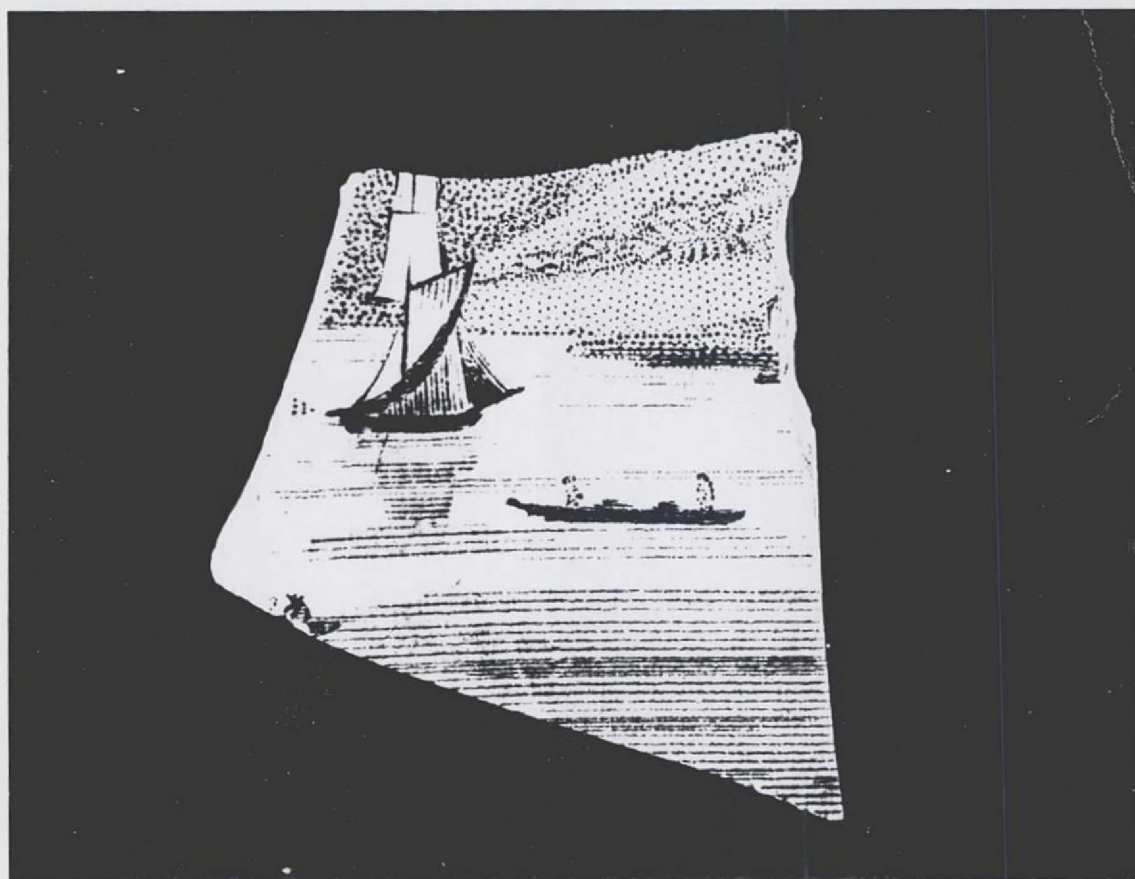


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THE ARCHAEOLOGICAL INVESTIGATION AT  
THE MATRON'S COTTAGE  
SNUG HARBOR CULTURAL CENTER  
STATEN ISLAND, NEW YORK



N.Y.C. LANDMARKS PRESERVATION COMMISSION  
JUNE 1987

Report funded by the N.Y.C. Department of  
Cultural Affairs

AN ARCHAEOLOGICAL EXCAVATION AT THE MATRON'S COTTAGE  
SNUG HARBOR CULTURAL CENTER, STATEN ISLAND

NYC LANDMARKS PRESERVATION COMMISSION

Sherene Baugher  
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June, 1987

REPORT FUNDED BY THE NYC DEPARTMENT OF CULTURAL AFFAIRS



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We wish to thank our consultants, archaeologists Edward Lenik, Daniel Pagano, and Dr. Frederick Winter for their comments and suggestions during the course of this project. We would like to express our gratitude to Louise DeCesare for her cover design and the drafting of all the original maps in this report. A round of applause goes to our hardworking and dedicated field crew and volunteers. Lastly, we would like to express a special thanks to Sandra Famolare for her meticulous and diligent laboratory work, and for her thorough and energetic fieldwork.



## Introduction

This report presents the results of the archaeological excavation in the yard of the Matron's Cottage at Snug Harbor Cultural Center, Staten Island. The work was undertaken by the archaeology program at the New York City Landmarks Preservation Commission, and was funded by a grant from the New York City Department of Cultural Affairs to the New York Landmarks Preservation Foundation (the Landmarks Commission's non-profit Foundation). Field work for this project was conducted from August 3 to August 17, 1985. Dr. Sherene Baugher, director of the archaeology program of the Landmarks Preservation Commission, served as the principal investigator.

This report contains background information about the site of the Matron's Cottage, the field testing methodology, the results of the fieldwork, and our conclusions. More detailed information on the overall history of Sailor's Snug Harbor is contained in An Archaeological Predictive Model of Snug Harbor Cultural Center (Baugher, Baragli, DeCesare, and Venables 1985).

Sailors' Snug Harbor makes an excellent case study of a nineteenth century institution with members of almost every socio-economic strata represented within its community. The Harbor was a planned community with clearly defined activity zones, and with clearly defined residential locations. This separation of spatial areas makes it easier for the archaeologist to link archaeological deposits to particular buildings or activity areas. The detailed documentary record kept by the Trustees of the Harbor contains data on all aspects of life at the Harbor including the exact names and occupations of the

residents of the various buildings over time. This documentary record enables the archaeologists to link the artifactual deposits with the known inhabitants of the site. In the Matron's Cottage excavation, we tested to determine if the archaeological deposits accurately reflected the socio-economic status of the family/individuals who discarded the material.

Almost 4,000 artifacts used in the the period 1845-1900 by the inhabitants of the Matron's Cottage at Sailors' Snug Harbor were unearthed by archaeologists from the New York City Landmarks Preservation Commission. The assemblage contained a wide variety of objects including broken dishes, glasses, bottles, clay smoking pipes, buttons, and even food remains, such as beef and chicken bones. The material record buried in the ground yielded an interesting story about the lifestyles of the people who lived at the Matron's Cottage. From the documentary record it is known that in the nineteenth century there were two distinct periods of occupancy of the house: 1) from 1845-1879 and 2) 1879-1900+. From 1845-1879, the Steward and his wife, who was the Matron, had an apartment in the building as their private residence. In 1879, a new home was built for the Steward and his family and the Matron's Cottage became used as dormitory space for the Matron and the female employees. After 1879, the Matron was no longer the wife of the Stewart. The Stewart's association with the Matron's Cottage ceased when he and his family moved to their new residence in 1879. The archaeological artifacts represent these two distinct periods of residency. The artifacts reveal details about the differences in the lifestyles of these individuals from two different socio-economic levels within the community of Sailor's Snug Harbor.

In addition, the artifacts from the Matron's Cottage excavation were compared to artifacts (uncovered in an excavation in 1982 by archaeologist Jo Ann Cotz) that were associated with the seamen, the lowest ranking individuals at the Harbor. Archaeologically, we were able to test to determine if there were differences in the household garbage of individuals of different rank. The specific research questions that were addressed in this study are discussed in chapter four.

Chapter one presents the background information about the development of Sailors' Snug Harbor and the New York City Landmarks Preservation Commission's involvement with the Harbor. Chapter Two describes the methods and procedures used during the archaeological excavation of the Matron's Cottage site. Chapter Three explains the laboratory procedures used by the archaeology program at the Landmarks Preservation Commission, and chapter four provides the archaeological interpretation of the site.

The artifacts, copies of the report, slides, photographs, field notes, and catalogue sheets will be given to Snug Harbor Cultural Center, Staten Island. It is hoped that this information can be used in the educational and interpretative programs at the Harbor.

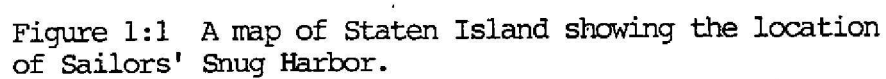
## CHAPTER ONE: BACKGROUND INFORMATION ON THE SITE

This chapter provides background information on the location of the site, with a brief history including the preservation plans, a description of the previous archaeological testing and a summary of the archaeological findings. Chapter two describes the recent excavation conducted by the Landmarks Preservation Commission.

### Site Location

The Matron's Cottage Site is located within the confines of the Snug Harbor Cultural Center on the north shore of Staten Island (see Figure 1:1). In land area Staten Island is the third largest borough of New York City. It is 13.9 miles long, 7.3 miles wide (extreme breadth), has 57 miles of waterfront, contains 60.0 square miles (Staten Island Chamber of Commerce 1972:1), and encompasses a number of distinct ecological zones. It has serpentine highlands, salt marshes, peat bogs, sand and dune beaches, pine barrens, and coastal plains (Shapiro 1972). The island is the home of over 400 species of mammals, birds, reptiles, amphibians, and fish (Leng and Davis 1933, vol. I: 27-62).

The Matron's Cottage Site is located on a coastal plain at the northern edge of serpentine highlands. The house itself is located within the grounds of Snug Harbor Cultural Center (see Figure 1:2). The New York City Zoning Map for Staten Island lists this parcel as block number 76, lot 1. The Cultural Center is bounded by Richmond Terrace to the north, Tysen Street to the east, Henderson Avenue to the south, and Snug Harbor Road and Kissel Avenue to the west.





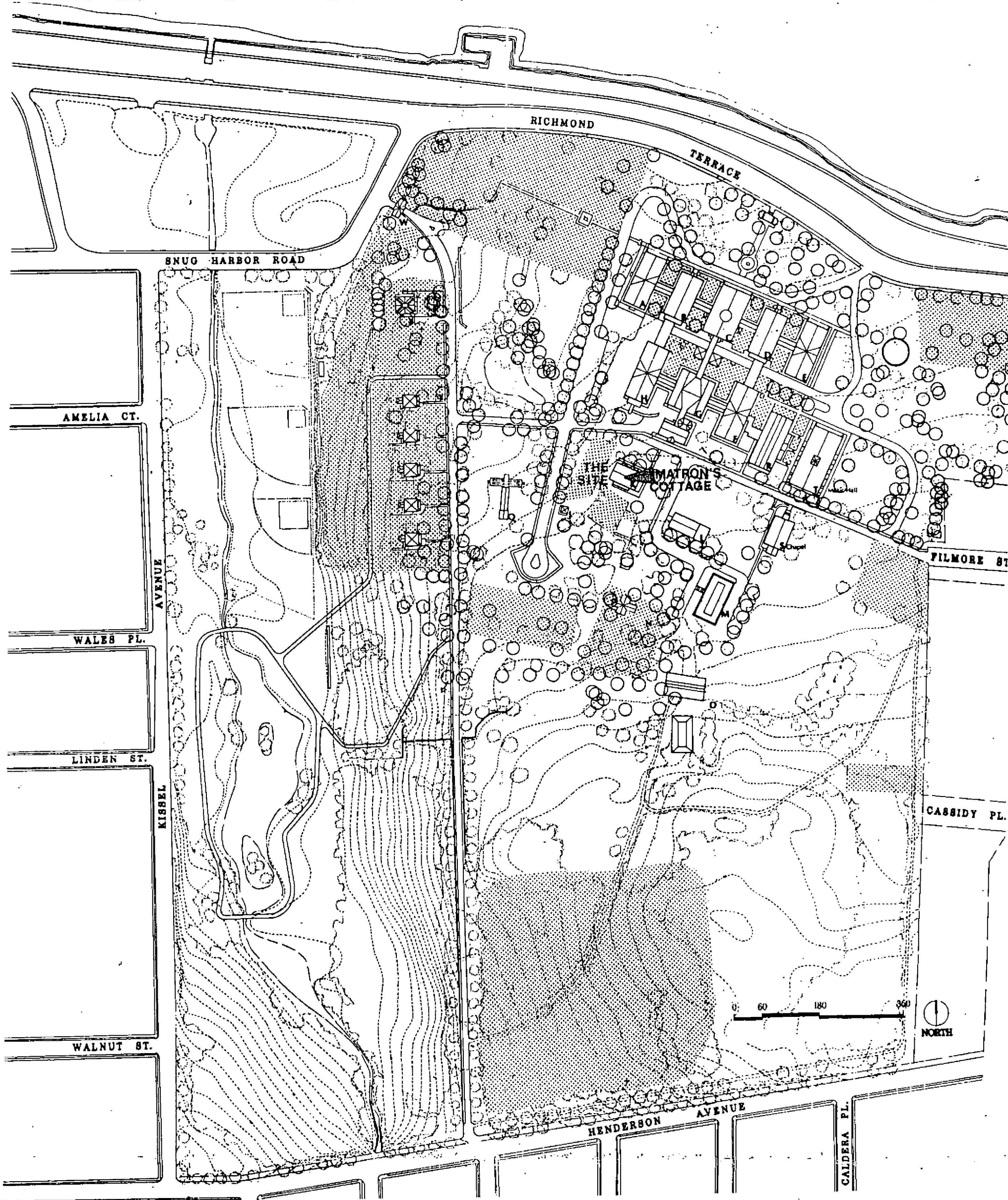


Figure 1:2 Overview of the Archaeologically Significant Zones at Snug Harbor Cultural Center. Location of the Matron's Cottage is marked with an arrow.

### Site Description

The Matron's Cottage was designed as a wash and bake house by Frederick Diaper in 1845 (see Figure 1:3). Diaper was an English-born architect known for his residential designs ("Beverwyck" in Rensselaer, New York). In the Historic Structures Report for Sailors' Snug Harbor a brief history on the use of the house is given from its first use as a wash house to its final use as staff apartments (Gibson, Shepherd, and Bauer 1979, vol 2: 4.11/1). In 1855, after the completion of a new wash house, this building became the Steward's House. When a new Steward's House was constructed in 1879, at another site in the Harbor complex, the older building was assigned to house the Matron and the Harbor's female staff. In the 1950's, this structure was re-modelled to contain three apartments for the staff (Gibson, Shepherd, and Bauer 1979, vol. 2: 4.11/1). In June 1986, in an archival study undertaken by the Research Department of the Landmarks Preservation Commission, it was discovered that the Steward lived in the Matron's Cottage while it was being used as a wash house. So the house had a mixed use as service and residential structure for ten years before it became strictly a residential building.

### Preservation Work at Snug Harbor

Snug Harbor Cultural Center is a New York City owned property comprised of 80 acres on the north shore of Staten Island. The property is being developed as a cultural center to house a botanical garden, museums, art galleries, a performing arts center, and a conference center. Seven of the extant buildings are designated New



Fig. 1:3 The Matron's Cottage.  
(Photo: Carl Forster, N.Y.C. Landmarks Preservation Commission, 1985).



York City Landmarks. The New York City Landmarks Preservation Commission has held a public hearing regarding the designation of the entire 80 acres of Snug Harbor Cultural Center as an historic district. There is an organized and concerted effort by the City of New York to rehabilitate and restore the buildings at Snug Harbor. This carefully planned program is converting the once grand home for retired seamen into a vital and viable cultural center for Staten Island.

With all of the recent work and changes to Snug Harbor, and the plans for its future, it is also important to remember its past. These buildings are visible reminders of the site's use as a home for aged and sick seamen (see Figure 1:4). Sailors' Snug Harbor was the first institution for retired seamen in the United States. The institution Sailor's Snug Harbor still exists but in 1976 the property was sold to the City of New York and the institution relocated to Sea Level, North Carolina. Before the initial construction of Sailors' Snug Harbor in 1831, this property was used during the colonial and early Federal periods as a farm. Before the European occupation of the land, Native Americans may have settled on this site. Snug Harbor Cultural Center is thus a property with a rich and varied history (for more details on the Harbor's history see Baugher, Baragli, DeCesare, and Venables 1985, Chapter Two).

In order to evaluate the archaeological resources at the Harbor, an archaeological predictive model was researched and developed by the Archaeology Program of the New York City Landmarks Preservation Commission (Baugher, Baragli, DeCesare, and Venables 1985). This predictive model identified those sections of the Harbor which had the highest probability of containing significant archaeological resources.



Figure 1:4 The Main Complex, 1894. (Photo: Published by W.H. Parish Publishing Company. Photographer unknown. Sailors' Snug Harbor Collection, Archives, Staten Island Institute of Arts and Sciences).



The project was funded by a matching grant from the New York City Department of Cultural Affairs to the New York Landmarks Preservation Foundation.

Two museums, the Staten Island Museum and the Children's Museum, will be moving to Snug Harbor within the next two years. In 1985, the City had proposed the construction of two new parking lots to accommodate the staff and visitor needs of the Center. Storm sewer holding tanks were to be constructed underneath a portion of the parking lots while an electrical conduit line would connect both lots. Because the proposed construction at Snug Harbor would have had an impact on areas that were flagged in the archaeological predictive model as being culturally significant (see Figure 1:5) the New York City Department of Cultural Affairs funded a project to explore, through shovel testing, the archaeological zones that would be affected by the proposed construction. The shovel test report presented a detailed discussion of the shovel testing project (Baugher, Baragli, and DeCesare 1985).

#### Archaeological Testing

The shovel testing project was undertaken because of planned construction during the summer of 1985 at the Snug Harbor Cultural Center. Fifty archaeological shovel tests were excavated in the areas of this proposed construction. The purpose of the archaeological investigation was to identify any significant archaeological resources which would have been destroyed by the proposed construction. If significant remains were located, then recommendations would be made for mitigation measures to preserve or salvage these resources.

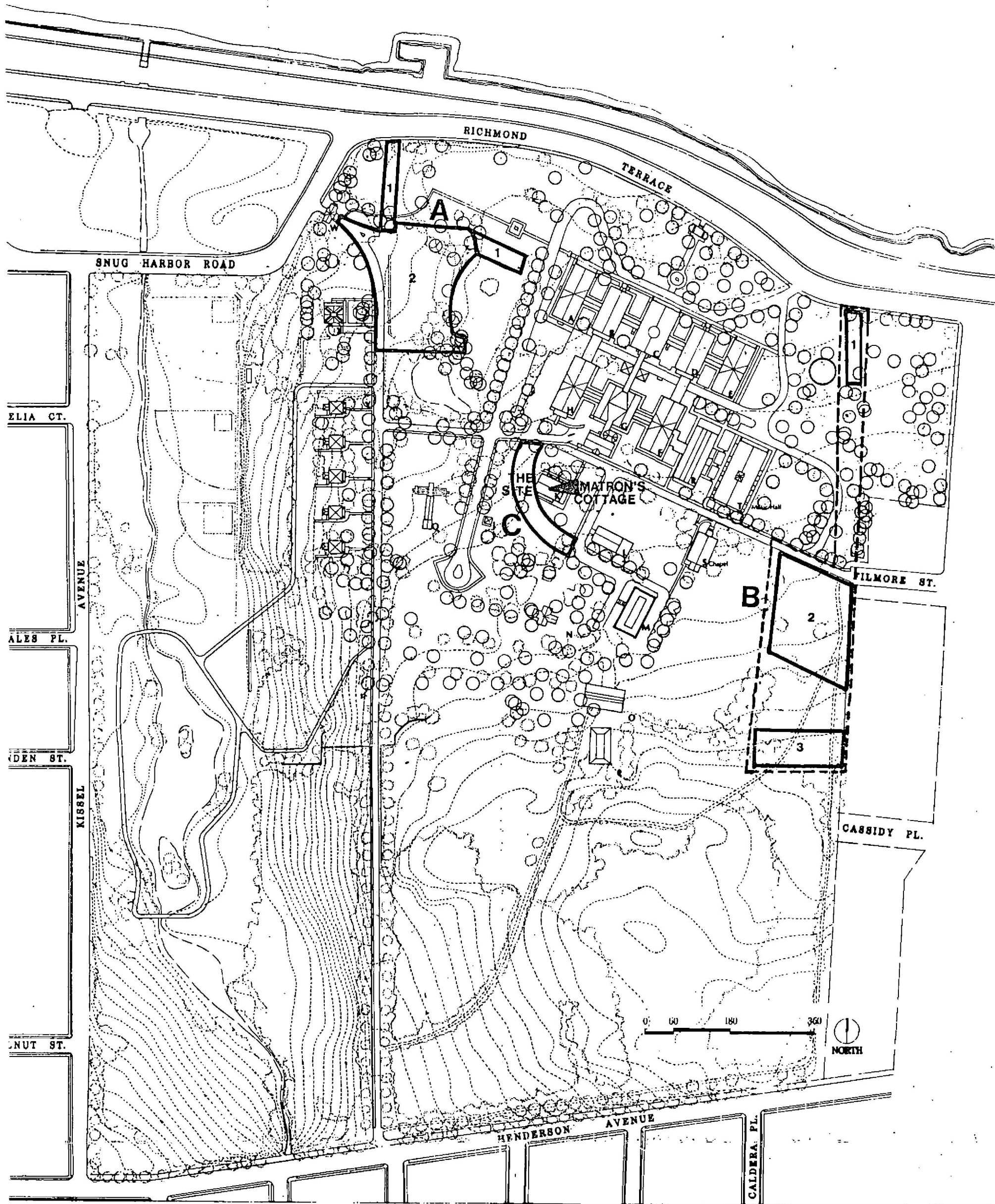


Figure 1:5 Map showing the shovel test areas A, B, and C, and the sections within these areas. An arrow points out the location of the Matron's Cottage.

As a result of the archaeological field investigations and laboratory analyses, it was possible to determine that only a portion of one of the areas of the proposed construction held archaeological remains of significance. This was the area along the western side of the Matron's Cottage. With this one exception, there were no findings from this program of archaeological field sampling that led to recommendations for modifications in the proposed construction project (Baugher, Baragli, and DeCesare 1985).

Area C contained a small segment of the proposed conduit line that would run along the southern and western sides of the Matron's Cottage (see Figures 1:6 and 1:7). Eight tests were placed in this area to determine if artifacts and features relating to the occupation of the Cottage by the Steward and his family (1845-1879), and the Matron and female staff (after 1879), were buried along the route of the conduit line (see Figure 1:7).

The only area of archaeological significance was along the western side of the Matron's Cottage. Shovel test number 46 contained a very rich deposit of artifacts (151 artifacts) including ceramics and glass which were manufactured in the mid-nineteenth century. This test was located twenty-five feet west of the southwest corner of the Matron's Cottage (see Figure 1:7). The other forty-nine shovel tests at Snug Harbor contained an average of thirteen artifacts per test; therefore, shovel test number 46 had 1161 percent more artifacts than the average shovel test. The total number of artifacts uncovered in all fifty shovel tests was 786; the artifacts from shovel test #46 comprised 19.2% of this entire collection. Clearly this area contained a heavy concentration of material. Test #46 contained very clear

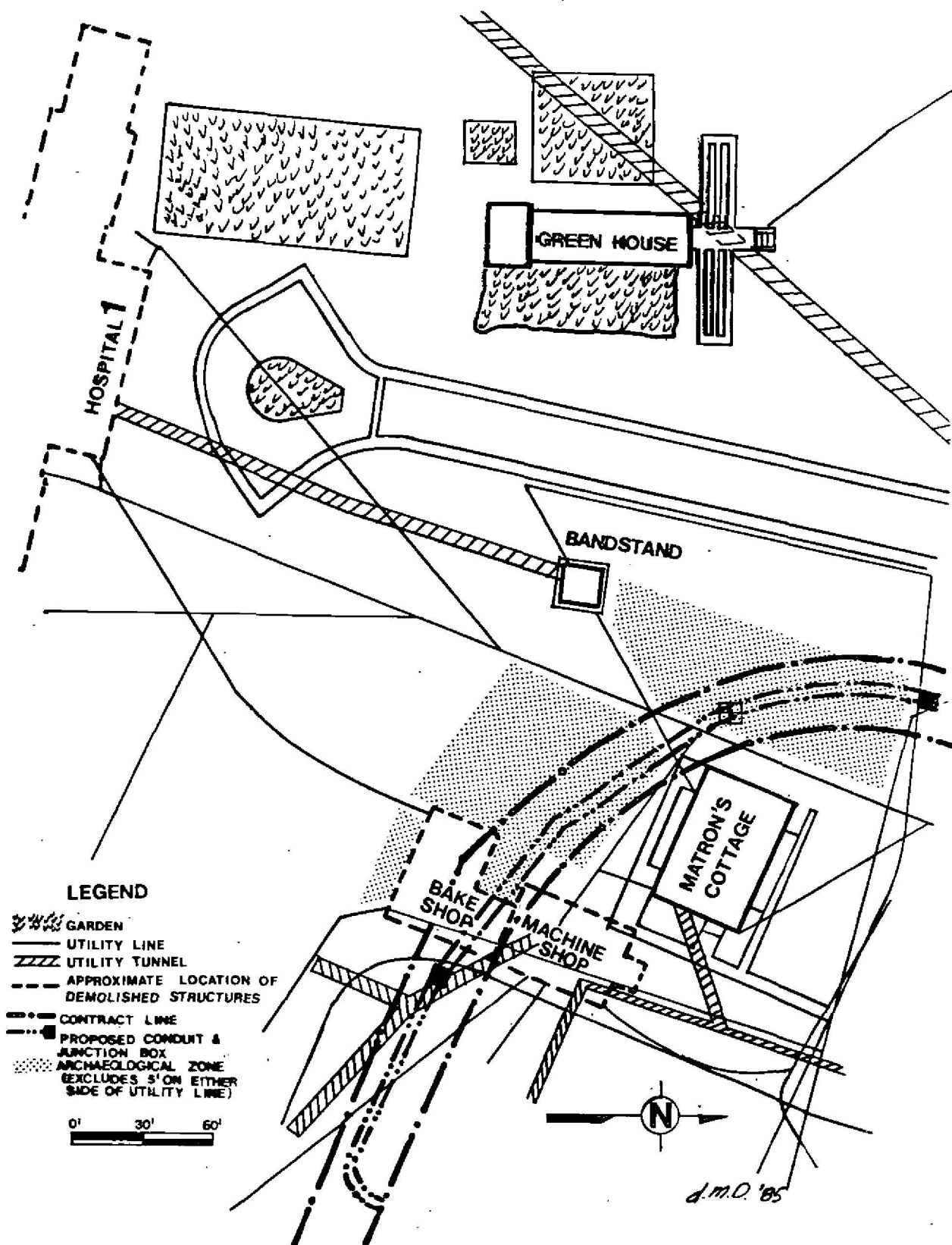


Figure 1:6 Impact of the proposed DGS construction on the archaeologically significant areas surrounding the Service Buildings (western group).

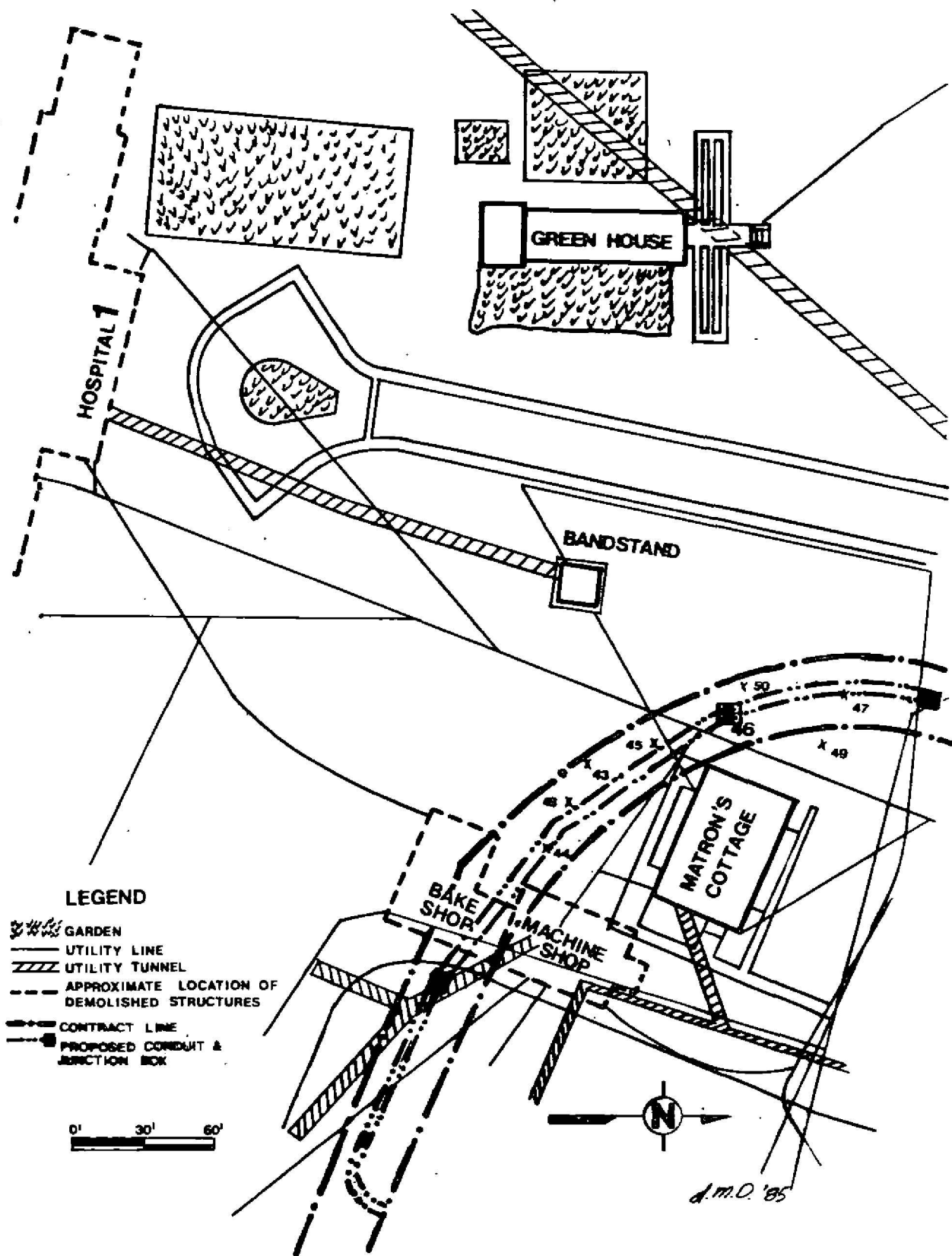


Figure 1:7 Map showing the location of shovel tests in area C.  
 Test number 46 is the only shovel test that contained significant archaeological resources.



stratigraphic deposits; six levels existed over the sandy subsoil (the other shovel tests contained two strata above the subsoil). It was assumed that this deposit probably represented a kitchen dump for the Matron's Cottage. There is a cellar door located on the western side of the house, and test #46 is located just south of the door.

The occupants of the Matron's Cottage may have discarded their garbage in the yard area to the west of the house (in the vicinity of shovel test number 46). This area may have been a depression that was periodically filled in with household garbage. It was also possible that this was a refuse pit and that our test was located in the middle of the pit. Regardless of whether this feature was a refuse pit or a depression filled in with garbage, the area surrounding test #46 was significant.

#### Archaeological Recommendations

The shovel test report recommended that the archaeological feature found in test #46 had great potential to provide valuable information about the occupants of the Matron's Cottage. The quantity of material unearthed in shovel test #46, while large in comparison to that of the other shovel tests, was a small sample for an archaeological analysis of the material. More artifacts were needed from exact stratigraphic contexts in order to have a sufficient quantity for a meaningful statistical analysis. Additional excavation in this area would permit the retrieval of a much larger sample of artifacts, thus providing the needed analytical material.

The shovel test report recommended two courses of action to take to

prevent the destruction of this data. The first course would have been to alter the route of the proposed conduit line to avoid this feature, thus preserving this archaeological deposit. The second, and equally acceptable choice, would have been to have archaeologists excavate this area, salvage the material, and after the excavation was completed, have the conduit line constructed along the proposed route. The findings from the shovel tests # 47, 49, and 50 suggested that the archaeologically significant area was within a ten foot radius of shovel test #46. Test numbers 47, 49, and 50 were not part of this feature. Test # 47 which was twenty five feet north of test # 50 and test # 49, which was twenty five feet north of test #46, both did not have the same dense concentration of artifacts as was found in test #46. Test # 50, which was 10 feet west of test #46, was at the eastern edge of a gravel path. Excavation units needed to be placed within this ten foot radius.

The Department of Cultural Affairs decided to have the Landmarks Preservation Commission conduct an archaeological excavation and sampling of the culturally significant portion of the site and then allow the conduit line to be constructed along the proposed course after the archaeological work was completed. The archaeological work was scheduled to begin weeks before the construction was to commence in this area. The archaeological excavation was completed in August 1985 and the conduit line has been installed. The next chapter describes the excavation.

## CHAPTER TWO: THE EXCAVATION, METHODS AND PROCEDURES

An archaeological excavation was conducted from August 3rd through the 17th, 1985. The project was designed and directed by Dr. Sherene Baugher, Director of the Archaeology Program of the New York City Landmarks Preservation Commission. The laboratory director was Judith Baragli and the assistant archaeologist and draftsman was Louise De Cesare. Both Ms. Baragli and Ms. De Cesare are full-time staff members of the Archaeology Program at the Landmarks Commission (both salaries are paid by grants). Dr. Frederick Winter, archaeology professor at Brooklyn College, served as a consultant for three days of fieldwork. The field crew members were: Sandra Famolare, Eric Laventure, Daniel Pagano, Albert Winn, and included a team of dedicated volunteers: Martha Bailey, Ellen Hudson, Michael Godesiabo, Carol Schutter, Dennis Pidgeon, Giorgio Rosso, Bobby Rubenstein, Dr. Ira Rubenstein, Matthew Sosnow, and Myron Sosnow. Volunteers were paired with trained crew members. Laboratory work was undertaken primarily by Judith Baragli and Sandra Famolare. All maps were drafted by Louise DeCesare, and the report lay-out, graphics, and cover design were by Louise DeCesare. Artifact analysis and report preparation was conducted by Sherene Baugher and Judith Baragli.

### Excavation Procedures

Before the excavation began Doctors Baugher and Winter, with the assistance of Judith Baragli and Sandra Famolare, laid out a grid pattern for the site. Shovel test number 46 was located exactly twenty five feet west of the southwest corner of the Matron's Cottage.

The shovel test served as the center mark for the grid pattern. Four squares, four feet by four feet, were placed in a true north-south direction around the marker for shovel test #46 (see Figure 2:1). There was a two foot balk between the eastern and western squares and a one foot balk between the northern and southern squares. The area of the shovel test was within the balk. During the course of the fieldwork another square was added to the west of square number 1. Square number 5 was only four feet by two feet (it was a half square), and it was opened up exclusively to determine the dimensions of an historic pathway.

All five excavation squares were excavated by following natural soil stratigraphy. The squares were excavated from the surface to natural sterile subsoil. The deepest test was seven feet below current ground level but the average depth for the excavation squares was four feet. Trowels were the primary excavation tool though shovels were used to remove sod and backdirt, and in a few instances hand pick were used. All excavated soil was sieved through one quarter inch mesh screens. Artifacts from each soil level were labelled and bagged (with the provenience number of each bag). Individual bags were used for each soil layer in each square. All artifacts were brought to the archaeology laboratory at the New York City Landmarks Preservation Commission where they were washed, labelled, identified, dated, and catalogued.

### Stratigraphy

There was some similiarity and some differences in the stratigraphy from square to square. Due to money constraints the soil profiles in this report shows only one wall profile for each square (see Figures

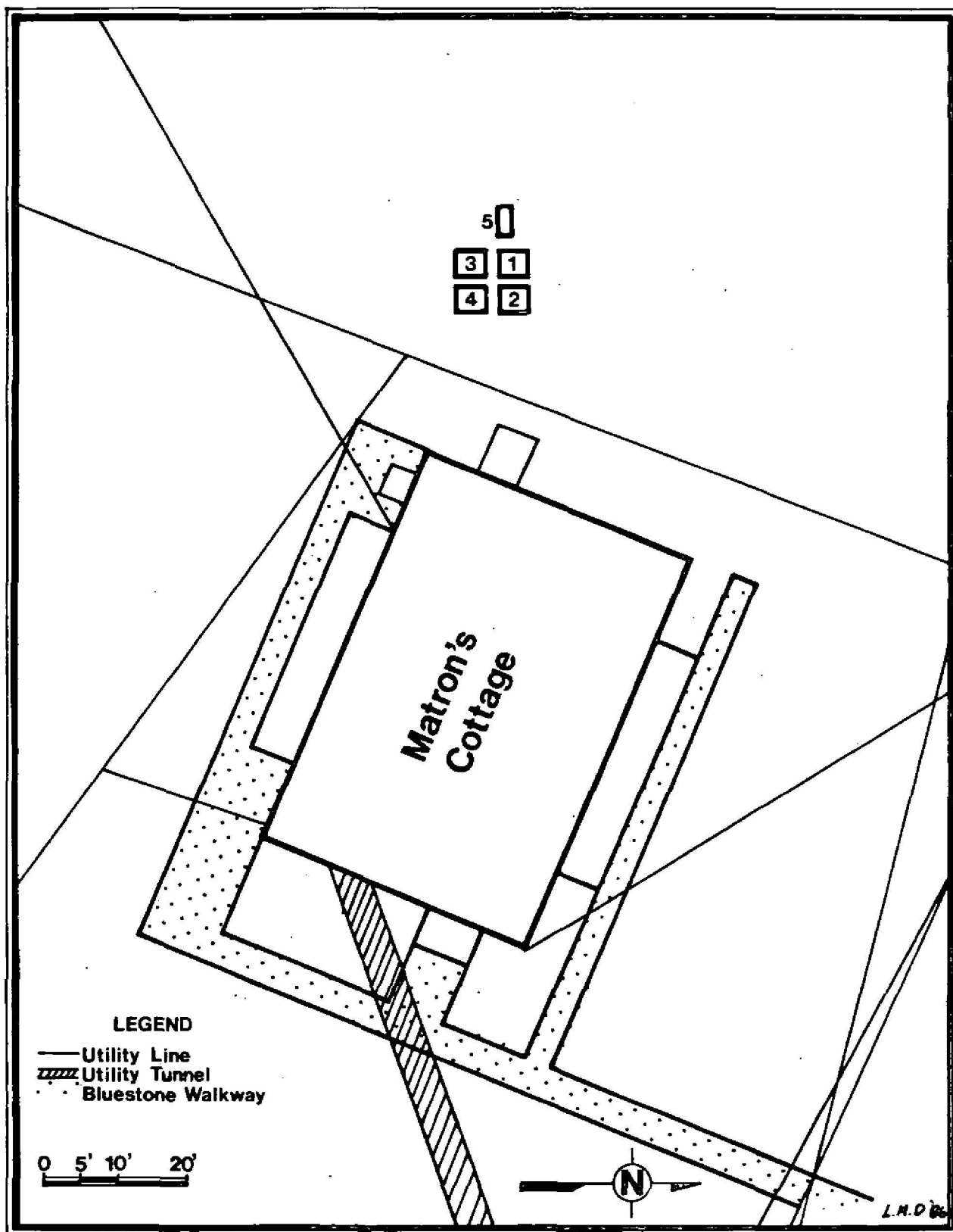


Figure 2:1 Map of the Matron's Cottage showing the location of the five excavation squares.

2:2, 2:3, 2:4, and 2:5). When following the natural soil stratigraphy, there were sections of different soil within the same horizontal level. Each soil color or composition change was given its own identification number (context number). Back in the laboratory, the artifacts associated with each context number were studied along with the data from the soil profiles in order to interpret these deposits. Since only one soil profile per square is presented in this report, the missing numbers on the soil profiles are the identification numbers that were given to soil contexts in other parts of the squares.

Sterile soil (soil without any artifacts in it) was an orange brown sandy soil (Munsell color number: 10 YR 4/6) and was the same type of soil found in all the shovel tests throughout the Harbor. When the trenches for the underground sewer line (under the two new parking lots) were constructed in June we were able to observe that the same sterile soil continued down for at least twenty feet. In the shovel tests sterile soil usually was found between 14 inches and 20 inches below current ground level. In the area of the Matron's Cottage excavation, the sterile soil was encountered at a deeper level --36 inches below current ground level as opposed to the 14-20 inch average depth from the shovel tests. It appeared that the side yard area had a natural depression which was filled in over time, thus accounting for the deeper deposits above the sterile soil in the western side yard.

Above the sterile soil was a rich brown soil that was approximately 6 inches thick (Munsell color: 10YR 3/3). Based on an artifact analysis, this brown level appeared to be the original ground level (depth below ground level, 2.5 feet). This stratum was located in: Square 1, context #11; Square 2, context #13 and 15; Square 3,

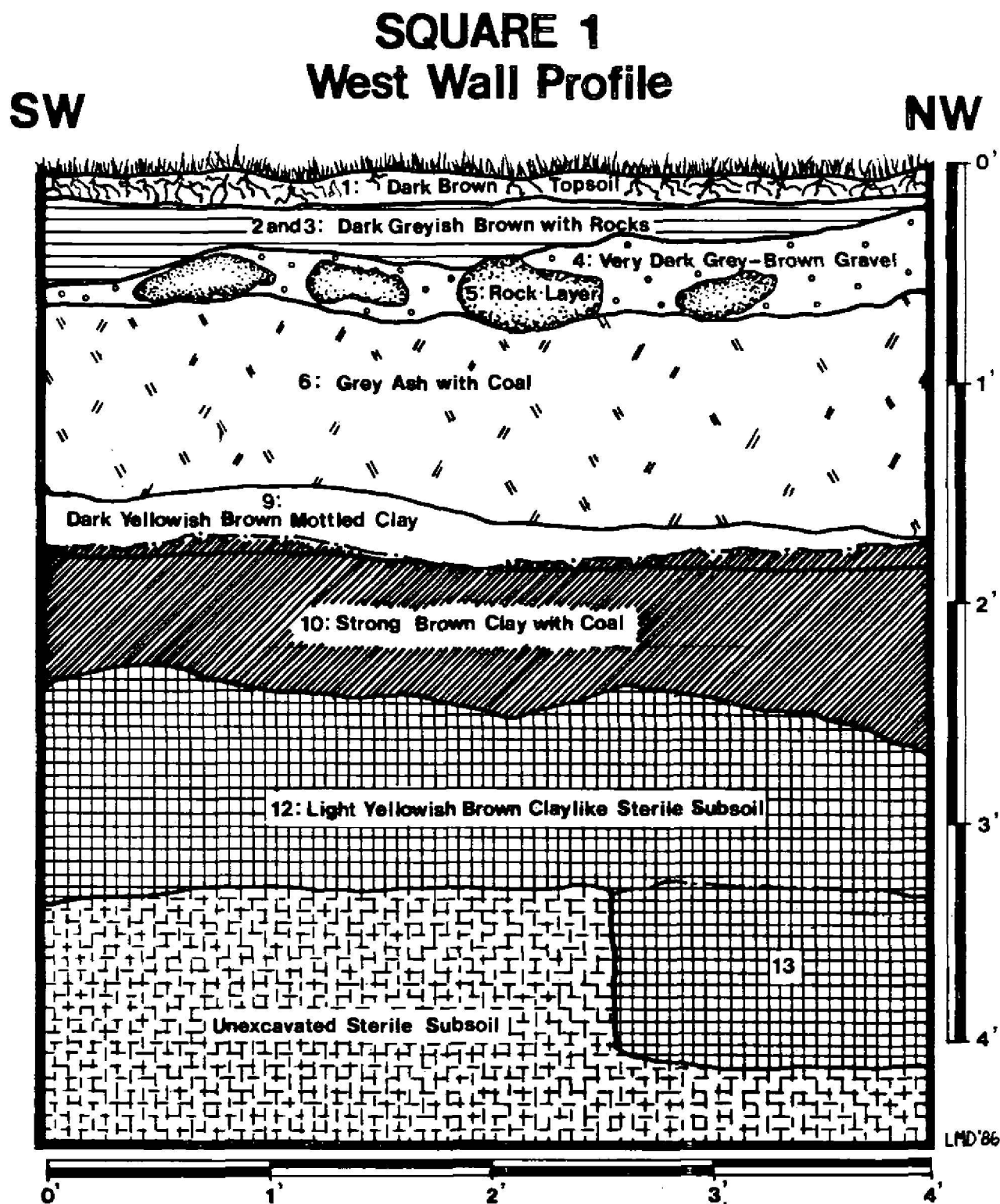


Figure 2:2 A wall profile from Square One. The rock layer (number 5) is the remnant of a stone footpath.

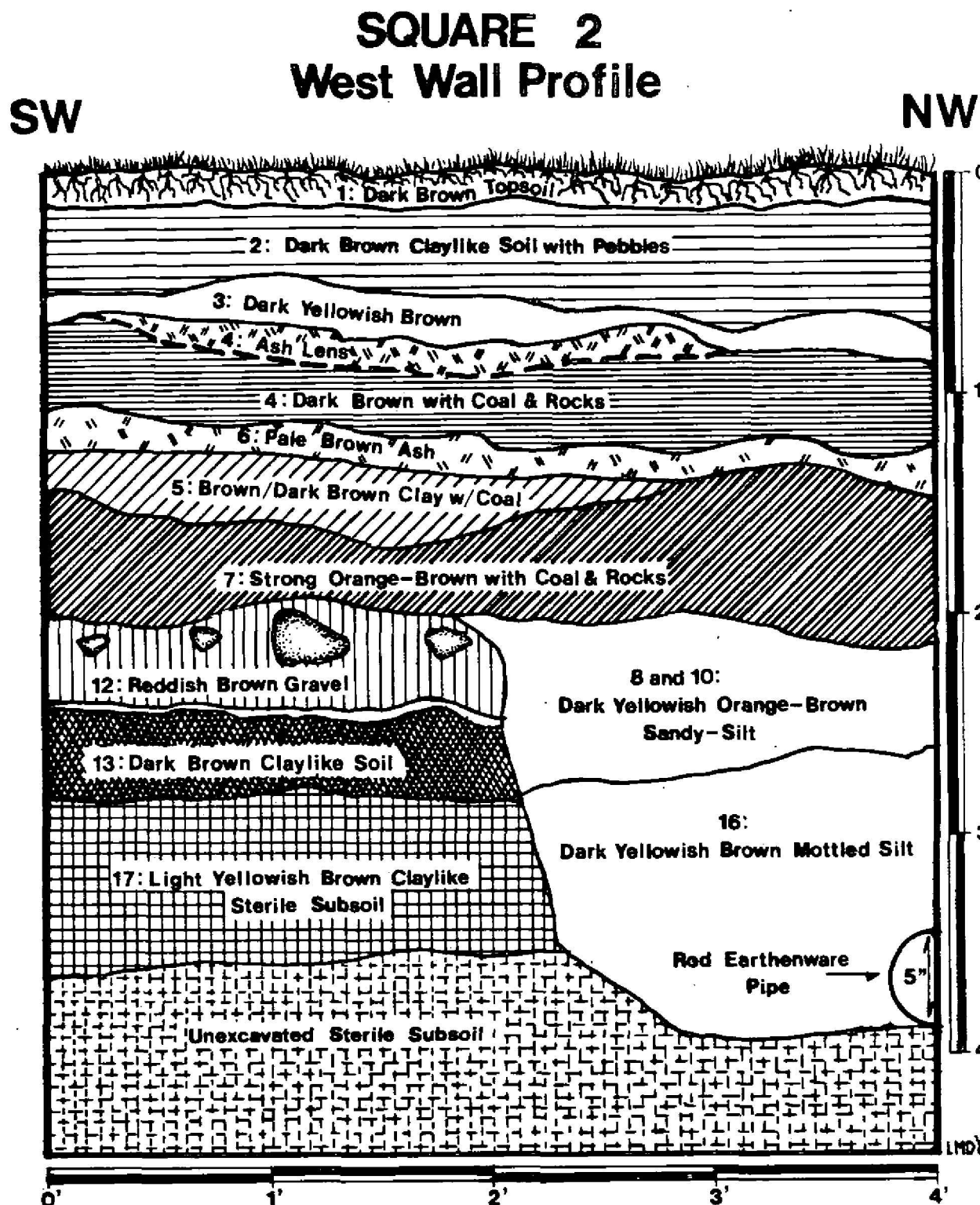


Figure 2:3 A wall profile of Square Two. Numbers 8, 10, and 16 are the trench for the buried pipeline.



# SQUARE 3

## North Wall Profile

NW NE

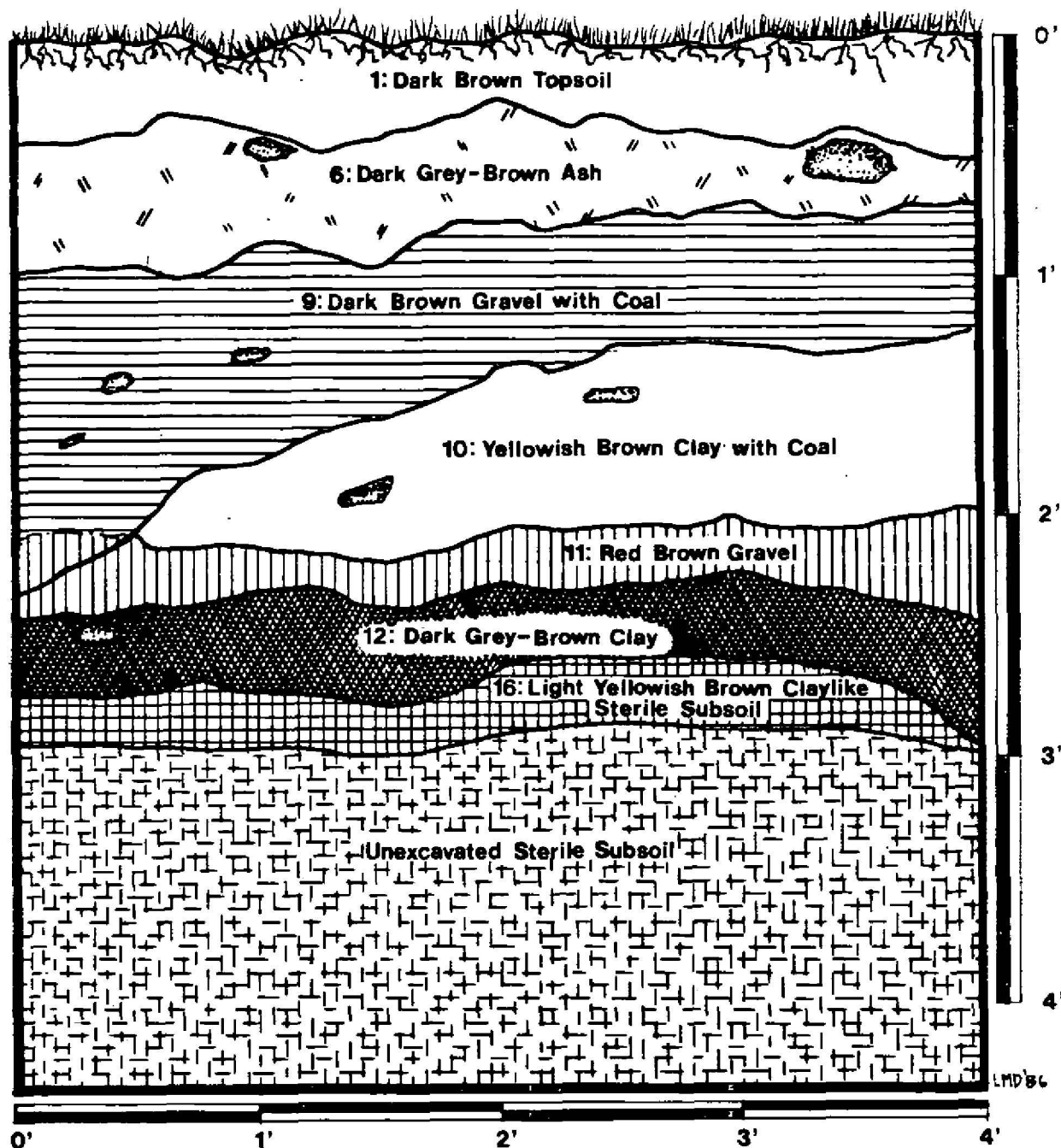


Figure 2:4 A wall profile of Square Three. The remnants of the stone footpath were found below the topsoil in the dark grey-brown ash stratum (number 6).

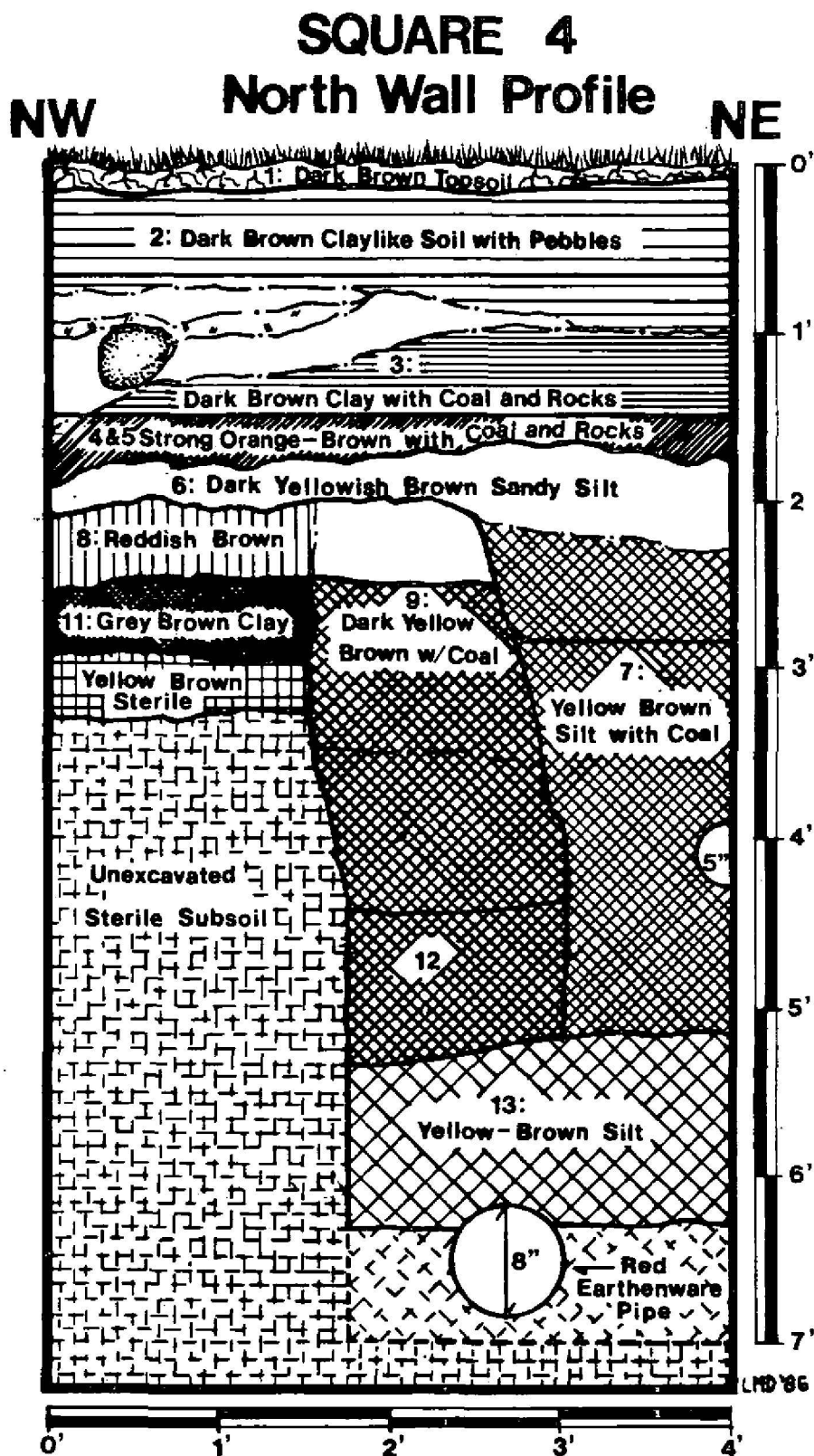


Figure 2:5 A wall profile from Square Four. The trench for the buried pipe can be found in areas indicated by the numbers 7, 9, 12, and 13.

context #12; and Square 4, context #10 and 11. Above this layer was a deep red soil approximately 6 inches thick (Munsell color: 7.5 YR 4/6). The red stratum was found at 2 feet below current ground level. This stratum was found in: Square 1, context #10; Square 2, context #12 and 14; Square 3, context #11; and Square 4, context #8. The similarities ended with this red stratum. In the two feet above the red stratum, there were mixed deposits that differed from square to square. Squares one and three, and two and four, were similar to each other. Squares one and three both contained the remains of a late 19th. century rock foot path (to be discussed later in this chapter). This path was found in Square 1, context 3 4-6; and Square 3, context # 5-8. Squares two and four both contained drain pipes that were probably buried in the 1860s (to be discussed later in this chapter). The drain pipes were found in Square 2, context #8-10 and 16; and in Square 4, context #6,7,9,12,and 13. In all four squares within the first 3-6 inches below the sod layer were ash remnants of a base of a 1906 crushed stone road.

### The Paths

On the 1906 Topographic Map of Richmond County, there is detailed information about buildings and pathways at Sailors' Snug Harbor. The 1906 map shows a flagstone walk and crushed stone road which start in the western side yard of the Matron's Cottage and circle around the rear yard (see Figure 2:6). The flagstone walk extended beyond the area of the present excavation. The "crushed stone" road was within the area of squares 1-4 (see Figure 2:6). Later in the twentieth century the road was removed and a new thin layer of topsoil was placed over the remaining ash. This layer contained late nineteenth century

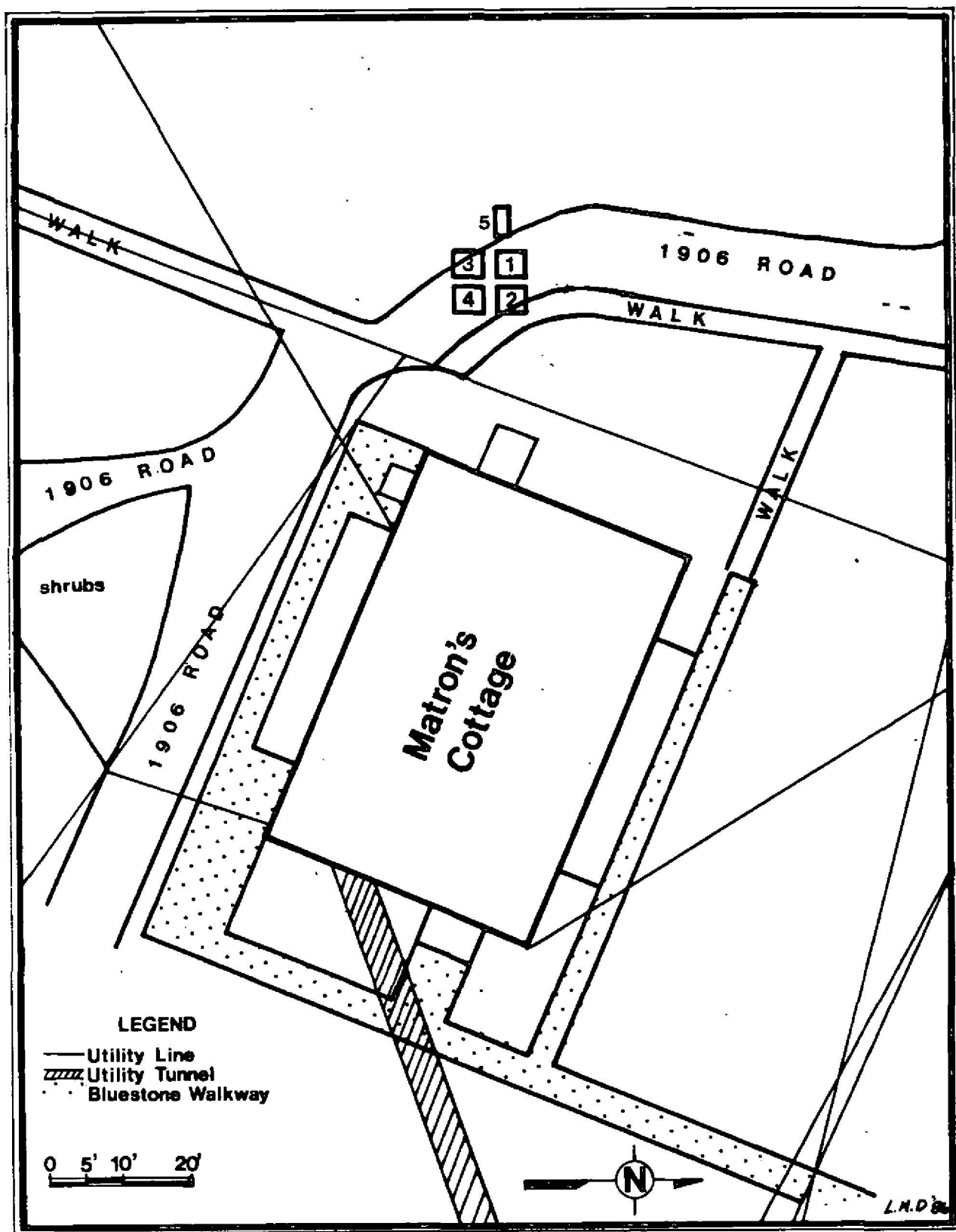


Figure 2:6 Map shows the location of the 1906 road and walk drafted onto a modern (1985) map of the site.

artifacts and one fragment from an early twentieth century bottle. This ash layer, found below the sod in all four squares, appears to be a remnant of this 1906 road.

Below the 1906 road was an earlier foot path. Figure 2:7 shows a rock path in squares 1,3, and 5. There was no evidence of the rock foot path in squares 2 and 4 or in shovel test 46. However, part of the rock footpath was uncovered in shovel tests 45 and 50, so the direction and the curve of the path could be determined (see Figure 2:7). The path was exactly five feet in width and had clearly delineated borders (see Figure 2:8). Below the rock path was a thick layer of ash and coal (see Figure 2:9). A common construction practice in the 19th century (and still used today) was to create a bed of ash to serve a dual purpose of leveling the ground and facilitating drainage; the rock path would be placed on top of the ash bed (Donald Plotts, Technical Specialist in Preservation, NYC Landmarks Preservation Commission, personal communication). In squares 1,3, and 5 both the rock path and the ash bed were uncovered. The artifacts associated with this path date from 1870-1900.

### The Trenches

Two orangeburg drain pipes were discovered at the bottom of squares 2 and 4. Because they were of similiar composition it is presumed that they are contemporaneous (see Figure 2:10). On the basis of the artifacts in the builders' trench, the pipes were put in at about the same time, within the 1860s. Orangeburg drain pipes were used during the mid to late nineteenth century (Donald Plotts, NYC Landmarks Preservation Commission, personal communication). There was a similiarity in the disturbed areas around the trenches. The top of the trenches were found in the level above the red stratum (2 feet below

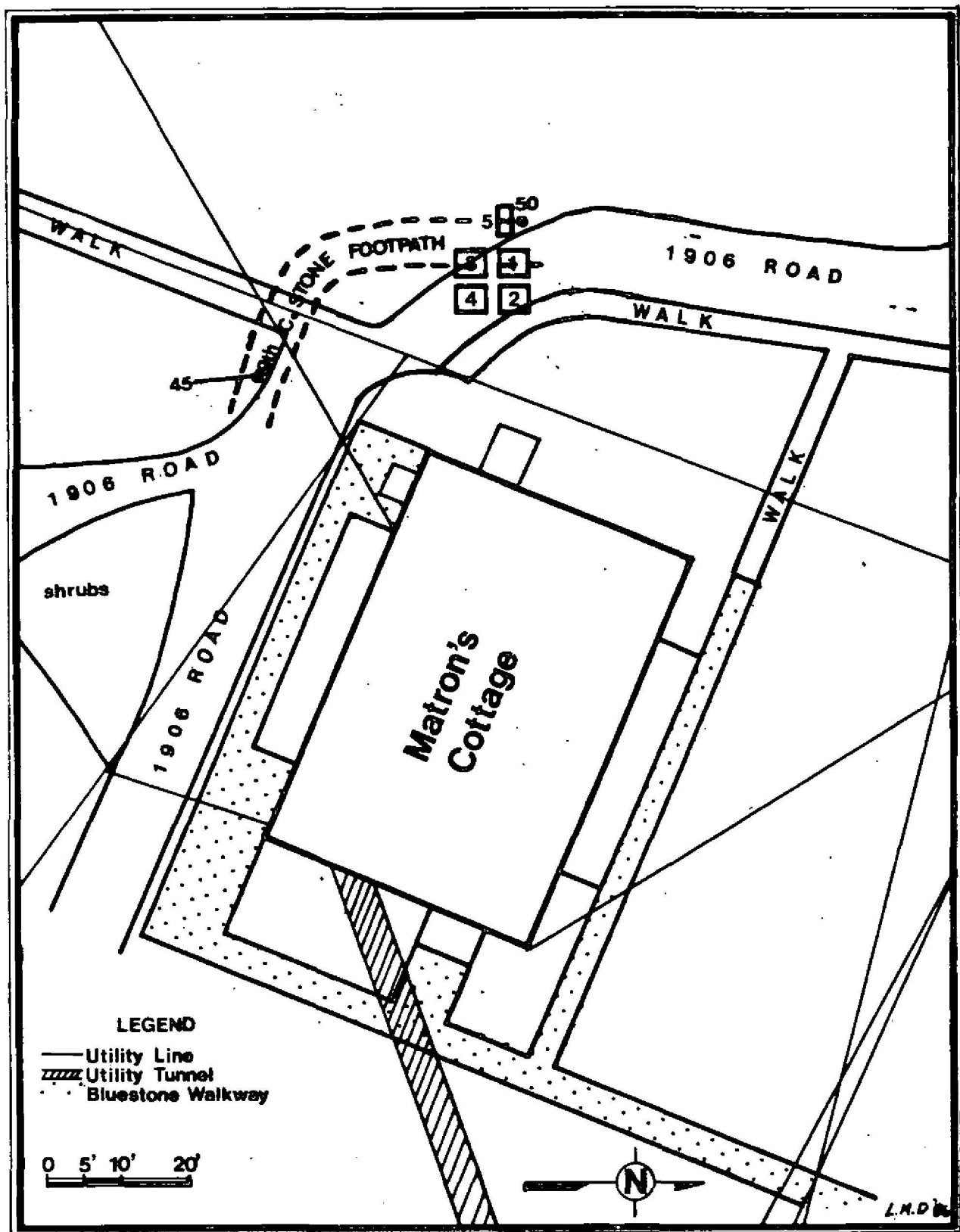


Figure 2:7 Map shows the location of the 19th century stone footpath and shovel tests 45 and 50 in relation to the 1906 road and the contemporary site.





Figure 2:8 The stone footpath located in Square One. The edge of the path is clearly delineated. No evidence of the path was found in Square Two (at the top of the photograph). (Photo: Sherene Baugher, N.Y.C. Landmarks Preservation Commission, 1985).



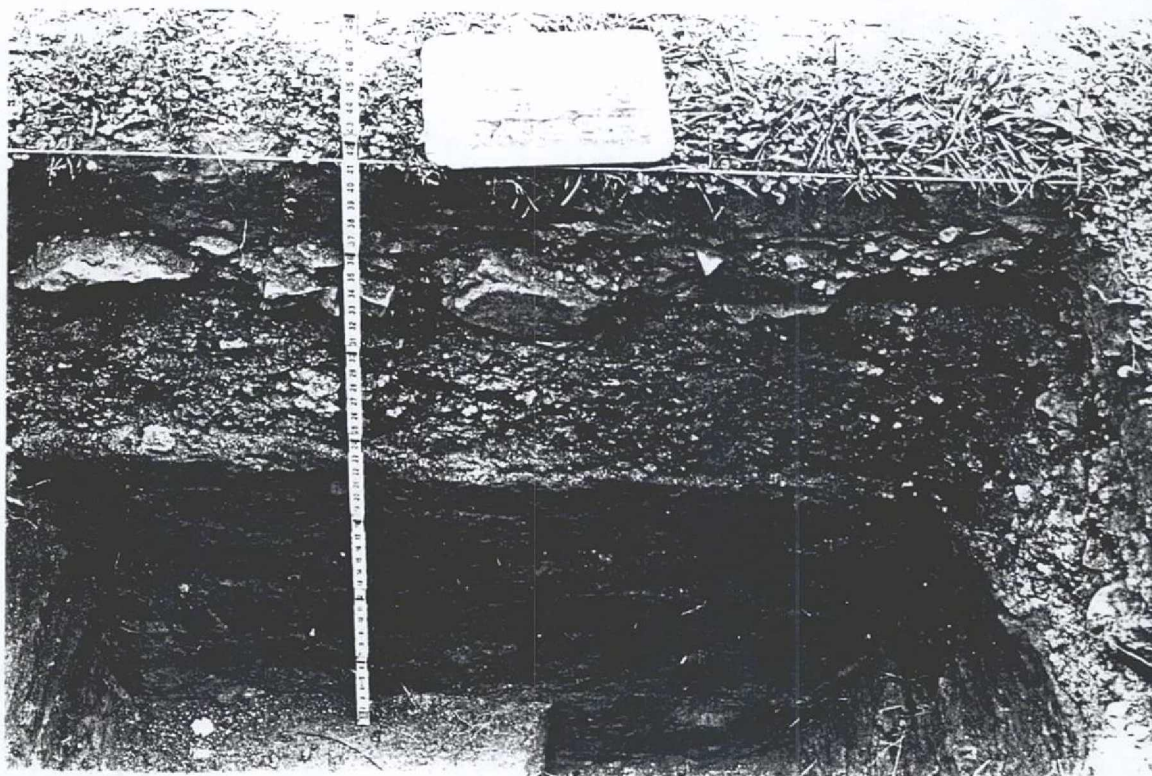


Figure 2:9 Wall profile of the west wall of Square One. The rock footpath is sitting on a one foot thick bed of ash and coal. (Photo: Sherene Baugher, N.Y.C. Landmarks Preservation Commission, 1985).



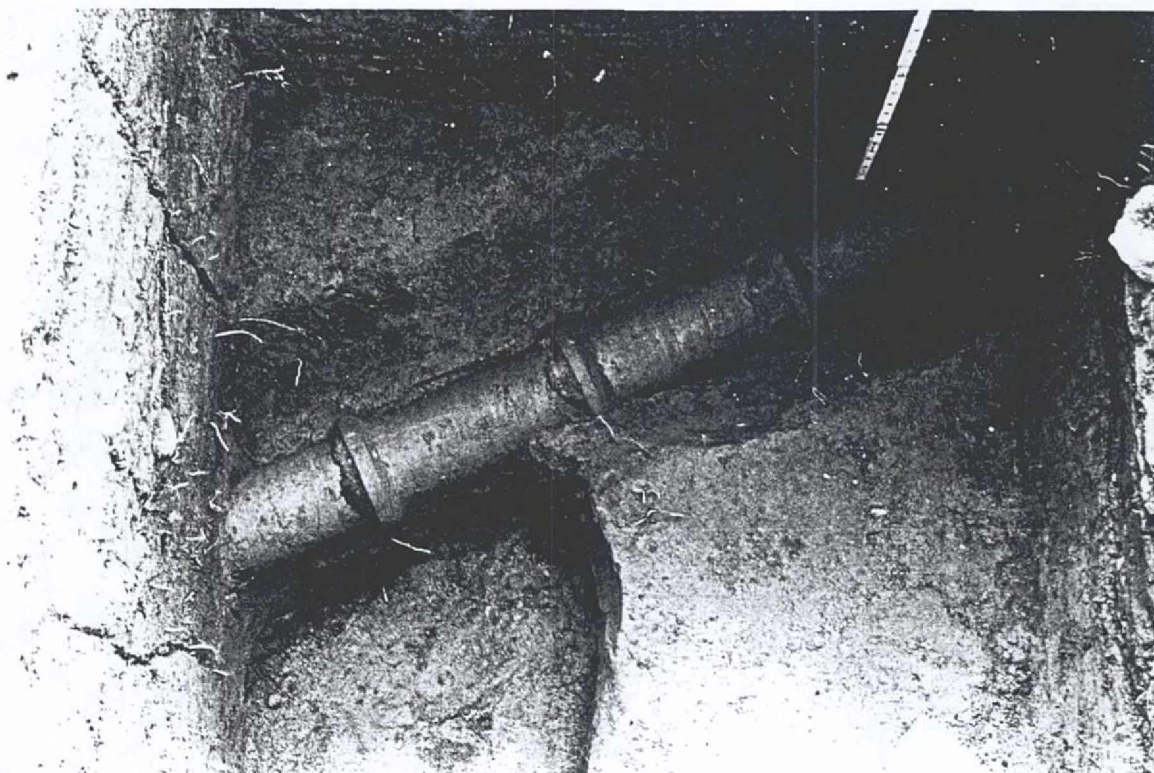


Figure 2:10 Orangeburg water pipe uncovered in Square Two. In the southwest corner of the photograph is the area that was excavated six inches below the base of the trench; no artifacts were found in this pit.  
(Photo: Sherene Baugher, N.Y.C. Landmarks Preservation Commission, 1985).

current ground level) but below the stone foot path. The trenches interrupted the red stratum and original top soil layer. The drain pipe in square 2 was uncovered at 52 inches below current ground level. The trench was 15 inches wide and the drain pipe was five inches in diameter. The drain pipe was placed in a trench that ran from the northwest corner of the square to the southeast corner of the square. An additional five inches below the drain pipe were excavated to determine if additional cultural materials were buried below the pipe; none were found. The pipe was sitting at the base of a trench which had been dug into sterile soil. The trench was actually 2.5 feet below the then ground level of the red stratum. The second drain pipe, found in square 4, also was placed at the bottom of the trench at 83 inches below current ground level; it would have been five feet below the 19th century ground level. This trench ran from the southwestern corner of the square to the northeastern corner of the square. At the northeastern corner there was a few inches where the pipe from Square 2 crossed over the trench from square 4 (see Figure 2:5). The trench was approximately 24 inches wide and the drain pipe was eight inches in diameter. The dating of the trenches and of the 19th century stone path will be discussed in more detail in chapter four, which contains the archaeological interpretation of the site.

### CHAPTER THREE: METHODS OF LABORATORY WORK

This chapter describes the procedures used during the laboratory work on the Snug Harbor collection. To an archaeologist, an artifact loses much of its value if its context is not known. Therefore, the first task of an archaeological laboratory is to ensure that the provenience of each of the thousands of artifacts found during the excavation is accurately and permanently recorded. This chapter describes the recording procedures and the various kinds of studies that were made on the collection in order to interpret the site accurately.

#### Field Recording

The documentation of the Matron's Cottage site began during the first day of fieldwork. Judith Baragli, laboratory director, was in charge of overseeing the labelling and bagging of all artifacts in the field. As the artifacts were excavated, they were placed in paper or plastic bags. Each bag was labelled in pencil or with water-proof marker with the exact site location (the code number indicating the depth at which the artifacts were found) and the general category of artifacts inside the bag (wood, ceramics, etc.). As added insurance, a piece of paper indicating site provenience was placed inside the bag. Artifacts were brought back to the Landmarks Preservation Commission's archaeology laboratory every few days. When the fieldwork was completed, Ms. Baragli, with the assistance of Sandra Famolare, proceeded to clean all the artifacts. Ceramics, glass, and clay smoking pipes were soaked in water and scrubbed with a tooth brush. Fabric, leather, mortar, bricks, wood, shell, bone, and floral material was

cleaned, gently, with a dry brush. Metal was hammered and scraped, with great care to remove the earth and the encrustation of rust which often disguised completely the nature of the object within.

During the cleaning process, artifacts were always tagged with their provenience number. After the cleaning process was completed selected artifacts (ceramics, glass, clay smoking pipes) received individual provenience numbers. Most of the architectural material (metal, mortar, brick, and window-glass) was tagged and bagged (with labels on the tags and bags) but did not have provenience numbers applied to their surfaces.

Artifacts from the categories selected for individual labeling all had the same first four code letters: SHMC (for Snug Harbor Matron's Cottage); each was numerically coded with its exact site location. For example, a fragment of pottery excavated in square number 1, level/context 1 would be labeled SHMC101. Care was taken that each label was in a place that would not be obscured during the subsequent mending process. A coat of clear nail polish was applied to the spot to be labelled to ensure that ink did not penetrate the surface of the artifact. When the nail polish was dry, the provenience code number was written on it in indelible ink. After the ink was dry, a second layer of nail polish was applied to serve as a sealer. The use of this method allows for the removal of the label should it be necessary. Artifacts which were too tiny to be labelled were placed in small containers on which the type (e.g. ceramics, glass, metal, etc.) and provenience were written. When cleaning and labelling were completed, artifacts previously grouped according to general category (for example, ceramics) were sorted into more specific subcategories

(redware, buffware, delft, etc.).

Artifacts were then placed in plastic Ziploc bags according to specific sub-groups (e.g. transfer-printed white earthenware) and site location. Each bag was labelled on the outside with a waterproof marker. For the purpose of safety, a card, stating the same information, was placed inside the bag.

Some artifacts, as was mentioned earlier, were not labelled individually. Nails, for example, are usually too small, rounded, and rusty to be labelled with sufficient clarity. Each nail, though, was examined to determine its diagnostic physical characteristics (hand-wrought, cut, or wire) in order to obtain architectural information and approximate dates for the objects. The catalogue sheets contain a record of the exact number of nails of each subcategory (hand-wrought, cut, or wire nail) within each strata: e.g., square one, context one contained 15 wire nails and 8 cut nails.

It is often impractical to label window glass fragments individually. The diagnostic value of these window glass fragments lies in the interpretation of the quantities retrieved from each separate time period. For this reason, window glass fragments were washed, identified according to historic period, counted, and then catalogued and bagged according to their site location. Each bag was labelled on the outside, and a card placed on the inside indicating the exact site location (square and level/context). Diagnostic nails and a window glass fragments that were of particular importance, and/or well-preserved, were labelled or tagged and a special note added to the catalogue sheets. In this way, these artifacts can be easily retrieved

from storage for further study or museum display.

It is helpful to explain in more detail the process of cataloguing the collection. Each catalogue sheet was headed with the site name and location (square and level/context number) and type of artifact (e.g. buttons) to be catalogued. These sheets were prepared to meet the universal needs of a cataloguing system and also to reflect the characteristics of the artifacts found on the specific site to be documented. They were designed to make it possible to enter and to read the necessary data quickly and clearly. It was determined that each category of artifacts required a catalogue sheet which is appropriate to its particular nature (see Appendix 1). For example, the total number of brick found during an excavation is measured by weight, but ceramics, glass, and nail counts are more helpful in analysis than just volume weights.

The cataloguing process is critical to the interpretation of the artifacts and the site. Because of the availability of documentary information about smoking pipes, ceramics, and glass bottle necks and bases, these artifacts can be dated quite precisely (Baughner-Perlin 1982; McKearin and McKearin 1941; Noel Hume 1970; and Thorn 1947). Their presence at a particular site and the record of the stratigraphic context allows the archaeologist to assign a time span to each level.

Using a dating system devised by Mr. J.C. Harrington and refined by Dr. Lewis Binford, it is possible to date with reasonable precision, the stems of clay smoking pipes made by the British between 1600 and 1800. During this period, pipes were made with longer and longer stems and the size of the hole in these stems (bore hole) became smaller and



smaller in diameter. By measuring the bore hole, and inserting this number into a mathematical equation, one can determine the date of manufacture of the pipe stem (see Appendix 2). The designs on the pipe bowls changed from the 1600's through the 1800's and these motifs also can be used to date the pipes (see Appendix 2).

Changes in style and in technical development make it possible to date ceramics and glass bottle necks and bases. For example, it was not until the 1770s that English potters were able to produce a ware of blue whiteness, pearlware. Pearlware became the most popular kind of ceramics until the 1820's when whiteware (white colored earthenware) began to take its place. After 1820, some of the patterns that began on pearlware, such as willowware and annularware, continued to be produced on whiteware (white bodied earthenware).

The presence of pearlware at a particular level tells us that the level in question can be given a date no earlier than 1770. Because of its "pearl-like" whiteness, pearlware lent itself to the application of colored designs, and the presence of particular design motifs can allow us to be more specific in dating the sherd and the excavation level at which it was found. For example, pearlware with a blue transfer printed "willow" pattern was not produced until after 1792 but this design was used throughout the 19th and 20th century on whiteware (Noel Hume 1969:130). Pearlware decorated with horizontal bands of color (annularware) does not appear, however, until 1795 and it was produced on whiteware during the 19th century (Noel Hume 1969:131). If annular designed pearlware is found in a particular stratum containing artifacts from the late 18th century, then its presence at a particular stratum given a date of at least 1795 to that level.

Technical developments in the 19th century allows us to determine whether bottle glass was made before or after 1820. Until that time, bottles were free-blown. Molten glass was placed at one end of a blowpipe, and the glass blower, by forcing air through the other end, rolling the molten glass on a marble or metal slab, and pulling the glass to form a neck created a bottle (McKearin and McKearin 1941). After 1820, molds began to be used to make glass. The molten glass was blown into one of a variety of molds, and removed when it was cool. These molds were hinged to allow for the removal of the bottle, and therefore left seam marks on the finished product. The presence of seams on a bottle indicates that it was made after 1820.

When all possible dates have been recorded on the catalogue sheets, the mending process can begin. Water-soluble household glue was used so that, if necessary, the mended fragments can be separated. In addition to providing meaningful objects suitable for museum display, mended pieces give the archaeologist information about site disturbance. If fragments from different locations can be joined together, we know that those particular locations have been disturbed at some point in time and that other artifacts from those two locations must be analyzed accordingly.

When all mending possibilities are exhausted and documented, the artifacts are re-bagged. The bags are then put into boxes according to category (for example, ceramics, bottle glass, or clay smoking pipes) for reference and storage.

Once mending has been completed, the archaeologist can group certain levels together. After the artifacts have been dated as precisely as

possible on the basis of historical documentation; one can assign a time span to each of the levels excavated. A dating technique called terminus post quem (the date after which) is used. The date given to a particular level can only be later than the most recent artifact found in that level. Because artifacts have a time span as opposed to an exact date (most objects are produced over a period of time, and not "just once"), it is practical to find a mean date for each category of artifact at a particular level. This date is obtained by averaging the dates of all the artifacts of a particular category at a specific level. It must be remembered that an artifact can occasionally slip down from one level to another during the excavation. The presence of water or the instability of the soil (i.e. sandy soil as opposed to clay or silt) at the site can be the causes of this slippage. For example, if one 19th century artifact was found in a stratum that contained 17th century artifacts, it could be assumed that the 19th century artifact slipped from a higher level (closer to the ground surface) into this lower level.

The principle of terminus ante quem (the date before which) can also be used to date a level. This dating technique is based on the assumption that the absence at a particular level of a type of artifact for which the date of origin is documented indicates that the level pre-dates that date of origin. For example, if no pearlware is found in a specific soil stratum, it is rational to assume that this excavation level pre-dates 1770 providing that other artifacts from the level date before 1770.

One can then average the mean dates of all of the types of artifacts at a particular excavation level to find the mean date of that level.

#### CHAPTER FOUR: ARCHAEOLOGICAL INTERPRETATIONS

Chapter Four presents the research questions that were tested during the field work at the Matron's Cottage site and the results of the artifact and historical analyses. The interpretations of the material uncovered at the site are based on both an analysis of the artifacts and additional research in the archives of Snug Harbor. The conclusions are based on historical and archaeological data used in tandem for a more complete interpretation of the site.

The specific diagnostic artifacts (ceramics, bottle glass, clay smoking pipes, nails, and architectural elements) found within each stratum at the Matron's Cottage site enabled us to assign a date range to each of these levels. In some cases two or three strata could be combined together as one cultural context -- for example, the artifacts from three different soil strata appear to have been deposited by the same people. Archaeologists are rarely able to date a deposit to a very specific time period (e.g. 1867 or 1823), but usually are able to date material deposited within a range of ten to twenty years. Clearly, broken objects and left over food were discarded many times during each time period, and hence, various soil strata can be combined to reveal information about a particular family (the Steward's family) or a group of residents (the Matron and the female employees). At the Matron's Cottage site, the artifacts are assignable to two distinct time periods: 1) 1845-1870, and 2) 1870-1900. Artifacts dating from the period 1845-1870 were found in the brown soil layer (the level directly above the sterile soil), the red stratum, and in the two waterpipe

trenches.<sup>1</sup> Once dates were assigned to all of the levels, we were able to analyze the artifact assemblage in light of our research questions.

**Research Question One:** Does the archaeological data reveal a different use for the Matron's Cottage other than the use described in the Historic Structures Report for the Harbor?

According to the Historic Structures Report, the Matron's Cottage was built in 1845, and was used as a wash house. In 1855, a new wash house was constructed and the cottage was used as a residential building (Gibson, Shepherd, and Bauer 1979: 4. 17/1).

Archaeologically, we have a different picture of the site. No artifacts were found which can be associated with a wash house such as clothes pins, clothes line, wash tubs, needles, pins, iron, thimbles, buttons, wash tubs, etc. Only four buttons were uncovered that could with probability be associated with the wash house. However, these buttons were not found in the soil layers associated with the period 1845-1855 when the building was used as a wash house.

The archaeological data suggests that the building was used as a private residence from its initial occupation. The archaeological assemblage shows that 76% of the collection consists of kitchen refuse, e.g. dishes, glasses, bottles, tablewares, etc. (see Figures 4:1 and 4:2); 18% architectural material (e.g., window glass, nails, spikes, hinges, etc.); 5% personal items such as clay smoking pipes and buttons, and less than 1% are American Indian artifacts.

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<sup>1</sup> Artifacts from this time period (1845-1870) were found in the following soil contexts: Square 1 - level 10; Square 2 - levels 8, 10, 12, and 16; Square 3 - levels 11 and 12; and Square 4 - levels 7, 8, 9, 11 and 12. Artifacts from all other contexts date to the period post-1870.

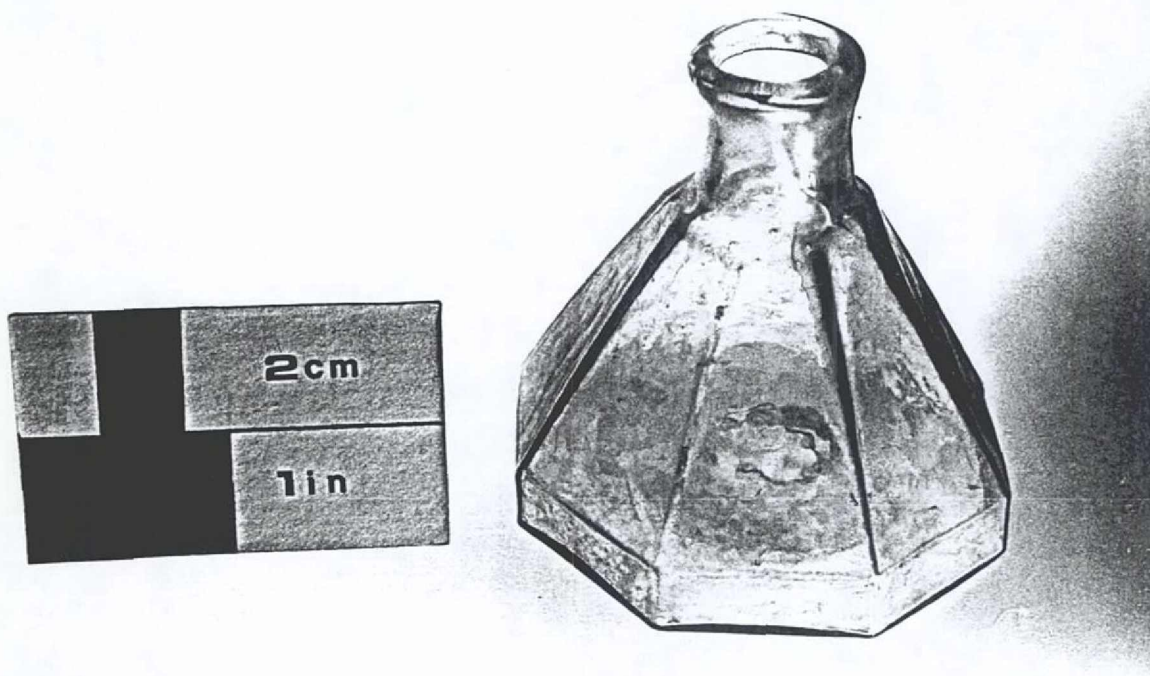


Figure 4:1 An aqua-colored, "umbrella" shaped inkwell. This mold-blown inkwell has a rolled-in lip and a glass-tipped pontil scar. Inkwell dates from period 1820-1880.



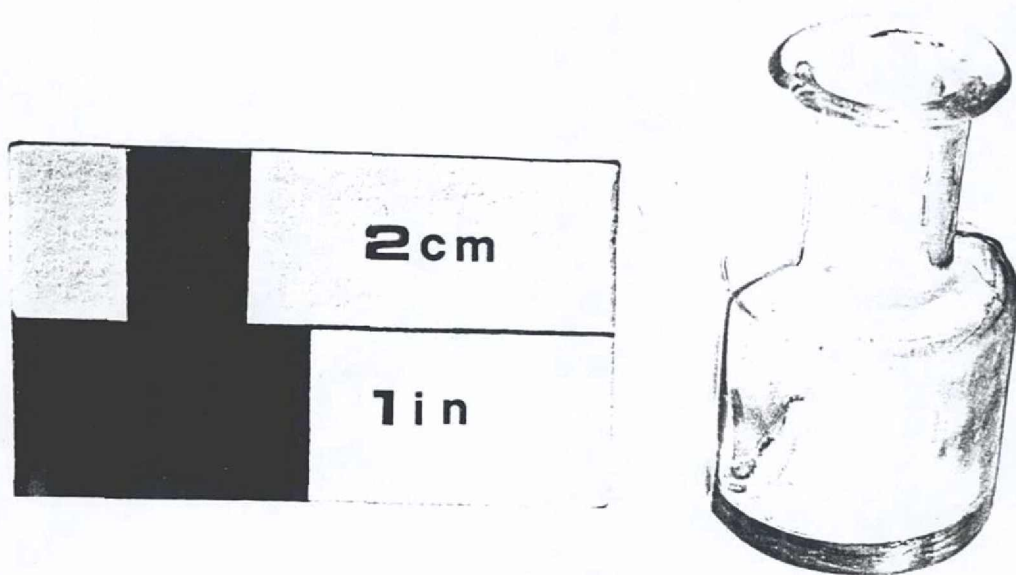


Figure 4:2 A mid-19th century medicine vial. Bottle was made from a bottom-hinged mold, contains a flared out lip and has a glass tipped pontil scar.

Research into the archives of Sailors' Snug Harbor confirms the findings from the archaeological record. When the 1855 Wash House was completed, the interior of the 1845 Wash House (Matron's Cottage) was divided into an apartment for the Steward and his wife, the Matron, with additional rooms and work areas for the female employees (Executive Committee Report, March 30, 1846, Sailors' Snug Harbor Archives, on file at the New York Maritime College, the Bronx). It is important to note that the documentary record contained information about the use of the house; the inaccurate interpretation occurred when the authors for the Historic Structures Report did not thoroughly research the records. The archaeological findings that sent us back to the archives make clear the importance of doing thorough documentary research before interpreting the use of an historic property.

**Research Question Two:** Does the archaeological record reflect status differences between the Steward and the Matron (and the female employees living with the Matron)? Is there a difference in the artifactual deposit when the house was being used by the Matron and female employees, compared to its use by the Steward and his wife?

Over the last ten years, archaeologists have studied how status differences are reflected in the archaeological record. Some archaeologists assumed that expensive high quality goods were associated with people of high status and inexpensive wares were only owned by individuals of lower status (Otto 1980:3). Recent studies of class and status have demonstrated that the differences in the material discarded by people from different classes is in the quantity of expensive wares not in the mere presence or absence of status goods (Baughner and Venables 1987; De Cunzo 1982; and Otto 1977). Archaeologists have focused on ceramic assemblages in their study of the material evidence of status. Lu Ann De Cunzo (1982) found that

19th century factory workers in Paterson, New Jersey were fashion conscious and owned some expensive dishes. However, De Cunzo (1982:22) found that the workers were not able to afford complete dinner sets and in some cases the few expensive dishes appeared to be "seconds". The artifacts discarded by late 19th century factory workers in Troy, New York showed that while they primarily owned inexpensive, undecorated dishes, they did acquire some expensive, decorated dishes (Baugher 1982). In studying various middle class and upper class families from the colonial and federalist periods, Sherene Baugher and Robert W. Venables (1985) found that the differences in the ceramic assemblages between these groups were in the quantity of high status wares and not merely in the quality of the wares, that is, upper class families were more likely to have more high quality ceramics than middle and lower class families. Both middle and upper class families owned expensive high quality ceramics -- but the middle class families had a few good pieces and the upper class families owned complete sets of expensive wares. At Snug Harbor we wanted to evaluate the status differences between the Steward, and the Matron and female employees as reflected in the archaeological record.

Sailors' Snug Harbor makes an excellent case study of a nineteenth century institution with members of almost every socio-economic strata represented within the community. The Harbor was a planned community with clearly defined activity areas, and residential areas. The hierarchical structure called for the separation of employee and inmate residences (NYC Landmarks Preservation Commission 1986:3). During the period of its use, the Matron's Cottage housed employees of very different ranks, the Steward (one of the officers of the institution) and the Matron and the female staff (a group of very low status employees). This site enables us to look at the artifact record with these status differences in mind. Our objective was to determine if the material culture reflected the known status differences between

these two groups (the Steward and his family and the Matron and the female employees). In order to address this question of status, we have combined documentary data and archaeological data.

In the 1842 changes to the Bylaws, the Steward, the accountant of the Institution, was made the Assistant Governor (or assistant director) of the Harbor. He was in charge of purchasing all supplies, and assisting the Governor in managing the institution. The Governor, Steward, Physician, and Chaplain were the officers of the institution. The Matron, on the other hand, was one of the low ranking people in the hierarchy. She directed the female staff employed for washing, ironing, and mending the inmates clothing. The Matron had to be literate because her responsibilities involved keeping an inventory of all laundry supplies, bedding supplies for the inmates, and household supplies used by the female employees. There were marked differences in the salaries of the employees. Table 1 shows a salary chart from 1889. In 1889, the Steward received \$166.66 per month, the Matron was paid \$50 per month, but the seamstress and laundress only received \$15 and \$12 per month respectively. In addition to the differences in responsibilities and pay there were other noticeable differences in the status of the Steward and female employees. The Steward always had larger and more spacious living quarters than the female staff.

For a time, the Steward and his family lived in the same building as the female staff. The immediate question was whether the documentary record could provide information that would enable the archaeologists to distinguish deposits discarded by the Steward from those of the female staff. Fortunately, the documents provided that information.

In the 1844 Bylaw changes it specifies that the female employees shall take all their meals in the general kitchen (the kitchen next to the seamen's dining hall) so that they could eat separately from the

Table 1: Sailors' Snug Harbor PayRoll, March 1889

JOB TITLE	MONTHLY PAY
* Steward	166.66
Chief Engineer	150.00
Apothecary	83.33
Blacksmith	65.00
1st Engineer	65.00
Farmer	60.00
Gardener	58.33
Baker	50.00
Cook for Main Dining Hall	50.00
Butcher & Carpenter	50.00
* Matron	50.00
Hospital Cook	45.00
2nd Engineer	40.00
Fireman (3)	35.00
Cartman	30.00
Nurses (9)	20.00
Night Nurse (3)	20.00
2nd. Hospital Cook	20.00
Orderly	20.00
3rd. Hospital Cook	18.00
Farm Hands (5)	15.00
* Seamstress (3)	15.00
Ass't. Cook for Main Dining Hall	16.00
* Cook for Matron's House	14.00
* Laundress	12.00
Head Waiter for Main Dining Hall	12.00
Clerk	12.00
Scrub Woman	12.00
Dock Master & Flagman	10.00
Librarian	6.00
Flagman	6.00
Mattress Maker	6.00
Waiters	6.00
Watchers	6.00
Ass't. Gardener	6.00
Swindherder	6.00
Dock Guide	4.00

\* Employees discussed in this report

sailors but within the same building. By 1873, the female employees were able to take all their meals in the Matron's Cottage and, in fact, a cook was hired to cook for the women; she was to live in the Matron's Cottage (Governor's Quarterly Report, March 31, 1873). From 1845-1872, the kitchen refuse was from the Steward and his family. From 1872 to 1880 it was a mixed deposit of refuse from the Steward and his family, with that from the female employees. After 1880, the Steward acquired his own house and the material discarded at the Matron's House was solely from the Matron and the female employees.

From 1845 to 1873, the Matron was also the wife of the Steward, so it made sense to have the Steward and the Matron living in the same building with the female employees. By 1873, Governor Melville decided that the functions of the Steward and Matron should be separated. He planned to separate the quarters of Steward and Matron and hire a single woman as Matron (Governor's Quarterly Report, March 31, 1873). In the Bylaw changes of 1873, the Steward was to be provided with his own dwelling house although the house was not provided for him until 1880. The Matron, now a single woman, lived in the Matron's Cottage with the female staff. In 1874, the Matron's Cottage was divided into two distinct components -- half of the building for the Steward and his family and the other half to be used for the Matron and the female employees and their work space. By 1878, the women's half was so overcrowded that the Governor recommended that a new house be built for the Steward (Governor's Quarterly Report, Dec. 30, 1878). In 1880, the Steward and his family finally moved into their new home, and the Matron's Cottage was used solely for the Matron and her female staff (Governor's Quarterly Report, June 18, 1880).

From an archaeological point of view, the trash deposits fall into three groupings: 1) pre-1870 material; 2) the 1860s trench; and 3) the 1870-1900 deposit. The pre-1870 material probably is the garbage from



the Steward and his wife, the Matron. The trench deposit could be the Steward/Matron's trash with garbage from the workmen, or garbage from some other site within the Harbor<sup>2</sup>. Because the soil mixture in the trenches is similiar to the soil layers found in the yard area of the Matron's Cottage, the garbage is probably from the Matron's Cottage. For this analysis the data from the trenches was not included in the comparisons of the Steward's deposit and the assemblage from the female employees.

Archaeologically there are differences in the ceramic deposits (see Table 2). For this study the ceramic wares were divided into three groups: 1) decorated dishes; 2) undecorated dishes; and 3) utilitarian wares such as mugs, bowls, and baking pans (see Figures 4:3 and 4:4). George Miller's (1980) analysis of merchants' records has shown major price differences between decorated and undecorated dishes. Table 3 shows the numerical and percentage differences between decorated and undecorated dishes found at the site during the two time periods. The decorated dishes represent, in archaeological terms, the status wares. During the period of prime use by the Steward and his wife, the Matron, 41% of the dishes were the expensive decorated wares (see Table 3 and Figure 4:5). After 1870, only 17% of the dishes were decorated; thus making this deposit less than half the amount discarded by the Steward. It must be noted that some of the post-1870 decorated wares may be attributed to the Steward's residency (1870-1880) and that the actual percentage used by the female employees may be even lower than 17% thus making the differences in the two deposits even more pronounced.

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None of the trench artifacts cross-mended with artifacts from the pre-1870 deposits or from the 1870-1900 deposits. None of the designs on the trench ceramics had the same motifs as designs on ceramics from the pre-1870 or post-1870 deposits. There were similiar designs but they were not the same patterns.

Table 2: Total Ceramics Found in the Three Components at the Matron's Site

	1840-1870		Trench 1860-1870		1870-1900	
	Percentage	Number	Percentage	Number	Percentage	Number
decorated dishes	36%	30	22%	43	14%	131
undecor. dishes	51%	43	60%	114	72%	657
utilitarian wares	13%	11	18%	35	14%	129
totals	100%	84	100%	192	100%	917

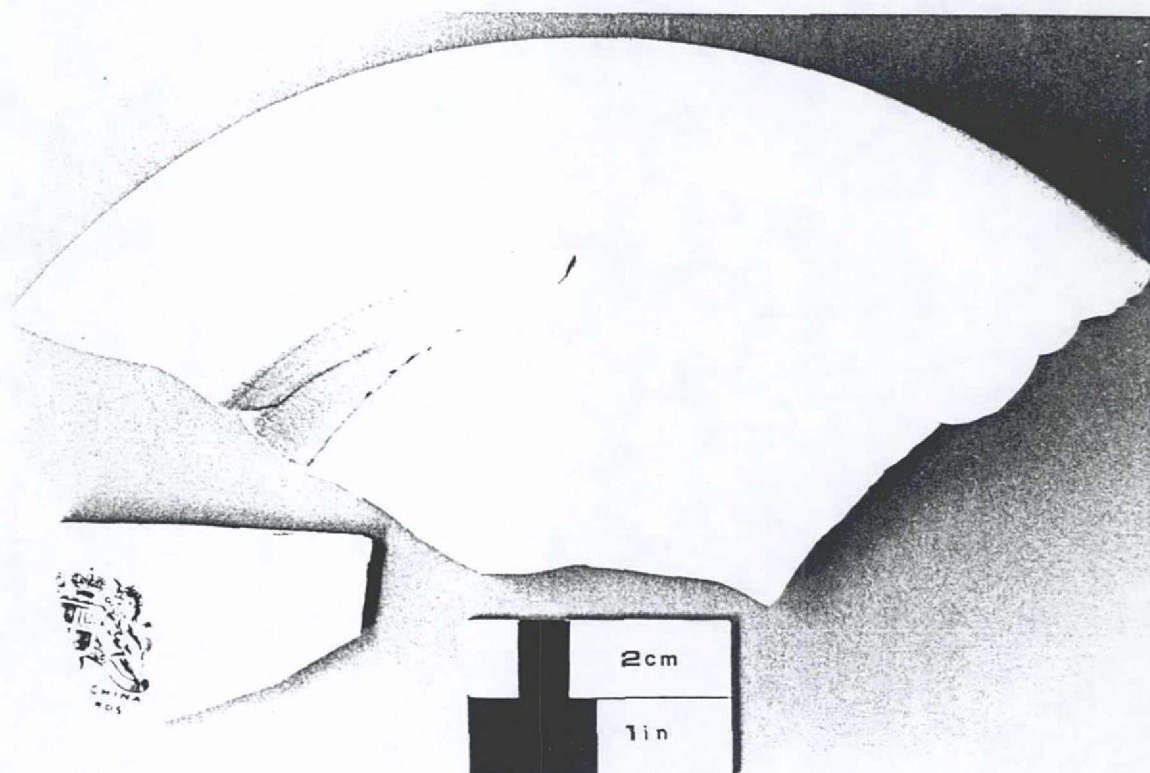


Figure 4:3 A white ironstone plate, late 19th century. The sherd on the left contains a maker's mark. (Photo: Carl Forster, N.Y.C. Landmarks Preservation Commission, 1986.)

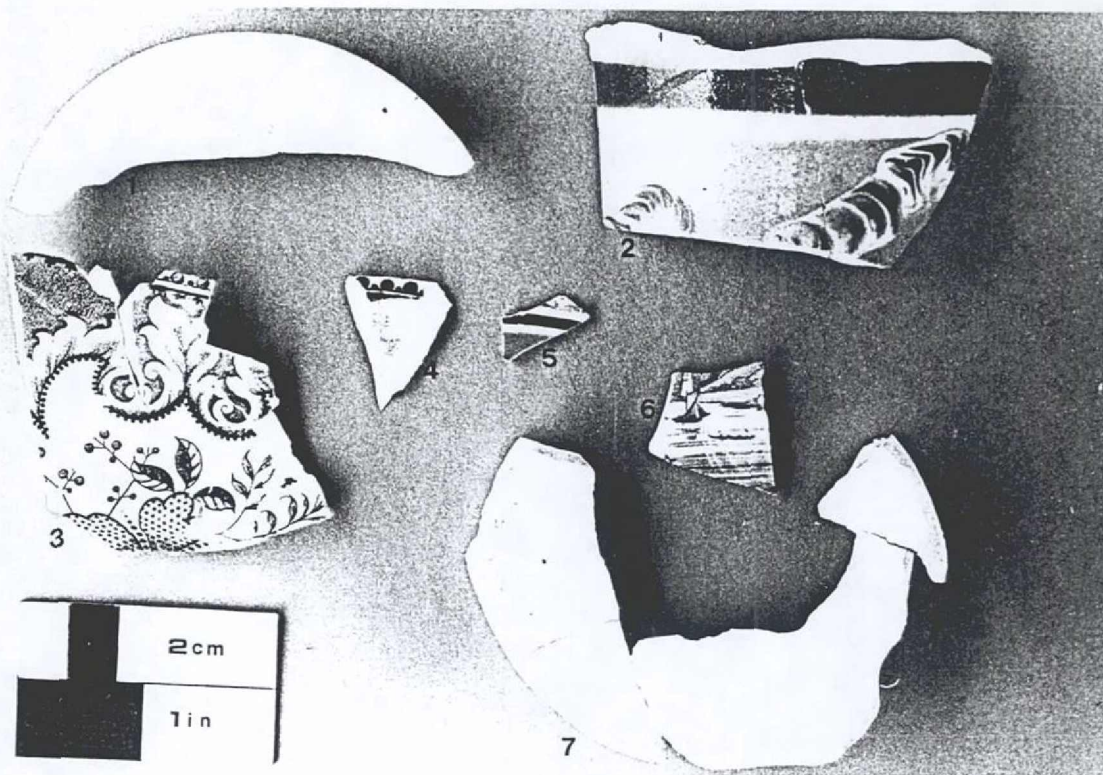


Figure 4:4 Dish shards from the Matron's Cottage show the variety of wares used in the house. (Photo: Carl Forster, N.Y.C. Landmarks Preservation Commission, 1986.)

- 1: Undecorated whiteware bowl rim.
- 2: Whiteware mocha-decorated mug with annular bands.
- 3: Brown transfer-printed soup-plate.
- 4: Hand-painted white bowl rim.
- 5: Whiteware bowl with annular bands.
- 6: Early 19th century black transfer-printed whiteware bowl. Scene is probably of New York Harbor.
- 7: Undecorated white bowl base.



Table 3: A Comparison of Decorated to Undecorated Dishes from the  
Matron's Cottage Site

	1840-1870		Trench 1860-1870		1870-1900	
	Percentage	Number	Percentage	Number	Percentage	Number
decorated dishes	41%	30	27%	43	17%	131
undecor. dishes	59%	43	73%	114	83%	657
total	100%	73	100%	157	100%	788

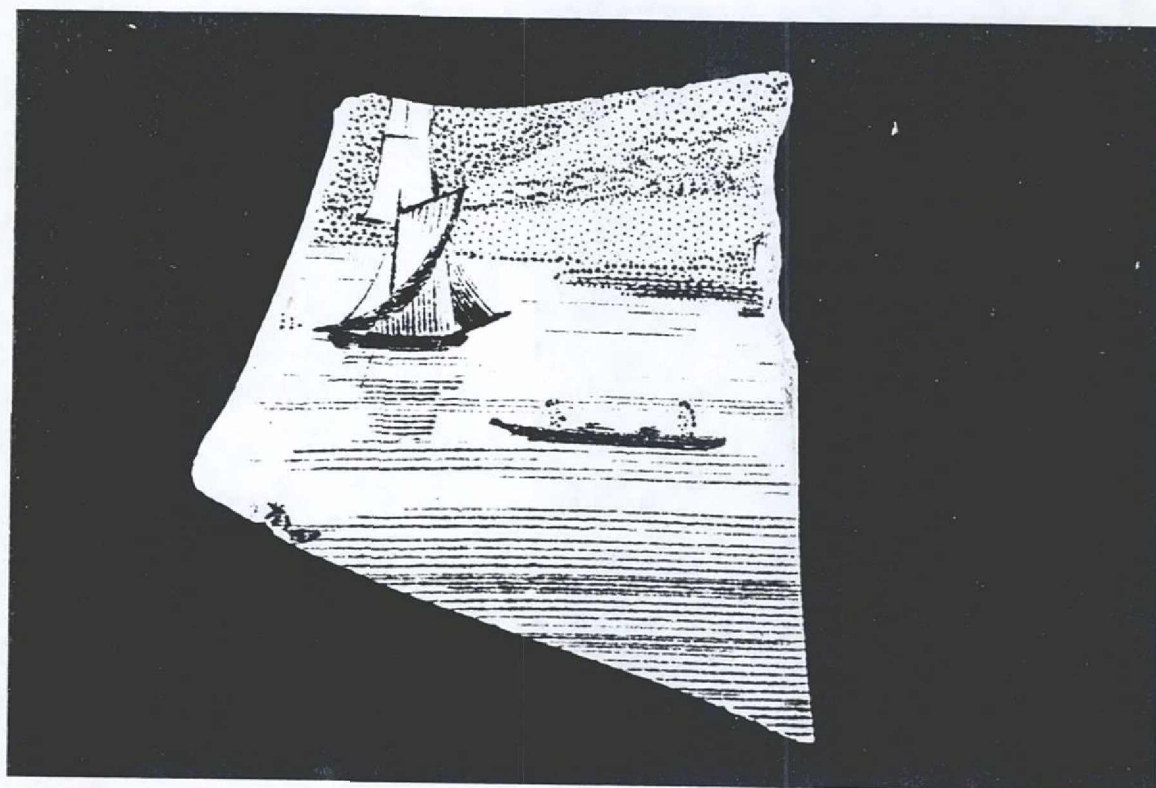


Figure 4:5 Enlargement of the dish sherd from Figure 4:4. Similar examples of scenes of New York Harbor can be seen on Staffordshire pottery of the 1820's. (Photo: Carl Forster, N.Y.C. Landmarks Preservation Commission, 1986).



The quantity of decorated wares in the trench deposit falls between the Steward's and the female employees' refuse; i.e. decorated dishes amounted to 27% in this deposit. The major difference is in the percentage of utilitarian wares; the trench contained 18% of these wares in contrast to 13% for the Steward and 14% for the female employees. Perhaps these extra stoneware and redware mugs and bowls were deposited by the workmen who dug the pipe trench.

Another archaeological indicator of the difference in lifestyle between the Steward and the female employees is in the presence of clay smoking pipes (see Figures 4:6 and 4:7). Of the 145 clay smoking pipe stems only 13 or 9% were associated with the Steward. Of the 58 pipe bowls found, only 2 or 3.5 % were deposited by the Steward. Were these late 19th century female employees avid smokers or does the presence of these smoking pipes indicate male visitors to the house? It is also possible that some of the pipes can be attributed to Captain Nicklason (Steward 1871-1873) or Joseph Clark (Steward 1874-1889), the two Stewards who lived in the house during the 1870s.

The archaeological record also shows noticeable differences between the faunal material discarded by the Steward and that of the female employees. Archaeologist Kate T. Morgan undertook a study of the faunal material from this site (see Appendix 3). During the period 1845-1872 (the Steward's tenure at the house), the bone refuse indicates a diet of beef, mutton, pork and poultry. Morgan (Appendix 3:114) states that "such a diet in correspondence with the presence of expensive ware-types points to the affluent position the Steward occupied at Sailors' Snug Harbor". The bone refuse tabulated from the period 1872-1900, according to Morgan (Appendix 3:114) "reveals a drop in the presence of beef and pork, while the presence of mutton or lamb is on the rise". It is important to note that sheep were raised at Snug Harbor and may have provided an inexpensive source of meat for

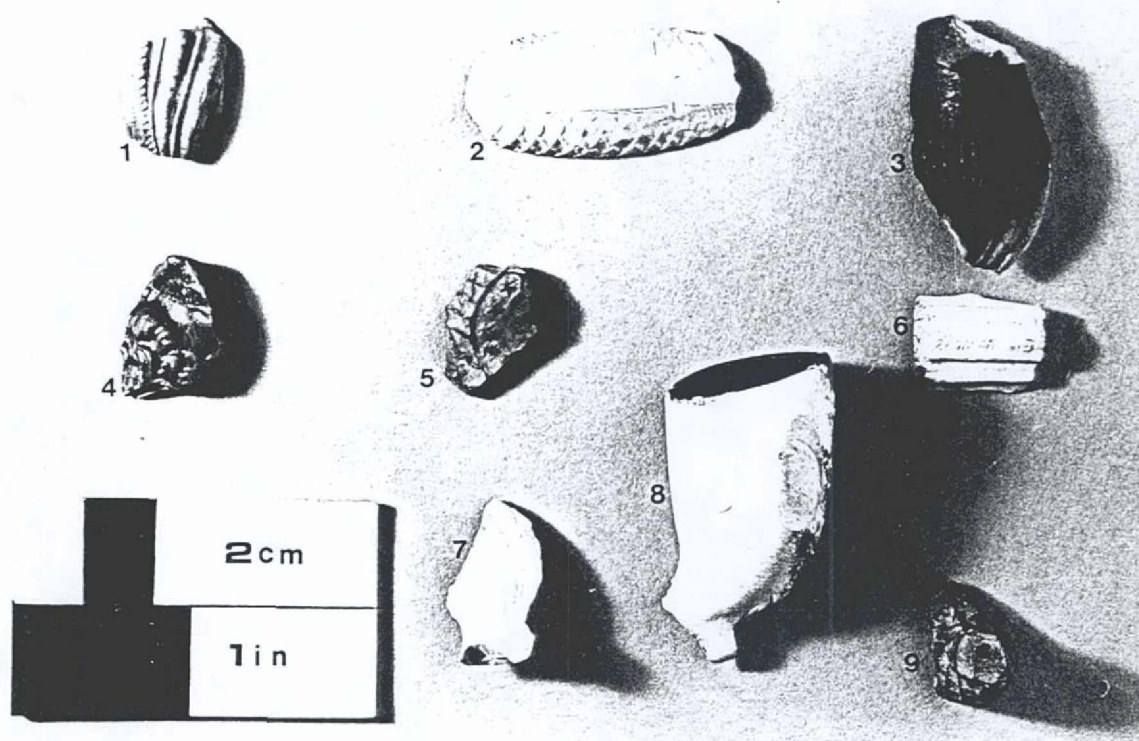


Figure 4:6 Decorated Clay Smoking Pipe Bowls. (Photo: Carl Forster, N.Y.C. Landmarks Preservation Commission, 1986.)

- 1: Fluted bowl fragment, 19th century.
- 2: "T.D." bowl fragment with cross-hatched motif, 1812-1850.
- 3: Fluted bowl fragment with rope motif, 19th century.
- 4: Red clay bowl fragment showing the "beard" of human face.
- 5 and 9: Bowl fragments with cross-hatching and stars, 1812-1850.
- 6: Fluted bowl fragment with embossed basket design, early 19th century.
- 7: Fluted bowl fragment with bore hole, 19th century.
- 8: "T.D." bowl fragment with leaf decoration on mold seams, 1790-1830.



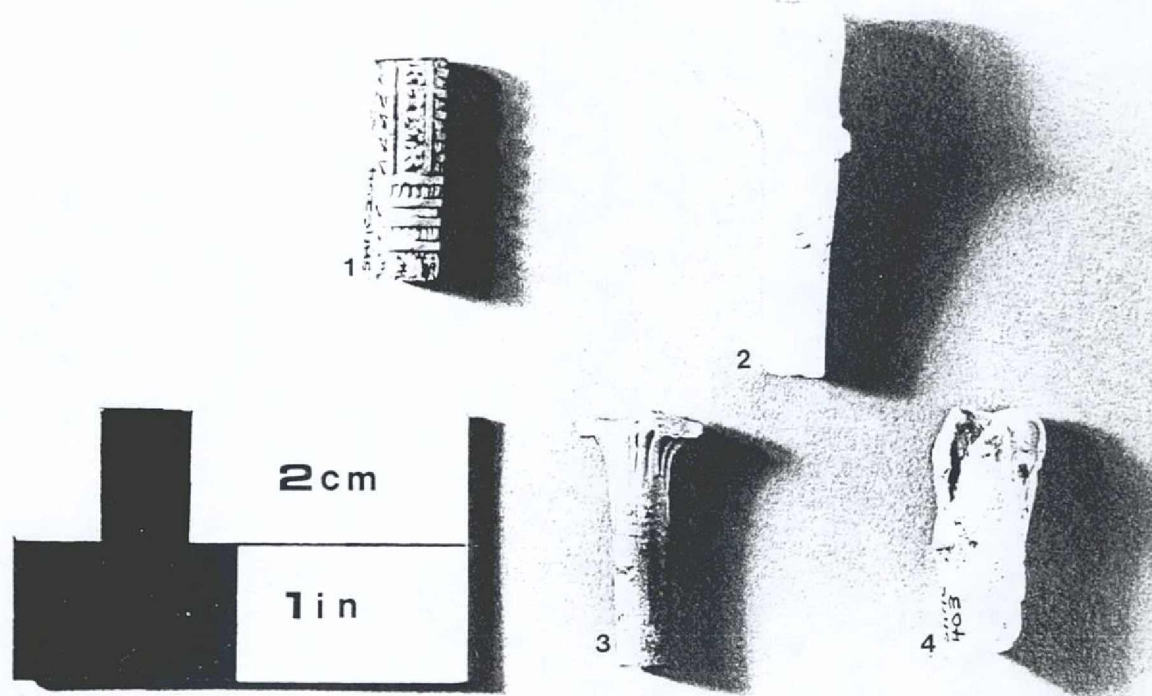


Figure 4:7 Decorated Clay Smoking Stems. (Photo: Carl Forster, N.Y.C. Landmarks Preservation Commission, 1986).

- 1 and 2: Peter Dorni stem fragments, 1850-1880.
- 3: Red fluted stem fragment, 19th c.
- 4: Scrolled bowl base fragment.

some of the staff. Morgan notes that during the 1872-1900 period there was both a noticeable decrease in the expensive decorated tablewares and a decrease in the variety of meats being consumed by the occupants of the Matron's Cottage.

While the archaeological assemblage does show differences in the ceramic, smoking pipe, and faunal deposits, there is one drawback to this study -- we are comparing material from two different periods of time. Ideally, archaeological deposits should be taken from the yard area of the Steward's house (1880-1900) and compared with the material left by the female employees during the same time period. Noticeable differences should show up when comparing collections from the same time. Because of the time differential in this study, we can only say that there are noticeable differences in the material possessions of the Steward and the female employees and that these differences may reflect differences in status.

**Research Question Three:** Was there a difference in the archaeological material from the Matron's Cottage and the material discarded around the Main Complex by the Sailors? In other words, what was the extent of the differences in the material possessions of the inmates (sailors) and in those of the employees during the same time periods?

Sailors' Snug Harbor, like other 19th century institutions, was operated in a paternalistic manner. The Harbor was an enclosed community, which was emphasized by the fences and walls that separated it from the surrounding community of New Brighton. Within the institution, there was a clearly defined hierarchy starting with the Governor and Assistant Governor (the Steward) followed by minor officials, support staff, and ending with the seamen at the bottom. This hierarchy recreated on land the very strictly ranked society that existed on board a ship. While it is clear that the old adage, "rank

has its privileges" is true, archaeologists have raised the question of whether the material possessions of those people on the lower end of the social order (within an enclosed society) are noticeably different from those within the middle range of that closed society (even though their privileges may be different).

For this report a comparison was made of the archaeological deposits associated with the sailors' quarters and those deposits from the Matron's Cottage. In 1982, archaeologist Jo Ann Cotz placed numerous shovel tests and trenches around the seamen's buildings. She tested 1,082 cubic feet of soil and uncovered 300 ceramic sherds. The artifact inventory from her report (Cotz 1984) divides the ceramic deposits into two major time periods 1830-1860s, and 1870s to 1900. In the dig at the Matron's Cottage we excavated only 224 cubic feet of soil but unearthed 1,193 ceramic sherds. Table 4 outlines the differences and similarities in these deposits. There was a marked similarity between the percentages of the decorated and undecorated wares for both the seamen and the female employees. The seamen had 20% decorated dishes while the female employees had 17% decorated wares. The major difference in this time period is that overall, 46 % of the sailors' ceramics were utilitarian wares including stoneware and yellowware bowls and mugs whereas only 14% of the ceramics from the female employees were made up of utilitarian wares. It may be that the female employees were using the very inexpensive cream-colored wares for some of their utilitarian wares. In terms of expense, cream-colored bowls and mugs were about the same price as yellowware mugs and bowls.

There is a noticeable difference between the deposit associated with the seamen (1830-1860) and the Steward's material (1845-1870). The seamen had 20% decorated dishes whereas the Steward had 41% decorated dishes. This doubling of the amount of decorated wares may be

Table 4: A Comparison of the Ceramics Deposited in the Sailors' Yard  
and the Matron's Yard

	SAILORS' YARD				MATRON'S COTTAGE SITE			
	1830-1870		1870-1900		1840-1870		1870-1900	
	%	#	%	#	%	#	%	#
decorated dishes	16%	31	11%	11	36%	30	14%	131
undecor. dishes	63%	125	43%	44	51%	43	72%	657
utilitarian	21%	42	46%	47	13%	11	100%	917



attributed to the Steward's status. At this time, only 21% of the seamen's collection was comprised of utilitarian wares and only 13% of the Steward's collection was made up of these vessels.

These statistics on the Steward, female employees, and the sailors correlate well with data from plantation studies. For example, in studies of southern plantations, archaeologists found a similarity in the material goods owned by the black slaves and the white overseers even though there was a marked difference in their status (Otto 1977). John Solomon Otto (1977) found a marked similiarity between the slaves' and overseers' ceramics. At Cannon's Point Plantation, Otto (1977:105) found that the plantation owners had purchased ceramics for both the overseers and the slaves. In addition, Otto(1980:9) notes that "the overseers' material living conditions may have approximated those of the slaves". Otto (1977, 1980) found that the marked differences were between the material goods discarded by the plantation owners and those discarded by both the overseers and the slaves. The archives of Snug Harbor reveal similiar information. The institution provided all the dishes for both the seamen and the female employees. In fact, the Matron had to keep a monthly record of the number of dishes broken and the number of replacement dishes that were purchased for her staff (Inventory of Supplies at the Matron's House, subsection Matron's Department 1888-1897, on file at the archives at Snug Harbor Cultural Center). The Steward and all the other officers had to purchase their own supplies, including food (1873 Bylaws, Archives Sailors' Snug Harbor, on file at the New York Maritime College, the Bronx). So the Steward was able both to choose and afford status wares for his dining table, whereas the sailors and the female employees had to use whatever was given to them.

Research Question Four: Is there archaeological evidence that American Indians had lived on the site of Snug Harbor?

Snug Harbor is a coastal site on an island rich in Indian history. However, the Harbor is located on a part of the island that has received very little attention from archaeologists. The fact that almost no Indian sites have been located on the north shore near the Harbor does not imply that Indians did not settle here; it simply means that no one has thoroughly examined the area. Archaeologist Edward Lenik was hired by Landmarks as a consultant to assess the Harbor's potential for containing Indian material. Lenik evaluated the findings in Jo Ann Cotz' (1984) archaeological report on Snug Harbor, and then did two thorough walk-over surveys of the Harbor. In analyzing the Harbor's potential for containing Indian sites Lenik looked at several different variables, that is, the area's relevant environmental factors, and the degree of contemporary disturbance. Lenik identified two zones at the Harbor that had the potential for containing prehistoric material. Lenik describes the two areas as follows:

The first zone begins at a point northwest of the "new" Governor's House and runs southwest behind the house and the 5 adjoining cottages..... This zone is lightly wooded, flat, well-drained land, and generally undisturbed.

The second potentially sensitive zone is located in the southwest corner of the property. This zone is wooded, undisturbed,....is well-drained, somewhat sheltered, and in close proximity to the stream (Baugher, Baragli, DeCesare, and Venables 1985:44).

The Matron's Cottage is not located in one of the sensitive zones but Native American artifacts were found.

Chert flakes were found as well as a Levanna type projectile point, which dates to the Late Woodland Period or A.D. 1,000-1600 (see Figure 4:8). However, all of these artifacts were found in levels with nineteenth century artifacts. How can we explain their presence at the site? The stone tools recovered from the site are made of material commonly found in the New York City area. It is likely that the chips

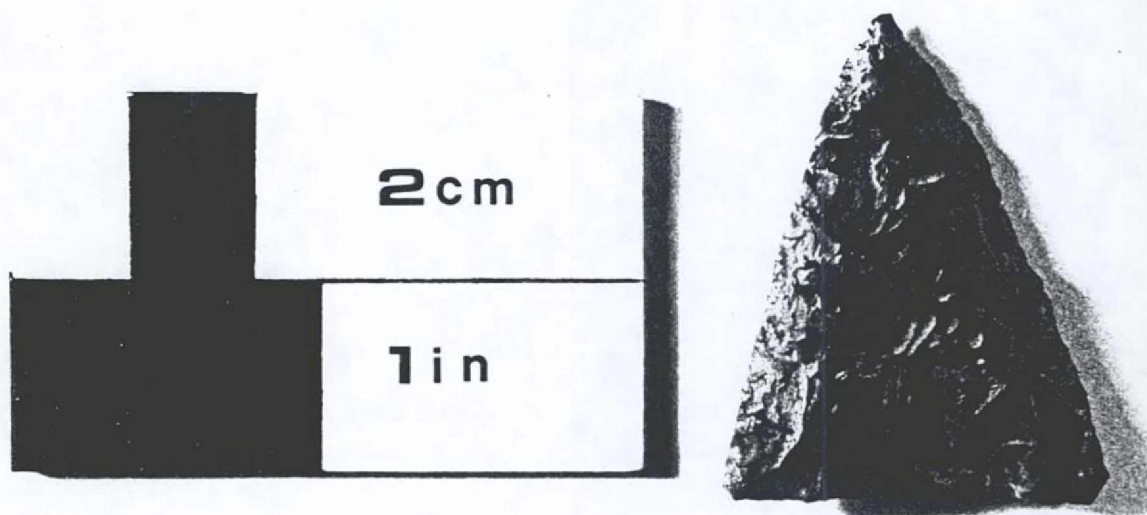


Figure 4:8 American Indian "Arrow-Head". Levanna projectile point, green chert, middle to late Woodland period (A.D. 1000-contact period).  
(Photo: Carl Forster, N.Y.C. Landmarks Preservation Commission, 1986).

and flakes were discarded years ago by the Indians themselves, and when the trenches were dug for the drain pipes, these artifacts were disturbed from their original context and were redeposited with the fill from the trenches. Native American artifacts were found in 19th century deposits in Jo Ann Cotz' 1982 shovel tests. Each time more local Indian artifacts are unearthed at the Harbor, it provides more credence to the belief that Native Americans had lived on the Harbor property.

**Research Question Five:** In the late nineteenth century and early twentieth century, garbage collection services became more available to the administration of Sailors' Snug Harbor. Therefore, was there a noticeable decrease in the number of artifacts deposited at the site?

In the late-nineteenth century there was growing concern about general sanitary conditions. The Richmond County Board of Health Report of 1873 discussed the problems of garbage disposal and suggested that each town establish some mechanism for garbage collection (Archives of the Staten Island Institute of Arts and Sciences). In the village charters of New Brighton (1875), Edgewater (1886), and Port Richmond (1893), there were specific ordinances regarding garbage disposal with fines levied against discarding any type of refuse in the village streets, parks, on village property, or on vacant lots (Archives of the Staten Island Institute of Arts and Sciences). Since the ordinances regarding garbage disposal are quite lengthy, it appears that there were numerous violations. In his 1902 Borough President's report, Cromwell notes that the Borough of Richmond had house to house garbage pickups in all but two small villages. The documentary record indicates that methods of garbage disposal were a major concern to both politicians and health officials during the late nineteenth and early twentieth centuries. Archaeology enables us to look at these sanitary

practices in regard to specific sites and specific families.

In comparing the 20th century archaeological deposits from Snug Harbor with 20th century material from other Staten Island sites, striking differences were observed. Twentieth century household garbage was found in the yard areas of the Edwards House in Richmondtown and at the Cutting House in Sandy Ground (Baugher-Perlin 1979; Cotz, Lenik, and Githens 1985). Buried in the yard area of the Edwards House was a variety of household garbage and the stripped remains of two Model T Fords, along with many broken car parts; all of this garbage dated to the period 1900-1930 (Baugher-Perlin 1979). The owners of the Cutting site were burying garbage in their yard up through the 1970's, in spite of free garbage collection service provided by the New York City Department of Sanitation (Cotz, Lenik and Githens 1985). In contrast to these sites, at Snug Harbor there is a noticable lack of 20th century garbage.

Only three artifacts of the almost 4,000 artifacts found at the Matron's Cottage site date to after 1900. These artifacts were three fragments of bottle glass that were associated with the remnants of the 1906 road. In addition to the three artifacts, the ash layer associated with the road does contain some household garbage, i.e., very small fragments of broken plates, glasses, glass bottles, and a few animal bones which could not be dated precisely. It is possible that this garbage was mixed with the ash to create the bed for the road. In the fifty shovel tests at the Harbor, there was also a noticeable lack of twentieth century artifacts (Baugher, Baragli, and DeCesare 1985). The archaeological record indicates that the directors of Sailors' Snug Harbor had taken steps to insure that proper twentieth century sanitary standards were maintained at the Harbor. The documentary record confirms the findings from the archaeological record.

In 1901, Snug Harbor installed a "garbage destructor"; and this

incinerator process left only ash which was used as fertilizer (Greene Street Collection, Box 35, file 7). By 1918, the Harbor was carting the garbage away and looking for new locations for depositing the ashes (Greene Street Collection, Box 35, file 7). It is important to add that the seamen were required to work five hours per day for at least three days a week unless they had a medical excuse from the Harbor physician (Shepherd 1979: 23). Part of the work may have been cleaning and maintaining the property, thus partially accounting for the relatively clean condition of the grounds.

**Research Question Six:** In the last third of the nineteenth century there was growing concern over health problems related to unsanitary practices. Did Sailors' Snug Harbor install water and sewer systems as soon as these public utilities became available on the north shore or did they continue to use wells and privies throughout the nineteenth century?

By the second half of the nineteenth century, citizens of Staten Island had become very concerned about the link between health problems and unsanitary living conditions. In a newspaper article in 1864, Dr. Anderson, health officer for the Town of Southfield, discussed the reasons why families must clean their privies and noted that some privies were in a "most filthy state, their contents overflowing upon neighboring lots and finding their way to neighboring drains" (Richmond County Gazette, June 3, 1864). The concern over sanitary problems related to unclean privies was so great that the charters of various north shore villages have provisions about the cleaning of privies and fines for non-compliance (Charters of the villages of: New Brighton 1875, Edgewater 1886, and Port Richmond 1893, on file in the Archives of the Staten Island Institute of Arts and Sciences). The report of the Richmond County Board of Health (1873:3) suggested that all



villages require that privies be cleaned out and disinfected once a year. If this cleaning project, in fact, was undertaken, then this work probably would have removed most artifacts from the privies. However, since unsanitary health practices were a continuing concern to government officials throughout the late nineteenth century, it is clear that these health suggestions/rules were not being followed.

Since Snug Harbor prided itself on being a model institution, it would follow that the Harbor would opt to install modern health facilities as soon as they became available. In the archaeological work at the Matron's Cottage, no wells or privies were located. In the extensive shovel testing around the Chaplain's House (ca. 1890-1892) by the Landmarks Commission Archaeology Program, no privies or wells were located (Baugher, Baragli, and DeCesare 1985). In fact, in the excavation at the Matron's Cottage, two Orangeburg drainpipes were uncovered. Orangeburg drain pipes were used during the mid to late nineteenth century (Donald Plotts, NYC Landmarks Preservation Commission, personal communication). The artifacts found in the trenches for these two lines suggest a date in the 1860s or 1870s. The stoneware and redware sherds contained decorative motifs popular in the mid-nineteenth century. Shell-edged ware (popular from 1780s-1860s) was found on sherds from dishes. The archaeological evidence suggests that by the 1860s, water and sewer lines were being installed at the Harbor.

The documentary record provides clear evidence to support the archaeological conclusions. The archives of Sailors' Snug Harbor show that the Harbor had sewers, water closets, and piped water in advance of its use by the other citizens of the north shore. Plumbing and a toilet room were installed in the Matron's Cottage in 1866 (Greene Street Collection, Box 33, file 13). In 1868, the bathroom and water closets in the Doctor's house were connected to the main drain at the

Harbor (Governor's Quarterly Report, 1868). In the Engineer's Annual Report of 1878, the Harbor engineer states that he believes that the the Harbor has "more piping here than there is in all the houses in New Brighton combined". The Governor's Quarterly Report of Sept 30, 1872 states that a large amount of work was done in connection with the laying of water pipes throughout the Harbor complex. In 1875, Sailors' Snug Harbor became part of the Village of New Brighton, and had access to the public services provided by that village. In 1881, the village had a public water supply (eliminating the need for wells and cisterns). In 1884, the construction of sewers began and the sewer lines were almost completed by 1893 (Anom. 1893:50). Well after Sailors' Snug Harbor had established its own water and sewer lines, they were able to link up with the utilities being provided by the village of New Brighton.

Research Question Seven: As a model institution, the administration of Sailors' Snug Harbor was concerned with the physical appearance of the Harbor in the general upkeep and appearance of the grounds. Is this reflected in the archaeological record?

At the Matron's Cottage, there were clearly numerous alterations to the ground level. The original ground level was three feet lower than it is today (see chapter 2, pages 19-26 for stratigraphic details). Changing the ground surface seemed to be a common practice at the Harbor, whether it meant putting in new roads and paths or actually involved landscaping. In the archives of Snug Harbor there are documents showing various types of alterations to the ground level throughout the site. For example, in 1839, the Board of Trustees of Snug Harbor agreed "to have the ground on the east side of the Main building graded to correspond with that on the west side" (Board notes, Greene Street collection, Box 34, file 1). In 1860, the grounds

around the Physician's house had been graded and paved (Governor's Quarterly Report, Sept. 1869). In 1871, the Governor of Snug Harbor had undertaken extensive planting of trees, shrubs, and flower beds and had trees transplanted "to better positions" (Governor's Quarterly Report, March 27, 1871 and June 12, 1871). In 1871, the Governor "improved and graded the grounds along the east, south, and west sides of the Main Buildings" (Governor's Quarterly Report, March 27, 1871). In a letter dated June 1, 1917, the Governor notes that 490 loads of dirt had been excavated from space opposite the west gate and deposited in the swamp southwest of the blacksmith shop (Greene Street Collection, Box 34, file 1).

The buildings at Snug Harbor have a long history of structural alterations and adjustments. However, the archaeological excavation at the Matron's Cottage unearthed only a small quantity of window glass. Of the 229 fragments excavated (out of a total of 2442 diagnostic artifacts of all types) all date to post-1830. Only 18% of the total collection was made up of architectural material, e.g., window glass, nails, bolts, screws, hinges, etc. This is consistent with the findings in May 1985 from the 50 shovel tests in various area of the Harbor and with the results from the Snug Harbor shovel tests completed by Jo Ann Cotz in 1982. Compared to other 19th century sites, the Harbor contained very little demolition debris.

### Conclusions

Based on the shovel tests surrounding the Matron's Cottage, it appears that there was a natural depression in the ground in the area flagged for the excavation. Our analysis of the artifacts suggests that this area was filled in over a fifty year period (1845-1900). The artifacts, coupled with information from the documentary records, enable us to interpret the nature of this fill and something about the

people who deposited it.

The fill was household sheet scatter discarded by the occupants of the Matron's Cottage. Kitchen debris comprised 76% of the fill, while architectural material made up only 18% of the assemblage. The archaeological deposit was assignable to two distinct time periods: 1) 1845-1870, and 2) 1870-1900. The 1845-1870 deposit corresponds to the Steward's tenure at the house. From 1873-1880, both the Steward and the female employees resided in the Matron's Cottage, each taking their meals in separate sections of the house. From 1880-1900, the female employees, including the Matron, were the sole occupants of the house.

The archaeological assemblage reflects the known status differences between the Steward and the female employees. The Steward and his family had more transfer printed dishes (which were expensive) and far fewer undecorated dishes (which were inexpensive) than did the female employees. The Steward's diet, based on the faunal analysis, was more varied than the diet of the female employees. The documentary information expands the archaeological findings. The Steward, as the Assistant Governor, could purchase whatever goods he wished and could afford. The Matron and the female employees were given their household goods and their food by the institution. The household of these low ranking female employees would have had less variety than the higher status household of the Steward, as confirmed by the archaeological evidence.

The archaeological record shows that there was greater similarity in the material goods associated with the seamen/inmates, and the low ranking female employees than there was between the objects owned by the high ranking Steward and the low ranking female employees. This finding is similar to the conclusions drawn from Southern Plantation

studies. Low ranking staff (the overseers on Southern Plantations) had material possessions similiar to those of the slaves, even though their rank (including priviledges and freedom) was markedly different.

Snug Harbor sought to be a model institution. The archaeological data suggests that the Harbor was a well-maintained complex as the historical records indicate. By 1901, the Harbor had a "garbage destructor" and there are very few artifacts that date post-1900. In addition, compared to other late 19th century sites, Snug Harbor contained very little demolition debris.

In summary, the archaeological material confirms the historical data. Sailor's Snug Harbor was indeed a model institution. It provided amenities to the inmates and staff (such as indoor water and sanitary facilities) as soon as they became available on Staten Island. As an enclosed society, the institution provided for the food, clothing and shelter of its inmates and lower ranking staff. The institution maintained on land the hierarchy and very strictly ranked society that existed onboard ships. The status differences are noticeable in the artifacts discarded by the Steward and the female employees. Lastly, when the historical record and the archaeological record are used in tandem we can create a more complete picture of the site.

## REFERENCES

### MAPS

Anonymous

1906 Borough of Richmond Topographical Survey.

Department of General Services, N.Y.C.

1984 Snug Harbor Cultural Center, sheet numbers 1-6,  
topographical and property line map.

### PUBLIC DOCUMENTS

Anom.

1893 Clifton, New Brighton, Stapleton, West New Brighton, Port  
Richmond, Its Representative Business Men and Its Points of  
Interest. New York Mercantile Pub. Co. : New York.

Cromwell, George

1902 City of New York, President of the Borough of Richmond Annual  
Report. Martin B. Brown Press: New York.

Executive Committee Report

1846 Report in the Sailors' Snug Harbor Collection on file in the  
Archives of the New York Maritime College, Bronx, New York.

Greene Street Collection

1830- Sailors' Snug Harbor Records that were housed in the office  
1930 on Greene Street, Manhattan; collection is on file in the  
Archives of the New York Maritime College, Bronx, New York.

Governor's Quarterly Reports

1867- Quarterly Reports of Governor Melville, Director of Sailors'  
1881 Snug Harbor; reports on file in the Archives of the New York  
Maritime College, Bronx, New York.

Inventory of Supplies at the Matron's House

1888- Reports of monthly supplies ordered by the Matron for use in  
1897 the Matron's House, reports on file in the Sailors' Snug  
Harbor Archives, Snug Harbor Cultural Center.

Richmond County Board of Health

1873 First General Report of the Board of Health and of Vital  
Statistics of the County of Richmond. Richmond County Gazette  
Print: Stapleton, Staten Island.

Richmond County Gazette

1864 Newspaper on file in the Archives of the Staten Island  
Institute of Arts and Sciences.



Village of Edgewater

- 1886 Charter of the Village of Edgewater. Staten Island Leader  
Printing Office: Edgewater, Staten Island.

Village of New Brighton

- 1875 Charter and Ordinances of the Village of New Brighton. Thomas  
Humphrey: New York.

Village of Port Richmond

- 1893 Charter of the Village of Port Richmond. Staten Island Star  
Stream Print: West New Brighton, Staten Island.

ARTICLES, BOOKS, and REPORTS

Archer, Michael and Brian Morgan

- 1977 Fair as China Dishes. International Exhibitions Foundation:  
Washington D.C.

Barber, Edwin Atlee

- n.d. Marks of American Potters. Cracker Barrel Press: South  
Hampton, New York.

Baughner, Sherene

- 1982 "Hoboken Hollow: a 19th Century Factory Worker's Housing  
Site." Northeast Historical Archaeology, vol.11:25-38.

Baughner, Sherene, Judith Baragli, Louise De Cesare, and  
Robert W. Venables

- 1985 "An Archaeological Predictive Model of Snug Harbor  
Cultural Center." Report on file at the New York City  
Landmarks Preservation Commission.

Baughner, Sherene, Judith Baragli, and Louise DeCesare

- 1985a "An Archaeological Report of the Field Testing at Snug Harbor  
Cultural Center, Staten Island." Report on file at the New  
York City Landmarks Preservation Commission.

Baughner, Sherene, Judith Baragli, and Louise DeCesare

- 1985b "The Archaeological Investigation of the Voorlezer House Site,  
Staten Island, New York." Report on file in the Archives of  
Staten Island Historical Society.

Baughner, Sherene and Robert W. Venables

- 1985 "Trade Networks and Archaeology: Colonial and Federal  
Periods". Report for the exhibit, Staten Island Trade  
Networks, Staten Island Museum, March-August 1985. Ms. on  
file with the archives of the Staten Island Institute of Arts  
and Sciences.

- 1987 "Ceramics as Indicators of Class and Status in Eighteenth  
Century New York". In Socio-economic Status and Consumer  
Choices in Historical Archaeology, Suzanne Spencer-Wood  
(ed.), Plenum: New York (in press)

Baughner-Perlin, Sherene

1978 The Prall Site: A Case Study in Historical Archaeology.  
Ph.D. dissertation, S.U.N.Y. at Stony Brook. University  
Microfilms: Ann Arbor, Michigan.

1979 "The Excavation of a Twentieth Century Site", Proceedings,  
Staten Island Institute of Arts and Sciences 29(3):63-72.

Binford, Lewis

1961 "A New Method of Calculating Dates from Kaolin Pipe Stem  
Fragments." Southeastern Archaeological Conference Newsletter.  
Vol. 9, No. 1: 19-21.

Board of Education of the City of New York

1964 Staten Island: A Resource Manual for School and Community.  
The Board of Education of the City of New York: New York.

Cotz, Jo Ann E.

1984 "Cultural Resource Study at Sailors' Snug Harbor."  
Report on file at the New York City Landmarks Preservation  
Commission.

Cotz, Jo Ann E., Edward Lenik, and Herbert Githens

1985 "Sharrott Estates Archaeological Project: Report on Mitigation  
Procedures in the Sandy Ground National Register District,  
Staten Island, New York." Report on file with the NYS Office  
of Historic Preservation, Albany.

De Cunzo, Lu Ann

1982 "Households, Economics and Ethnicity in Paterson's Dublin,  
1829-1915: The Van Houten Street Parking Lot Block".  
Northeast Historical Archaeology, Vol. 11:9-25.

Deetz, James

1977 In Small Things Forgotten: The Archaeology of Early American  
Life. Doubleday: New York.

Dorr, Frank

1969 "Nails." Encyclopedia Americana, Vol. 19: 682-683.

Fontana, Bernard and J. Cameron Greenleaf

1962 "Johnny Ward's Ranch: A Study in Historical Archaeology." The  
Kiva, Journal of the Arizona Archaeological and Historical  
Society, Vol. 28, No. 1 and 2: 1-115.

Gibson, David, Barnett Shepherd, and Steven Bauer

1979 "Sailors' Snug Harbor, an Historic Structures Report". 4 Vols.  
Report on at the New York State Office of Parks and Recreation  
Historic Preservation Division, Albany, New York.

Guilland, Harold

1971 Early American Folk Pottery. Chilton Book Co.: Philadelphia

Leng, Charles and William T. Davis

1930 Staten Island and Its People: A History, 1609-1929, Vol. I and  
Vol. II. Lewis Historical Publishing Co: New York.

- McKearin, George and Helen McKearin  
1941 American Glass. Crown Publishers: New York.
- Miller, J. Jefferson and Lyle Stone  
1970 Eighteenth Century Ceramics from Fort Michilimackinac.  
Smithsonian Institution Press: Washington, D.C.
- Miller, George L.  
1980 "Classification and Economic Scaling of 19th Century Ceramics." Historical Archaeology, Vol. 14: 1-40.
- NYC Landmarks Preservation Commission  
1986 "Draft, Snug Harbor Historic District Designation Report",  
on file at NYC Landmarks Preservation Commission.
- Noel Hume, Audrey  
1978 "Food." Colonial Williamsburg Archaeological Series. No. 9,  
The Colonial Williamsburg Foundation: Williamsburg, Virginia.
- Noel Hume, Ivor  
1969 A Guide to Artifacts of Colonial America. Alfred A. Knopf:  
New York.
- Otto, John Solomon  
1977 "Artifacts and Status Differences - A Comparison of Ceramics  
from Planter, Overseer, and Slave Sites on an Antebellum  
Plantation". In Research Strategies in Historical  
Archaeology, edited by Stanley South, pp/ 91-118. Academic  
Press: New York.
- 1980 "Race and Class on Antebellum Plantations". In Archaeological  
Perspectives on Ethnicity in America, edited by Robert L.  
Schuyler, pp. 3-13. Baywood Publishing Company, Inc.:  
Farmingdale, New York.
- Reid, C.S. "Paddy"  
1976 "Clay Pipes in the Upper Great Lakes: The Ermatinger  
Assemblage." Northeast Historical Archaeology. Vol. 5, No. 1-  
2, Spring: 3-5.
- Shapiro, Arthur  
1972 New York City's Last Frontier. Staten Island Institute of  
Arts and Sciences: Staten Island, New York.
- Shepherd, Barnett  
1977 Sailors' Snug Harbor, 1801-1976. Publishing Center for  
Cultural Resources (for Snug Harbor Cultural Center): New  
York.
- Spargo, John  
1972 The Potters and Potteries of Bennington. Dover Publications:  
New York.

Steinmeyer, Henry

1950 Staten Island, 1524-1898. Staten Island Historical Society:  
Staten Island, New York.

Staten Island Chamber of Commerce

1972 Statistics Guide. Staten Island Chamber of Commerce: Staten  
Island.

Thorn, C. Jordon

1947 Handbook of Old Pottery and Porcelain Marks.  
New York: Tudor Publishing Co.

Walker, I. C.

1977 Clay Tobacco Pipes with a Particular Reference to the Bristol  
Industry. 4 Volumes. National Historic Parks and Sites  
Branch, Parks Canada, Department of Indian and Northern  
Affairs: Ottawa.

APPENDIX I: BLANK CATALOGUE SHEETS





PORCELAIN

SITE: \_\_\_\_\_

SQUARE: \_\_\_\_\_

LEVEL: \_\_\_\_\_

TOTAL COUNT: \_\_\_\_\_

EUROPEAN/  
AMERICAN

ORIENTAL  
EXPORT

CANTON/  
NANKING

COMMENTS

BLUE				
OTHER MONOCHROME				
POLYCHROME				
GILDING				
OTHER MONOCHROME WITH GILDING				
POLYCHROME WITH GILDING				

WHITEWARE

SITE:

SQUARE:

LEVEL:

TOTAL COUNT:

UNDECORATED

TRANSFER-  
PRINTED

HAND-  
PAINTED

DECAL

COMMENTS

WHITE					
BLUE					
GREEN					
BROWN					
BLACK					
MAROON					
PINK/RED					
POLYCHROME					
OTHER					

StonewareSite:Square:Level:Total Count:

	Section	Function	Date	Comments
<u>White</u>				
Undecorated				
Scratch-Blue				
Slip-dipped				
<u>Grey</u>				
Undecorated				
Incised				
Painted				
<u>Brown</u>				
Undecorated				
Slip				
Nottingham				
Other				

BUFFWARE

SITE: \_\_\_\_\_

81

SQUARE: \_\_\_\_\_

LEVEL: \_\_\_\_\_

TOTAL COUNT:

	NO SLIP	SLIP	OTHER	COMMENTS/DATE
UNGLAZED				
CLEAR GLAZE				
DARK BROWN GLAZE				
METALLIC BROWN GLAZE				
BLACK GLAZE				
MOTTLED BROWN GLAZE				
SPOTTED BROWN/ YELLOW				
ROCKINGHAM				
OTHER				



DELFT

SITE: \_\_\_\_\_

SQUARE: \_\_\_\_\_

TOTAL COUNT: \_\_\_\_\_

LEVEL	UNDECORATED	BLUE MONOCHROME	OTHER MONOCHROME	POLYCHROME	COMMENTS
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

PEARLWARE

SITE:

SQUARE:

LEVEL:

TOTAL COUNT:

	COLOR	SHELL- EDGED	FEATHER- EDGED	OTHER- EDGED	COMMENTS
UNDECORATED					
HAND- PAINTED					
TRANSFER- PRINTED					
ANNULAR- WARE					
SPONGEWARE					
FLOW-WARE					
OTHER					

REDWARE

SITE:

84

SQUARE:

TOTAL COUNT:

LEVEL:

	NO SLIP	SLIP	OTHER	COMMENTS/DATE
UNGLAZED				
CLEAR GLAZE				
DARK BROWN GLAZE				
BLACK GLAZE				
MOTTLED BROWN GLAZE				
JACKFIELD- LIKE				
SPOTTED BROWN/ YELLOW				
OTHER				

CREAMWARE

SITE:

SQUARE:

LEVEL:

TOTAL COUNT:

	SHELL- EDGED	FEATHER- EDGED	OTHER- EDGED	TRANSFER- PRINTED	COMMENTS
UNDECORATED					
BLUE					
GREEN					
BROWN					
BLACK					
MAROON					
PINK/RED					
POLYCHROME					
OTHER					

Stem hole diameter

[illegible]



SITE \_\_\_\_\_

SQUARE \_\_\_\_\_

GLASS BOTTLES: FUNCTION

LEVELS	BEER	FOOD/ HOUSEHOLD	INKWELLS	MEDICINE	MILK	PRESERVING JARS	SODA & MINERAL BOTTLES	WINE & CHAMPAGNE	WHISKEY	OTHER
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Site \_\_\_\_\_

Square \_\_\_\_\_

## LIPS, NECKS, BASES (GLASS)

## TIME PERIODS

LEVEL	1700-1800	1800-1870	1870-1903	1903-1930	POST 1930
1					
2					
3					
4					
5					
6					
7					
8					
9					

TOYSSITESQUARELEVEL

## 1. TEA SETS

FUNCTION	NUMBER	MATERIAL	DESIGN	COMMENTS
CUPS				
SAUCERS				
POTS/BOWLS				

## 2. DOLLS

FUNCTION	NUMBER	COLOR	MATERIAL	COMMENTS
ARM				
LEG				

## 3. MARBLES

NUMBER	COLOR	MATERIAL	COMMENTS

## 4. OTHER

FUNCTION	NUMBER	COLOR	MATERIAL	COMMENTS

CLOTHINGSITESQUARELEVEL

## 1. TEXTILE

NUMBER	COLOR	FABRIC	FUNCTION

## 2. LEATHER

NUMBER	COLOR	FUNCTION

## 3. BUTTONS

NUMBER	COLOR	MATERIAL	NUMBER OF HOLES

## 4. BEADS

NUMBER	COLOR	MATERIAL

## 5. BUCKLES

NUMBER	COLOR	MATERIAL	FUNCTION

## 6. OTHER

NUMBER	COLOR	MATERIAL	FUNCTION







## VOORLEZER HOUSE: NAILS

LEVEL	HAND- WROUGHT	CUT	WIRE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

WINDOW GLASSSITESQUARELEVELPRE- 1830

TYPE	COUNT	TOTAL	COMMENTS
HEAVILY PATINATED			
THICK WITH BUBBLES			

POST- 1830

TYPE	COUNT	TOTAL	COMMENTS
AQUA			
GREEN			
LIGHT GREEN			
YELLOW GREEN			
CLEAR			
CLOUDY			



\*mus.=mussel  
oys.=oyster  
sc.=scallop

SHELL\*

SITE:

96

SQUARE:

LEVEL      HINGES      WEIGHT      FRAGMENT COUNT

1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

APPENDIX II: METHODS OF DATING CLAY SMOKING PIPES

A GUIDE TO

# ARTIFACTS OF COLONIAL AMERICA

*IVOR NOËL HUME*



ALFRED A. KNOPF

1972

NEW YORK

## § TOBACCO PIPES and SMOKING EQUIPMENT

The English kaolin tobacco pipe is possibly the most valuable clue yet available to the student of historical sites, for it is an item that was manufactured, imported, smoked, and thrown away, all within a matter of a year or two. Fortunately the shape of the pipe's bowl underwent an easily recognizable evolution that had begun before the start of the seventeenth century and was still going on well through the nineteenth century. In addition, pipes were extremely cheap (selling in 1709 for as little as two shillings a gross), thus making them available to all economic levels of colonial society. They were as expendable as cigarettes, though vastly more durable, ensuring that their fragments survive in the ground in prodigious quantities.

The Indian habit of smoking tobacco by means of a device formed "like a little ladell" became fashionable in England in the 1570's, and by the early seventeenth century the clay pipe had become commonplace. The earliest types, those of the late sixteenth century, were very short-stemmed, some being no more than 1¾" in length, though the average was about 3½". By the third quarter of the seventeenth century the average stem length was between 11" and 12", and by the end of the century many were a little longer still. Lengths of 13" or 13½" seem to have been common during the first half of the eighteenth century (Frontispiece), though advertisements referred to both short- and long-stem pipes. In the second half of the eighteenth century a few pipes were made with stems of enormous length, 2' and more (popularly termed "church-wardens," a name coined in the nineteenth century), while others

<sup>7</sup> Adrian Oswald: "English Clay Tobacco Pipes," *The Archaeological News Letter* (London), Vol. 3, No. 10 (April 1951), p. 153; quoting from William Harrison's *Great Chronicle* of 1588.

## Tobacco Pipes and Smoking Equipment

reverted to an earlier and more manageable size and were no more than 9" or so from heel to mouth. Boston newspapers carried advertisements offering "long London Tobacco Pipes" in 1716 and 1742, "Boxes of short Pipes" in 1761, "long and short Pipes" the next year, and "long and midling Pipes" in 1763. More helpful was the advertiser in the *Boston Gazette* (May 28, 1764) who offered his customers "glaz'd 18 inch London Pipes per Box," but whether these were considered long or extra-long remains anybody's guess.

It should be noted that as a rule the length of the stem had no bearing on the size of the bowl, but it did have a very considerable influence on the size of the hole that passed through it. This was made with a wire that was pushed down the solid stem while it was still supported in the mold. When the stem was short, a fairly large hole could be made by using a thick wire, but when the stems became longer and the wire had further to travel a thick wire was more liable to stick through the side than was a thin. In consequence, therefore, smaller wires were generally used as the stems became longer. This, at least, is the theory, though it is possible to find wires of differing thickness in use in the same period by the same maker. (See p. 300.) There is no denying, however, that the holes in pipe stems became smaller and smaller through the seventeenth century and on into the second half of the eighteenth, a fact first noticed by Mr. J. C. Harrington of the United States National Park Service. In September 1954, after a careful study of many thousands of pipes both in America and in England, Harrington published a chart showing the percentages of different diameters (gauged in sixty-fourths of an inch) represented among well-dated

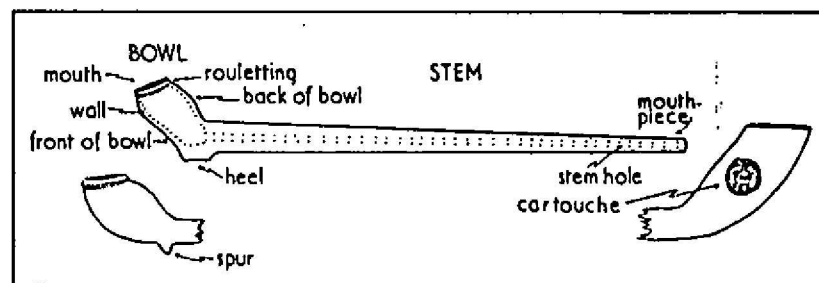


Fig. 95. The parts of a tobacco pipe.



## Tobacco Pipes and Smoking Equipment

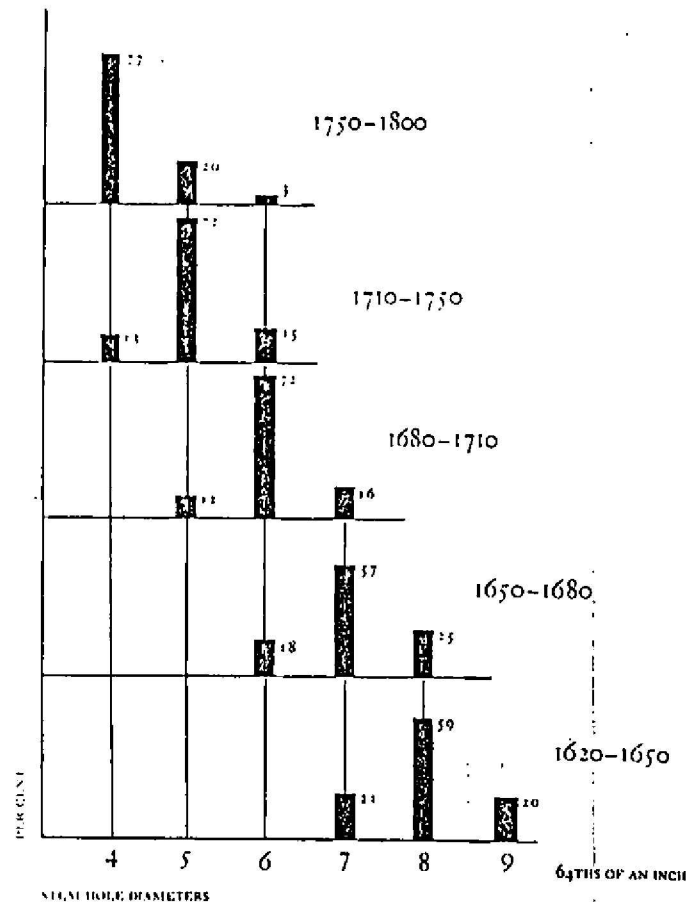


Fig. 96. Chart showing variations in hole diameters through the stems of clay tobacco pipes.

English pipes in five successive time periods from 1620 to 1800. (Fig. 96)

At first, what has come to be known as the "Harrington Theory" was received with considerable merriment among pundits of the pipe, but it soon became apparent to those who took the trouble to test the chart that there was a good deal of truth in it—though Harrington himself had made it very clear from the start that he considered the sampling too small and that much refine-

ment would be necessary when more groups of archaeologically datable pipes became available for study. He also pointed out that associations of only twenty or thirty pipes would probably be insufficient to produce an accurate answer.

So far as I know, no real effort has yet been made to redefine Harrington's date brackets, though much new information has been unearthed in the past decade. However, Dr. Lewis Binford produced a straight-line regression formula based on the Harrington chart enabling a mean date to be arrived at for any assemblage of stem fragments, be it large or small. That formula is as follows:

$$Y = 1931.85 - 38.26X$$

Y being the mean date for the group, 1931.85 the theoretical date when the stem hole would disappear altogether, 38.26 the number of years between each sixty-fourth-of-an-inch decrease, and X being the mean hole diameter for the group. This last is arrived at by first determining the diameter of the bore of each fragment (using a set of wood drills of graduated sizes), multiplying the number of fragments by the number of sixty-fourths, next adding together the total of fragments of all sizes and then all the products, and dividing one into the other, carrying the answer to three places of decimals. Thus:

Hole diameter	Fragments	Product
7/64	35 × 7 =	245
6/64	79 × 6 =	474
5/64	50 × 5 =	250
4/64	20 × 4 =	80
	184	1049 = 5.701 = X

Extremely helpful though this is, it is still based on Harrington's original chart, and the question remains as to how accurate his dates really are.

In the course of excavations in Williamsburg in the summer of 1963 a large quantity of broken pipe stems was found tramped into the ground to make a walkway, all undoubtedly laid down at the same time and most of them the products of a single maker, for

## Artifacts of Colonial America

nearly 150 bowl fragments bore the initials RM astride the heels. There were, in all, approximately 12,000 stem fragments, and on the basis of other archaeological and historical evidence it was deduced that they were deposited in the early 1740's. Using the Binford formula and taking arbitrary samplings from the collection, the following results were obtained:

No. of Pipes	Formula date
19	1726.38
35	1738.09
54	1733.67
105	1733.29
129	1742.09
290	1736.59
295	1740.55
296	1738.26
383	1737.74
591	1739.79
932	1740.55
1111	1740.55
1746	1741.70
9272	1740.55
11164	1740.55

It will be seen, therefore, that although 295 fragments produced a "correct" date of 1740.55, five pieces less put it four years earlier, while one more put it two years less. It was not until 932 fragments were used that a more or less consistent answer could be relied upon. Nevertheless, the very fact that the Harrington-Binford system produced a date for the pipe fragments within ten years of that suggested by other means demonstrates its valuable contribution to historical-archaeological studies. Unfortunately, however, its range of acceptable accuracy seems to be restricted to the period c. 1680-1760, with the probability of error increasing rapidly as one moves away from that bracket in either direction. The following short list of samples from sites of various dates will serve as an illustration:

## Tobacco Pipes and Smoking Equipment

No. of fragments in deposit	Formula date	Date deduced on other evidence
90	1631	1645-53
924	1636	1645-60
300	1622	1650-60
648	1698	1690-1700
91	1709	1702-10
17	1731	1725-35
271	1751	1745-60
121	1758	1750-65
213	1767	1760-70
485	1747	1762-72
290	1753	1770-80
772	1747	1775-80
51	1755	1775-90
168	1751	1817-20

Although the large quantity of fragments needed to produce a consistent date was present in none of these instances, it is significant that within the period of reliability even quite small groups of stem fragments were capable of producing useful answers, whereas beyond it even the larger groups could provide no greater accuracy than could the small. It should be noted that the foregoing examples show the pipe-dating discrepancies falling consistently earlier than that provided by other evidence. It might be argued, of course, that even a thirty-year tolerance might be helpful in enabling the novice to get a broad idea of the era to which his site belongs, though when I ventured to make this point a lady archaeologist of my acquaintance retorted that if the excavator was unable to pin his site down to such a bracket through his knowledge of other artifacts, he had no business to be digging it.

Among the fallacies nurtured by earlier students of the pipe was the belief that the reason so many stem fragments are found is because smokers passed the pipe from mouth to mouth in the Indian fashion, each smoker breaking a piece off the stem to give himself an unsullied mouthpiece. Broadly speaking, this is nonsense. Pipes were carefully tapered so that the lips easily closed over them, and consequently the removal of more than 2" or 3" would have defeated that purpose. Furthermore, broken pipes are found

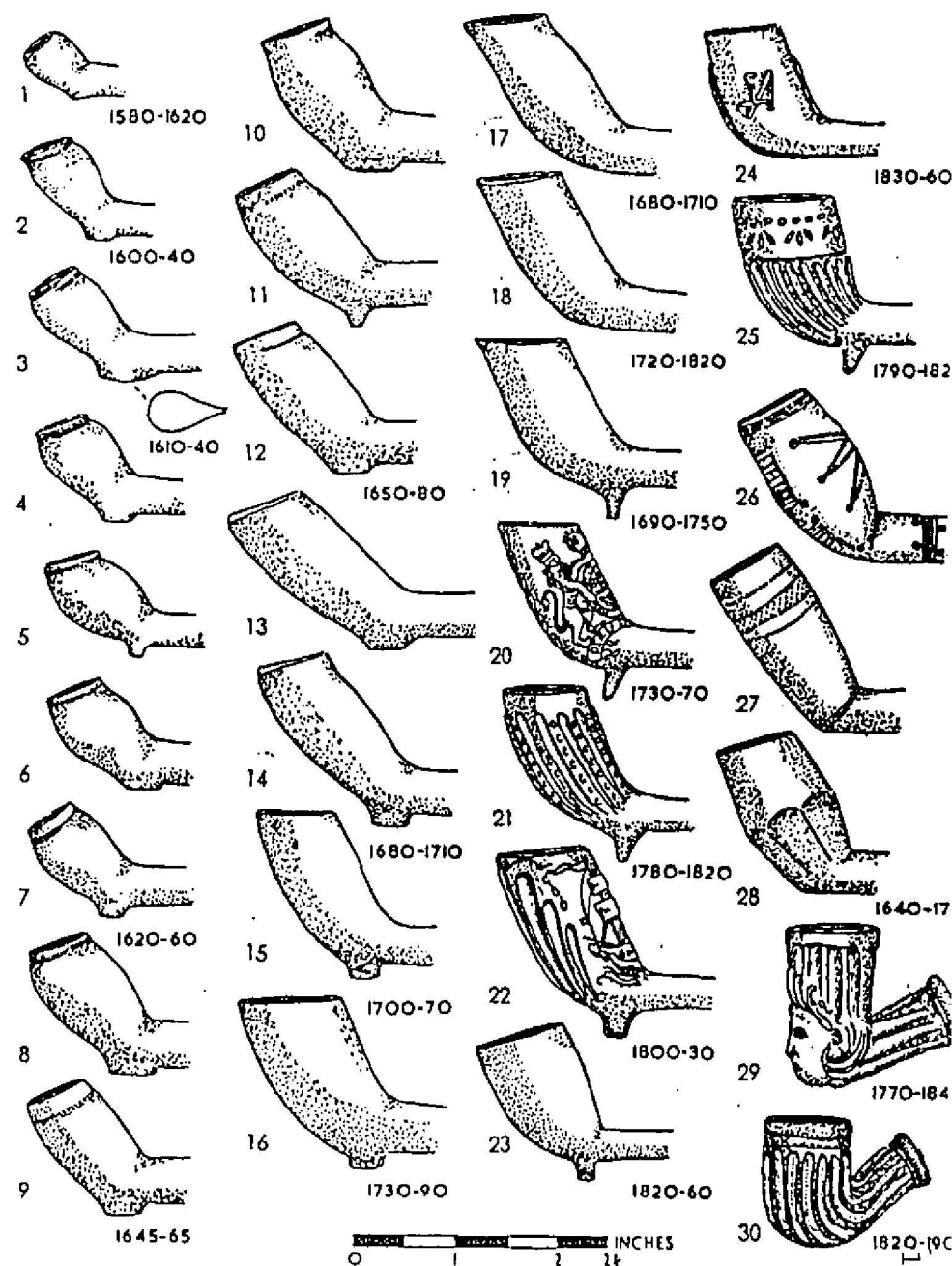
whose fractured stem has been carefully filed or ground down to shape a new mouthpiece. It is extremely unlikely, therefore, that a smoker would have been satisfied to smoke a jagged-ended, thick-mouthed pipe. The obvious explanation for the prevalence of stem fragments on colonial sites is that pipes were long and fragile, and when dropped or knocked broke into numerous pieces. With this said, however, I must note that Colonial Williamsburg owns a mid-eighteenth-century pair of steel ember tongs (see p. 309) having three semicircular notches on the inner faces of the arms just above the pads, which, when the tongs are closed, create three circular holes of two sizes that could well have been used to break very small pieces from the mouthpieces of clay tobacco pipes. On the other hand, the notches could be purely decorative. Before leaving the matter of mouthpieces, I should mention that some were coated with a brown or green lead glaze for a distance of about 1", while others were dipped for a similar distance into red wax—presumably having first had a plug placed in the hole. Both glazing and waxing appear to have been an eighteenth-century innovation and were by no means common.

Prior to Harrington's study of stem holes, the dating of tobacco pipes had relied on the evolution of the bowl form, and for the seventeenth century this is still the most reliable guide. However, as was demonstrated when more than 12,000 stem fragments were found together in Williamsburg, bowls are comparatively scarce, for the stem fragments were accompanied by only 800 bowls, the stem of each pipe therefore theoretically breaking into fifteen pieces.

The first study of bowl evolution (on which nearly all others have been based) was published by the English archaeologist Adrian Oswald in 1951. Figure 97 demonstrates the development of the bowl through the seventeenth into the nineteenth century in a somewhat simplified form.

The shapes were dependent on the mold makers, and each pipe-maker had his own molds. Although the forms followed the same

Fig. 97. A simplified evolutionary series of English clay tobacco pipes, plus examples of locally distributed American types. Nos. 1-24 are English; 25 and 30, American of uncertain provenance; 26-8, Virginian; 29, North Carolinian.



general evolutionary trends, it is clear that the pipes made at Chester or Broseley differed from those produced in Salisbury and that the latter were not the same as those made in Bristol—unless the manufacturers happened to buy their molds from the same maker. When one reaches the nineteenth century, decorative bowls were extremely common, and while I have illustrated three examples of styles attributable to different periods I make no pretense that they are adequately representative of the entire class.

There is, unfortunately, a great deal that we do not yet know about the so-called evolution of bowls and stems, and there is reason to suspect that present stylistic and dating criteria have been oversimplified. According to Randle Holme's *An Academie or Store House of Armory & Blazon* (c. 1682) there were then no fewer than ten pipe types, for which there were "seuerall Molds for seuerall fashions as. Lark heele pipes, Flat heele pipes, Round bolls or head, Long Bolls, Long shanks, Midle shanks, Short shanks or ends, Wrought pipes in the head and shank, Smooth pipes, [and] Gleased pipes."<sup>8</sup> The last two almost certainly refer to styles of finishing after removal from the mold; i.e., burnishing and glazing. It would appear that in the latter part of the seventeenth century there were three stem lengths, long, middle, and short, a revelation which casts doubt on the validity of the theory that the stem-hole wire (or "Shanking Wyer" as Holme called it) became progressively smaller as stems grew longer. Holme's "Lark heeles" were probably what we term *spurs* (e.g., Fig. 97, No. 11), while his "Round bolls" are paralleled by my example in Figure 97, Number 10, and the "Long Bolls" by Number 12. As for the "Wrought pipes in the head and shank," they were almost certainly those with relief decoration.

In addition to the evidence of stem holes and bowl shapes, pipes may also be dated through the correct identification of makers' marks. Here again Adrian Oswald's published work provides the fullest available information. In the first half of the seventeenth century, marks were generally stamped on the flat base of the heel and took the form of initials, full names, or occasionally a rebus. In the third quarter, marks were less common, but they became plentiful again in the last quarter of the century. At this time they were normally reduced to two initials, one on either side of the heel or

spur, or occasionally more fully on the back or side of the bowl in incised circles or relief-molded cartouches. These last are particularly characteristic of Bristol pipemakers. The side cartouches extended into the first quarter of the eighteenth century, but the heel-flanking initials as well as the back circles went right on through the eighteenth and nineteenth centuries. By about 1690, Bristol pipemakers were producing pipes without either heels or spurs (apparently in imitation of the traditional Indian styles) for export to the American colonies. Some of these were embossed with the makers' initials on either side of the bowl base. Although such plain bowls continued to be made until the latter years of the eighteenth century, the majority of marked examples belong to the years c. 1690–1730.

Makers' initials are also found straddling the stem, running around it as part of ornamental bands, and stamped in circles on the top—all occurring in the first half of the eighteenth century. In the second half, and on through the nineteenth century, one often finds Liverpool, Glasgow, and Irish makers' names in rectangles stamped on one side of the stem and that of the town along the other.

Stems were sometimes decorated with large, multiple, diamond-shaped fleur-de-lis stamps, a style most popular in the mid-seventeenth century. Toward the end of the century and into the early 1700's, Chester pipemakers decorated stems with bands of ornament that sometimes included spiral fluting and cartouches containing tavern signs or the arms of the City of Chester. The most striking stem decoration yet encountered comes from a mid-eighteenth-century site in Delaware where fragments of two pipes were found coated with a thin brown slip around multiple, irregular reserves exposing the white pipeclay beneath and creating a dramatic, though none-too-pleasing, polka-dot effect.

A few English pipe bowls of the seventeenth century were decorated with groups of raised dots in the shape of trees or bunches of grapes, while on rare occasions the fronts of the bowls were pinched and pared into the shape of a human face. Decorative bowls became much more common in the eighteenth century, a considerable number of them being molded with the arms of the monarch or with the crest of the Prince of Wales. Because the British royal arms appear not only on pipes, but on slipware pottery, on coins, tokens, etc., engraved on glass, and molded on iron firebacks, it may be

<sup>8</sup> Holme, op. cit., p. 271; for full citation, see fn. 1, p. 37.

useful to enumerate the changes made to the royal arms in the seventeenth, eighteenth, and early nineteenth centuries.

From 1403 to 1603, when James I became king, the arms were divided into four quarters (reading from top left to bottom right) comprising the three fleur-de-lis of France in the 1st and 4th and the three lions passant guardant (leopards) in the 2nd and 3rd. From 1603 until the flight of James II, the charges of the previous arms were compressed into the 1st and 4th quarters, while the 2nd received the lion rampant of Scotland and the 3rd the harp of Ireland. With the accession of William III the arms of Nassau were added as an escutcheon on the center of the shield, these arms comprising a lion rampant with rectangular billets around it. From 1702 to 1707, until the union with Scotland, the Stuart arms were restored in the form established in 1603. But after the Union and until the death of Queen Anne, the three leopards of England shared the 1st and 4th quarters with the lion of Scotland, while the fleur-de-lis occupied the 2nd quarter and the Irish harp retained the 3rd. In 1714, with the accession of Hanoverian George I, quarters 1 to 3 remained the same, but the 4th was divided into four elements to accommodate the arms of the Electorate of Hanover. These comprised: (1) two Brunswick leopards; (2) a Luneberg lion rampant surrounded by hearts; (3) (below) a Westphalia running horse; and (4) in the center an escutcheon charged with the crown of Charlemagne. There were no further changes until 1801, when the Hanoverian arms of the 4th quarter were moved onto a central escutcheon surmounted by the Elector's cap and replaced by the three English leopards which then appeared in both the 1st and 4th quarters, the lion of Scotland ousting France from the second quarter. Another minor change occurred in 1815 when the Elector's cap was replaced by a crown in keeping with Hanover's change from electorate to kingdom. Because Queen Victoria could not succeed to the kingdom of Hanover, the Hanoverian escutcheon was removed in 1837, thus creating the simplest royal arms since the death of Elizabeth I. There have been no changes since.

The majority of armorial tobacco-pipe bowls bear the 1714-1801 Hanoverian arms, but a few have been found bearing the post-Union arms of Queen Anne. So many ornamental devices were used in the nineteenth century that it is likely (though I have not seen

one) that the Victorian arms were also used. The arms of London were frequently borrowed in that period, those being a shield charged with a cross and with the sword of St. Paul in the 1st quarter.

Pillar-molded or gadrooned bowls became popular in England and America in the late eighteenth century and continued into the nineteenth, but by mid-century English styles had become much more adventurous and the bowls were decorated with arms and crests of counties, with the insignia of Freemasonry or of the Royal Order of Buffaloes, with figures of soldiers or of ships. Sometimes the whole bowl was cast in the shape of a barrel or even a boot.

In addition to English pipes, a small number of Dutch specimens are found on eighteenth-century American sites, most of them in Florida and the Gulf States but some of them in other areas during the Revolutionary War. These Dutch pipes have somewhat egg-shaped bowls very often with evidence of vertical paring on the sides, thin walls, narrow stems, and generally highly burnished buff surfaces. Makers' marks are stamped on the backs of the bowls, on the bases of small heels, or on either side of spurs, nearly always in diminutive letters or minuscule shields of arms. Equally small pictorial marks were impressed on the bases of the small heels, among them a fish, a windmill, a milkmaid carrying two buckets, and a figure whom the Dutch describe as the "lady of easy virtue." The thin stems are often elaborately molded with fleur-de-lis, rosette, and foliate motifs, and the name *COUDA* (their principal place of manufacture) is frequently included in the embossed decoration.

A few French pipes are found on early Federal sites and may be identified by the superior quality of their molded bowls, which may be shaped as faces, figureheads, or other elaborate devices. Pipes made either in the United States or for the American trade occur in large quantities in the first quarter of the nineteenth century, usually with pillar-molded or gadrooned lower bowls with broad collars above adorned by thirteen stars.

Large numbers of locally made pipes occur on Virginia sites from the second quarter to the end of the seventeenth century, some of them of great elaboration involving the use of blended clays to produce "agate" effects and employing stamps and rouletting wheels to create various impressed devices. Many of the latter are distinctly Indian in character, giving rise to the strong possibility.



that they were made by the Indians and smoked by the colonists. By mid-century, cruder copies of the plain English pipes were also produced in Virginia and New England, but as no positively identified kilns have yet been found we do not know exactly where or by whom they were made. It may also be noted that very crude hand-rolled, red-clay copies of late-seventeenth-century English pipes (though with stamped ornament) are found in appropriate contexts in Jamaica. It is reasonable to suppose that the continuing exploration of early sites in others of the erstwhile British colonies will produce more evidence of local pipemaking.

Similar studies are needed in the area of nineteenth-century pipemaking in America. Until recently it was assumed that the so-called Indian-head pipes with reed stems were unknown before the early 1800's, but excavations at the Moravian settlement site at Bethabara in North Carolina have revealed similar bowl types (Fig. 97, No. 29) in a potter's waster pit dating at least as early as 1771. No doubt other such surprises are in store for us.

As well as pipes of clay, a few were of metal. There are silver examples dating from the second quarter of the seventeenth century whose stems unscrew in the middle for portability; but the majority of metal pipes belong to the latter part of the eighteenth century, when they were made of either iron or brass. They are said to have been designed for travelers and huntsmen, for whom the clay pipe was too fragile. However, the metal pipes could be painful if jolted into someone's eye, and they were not widely used. Nevertheless, fragments have been found in American excavations. In addition, the remains of a pewter pipe of uncertain date were found at Jamestown.

Supplying the smoker with fuel for his pipe proved to be one of history's most influential endeavors, and the changes wrought by it have left their mark on the world in which we live. While it would be possible to write an entire book on the artifacts, from anchors to wire, that were employed in the service of tobacco, we are here only concerned with those that kept the pipe going during the actual smoking process. Next to the weed itself, the fire was the most important accessory, coupled, of course, with a means of bringing the two together. While lighting one's pipe from a candle was probably the most convenient method (e.g., Hendrick Terbrugghen's

*Boy lighting a Pipe*, 1623), the embers from domestic hearths were frequently used, picked up by a pair of long steel tongs, the ends resembling those of ordinary fireplace tongs but the handles separate above a pivot with a spring between them to hold the ember-seizing pad ends together. Such tongs were used in both the seventeenth and eighteenth centuries, and some have removable tampers and even whistles as terminals. Dated examples occur from the late seventeenth to the mid-eighteenth century.

Much smaller tongs, also with spring grips, were often used, generally through the seventeenth and into the early eighteenth century. They were normally about  $3\frac{1}{4}$ " long and of steel or brass. The ember-seizing ends were almost pointed and together somewhat resembled the beak of a heron. The two arms were linked and pivoted in the same manner as their larger counterparts, the thicker of the two having a small spring against which the other pressed. These tools are frequently found broken, at which times the thicker of the two arms often resembles a miniature ice skate, an appearance partially derived from the flat disc at the handle end. The other handle also ended in a disc, though turning outward and intended for use as a pipe tamper. This small, and by no means rare, tool has rightly been described as a "smoker's companion," but more often than not it fails to be identified or is classed as a surgical instrument.

In the seventeenth century the embers into which the small tongs were dipped were generally contained in earthenware braziers or chafing dishes and were stood on the table. However, the same kind of brazier was used as a heater for wooden foot warmers, the boxes being open, or having a door in one side and holes or slots in the top. Good examples of both types are to be seen in seventeenth-century Dutch paintings, notably Jan Miensz Molenaer's *Tavern of the Crescent Moon* (before 1668), Jan Steen's *Twelfth Night* (1688) and *Welcome for the Visitor* (before 1679), and Cornelis de Man's *The Chess Players* (before 1706). The pottery braziers were of two shapes, the most common being roughly triangular with three short legs and a single looped or cylindrical handle. These are generally of lead-glazed red earthenware, and both ware and handle types are clearly shown in two of Molenaer's paintings, the already cited *Tavern of the Crescent Moon* and *Peas-*

ants in the Tavern. The second and more elaborate type of brazier comprised a bowl with a slotted or punctured bottom over a hollow pedestal foot, the latter generally having a triangular aperture in the side to encourage an upward draft. One such foot in "Metropolitan" slipware was found at Jamestown and, being decorated, was clearly not intended to be hidden in a foot warmer. Smokers' braziers were also made in more expensive and ornamental materials, such as brass and even silver gilt. An example of this chafing dish type is shown in Willem Pietersz Buytewech's *A Merry Party* (about 1615). Small sheet-brass braziers with a turned wooden handle attached to one side were common in the eighteenth century. They generally stood on a cast-brass collarlike foot, made in at least two sections and decorated with patterns of circular holes and crescents. Parts of these feet are found on American archaeological sites of the mid-eighteenth century—and are generally classed as unidentified.

Next to the means of lighting his pipe, the smoker's most important tool was the tamper or stopper. These were commonly of brass, and from at least as early as 1660 they were cast with elaborately ornamental handles. (Fig. 98) Close dating is not always as easy as it looks, for the designs were frequently retrospective; for example, a profile of Charles I would have been popular in the reign of Charles II, while a coin mounted on the handle might already have been old (and therefore interesting) when it was so used. The best clue to an early date is provided by the size of the tamper itself, for those that were of small diameter (Fig. 98, No. 1) fitted small bowls—and small bowls were generally early. A sophisticated type appeared in the early eighteenth century (and continued through it) in the form of a closed-ended tube topped by a signet ring; the tube served both as a tamper and as a case for a pocket corkscrew attached to the ring handle.

Sometimes mistaken for a corkscrew is another smoker's aid, this one in the shape of a miniature steel hatchet. Attached to the handle end was a double "corkscrew" resembling the "worm" for extracting debris from gun barrels; it served a comparable purpose in extracting plugged tobacco from pipe bowls. At the other end of the tool was a small blade with an unsharpened edge to break up tobacco without cutting it, while behind, at what might be termed

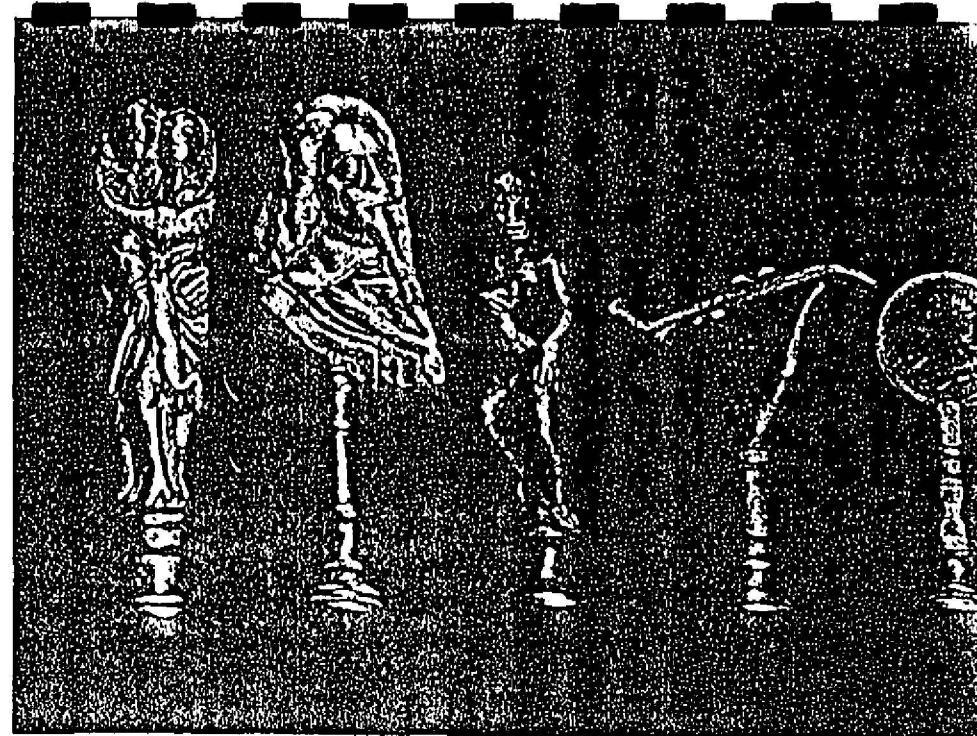


Fig. 98. Brass pipe tampers. 1. Amorous couple; third quarter of 17th century. 2. Profile of Charles I; late 17th or 18th century. 3. Nude boy; 17th or 18th century. 4. Hand with pipe, probably early 19th century. 5. Handle in the shape of a Queen Anne coin; early 18th century (?). Ht. of No. 1: 3".

the poll of the hatchet, was a round-sectioned tamper sometimes decorated with multiple collars and grooves. The small diameter of the tampers suggest that these tools may date from the seventeenth rather than the eighteenth century, but unfortunately I know of no examples from dated archaeological contexts.

Tobacco boxes fall into two classes, those used to carry it around on one's person and those to keep it in the home. Pocket boxes are sometimes impossible to distinguish from large snuffboxes, and cheap varieties of both were made of tin, pewter, and brass. Copper boxes with brass lids having stamped and engraved decoration were made in the Netherlands throughout much of the eighteenth century and are identified by the presence of Dutch inscriptions describing designs of ships, harbors, towns, and convivial or Biblical scenes. The majority of such boxes were oblong, but the earliest examples seem to have been oval with both top and bottom of brass. (Frontispiece)



Nonportable tobacco boxes used in the home and in taverns or other public buildings were most commonly of lead, usually with poorly defined cast decoration (tavern scenes, shields of arms, etc.) on the sides; they had removable lids and a press inside to keep the tobacco tight and away from the air. These boxes were often gaily painted, particularly in the early nineteenth century. The archaeologist who finds scraps of lead with molded, paneled ornament would do well to consider the possibility of its having been part of a tobacco box. They were also made in iron, brass, and pewter. In the nineteenth century brown stoneware jars with flat lids were widely used, some of the more elaborately decorated jars coming from the Rhenish potteries of Nassau in the Rhineland as part of their Gothic revival.

Although clay tobacco pipes were relatively cheap, tavern keepers who provided them for their customers were wont to re-use them as long as they remained unbroken. In the interests of hygiene they baked used pipes in what were known as "kilns," iron racks comprising three hoops held together by horizontal straps and with a suspension ring in the mid-section of the second hoop. Slung in this rack, the pipes were baked over the kitchen fire or sealed in the bread oven. Iron feet in the form of bent lengths of strapping were usually attached to the bottom horizontal strap so that once cleansed, the pipes and rack could be stood beside the hearth to cool. Thus skeletal iron tubes found in excavations may well have been pipe "kilns." It is worth remembering that such items listed in household inventories do not necessarily mean that the owners manufactured pipes!

- BENFORD, LEWIS R.: "A New Method of Calculating Dates from Kaolin Pipe Stem Fragments," *Southeastern Archaeological Conference Newsletter* (Cambridge, Mass.), Vol. 9, No. 1 (June 1962), pp. 19-21.
- HARRINGTON, J. C.: "Dating Stem Fragments of Seventeenth and Eighteenth Century Clay Tobacco Pipes," *Quarterly Bulletin of the Archeological Society of Virginia* (Richmond), Vol. 9, No. 1 (September 1954).
- LANDSAY, J. SEYMOUR: *Iron and Brass Implements of the English and American House*. Rev. edn. London, 1964.
- MOJZER, MIKLOS: *Dutch Genre Paintings in Hungarian Museums*. English edn. Budapest, 1967.

- NOËL HUME, AUDREY: "Clay Tobacco Pipe Dating in the Light of Recent Excavations," *Quarterly Bulletin of the Archeological Society of Virginia* (Richmond), Vol. 18, No. 2 (December 1963), pp. 22-5.
- OSWALD, ADRIAN: "English Clay Tobacco Pipes," *The Archaeological News Letter* (London), Vol. 3, No. 10 (April 1951), pp. 154-9.
- : "The Archaeology and Economic History of English Clay Tobacco Pipes," *Journal of the Archaeological Association* (London), 3rd Ser., Vol. 23 (1960), pp. 40-102.
- : "The Evolution and Chronology of English Clay Tobacco Pipes," *The Archaeological News Letter* (London), Vol. 7, No. 3 (September 1961), pp. 55-62.
- PAWSON, MICHAEL: "Clay Tobacco Pipes in the Knowles Collection," *Quarterly Bulletin of the Archeological Society of Virginia* (Richmond), Vol. 23, No. 3 (March 1969), pp. 115-47.

APPENDIX III: MATRON'S COTTAGE FAUNAL ANALYSIS

KATE MORGAN

## MATRON'S COTTAGE FAUNAL REPORT

### Introduction

This appendix comprises of the analysis of the faunal material from the Matron's Cottage Site. The bones, catalogued by their provenience (as were the site's artifacts), were analyzed from datable contexts representing the cultural time periods: 1820-60, 1870-90 and 1900+. Divided into four components, this appendix consists of one, methods used for analysis. Two, a discussion of foodways in relation to economic scale. Three, a discussion of butchery practices in relation to economic scale. And, finally, four, a discussion of the findings specific to the Matron's Cottage Site.

### Methods

From the construction and/or production of materials to their deposition in the ground to the excavation of artifacts, and finally, to the analysis of their relationship to each other and the environment--the archaeological investigation is fundamentally a process of translation. In this report, bone as matter is 'transcribed' into data written on tabulation sheets. From these tabulations, results a set of graphs and concepts which attempt to organize the remains in a way that will illuminate both recurrence and anomaly. In other words, both the repeated and unique food

practices of the inhabitants at the Matron's Cottage of Sailors' Snug Harbor will be reflected in the study of these faunal remains. Ultimately, broader questions, such as the relationship of the market to the household through time and the changes in regional food patterns and customs, can be recognized.

Prior to this analysis of the fauna excavated from the Matron's Cottage Site, it is appropriate to discuss certain cautionary lessons. Bones are more often than not found in fragments. If they were not broken up in primary use (prior to discard, during household food preparation hunting, predation, natural causes, etc.), they will go through a series of transformations generally called the "taphonomic process." Literally speaking, 'taphonomy' is the "process of death" which wears down the bone, breaks it up, alters its shape and often, obliterates it from the archaeological record. Therefore, what is being seen archaeologically is never all that was. The nature of each bone--its size, density, and its function (if it was being boiled, baked, burned, chopped, sawed, gnawed, etc.)--will effect its endurance-life in the ground and determine the form in which it arrives in our hands.

In many cases, the archaeologist views a skewed, unbalanced sample of past life-ways. At the same time, however, what does remain, exists in spite of its maker and therefore, exists, although fragmentary and incomplete, as

evidence of past foodways.

### Foodways and Economic Scaling

When it is possible to identify clearly what was being cooked, eaten, and thrown away by the inhabitants of a site, zooarchaeologists are able to hypothesize on food preference, life-style, ethnicity, and economic scale. Roselle Henn (1982) has done interesting studies of the Weeksville community in Brooklyn. She compares faunal remains from various household units within the community that date to the late nineteenth and early twentieth centuries. This is a crucial time period in which occurred the standardization of meat cuts and prices. With some working knowledge of a 'standard,' archaeologists are able to base their suppositions of food-purchase and food-preparation as the multifarious result of ethnic preference, religious affiliation, needs to assimilate, occupational status, and level of income.

It seems to be a fairly steady constant that beef is more expensive than pork. Late nineteenth century prices of beef and pork in New York City appear to remain relative to each other--pork for the most part being the less expensive product (Henn 1982:14-15). Mutton and lamb seem to vary in their price relationship to beef and pork and require further research and comparison. The cost relationship between meats and fowl is a little more complex as they were packaged and

priced differently. Therefore, it is difficult to insure a balanced comparison. For example, in 1827, the best cuts of beef were sold at 8-10 cents per pound, while ducks, geese and turkeys were sold a 50 cents to \$1.25 each. Chickens were sold by the pair at 50-63 cents, but it is difficult to guess how much these nineteenth-century birds weighed, what they were fed on, how hefty a carcass they provided, how much of their weight was discardable in bone-mass, and so on (Morgan 1984). These questions complicate any hope to compare beef, which was weighed by the pound, to fowl, which was sold by the entire carcass. For example, was a family of five paying less to eat a whole chicken as opposed to a pot of stew meats? And, in what time period? Did the price differences fluctuate? And finally, what would be the difference, in cost and quantity, between foods bought for a small household and foods purchased for a large institution such as Sailors' Snug Harbor?

In answer to these above questions, further research into the standardization of both packaging (the form in which the meats were actually brought into the household) and pricing, is needed. However, it should always be taken into consideration the fact that prices do fluctuate. Factors, such as seasonal availability, scarcity due to political or wartime embargoes, strife due to natural disasters or epidemics, will effect food costs and accessibility. Ultimately, the archaeologist makes use of these cautions mentioned above by considering them in conjunction with all

the other variables present in the archaeological and archival record. Some of these variables--observable butchery practices, associated artifact deposits, architectural history, history of occupancy, and records of purchase, payment, jobs, menus, etc.--help to observe the patterns implied in the archaeological setting and hopefully, to comprehend past life-ways.

### Butchery and Economic Scaling

A general overview of butchery practices can be presented in the following way:

Domesticated mammal {Ovis/Capra for Sheep/Goat or mutton and lamb; Bos for cattle or beef; Sus for Pig or pork} is divided into hindquarter and forequarter, after the carcass has been split into right and left side. Cuts of meat that come from the hindquarter for a mammal would include sirloin, rump, round, flank, shank and feet. In general the market cost decreases from the sirloin, being the most expensive, to the feet, being the least expensive. The forequarter includes the shoulder, chuck, shank, and feet--also in decreasing order of cost. The ribs of mammalia are also cuts of meat ranging from prime ribs, to chops, to smaller cheaper rib cuts. The remaining body parts include the neck, head, vertebrae, and tail. R. Lee Lyman (1977:70 observes at Fort Walla Walla Dump Site in Washington State



that "the wrist and ankle have high (nutritional) food value as do the vertebrae and ribs."

There are, in general, a few problems facing the zooarchaeologist of historic sites that are worth mentioning here. One, is the problem of distinguishing the difference between an assemblage deriving from butchery practices done in the home versus the remains from packaged meats obtained from the market. Lyman (1977:70) calls this "functional variation." "Some carcasses," he says, "were cut into large steaks and roasts, while other carcasses were cut into smaller ones." If at the market level, there were wholesale cuts and retail cuts, the question would be: what was being bought at the market, brought home, prepared into smaller pieces, and cooked? Or what was being raised, butchered, and prepared solely in the home? Would there be a difference in the nature, form, and quantity of the bones? Finally, in terms of people, what aspect of food practices, from market to dinner-table, reflect variation on the socio-economic scale? It is at this point that historic archaeologists turn to history (specifically, archival records) for any clues as to the nature of life of the inhabitants whose remains are being examined.

A second problem addresses the issue of presence/absence, since there are certain cuts of meat that have no bone, such as, sirloins, mignons, 'baron of beef' (the rump), briskets for corning, stew squares, etc. No bone means no record, but not necessarily no meat on the table. Always allowing for

this presence/absence, the zooarchaeologist must also consider the activities of animals such as dogs and rodents that will cart away bones, devour them, or simply gnaw on them to the point of changing their form at the time of deposition.

Finally, the third problem, which is present specifically in the analysis of the Matron's Cottage data, directly addresses the difficulty in interpreting the function or the use of the bone assemblage. For example, if the bones retrieved represent a large percentage of mammalia extremities, such as feet and lower leg bones with few or no butchery marks, are we to assume they were used for soups, stews or boullions or are we to identify them as the discard from food-preparation and butchery? Similarly, if there are butchery marks are we to assume they are marks from butchery carried out for the purposes of cooking or for the purposes of discarding inedible parts?

#### Analysis of the Faunal Remains at the Matron's Cottage

Built originally to function as a Wash House on the premises of Sailor Snug Harbor, a institution for retired seamen, the Matron's Cottage was occupied by the Steward (overseer of provisions and supplies), his family, and several female employees from 1845 through 1872. During this time, the women took their meals outside of the Matron's

Cottage, in the 'general kitchen,' adjacent to the seamen's dining hall, while the Steward and his family supped in the Cottage dining area.

The bone refuse deposited in the time period, 1845-72, is associated with a relatively high percentage of decorated ceramics (see Chapter 4, Table 2), and reveals a considerably broad diet of beef, mutton, pork, and poultry. Such a diet in correspondence with the presence of expensive ware-types points to the affluent position the Steward occupied at Sailors' Snug Harbor. His salary registers as the highest paid position on the pay rolls of 1889 (see Chapter 4, Table 1).

After 1873, a cook was hired, and the female employees, who slept at the Cottage, were also able to take their meals in the Cottage. The bone refuse tabulated from this time period (also in association with the ceramic assemblage) reveals a drop in the presence of beef and pork, while the presence of mutton or lamb is on the rise. This pattern accelerates in percentage at the turn of the century and is associated with a declining number of decorated wares found in the assemblage. This change in the refuse deposit corresponds to the time period in which the Steward acquired his own house after 1880. It is probable that any subsequent bone discard would be generated from the matron and the female employees who, after this time, were the sole occupants of the Matron's Cottage.

In sum, it was observed archaeologically that, in

correspondence to a drop in expensive, decorated wares, there was also a drop in the variety of bone (meats). This 'drop-in-variety' pattern supports the general supposition that the change in occupancy from affluent Steward to working-class female employees resulted in the 'narrowing' of types in both ceramics and bones. It could be stated then, that, not only is the Matron's Cottage Site a good example of economic scaling and variation, but also of differential access to wealth based on class and gender.

Conclusive evidence, however, pointing to this differential treatment of the working women at Sailors' Snug Harbor still remains to be obtained. It is a fact that, according to a menu printed in the fall of 1898, the seamen were eating quite varied and well-rounded meals (see Figure 1.) which would produce food refuse not unlike the kind analyzed from the time the Steward occupied the Matron's Cottage. In addition, further archival and archaeological research into the life-style and status-position of working men (not seamen) on the payroll at Sailors' Snug Harbor, would place the treatment of these working women, who occupied the Cottage after 1880, in a context that might offer further insights.

The fact remains however, that in the archaeological record, dating to the last quarter of the nineteenth century, there is a remarkably high percentage of mutton/lamb deposited at kitchen refuse from the Matron's Cottage (see

✦ S. S. HARBOR, BILL OF FARE. ✦    ✦ S. S. HARBOR, BILL OF FARE. ✦    ✦ S. S. HARBOR, BILL OF FARE. ✦

Sunday September 11<sup>th</sup>, 1898. *189*

BREAKFAST.

Oatmeal Mush and Milk  
Boiled Eggs  
Tea and Coffee    Rolls Bread and Butter

DINNER.

Roast Ribs of Beef, brown Gravy  
Mashed Potatoes  
Boiled Green Corn  
Baked Rice Pudding, Vanilla Sauce  
Bread and Butter

SUPPER.

Tea    Cake  
Rolls Bread and Butter

Saturday, September 10<sup>th</sup>, 1898. *189*

BREAKFAST.

Cornmeal Mush and Milk  
Fried Pork Chops    Mashed Potatoes  
Tea and Coffee    Rolls Bread and Butter

DINNER.

Boiled smoked Shoulders of Pork  
Potatoes in their Jackets  
Mashed Pumpkins  
Bread and Butter

SUPPER.

Fresh Peaches  
Tea    Cold Meat  
Rolls Bread and Butter

Friday September 9<sup>th</sup>, 1898. *189*

BREAKFAST.

Cornmeal Mush and Milk  
Stewed Beef with Potatoes  
Tea and Coffee    Rolls Bread and Butter

DINNER.

Fried Halibut  
Ringed Potatoes  
Steamed Haddock with Molasses  
Mixed Pickled Beets  
Bread and Butter

SUPPER.

Stewed Prunes  
Tea    Cheese  
Rolls Bread and Butter

Figure 1: Snug Harbor Bills of Fare

← S. S. HARBOR, BILL OF FARE.

→ S. S. HARBOR, BILL OF FARE!

← S. S. HARBOR, BILL OF FARE. →

Monday September 12<sup>th</sup>, 1898.

Thursday, September 15<sup>th</sup>, 1898.

Tuesday, September 13<sup>th</sup>, 1898. 189

BREAKFAST.

Indian Meal Mash and Milk

Corned Beef Mash

Tea and Coffee Rolls Bread and Butter

DINNER.

Ragout of Veal with Vegetables

Mashed Turnips

Boiled and Fried Potatoes

Bread and Butter

SUPPER.

Stewed Peaches

Tea Cheese

Rolls Bread and Butter

BREAKFAST.

Indian Meal Mash and Milk

Corned Beef Mash

Tea and Coffee, Rolls Bread and Butter

DINNER.

Fricassee of Chicken

Mashed Potatoes

Boiled Green Corn

Steamed Fruit Pudding, Strawberry Sauce Pickled Beets

Bread and Butter

SUPPER.

Fresh Peaches

Tea Cold Meat

Rolls, Bread and Butter

BREAKFAST.

Cornmeal Mash and Milk

Stewed Beef with Vegetables

Tea and Coffee Rolls Bread and Butter

DINNER.

Corned Brisket of Beef Pea Soup

Boiled Cabbage

Fried and Boiled Potatoes

Pickled Beets

Bread and Butter

SUPPER.

Stewed Apples

Tea Cold Meat

Rolls Bread and Butter

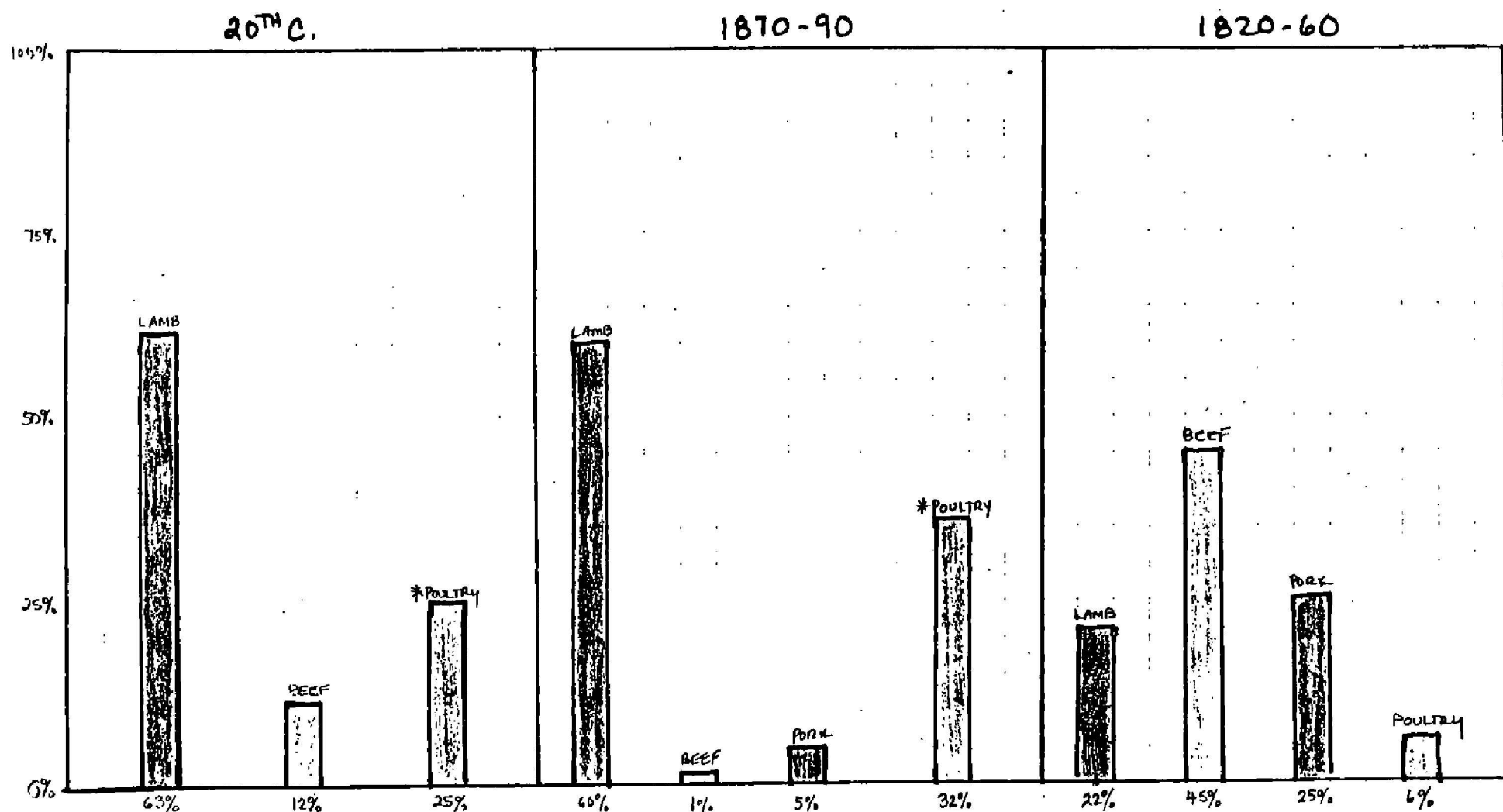
Figure 1 (cont.): Snug Harbor Bills of Fare

Figures 2, 3, 4, 5; and 6). There can be only two explanations for this phenomena: one, is that mutton/lamb was somehow more available to the women of the Cottage than beef, pork, or poultry (although poultry is the second highest of percentaged presence of bone in this time period); two, that perhaps, beef, pork etc. was also being consumed but the bones were being carted away, leaving only the mutton/lamb bones present in the deposit.

Pertaining to the first explanation, sheep were raised on the premises of the institution throughout the nineteenth century (Gibson, Shepherd and Bauer 1979), which would provide an accessible and inexpensive meat source for the inhabitants of the Matron's Cottage, as well as the Steward and his family, and the seamen. However, what complicates this explanation is found in the Steward's purchasing records. In 1849-50, he, in fact, lumps the purchase of beef, poultry, and mutton together in the same column and listed each day at anywhere from 231 to 271 pounds consumed. Pork is listed in a separate column at the same total poundage (see Figures 7, 8, 9, & 10). The lumping of the above meat-types suggests that while there may be a price difference between beef-poultry-mutton and pork, there is an equivalent relationship between beef and poultry and mutton.

What further complicates the theory that lamb/mutton is the standard meal to be found in a worker-class household, is noted in the Steward's expenditures, 1875-6, which lists beef and mutton at both 11 cents a pound, while poultry is the





\*POULTRY COMES FROM SQUARE 4, LEVEL 3 WHICH IS A MIXED CONTEXT OF 19<sup>TH</sup> + 20<sup>TH</sup> C. MATERIAL. THEREFORE, THE RELATION BETWEEN TIMES - 20<sup>TH</sup> C. and 1870-90- ARE SOMEWHAT ENTWINED. PLEASE CONSIDER THIS RELATION IN ANALYSIS.

Figure 2: Histogram: Total Percentage of Bones Through Time

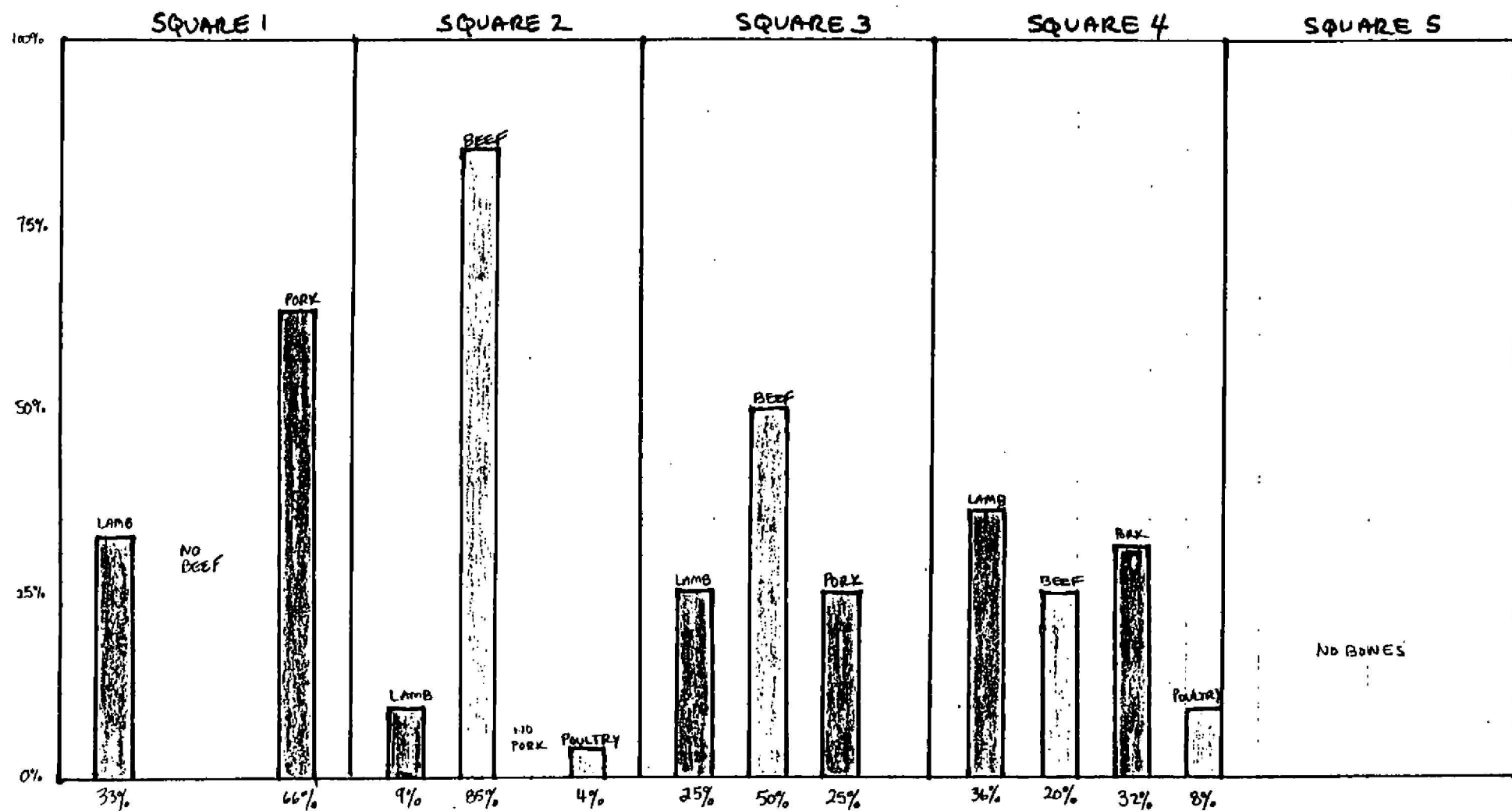


Figure 3: Histogram: Percentages of Bones, 1820-1860

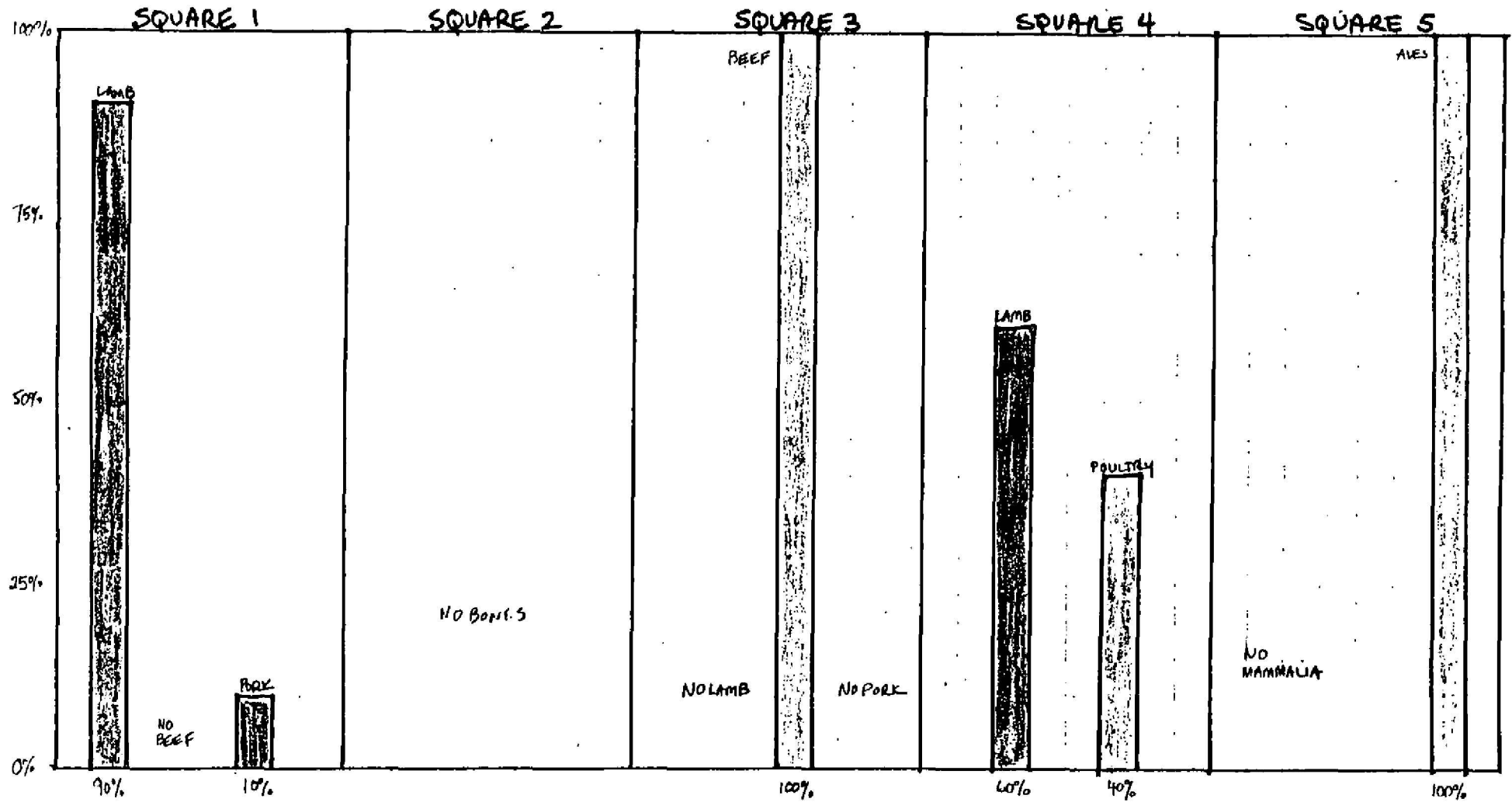


Figure 4: Histogram: Percentages of Bones, 1870-1890.

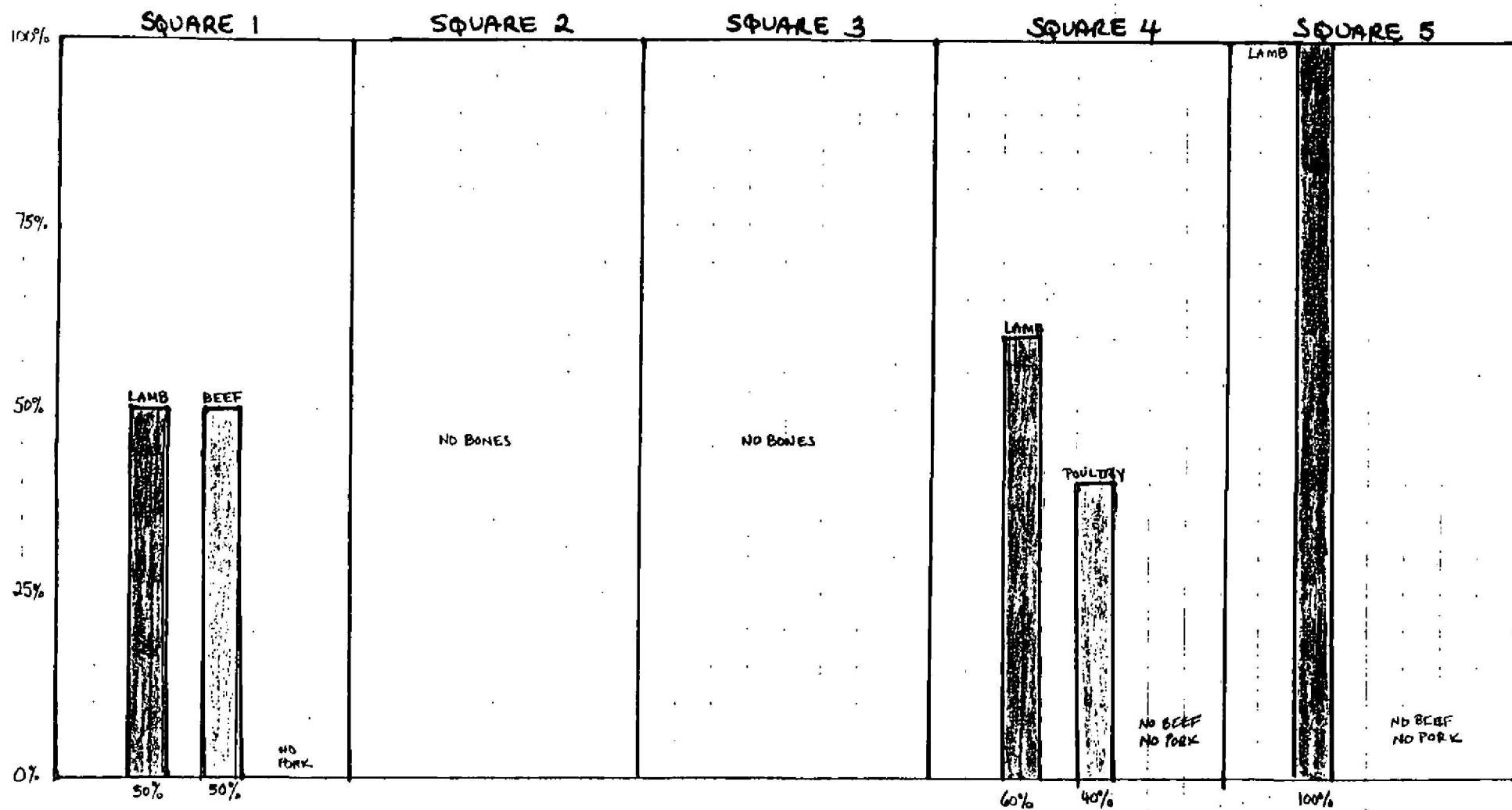


Figure 5: Histogram: Percentages of Bones, Twentieth Century











Day	Mo	Da	Time	Place	Item	QTY	Price	Total	Balance	Notes
Monday	5	28	8	28	1/2 lb Sugar	1	62	62	240.53	7 lbs 20 cts
Tuesday	6	27	1	27	1/2 lb Sugar	1	62	124	240.53	1 lb 10 cts
Wednesday	7	26	1	26	1/2 lb Sugar	1	62	186	240.53	1 lb 10 cts
Thursday	8	25	1	25	1/2 lb Sugar	1	62	248	240.53	1 lb 10 cts
Friday	9	24	1	24	1/2 lb Sugar	1	62	310	240.53	1 lb 10 cts
Saturday	10	23	1	23	1/2 lb Sugar	1	62	372	240.53	1 lb 10 cts
Sunday	11	22	1	22	1/2 lb Sugar	1	62	434	240.53	1 lb 10 cts
Monday	12	21	1	21	1/2 lb Sugar	1	62	496	240.53	1 lb 10 cts
Tuesday	13	20	1	20	1/2 lb Sugar	1	62	558	240.53	1 lb 10 cts
Wednesday	14	19	1	19	1/2 lb Sugar	1	62	620	240.53	1 lb 10 cts
Thursday	15	18	1	18	1/2 lb Sugar	1	62	682	240.53	1 lb 10 cts
Friday	16	17	1	17	1/2 lb Sugar	1	62	744	240.53	1 lb 10 cts
Saturday	17	16	1	16	1/2 lb Sugar	1	62	806	240.53	1 lb 10 cts
Sunday	18	15	1	15	1/2 lb Sugar	1	62	868	240.53	1 lb 10 cts
Monday	19	14	1	14	1/2 lb Sugar	1	62	930	240.53	1 lb 10 cts
Tuesday	20	13	1	13	1/2 lb Sugar	1	62	992	240.53	1 lb 10 cts
Wednesday	21	12	1	12	1/2 lb Sugar	1	62	1054	240.53	1 lb 10 cts
Thursday	22	11	1	11	1/2 lb Sugar	1	62	1116	240.53	1 lb 10 cts
Friday	23	10	1	10	1/2 lb Sugar	1	62	1178	240.53	1 lb 10 cts
Saturday	24	9	1	9	1/2 lb Sugar	1	62	1240	240.53	1 lb 10 cts
Sunday	25	8	1	8	1/2 lb Sugar	1	62	1302	240.53	1 lb 10 cts
Monday	26	7	1	7	1/2 lb Sugar	1	62	1364	240.53	1 lb 10 cts
Tuesday	27	6	1	6	1/2 lb Sugar	1	62	1426	240.53	1 lb 10 cts
Wednesday	28	5	1	5	1/2 lb Sugar	1	62	1488	240.53	1 lb 10 cts
Thursday	29	4	1	4	1/2 lb Sugar	1	62	1550	240.53	1 lb 10 cts
Friday	30	3	1	3	1/2 lb Sugar	1	62	1612	240.53	1 lb 10 cts
Saturday	31	2	1	2	1/2 lb Sugar	1	62	1674	240.53	1 lb 10 cts
Sunday	1	1	1	1	1/2 lb Sugar	1	62	1736	240.53	1 lb 10 cts
Monday	2	1	1	1	1/2 lb Sugar	1	62	1798	240.53	1 lb 10 cts
Tuesday	3	1	1	1	1/2 lb Sugar	1	62	1860	240.53	1 lb 10 cts
Wednesday	4	1	1	1	1/2 lb Sugar	1	62	1922	240.53	1 lb 10 cts
Thursday	5	1	1	1	1/2 lb Sugar	1	62	1984	240.53	1 lb 10 cts
Friday	6	1	1	1	1/2 lb Sugar	1	62	2046	240.53	1 lb 10 cts
Saturday	7	1	1	1	1/2 lb Sugar	1	62	2108	240.53	1 lb 10 cts
Sunday	8	1	1	1	1/2 lb Sugar	1	62	2170	240.53	1 lb 10 cts
Monday	9	1	1	1	1/2 lb Sugar	1	62	2232	240.53	1 lb 10 cts
Tuesday	10	1	1	1	1/2 lb Sugar	1	62	2294	240.53	1 lb 10 cts
Wednesday	11	1	1	1	1/2 lb Sugar	1	62	2356	240.53	1 lb 10 cts
Thursday	12	1	1	1	1/2 lb Sugar	1	62	2418	240.53	1 lb 10 cts
Friday	13	1	1	1	1/2 lb Sugar	1	62	2480	240.53	1 lb 10 cts
Saturday	14	1	1	1	1/2 lb Sugar	1	62	2542	240.53	1 lb 10 cts
Sunday	15	1	1	1	1/2 lb Sugar	1	62	2604	240.53	1 lb 10 cts
Monday	16	1	1	1	1/2 lb Sugar	1	62	2666	240.53	1 lb 10 cts
Tuesday	17	1	1	1	1/2 lb Sugar	1	62	2728	240.53	1 lb 10 cts
Wednesday	18	1	1	1	1/2 lb Sugar	1	62	2790	240.53	1 lb 10 cts
Thursday	19	1	1	1	1/2 lb Sugar	1	62	2852	240.53	1 lb 10 cts
Friday	20	1	1	1	1/2 lb Sugar	1	62	2914	240.53	1 lb 10 cts
Saturday	21	1	1	1	1/2 lb Sugar	1	62	2976	240.53	1 lb 10 cts
Sunday	22	1	1	1	1/2 lb Sugar	1	62	3038	240.53	1 lb 10 cts
Monday	23	1	1	1	1/2 lb Sugar	1	62	3100	240.53	1 lb 10 cts
Tuesday	24	1	1	1	1/2 lb Sugar	1	62	3162	240.53	1 lb 10 cts
Wednesday	25	1	1	1	1/2 lb Sugar	1	62	3224	240.53	1 lb 10 cts
Thursday	26	1	1	1	1/2 lb Sugar	1	62	3286	240.53	1 lb 10 cts
Friday	27	1	1	1	1/2 lb Sugar	1	62	3348	240.53	1 lb 10 cts
Saturday	28	1	1	1	1/2 lb Sugar	1	62	3410	240.53	1 lb 10 cts
Sunday	29	1	1	1	1/2 lb Sugar	1	62	3472	240.53	1 lb 10 cts
Monday	30	1	1	1	1/2 lb Sugar	1	62	3534	240.53	1 lb 10 cts
Tuesday	31	1	1	1	1/2 lb Sugar	1	62	3596	240.53	1 lb 10 cts
Wednesday	1	1	1	1	1/2 lb Sugar	1	62	3658	240.53	1 lb 10 cts
Thursday	2	1	1	1	1/2 lb Sugar	1	62	3720	240.53	1 lb 10 cts
Friday	3	1	1	1	1/2 lb Sugar	1	62	3782	240.53	1 lb 10 cts
Saturday	4	1	1	1	1/2 lb Sugar	1	62	3844	240.53	1 lb 10 cts
Sunday	5	1	1	1	1/2 lb Sugar	1	62	3906	240.53	1 lb 10 cts
Monday	6	1	1	1	1/2 lb Sugar	1	62	3968	240.53	1 lb 10 cts
Tuesday	7	1	1	1	1/2 lb Sugar	1	62	4030	240.53	1 lb 10 cts
Wednesday	8	1	1	1	1/2 lb Sugar	1	62	4092	240.53	1 lb 10 cts
Thursday	9	1	1	1	1/2 lb Sugar	1	62	4154	240.53	1 lb 10 cts
Friday	10	1	1	1	1/2 lb Sugar	1	62	4216	240.53	1 lb 10 cts
Saturday	11	1	1	1	1/2 lb Sugar	1	62	4278	240.53	1 lb 10 cts
Sunday	12	1	1	1	1/2 lb Sugar	1	62	4340	240.53	1 lb 10 cts
Monday	13	1	1	1	1/2 lb Sugar	1	62	4402	240.53	1 lb 10 cts
Tuesday	14	1	1	1	1/2 lb Sugar	1	62	4464	240.53	1 lb 10 cts
Wednesday	15	1	1	1	1/2 lb Sugar	1	62	4526	240.53	1 lb 10 cts
Thursday	16	1	1	1	1/2 lb Sugar	1	62	4588	240.53	1 lb 10 cts
Friday	17	1	1	1	1/2 lb Sugar	1	62	4650	240.53	1 lb 10 cts
Saturday	18	1	1	1	1/2 lb Sugar	1	62	4712	240.53	1 lb 10 cts
Sunday	19	1	1	1	1/2 lb Sugar	1	62	4774	240.53	1 lb 10 cts
Monday	20	1	1	1	1/2 lb Sugar	1	62	4836	240.53	1 lb 10 cts
Tuesday	21	1	1	1	1/2 lb Sugar	1	62	4898	240.53	1 lb 10 cts
Wednesday	22	1	1	1	1/2 lb Sugar	1	62	4960	240.53	1 lb 10 cts
Thursday	23	1	1	1	1/2 lb Sugar	1	62	5022	240.53	1 lb 10 cts
Friday	24	1	1	1	1/2 lb Sugar	1	62	5084	240.53	1 lb 10 cts
Saturday	25	1	1	1	1/2 lb Sugar	1	62	5146	240.53	1 lb 10 cts
Sunday	26	1	1	1	1/2 lb Sugar	1	62	5208	240.53	1 lb 10 cts
Monday	27	1	1	1	1/2 lb Sugar	1	62	5270	240.53	1 lb 10 cts
Tuesday	28	1	1	1	1/2 lb Sugar	1	62	5332	240.53	1 lb 10 cts
Wednesday	29	1	1	1	1/2 lb Sugar	1	62	5394	240.53	1 lb 10 cts
Thursday	30	1	1	1	1/2 lb Sugar	1	62	5456	240.53	1 lb 10 cts
Friday	31	1	1	1	1/2 lb Sugar	1	62	5518	240.53	1 lb 10 cts
Saturday	1	1	1	1	1/2 lb Sugar	1	62	5580	240.53	1 lb 10 cts
Sunday	2	1	1	1	1/2 lb Sugar	1	62	5642	240.53	1 lb 10 cts
Monday	3	1	1	1	1/2 lb Sugar	1	62	5704	240.53	1 lb 10 cts
Tuesday	4	1	1	1	1/2 lb Sugar	1	62	5766	240.53	1 lb 10 cts
Wednesday	5	1	1	1	1/2 lb Sugar	1	62	5828	240.53	1 lb 10 cts
Thursday	6	1	1	1	1/2 lb Sugar	1	62	5890	240.53	1 lb 10 cts
Friday	7	1	1	1	1/2 lb Sugar	1	62	5952	240.53	1 lb 10 cts
Saturday	8	1	1	1	1/2 lb Sugar	1	62	6014	240.53	1 lb 10 cts
Sunday	9	1	1	1	1/2 lb Sugar	1	62	6076	240.53	1 lb 10 cts
Monday	10	1	1	1	1/2 lb Sugar	1	62	6138	240.53	1 lb 10 cts
Tuesday	11	1	1	1	1/2 lb Sugar	1	62	6200	240.53	1 lb 10 cts
Wednesday	12	1	1	1	1/2 lb Sugar	1	62	6262	240.53	1 lb 10 cts
Thursday	13	1	1	1	1/2 lb Sugar	1	62	6324	240.53	1 lb 10 cts
Friday	14	1	1	1	1/2 lb Sugar	1	62	6386	240.53	1 lb 10 cts
Saturday	15	1	1	1	1/2 lb Sugar	1	62	6448	240.53	1 lb 10 cts
Sunday	16	1	1	1	1/2 lb Sugar	1	62	6510	240.53	1 lb 10 cts
Monday	17	1	1	1	1/2 lb Sugar	1	62	6572	240.53	1 lb 10 cts
Tuesday	18	1	1	1	1/2 lb Sugar	1	62	6634	240.53	1 lb 10 cts
Wednesday	19	1	1	1	1/2 lb Sugar	1	62	6696	240.53	1 lb 10 cts
Thursday	20	1	1	1	1/2 lb Sugar	1	62	6758	240.53	1 lb 10 cts
Friday	21	1	1	1	1/2 lb Sugar	1	62	6820	240.53	1 lb 10 cts
Saturday	22	1	1	1	1/2 lb Sugar	1	62	6882	240.53	1 lb 10 cts
Sunday	23	1	1	1	1/2 lb Sugar	1	62	6944	240.53	1 lb 10 cts
Monday	24	1	1	1	1/2 lb Sugar	1	62	7006	240.53	1 lb 10 cts
Tuesday	25	1	1	1	1/2 lb Sugar	1	62	7068	240.53	1 lb 10 cts
Wednesday	26	1	1	1	1/2 lb Sugar	1	62	7130	240.53	1 lb 10 cts
Thursday	27	1	1	1	1/2 lb Sugar	1	62	7192	240.53	1 lb 10 cts
Friday	28	1	1	1	1/2 lb Sugar	1	62	7254	240.53	1 lb 10 cts
Saturday	29	1	1	1	1/2 lb Sugar	1	62	7316	240.53	1 lb 10 cts
Sunday	30	1	1	1	1/2 lb Sugar	1	62	7378	240.53	1 lb 10 cts
Monday	31	1	1	1	1/2 lb Sugar	1	62	7440	240.53	1 lb 10 cts

Figure 10: Steward's Purchasing Records, May, 1850.

more expensive at 20 cents a pound (see Appendix 4). What is perturbing, however, is why mutton is being purchased along with beef and poultry, if sheep were being raised on the premises? And, if the female inhabitants of the Matron's Cottage were being supplied with a "narrower" range of meat-types (mutton/lamb and poultry), how could it be that one of those 'narrow' types was a meat that was priced higher than all the others, namely poultry?

It is, then, perhaps, the second explanation which might offer further insight into the curious presence and/or absence of bones at the Matron's Cottage in the late nineteenth century. During this time, sanitation practices had become increasingly sophisticated. Not only was there a concern for the health and hygiene of peoples' living-quarters and environs, but also the growing popularity of processing bone for bonemeal, for fertilizer, and for glue. It is possible that the differential presence of mutton/lamb to other meats in the archaeological deposit representing the late nineteenth century, signifies technological advances in garbage maintenance and processing. In expenditures for the quarter ending May 31, 1875, the Steward records payment to an R.H. Allen and Company for "bone and etc." at \$53.01 (see Figs. 11,12 &13). If Allen was being hired to cart bones from the seamen's dining hall, it is conceivable he was carting bone from the Matron's Cottage as well. Unfortunately, there is no data as yet, from the Seamen's dining hall which would support this differential presence of bone. One last





# Farm & Garden account with Institution Dr

for quarter ending May 31 1875.

" J. Driscoll bill of feed	58 00	
" R. Allen & Co " " Tools	16 38	
" L. Liechtenstein " Grain	33 00	
" J. Driscoll " " feed	58 00	
" R. H. Allen & Co " Guano	70 38	
" Mrs Deane " " Manure	18 00	
" L. Liechtenstein " Grain	33 00	
" R. H. Allen & Co " Bone &c	83 01	
" Geo Wiley " " Potatoes	250 00	
" Jas Cahill " " Manure	180 00	
" Thos Riley " " Tools &c	15 83	
" Pay Rolls for the quarter	671 15	11,456.45
Balance in favor of Farm		13.31
		<u>\$1,470.06</u>

## Farm Credit

For 1250 $\frac{1}{2}$ Galts milk	240	500 20
" 59 6 Bush Potatoes	" 100	59 6 00
" 59 $\frac{1}{2}$ " Turnips	" 70	41 30
" 25 " Beets	" 80	29 00
" 68 $\frac{1}{2}$ " Onions	2.25	154 13
" 15 $\frac{1}{2}$ " Carrots	45	11 63
" 29 $\frac{1}{2}$ " Parsnips	1.00	29 50
" 715 Hds. Cabbage	12	85 30
" 4 Cord wood	6.00	24 00
" 30 Sacks Rye Straw	7.50	1470.06

Figure 13: Farm and Garden Account for Quarter Ending May 31, 1875.

question would be: if Allen was carting away the bones, what is it about mutton/lamb bones that would cause them to be left behind?

These above queries, while they put a strong caution on the economic scaling theory and possible differential treatment based on gender, they don't explain away the striking correspondence between expensive meats and expensive wares, present archaeologically in the time period that the Steward occupied the Cottage. Nor do they explain the association between a drop in the "variety" of expensive meats and a drop in the presence of expensive wares, observable archaeologically during the time the matron and the female employees occupied the Cottage

In conclusion, then, it can be ventured, that all the above explanations are factors in determining the nature in which the faunal remains are to be read out of the archaeological record. While there is a definite and marked difference in species-types through time, there may have been a change in the way the bone was discarded through time. What may or may not have changed is the way in which people arranged themselves: by ethnicity, religious affiliation, economic status, and gender identification. It may or may not be significant that the women who occupied the Matron's Cottage, in the last quarter of the nineteenth century, left behind a smaller variety of meat bones from their meals and an array of less expensive wares. The question to pursue



further involves the complex interrelationship of social/historical forces impacting on the archaeological record. What is the picture we are seeing? And, how to separate out all factors--technological advances, economic scaling, and finally, gender.

Gender, is a difficult but ever-present issue which, in terms of archaeology, becomes an issue of the differential treatment of women to the access of material things: food, clothing and shelter. The differential access to material things experienced by women, as an entire class of people, will in some cases be visible in the archaeological record. However, the questions to ask are not merely ones of economics, but also to illicit from the archaeological domain the social/ humanistic questions of which gender is one. To take notice of the imbalances between people and things, and to question these imbalances, even if there are no concrete answers, is to begin to understand the ways in which power manifests itself in daily life, ours and theirs.

## Bibliography

Gibson, Shepherd, and Bauer

1979 "Sailors' Snug Harbor, an Historic Structures Report." 4 vols. Report on file at the New York State Office of Parks and Recreation, Historic Preservation Division, Albany, New York.

Henn, Roselle

1982 "From Market, To Table, To Trash: Analysis of Faunal Remains from The Hunterfly Site." CUNY Graduate Center.

1984 "Reconstructing the Urban Foodchain: Problems in Interpreting Faunal Remains Recovered from Household Deposits." Paper presented at the annual meeting of the Society for Historical Archaeology.

Morgan, K.T.

1984 Faunal Analysis and archival research focusing on the Stadt Huys Site, Hanover Square Site, and Telco Site collections. National Endowment of the Humanities Grant. Research partner: Meta F. Janowitz. Research coordinator: Dr. Nan Rothschild.