

THE BULLETIN

NUMBER 82 FALL 1981

CONTENTS

Historic Preservation in New York Paul R. Huey	1
Archaeological Exploration of the Louw-Bogardus Site, Kingston, New York Paul R. Huey	4
An Archaeological Testing Project at Johnson Hall State Historic Site, Johnstown, New York Rich Goring	25
Archaeological Testing at Clermont State Historic Park, Town of Clermont, Columbia County, for a Proposed Telephone-Electrical Line Lois M. Feister	39
Archaeological Test Excavations at the Canal Store, Schoharie Crossing State Historic Site, Located in the Town of Florida, Montgomery County, New York Sandra J. Hutchinson and Dennis L. Wentworth	46

the bulletin and journal

of Archaeology for New York State



Frog Alley Residence

HISTORIC PRESERVATION IN NEW YORK
PREFACE

The State Historic Sites and Archaeological Resources

The story of New York State's system of State-owned historic sites begins along the Hudson River about 15 miles north of Bear Mountain, in the middle of Newburgh, New York. Newburgh stands at the northern fringe of the romantic Highlands of the Hudson, and travelers since the time of Henry Hudson in 1609 have noted and commented on the beauty of this area. The popularity of travel by steamboat in the 19th century increased public access to it, and the many scenes of Revolutionary War history appealed to the popular romantic interests of the period. In the 1830's, Washington Irving organized a group of men to try to preserve the old Hasbrouck House in Newburgh, used by General Washington as his headquarters in 1782 and 1783. Interest in saving the historic structure continued through the 1840's, and in 1850 the State of New York acquired the property as an historic site. This unprecedented example of public historic preservation began New York's progressive program of acquiring and preserving historic sites for the public. Today the State of New York owns and operates 34 Historic Sites for the public. They are operated essentially as museums.

The types of sites that have been acquired and the ways in which the sites have been handled, managed, and presented also reflect patterns of periodic change in ideas and concepts since 1850. What exists today is an inherited accumulation of these changes. In illustrating the history of our changing ideas about history, the historic sites have much to offer in addition to the intrinsic values for which they were originally acquired.

For example, at Washington's Headquarters the Tower of Victory was built in 1886 and still stands near the house as a magnificent example of 19th century monumental architecture. In 1908 the State proudly built the new brick museum building at Washington's Headquarters. Meanwhile, in Kingston, New York, the State acquired the historic Senate house in 1887, and changes to that structure began immediately with construction of a large stone addition on the north side. In 1927 at Senate House, the State also constructed a large new stone museum building near the house.

Through the years, as other historic sites were acquired, substantially restored, and developed for the public, very little, if any, attention was paid to the concomitant disturbance and destruction of archaeological remains associated with these buildings and sites. Today it is assumed that significant archaeological remains must lie in the ground associated with historic buildings, but this concept was ignored during the many years of historic site development and preservation by the State.

The history and development of the New York State historic sites system since 1850 reflect many different philosophies and methods of historic resources management. Within recent years, however, an important new dimension has been added to the understanding and interpretation of historic sites as resources. This new dimension is an awareness that entire sites must be carefully preserved, managed, and interpreted, and not just presented as objects associated with single events or specific individuals. The historic sites have thus also come to be recognized as archaeological sites, many of which still contain buried archaeological remains of great importance as resources in the study of site history as well as of changing cultural systems. Not only was the Hasbrouck House in Newburgh Washington's Headquarters in 1782 and 1783, but it is also an important site that has been steadily occupied since about 1720. Senate House in Kingston was not only the meeting place of the State Senate in 1777, but it is also a Dutch urban house site occupied since at least 1676.

The New York State Historic Trust and the Division for Historic Preservation

In 1966 Governor Nelson A. Rockefeller established The New York State Historic Trust within the Conservation Department to maintain and operate the State Historic Sites and to act as liaison with the federal

COVER ILLUSTRATION: Photograph of the "Frog Alley Residence" published in 1896 (De Lisser 1968:17). Courtesy of Hope Farm Bookshop, Cornwallville, N.Y.

government in accordance with new federal preservation legislation. The Historic Trust subsequently established, in 1969, a systematic program of historical archaeology with the purpose of managing archaeological resources and providing data for improved public interpretation at the State Historic Sites. The State Historic Sites represent a non-random sampling of sites selected on a non-scientific basis. As a means of analyzing and interpreting New York State history and its past cultures, therefore, the New York State Historic Trust initiated archaeological research surveys and excavations not only at the State Historic Sites but also at key sites threatened with imminent destruction in order to provide data that form a vitally necessary basis for objective comparative studies.

With the creation of the Department of Environmental Conservation, the New York State Office of Parks and Recreation became a separate agency. Within the Office of Parks and Recreation the New York State Historic Trust subsequently became the Division for Historic Preservation. Finally, the Division for Historic Preservation was organized into two separate bureaus: the Bureau of Field Services to coordinate Statewide preservation activities in liaison with federal programs and the Bureau of Historic Sites to provide guidance and assistance in the maintenance, operation, and interpretation of the State Historic Sites. The staff of the archaeology unit within the Bureau of Historic Sites continues to conduct field work as well as subsequent research, analysis of data, and preparation of scholarly reports to enhance the understanding and interpretation of New York State history to the public through the State Historic Sites system.

Research Goals

Research goals of the archaeology unit exist at many levels, providing historical documentation and answering relatively simple historical questions about the State Historic Sites while also testing hypotheses that may help identify and explain the existence of past cultural patterns or of periods of culture. The development and refinement of research goals has been a continuous process as hypotheses are supported, revised, altered, or discarded. A successful research program in the archaeology unit depends heavily on the unit's ability to conduct innovative comparative studies between the different State Historic Sites and to compare archaeological evidence from the State Historic Sites with the evidence from many other sites that have been studied and reported.

One useful approach has been the study of specific artifact types by geographic distribution to reveal possible patterns of historic trade and transportation, if not of cultural selectivity or specialization. More importantly, it is hoped that by conducting quantitative studies of archaeological data from sites, the comparative analysis between sites will reveal similarities and differences that can be correlated with hypothesized cultural systems of the historic period. Comparative archaeological data have been collected and quantified, based on numerous variables such as ceramic type percentage distributions, South's mean ceramic dates, nail sizes and types, and window glass thicknesses. Among these, comparisons of ceramic sherd percentage distributions from different sites have been very useful, although many factors, such as the actual circumstances of artifact deposition, must be taken into consideration in such research. Nevertheless the comparative analysis of ceramic sherd distribution has already revealed, archaeologically, cultural patterns or subcultures. Military sites of the 18th century, for example, with few exceptions have been found to contain very high percentages of delft sherds among the ceramics as compared to non-military sites. Understanding the meaning or significance of this pattern will, of course, require additional testing of hypotheses, but it is believed that such data can contribute materially to the broad study of currently relevant questions and hypotheses proposed by modern historians and anthropologists relating not only to subcultures such as the military or social elite in colonial America, but also to processes such as acculturation and culture change, migration, urbanization, and other phenomena.

Management of Archaeological Resources

As elsewhere, the archaeological resources at the State Historic Sites are finite and non-renewable. The program of the archaeology unit in the Bureau of Historic Sites includes the identification, protection, and use through wise management of these archaeological resources. At such protected sites, where resource conservation programs are possible, it is important that archaeological research questions be of a level of significance that justifies the destruction of even a small portion of a non-renewable resource. Controlled sampling of the State Historic Sites in most cases produces sufficient data to answer research questions or test hypotheses. Construction requiring ground disturbance is directed wherever possible away from or around archaeological

resources identified through testing, but when there is no alternative and construction is necessary, rescue excavation of the threatened resources is planned and conducted.

The excesses of past archaeological activities at protected sites are today very often regretted. The techniques and methods of archaeology are constantly improving and, since 1969, it has been the consistent policy at the State Historic Sites to conserve and preserve archaeological resources in the public trust, minimally destroying only what is necessary for research or mitigation of adverse impact prior to development, thereby leaving large areas protected for future study. Technology is rapidly advancing, and in 1981 at new Windsor Cantonment the Bureau of Historic Sites conducted its first magnetometer and ground-penetrating radar surveys.

Archaeological Reports

Since 1969 nearly 70 archaeological research reports have been completed on work conducted or sponsored by the Historic Trust and the Bureau of Historic Sites as part of the research and interpretation program at State Historic Sites and in New York State Parks. A massive amount of data has been gathered during more than ten years of excavations. While numerous reports of unfortunately limited distribution have been produced, there are many more reports yet to be written, and the real work of the archaeology unit is just commencing, with the further development, refinement, and testing of hypotheses using the data sampled and rescued from a wide range of sites.

Of the following four reports, the article on the Louw-Bogardus site represents one of the initial research projects of the Historic Trust in May 1969 in its program of identifying and sampling archaeological resources for comparative studies. The Louw-Bogardus site was in some ways similar to the Senate House State Historic Site also in Kingston, and both sites stood in one of the several key urban areas established by the Dutch in the Hudson Valley in the 1650's and 1660's. Although no conclusive evidence of 17th century Dutch occupation levels was found at the Louw-Bogardus site, in July, 1970, a crew directed by Dr. Bert Salwen of New York University commenced excavations on Urban Renewal land in Kingston at the corner of North Front Street and Clinton Avenue and successfully located a series of early post holes on the site of the stockade line of 1658.

Rich Goring's report on Johnson Hall was originally completed in April, 1978, and Lois Feister's report on the testing at Clermont was originally completed in January, 1977. The Schoharie Crossing Canal Store report by Sandra Hutchinson and Dennis Wentworth dates from January, 1978. These reports were selected as representative examples of the types of work that have been conducted in the State Historic Sites program, and they are presented with the hope that the information and data they contain will be of use to other researchers of New York State archaeology. They are the result of a team effort by staff members who did the field work as well as writing, review, and production. Special thanks are due to Dennis Wentworth for his skilled editing, to Joseph McEvoy who took all of the photographs, to Linda Demers for many of the drawings, and to Kathie Benac for typing.

Paul R. Huey
Senior Scientist (Archaeology)
Bureau of Historic Sites
Division for Historic Preservation New York State Office of Parks,
Recreation and Historic Preservation
Peebles Island, Waterford, New York

ARCHAEOLOGICAL EXPLORATION OF THE LOUW-BOGARDUS SITE, KINGSTON, NEW YORK

Paul R. Huey, NYSAAF
New York State Division for Historic Preservation

Van Epps-Hartley Chapter, NYSAA

INTRODUCTION

In February 1969, Fred Johnston, chairman of the Kingston Historic Landmarks Commission, called attention to the architectural significance of the old stone house in Frog Alley, located apparently near the corner of the 17th century Kingston stockade. Careful research with maps and aerial photographs by Dr. Charles Galyon of Kingston confirmed the fact that the topography still followed this stockade line, and that portions of the bluff containing the site of the stockade bastion might have remained relatively undisturbed near the old stone house.

On the basis of these findings, the staff of the New York State Historic Trust, now the New York State Office of Parks, Recreation and Historic Preservation, provided the Kingston Historic Landmarks Commission with three days of archaeological investigation and testing in May, 1969, in an attempt to date the earliest occupation of the old house as well as to define if possible any evidence of the 17th century stockade. It was also intended that the work would produce a controlled sample of artifacts for use in comparative site studies. The work included the excavation of four short test trenches, one inside the house and three outside the house. Dr. Charles Galyon had previously dug another small trench at the southeast corner of the house, revealing part of a brick cistern adjacent to the wall, and he had cleared the brush from areas around the house in preparation for more extensive testing.

This house, subject to frequent speculation and historical discussion, is illustrated and described in *Dutch Houses in the Hudson Valley Before 1776* by Helen Wilkinson Reynolds, published in 1929. The historical research presented in this report is based upon the record of title established by Frank D. Lowe of Albany in 1922 and described by Reynolds in 1929, revealing that the dwelling belonged originally to Pieter Cornelissen Louw. Additional research information was furnished by the Kingston Historic Landmarks Commission.

The writer is indebted to Fred Johnston of the Kingston Historic Landmarks Commission and to Dr. and Mrs. Charles Galyon and family for their continued assistance and kind hospitality. The archaeological work and architectural analysis of the site was conducted with other members of the Historic Trust staff, Paul Battaglino and John G. Waite. For the preliminary identification of faunal evidence from the site, the writer is indebted to Dr. Edgar M. Reilly, Jr., of the New York State Museum and Science Service for his kind and patient assistance.

This report was prepared in March, 1970, and is presented here with additional historical documentation made available since that time but otherwise with only slight changes in the original text. Subsequent public recognition of the significance of the Louw-Bogardus site and its successful preservation during the 1970's was largely due to the efforts of Edwin Ford, as president of the Friends of Historic Kingston. The Friends of Historic Kingston ensured that the site was included in the Stockade Area Historic District nominated to and listed on the National Register of Historic Places. They purchased the site for preservation from the Kingston Urban Renewal Agency and successfully encouraged the realignment of Converse Street (renamed back to Frog Alley) farther away from the site. Finally, they arranged for and financed, with the Ulster Garden Club, the stabilization and preservation of the walls as a ruin, as well as the landscaping of the site. The site is still owned, maintained, and preserved by the Friends of Historic Kingston, assisted by the Ulster Garden Club.

HISTORICAL SETTING

Fertile, low-lying farm land characterizes much of the Hudson Valley at least half of its distance from Albany to New York City. Near Kingston, however, on the west side of the river, the northeast terminus of the Shawangunk Mountain ridge has a dramatic effect on the river valley, which becomes deep and more precipitous before entering the Highlands.

Just south of the Shawangunk Mountain ridge Rondout Creek empties into the Hudson; it is separated by this ridge from Esopus Creek, which flows along the north side before joining the Hudson at Saugerties. Situated upon

this ridge. Kingston stands about two miles from the river on a high flat terrace overlooking the meandering Esopus creek as it flows between lush, well-watered meadows. This location, which Peter Stuyvesant chose in 1658 for a new village soon to be called Wiltwyck, enjoyed significant strategic advantages in trade and agriculture. Protected to the east and north by steep bluffs and to the west by a ravine, the area was enclosed by a log stockade completed on June 20, 1658. The streets within this stockaded area are still an intact part of modern Kingston, and North Front Street and Clinton Avenue still follow part of the original stockade line. Present Green Street follows the western stockade wall, along a ravine and stream which flowed toward the Esopus Creek (Fig. 1). Converse Street, which passes close to the ruins of the old Louw-Bogardus house and may partly follow the stockade wall, once led to a fording place in the Esopus Creek and was called "Frog Alley."

The ruins of this stone house stand on the promontory bluff which marked the northwest bastion of the Kingston stockade (Fig. 2). This hill, overlooking the ravine to the west and the flats along the Esopus to the north, was part of the land of Pieter Cornelissen Louw who, as partner with Pieter Jacobsen, owned a mill nearby and is believed to have lived at this site. Pieter Cornelissen Louw and Pieter Jacobsen together came from Holstein to New Netherland in February 1659 in the ship *Faith*. Pieter Cornelissen Louw was described as a "Labourer" (O'Callaghan 1850:53).

The small nearby stream and ravine furnished a valuable source of water power for a mill site, and in October 1661 Pieter Jacobsen requested the Court of Wiltwyck to fix his charges for grinding corn (Oppenheim 1912:4). It seems likely that he established his "mill-house" in this vicinity about that time (Oppenheim 1912:37).

Both Pieter Jacobsen and Pieter Cornelissen Louw became subjects of a series of lawsuits in Wiltwyck, beginning with Pieter Jacobsen against whom Grietjen Hendricks Westercamp filed a paternity charge in October 1662 (Oppenheim 1912:36-37). In January and February 1663, Pieter Cornelissen Louw was defendant with Thomas Chambers and Elsje Jans in a libel suit by Jan Broersen (Oppenheim 1912:51, 53-54, 57), and in November 1663 Pieter Cornelissen Louw testified in support of Paulus Paulussen who was accused of thievery (Oppenheim 1912:104).

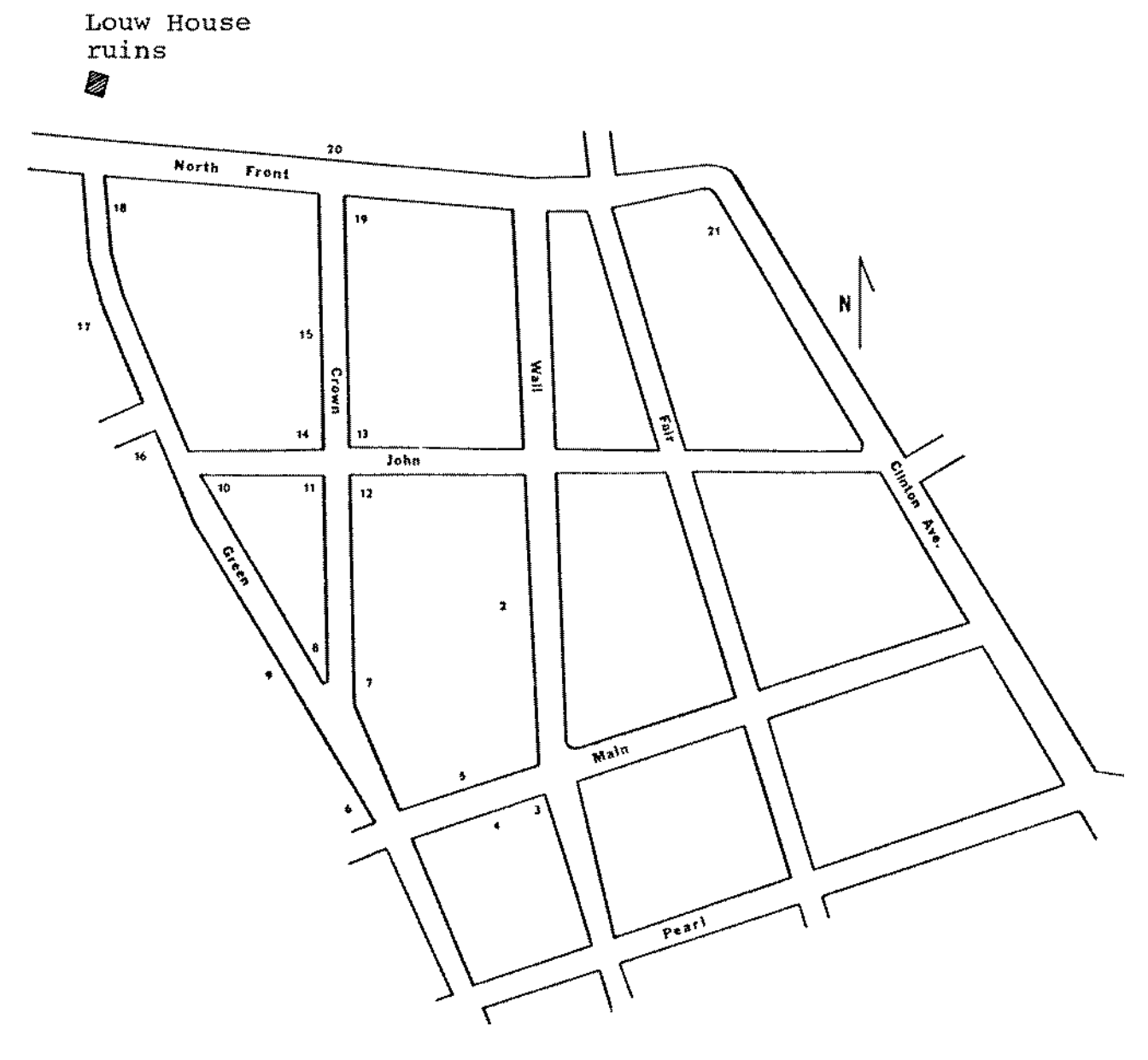
The court records furnish other significant facts relating to Pieter Cornelissen Louw's business as a miller. In June 1663 he was sued by Barent Gerritsen for nondelivery of 341/2 schepels of wheat (Oppenheim 1912:70), and in December Roelof Hendricks sued Pieter Cornelissen Louw and his partner, Pieter Jacobsen, for 45 schepels of wheat and 17 guilders (Oppenheim 1912:107). In March 1664 the attorney for Abraham Stevensen seized five schepels of wheat from Pieter Cornelissen Louw (Oppenheim 1912:132), and both Pieter Cornelissen Louw and Pieter Jacobsen were soon forced to mortgage their mill because of a debt of 61 schepels of wheat with four years' interest at 10 per cent due to Nicolaes Meyer, a merchant at New Amsterdam (Oppenheim 1912:139).

As a miller, Pieter Cornelissen Louw obviously suffered financial difficulties, while frequently involved in antagonisms relating to property offenses and ownership of wealth. A court order of November 1664 indicates the close proximity of the mill and mill dam to the palisades and an apparent conflict in land use. The dumping and burning of rubbish along the ravine close to the palisades created a serious fire hazard, and the court instructed "householders living near the Mill gate" to carry their rubbish across the mill dam to be dumped (Oppenheim 1912:168-169).

Pieter Cornelissen Louw may have been one of those householders, for in January 1665, after Pieter Jacobsen, his partner, had died, he requested that his mill house be appraised so that he would be given credit by his creditors for any repairs he made afterward (Christoph, Scott, and Stryker-Rodda 1976:201, 206). He also received permission to sell at auction all the effects belonging to him and his deceased partner, and although he continued to remain in debt, he was requested, in October 1666, to board a soldier one month in every three (Christoph, Scott, and Stryker-Rodda 1976:303-304). The soldier was evidently English, for in January 1668, Pieter Cornelissen was involved in a dispute where he spoke disrespectfully of the English soldiers (Christoph, Scott, and Stryker-Rodda 1976:385).

Pieter Cornelissen Louw, or Molenaer (Miller), nevertheless continued to operate his mill as well as develop his property. In November 1665 he succeeded in paying in full his debt to Nicolaes Meyer (Christoph, Scott, and Stryker-Rodda 1976:582). In 1668 he married Elisabeth Blanshan at Kingston (Hoes 1891:503), and in January 1670 the continued operation of his mill is suggested by his complaint that many people were stopping up "his drain or water course" by dumping dung into it (Christoph, Scott, and Stryker-Rodda 1976:438).

Increasing prosperity and status for Pieter Cornelissen by April 1671 is indicated with his purchase of a tract of "arable land situated under this village of Kingston, on this side of the kill" and, in January 1672, with his purchase of an additional parcel. He immediately became involved in lawsuits over the fencing of his land, and that November he sold a horse mill to Andries Pietersen. Pieter Cornelissen had served as a horse examiner



- | | | | |
|-----|---------------------------|-----|--|
| 1. | Old Dutch Church | 11. | Academy |
| 2. | Court House | 12. | Matthew Persen House |
| 3. | Dr. C. Elmendorf House | 13. | Frantz Roggen House |
| 4. | Tobias Swart House | 14. | Matthew Jansen House |
| 5. | Dr. James Elmendorf House | 15. | Abraham Low House |
| 6. | Jacob Tremper House | 16. | Egbert DuMlond House |
| 7. | Cornelius Tappen House | 17. | Dr. Jacobus Elmendorf House |
| 8. | Henry Sleight House | 18. | Anthony Hoffman House |
| 9. | Lucas Elmendorf House | 19. | Colonel Jacobus Bruyn House |
| 10. | Gerrett Van Keuren House | 20. | Anthony Freer House |
| | | 21. | Colonel W. TenBroeck House (Senate House & Museum) |

Figure 1. Street plan and locations of historic buildings in the city of Kingston. Map prepared by the Kingston Area Chamber of Commerce, 1969.

Approximate location
of Louw House ruin

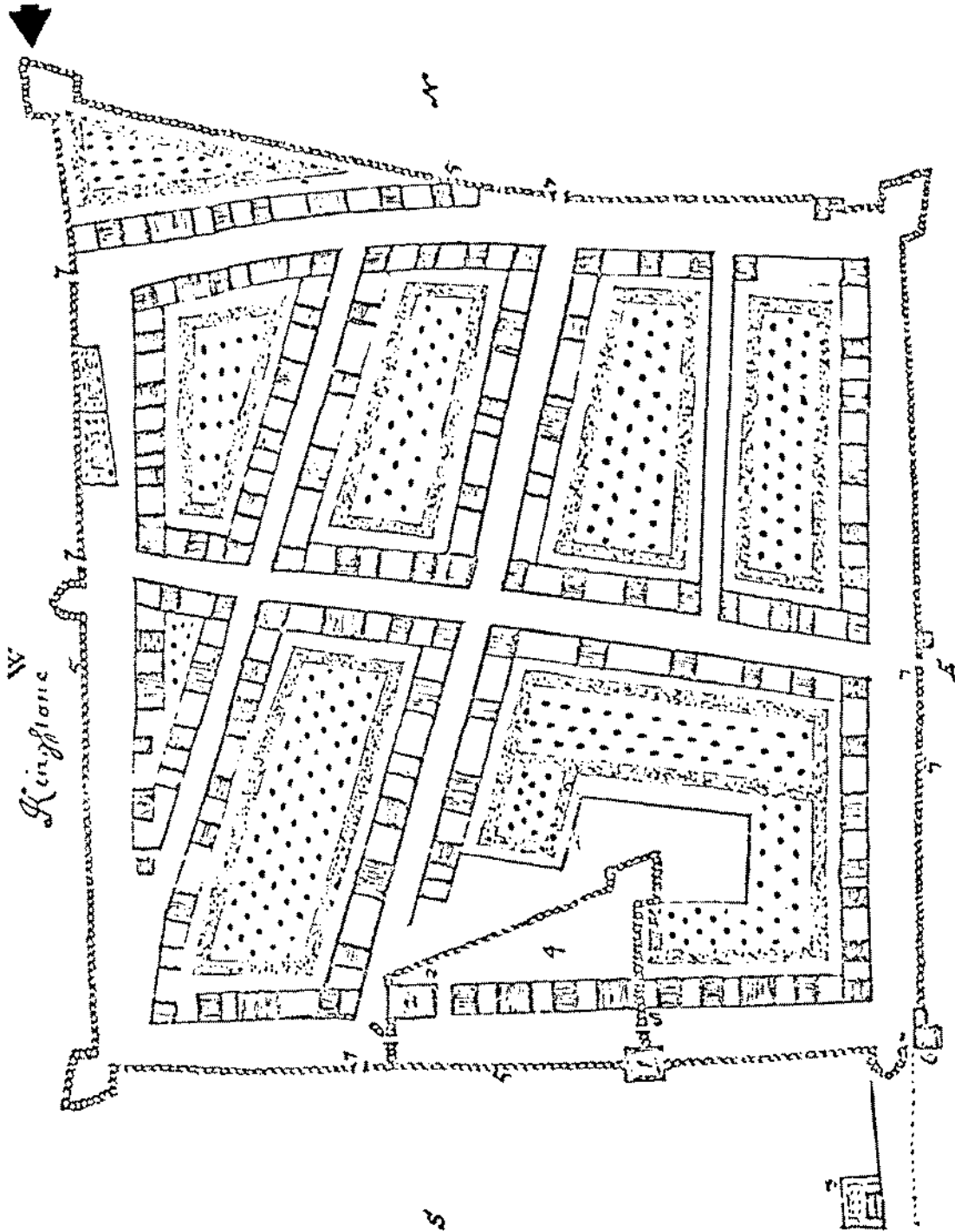


Figure 2. Map of Kingston drawn by Reverend John Miller in 1695. Original in The British Museum.

during 1671, and until May 1675 he served as a fence examiner (Christoph, Scott, and Stryker-Rodda 1976:456, 477, 498, 534, 700, 727, 728).

Reference to Pieter Cornelissen stone house evidently occurs in January 1676 in his contract with a builder for construction of a shed behind his house. It was to be "built of stone, viz. cliffstone, 8 feet high, back of the house, 20 feet wide, 25 feet long, with loft and floor and doors and a transom window, everything complete, roof, laths, rafters and shingles" (Fried 1970).

Pieter Cornelissen and Elisabeth (Blanshan) Louw had four children, baptized in Kingston between 1681 and 1688 and, in September 1687, Pieter Cornelissen swore allegiance to the King of England with other inhabitants of Ulster County (Hoes 1891:15, 19, 25, 31; Scott and Stryker-Rodda 1975:88). In his will dated 1690 and proved on March 4, 1707/08, Pieter Cornelisen divided his estate equally between his widow and their children. Consequently, in 1710 four of the children, including Magdalena, bought from their mother "that certain house, millhouse, mill, mill-dam, barn, etc., and land" which formerly belonged to their father south of Esopus Creek (Kingston Historic Landmarks Commission 1969:1-2). Magdalena Louw had married Benjamin Smedes, and they had moved from Kingston to Shawangunk some time before 1706, when their son Benjamin, Jr., was born (Hoes 1891:76, 547, 557; New-York Historical Society 1896:237). Their eldest son, Petrus Smedes, was born in Kingston, and in February 1725 he married Catrina du Bois, formerly the wife of Petrus Mathiessen Louw (Hoes 1891:157, 543, 547). At this time he was living in Kingston, evidently in the house inherited by his parents in Frog Alley.

When Benjamin Smedes of Shawangunk wrote his will in June 1744, he explained that "my son Peter has had the benefit of my grist mill at Kingston for several years without paying a sufficient rent, . . . having assisted him in various ways." Benjamin Smedes directed that of his three sons, the one who gave most for them could have his "lands and grist mill in Kingston." His will was proved on September 15, 1749, and Petrus Smedes apparently became the owner of his father's Kingston property (New-York Historical Society 1896:237-238). In 1738 he was corporal of a company of foot in the Kingston militia commanded by Captain Tjrk Van Keuren (Hastings 1897:601). In 1755 a census shows that he owned four slaves: three males and one female (O'Callaghan 1850:845).

The increase of wealth through land holding represents a significant characteristic of this period. Land, as a primary form of wealth, was also closely related to the merchandise carrying trade and facilitated rapid upward mobility. Benjamin Smedes had owned extensive land along Shawangunk Creek, adjoining the property of Jacobus Bruyn (New-York Historical Society 1896:237-238). Petrus Smedes's sister Rachel had married in 1730 into the Bogardus family which had, through Captain Anthony Rutgers, an interest in the Dutchess County Nine Partners (Hoes 1891:559; New-York Historical Society 1895:418-419). Petrus Smedes's daughter Catrina in 1755 married Charles Hardenbergh, a "ship captain," and his daughter Sarah married Dirck Wynkoop, a merchant, in 1760 (Hoes 1891:609, 618).

When Petrus Smedes died in 1783, he provided for his slaves handsomely; he gave absolute freedom to his "good faithful and honest" Harry the elder, together with support in food and clothing for life. To his slaves, Thom, Hono, and Harry the younger he gave the privilege of choosing any of his sons as their new masters. Petrus described himself as a "miller, of the Green Kill in Kingston," and he directed that his son Petrus "shall have the land, house, barn, mill-stones, bolts and bolting cloath, etc., with the use of the water of the mill-dam; he is to keep the mill in order for the use of my wife during life." To Petrus he also gave his blacksmith tools and half of his wearing apparel, and to his daughter Jackamytje he gave his "large cupboard and large looking glass (New-York Historical Society 1904:147-148).

At this time, the property is said to have left the Smedes family, and it may have been conveyed to Nicholas Bogardus, who had married Rachel Smedes (Hoes 1891:559). The house may have passed to their oldest son, Nicholas Bogardus (Hoes 1891:201), but it is said to have been owned by their youngest son, Benjamin Bogardus, born in 1747 (Hoes 1891:291). In any case, the Bogardus family apparently enlarged the house, and a list of Kingston citizens in 1770 shows that Nicholas Bogardus worked as a mason (Anon. 1943:60). Both Nicholas and Benjamin were wealthy slave owners in 1790, Nicholas having five slaves and Benjamin owning four slaves (Anon. 1908:172).

After 1816, several tenants occupied the house, including Henry Darling, a stone cutter, who may have rebuilt parts of the walls. Mr. Clarence Clark owned the property in 1929 and later sold it to Mr. Harold Shaw. The house was gutted by fire in the 1960's and still stands as a vacant charred ruin, perhaps appearing much the same as it might have looked following the burning of Kingston in 1777. The eastern half of the house appears to be the earlier section, as revealed by a seam in the south wall, and this small one-and-a-half story unit has often

been reputed to be the 17th century home of Pieter Cornelissen Louw (Kingston Historic Landmark Commission 1969).

PROCEDURES AND OBJECTIVES

A simple grid system was first established for the area around the house. This was based on arbitrary 6 ft. grid units measured from a single datum point established at the southeast corner of the house; all lines were thus parallel and at right angles to the walls of the house. Each grid square was designated by the coordinates of the stake at the corner farthest from the datum point, so that the grid could be extended indefinitely in any direction. Coordinates were given in distances northeast, southeast, southwest, or northwest from datum (Figs. 5 and 6).

Previous excavations by Dr. Galyon in square 6N6E had revealed part of the brick cistern containing 19th century fill. Consequently, other trenches were excavated in squares 12N18E and 18N18E, where it was believed later disturbance of any 17th century levels associated with the stockade, if they existed, was less likely. A trench in square 6S42W was dug near the southwest corner of the house, and a final trench was dug beneath the floor within the western section of the house at 12N24W.

No trench was larger than 3 ft. by 6 ft. in area, and vertical control was maintained by scraping each natural layer individually and collecting the artifacts in marked bags. All features were measured and drawn on the grid plan, and the exposed trench side walls made it possible to draw the stratigraphy. The purpose of the work was to record levels in the site and to determine the presence of possible 17th or 18th century occupation associated either with the house or with the stockade area.

Each artifact was washed and sorted by type within the context of square and level. The types thus sorted have been placed within clear plastic bags and are stored in boxes marked clearly with square number and stratigraphic association.

DISCOVERIES AND CONCLUSIONS

Trench 12N18E

This trench measured approximately 2 ft. by 4 1/2 ft. within the east half of square 12N18E. A layer of black topsoil extended below the surface, varying in depth from 6 to 9 in., and contained fragments of 19th century plain white earthenware and mid-19th century blue shell edged plate. A piece of pipe stem with 5/64 in. bore and a fragment of clear thick flint glass with frosted patination, however, were possible 18th century objects within this layer.

Below the black topsoil a layer of brown sand varied in thickness from 6 to 12 in. This layer included ceramic materials dating from the late 18th and early 19th century periods, such as fragments of hand decorated blue and white pearlware, printed blue and white earthenware, plain white earthenware, a single piece of unglazed red earthenware pot rim, and a pipe stem with 3/64 in. bore. A small piece of hard flint glass with fire polished rim may be noteworthy, and two hand wrought iron nails represent building material from the level. These nails measure 2 3/4 in. and 4 in. in length, but the latter had been clinched over to fasten a 3 in. thickness of wood.

This trench yielded no definite evidence of occupation earlier than ca. 1780. The brown sand layer rested on culturally sterile tan sand mixed with red clay. This was excavated at one point to a depth of almost 5 ft. below surface without any significant change or indication of additional historical evidence. The most important characteristic of the stratigraphy in this trench, however, may be the reversed slope of the subsoil surface upon which the brown sand rests, since this is the opposite of the present slope of the ground surface.

Trench 18N18E

This trench was dug as a pit measuring 2 ft. by 1 3/4 ft. in the southwest corner of square 18N18E. Several in. of coal ash covered the original surface and included an assortment of plain white earthenware fragments, round wire nails and square cut nails, and a toy glass marble. The nails were of various sizes, including a round 5 in. spike, 8d round nails, and a 10d cut square nail. One round nail had been bent over a 1 1/2 in. thickness of wood. The ashes were clearly dumped here on the surface, sealing off the black topsoil, sometime after 1900.

The black topsoil, a deposit of about 9 in., contained 4 1/2 in. round spikes, 8d round nails, and a 2 in. bolt and washer, but the deposit basically represented 19th century occupation. One of the round spikes had been bent

over a 3 in. thickness of wood. Glassware with etched Victorian floral design and white earthenware with printed patterns seem representative, together with several fragments of inexpensive 19th century European porcelain. A sawed-off beef rib bone is indicative of diet, and a thin plated suspender clasp and a simple 2-hole bone button are characteristic of 19th century clothing.

Late 18th century material once again appeared in the brown sand deposit and included plain lead-glazed creamware as well as pearlware with hand decorated blue floral design. A fragment of blue shell edge ware was most likely an early 19th century example. A single piece of unglazed red earthenware body sherd again appeared in this deposit, together with a piece of dark green hand blown glass wine bottle and a single sheep or goat tooth. Evidence of building material includes window glass, a fragment of soft, porous brick, and several hand wrought nails. One of these has a machine cut shank with a hand wrought head and may date from the early years of the 19th century.

This trench yielded no definite evidence of occupation before the last quarter of the 18th century but nevertheless revealed a feature of potential interest. A deep intrusion had been cut vertically from the brown sand layer through the sterile subsoil to an unknown depth. This intrusion contains the same late 18th century brown sand fill and appears therefore to be an 18th century feature of unknown extent.

Trench 6S42W

This trench covered the south half of square 6S42W and was therefore just 3 ft. from the wall of the house. The photograph published by Helen Wilkinson Reynolds in 1929 (Fig. 4) shows that a curb line extended south from the southwest corner of the house, parallel to Converse Street. The grassy yard shown in the picture, however, gives no indication that the area adjacent to the curb was in use as a thoroughfare. A photograph taken about 1896 (Fig. 3) shows that a fence had been erected from the curb line to the edge, of Converse Street as a



Figure 3. Photograph of the "Frog Alley Residence" published in 1896 (De Lisser 1968:17). Courtesy of Hope Farm Bookshop, Cornwallville, N.Y.



Figure 4. Photograph of the house of Pieter Cornelissen Louw published in 1929 (Reynolds 1929:263).

barrier to prevent people from crossing the yard close to the house, and a low stone retaining wall separated Converse Street from the yard around the house. This retaining wall has disappeared, and the bank has been excavated away much closer to the house, to make room for Converse Street.

Previous to excavating trench 6S42W, remnants of the old curb line, consisting of vertically set slabs of stone, were clearly visible. About 9 in. of black topsoil and ash had filled in around the upper and lower sides of this curb line and contained round nails, white earthenware, gray salt glazed stoneware and other objects representative of the late 19th and early 20th centuries. The soil also contained a brass ferrule tip from a wooden pencil and a brass "hand snap" button. Sometimes advertised as "bachelor buttons," it was claimed that "By the use of these buttons the traveling man, the farmer, the laborer, the mechanic, the growing boy and his father, of any profession, can instantly replace his missing buttons" (Anon. 1969:940). Evidence of food or diet from this topsoil consisted of a vertebra either from a sheep or pig. Buried within the black topsoil, at the west end of the trench, large paving stones were discovered running in a direction parallel with the old curb and with the street. These stones were not moved and excavation continued in the remainder of the trench.

The slab of stone marking the old curb rested its lower edge directly on a deposit of dark brown loam below the black topsoil. This dark brown loam contained a concentration of material dating from the late 18th century to the mid-19th century. Objects of interest included a broken small brass clothing buckle and a toy clay marble $\frac{1}{2}$ in. in diameter. Ceramics included both hand decorated and printed earthenwares, as well as plain white earthenware of the 19th century. Printed wares of the 19th century were decorated in blue, black and brown patterns, while hand decorated pearlware included green and blue shell edge as well as blue and polychrome floral designs of the late 18th and early 19th centuries (Fig. 7). Porcelain sherds included blue decorated Chinese export as well as plain white hard-paste porcelain. From this layer, the bottom fragments of a creamware chamber pot represent an interesting specimen (Fig. 8). While the crevice inside the wide footring contains glaze which appears greenish yellow, a small speck of blue in the body glaze may represent an attempt to whiten the color by

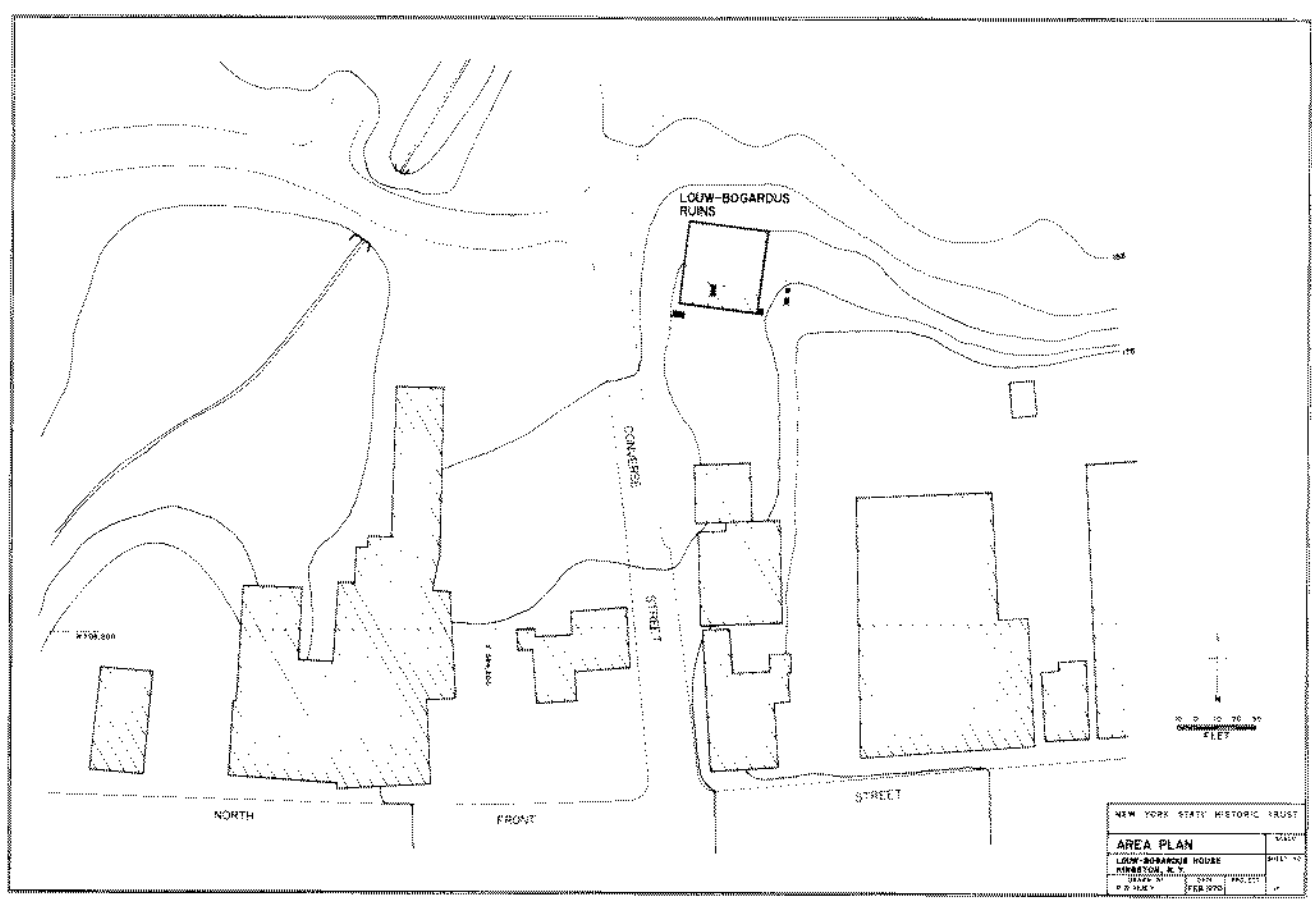


Figure 5. Plan of the Converse Street area north of North Front Street, Kingston, with locations of test units near the Louw-Bogardus ruin, May 1969.

adding cobalt. The original diameter of the chamber pot was probably about 10 in. Fragments of clear lead glazed red earthenware and a sherd of black glazed red earthenware appeared in the level, together with a few fragments of a brown salt glazed as well as a gray salt glazed stoneware pot. Several beef bones in the same layer represent evidence of diet.

Glassware in this level comprised a noteworthy amount of broken pale green hand blown window glass, together with a melted globule of the same color glass fused to wood ash on one side. Other building material included several broken hand wrought iron nails.

Clay tobacco pipes were also more numerous in this square than elsewhere. One stem hole measured $7/64$ in., although most of the stem holes measured $5/64$ in. Among the $5/64$ in. stems at least two pipes with fluted or ribbed bowls were represented, typical of the period of circa 1785 to 1825. Both of these pipes had been heavily smoked.

This deposit of dark brown loam evidently includes debris dating from the Revolutionary War and later, extending into the 19th century. The material thus corresponds in period to the brown sand stratum in trenches 12N18E and 18N18E, and this deposit also partly rests upon the sterile tan sand and packed red clay. In the east end of this trench, however, a separate deposit of light brown sand and loam was found resting upon the sterile subsoil, below the dark brown loam. This deposit extended westward toward Converse Street no farther than the later stone curb line, apparently indicating a colonial division line in this same location.

Glassware from this low mound of light brown sand and loam includes several fragments of green tinted window glass as well as thick fragments of flint glass. An outstanding piece was a heavy, hand blown flint glass base possibly broken from a candlestick. This heavily rounded piece originally measured about $2\ 1/2$ in. in diameter and was $1/2$ in. thick. Ceramic wares from this deposit are represented by single fragments of Chinese porcelain, creamware, clear lead glazed red earthenware, and yellow ware decorated with brown combed slip. The yellow ware could date from within the first half of the 18th century, while the creamware would have appeared some

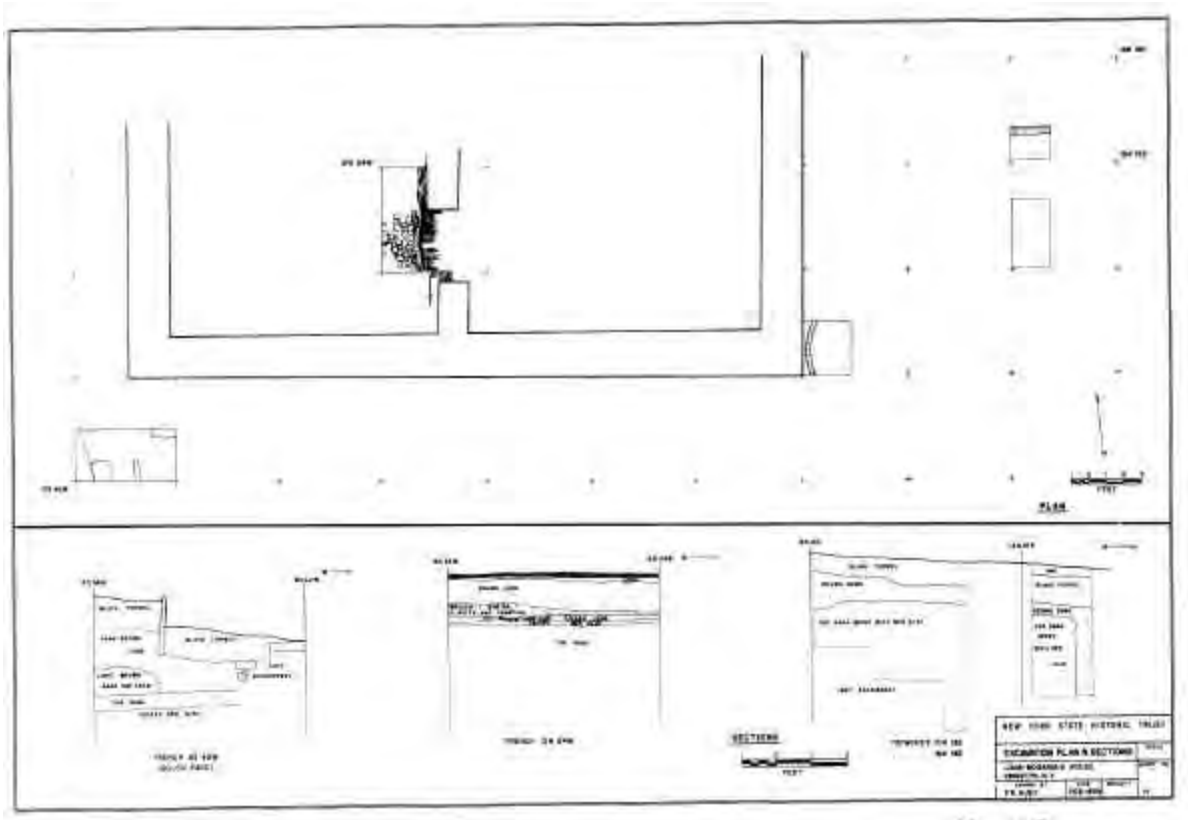


Figure 6. Plan of excavations and soil profiles of test units, Louw-Bogardus ruin, May 1969.

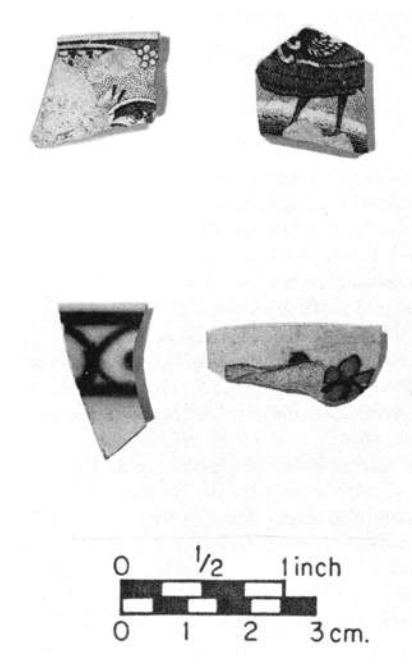


Figure 7. Ceramic sherds from dark brown loam layer, Trench 6S42W. Top: white earthenware with brown transfer printed patterns; bottom left: blue hand decorated pearlware rim; bottom right: green, yellow, and brown hand decorated pearlware rim.

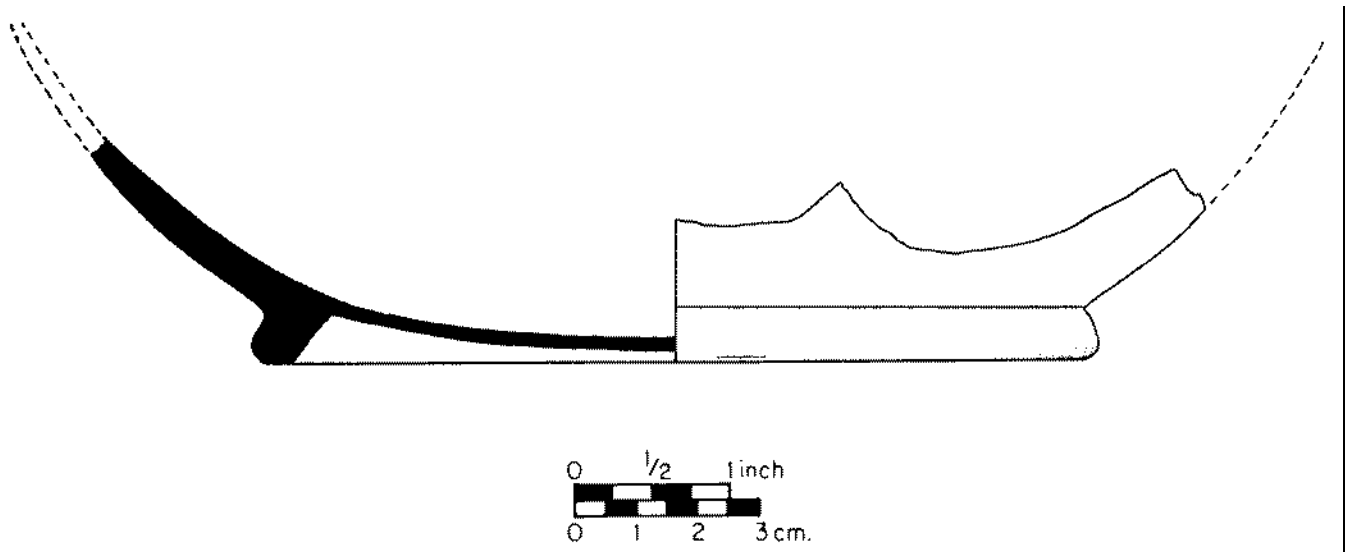


Figure 8. Basal section of creamware chamber pot from dark brown loam layer. Trench 6542W.

time after 1760. Possibly the most interesting ceramic discovery, however, was a rim section of decorated blue and gray Rhenish Westerwald salt glazed stoneware plate (Fig. 9). The original diameter of this plate was about 8 5/8 in, and the incised rim ornament is brightly decorated with cobalt blue. Rhenish Westerwald salt glazed stoneware was widely exported to America in the 17th and early 18th centuries. The decorated pattern of this plate rim closely resembles the incised pattern of a Rhenish Westerwald tavern mug bearing the cipher of Queen Anne, found in Williamsburg, Virginia, dating between 1702 and 1714 (Noel Hume 1963:156, 289). Westerwald stoneware plates of this pattern, however, are believed to date generally from the second half of the 18th century (Reineking-von Bock 1976:365-366). Associated dietary evidence consisted of several clam shells (species *Venus*) and oyster shells (*Ostrea esculenta*).

Trench 6S42W provided the first solid evidence of pre- Revolutionary occupation at this site. The light brown sand and loam containing colonial material rested directly upon the sterile tan sand subsoil, but it is noteworthy that the tan sand surface sloped toward the east very slightly. This slope was nearly 2 in. in 4 ft., in sharp contrast to the reversed slope of the present surface.

Trench 12N24W

The trench in square 12N24W measured 6 ft. by 2 ft. in the west half of the square. The trench was located inside the west section of the ground floor of the house, in front of the door connecting the two sections. This door was an opening through a heavy stone wall running through the center of the house, although it was found that the walls on each side of the door had been built separately and did not line up with each other.

The floor and interior wall finish of the west section of the house appeared to be of much later construction, and the trench was easily cut through the thin rotten floor boards to the ground surface below. The eastern limit of the trench was determined by the presence of earlier beams along the wall which were not disturbed.

The first stratum of soil encountered was a deposit of brown loam about 9 in. in depth. Surprisingly, the layer contained very little that could be attributed to later periods, indicating that the floor had effectively sealed off the area from any disturbance after the middle of the 19th century. A single white glass button which may be of later date could have rolled through a crack, but this was the only button found.

The late 18th century to middle 19th century ceramics consisted of part of a brown, green and dull yellow banded ware bowl, part of a green shell edge plate, and hand decorated polychrome brown, blue, and yellow pearlware fragments. The bowl was originally about 6 1/2 in. in diameter, and the shell edge plate was about 10 1/2 in. in diameter (Fig. 10). Fragments of creamware, however, were more common, representing at least one cup of 3 in. diameter and one plate of 8 3/4 in. diameter. The creamware plate was a plain piece with a rim pattern characteristic of the Revolutionary War period, but which appeared as late as 1814 in the Leeds Pottery pattern book as the "Bath" pattern, in which table plates were made in the 9 1/2 in. size (Towner 1963:156, 289).

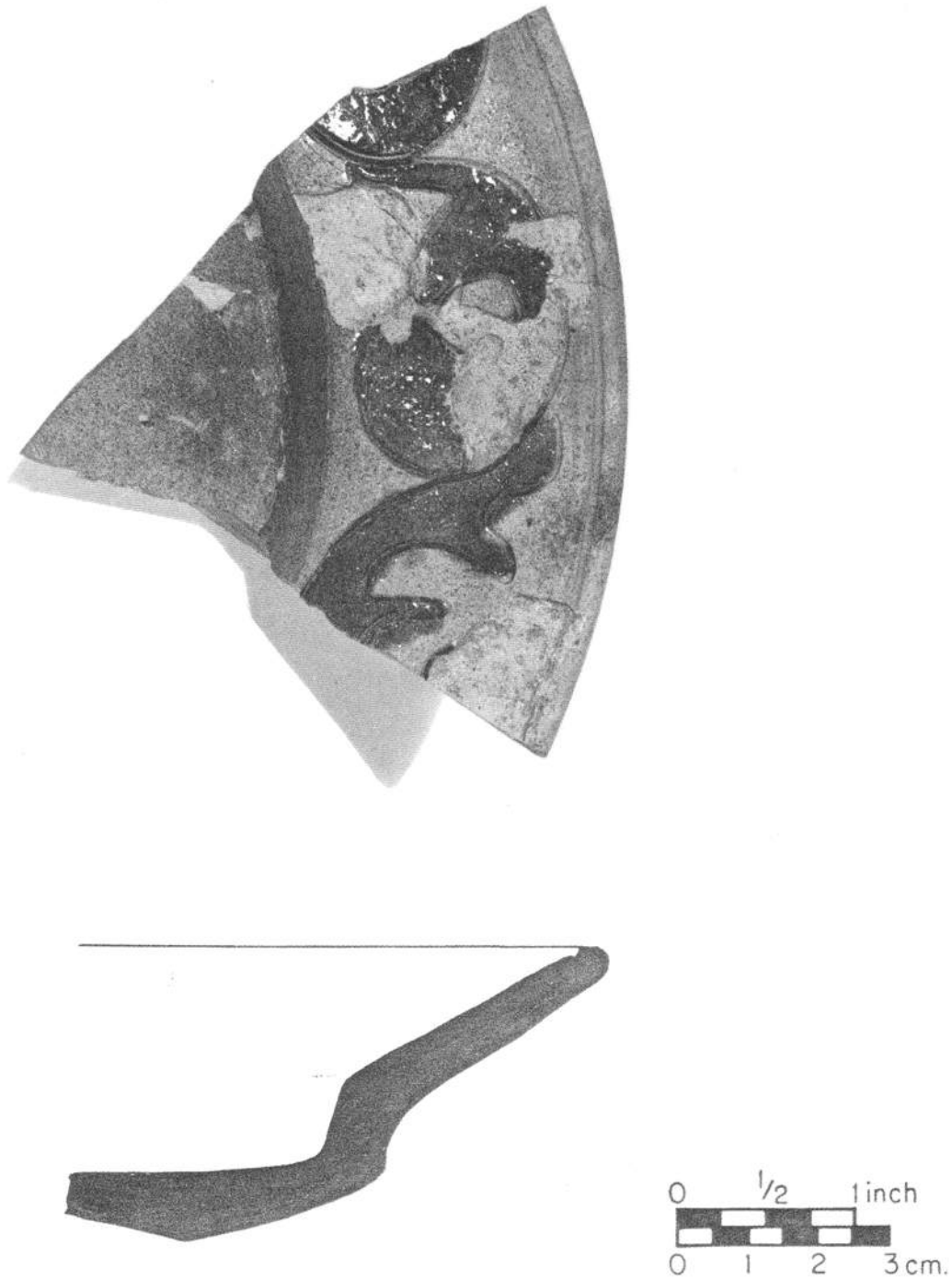


Figure 9. Rim of incised, blue decorated gray Rhenish Westerwald salt glazed stoneware plate from light brown sand and loam, Trench 6S42W.

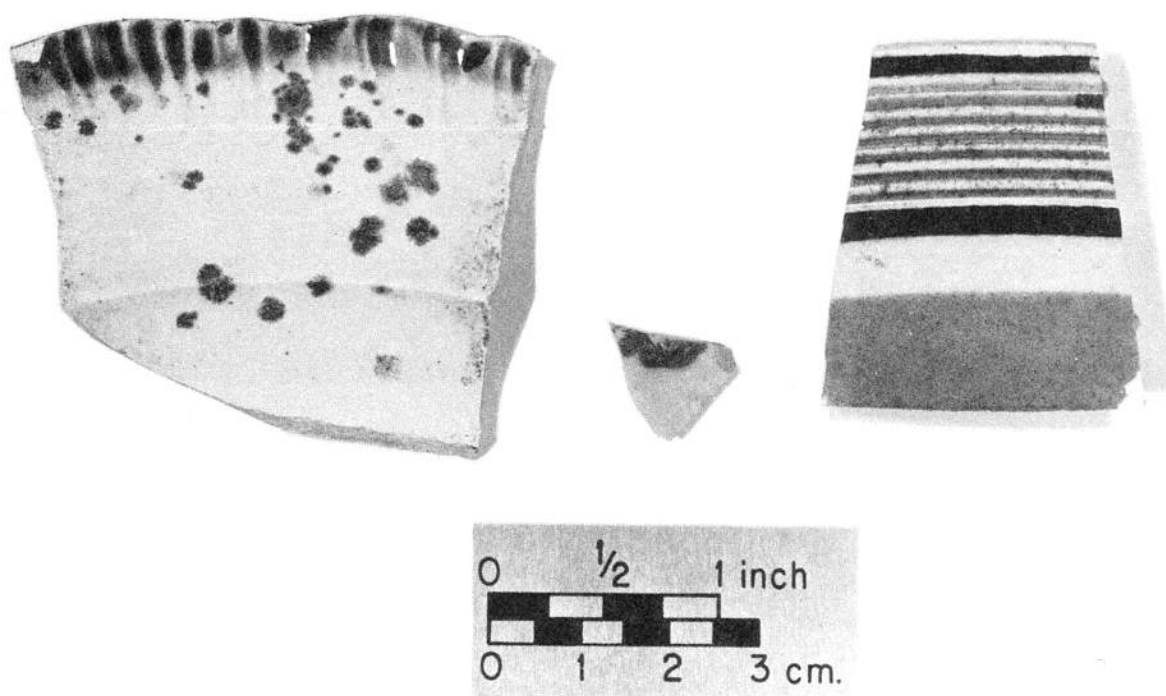


Figure 10. Ceramic sherds from brown loam layer, Trench 12N42W. Left: green shell edge pattern pearlware plate rim; center: over-glaze red and gold enamel hand decorated Chinese porcelain; right: brown, green, and dull yellow banded ware bowl rim.

Glassware included a rim section of a hand blown flint glass bottle or decanter. The bottle neck had been decorated with spiraled grooves on the outside surface (Fig. 11). Clay tobacco pipe stem holes were $\frac{4}{64}$ in., except for the stem hole of an ornamented pipe bowl which measured $\frac{5}{64}$ in. (Fig. 11). The appearance of larger stem holes associated with decorated pipe bowls of this type late in the 18th century is not unexpected. Stylistically, this pipe would date in the post-Revolutionary period of circa 1785 to 1825. It had been repeatedly smoked and stained.

One buckle of cast brass and one steel shoe buckle chape and tongue also appeared in this stratum and indicate colonial or Revolutionary period occupation (Fig. 12). The brass buckle is most likely a small military shoulder strap or sling buckle, perhaps associated with Petrus Smedes's service in the Kingston militia in the 1730's. Similar buckles were commonly used on shoulder straps or sword slings from as early as the 17th century, as shown, for example, in Netscher's painting of a Dutch officer dating before 1684 (Mojzer 1967:32). The same type was used to fasten the baldrics of British foot soldiers and Horse Grenadier Guards in the 1740's and 1750's (Cobban 1969:190-191). Examples comparable to the Louw-Bogardus specimen have been excavated from Fort Michilimackinac, established by the French about 1715, from features in Fort Stanwix dating circa 1764 to 1781 and 1776 to 1781, and from a context of circa 1775 in Virginia. Some examples have a brass strap bent around the central frame bar which attached permanently to the leather belt (Noel Hume 1970:85; Hanson and Hsu 1975:93; Stone 1974:32, 34).

Structural evidence in this context consists of hand wrought nails as well as a machine made nail; two iron keys from the same layer might have been for locks to the adjoining doorway (Fig. 13). Window glass fragments were mostly green tinted, although two pieces were pale blue green tinted and might be early 19th century cylinder glass, since they resemble such glass dating ca. 1800 to 1815 from the glass house site near Albany. Other structural evidence included brick fragments and fragments of mortar, plaster, and daub containing straw, possibly indicating a period of repair or construction.

Bones in the layer consisted of pig teeth and bones, fish bones, chicken bones, beef bones, and sheep bones. Pig bones included a short metatarsal as well as a cap bone from the distal end of a young femur; some of them

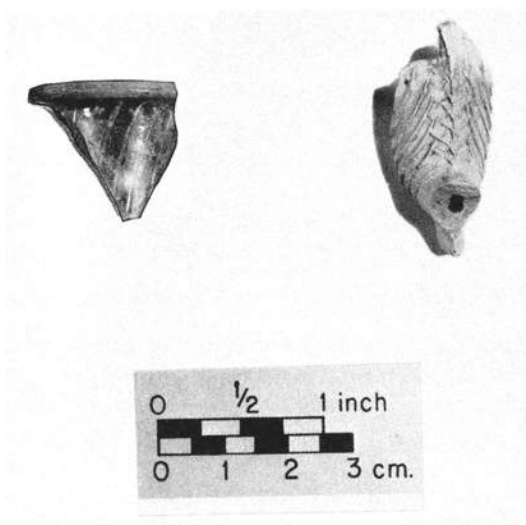


Figure 11. Left: neck and lip of spiral ornamented flint glass bottle; right: mold decorated bowl of clay tobacco pipe; from brown loam layer, Trench 12N24W.

Figure 12. Buckles from brown loam layer, Trench 12N24W. Left: shoe buckle steel chape and tongue; right: cast brass buckle.



had been gnawed by a mouse. Mouse-gnawed beef bones included a rib and a collar bone (coracoid) which had been cracked for marrow. One young sheep mandible was also found.

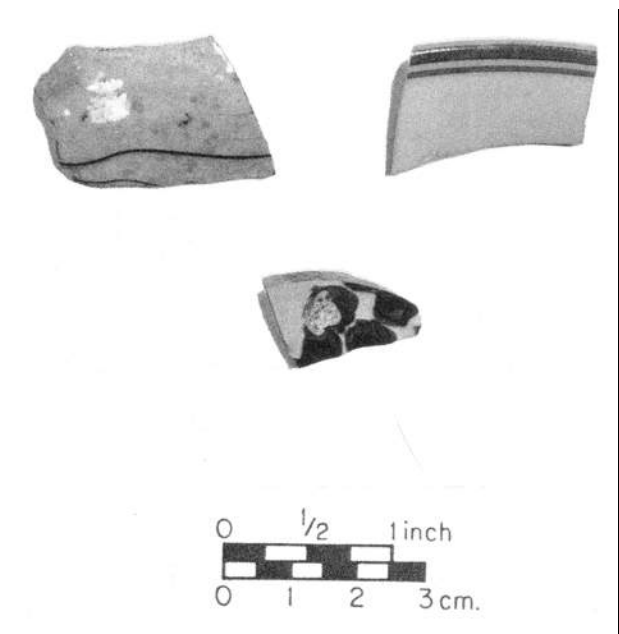
Below the brown loam deposit there appeared a layer of mixed broken red bricks, plaster, mortar, and charcoal. This stratum was thickest at the south end of the trench, where it was about 6 in., and it contained much broken structural material. Apparently this level represents a destruction about the time of the Revolution. The broken window glass was darkly green tinted, and the deposit included fragments of charred wood and many pieces of clay and lime mixture which had been applied to a daub mixed with straw on one side while the other side had been finished with whitewash. Broken bricks consisted of at least one piece of 2 1/4 in. thickness, but otherwise the bricks measured only 1 1/4 in. thickness. Widths of these small bricks varied from 3 1/8 in. to 3 1/2 in. to 3 3/4 in., while lengths are unknown since only broken half bricks were recovered. They are carelessly formed; one was only soft-fired to salmon pink and seems especially crude. These bricks apparently represent a small size dating from the 17th century in the Hudson Valley, and are among the smallest sizes yet recorded.

Of interest among this debris were another fragment of clear, brittle flint glass and clay pipe stems measuring 5/64 in. bore. A fragment of plain white saltglazed stoneware flared rim came from a cup which originally



Figure 13. Iron keys from brown loam layer. Trench 12N24W.

Figure 14. Ceramic sherds from mixed plaster and mortar, Trench 12N24W. Left: buff-bodied yellow ware, combed with brown slip and lead glazed; center: blue, orange, and green hand decorated pearlware; right: over glaze red decorated Chinese porcelain bowl rim.



measured about 3 in. in diameter and which could have been manufactured any time between 1720 and the Revolution. Other ceramics consisted of yellow ware combed with brown slip, made in the early to middle 18th century, creamware, and hard-paste porcelain with over glaze red enamel rim decoration (Fig. 14). The porcelain was from a bowl which originally measured about 6 in. in diameter. A small piece of hand decorated pearlware

(Fig. 14) from this context might be of slightly later date but nevertheless represents the type of earthenware developed by Wedgwood in June, 1779, first called "pearl white" (Finer and Savage 1965:231). As evidence of food, bones in this debris consisted entirely of beef bones, with the exception of two chicken bones. The beef bones included a rib and a phalangeal bone. One fresh water mussel shell, probably *Anodonta*, also appeared.

This deposit of debris rested upon an early surface paved with broken red bricks directly in front of the doorway. Adjoining the paving, a thin layer of packed brown loam extended over the red clay and tan sand subsoil. The bricks, which also rested directly upon this level subsoil surface, were of small size and measured 1 1/4 in. thickness. They were generally 3 3/4 in. wide, and included hard fired red brick as well as soft fired salmon pink brick.

Other building material found associated with the paving and adjoining surface consists of a heavily encrusted hand wrought nail and numerous fragments of whitewashed or plastered clay and lime daub. Glass included only single pieces of green tinted window glass and dark glass wine bottle. Embedded in the loam surface close to the brick paving were also parts of a yellow ware wide-mouthed bowl originally about 5 in. in diameter. The pattern had been the typical combed brown with brown dots, but the fragments had been subjected to an extremely hot fire which burned the pattern almost beyond recognition and had turned the earthenware into stoneware. Other ceramics included Chinese porcelain with floral pattern in blue (Fig. 15).

Bones associated with the paved feature and adjoining surface were represented by pigeon and pig bones. The gill bone of a fish also appeared together with more fresh water mussel shells, *Anodonta*.

A curious iron or steel object found with this level remains unidentified. It is very heavily corroded and is difficult to reconstruct; nevertheless it apparently consisted of a flattened blade extending from a short round and sharply pointed shank. At the pointed end of this shank, however, is attached part of a curious cone shaped piece of horn or hard wood material, the rest of which is missing. The inside of this horn or wood portion is hollowed or recessed to fit the blunt end of another object. It is probably part of a knife blade and handle (Fig. 16).



Figure 15. Chinese blue decorated porcelain plate sherd from packed brown loam and brick, Trench 12N24W.

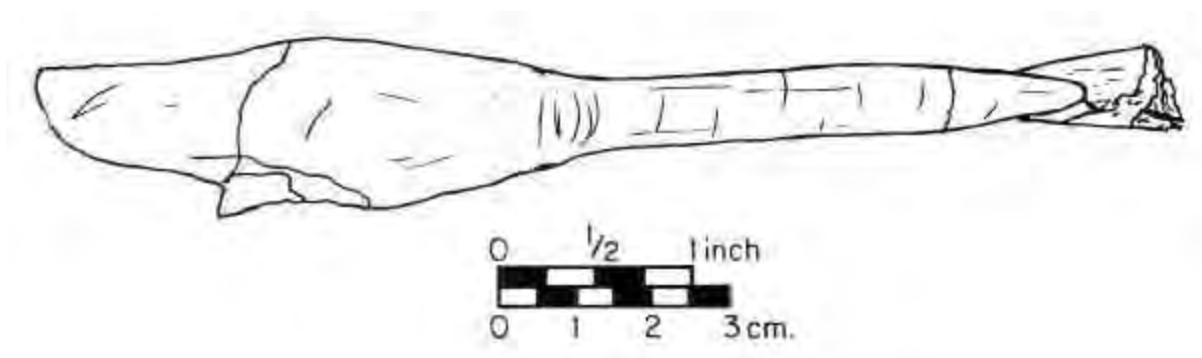


Figure 16. Unidentified iron or steel blade and handle, probably a knife, from packed brown loam and brick, Trench 12N24W.

This early surface and brick paving had been laid directly on a thin compacted layer of red clay. This clay was sterile except for a piece of pipe bowl which had been forced into it. This red clay, together with the tan sand subsoil below it, formed an absolutely level plane surface, and although no definite 17th century occupation was found here, the level subsoil surface contrasts the inward sloping surface encountered in the other trenches.

CONCLUSIONS

On the basis of these very limited tests, the site can be interpreted in different ways. It seems definite that a change in occupation had occurred late in the 18th century, possibly at the time of the British burning in 1777 or perhaps in 1783 when Petrus Smedes died; ca. 1780 is a reasonable date, after which the house was either rebuilt or enlarged. The interior brick paving area may represent a doorway which once opened to the outside during part of the 18th century. The absence of creamware on this surface is perhaps significant, since creamware did not appear until the 1760's. Furthermore, the red bricks in the paving are extremely small and may date from the 17th century. The small bricks, together with the occurrence of a pipe stem with 7/64 in. bore, would appear to provide evidence consistent with an occupation of the site in the 17th century. The Westerwald stoneware in plate or shallow dish form is quite unusual and not known to have occurred at other American sites to date.

Through most of the site the post 1780 level rests directly upon the subsoil surface. The subsoil surface consistently sloped southward and westward in the two trenches outside the house, which reverses the present contour of the bluff where the stockade is supposed to have been. Possibly, the site was extensively altered after the 1777 burning, and the previous surface levels may have been graded away. Such grading or digging would have been an ambitious project in view of the present topography, and its purpose is a mystery which only careful excavations over a much wider area may solve.

Governor Peter Stuyvesant arrived at present Kingston in May 1658 with 50 or 60 soldiers. On June 3, he began to construct the palisade, and "to dig out the moat." "At the proper time," he wrote, "when necessity requires it, it can be surrounded by water on three sides. . . ." On June 4 the inhabitants "were set to digging the moat, and continued as weather and rain permitted," while the soldiers built the palisades. Since the mill dam was located on the kill near the Louw-Bogardus house, the mill pond may have been designed to provide or divert water at a level sufficient to flood a moat dug around the bluff outside the palisade. The combination could have, as Stuyvesant noted, surrounded the settlement on three sides with water. Stuyvesant noted that finishing the palisade wall on the north side was harder work, "because this side could not be made as straight as the other . . ." (Fenow 1878:540, 545-546). The subsoil contours as revealed in the test trenches dug around the Louw-Bogardus house could, therefore, be interpreted as some evidence of such a moat dug close to the bluff but outside the south wall of the house. Only very careful excavation in the area, using controlled arbitrary datum levels, will make testing this hypothesis possible.

The material excavated at the Louw-Bogardus house nevertheless provides a valuable collection which can be used as a basis for comparison with other sites, both urban and rural. A noteworthy characteristic of the collection is the almost ubiquitous occurrence of flint glass fragments, with a high proportion occurring in 18th century context. This hard, brittle glass, with its wonderful sparkling brilliance, represented a major technological achievement by the English glass industry late in the 17th century as it attempted to break the near-monopoly of Venice (Davis 1968:46-47). English production of this glass during the 18th century, and its apparent importance to occupants of the Louw-Bogardus house, seems to represent the prosperity and relatively sophisticated taste of Petrus Smedes.

Although the sample size is small, the distribution of ceramics in use at the site during the lifetime of Petrus Smedes also suggests an especially high proportion of fine porcelain, much of it hand decorated with over glaze colors (Fig. 17). This, together with the even higher preference for the attractive English brown combed yellow ware, probably for everyday use, contrasts sharply with the paucity of coarse red earthenware and salt glazed gray or white stonewares. The complete absence of delft ware on the site seems curious but again may indicate the highly urbane preferences of Petrus Smedes during the 18th century. Moreover, the decline of porcelain late in the 18th century and its replacement by pearlware is the dominant characteristic of ceramics in the site after 1780 (Fig. 18). Interestingly, creamware evidently never assumed major importance, as it does in some rural sites.

Evidence provided by bones from the site may also be a useful basis for comparison with other sites, although the statistical reliability of this particular analysis is admittedly limited due to the small sample. Petrus Smedes apparently preferred beef above all other meat in his diet, and the absence of sheep or goat bones during the occupancy of Petrus Smedes may be significant (Fig. 19). By contrast, the late 18th and early 19th century levels

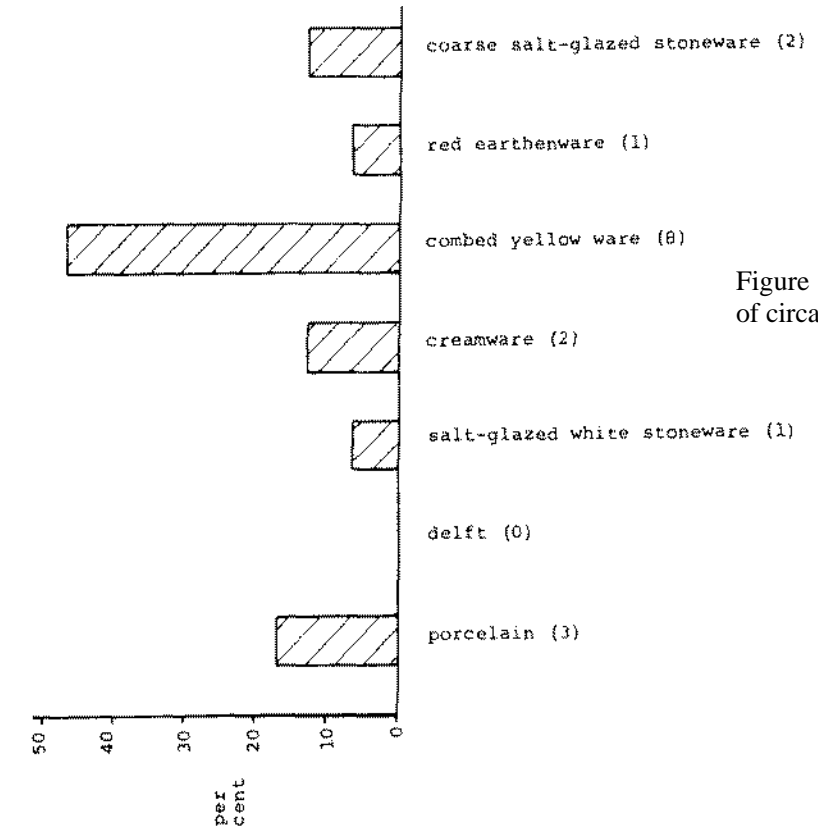
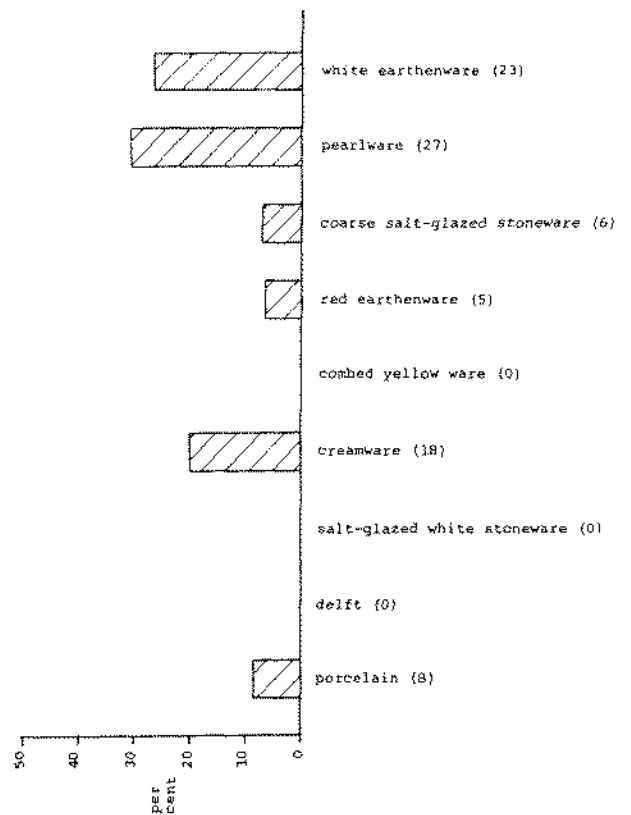


Figure 17. Distribution of ceramic sherds from contexts of circa 1780.

Figure 18. Distribution of ceramic sherds from contexts of circa 1780 to 1840.



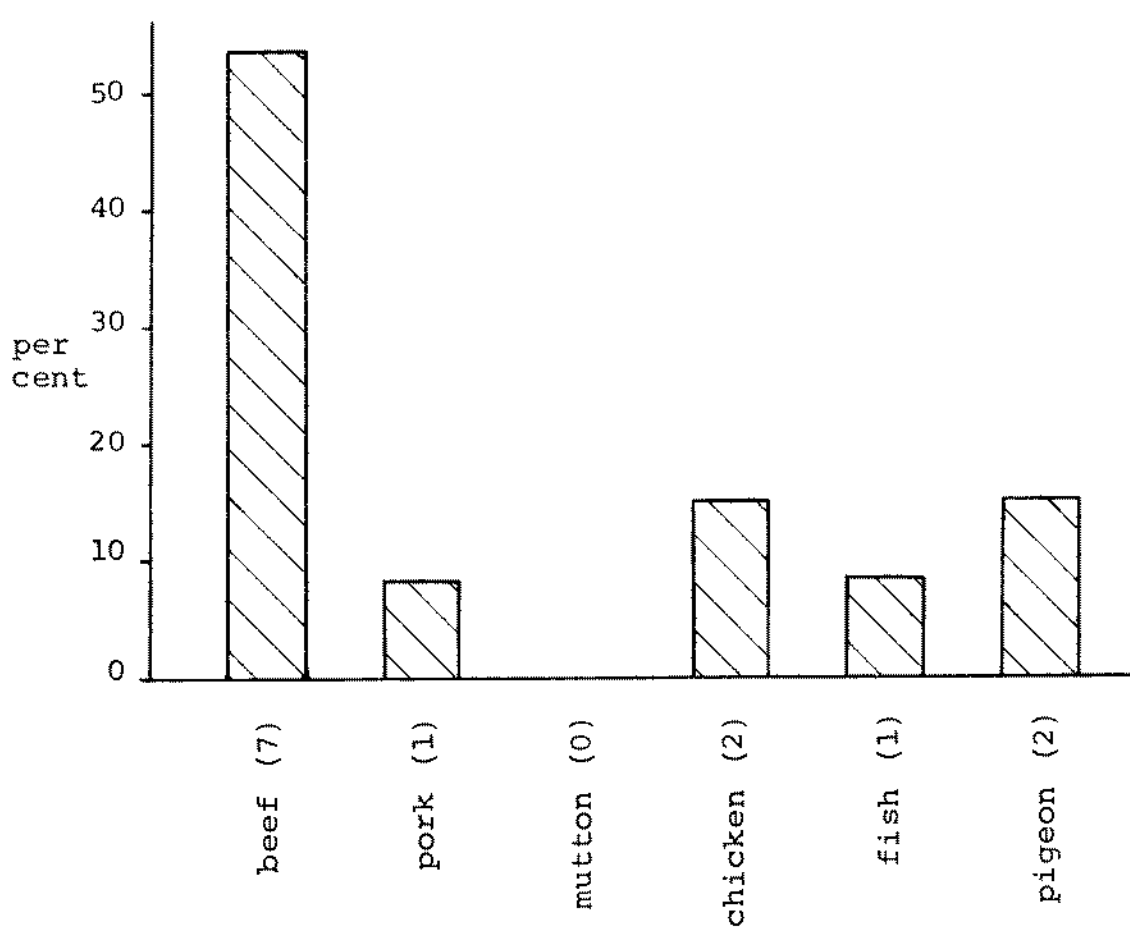


Figure 19. Distribution of bones from contexts of before circa 1780.

seemed to contain numerous sheep or goat bones, and this consumption of mutton is interesting in relation to the relative decrease in beef consumption (Fig. 20). Unfortunately, in many cases the bones of sheep, goat, or pig could not be definitely distinguished and were thus not counted. Also, it is not known how many different animals the total number of bones actually represented.

The early levels contained a high concentration of shells of cherry-stone clams, oysters, and fresh water mussels in relation to the later levels. Nevertheless, the relative scarcity of bones and shells in late 19th century levels probably indicates the advances in sanitation and garbage disposal in this urban environment after the 1830's.

Many other interesting observations could be made from this work, but it is dangerous to generalize from data provided from such limited areas. It is essential that any major future excavation project be carefully designed in a manner so as to reveal as much as possible any broader patterns of distribution in relation to stratigraphy and features, without unnecessarily extensive and destructive excavation. Perhaps the material from this small excavation, when considered in future comparative studies with other sites, has already begun to reveal significant behavior patterns related to status and social mobility, especially when one considers the documented contrasts in economic status between Petrus Smedes and that of Pieter Cornelisen Louw during his early years in Kingston. The artifact collection, together with the house, has nevertheless provided an important form of evidence representing Petrus Smedes and his relationship to daily life in 18th century Kingston.

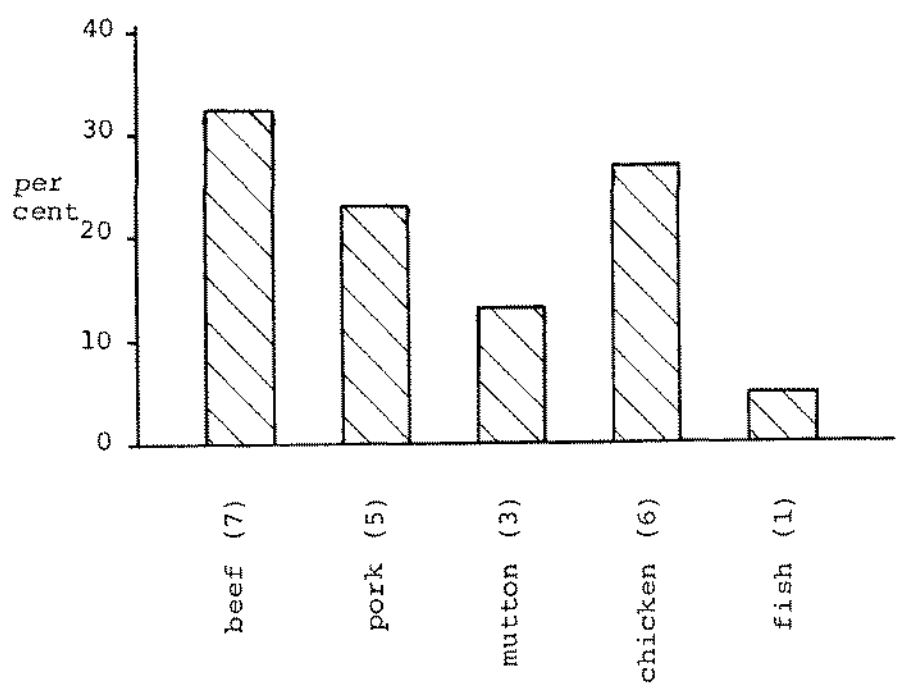


Figure 20. Distribution of bones from contexts of circa 1780 to 1840.

REFERENCES

Anonymous

- 1943 "List of Citizens of Ulster County, 1770, with Place of Residence and Occupation, from Which a Jury Panel of Twelve was Selected." *The New York Genealogical and Biographical Record*. Volume LXXIV, Number 2, April.
- 1908 *Heads of Families at the First Census of the United States Taken in the Year 1790*: New York. Government Printing Office, Washington.
- 1969 *The 1902 Edition of the Sears Roebuck Catalogue*. Bounty Books, a division of Crown Publishers, Inc., New York.

Christoph, Peter R., Kenneth Scott, and Kenn Stryker-Rodda, eds.

- 1976 *Kingston Papers* translated by Dingman Versteeg. *New York Historical Manuscripts: Dutch*. Genealogical Publishing Co., Inc., Baltimore.

Cobban, Alfred, ed.

- 1969 *The Eighteenth Century: Europe in the Age of Enlightenment*. McGraw-Hill Book Company, New York, St. Louis, San Francisco.

Davis, Frank

- 1968 *The Country Life Book of Glass*. Country Life Books, The University Press, Glasgow.

De Lisser, Richard Lionel

- 1968 *Picturesque Ulster*. Reprint of 1896-1905 edition. Twine's Catskill Bookshop, Woodstock, New York.

Fernow, Berthold, ed.

- 1878 "Governor Stuyvesant's Journey to Esopus, 1658." *Magazine of American History*. Volume II, Number 9, September.

Finer, Ann, and George Savage, eds.

- 1965 *The Selected Letters of Josiah Wedgwood*. Cory, Adams & Mackay Ltd., London.

Fried, Marc

- 1970 Letter of August 3, with reference from *Translation of Dutch Records* by Dingman Versteeg, Volume II, pages 391-392, at Ulster County Clerk's Office.

Hanson, Lee, and Dick Ping Hsu

- 1975 *Casemates and Cannonballs*. U.S. Department of the Interior, National Park Service, Washington.

- Hastings, Hugh, ed.
1897 *Second Annual Report of the State Historian of the State of New York*. Wynkoup Hallenbeck Crawford Co., State Printers, Albany and New York.
- Hoes, Roswell Randall, ed.
1891 *Baptismal and Marriage Registers of the Old Dutch Church of Kingston, Ulster County, New York*. Printed for the Transcriber and Editor by the DeVinne Press, New York.
- Kingston Historic Landmark Commission
1969 Notes for 18-22 Converse Street.
- Mojzer, Miklos
1967 *Dutch Genre Paintings*. Taplinger Publishing Company, New York.
- New-York Historical Society
1895 *Abstracts of Wills on File in the Surrogate's Office, City of New York*. Volume III. *Collections of The New-York Historical Society for the Year 1894*. Printed for the Society, New York.
1896 *Abstracts of Wills on File in the Surrogate's Office, City of New York*. Volume IV. *Collections of The New York Historical Society for the Year 1895*. Printed for the Society, New York.
1904 *Abstracts of Wills on File in the Surrogate's Office, City of New York*. Volume XII. *Collections of The New-York Historical Society for the Year 1903*. Printed for the Society, New York.
- Noel Hume, Ivor
1963 *Here Lies Virginia*. Alfred A. Knopf, New York.
1970 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.
- O'Callaghan, E. B., ed.
1850 *The Documentary History of the State of New-York*. Volume III. Weed, Parsons & Co., Public Printers. Albany.
- Oppenheim, Samuel, trans.
1912 *The Dutch Records of Kingston. Part I. Proceedings of The New York State Historical Association*. Volume X1. Published by The New York State Historical Association.
- Reineking-von Bock, Gisela
1976 *Steinzeng*. Kunstgewerbemuseum der Stadt Koln, Koln.
- Reynolds, Helen Wilkinson
1929 *Dutch Houses in the Hudson Valley Before 1776*. Payson and Clarke Ltd., New York.
Scott, Kenneth, and Kenn Stryker-Rodda
1975 *Denizations, Naturalizations, and Oaths of Allegiance in Colonial New York*. Genealogical Publishing Co., Inc., Baltimore.
- Stone, Lyle M.
1974 *Fort Michilimackinac, 1715-1781: An Archaeological Perspective on the Revolutionary Frontier*. Michigan State University, East Lansing, and Mackinac Island State Park Commission, Mackinac Island.
- Towner, Donald
1963 *The Leeds Pottery*. Cory, Adams & Mackay Ltd., London.

AN ARCHAEOLOGICAL TESTING PROJECT AT JOHNSON HALL STATE HISTORIC SITE, JOHNSTOWN, NEW YORK

Rich Goring

New York State Division for Historic Preservation

INTRODUCTION

Johnson Hall, the Georgian country home of Sir William Johnson (1715-1774) was erected near present Johnstown, New York, beginning in 1763, and is now owned and administered by the New York State Office of Parks and Recreation. The house with its many outbuildings and dependencies formed an extensive estate on the 700 acres purchased by Sir William who served as Superintendent of Indian Affairs for the British government. Since the house was acquired by the State in 1906, extensive restoration and reconstruction projects have been undertaken. These projects have unfortunately often involved the careless destruction of archaeological resources.

In May, 1976, staff from the Archaeology Unit of the Bureau of Historic Sites, -New York State Office of Parks and Recreation, Division for Historic Preservation, tested areas around Johnson Hall where new sidewalks and electrical lines were proposed. The planned sidewalks would extend from stone blockhouse to stone blockhouse parallel to the northwest wall of Johnson Hall approximately 25 ft. from the Hall, and also southeastward from the west blockhouse to the elliptical driveway in front of the main building. The "blockhouses," actually stone outbuildings built in 1765 and 1766, represent flankers which were typical of Georgian mansions of the Palladian style in this period (Waite and Huey 1971:4-6). The archaeological testing was conducted to determine whether the construction as proposed would have any adverse impact on known or unknown archaeological resources.

The expected depth of disturbance for the sidewalks was a maximum of 1 ft., and sidewalks were planned to be approximately 6 ft. wide. The northeast half of the walkway connecting the blockhouses would be installed on top of a deposit of new fill which was to be brought in to upgrade the steep slope toward the recently reconstructed north blockhouse, and so a decision was made that testing in this area would therefore be unnecessary. The intended electrical line was designed to provide service for the reconstructed north blockhouse and would also be placed almost entirely within the new fill except near the upslope terminus of the line where it would exit from Johnson Hall. At that point the maximum necessary disturbance to existing soils was estimated as 1 ft. vertical and 2 ft. horizontal.

The testing was conducted within the limits of the proposed improvements, except in areas known to have been excavated during previous archaeological or restoration projects and in areas where no disturbance to existing soils would be required. In addition to determining the degree of impact which the proposed improvements would have upon archaeological resources, the testing was planned to provide a sample of material from datable contexts and to reveal the extent of previously unrecorded or insufficiently documented disturbances in those areas. Based on the results of the testing, additional planning, if necessary, would include either archaeological salvage in advance of construction or modification and redesign of the improvements to avoid an adverse impact on archaeological resources.

PROCEDURE

Among the areas at Johnson Hall known to have been previously disturbed was most of the area between the north blockhouse and the main building itself which had been heavily disturbed during reconstruction of the blockhouse in the late 1960's. Both the sidewalk and the new electrical line would be contained almost entirely within the limits of new fill which was to be added in this region. Also, much of the area northeast of the west blockhouse and between it and Johnson Hall had been excavated during the 1957 to 1959 archaeological digging aimed at locating the "tunnel" between those two structures (Ducey n.d.; Ismay 1969). Finally, it was assumed that the existing forked walkway leading southeastward from the west blockhouse had required subsurface disturbance similar in depth to that required for installation of the new walkway in the same location.

Thus, only three areas of proposed construction seemed to hold potential for revealing undisturbed archaeological remains: the interval between the branches of the existing sidewalk where the new path would be

installed, the southwestern terminus of the electrical line where it would enter Johnson Hall, and the new sidewalk area northwest of Johnson Hall on the level upslope or southwestern half of the proposed route which was thought to be just on the periphery of the area disturbed by the "tunnel" excavations of 1957 to 1959.

Accordingly, six 1 ft. square archaeological test pits were located and excavated as shown on the site plan (Fig. 1). Each was stratigraphically excavated to or slightly below the maximum depth of anticipated subsurface disturbance. Each layer in each test square was treated as a separate temporal and cultural entity. Concurrent with excavation, descriptive field notes were recorded for each layer, and significant features, when encountered, were photographed and mapped in plan. Upon completion, each test pit was profiled, and summary notes or "provenience sheets" were compiled for each stratum in every excavation. All field records are on file at the Peebles Island facility of the Historic Sites Bureau, Office of Parks, Recreation and Historic Preservation, Waterford, New York.

FINDINGS

Excavation of the six 1 ft. square test pits revealed that the proposed sidewalks, with slight modification in design, and the new electrical line would have very little adverse impact upon significant archaeological resources.

The area in which Test Pit No. 4 was located, at the north corner of Johnson Hall, had already been heavily disturbed, probably during various phases of restoration of the structure in this century. At 9 1/2 in. below the

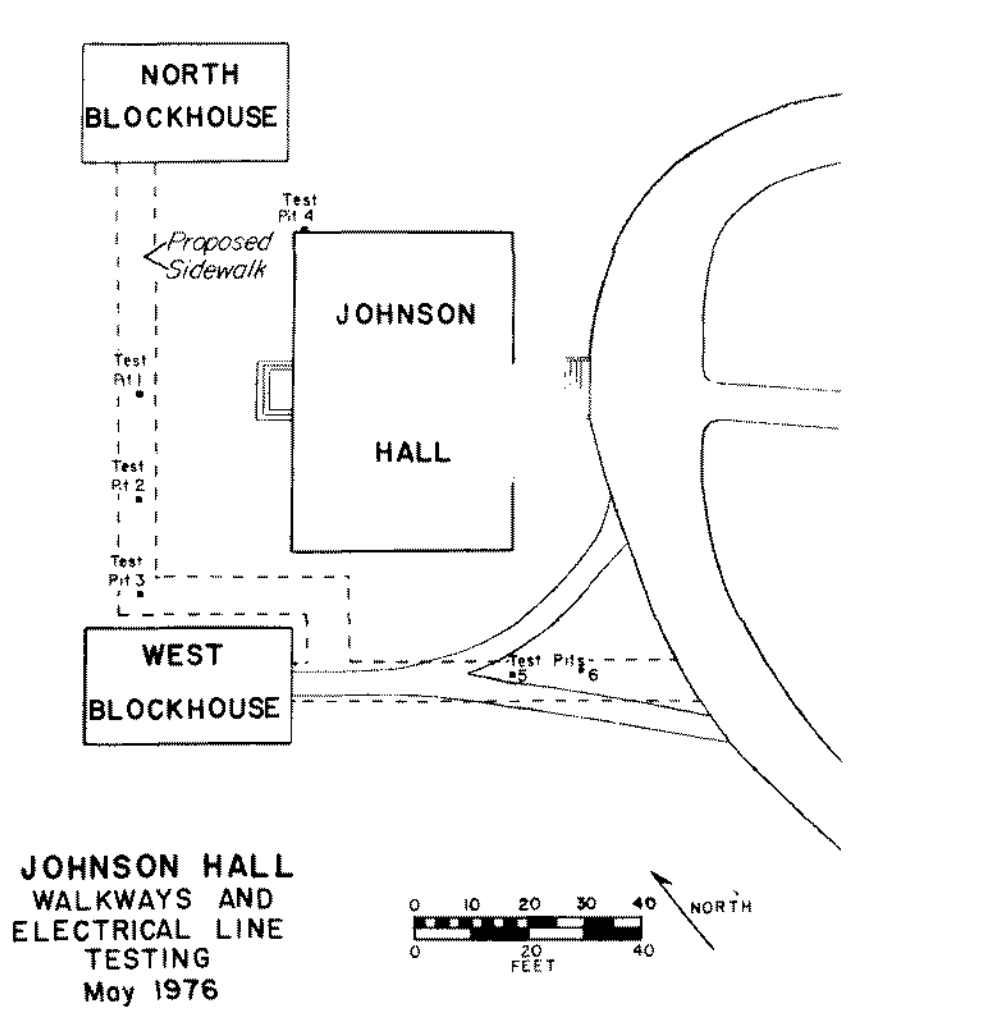


Figure 1. Plan of Johnson Hall and flanking stone blockhouses, with locations of test units, May 1976.

present ground surface a large rock spattered with white paint was encountered. This stone appeared to be in situ, and the paint probably is from a fairly recent, 20th century repainting of the house. At 13 to 15 in. in depth, lime mortar and stone rubble were found, most likely representing the 1910 destruction of a 19th century wing which formerly extended toward the northeast.

The area of Test Pit No. 2 had also been quite heavily disturbed, at least for the upper 12 to 13 in. At that depth a tan clay feature occupied the northern half of the square, with its southern limit being a sharply defined line running diagonally from the west to east corners of the excavation. This clay feature was very similar in character to a large "L" shaped feature encountered in the 1957 to 1959 archaeological excavations in this same general area (Fig. 2) which is believed to have been a tunnel connecting Johnson Hall with the west blockhouse. When the tunnel feature was transposed onto the base map, the northern arm of the feature was found to terminate approximately 11 ft. south of Test Pit No. 2. It is possible, however, that the feature was intermittent, or that part of it had been disturbed and refilled with different soil, and thus the tan clay feature found in Test Pit No. 2 could be part of the "tunnel" found by Ducey (Fig. 2). Alternatively, it could be of an entirely different origin and/or date. Only intensive documentary research combined with future archaeological excavation in this area might resolve this question. In any case, the feature at the Test Pit No. 2 locus should be considered potentially significant. Since the maximum anticipated depth of disturbance in this area was less than the depth at which the feature was encountered, it was felt that sidewalk installation would have no major impact other than precluding simple access to that part of the feature.

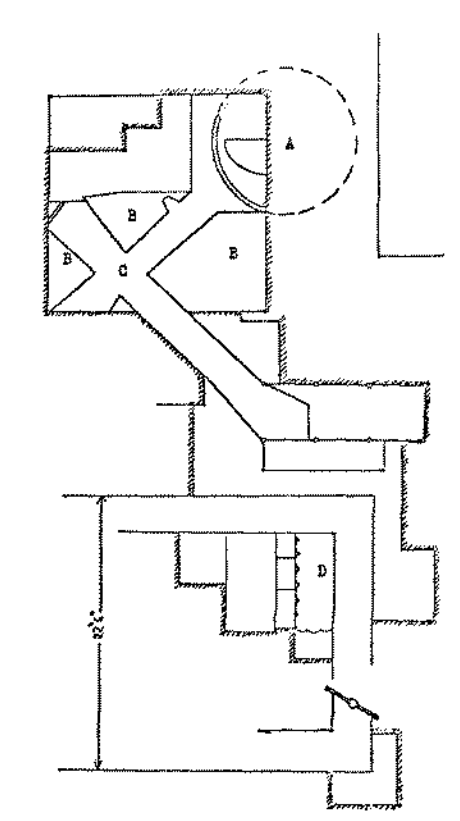


Diagram of the Excavation for the Tunnel, Shoving the Cistern (A), the Cobbled Terrace (B), the Clay Filled Passageway (C), and the Stone Fill in the Interior Corner of the Blockhouse (D),

Figure 2. Plan of the 1957 to 1959 excavations conducted by Paul R. Ducey (Ducey n. d.).

ARTIFACT TYPES:	Test Pit	1		2	3			
	Stratum	III	IV	I	I	II	III	IV
	Cat. #	48	49	53	55	56	57	58
FOOD & DRINK								
Clamshell								
Oystershell				5				1
Bone				4				
Bottlecap								
Clear Bottle Glass								
Green Bottle Glass								
Porcelain								
Delftware				1				
White Saltglazed Stoneware								
Creamware	2			9		1	1	1
Red Earthenware				4				
Coarse Saltglazed Stoneware								
Pearlware				8			1	1
Whiteware	1						1	
White Plastic				1				
Iron Knife								
STRUCTURAL REMAINS								
Red Brick	2			7		1	1	9
Handwrought Nail							1	1
Machine Cut Nail	1			3			2	
Round Wire Nail							1	
Unidentified Iron							3	
Lime Mortar	1			2		3		1
Burned Limestone				7			1	1
Portland Cement							10	
Slate							4	
Roofing Tile								
Coal	2			7			2	
Coal Ash	1			6			2	
Sewer/Drain Pipe			6					
Window Glass	2			4	1	1	4	1
PERSONAL USE ITEMS								
Coin								
Clay Pipe Stem				1				1
Clay Pipe Bowl				1				
MISCELLANEOUS								
Redware Flower Pot				1				
Lead Waste								

Table I. Artifact summary for test pits and surface collection.

ARTIFACT TYPES:	Test Pit	5				6		Sur- face Coll.
	Stratum	I	II	III	II	III		
	Cat. #	45	50	51	52	61	62	
FOOD & DRINK								
Clamshell						1		
Oystershell			1	7			8	
Bone			4	9		4	2	
Bottlecap			1					
Clear Bottle Glass						2		
Green Bottle Glass					4			
Porcelain					2		1	
Delftware								
White Saltglazed Stoneware					1		1	
Creamware			4	13		2	4	
Red Earthenware			1	3		1		
Coarse Saltglazed Stoneware			1			1		
Pearlware			2	5		2	1	
Whiteware						2	1	
White Plastic								
Iron Knife							1	
STRUCTURAL REMAINS								
Red Brick					8	8	6	
Handwrought Nail			1	4		2	1	
Machine Cut Nail			3			10		
Round Wire Nail								
Unidentified Iron						5		
Lime Mortar	4				4		3	
Burned Limestone					5	3		
Macadam			3					
Slate								
Roofing Tile				1				
Coal			2			9		
Coal Ash			6			5		
Sewer/Drain Pipe								
Window Glass			3	2		6		
PERSONAL USE ITEMS								
Coin		1						
Clay Pipe Stem						1		
Clay Pipe Bowl							1	
MISCELLANEOUS								
Redware Flower Pot					1			
Lead Waste							1	

Whereas the upper 12 to 13 in. of soil in Test Pit No. 2 had been disturbed, producing only a single mixed layer of recent date (circa 1960 or later), the areas of Test Pits No. 1 and No. 3 were much less disturbed. Both test pits share an upper layer of dark brown sandy loam probably deposited during recent restoration projects in the 1960's and 1970's. The second layer in both these excavations is a dark brown sandy loam mixed with some gray clay, light brown sand, and deteriorated mortar. Although no artifacts were found in this layer in Test Pit No. 1, and a single sherd of creamware was the only diagnostic artifact found here in Test Pit No. 3, this layer must date no earlier than the last quarter of the 19th century and is probably of a 20th century origin. This conclusion is based on the dating of the underlying layer in Test Pit No. 3, a dark gray clayey loam which contained, among other artifacts, Portland-based cement and a fragment of a round wire nail which would most likely date to the last quarter of the 19th century or later (Priess 1973:88). The third layer in Test Pit No. 1, probably dating from the mid 19th century or later, was comprised of dark brown loam heavily mottled with yellowish sand, lime mortar, and red brick fragments. The fourth stratum in Test Pit No. 1, the last one sampled there, was also of 19th century or later date since the only artifacts found in this mottled gray sand were fragments of stoneware sewer pipe with dark grayish brown Albany-type slip glaze.

In Test Pit No. 3, however, the fourth layer was a dark brown sandy loam which could date to the 1790's since the most recent artifact found in it was blue hand painted pearlware. This loam had accumulated on top of an earlier cobble stone surface which is most likely datable to the 18th century. Portions of this cobbled surface or "courtyard" were encountered by Ducey during his excavations for the "tunnel" in the late 1950's (area B on Fig. 2).

Test Pits No. 5 and No. 6 also revealed a late 18th century stratum approximately 1 ft. below the existing ground surface. This context should be considered potentially significant since so much of the site has already been disturbed that any surviving 18th century proveniences must be carefully protected. The uppermost layer in both pits was a dark brown sandy loam with sod growth which represents soil accumulation or deposition after 1975, as evidenced by a Lincoln penny of that date found in this stratum in Test Pit No. 5. Beneath this was found, in Test Pit No. 5, a dark brown sand with broken twigs which would date (on the evidence of a crimped bottle cap found in this layer) after ca. 1892 (Jones 1971), but is probably of a very recent date judging by the broken twigs which are only partially decomposed and may be a bulldozed deposit. In Test Pit No. 6 the second layer is a dark brown sandy loam probably dating from the middle of the 19th century or later since the layer contained both pearlware and white ware as well as machine cut and headed nails and coal.

Artifacts in the third stratum in both pits, though contained in different soil types, are consistent with samples indicating an 18th century date, but could date later as well. In Test Pit No. 6 the stratum is composed of light brown sandy loam which contains bone and oyster shell fragments, red brick, charcoal, a hand wrought nail, and four sherds of creamware. Below it was found the light brown clay subsoil mottled with brown loam.

Stratum III in Test Pit No. 5 was a dark brown sand only slightly lighter than the layer above it. But this zone was very rich in artifacts, especially ceramics. Twenty four sherds were found in this context, including five pearlware (four of which are hand painted in blue underglaze decoration, and would date this layer after ca. 1785), three red earthenware (including a lead glazed sherd from a bowl with an original basal diameter of approximately 7 inches, one thin sherd of lead glazed "engine-turned" red earthenware, and one small sherd of black glazed Jackfield-type), two sherds of Chinese porcelain (one decorated in underglaze blue), and a tea bowl or saucer fragment of "scratch-blue" English white saltglazed stoneware. Also found here were oyster shell and bone fragments, pieces of dark green bottle glass (one of which is from a square-sectioned "gin" or "case" bottle), hand wrought nails, red brick, red roofing pan tile with blackish-brown rough textured glaze, lime mortar, partially burned limestone, and clear window glass. Having satisfactorily identified and defined the presence of a potentially significant archaeological resource, only about 2 in. of this stratum was excavated, in order to bring the depth of excavation to the 12 to 13 in. maximum proposed depth of disturbance for the new sidewalk.

CONCLUSIONS AND RECOMMENDATIONS

Excavation of six small archaeological test pits prior to installation of new sidewalks and an electrical service line revealed a useful body of data pertaining to Johnson Hall and its various inhabitants. Even in areas which appear to have been mechanically disturbed, significant archaeological deposits were found to exist intact below the limit of disturbance. Such remains were found in Test Pits No. 3, No. 5, and No. 6, and a potentially significant context was also found under a similar recent accumulation in the area of Test Pit No. 2. Since all of these contexts are found at a depth of approximately 1 ft. below the present ground surface, it was felt that

installation of the sidewalks as proposed should not have a major adverse effect upon buried archaeological resources. However, reduction of maximum subsurface ground disturbance from the proposed 12 in. to about 6 in. was recommended so as to greatly reduce the chance of disturbance to these significant archaeological strata.

Six general temporal proveniences were revealed through this archaeological testing at Johnson Hall. The earliest contexts found, probably dating to the 18th century, are those found in Test Pit No. 3 Stratum V (the cobbled surface) and Test Pit No. 6 Stratum III. Contexts corresponding to the late 18th century or early 19th century are Test Pit No. 3 Stratum IV and Test Pit No. 5 Stratum III. Mid to late 19th century deposition was found in Test Pit No. 1 Strata III and IV, and Test Pit No. 6 Stratum II. Early 20th century deposits exist at Test Pit No. 4 Stratum IV and Test Pit No. 3 Stratum III. Soil was deposited or disturbed after circa 1960 in Stratum I of Test Pits No. 1 and No. 2, and at Test Pit No. 5 Stratum II, while the contexts of Stratum I in Test Pits No. 5 and No. 6 were deposited in 1975 or later. These late deposits are often significant because they can contain vestiges of earlier material culture which are important even in the absence of more precise temporal associations.

Since much of the material recovered from the test excavations is from mixed or disturbed contexts, analysis of cultural change on the site cannot validly be undertaken on the basis of this sample alone, except in rather generalized terms. Yet considering the composite artifact sample from all contexts, significant insights can be suggested.

Structural or architectural remains exist in the form of nails (both hand wrought and machine cut), glazed red earthenware roof pan tiles, roofing slate, coal, and spattered white paint. While the latter is probably associated with the 20th century process of restoration of the main building, most of the other structural artifact types are of earlier periods. The glazed red earthen roofing pan tiles are indicative of an 18th century roof structure on either Johnson Hall or its dependent outbuildings and associated structures. At some later, unknown date, probably during the 19th century when the main house was being enlarged, the roofing material was changed to slate. An important change also occurred during the 19th century when coal probably replaced or at least supplemented wood as a heating source.

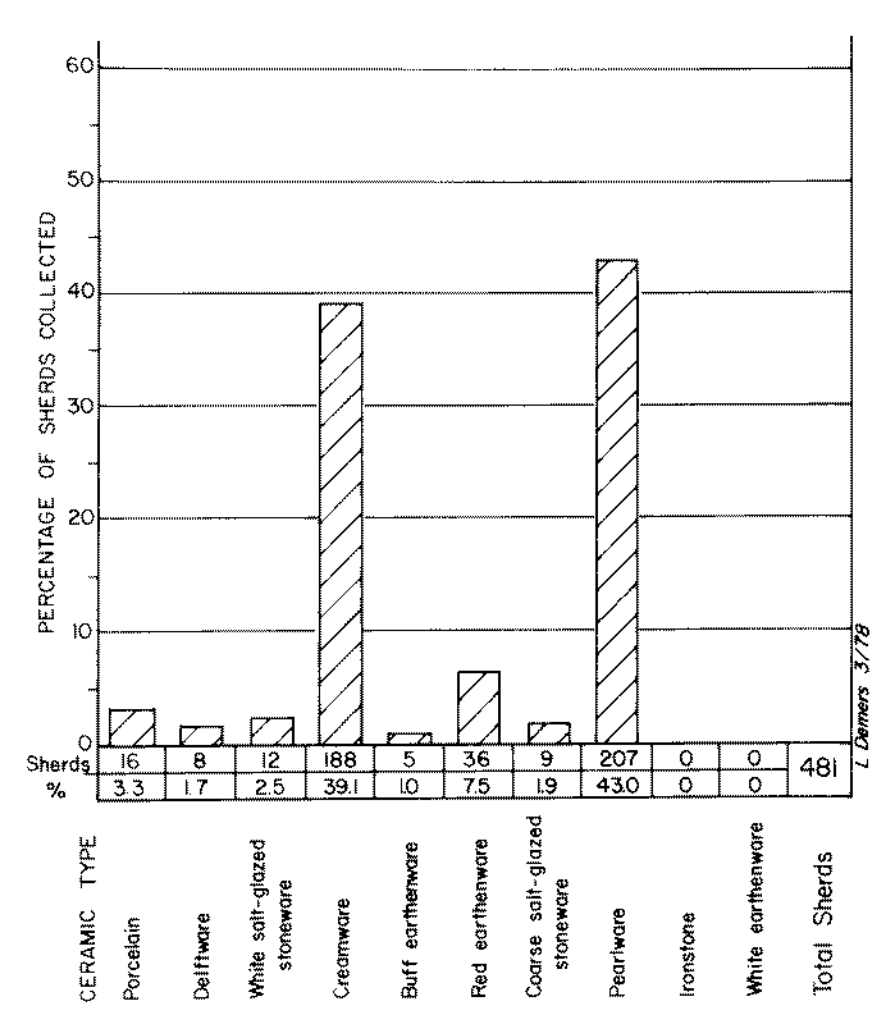
Probably during the 18th century a cobbled stone courtyard was installed in at least part of the area between the two stone blockhouses, yet it seems that by about the turn of the 19th century this surface was being covered by soil. In the 20th century durable road or walkway surfaces were again required, in the form of macadam pavement. These durable traffic surfaces may be a reflection of more intensive human occupation/visitation at Johnson Hall during its earliest years as well as recently. The existence of an 18th century cobbled courtyard or road surface certainly indicates that there must have been intense activity at the site during that period. Perhaps such a surface can be interpreted as an association with 18th century sites where extraordinary "traffic" (either pedestrian, equestrian, or wagon-borne) was commonplace. The period from 1763 to 1774, when Sir William Johnson occupied the site in his capacity as Commissioner of Indian Affairs, would have witnessed such intensive traffic since the site was used extensively both for councils and as a trading center.

The existence of a paved cobblestone courtyard may also be an indication of wealth and status, in addition to its existence in an area of intense use and activity. A cobblestone paved area was discovered during testing at Fort Johnson, which was Johnson's previous home in the Mohawk Valley (Lenig and Swart 1976). North of Albany, at the Schuyler Flatts site, an extensive area of cobblestone pavement from the second half of the 18th century was also discovered to the rear of the old Schuyler house foundations (Huey 1974). Testing in 1975 at the John Jay house in Westchester County revealed evidence of another cobblestone-paved courtyard to the rear of the house, built in 1787 (Feister 1976:1). A cobblestone paved yard or path dating ca. 1790 was uncovered in 1975 adjacent to the Van Enden-Onderdonk House in Maspeth, Queens County, New York (Bridges 1975:3). In New England, a cobblestone yard area was uncovered to the rear of the Narbonne House in Salem, Massachusetts, the home of a prosperous tanner and his family after 1780 (Moran 1976:195, 202).

Fragments of partially burned limestone seem to indicate that lime used for mortar at Johnson Hall was extracted in a local kiln, most likely at the time of construction of the main house and its original dependencies. Dietary remains are sparse, and much of the bone recovered is too fragmentary for identification, but oysters, pig, and an unidentified species of fowl are present. White clay tobacco pipe fragments, while certainly providing evidence of tobacco smoking, may also have been an item of trade or exchange. It is interesting to note that in the inventory of the possessions of Sir William that was made after his death in 1774, tobacco pipes are mentioned in only two locations. Two "broken Boxes of pipes" are included in the contents of the "Indian Store" along with such trade items as blankets, clothing, knives, brass rings, thimbles, jews harps, flints, and shot, as well as "50¹¹ of cut Tobacco." And in "the red Coach house Store" are found "4 Boxes of pipes cont^g. 107 Gro^s" (Rubenstein 1958:268-285).

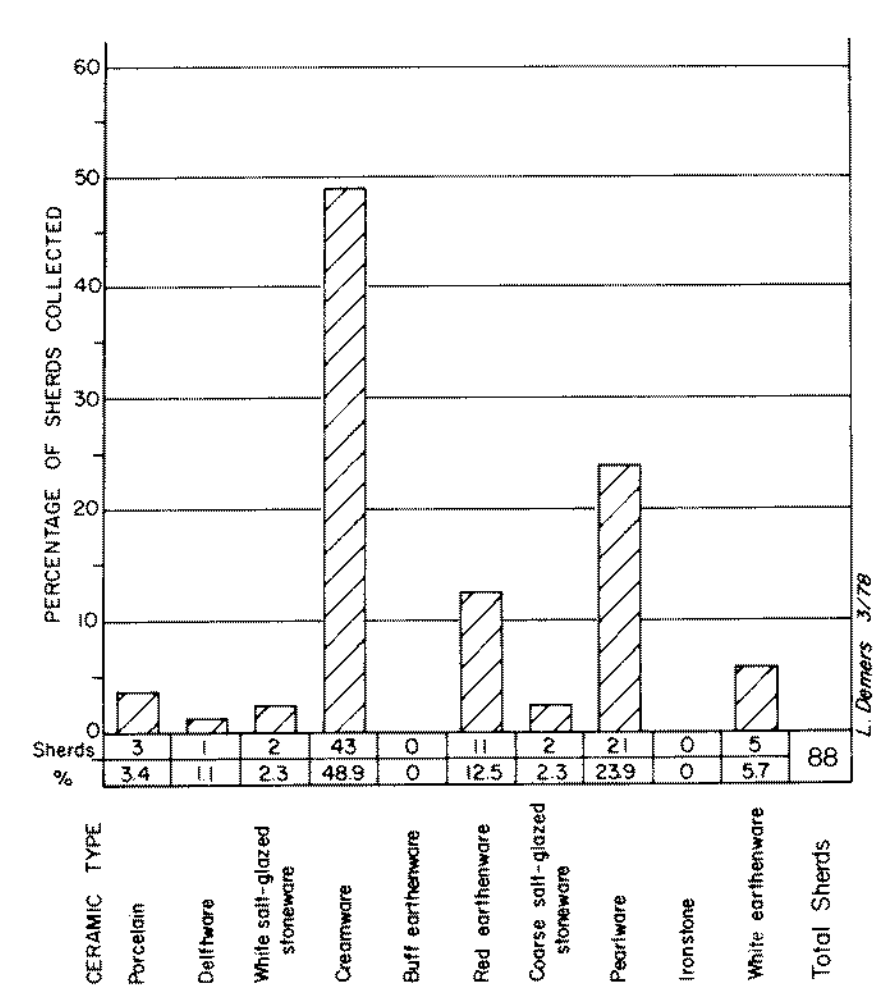
The largest artifact assemblage from Johnson Hall is the ceramic assemblage. Although this sample from the test pits is small for reliable statistical analysis, consisting of a total of 88 sherds, the ceramic sherd distribution graph for this collection (Fig. 4) is similar to the graph of a much larger collection gathered in 1969 from the site of the north (northeast) stone house at Johnson Hall during its reconstruction (Fig. 3). The major difference between the two samples is the much higher proportion of pearlware in the northeast stone house assemblage which can probably be explained by localized or more intensive 19th century habitation of that building (standing until 1866) and the nearby 19th century addition extending to the northeast from Johnson Hall (standing until 1910). The percentages of red earthenware and coarse saltglazed stoneware are very similar in the two assemblages, and the porcelain, delftware, and white saltglazed stoneware percentages are virtually identical. Thus it seems reasonable to conclude that the test pit assemblage is a valid sample for comparison with other archaeological samples and further supports the validity of ceramic sherd distribution analysis as a means of comparing sites to help define possible cultural patterns.

Using Stanley South's method of determining the mean date of a site using the ceramic assemblage (South 1972), a mean ceramic date for the Johnson Hall test pit collection of 1795.0 (+/- 4.0 years) is obtained. This date was then modified, as recommended by South (1972:205-206), by eliminating the three sherds of Chinese porcelain in the assemblage from the computation, thus producing a date of 1797.6 (+/- 4.0 years). Further



Ceramic Sherd Distribution
 JOHNSON HALL
 1969 Surface Collection from Site of
 Northeast Stone House, circa 1765-1866

Figure 3. Distribution of ceramic sherds collected from the site of the north stone blockhouse during reconstruction, 1969.



Ceramic Sherd Distribution
 JOHNSON HALL
 Walkways and Electrical Line Test Excavations
 Surface Collection, All Test Pits, All Levels
 EXCAVATED-MAY 1976

Figure 4. Distribution of ceramic sherds from test excavations, May 1976.

modification of the date was made by employing the alterations (involving revisions of the mean ceramic dates for pearlware and whiteware ceramic types) recommended by Lofstrom (1976) which yielded a mean ceramic date of 1799.3 (+/- 4.0). Since Johnson Hall was occupied from 1763 until 1906, we would expect a median date of approximately 1834.5. The difference between the expected median and that produced by the ceramic assemblage may indicate a difference in the intensity of habitation and activity on the property, with greater activity occurring in the first decade of the site's occupation. During that time, in addition to being the private residence of Johnson and his large family, the estate also served as a locus of trade and official negotiation with 18th century Indian populations. This increased activity might be expected to have manifested itself in greater quantities of artifactual material from the earlier period.

The surface collection from the site of the reconstructed north stone house (occupied circa 1765 to 1866) contains four times as much red earthenware as coarse saltglazed stoneware. The test pits in 1976 yielded between five and six times as much red earthenware as coarse saltglazed stoneware. Other American sites that have yielded from four to six times as much red earthenware as coarse saltglazed stoneware include sites associated with 18th century occupants of English origin, such as the "First Statehouse" site at Jamestown, Virginia (occupied circa 1670 to 1730) and two sites in Orange County, New York: the Haskell House near Newburgh (circa 1726 to 1960) and the McGill-Atwood House at New Windsor Cantonment (circa 1800 to 1960)

(Cotter 1958:233-234; Goring 1978; Wentworth 1976). The same relationship of red earthenware to coarse saltglazed stoneware also exists in the ceramics from the John Jay house in Westchester County (built in 1787) and from the Van Enden-Onderdonk House in Queens County (contexts of circa 1790 to 1960) (Feister 1978; Moser 1976). Finally, two military sites also share this ceramic relationship: Fishkill Supply Depot in Dutchess County (American, circa 1776 to 1782) and Fort Ligonier in Pennsylvania (British, 1758 to 1766) (Goring 1973:6; Grimm 1970). None of the above samples, however, correlate positively with the Johnson Hall assemblage in any other relationships between major ceramic types such as delft, porcelain, white saltglazed stoneware, or buff earthenware. It may be that the relationship of red earthenware to coarse saltglazed stoneware represents some shared function relating to the use of these ceramic types as utility wares at these different sites.

The 3:1:2 ratio of porcelain, delftware, and white saltglazed stoneware provides an additional basis for comparative purposes. Similar ratios were encountered in ceramic collections from Fort Watson in South Carolina (1780 to 1781; ratio of 4:1:2), Clermont in Columbia County (3:1:2), the Isaac van Campen house in New Jersey (dating circa 1760 to 1960; 4:1:3), and the Van Wie-Gardinier site in Columbia County (circa 1760 to circa 1960; 15:1:6) (Ferguson 1975; Feister 1977; Salwen and Williams 1976; New York State Office of Parks and Recreation 1972). The Isaac van Campen house was the substantial Georgian home, built of stone, of a major land-owner in the upper Delaware Valley, while the brick Van Wie-Gardinier house near Kinderhook, New York, also belonged to a prosperous Dutch farming family. Only the wealth and power of Robert Livingston of Clermont, however, could have matched that of Sir William Johnson. The actual quantity of porcelain is significant since porcelain was presumably a more expensive ceramic type and thus can be considered a reflection of wealth or affluence. But only 3.4% of the test pit assemblage is porcelain, whereas the Clermont sample contains 14% porcelain, the Van Wie-Gardinier site shows 9% porcelain, and the Van Campen house had 4.3%. Even the British military population of Fort Watson left behind a higher percentage of porcelain (3.8%) than did the occupants of Johnson Hall.

Several explanations are possible. First of all, it should be noted that the west blockhouse, near which three of the test pits were placed, functioned as quarters for slaves and indentured servants, and the ceramic sample may reflect a pattern of use that will differ from samples elsewhere on the estate (Waite and Huey 1971:4-5). Assuming that a high use level of porcelain is characteristic of sites occupied by individuals of British origin and by prosperous Dutch land owners close to direct sources of trade and supply, then the low occurrence of porcelain at Johnson Hall might indicate the difficulty in obtaining and transporting finer wares to the more inaccessible places on the frontier. This seems to be contradicted, however, by the fact that at many British colonial military sites at isolated locations on the frontier there are also very high percentages of porcelain. Ceramic sherds excavated from behind the Soldiers' Barracks (circa 1760 to 1773) at Crown Point on Lake Champlain included, for example, 11% porcelain, while approximately 20% of the large ceramic samples from sites such as Fort Ligonier, Pennsylvania, and Fort Michilimackinac at Mackinac, Michigan, (1715 to 1781) was porcelain (Feister n. d. ; Grimm 1970; Miller and Stone 1970).

A more likely explanation is perhaps related to the function of porcelain use at Johnson Hall and to the circumstances of deposition of broken fragments. The samples from Crown Point and from Clermont are both from sites that were destroyed by fire (in 1773 and 1777, respectively). The other samples, however, including the samples from Johnson Hall, presumably represent deposition of material broken and discarded from normal site occupation and use. The inventory of Sir William Johnson's possessions, made shortly after his death in 1774, reveals that his house contained 104 pieces of creamware ("Queensware"), 58 pieces of "blue china" (porcelain), 22 pieces of "Burnt china" and 2 delftware teapots (Rubenstein 1958:268-285). The "Burnt china" cannot be definitely ascribed to a specific ceramic type, as stated by Marley R. Brown III who in analyzing ceramics listed in estate inventories from the Plymouth Colony concluded that the burnt china designation "remains enigmatic" (Brown, 1973:49). Even discounting the "Burnt china" the 1774 inventory shows a creamware to porcelain ratio of 2:1 while the archaeological test pit ratio is 14:1. While it appears that Sir William did indeed possess a very large proportion of porcelain, it either was more durable or perhaps it was not used as much as creamware. English gentlemen of the 18th century such as Johnson may have valued porcelain for its aesthetic appeal and value and as a symbol of status. That creamware was the more utilitarian ware is also suggested by the fact that all but one of the creamware items in the inventory are included in the "Butlers room, Kitchen &^c," and these areas do not include any porcelain. Fifty four-pieces of the "blue china" (along with all of the "burnt china" and "2 Delf Teapots") are listed, however, among the "Artic^s. in y^e white parlour Closset." Only in "the blue Parlour" are china and creamware both represented in the same room, where, amongst 291 pounds' worth of silver, are found "1 large China Bowl . . . 3 small blue d^o." and one "Queensware quart & pint Mug" (Rubenstein 1958:275-277).

Creamware also appears to have been a more versatile and diversified ceramic type, appearing in the inventory in such forms as a mug, large oval dishes, large round dishes, oval dishes, small dishes, soup plates, common plates, a "quart & pint Mug," and one "Terreen." Porcelain is confined to more specialized use, occurring only as breakfast cups, saucers, a large bowl, small bowls, small plates, and "5 Tea Yoars Ewers". The burnt china is also confined apparently to a tea service consisting of "11 burnt china Tea Cups & 10 Saucers d^o." and "1 [burnt china] Cream and Teapot."

Analysis of the vessel forms in the archaeological collection confirms that creamware was the most diversified of the ceramics. Fragments of a chamber pot, a teacup (with black over glaze decoration, Fig. 5), and a plate were found in creamware, while the only identifiable vessel form of porcelain is a sherd from a blue decorated cup, either a teacup or perhaps one of the "Breakfast Cups" listed in the inventory. Only one sherd of pearlware was identifiable as to vessel form, that being a plate, while red earthenware was found used for flowerpots, a bowl, and a milk pan or bowl. Two fragments of coarse saltglazed stoneware are from storage crocks or similar vessels, and a sherd of white saltglazed stoneware is probably from a saucer. Single sherds of Jackfield-type stoneware and "engine turned" red earthenware, although too small for definitive vessel form identification, are most likely from vessels associated with specialized functions in association with tea drinking (Fig. 5 and Fig. 7).

SUMMARY

Preliminary archaeological testing of a small area at Johnson Hall has revealed the presence of apparently undisturbed contexts dating from the 18th century. A cobbled surface previously reported by Ducey was

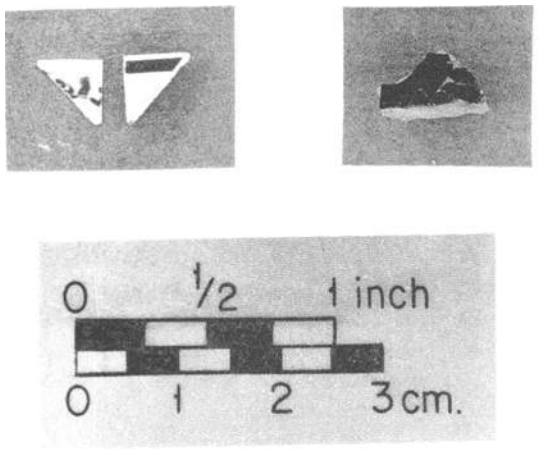


Figure 5. Ceramic sherds from Test Pit No. 5. Left: interior and exterior sides of a black decorated creamware cup rim from Stratum II; right: Jackfield-type red-bodied stoneware from Stratum III.

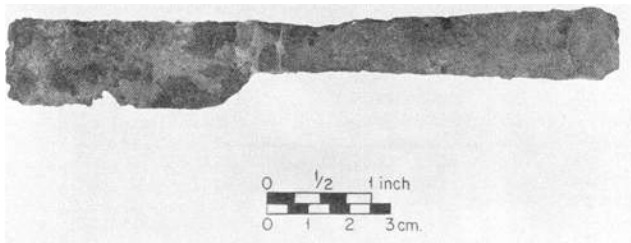


Figure 6. Iron knife from surface collection. Also found on the surface was a clay pipe bowl fragment with a TD cartouche similar to one illustrated by Walker (1977:1747 Figure 158).

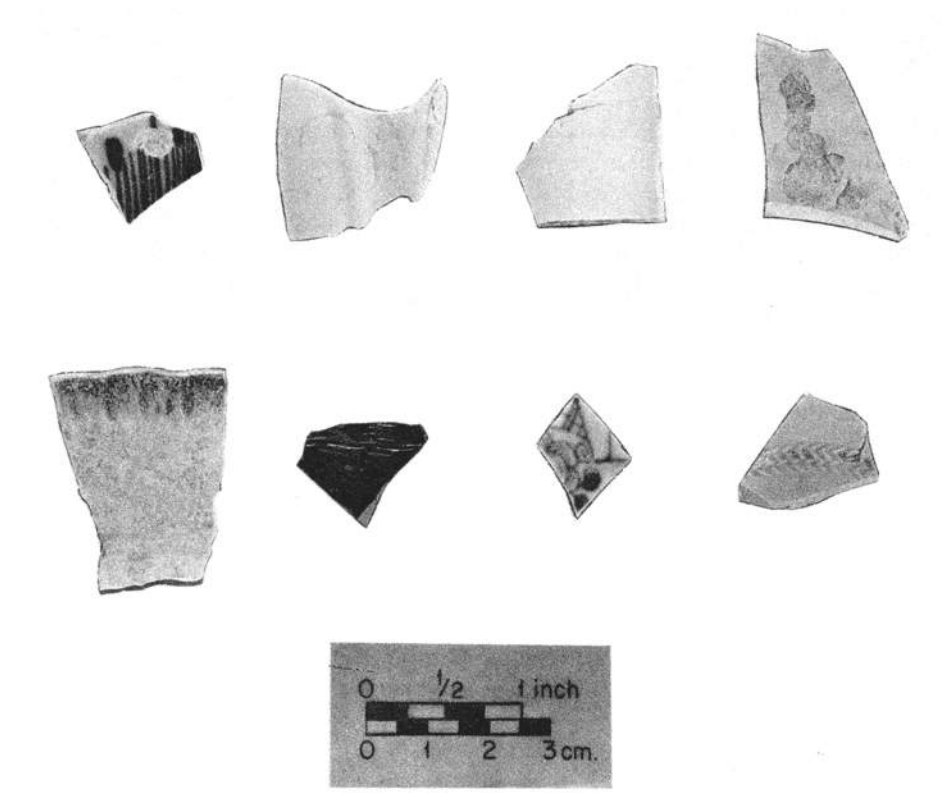


Figure 7. Ceramic sherds from Test Pit No. S, Strata I and III. Top (1-r): blue hand painted pearlware (III), three creamware sherds (III); bottom (1-r): blue shell edged pearlware rim (I), engine-turned lead glazed red earthenware (III), blue decorated Chinese porcelain (III), scratch-blue white saltglazed stoneware (III).

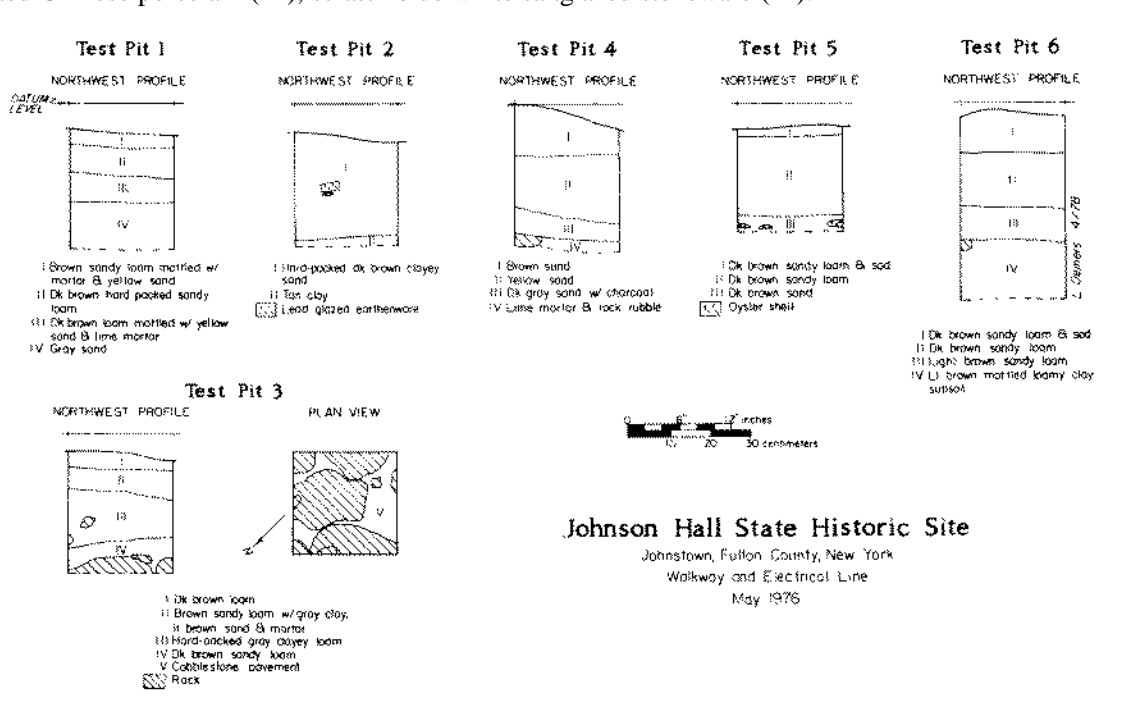


Figure 8. Test unit soil profiles, Johnson Hall, May 1976.

encountered, thus further documenting and expanding knowledge of the nature and extent of this significant feature. The artifact collection from these contexts as well as from other strata or features is an important assemblage useful in comparing Johnson Hall with other sites. Analysis of the ceramic assemblage in particular points to an interpretation of a possible functional preference in the use of certain wares such as porcelain in the Johnson household.

Not only does the testing provide useful interpretive data relative to Johnson Hall and its occupants, it also helps to form part of a broader archaeological index to surviving resources in the area that will be useful both in planning future research at the site and in assessing the potential impact of other proposed site developments in the same vicinity. The assessment of archaeological resources in the project area, scheduled and completed in advance of project implementation, permitted the inclusion of archaeological considerations in the planning and design process. The archaeological data gathered in this simple testing provided guidelines for the installation of the sidewalks and electrical line so they could be completed in a manner that would have the least possible effect on these irreplaceable buried resources.

REFERENCES

- Bridges, Sarah
1975 Request for assistance at the Van Enden-Onderdonk House. Memorandum to Paul Huey, June 5, on file with the Division for Historic Preservation.
- Brown, Marley R., III
1973 "Ceramics from Plymouth 1621-1800: The Documentary Record." *Ceramics in America* edited by Ian M. G. Quimby, Winterthur Conference Report, 1972. University Press of Virginia, Charlottesville.
- Cotter, John L.
1958 *Archeological Excavations at Jamestown*. National Park Service, Washington, D.C.
- Ducey, Paul R.
n. d. *Archeological Investigations at Johnson Hall, Johnstown, New York*. Report on file with the Division for Historic Preservation.
- Feister, Lois M.
1976 *Archeological Testing for Proposed Drainage System at John Jay State Historic Site*. Report on file with the Division for Historic Preservation.
1977 *Archeological Testing at Clermont State Historic Site for the Telephone-Electrical Line and the Two-way Radio Line*. Report on file with the Division for Historic Preservation.
1978 *An Archeological Sample from John Jay Homestead State Historic Site, Located in the Town of Bedford, Westchester County, New York*. Report on file with the Division for Historic Preservation.
n. d. Manuscript in preparation on archaeological excavations at the Soldiers' Barracks, Crown Point State Historic Site, Crown Point, New York. New York State Office of Parks, Recreation and Historic Preservation, Division for Historic Preservation, Bureau of Historic Sites, Waterford, New York.
- Ferguson, Leland G.
1975 "Analysis of Ceramic Materials from Fort Watson: December 1780-April 1781." *The Conference on Historic Site Archaeology Papers, 1973*. University of South Carolina, Columbia.
- Goring, Rich
1973 "Fishkill Supply Depot Complex, Salvage 1971, Survey 1972: Identification and Comparison of Ceramics Recovered *in situ*." *The Archaeological Salvage and Survey of a Portion of the Revolutionary War Supply Depot at Fishkill, New York* by James C. Gifford, Daniel G. Crozier, et. al. Department of Anthropology, Temple University, Philadelphia.
1978 *Archeological Testing at the John Haskell Site, Orange County, New York*. Report on file with the Division for Historic Preservation.
- Grimm, Jacob L.
1970 *Archeological Investigation of Fort Ligonier, 1960-1965*, Annals of the Carnegie Museum, Pittsburgh. Volume 42.
- Huey, Paul R.
1970 *Salvage Archeology at Johnson Hall, 1969*. New York State Historic Trust, Albany. Report on file with the Division for Historic Preservation.
1974 *Archeology at the Schuyler Flatts, 1971-1974*. Published by the Town of Colonie, New York.
- Ismay, Louis F.
1969 *Archeological Excavations, Johnson Hall, Johnstown, New York, Summer 1957 and 1958*. Prepared at the request of the New York State Education Department, Office of State History. Report on file with the Division for Historic Preservation.
- Jones, Olive
1971 "Some Comments on the Newman Dating Key." *Society for Historical Archaeology Newsletter*. Volume 4, Number 3.

- Lenig, Wayne, and Jan Swart
 1977 "Exploratory Archaeological Excavations at Fort Johnson, New York." *Fort Johnson: A Historic Structure Report*. Mendel, Mesick, & Cohen, Albany. (Reprinted 1978 by Technical Preservation Services Division, Office of Archeology and Historic Preservation. Heritage Conservation and Recreation Service. United States Department of the Interior, Washington.)
- Lofstrum, Edward Urling
 1976 *A Seriation of Historic Ceramics in the Midwest, 1780-1870*. Paper presented at the Joint Plains-Midwest Anthropological Conference, October 22, 1976, on file with the Division for Historic Preservation.
- Miller, J. Jefferson, II, and Lyle M. Stone
 1970 *Eighteenth-Century Ceramics From Fort Michilimackinac*. Smithsonian Studies in History and Technology Number 4. Smithsonian Institution Press, Washington.
- Moran, Geoffrey P.
 1976 "Trash Pits and Natural Rights in the Revolutionary Era." *Archaeology*, Volume 29, Number 3, July. New York.
- Moser, Jill
 1976 *Test Trench #5: The Onderdonk Site*. "Historic Archaeology", for B, Salwen, New York University, May 31. Report on file with the Division for Historic Preservation.
- New York State Office of Parks and Recreation
 1972 Distribution of ceramic sherds surface collected from the Van Wie-Gardinier Site, circa 1767, Kinderhook, Columbia County, New York. Spring. Chart on file with the Division for Historic Preservation.
- Priess, Peter
 1973 "Wire Nails in North America." *The Association for Preservation Technology Bulletin*. Volume V, Number 4. Ottawa, Canada.
- Rubenstein, Lewis C.
 1958 *Johnson Hall*. Masters Thesis, University of Delaware.
- Salwen, Bert, and Lorraine E. Williams
 1976 *Final Report: 1974 Archaeological Investigations at the Isaac Van Campen House, Sussex County, New Jersey*. New York University, New York, and New Jersey State Museum, Trenton.
- South, Stanley
 1972 "Evolution and Horizon as Revealed in Ceramic Analysis in Historical Archaeology." *The Conference on Historic Sites Archaeology Papers, 1971*. University of South Carolina, Columbia.
- Waite, John G., and Paul R. Huey
 1971 *Northwest Stonehouse, Johnson Hall: an Historic Structure Report*. New York State Historic Trust, Albany.
- Walker, Iain C.
 1977 *Clay Tobacco Pipes, with Particular Reference to the Bristol Industry*. Published as *History and Archaeology* (11A-11D). National Historic Parks and Sites Branch, Parks Canada, Department of Indian and Northern Affairs.
- Wentworth, Dennis L.
 1976 *Analysis of Artifacts from the McGill House Sewer Line, New Windsor Cantonment State Historic Site, Town of New Windsor, Orange County, New York*. Report on file with the Division for Historic Preservation.

**ARCHAEOLOGICAL TESTING AT
CLERMONT STATE HISTORIC PARK,
TOWN OF CLERMONT, COLUMBIA COUNTY,
FOR A PROPOSED TELEPHONE-ELECTRICAL LINE**

Lois M. Feister
New York State Division for Historic Preservation

Van Epps-Hartley Chapter, NYSAA

INTRODUCTION

Situated on the east bank of the Hudson River south of Albany with a magnificent view of the Catskill Mountains, Clermont State Historic Park has been the location of extensive development for over two and one half centuries. The Livingstons of Clermont were members of a powerful New York landholding family of Scottish origin who married into such influential New York Dutch families as the Van Rensselaers and Schuylers. Four mansions as well as numerous outbuildings have existed on or near the site of the present-day Clermont. The present mansion (Fig. 1) was built during the Revolutionary War upon the ruins of the original structure, built about 1730; a short distance to the south are the ruins of another house, called "Arryl," built in the early 1790's and burned in 1909. The previous Clermont, and a separate mansion called Belvedere, built by Chancellor Robert R. Livingston just before the American Revolution, were both burned by British troops in 1777.



Figure 1. Southward view of the project area with the entrance drive, north yard, and Clermont mansion.

At such a site as Clermont it has become increasingly clear that routine maintenance as well as new development is liable to disturb or destroy important archaeological evidence. When work on a trench for telephone and electrical lines was planned in 1976, therefore, archaeological testing was first conducted to determine whether archaeological resources would be destroyed, since the proposed trench was to run along a section of the old entrance drive. The project required laying of the conduit lines in a single trench cut to a depth of 3 ft. designed to extend from the northwest corner of Clermont north along the gravel entrance road for approximately 250 ft., then to turn eastward 48 ft. 6 in. to a telephone pole. Thirteen test pits were set along this route (Fig. 2). These test units provided new information on landscaping history, road building techniques, and artifact distributions. At the same time, the testing allowed realignment of the proposed trench to avoid one area that was identified as of potential archaeological significance.

LANDSCAPING INFORMATION

A promising but neglected aspect of historical archeology is the information that it may provide about the physical appearance of a site at previous time periods. Clermont was noted for its gardens and landscape in both the 18th and 19th centuries. The best known resident of the house, Chancellor Robert R. Livingston, not only was a member of the committee to draft the Declaration of Independence, a Minister to France responsible for the Louisiana Purchase, and a partner with Robert Fulton, but also was interested in experimental farming. He and his descendants devoted a great deal of attention to landscaping their home, as described by Andrew Jackson Downing in 1859:

On the Hudson, the show place of the last age was the still interesting *Clermont*, then residence of Chancellor Livingston. Its level or gently undulating lawn, four or five miles in length; the rich native woods, and the long vistas of planted avenues, added to its fine water view, rendered this a noble place (Downing 1967:27-28).

An important result of the testing for the telephone and electrical lines was information about the locations of previous thoroughfares, as indicated by types of former ground surfaces in 6 of the 13 test pits. It is quite clear that the area of this test survey at Clermont had traditionally been the location of roadways or other thoroughfares. A description of the north side of Arryl House, for example, published in 1813 reveals that "The north front faces a fine lawn, skirted on one side by a beautiful wood on a bank raised about 10 feet, terminating in a second lawn. . . . This is balanced on the opposite side of the lawn by a beautiful avenue of locust trees, planted irregularly, through which winds the road to the House" (Spafford 1813:164). Six of the 13 test pits revealed evidence of such thoroughfares that date from the 18th through the 20th centuries. Table I summarizes the data.

Test Pit #12, placed approximately at the center of a slight rise about 30 ft. southeast of the present-day road, revealed the most substantially paved roadway. The large flat rocks in the road bed were first revealed at about 5 in. from present ground surface. The largest rock filled almost the entire pit and, when removed, proved to be 4 in. thick. A layer of smooth medium brown sand was found below until, at approximately 11 in. below present ground surface, a second layer of stones was encountered. These were smaller and more randomly aligned than those in Stratum III above and probably represent a fill layer rather than a new road surface. This stone fill layer was very thick, continuing to a depth of at least 24 in. below ground surface level. Since further digging was impossible due to the extension of stones into the side walls of the small pit, testing was continued with an auger, which showed that the pavement continued for 9 or 10 ft. to the west toward test pit #11, but was not present 6 ft. to the east of the pavement. Testing by angering to the south indicated the pavement can be found in a line leading toward the carriage barn, continuing for at least 90 ft. southward. It is probable, then, that the buried paved road leaves the present day road alignment on a curving diagonal toward the carriage barn located southeast of the Clermont Mansion. Since the carriage barn was built in various stages in the last half of the 19th century, this road most likely dates from this same period. Because the conduit would be cutting across the buried road and damage only a small section, a new route was not sought. Future plans, however, will provide protection for this important buried part of the Clermont landscape.

The other thoroughfares, mostly of crushed stone and gravel, date from the 18th, 19th, and 20th centuries and are part of an entire network of carriage roads that existed throughout the Clermont property. Other historic mansions, especially such 19th century homes as Olana, residence of the Hudson River Valley painter Frederic Church, also were similarly landscaped with winding scenic carriage drives.

It was another Scotsman, John Loudon McAdam, who profoundly influenced 19th century road building techniques in England and America with a system of using slate, hard cobbles, or other stone crushed into

Table 1. Thoroughfares north of the Clermont mansion.

Type	Material	Possible Date	Location
Roadway	Orange sand and gravel	18th century	#7
Fill or roadway	Small randomly aligned flat stones	Early 19th century	#2
Shoulder or roadway	Pea gravel and hardpacked loam	19th century, after 1800	#3, 7, 11
Road to Carriage House	Large flat stones	Last half 19th century	#12
Roadway	Flat stones	Late 19th, 20th century	#6, #7, and still visible further north
Unknown	Pocket of crushed stone	19th century	#3
Driveway	Crushed stone	Late 19th, early 20th century	#2
Roadway or yard surface	Crushed stone	19th or 20th century	#2
Walkway or yard surface	Scattered crushed limestone	20th century	#3, 6, 7
Existing driveway	Crushed stone and gravel	20th century	

granules of uniform size. These were laid down in layers with neither a foundation nor use of sand or gravel as binding material. Since McAdam did not approve of smoothing the surface with heavy rollers, his methods bore little resemblance to modern "macadamizing" techniques associated with his name today. McAdam lived in New York for a time during the late 18th century. By 1822 his system of road construction was widely applied (Stephen and Lee 1937-1938:XII, 395-396; Anon. 1971:1685). Such families as the Livingstons evidently were influenced by these popular techniques for their carriage roads.

A noteworthy characteristic of all the artifacts excavated from these thirteen test pits was their small size. Artifacts deposited around a historic site in areas subjected to vehicular and foot traffic are usually crushed and broken into small bits, another indication of the intense activity over many years in this area of Clermont State Historic Park. Another noteworthy pattern is the increasing number of different types of road surfaces farther from the house, with only one or two present in the immediate environs of the mansion itself. Except for one that dates from the 18th century, these thoroughfares represent a more complex system dating from the 19th century, typical of the attention devoted in that period to construction of complex, scenic drives on the property of a wealthy landowner.

HISTORIC FILL DEPOSITS

In addition to landscape features, the testing was conducted to determine whether historic soil or fill deposits existed in this area of the mansion grounds. More than half of the test pits excavated revealed undisturbed early historic deposits, thus indicating the need for care when planning any further development in this area at Clermont. The most extensive and significant archeological deposit was discovered around Test Pit #8 (Fig. 3), where strata possibly relating to an outbuilding or other feature were found.

This test pit was in the lawn away from the slight depression adjacent to the road. No artifacts were found in the first three layers; however, Stratum IV, mottled tan sand, contained many artifacts, the majority of which represented food and drink activities: some mammal bone remains; two plain delft sherds; two lead glazed buff earthenware sherds, one with part of a dark brown dot under the clear lead glaze; a sherd from a vessel with pierced open basketwork design, but burned (in 1777?) so that further identification is not possible; six undecorated sherds of creamware; one tiny piece of white saltglazed stoneware; and three porcelain fragments, two hand-decorated in blue and white. Artifacts relating to building activities in Stratum IV included four hand wrought nails, twelve red brick fragments, lime mortar, and one piece of plaster. A small hand forged iron buckle was also discovered and was probably part of a harness, perhaps from a bridle. A final artifact in Stratum IV was a 1 in. long brass straight pin with a wire-wound head.

Below the 10 in. thick layer of mottled tan sand, Stratum V was a dark brown sandy loam of about the same thickness. The artifact sample again dated from the 18th century and included two beef bone fragments, a single piece of dark green bottle glass, and two red brick fragments. Part of the base of a hand blown wine glass with a plain foot was also recovered along with a plain clay pipe stem fragment with a 4/64 inch bore diameter. A projectile point near the top of Stratum V was of dark flint with a short stem and finished base and is 1 3/4 in. long. It is probably a Bare Island type of the Late Archaic period, before hunters and gatherers settled into agricultural villages, and dates to circa 1300 B.C. (Ritchie 1969:31, 149). Perhaps deposited at Clermont at an early time, it was later disturbed and mixed with historic artifacts.

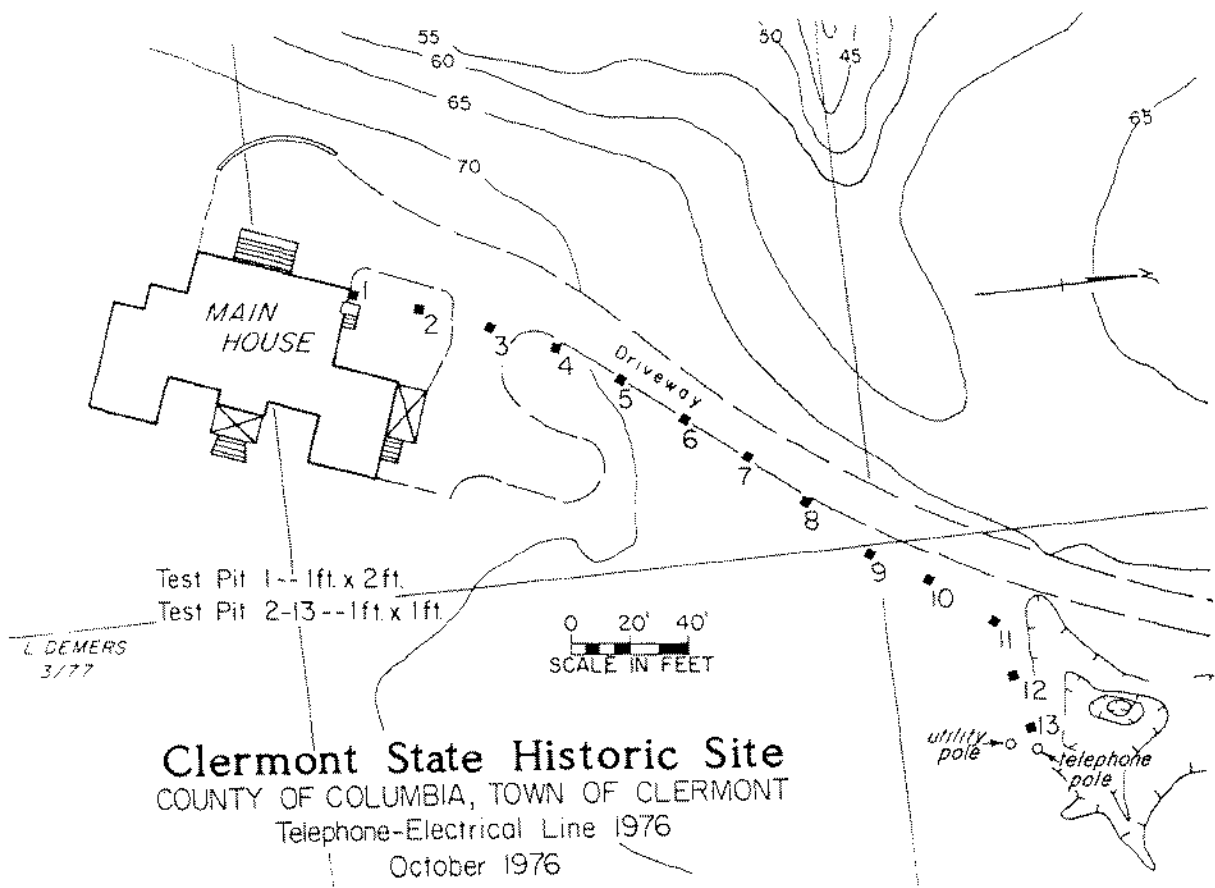
Stratum VI mounded up toward the south and consisted of a mottled yellow-brown clay with some wood ash mixture. There were 12 pieces of burned limestone in this layer together with an oyster shell and a 5 in. long beef bone. When this layer was removed, a layer of sharp rocks was found buried in a lighter brown silty loam. The rocks were laid horizontally and the layer thinned out to the east. In addition to these rocks, 2 pieces of Dutch yellow brick were also found. One measured 1 1/8 in. thick and the other was 1 5/8 in. thick. While all original lengths and widths could not be determined, the first was 3 1/8 in. wide. Yellow bricks are "generally confined to seventeenth-century sites" (Noel Hume 1970:83). Known as Dutch or Flemish brick, they were usually small, hard, rectangular forms fired in Europe from European clays. Numerous yellow bricks have been found at 17th and early 18th century sites in Albany and New York City, in Jamestown, Virginia, and elsewhere and appear to have been most often used for chimneys, walkways, and courtyards. Yellow bricks have been found also in a separate excavation at Clermont in another area. It is possible that these bricks, plus other artifacts dating from the 17th or early 18th century, do indicate the presence of a house from before 1730 on or near the site of Clermont. Such a site could date from as early as the original Livingston land patent in the 1680's, but the yellow bricks could also have been later salvaged from a 17th century site elsewhere and brought to Clermont either for sentimental reasons or for reuse.

Subsoil, a yellow-orange sand, was encountered in the southeast corner of the pit but, due to the depths involved, was not uncovered to the north and west. In this test pit was revealed the edge of a large depression or filled feature extending north and west.

From the evidence collected during the excavation, it was surmised that Test Pit #8 had revealed an undisturbed series of soil deposits from 18th century occupations at Clermont and perhaps even an early building deposit. Soil angering was therefore undertaken with a 1 in. bit around the immediate area of the test pit in order to determine some of the limits of the deposits or feature (Fig. 2). When the limit was determined to the east, the route of the conduit lines was changed in that direction in order to avoid completely this area of potentially significant remains, affording protection of the resource for future study.

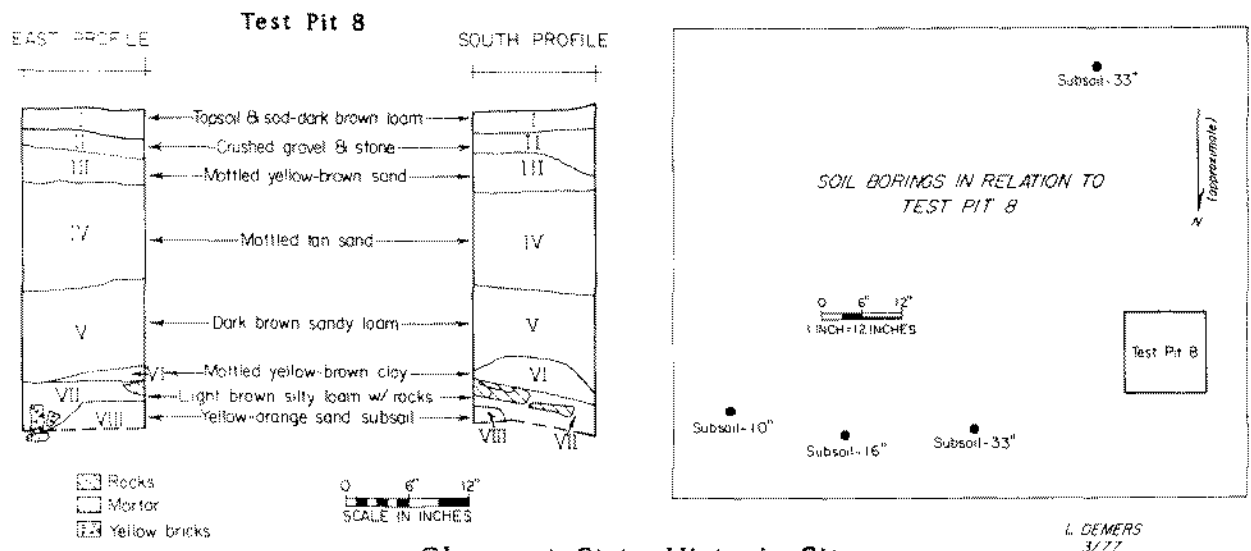
In comparison with those in Test Pit #8, historic soil deposits revealed in other test pits were neither as extensive nor apparently as early in date. There were, however, other areas of probable 18th century deposition, as revealed by artifact concentrations.

All of the early artifact concentrations were found between Test Pit #8 and the house, as though the area of Test Unit #8 was a dividing point in the site. The 18th century artifacts are most concentrated nearer the house and are least common or non-existent in areas showing the greatest road building activity and change. More



Clermont State Historic Site
COUNTY OF COLUMBIA, TOWN OF CLERMONT
Telephone-Electrical Line 1976
October 1976

Figure 2. Plan of test unit excavations at Clermont State Historic Park, 1976.



Clermont State Historic Site
COUNTY OF COLUMBIA, TOWN OF CLERMONT
Telephone-Electrical Line 1976
October 1976

Figure 3. Soil profiles of Test Pit #8 and location of soil borings.

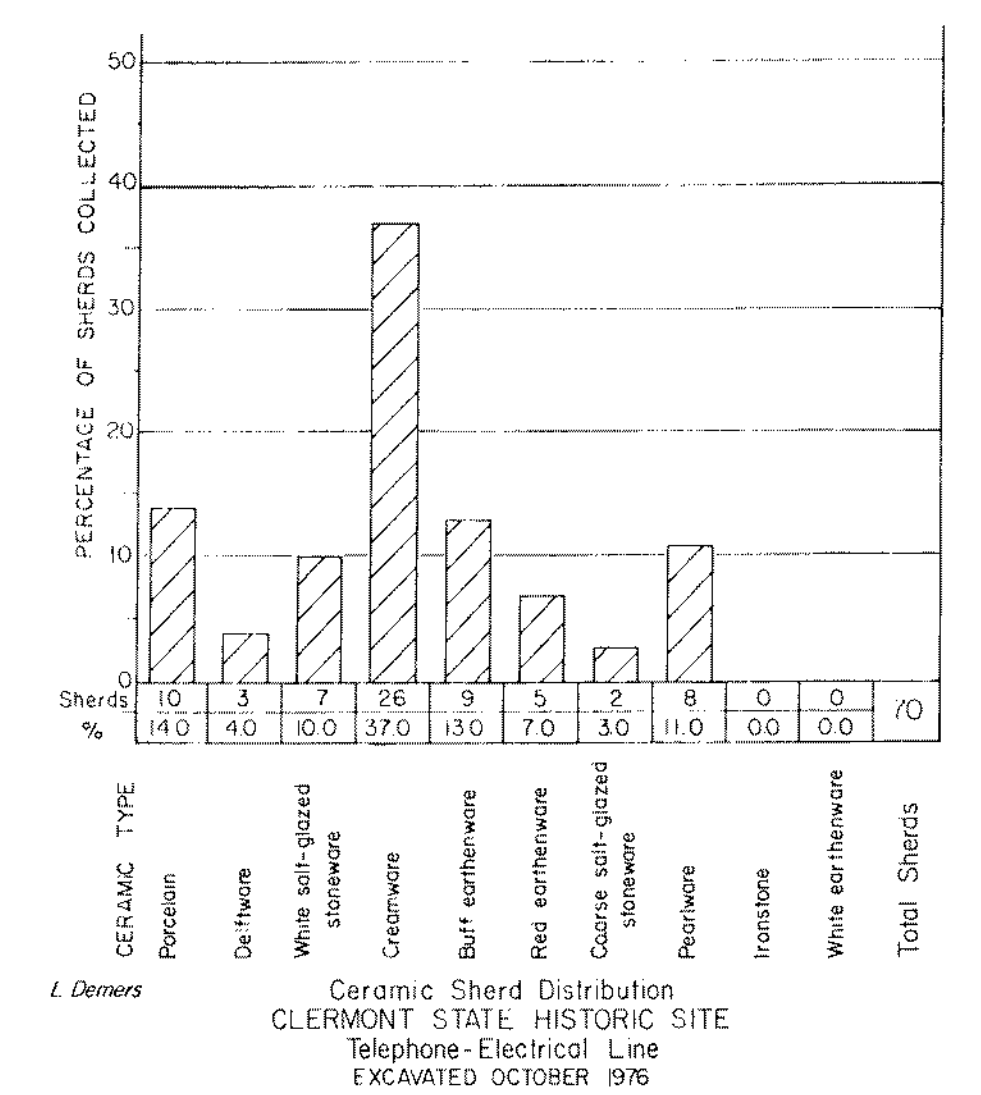


Figure 4. Distribution of ceramic sherds from all test units, Clermont, October 1976.

careful testing should be conducted between Test Pit #8 and the house when the overall site survey is planned and executed at Clermont.

Of the 8 ceramic types found, the most frequent was creamware (38% of the total ceramic sample), with porcelain the next most common (14%) (Fig. 4). A similar distribution pattern of ceramics has been discovered elsewhere at Clermont in other examinations around the east porch footings (Goring 1977; Goring 1981:17) and at Arryl House (Wentworth 1977). The lack of middle to late 19th century ceramics is at first puzzling considering the heavy use of the house and property at that time. Perhaps, however, it indicates a change in deposition patterns around the middle of the 19th century that has persisted to this day: the hauling away of trash to another separate, designated disposal area.

ACKNOWLEDGEMENTS

This project would not have been possible without the aid of the following individuals: members of the archaeology staff of the Bureau of Historic Sites who did the initial field work; Paul R. Huey and Dennis Wentworth who did extensive editing of the final report; Linda Demers who did the drawings; Kathie Benac who

did the typing of the final manuscript; and Cheryl Gold and other regional personnel who demonstrated their interest in the preservation of archaeological resources by arranging for realignment of the conduit lines.

REFERENCES

Anonymous

1971 *The Compact Edition of the Oxford English Dictionary*. Volume I (A-O). Oxford University Press, New York.

Downing, Andrew Jackson

1967 *A Treatise on the Theory and Practice of Landscape Gardening*. Reprint of the sixth edition, 1859. Funk & Wagnalls, -New York.

Goring, Rich

1977 *Archeological Testing at the East Porch of Clermont Mansion, Clermont State Historic Site*. On file, Division for Historic Preservation.

1981 "European Ceramics in 17th and 18th Century New York." *The Bulletin and Journal of Archaeology for New York State*. Double Issue, Nos. 80 and 81. Fall 1980-Spring 1981.

Noel Hume, Ivor

1970 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.

Ritchie, William A.

1969 *The Archaeology of New York State*. The Natural History Press, Garden City.

Spafford, Horatiu Gates

1813 *Gazetteer of the State of New York*. Printed and published by H. C. Southwick, Albany.

Stephen, Leslie, and Sidney Lee, ed.

1938 *Dictionary of National Biography*. Oxford University Press, London.

Wentworth, Dennis L.

1979 "Archaeological Test Excavations at Arryl House, Clermont, New York." *Journal of Field Archaeology*. Volume 6, Number 1. The Association for Field Archaeology, Boston University, Boston.

**ARCHAEOLOGICAL TEST EXCAVATIONS AT
THE CANAL STORE, SCHOHARIE CROSSING STATE
HISTORIC SITE, LOCATED IN THE TOWN OF
FLORIDA, MONTGOMERY COUNTY, NEW YORK**

*Sandra J. Hutchinson
Dennis L. Wentworth*

New York State Division for Historic Preservation

INTRODUCTION

On April 22, 1976, archaeological testing began at Yankee Hill Canal Store, Schoharie Crossing State Historic Site, near Fort Hunter, New York. Test excavations were conducted by staff archaeologists from the New York State Division for Historic Preservation to record the stratigraphy around the Canal Store foundation and its relationship to the foundation wall. This information provided a permanent record of data that would otherwise have been lost through a restoration project to rebuild the south foundation wall of the structure and to install a drainage trench along the base of the south and west walls.

Another objective in conducting test excavations was to provide data that could be used in interpretation of the structure as a canal store as part of Schoharie Crossing State Historic Site. Historical research has failed to indicate when the structure was built or first used as a canal store, and archaeologically derived data could add pertinent information to research already done on its history. Historical and architectural research relating to the site suggests that the Canal Store structure was moved to or erected on its present location after the construction of Yankee Hill Lock #28 and section #49 of the Enlarged Erie Canal in the 1840's. Although the Canal Store excavations were not done in an area immediately adjacent to Lock #28 or the canal and the limited data obtained can not yet be used to test the hypothesis that the structure is a later intrusion into original fill associated with construction of the Enlarged Canal, the excavations revealed a stratigraphic sequence in relation to actual wall construction. Because the Canal Store rests on the north bank and close to the canal, it would seem likely that it also rests in fill that was deposited during construction of the canal. The excavations have revealed previously unrecorded data on stratigraphy and artifacts that lend themselves to comparison with other 19th century canal sites and provide the first archaeological basis for interpretation of the site as an operative canal store.

HISTORICAL SETTING

The confluence of the Schoharie Creek with the Mohawk River at Fort Hunter has been, since colonial times, a strategic area in the settlement of the Mohawk Valley and in the development of the New York State Canal System. The growth and impact of the Erie Canal is illustrated at Fort Hunter by existing examples of both the Original Erie Canal (Clinton's Ditch) and the 1841 Enlarged Erie Canal. Structures related to the Enlarged Canal that have been acquired as part of Schoharie Crossing State Historic Site include a portion of the Schoharie Creek Aqueduct, Lock #30 at Fort Hunter, Lock #29 (The Empire Lock) about one mile east of the village, and Lock #28 (Yankee Hill Lock) three miles east of Fort Hunter with the associated canal grocery store (Fig. 1).

Construction of the 8 ft. lift double lock at Yankee Hill commenced in 1839, but inadequate financing caused suspension of canal construction and the lock remained incomplete until a contract was awarded to finish its gates and docking in 1847 (Whitford 1905:181). When Yankee Hill Lock became operative is not known, but the 1852 annual report of the canal commissioners lists it as enlarged and completed (Amsterdam Democrat 1852:15).

The Canal Store at Yankee Hill Lock was one of hundreds that provided groceries and provisions to passing boats. A canal traveler of the 1870's wrote:

A sparse collection of shabby buildings is (also) near the lock, foremost being the canal grocery, a squat, shingled structure with a portico in front. Here is gathered a pack of ill favored fellows, vagabonds and idlers, who, in tilted chairs, seem to pass their worthless lives in extracting poor sustenance from slips of wood or goose-quills. The interior is gloomy, and has a very insalubrious atmosphere; but there is no article in the range of an ordinary boatman's necessities that can not be obtained at this mart. Dry-goods, fresh meat, poultry, groceries, liquors, and literature are combined attractions to purchasers (Harper's New Monthly Magazine 1873:15).

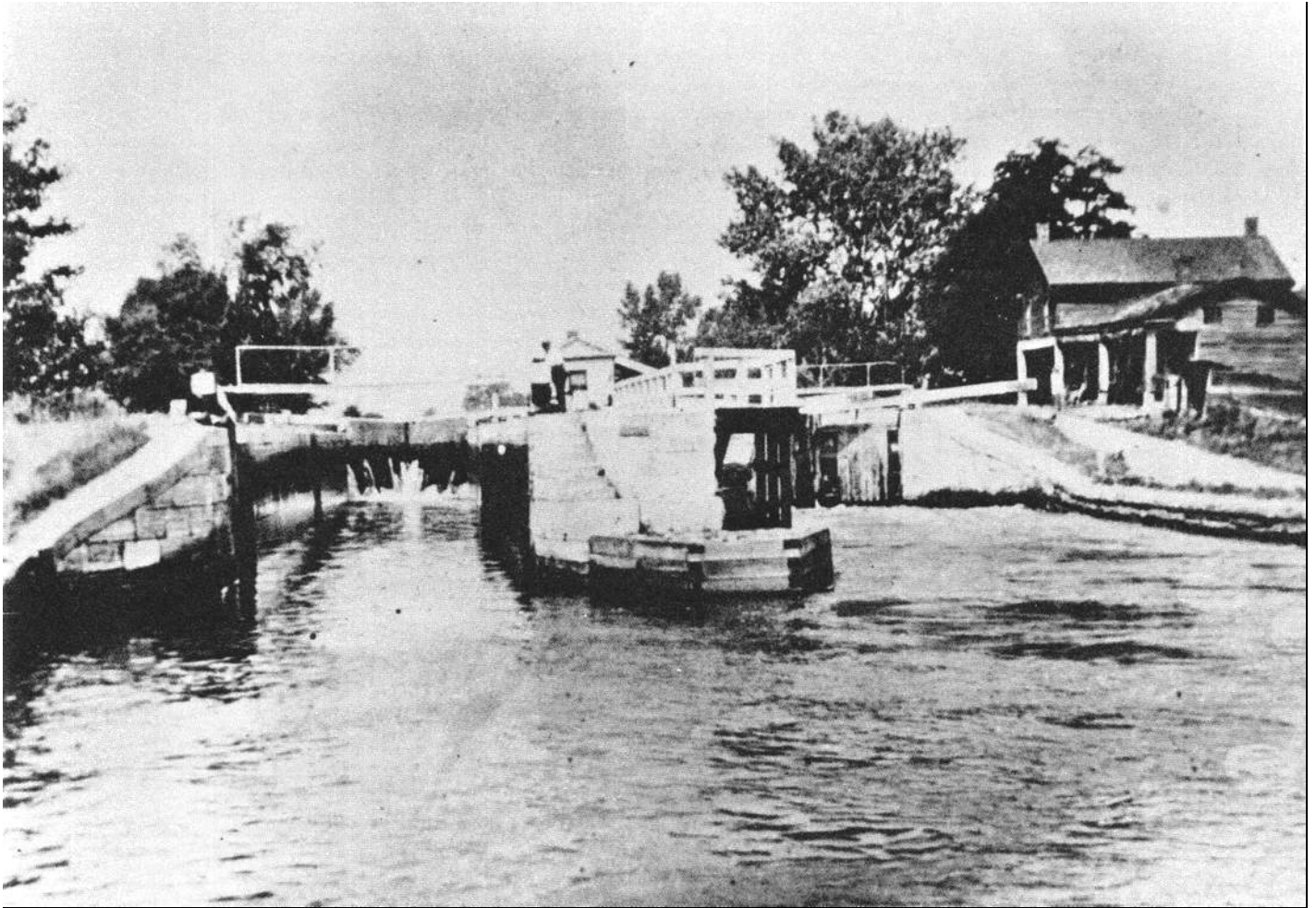


Figure 1. Photograph of Yankee Hill Lock #28 and Canal Grocery Store, 1898.

A newspaper advertisement of 1873 for John Hughes' Grocery and Provision Store at the Empire Lock #29 in Fort Hunter listed cheap coal, butter, eggs, cheese, flour, bread, meat, and hay and oats sold "at prices that defy competition" (*Amsterdam Democrat*, Oct. 3, 1873). Other merchandise may have included imported rum, whiskey and wine, bitters, sugar, raisins, figs, tea, coffee, molasses, tobacco, pipes, nuts, and fish (*Bottoming Out*, I, 3-4:12).

From 1825 there was a steady increase in the number of boats operated on the canal and in the amount of tonnage carried. The canal provided easy access to markets that had not been exploited because of the prohibitive costs of shipping freight overland. Freight costs were slashed and by 1872 the canal carried its peak of 6,000,000 tons (Ellis, et al. 1967:244). During this period there were more stores on the canal than there were miles of canal. In one fourteen mile section near Amsterdam there were forty stores (*Bottoming Out*, III, 3-4:9). Canal grocers in the Fort Hunter vicinity were assured prosperity:

The grocers of this place are doing a large business, as freight rates are high. This of course makes money easier (Amsterdam Democrat, Nov. 8, 1872). Next Tuesday John Hughes goes into the grocery stand vacated by S. DeForest. John has taken off his coat and rolled up his sleeves in a business-like manner, and we mistake it very much if his books at the end of the year do not foot up a good account on the right side. (Amsterdam Democrat, Nov. 28, 1873).

With the development of railroad and other types of overland transportation in the latter years of the century, the number of boats on the canal decreased. By 1897 the 5000 boats that had traveled the canal in the 1870's had

declined in number to about 1200. Boats had begun running in groups of four or more, with an extra boat that carried supplies and provided housing and meals for the crews. Boats were stocked with provisions for the entire trip at terminal points, purchases made at canal groceries by boatmen were small, and the merchants depended largely on the patronage of local farmers (*Bottoming Out*, III, 3-4:9).

In 1905 the rebuilding of the canal was authorized to reroute the canal into the Mohawk River. The canalization of the river was completed in the Fort Hunter area in 1916, providing a deeper channel and wider locks, thus permitting large boats to travel the canal. With completion of the New York State Barge Canal in the Mohawk River, the Erie Canal was abandoned.

The date of construction of the Canal Store at Yankee Hill is not known to have been recorded. The 1870's *Harper's* account may represent the first published mention of the structure. The earliest known published map (Fig. 2) showing the structure dates from 1905, when W. Staley is indicated as the owner or inhabitant (Century Map Company 1905:35). An 1853 map of Montgomery County shows Lock #28, but no structure is indicated adjacent to it. The earliest known deed for the present Canal Store property to mention the structure is dated April 20, 1911. This land in question was a parcel "excepting and reserving thereout and therefrom that portion of said premises known as the 'Canal Grocery Property' lying northerly of the Erie Canal and including all the land northerly of said Erie Canal" (Town of Florida n.d.).

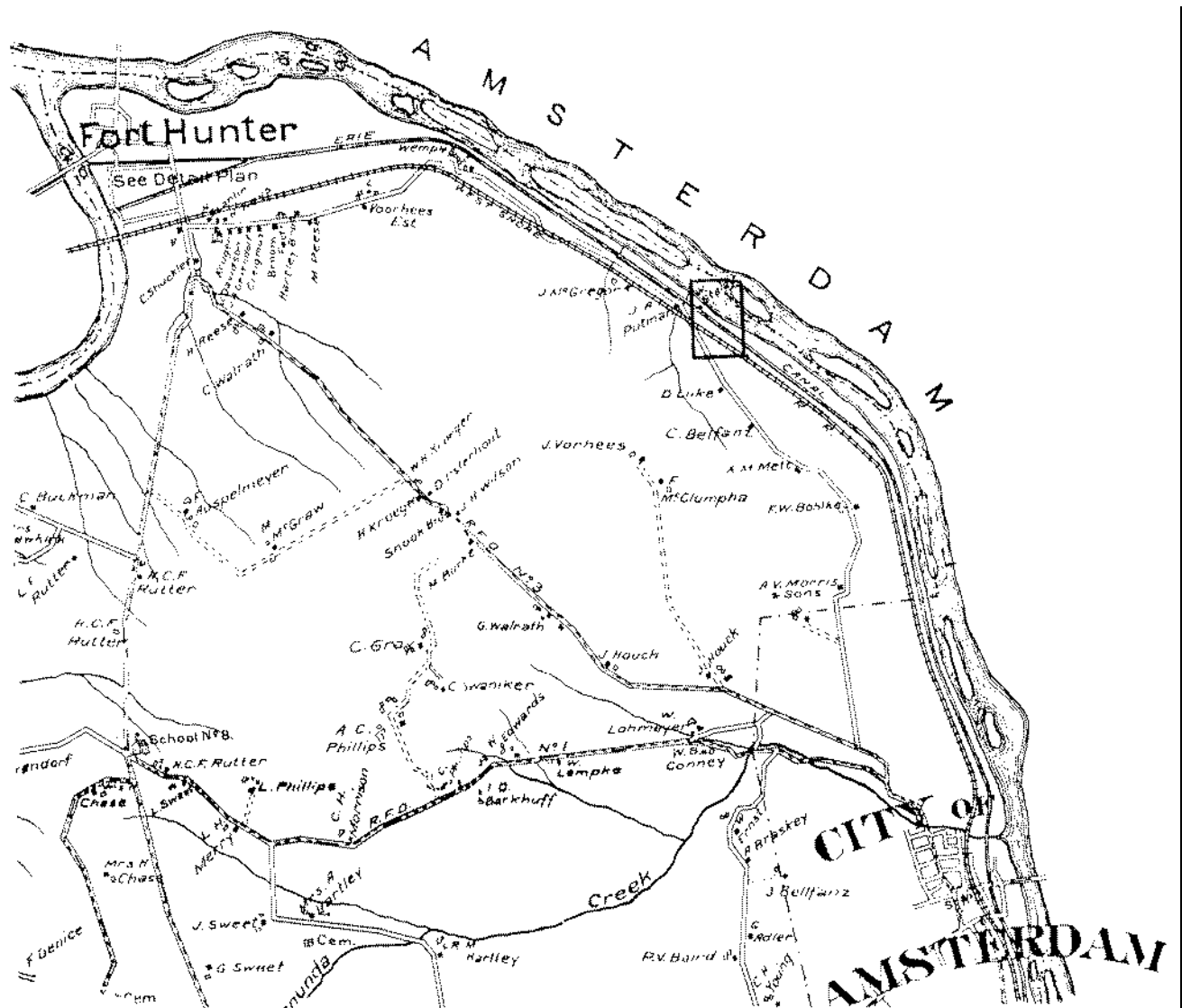


Figure 2. Detail from the map in the atlas of Montgomery and Fulton Counties published in 1905 (Century Map Company 1905:35). The Canal Store, located within the small rectangle, is indicated with "W. Staley" as owner or occupant.

The Canal Store is comprised of two distinct structural sections, the eastern section being of a later architectural style than that on the west. Because the entire structure is set on a continuously laid stone foundation, it appears that the foundation was intended for the structure with both sections intact. If the eastern section was an addition to the original structure, the original structure must have been moved to its present location, either with the addition intact, or with intent to construct the addition (Tuttle 1977).

This information has bearing on the archaeological investigation because the earliest period of associated occupancy as established by the test excavations should indicate when the structure was first occupied on its present site.

ARCHAEOLOGICAL EXPLORATION

Procedures and Findings

Five test trenches were excavated immediately adjacent and at right angles to the south and west foundation walls of the Canal Store. Excavation continued through strata that would be disturbed and removed by the foundation repair operations and ceased at the bottom of the planned repair trench. Three additional test pits were excavated to the north, or rear, of the Canal Store for stratigraphic comparison (see Fig. 3). Stratigraphic similarities existed among the test trenches according to their proximity to the Canal Store. For this reason, the test excavations will be considered in three groups: trenches B, C, and E, adjacent to the south foundation wall, trenches A and D, adjacent to the west foundation wall, and test pits F, G, and H, located to the north of the Canal Store.

Test Trenches B, C, E

Both test trenches B and C measured 2 ft. by 3 ft., while trench E measured 3 ft. 6 in. by 3 ft. 8 in., all with the longer sides at right angles to the foundation walls. The surfaces of all three trenches were covered with concrete rubble from a broken, modern concrete pavement. Artifacts from the disturbed surface layer were found

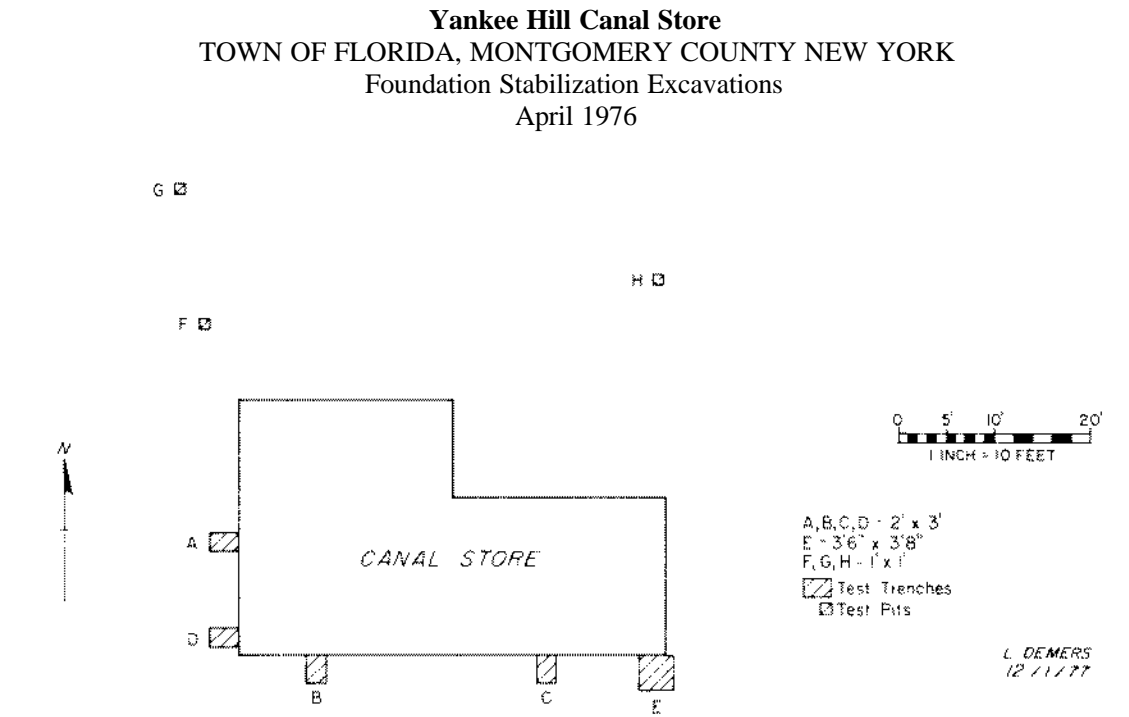


Figure 3. Plan of the Canal Store site with locations of test units, April 1976.

only on trenches C and E, and they included 19th and 20th century ceramic sherds, iron hardware, window glass, and two clay pipe stem fragments (one plain and the other with an impressed design and initials M.H., bores 5/64 and 6/64 inch).

In trenches C and E, limestone paving stone was uncovered directly underneath the concrete rubble. A cut limestone slab measuring approximately 3 ft. by 4 ft. by 5 in. was found in trench C while the slab removed from trench E measured approximately 3 ft. 6 in. by 3 ft. 3 in. by 6 in. The paving stone was set in loosely packed brown sand with limestone gravel in trench C, and in a brown sandy loam in trench E. The majority of artifacts found in these layers were related to building activity.

Directly below the concrete overburden in trench B, a layer of dark brown sand was present in the southern half of the trench, and below this was a culturally sterile layer of orange sand and gravel that was also present only in the southern half of the trench. (The concrete overburden had cut through the two upper strata in the north half of the trench.)

A brown sandy layer containing gravel underlay the sand and gravel and sandy loam of trenches B, C, and E. The majority of artifacts recovered in this layer were related to building activity; however, the consumption of food and beverage class of artifacts was well represented also.

Below the brown sand with gravel layer was a stratum consisting of well-mixed brown sand and gray clay in all three trenches that extended completely across each of the three trenches. In test trench E this stratum contained fist-sized cobbles and angular rocks.

Within this sand and clay the stratigraphy among the three trenches became less uniform with the appearance of a steep slope in trench E. Stratum VI, a deposit of brown sand below the brown sand and clay stratum in trench E, sloped towards the east at about a 40° incline, thus presenting an unusual profile on the south wall (see Fig. 5). In the northeast corner a dark brown sandy area with rubble was encountered which may have been a repair trench originally dug to reinforce the east foundation wall with concrete. The bottom of the repair trench was not reached in the test excavations, but iron building hardware, window glass, coal, cement and a miniature ironstone pitcher were found within the feature. The final excavation depth of trench E was 36 in. below the top of the surface of the paving stone.

The remaining strata that were removed from trenches B and C consisted of orange sand with different degrees of brown sand mottling. Several rounded cobbles were found within the orange sand in trench B, as well as two possible post holes, one located at 11 in. to 16 in. below ground level, the other at a depth of 20 in. to 22 in. Trench B was excavated to a depth of 33 in. below the ground surface underneath the surface rubble and trench C to 26 in./30 in. below the paving stone surface (See Figs. 4 and 5 for profile drawings.)

Trenches A and D

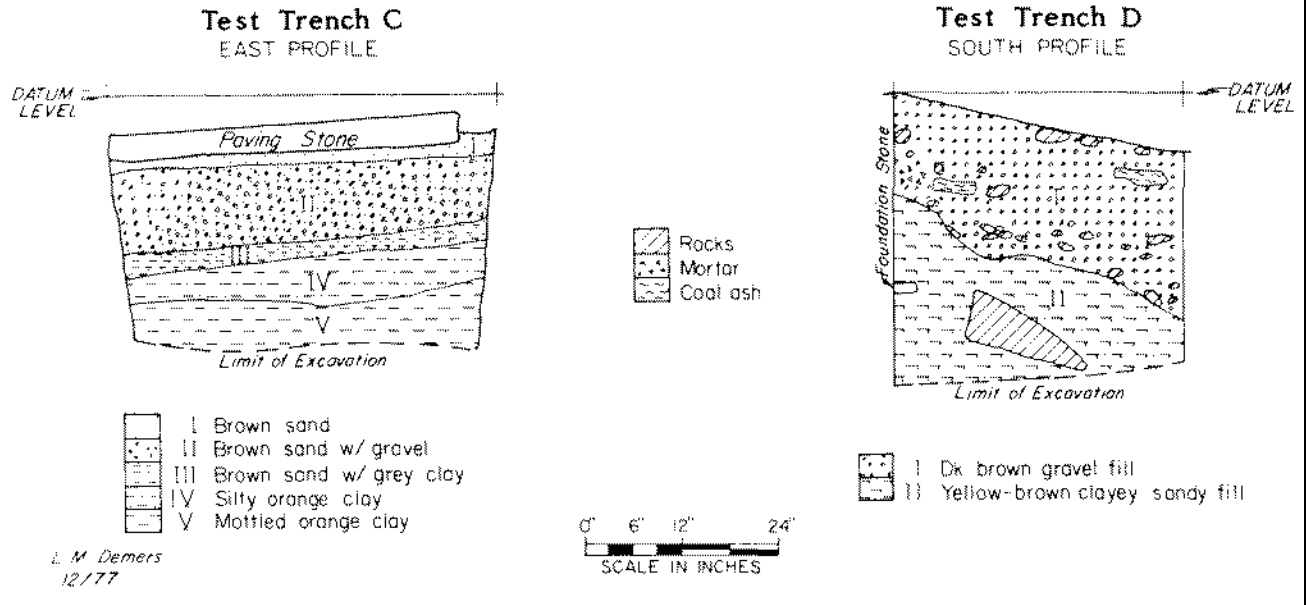
Test trenches A and D were located directly adjacent to the west foundation wall of the Canal Store. Each trench measured 2 ft. by 3 ft., with the longer sides at right angles to the foundation wall. Both trenches were excavated to a depth of approximately 36 in., measured from ground surface along the foundation wall.

The two primary stratigraphic components excavated along the west wall of the Canal Store can be clearly seen in the profile drawing of test trench D (Fig. 4). The strata sloped toward the west following the ground surface contour. Stratum I was a gravelly fill layer containing a large sample of 19th and 20th century artifacts, the majority of which represented building activity.

Stratum I was not uniform in trench D as it contained coal ash pockets, concentrations of mortar and stones, and textural variations. At a depth of 7 1/2 in. below ground surface and at 14 in. west of the foundation wall, a drip line appeared across the trench, parallel to the wall. The soil to the west of this line was more compact and stony than that to the east and closer to the foundation. Textural differences delineated by this line continued throughout stratum I. Because the fill had been laid on a slope, textural differences can be attributed to shifting and slumping of the fill down the slope towards the west.

In trench A a layer of mottled yellow and brown sand was uncovered beneath stratum I that did not extend across the trench. The surface of this layer sloped down toward the west as stratum I did, but its base was relatively level and did not follow the ground surface contour. Artifacts found in this layer were similar to those found in the stratum below but provided a larger sample of building-related debris.

A layer of yellow-brown clayey fill was uncovered in trench D below the upper fill layer. The surface of the second fill layer, stratum II, sloped away from the foundation wall at an incline of about 45°. The stratum contained river cobbles and cut foundation stone, lying haphazardly and overlapping in no pattern. At 24 in. below ground surface level in trench D a laid foundation stone appeared that protruded from the wall into stratum II. Excavation in trench D ceased within stratum II.



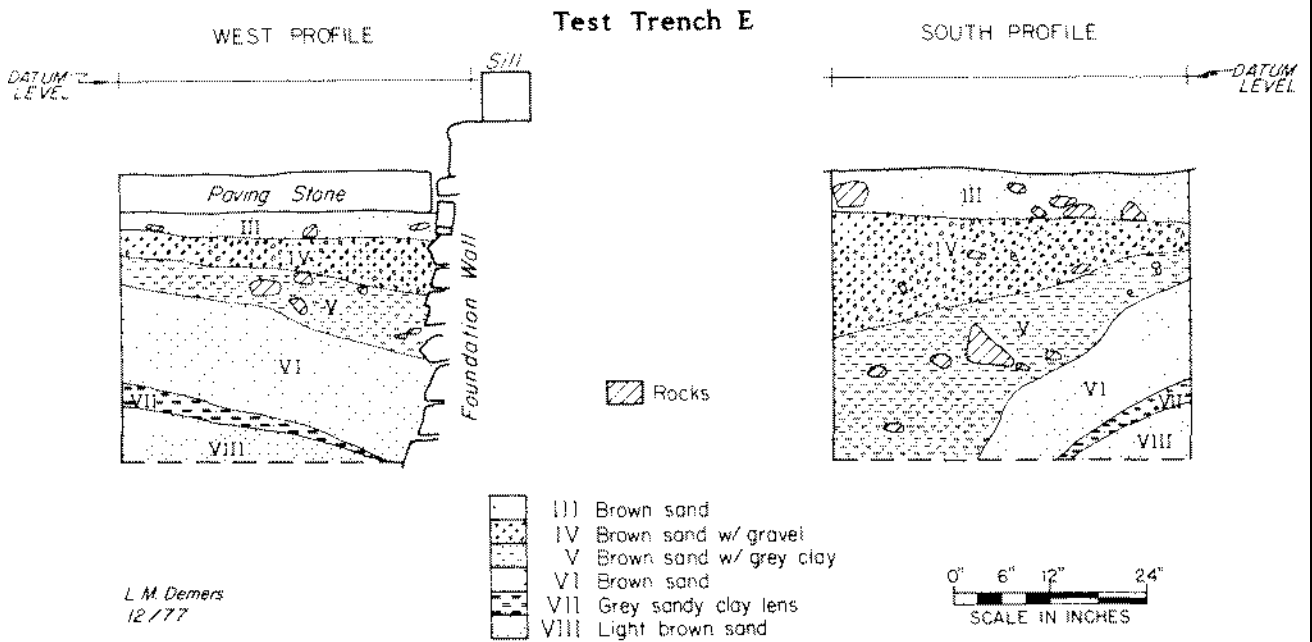
Yankee Hill Canal Store

TOWN OF FLORIDA, MONTGOMERY COUNTY, NEW YORK

Foundation Stabilization Excavations

April 1976

Figure 4. Soil profiles of test trenches C and D.



Yankee Hill Canal Store

TOWN OF FLORIDA, MONTGOMERY COUNTY, NEW YORK

Foundation Stabilization Excavations

April 1976

Figure 5. Soil profiles of test trench E.

In trench A excavation continued into a sterile layer of moist gray sand containing gravel and ceased at the level of the cellar floor.

Test Pits F, G, H

Three 1 ft. square test pits were excavated to the rear, or north, of the Canal Store for stratigraphic comparison. Identical strata were encountered in each pit. A dark brown clayey loam topsoil extended to a depth of 12 to 14 in. below ground surface level. The topsoil was underlain by a tan silty clay. A final depth was reached in pit F of 16 in., in pit G, 21 in., and in pit H, 24 in. Subsoil was not encountered in any of the pits, and the artifacts from all three were consistently 19th century in date.

CONCLUSIONS

Archaeological data from contexts along a foundation wall provide unique information for assessing the kind and period of construction of a structure. Besides locating such features as builders' trenches, stratigraphy can reveal evidence of filling, grading, and subsurface repair operations. The Canal Store test excavations have provided a stratigraphic record and an artifact sample of the area adjacent to the west and south foundation walls and, for comparison, of the area to the north of the structure.

The stratigraphy along the west and south foundation walls indicates that the Canal Store walls were surrounded by subsequent fill deposits. Although culturally sterile layers were reached in trenches A, C, and E, it is unlikely that any of these strata represent undisturbed subsoil. Previous archaeological testing at the site of Lock #30, built as part of the Erie Canal Enlargement at Fort Hunter, revealed a layer of sterile, undisturbed yellow sand in the south bank of the canal (Lenig 1975). This stratum was not encountered in any of the Canal Store excavations. Deeper excavation would be required to establish the nature of subsoil in this area.

At least three layers of fill were deposited along the west foundation wall after construction. The slope of strata I and II and the presence of cobbles and large rocks within stratum II suggest that the fill was banked up against the foundation wall to facilitate drainage. The textural anomalies within stratum I, delineated initially by a drip line, evidence the slumping of the fill and the drainage pattern following the slope to the west. The sterile, moist gray sand containing gravel, encountered in test trench A at the level of the cellar floor, was apparently laid as a drainage bed.

Stratum II of trench D contained a foundation stone protruding from the wall into the fill. Because unfinished foundation stone was rarely left exposed and was generally intended for subsurface use, it seems likely that the fill was banked against the foundation shortly after construction of the Canal Store. Artifacts from stratum II of trenches D and A represented either diet, building activity, or recreation. The presence of anthracite coal, machine-cut nails, and a clay pipe stem fragment suggests the period of mid-to-late-19th century for deposition of this stratum.

The south wall stratigraphy revealed fill layers more varied in number and soil type than those along the west wall. An unusual configuration was exposed in trench E, where strata VI, VII, and VIII sloped down gently toward the foundation wall, and sharply to the east. Strata VI and VIII consisted of light brown sand, VII of gray sandy clay, and all three were culturally sterile. Stratum V sloped steeply downward into the northeast corner of the trench. This slope suggests a repair trench, originally dug to reinforce the foundation at its southeast corner. The trench, filled with dark brown sand and stone rubble, contained clay pipe stem fragments, coal, and a miniature ironstone pitcher, which indicates it was filled during the late 19th or first quarter of the 20th century. The original digging of the repair trench would have created the extreme slope of strata VI, VII, and VIII (see Fig. 4).

Unlike the fill along the west foundation wall, none of the layers were banked up against the south foundation wall. Instead, the fill layers sloped slightly downward toward the foundation wall (see Fig. 5). Generally, this type of profile indicates fill deposition before or during wall construction and prior to occupation of the building. However, the absence of any distinct wall construction trench fill line suggests that the foundation walls were built prior to the extensive deposition of fill during other canal work or regrading in the area, possibly from the actual construction of Yankee Hill Lock in the 1840's. That this fill is the same as that associated with the construction of the enlarged canal could be validated only by further testing adjacent to the canal. The only other sequence that can be postulated is that if the foundation walls were constructed subsequent to the deposition of fill from canal construction, then a precisely vertical cut was made into the gravel fill against which the south

foundation wall was laid, leaving no space and no visible wall trench. This would seem unlikely since gravels tend to slump, making a vertical cut difficult to achieve. The sequence of wall construction followed by extensive fill deposition also seems to be true along the west side of the building, where the fill was laid and banked up against the foundation.

Out of a total of 702 artifacts recovered from all test pits and trenches, 61% represented shelter and furnishings, 24% diet, and 10% food and drink. Other categories represented were transportation, recreation, warfare, and aboriginal artifacts, with each comprising less than 10% of the total artifact assemblage.

The predominant ceramic type found at the Canal Store was hard white earthenware, comprising 50% of the total ceramic sample. Commonly called white ware, this ceramic type was an "improvement" (harder and more durable) on and successor to pearlware, and was among the most common of domestic ceramic types used after circa 1820. Pearlware comprised 20% of the total Canal Store ceramic sample. Pearlware was first manufactured in the late 18th century, was widely used during the first quarter of the 19th century, and declined in popularity with the advent of the harder, white-bodied earthenwares. Two and one half times as many white ware sherds were recovered as pearlware. Ironstone comprised 4% of the sample; it is a ceramic type first manufactured during the first quarter of the 19th century and is still made and widely used today. It is, however, most generally associated with the late 19th century.

A ceramic sample can be a reliable indicator of the period and kind of occupancy of a site. However, 19th century ceramics pose a number of problems in classification and dating. Although the Canal Store ceramics have been classified into types distinguished by body and physical properties resulting from firing, these characteristics merge between 19th century types, since pearlware, white ware, and ironstone represent a successive development of earthenwares through time. For this reason it is often difficult to distinguish between pearlware and whiteware, and between whiteware and ironstone. For instance, in the absence of crevices on a pearlware sherd it may be difficult to discern the bluish hue of the glaze and the sherd may erroneously be typed as white ware. Thus the percentages of 19th century ceramic types within the total ceramic sample from the Canal Store must be considered general indicators of the amount of each type found. Further, a total of 50 ceramic sherds was recovered from the Canal Store test excavations, a sample too small for conclusive statistical application.

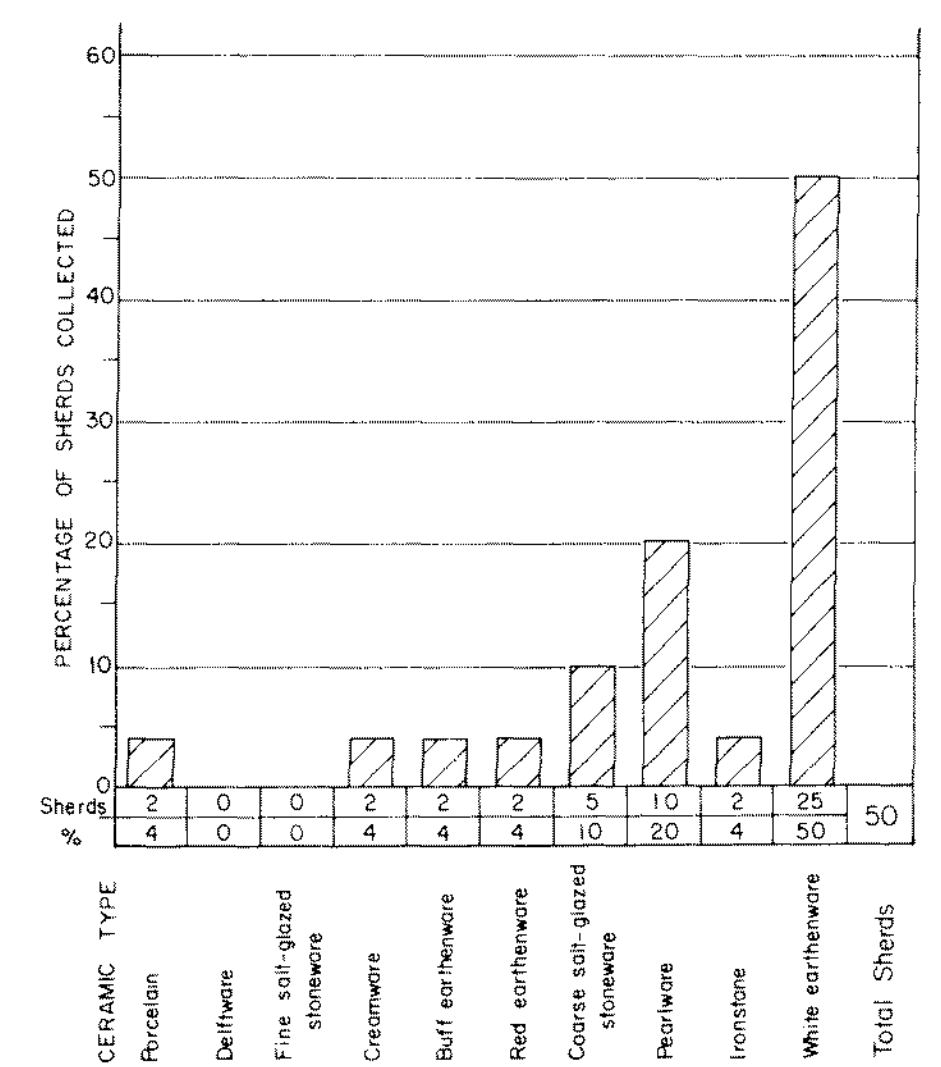
The predominance of mid-19th century ceramic types is most meaningfully interpreted as a validation of the information derived from stratigraphy and historical research on the Canal Store site. A comparison of the ceramic distribution graph (Fig. 6) with samples analyzed from numerous other sites nevertheless reveals some interesting regional correlations and possible interpretations. The Canal Store sample is remarkably similar to the sample retrieved during a test survey from contexts dating after circa 1890 at the Schoharie Lutheran Parsonage site at Schoharie, New York. Located in the Schoharie Valley nearly 20 miles south of the Canal Store and occupied since the late 18th century, the post-1890 contexts at the Parsonage, however, yielded a greater amount of creamware as well as a piece of white salt glazed stoneware from the 18th century (Huey and Truax 1971:34).

A second site that resembles the Canal Store by having more pearlware and whiteware than coarse stoneware, and more coarse stoneware than either the amounts of red earthenware, buff earthenware, or porcelain, is the Vereberg Tavern site located in the Pine Bush west of Albany on the main road to Schenectady near the junction with the Schoharie Road. Occupied from about 1750 to 1900, the Vereberg Tavern site yielded ceramics which also resemble in distribution those from the Canal Store but with much more creamware and very small amounts of delft and white salt glazed stoneware (Feister 1975:13).

Finally, several 19th century sites located in the Hudson Valley have yielded ceramic samples which also resemble the Canal Store distribution of pearlware and white ware, coarse stoneware, red earthenware, buff earthenware, and porcelain. These include the 19th century brick farmhouse site on Peebles Island at Waterford, Saratoga County (Wentworth 1976), the yard area of the Senate House State Historic Site in Kingston (Matejka 1976), and the Haskell House near Vail's Gate in Orange County. The Senate House, an urban site dating from the 17th century, has been owned and operated by New York State as a museum since 1887. The Haskell House was an 18th century home that was occupied through the 19th century south of Newburgh.

Aside from the close correlation between the Canal Store and the 19th century contexts of the Parsonage site up the Schoharie Valley, further testing and sampling will be necessary to determine whether these sites may represent part of a cultural pattern that was typical along the waterways and main transportation routes of 19th century New York State.

Sixty-one percent of all artifacts recovered represented shelter and furnishings. Window glass fragments, brick and mortar fragments, scrap iron, coal, and nails accounted for the majority of artifacts in this category. Among these, the artifacts most readily applied to interpreting the construction of the Canal Store are nails. A



Ceramic Sherd Distribution
 YANKEE HILL CANAL STORE
 All Test Trenches & Pits
 EXCAVATED - APRIL 1976

Figure 6. Distribution of ceramic sherds from all test units at the Canal Store, April 1976.

total of 44 measurable nails and spikes was found (see Figs. 7 and 8). Machine cut nails comprised 52.3%, machine cut spikes 13.6%, and round wire nails 34.1%. Of both machine cut and round wire nails, the mean length fell between 3 in. and 3 1/2 in. A 3 in. nail was most commonly used for furring strips, flooring, boarding, and interior fittings, and a 3 1/2 in. nail for wooden studding. Measurable round wire nails were recovered only from stratum I of test trenches A, D, E, and test pit F. These nails were not commonly used in building construction until late in the 19th century. The strata that have been associated with construction of the Canal Store, especially stratum II along the west foundation wall, contained no round wire nails. This observation indicates that construction must have taken place prior to about 1890.

Perhaps the most interesting artifact found at the Canal Store was a round tube cast brass spigot measuring 6 in. overall length, with a broken cock (see Fig. 9). Spigots have been found in various archaeological sites and shipwrecks, including specimens which are similar to the Canal Store example. Since the spigot from the Canal Store is a surface find and therefore without any definite cultural association, comparison with known examples will help identify the unassociated piece.

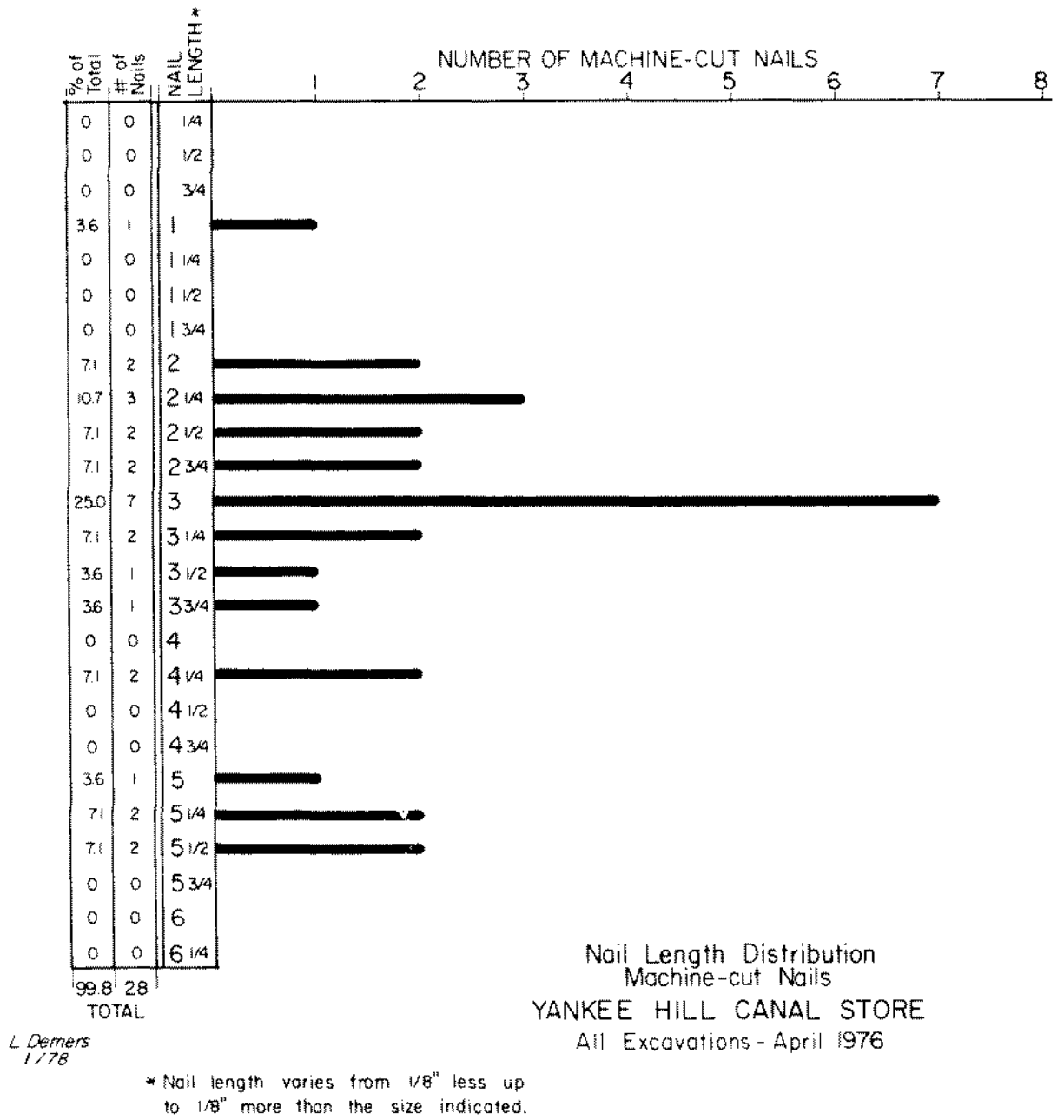


Figure 7. Distribution of machine-cut nails by length from all test units at the Canal Store, April 1976.

The most distinctive feature of the Canal Store spigot is the protuberance immediately above the spout, perhaps for hanging buckets or containers. Also important is the lack of a cock retainer knob, present on many 18th century pieces (see, for example, Neumann and Kravic 1975:249, Fig. 2). Although the Canal Store spigot closely resembles 18th century examples, the later date of the site suggests that use of the type persisted into the early or mid-19th century.

A cast brass spigot similar to the Canal Store specimen was excavated at Fort Charlotte, Grand Portage National Monument, Minnesota (Birk 1975:Fig. 6A). Though slightly shorter than the Canal Store spigot, the Fort Charlotte example is more nearly similar than any other that has been noted. The excavations from which the spigot was recovered was a North West Company fur trade site, specifically associated with the submerged remains of a pre-1800 dock structure.

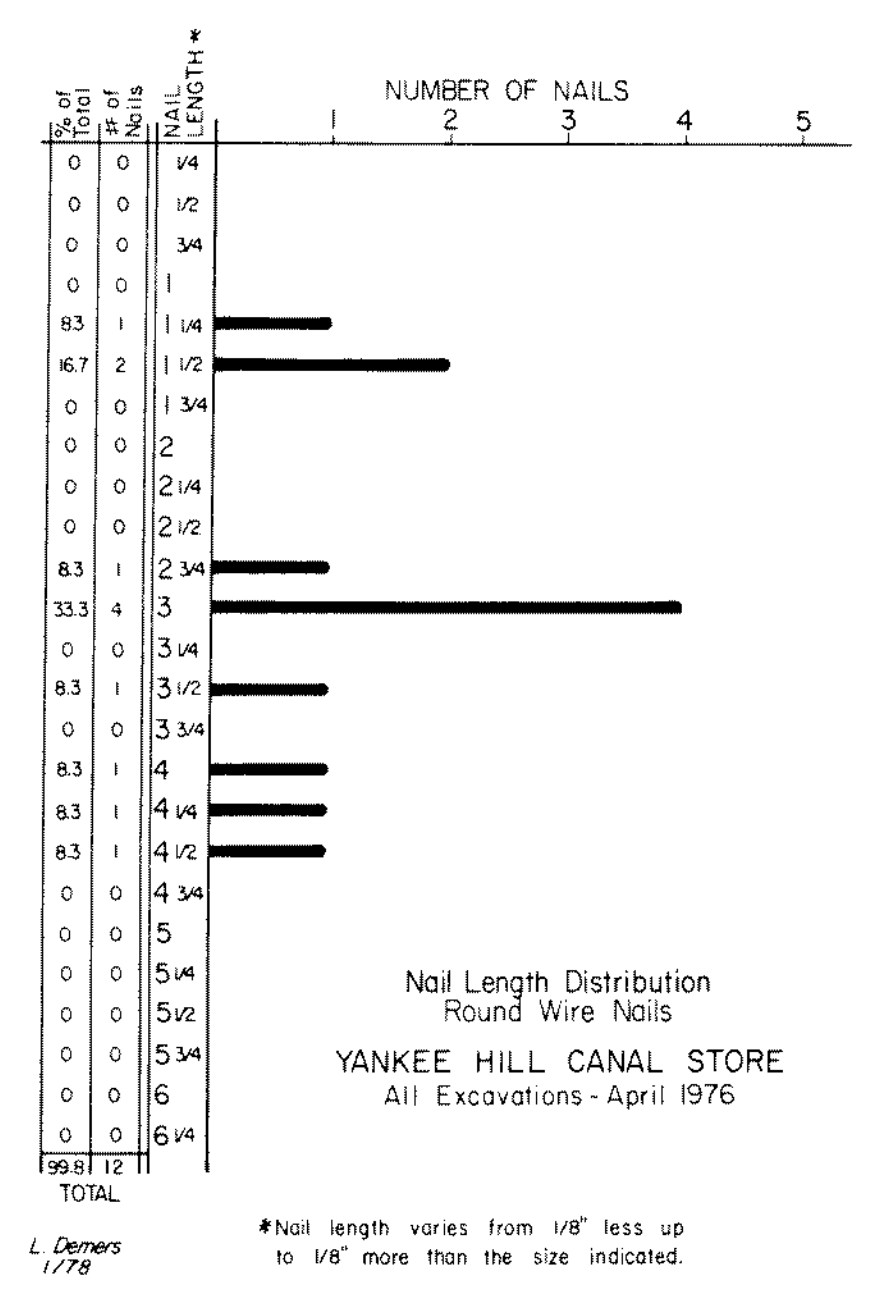


Figure 8. Distribution of round wire nails by length from all test units at the Canal Store, April 1976.

A spigot almost exactly the same size and shape of the Canal Store specimen was excavated from the site of Fort Pierre II, a historic trading post site on the Missouri River in South Dakota. The site was a commercial trading post operated between 1858 and 1863 by the St. Louis firm of P. Chouteau, Jr., and Company (Smith 1960: Pl. 25d).

This specimen, together with the Canal Store example and the one from a North West Company fur trade site, suggests a possible pattern of association with late 18th to mid 19th century commercially-sponsored westward trade and expansion.

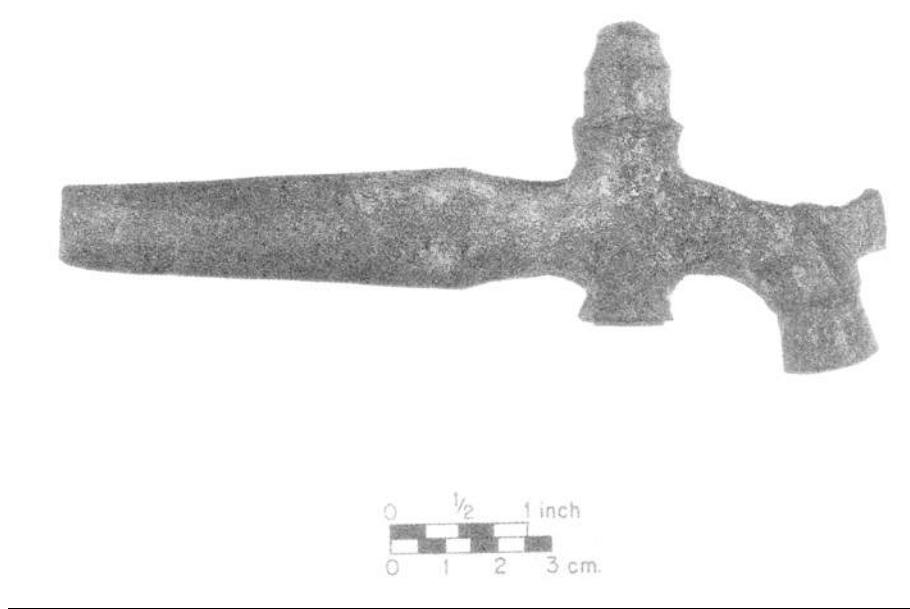


Figure 9. Cast brass spigot from the Canal Store.

SUMMARY

In summary, the Yankee Hill Canal Store foundation walls as presently situated were probably built before or during construction of the lock, because the foundation on the south side is built surrounded by the thick fill. This fill was probably deposited from construction of the canal lock. The stratigraphy associated with the foundation walls is now recorded and can be correlated with any future excavations. The artifact assemblage is somewhat scanty in terms of being meaningful for dating and for interpreting the site as an operative canal store, but the general artifact assemblage does generally coincide with the period of operation of the store. This initial testing project has thus identified strata present on the site, and suggests that more extensive excavations in the future could provide a sample of artifacts useful in helping to accurately predict life along the canal.

ACKNOWLEDGEMENTS

This project would not have been possible without many individuals then associated with the Bureau of Historic Sites, Division for Historic Preservation, New York State Office of Parks and Recreation, and the Saratoga-Capital District State Park and Recreation Commission. Edmund Lynch, Director, and Paul R. Huey, Senior Scientist (Archaeology), of the Bureau of Historic Sites provided continued support and guidance which ensured completion of the project. Bureau of Historic Sites archaeology staff conducted the excavations and associated artifact processing. Further support came from William Byrnes, Regional Historic Preservation Supervisor, Jesse Tuttle, Regional Restoration Coordinator, and Joe Wolff, Site Superintendent. Typing of the various manuscripts was provided by Angela Dinardo-Davey and Kathleen Benac. Thanks are extended to these and the many others in Parks and Recreation and the Saratoga-Capital District State Park and Recreation Commission who made this research possible.

REFERENCES

Amsterdam Democrat

1852 Volume 33.

1870- File, April 20, 1870, through May 4, 1875, Montgomery County Department of History and Archives,

1875 Fonda, New York.

- Birk, Douglas A.
 1975 "Recent Underwater Discoveries at Fort Charlotte." *The International Journal of Nautical Archaeology and Underwater Exploration*, Volume IV, Number 1.
- Bottoming Out*
 1956-1965 The Canal Society of New York State journal, Volumes I-XXIV.
- Century Map Company
 1905 *New Century Atlas of Montgomery and Fulton Counties*. Century Map Co., Philadelphia.
- Cleland, Charles E., and Lyle M. Stone
 1967 "Archaeology as a Method for Investigating the History of the Erie Canal System." *Historical Archaeology*, Volume 1.
- Ellis, David M., J. Frost, H. Syrett, and H. Carman
 1967 *A History of New York State*. Published in co-operation with the New York State Historical Association. Cornell University Press, Ithaca.
- Feister, Lois M.
 1975 "Analysis of the Ceramics found at the Vereberg Tavern Site, Albany County, New York." *Man in the Northeast*, Number 10, Fall.
- Harper's New Monthly Magazine*
 1873 Volume 48, December.
- Huey, Paul R., and Martha A. Truax
 1971 *Archeological Survey of the Old Lutheran Parsonage Site, Schoharie, New York*. MS on file, Division for Historic Preservation.
- Lenig, Wayne
 1975 *An Archaeological Survey of Areas in the Schoharie Crossing State Park, Fort Hunter, N.Y.* MS on file, Division for Historic Preservation.
- Matejka, Gail M.
 1976 Memorandum to Paul Huey, October 27. Division for Historic Preservation files.
- Neumann, George C., and Frank J. Kravic
 1975 *Collector's Illustrated Encyclopedia of the American Revolution*. Stackpole Books, Harrisburg.
- Schoeneck, Charles A.
 1974 *Weighlock Excavation Progress Reports*. MS on file, Division for Historic Preservation.
- Smith, G. Hubert
 1960 "River Basin Surveys Papers, No. 18: Fort Pierre II (39ST217), a Historic Trading Post in the Oahe Dam Area, South Dakota." *River Basin Surveys Papers: Interagency Archaeological Salvage Program: Numbers 15-20*. Washington, D.C.: U.S. Government Printing Office.
- Town of Florida
 n. d. Abstract of Title Search: Canal Store Property, Town of Florida, Montgomery County, New York. MS on file, Division for Historic Preservation.
- Tuttle, Jesse
 1977 Personal communication.
- Wentworth, Dennis L.
 1976 Memorandum to P. R. Huey. Peebles Fence Line Testing: Artifact Analysis, November 22. Division for Historic Preservation files.
- Whitford, Noble
 1905 *History of New York Canals*. Extracts on file, Division for Historic Preservation.