ARCHAEOLOGY OF COLLEGE HILL

John Brown House, Providence, Rhode Island

Archaeological Report

Fall 2008

Krysta Ryzewski

with contributions from Brad Sekedat and the students of ARCH 01900

Joukowsky Institute for Archaeology and the Ancient World

Brown University

CONTENTS

Part II. Object Biographies

Introduction

Excavations at the John Brown House, 2008

Krysta Ryzewski, with contributions from the students of *Archaeology of College Hill*

The Archaeology of College Hill

Offered as an advanced undergraduate course in the Joukowsky Institute for Archaeology and the Ancient World at Brown University, the *Archaeology of College Hill* (ARCH01900) is a hands-on introduction to archaeological survey, excavation, and preservation offered annually during the fall semester. In 2008 the course was held for the first time at the John Brown House on the corner of Benefit and Power Streets on the East Side of Providence. The John Brown House is a historic museum that is owned and operated by the Rhode Island Historical Society (RIHS). The proximity and interaction between the museum, preservationists from the RIHS, and the College Hill students conducting archaeological fieldwork was especially effective for communicating the broad scope of the archaeological process to the students, from the ground up. The course met for three hours once a week between September and December of 2008. The semester schedule permitted a total of eleven days of excavation and three days of labwork following the outdoor fieldwork. Over the course of ten weeks, the students excavated five 1x1 meter units and two 50x50cm shovel test pits.

Many of the College Hill students may not pursue careers in archaeology, or if they do, they may carry out fieldwork in other parts of the world. With this fluidity in mind, the course teaches students skills that are transferable in a range of archaeological and heritage management professions, including survey and excavation techniques, digital documentation, archival research, artifact analysis, mapping, exhibit preparation, and community outreach. At the same time, however, the John Brown House property remains a significant archaeological and cultural resource that is associated with several influential families and events in American history. We

respect the cultural importance of the property and are conscious about how the results of our work will contribute to the historical archaeology of New England. For the College Hill students, the John Brown House landscape is much more than a training ground for archaeological methods that are to be redeployed on future excavations. Our interactions with the John Brown House property are shaped by a desire to engage with the property's multidimensional histories; our approaches to managing the archaeological resources we uncover bear in mind the longer term benefits that our findings may have for other scholars in associated disciplines.

Student Involvement

As part of the course requirements, students maintained a wiki, an editable website, on which they posted a variety of formal and informal updates on a weekly bases (http://proteus.brown.edu/archaeologyofcollegehill/Home). Every student kept a field blog for posting their personal synopses and interpretations based on what they encountered during each week's fieldwork.

A sample of entries from the students' field blogs documents their thoughts about the John Brown House and the archaeological process (http://proteus.brown.edu/archaeologyofcollegehill/6344).

Another page on the College Hill wiki contains excavation summaries for each day in the field (http://proteus.brown.edu/archaeologyofcollegehill/6346). These summaries were authored by two students per week and contain technical details gathered from the excavation paperwork, images, and discussions. Additionally, two students, Whitney Knowlton and Kellie Slater, were assigned to be the multimedia curators for the project. Using a high definition video recorder, they formally documented and discussed each new stratigraphic change at the same time as excavators were taking photographs. A second video camera, a flip video recorder, was a device for recording candid moments, such as debates about soil changes or moments that exciting artifacts were discovered. As a final project, these two students created a short documentary in DVD format. Additional students from College Hill participated in preparing the files for longer term storage and entry into the Archaeotechnics program, which will act as a multimedia repository, as well as a presentation and research device.

Report Structure

This report is an assembly of the students' final research projects and it is organized into two parts. Although each student was required to incorporate specific types of detail into their reports, each of the chapters conveys students' individual approaches to organizing, interpreting, and writing about the archaeological process. To standardize the structure and language of these writings would be an act of editorial sacrifice that would sterilize the diversity of encounters between the students and the archaeology of the John Brown House. As these contributions thoroughly address the history and landscape of the John Brown House property, it is not repeated in this introductory section. The first part of the report consists of a technical summary that details the archaeological excavations at the John Brown House. Part I includes sections on

historical background, stratigraphic analysis, excavation unit summaries. The second part is a collection of interpretive essays based on the histories and archaeological contexts of individual objects that the students selected from the excavated assemblage for study. A third addition to the report is the DVD created by students Whitney Knowlton and Kellie Slater as part of the multimedia documentation of the fieldwork process.

Preliminary Survey

Reconnaissance for archaeological features within the John Brown House property began in May 2008 as part of a geophysics workshop hosted by the Joukowsky Institute for Archaeology and the Ancient World and directed by geophysicist Thomas Urban, an associate of the Brown Geosciences Department. The initial results of this survey indicated a rectilinear area of interest along the northwestern corner of the property. An additional geophysical survey conducted in September 2008 focused on mapping this area of interest in higher resolution, with results that guided the layout of the College Hill excavation units. A detailed summary of the geophysical surveys and their results appears in Appendix A.

Site Layout

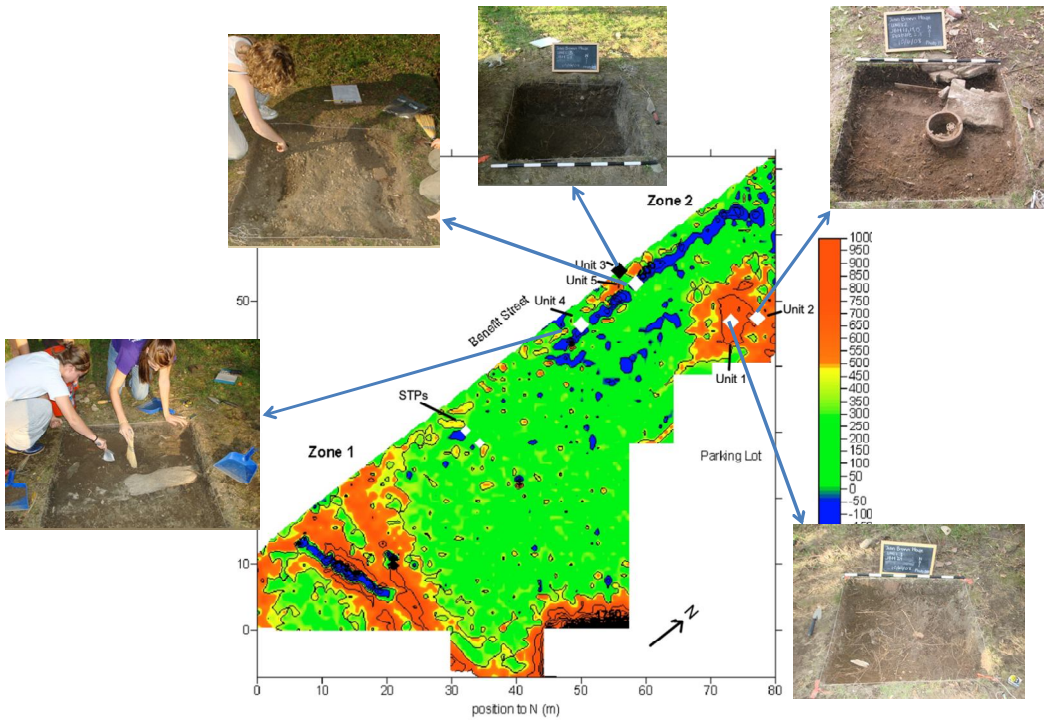
During the first geophysical survey in May 2008, Krysta Ryzewski and Thomas Urban selected a site datum to anchor and establish the site's grid structure. The datum (N0 E0) is the center of a concrete hitching post adjacent to the walkway. The post is firmly anchored into the ground next to the southwest corner of the sandstone retaining wall at the back of the John Brown House and positioned so that a line of sight to the areas of interest is unobstructed. The hitching post has a center hole, which was used as the center of the datum point for laying out the site grid, as well as during the total station survey. From the southeast corner of the retaining

wall, the datum is 86cm away at a 60° angle. The inner, eastern edge of the walking path is 1.4 meters due west of the datum. From the datum point, we laid out a site baseline running east-west for 40 meters, and marked intervals every five meters for potential shovel testing.

Satellite view with GIS overlay of the John Brown House property with baseline (red) and property boundaries marked as measured by the Total Station survey of November 2008. The datum is a point on the eastern (right) terminus of the baseine (map Brad Sekedat).

Photographic evidence in the RIHS collections of an unpublished excavation carried out on the property in the late 1960s or early 1970s depicted an approximately 2x2 meter unit somewhere along the eastern third of the baseline. Given our focus on the areas of interest outlined by the geophysical survey, we did not attempt to relocate these excavations, although two shovel test pits at N0 W35 and N0 W30 did uncover architectural traces that did not appear to have been uncovered by prior archaeological excavations.

Using data from the geophysical survey, we opened five 1x1 meter excavation units. Units 1 and 2 were placed in a large depression, identified by the geophysical survey as a conductive feature. Unit 1 was positioned at the deepest point of the depression. Unit 2 was placed along the upslope of the depression, where bricks and other architectural remnants were visible on the surface. Units 3 and 4 were placed with the intention of exploring the rectilinear feature outlined in the geophysical survey, and noted to be a resistive feature. Unit 3 exposed an architectural fill deposit rather than architectural materials. Several weeks into the course Unit 5 was opened 0.5 meters to the east of Unit 3, where it a substantial foundation wall was successfully uncovered. Unit 4 also encountered architectural remains associated with a foundation wall or other landscape feature.



The geophysical survey map with locations of the STPs and excavation units mapped, along with associated pictures of the five units during excavation.

Satellite view of the John Brown House property with GIS map overlay from Total Station survey in 2008, STPs and excavation units are marked (map Brad Sekedat).

Excavation and Recording Methodology[1]

Excavations proceeded through a combination of shovel skimming, in which a large shovel is used to take off thin layers of soil at a time, and toweling. The excavated soil was then sifted through ¼'' mesh to extract unseen artifacts.

Maggie, Jacob, Moira, and Alex measure out the dimensions of and calculate levels for Unit 2 before beginning excavations.

Munsell charts were used to categorize soil types, string levels were frequently used to make sure that the context layers of the Unit were dug in a uniform manner, and excavation notes were taken for each context to document our procession to deeper layers. Every time a new stratigraphic level (a soil change or feature) was encountered or every time a new 10cm arbitrary level was reached, students assigned the deposit a new context number, preceded by the initials JBH. Numbers were assigned sequentially across the entire site. No numbers were used twice

[1] A large portion of this methodological description is quoted from A. Ruby, final report

within the same units or between multiple units. The purpose of this context number documentation was to collect information systematically without presupposing stratigraphic relationships. Back in the lab, students synthesized and combined contexts which overlapped between units to establish a site-wide stratigraphic profile (see Combs, Chapter 2). Additionally, each artifact was labeled by its excavation context.

Moira, Ben, and Elise map and record the stratigraphic wall profiles of Unit 3 (background) and Unit 5 (foreground) on the last day of excavations.

Photo documentation and video footage were integral parts of the fieldwork process. At the beginning of every new context layer, and when significant finds were uncovered, the excavators paused to map and record the finds on paper, film, and print, using a standard measuring equipment, graph paper, grid squares for scaled drawings, a digital camera, and two video cameras.

Once digging had been completed for the season, the bottom of the Unit was covered with a tarp and some contemporary pennies (to provide a date to future excavators) and backfilled with the unearthed soil until a new team of archaeologists continues the work the class of 2008 started.

In the laboratory, artifacts were cleaned and documented according to their excavation context. The cataloguing process included not only describing each artifact, but also attempting to find its earliest date of production with which an overall date of activity in the context layer can be defined. This date is termed the "terminus post quem" (TPQ), and it essentially indicates the date after which we know the context has been disturbed because if an artifact was produced starting at a particular time, it could not be found in that context unless that context had been disturbed sometime after that time. In reality, many context layers tend to be grouped into larger strata based on soil type and on stratigraphic drawings taken of the sidewalls of the unit before they are refilled. Therefore, the TPQ date of an entire stratum is usually assigned, based on the latest TPQ date of an individual context layer in that stratum. The process of dating and documenting the artifacts discovered in the five excavation units greatly aided the process of assigning a timeline to the activity of this area of the John Brown House site.

Results

Thanks to an enthusiastic and capable group of students, the 2008 College Hill fieldwork successfully located at least two significant architectural features in the areas of Units 1 and 2, and in the areas of Units 4 and 5. In excavating these areas, the students also unearthed many undocumented and forgotten histories and uses of the John Brown House landscape over time.

The chapters within this report detail these, and provide an important reference for future archaeological research on the property during the College Hill course in 2009 and beyond.

The College Hill students gather to update each other on the progress of their excavations at the beginning of class during Week 3.

Special Thanks to:

- Staff of Rhode Island Historical Society and the John Brown House Museum
- Brad Sekedat (JIAAW) and the students of ARCH 1900
- Joukowsky Institute for Archaeology and the Ancient World (JIAAW)
- Thomas Urban, Brown Geosciences Department
- Brown Univ. Department of Anthropology
- John Nicholas Brown Center for Public Humanities & Cultural Heritage
- The Librarians at the Hay, John Carter Brown, and RIHS Libraries
- The Brown Family
- Greene Farm Archaeology Project

Part I.

Technical Report – John Brown House Archaeological Survey & Excavations

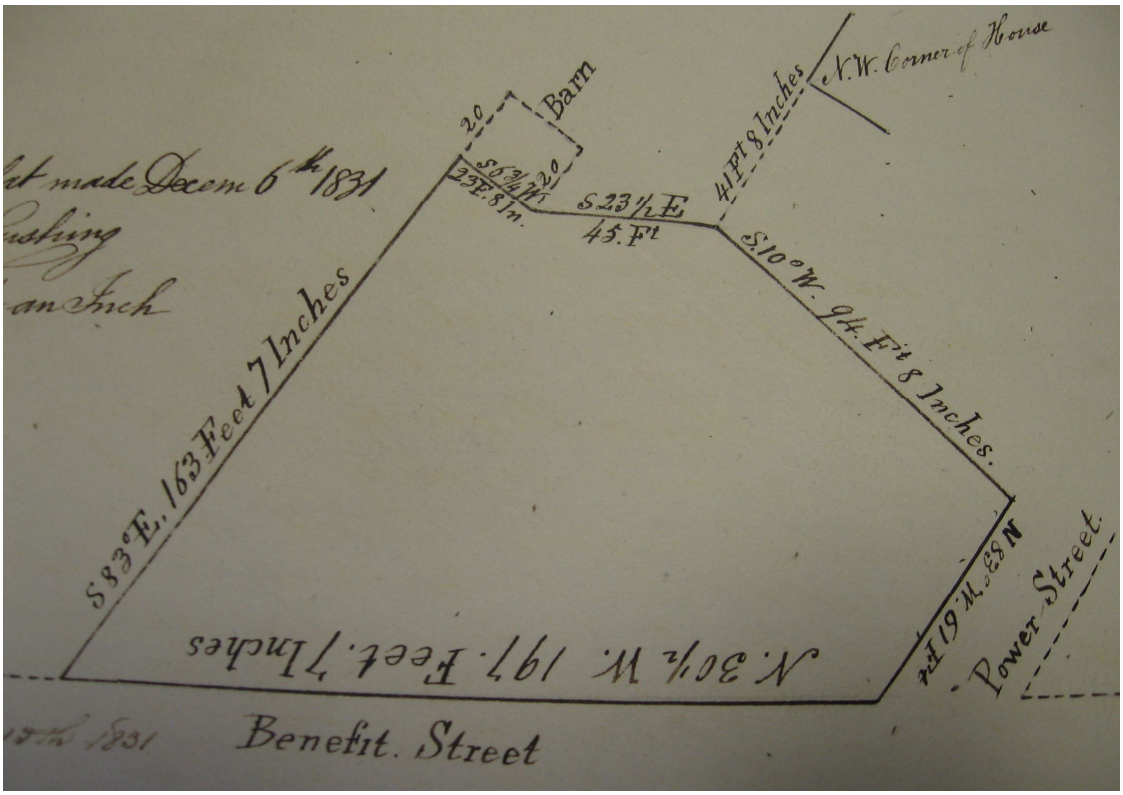
Chapter 1. Historical Background of the John Brown House Property

Steffi Yellin (with contributions from Megan Algeo from their midterm project research)

Landscape Contexts: Introduction

A survey of maps of Providence since the 17th century tells a story of changing ownership, changing land use, and ever-increasing population and development. The Brown family and the John Brown House occupied a culturally and economically central place in these changes. We look below at early maps of the area, showing the building of the house in a prestigious up-hill area of Providence, overlooking the shipping trade responsible for the Browns' fortunes. We consider the retrospective maps drawn by 19th and 20th century historians to relate the Providence of their times to the earliest European settlement. Finally, we discuss trends in Providence's development since the late 19th century and see them reflected in the increasing detail and accuracy of maps since that time.

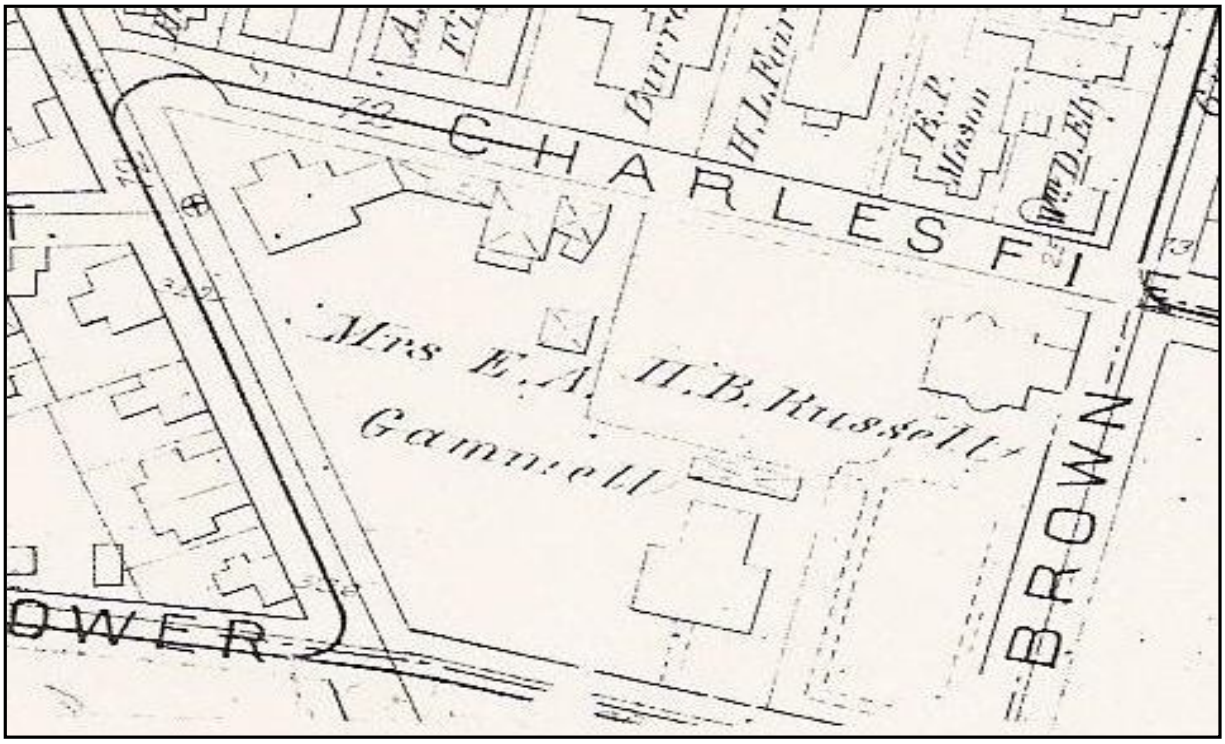
Historical Maps of the John Brown House Landscape



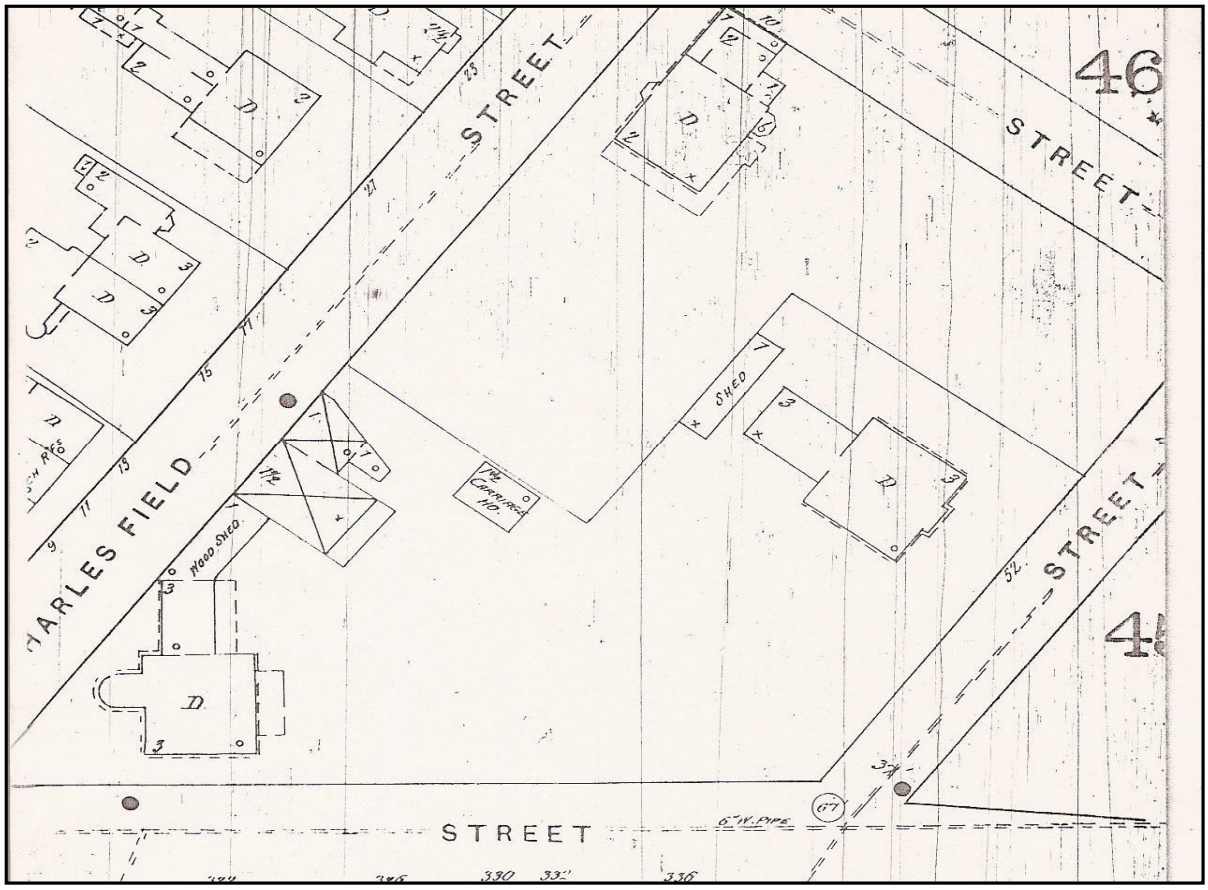
Ca. 1831 Map of the boundaries of the John Brown House property, no structures are shown, but they did exist at the time. “A plot of said lot was made by S.B. Cushing December 6 1831 and is copied on the back of this deed.”

1857 Walling Providence map- gives provides little information concerning the structure of the house. The main benefit of the map lays solely in showing evidence that the house was already built by this year.

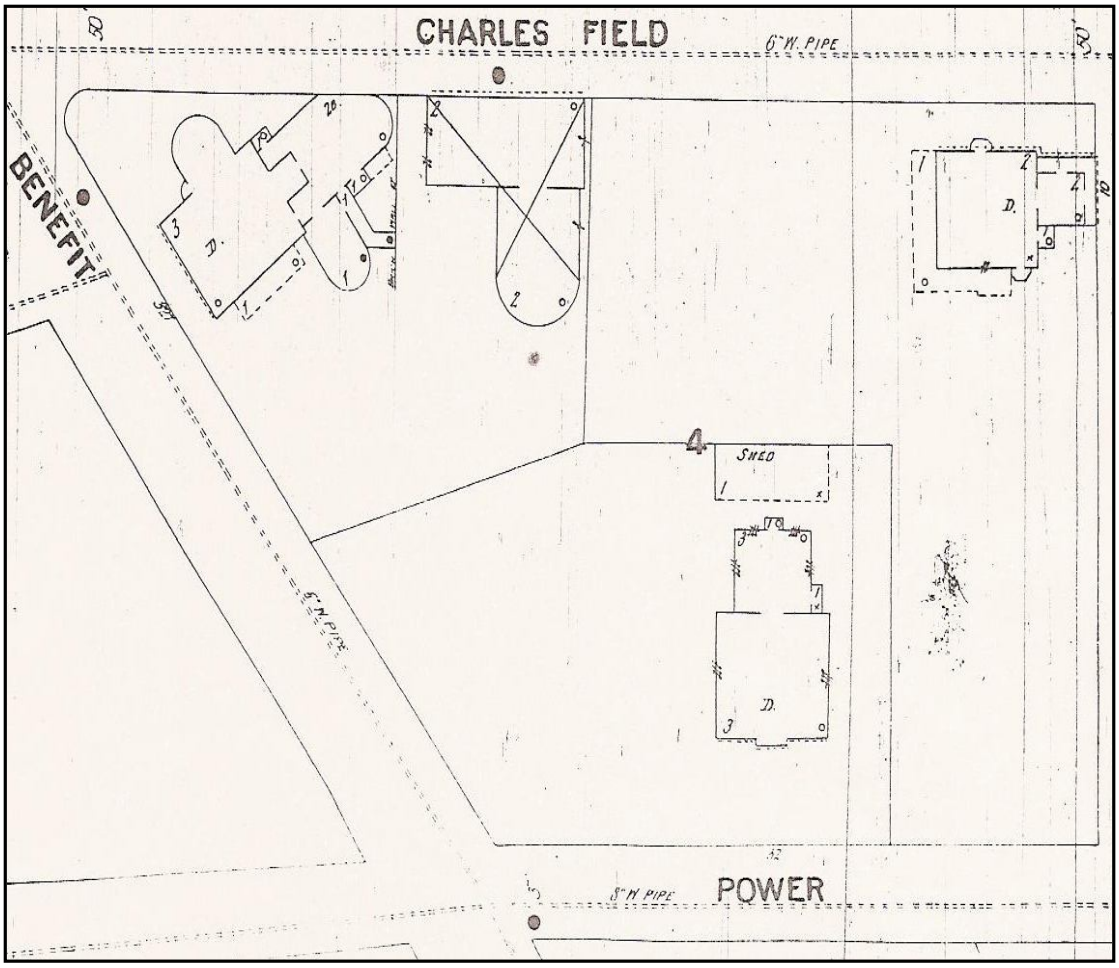
1875 Providence Platbook map- From the pink coloration of the house, it is known that the homestead, as well as the outhouses, is built from brick. The large outhouse behind the homestead in this 1857 map did not appear to have yet been built in the previous 1857 map. Thus, sometime between 1857 and 1875 the large outhouse was built. This map also serves to clarify the layout of the home.



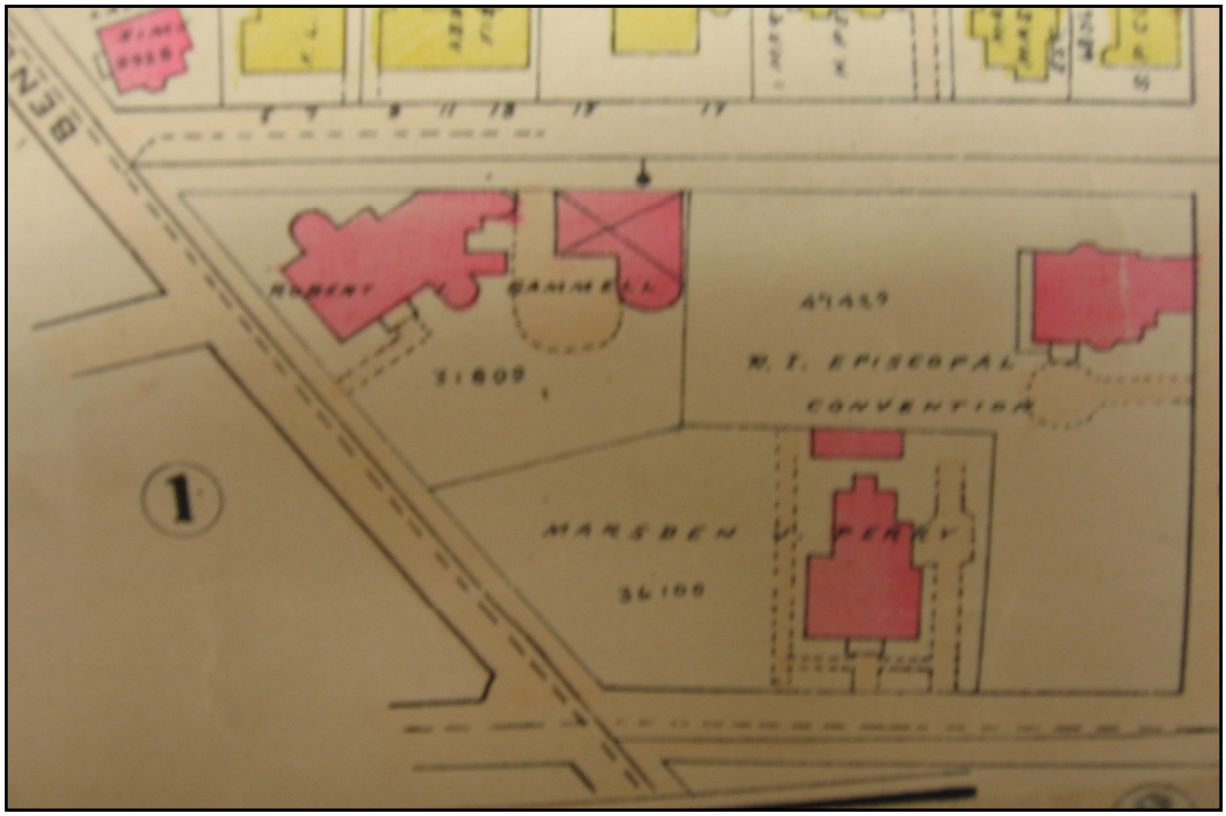
1882 Sanborn fire insurance map-this map looks different than the previous in that the house is connected to 3 separate looking outhouses. While it appears as if the outhouses might have previously existed, this map serves to differentiate the actual homestead from the connected buildings in the back. The larger outhouse from the previous map does not appear to be present. There is also a smaller outhouse off to the side which we later find out is a carriage house. In 1882, the land is listed as owned by Elizabeth Amory. Gammell, although we know the back homestead was now her son's.



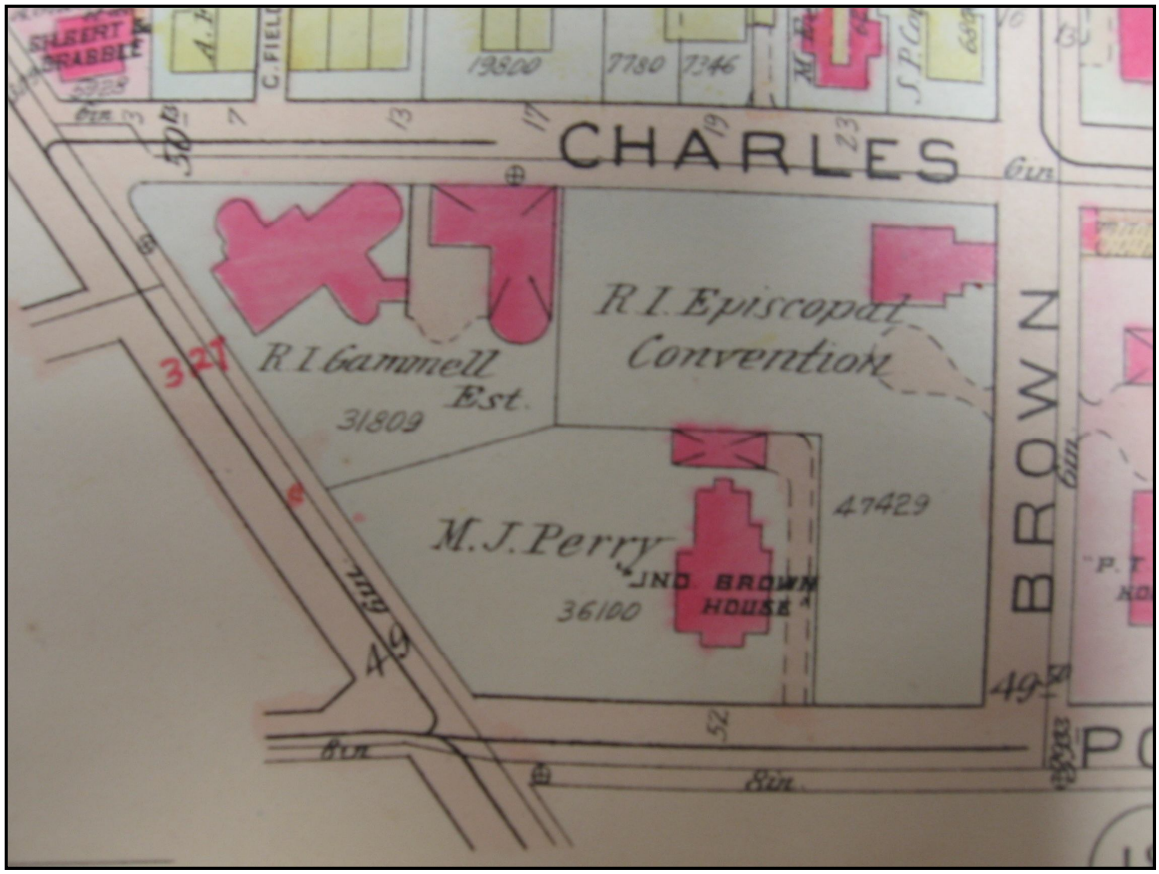
1889 Sanborn fire insurance map-this map clarifies the identity of some of the backhouses. The structure immediately to the back of the house was a woodshed, connected to two other larger barn-like buildings. The building off to the side is identified as a carriage house.



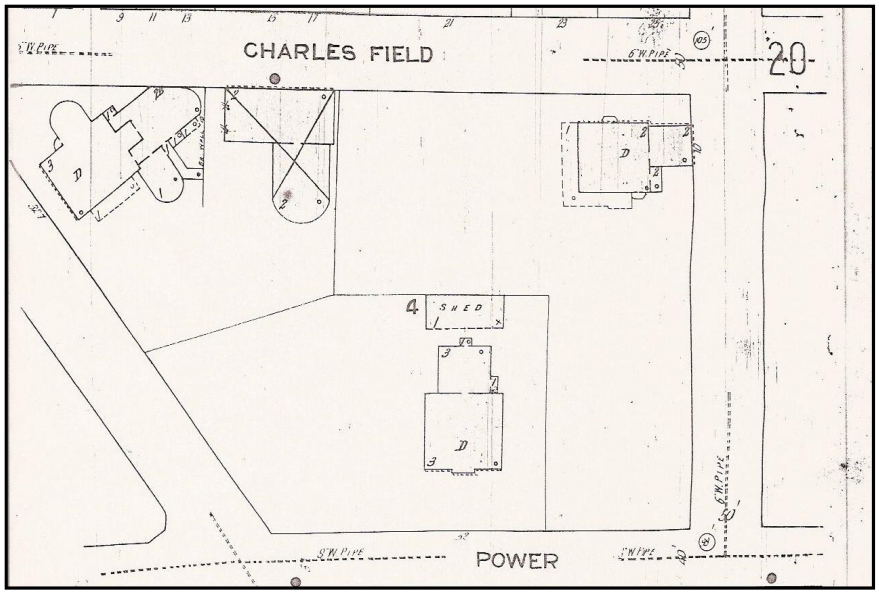
1900 Sanborn fire insurance map- This map is where some major changes take place. The actual house looks relatively the same, but all of the previous smaller outhouses are gone. There is some large structure directly connected to the house. As well, there is now a brick wall between the house and one backhouse, which appears to be almost as big as the actual house, if not bigger.



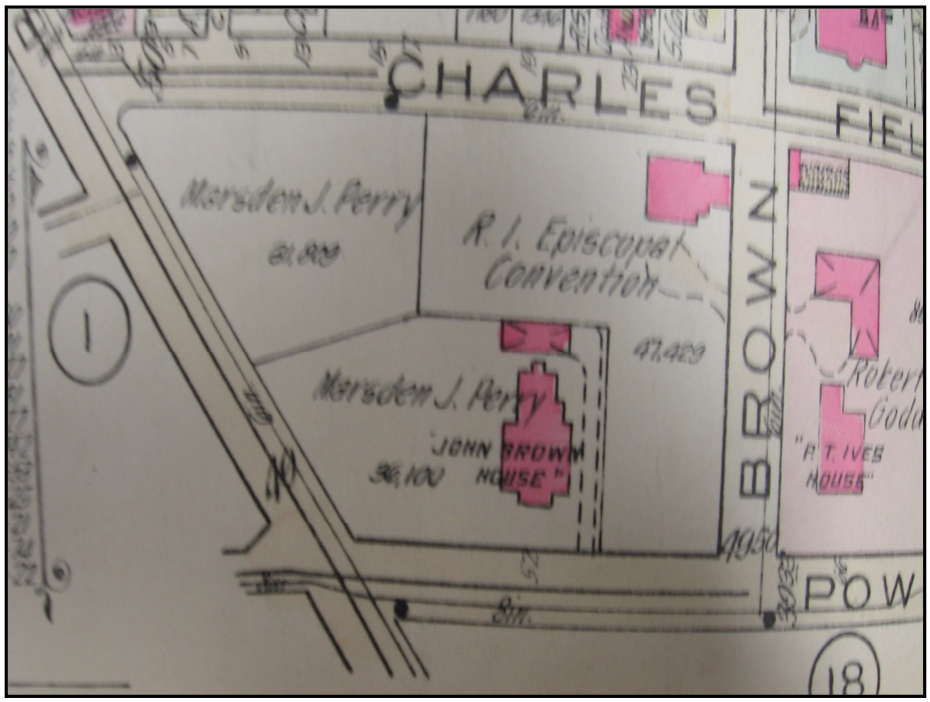
1908 Providence Platbook map-the structures of the house and outbuilding look similar to the 1900 map. The only new information we see is the presence of a sewer line running in a ½ circle between the house and outhouse, and also running from the side of the house towards Benefit Street. It is interesting that this map version does not show the brick wall that appeared in 1900; perhaps this is simply the result of a different artist's interpretation of the property. At this point, Marsden Perry had already gained ownership of the mansion house, while Robert Gammell still retained ownership of the Robert Hale Ives homestead estate.



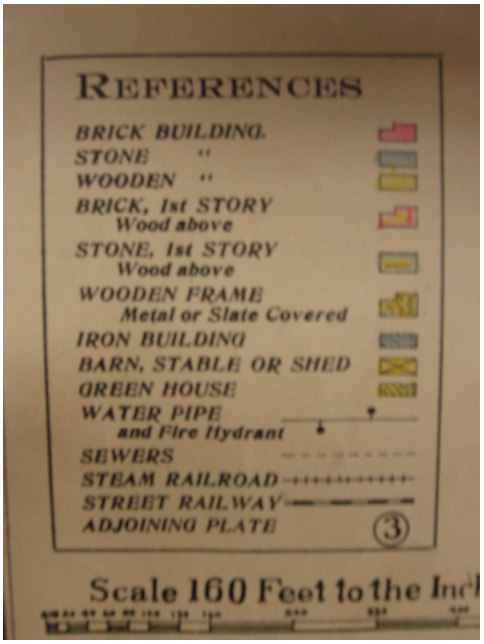
1918 Providence Platbook map- This map looks exactly the same in respect to the estate of Robert Ives Gammell, except in this map, the brick wall between the house and the outhouse is again clearly visible.



1921 Sanborn fire insurance map-no new significant changes.



1926 Providence Platbook map-this map shows the estate lands, along with the mansion house lands, which are both now owned by Marsden Perry. At this point, the house, along with its outbuilding, has been destroyed.



Structural materials described in legend of Sanborn maps.

In addition to these insurance maps, which clearly document the location of major structures and the materials with which they were constructed, several maps exist that document the wider landscape of Providence from the 18th century onwards. Due to copyright restrictions, they are not reproduced here, but are discussed and referenced in detail.

Early Maps (1770-1803)

Early depictions of Providence give us an excellent impression of the dynamic city in which the John Brown House was built. The earliest prints of the city are mainly plats from the 18th and early 19th centuries. Plats were small maps that clearly marked out property boundaries. One of the early plats that delineates property belonging to the Brown family is a plat from 1746 that shows the division of land along Towne St. (which is now North and South Main.) However, after plats, the first comprehensive views of Providence can be found in the

1770 powder horn map and 1790 Fitch sketch. Though these maps are not accurate to scale and therefore exclude some buildings and landmarks, they do represent the first full views of Providence that include approximate drawings of settlement patterns, waterways, and roadways at the end of the 18th century. The 1803 Anthony map, the first made from an actual geographic survey, is an example of the increasingly detailed survey methods that developed as the young U.S. government began documenting the states. Finally, Artist John Warrell's depiction of the city around 1810 fills out our collection with a landscape-style view of the increasingly developing city. This painting gives us an impression of Providence not from an imaginary bird's eye view, but from a human's point of view across the waterfront.

The 1746 plat shows dense settlement along the waterfront with wharves, houses, and churches interspersed with some undeveloped lots. Among the buildings listed are Brown's Cooper Shop, Capt. Brown's House, and Capt Brown's Wharf, all of which are North of the John Brown House property, near College St. Later maps place Chad Brown's home lot here. (Chad Brown was John Brown's great-great-grandfather, and the first of the Brown family to settle in Providence.)

In both the powder horn map and the Fitch map, Towne St. is the most densely settled area of Providence, with only a few roads branching off up College Hill and across the Providence River. The powder horn map was carved by a Revolutionary War soldier named Stephen Avery in 1777. This places it as the earliest technical comprehensive view of Providence, although the first paper map was drawn by Brown University student John Fitch in 1790. And while the John Brown House does not appear on the 1777 map as it hadn't yet been built, the mapmaker's drawings of tall ships under full sail and smaller boats crossing the river do hint at the atmosphere of growing trade and the prosperity in Providence in the 18th century

that would in time build the Brown family fortune and allow John Brown to build his house on Benefit Street.

Strikingly, the powder horn and Fitch maps both face east, rather than north as convention dictates. Even though settlement is densest along the riverfront, the mapmakers see the focus of Providence as eastward and up the hill. College hill was the area first divided among settlers as the "home lots" and continues, today, to be home to powerful Rhode Islanders and Rhode Island institutions. The panoramic view up College Hill that John Worrall painted between 1808 and 1812 continues this story of dense settlement around the river. The focus of this landscape still faces east towards the hill, where new roads and grand buildings continue to appear. This is quite logical when one considers that trade via sea was the staple of the Providence economy; therefore, the hill was an excellent vantage point from which merchants could watch for their ships returning. The hill was a practical place for the wealthy merchants to build their houses, and as a result, owning a house here became symbolic of wealth and power.

It is in this powerful neighborhood that the John Brown House appears on the Fitch map, one of the few eastward buildings drawn, along with Brown's University hall. The Fitch map was drawn just two years after the John Brown house was built. The Anthony map shows us that by 1803, the Browns shared this area with Governor Fenner, whose house is shown a few blocks from the John Brown House, along present-day Governor St. The 1803 map also shows the continued development of Providence, with new roadways appearing in the College Hill and Downtown areas. Benevolent St. and a street in the current location of Brown St. have cut through some of the open area previously surrounding the house.

Maps of Providence drawn just before and after the John Brown House was built show the changing landscape around the property as the city's population grew and Providence became increasingly urban. Through the inclusion of specific buildings, illustrations of significant motifs in Rhode Island society, and choices of perspective, these maps are indicative of the Brown family's prominent place in Providence society.

Retrospective Maps of Early Settlement

Perhaps the most intriguing views of Providence and College Hill in the 17th century come not from contemporary maps, but from maps drawn two to three hundred years after the time they depict. These maps may not be entirely accurate representations of colonial Rhode Island's geographic layout, but they are fascinating reflections of social, economic and cultural perceptions about the developing Providence of the 17th century from an early 20th century standpoint.

The Hopkins map was created in 1886, on the 250th anniversary of the founding of Providence. This map (either intentionally or not) manages to integrate the original settlement and ownership patterns with the author's own contemporary landscape of Providence. The author placed home lots in relation to naturally occurring geological features while still aligning them with the streets that exist in 1886. For example, Hopkins' map connects Power Street with the abutting property of settler Nicholas Power. Additionally, Hopkins relates all of College Hill to the first European settlement in Providence. Many street names echo the names on plots of original settlers that Hopkins has drawn into this hybrid map. A "Thomas Hopkins" (perhaps a forebear of the author himself) also appears on the map, serving to further connect the Providence of the 17th century to a Providence aged by two and a half centuries. It is bridges like

these that force the reader to acknowledge the physical human connection between the names we have assigned to these spaces, and the people who originally lived there. These people inscribed their own names upon the landscape, serving to memorialize themselves far longer than perhaps they ever expected. And the 1886 map is not the only example of this; the cartographers who created the various retrospective maps throughout the 20th century made the same attempt to align his or her perception of Providence with the Providence of centuries past. This map does not mix the past and present but instead shows the change of Providence's profile in two distinct snapshots. Shadows of modern streets behind the home lots and an outline of the original path of the Providence River create a palimpsest of past and present to show two clear views of Providence, centuries apart.

These retrospective maps of the home lots both show that the site where the John Brown House now sits was originally part of the property of William Wickenden. Chad Brown, the great –great-grandfather of John Brown, is represented by a lot near the present location of College St. and parts of Brown University. The maps do not show buildings in this area, which reinforces imagery from the earlier maps. The most developed area of Providence at this time would have been along the waterfront, as evidenced by both earlier plats and the more comprehensive maps. Larger-scale retrospective maps that look back at all of Rhode Island are filled with notes and comments about land disputes between European and Native American groups, and among municipalities. This shuffling of land mirrors the continuously evolving plots in Providence as wealthy traders bought and sold lots, including the lot where the John Brown house now stands.

The retrospective maps that were made in the 19th and 20th centuries to depict the Providence of the 16th century emphasize a connection between original settlement periods in Colonial Rhode Island and later periods in the history of the College Hill neighborhood. Looking at the maps emphasizes the history of power and privilege in an area that remains one of Providence's wealthiest, and is also a testament to the power of Providence as the seat of government for a small yet wealthy state in a young and growing country during this time.

Trends in Maps of Providence Since 1803

The Daniel Anthony map of 1803 was the first accurately surveyed map of Providence. It shows the existing streets and waterways of the time and their relationships to each other on a very precise and accurate scale. Since 1803, maps of Providence have become increasingly detailed as technology required to collect this type of survey data has improved. At the same time, the landscape has been aggressively developed; the creation of roads to increase ease of transport and buildings to house burgeoning industries has even changed the face of Rhode Island's coastline drastically. The area around the John Brown house was once an open hillside of fields; now, it has been built in and up, and skyscrapers rise from downtown Providence to dwarf the hill that was once the highest point in Rhode Island.

By 1885-1887, a USGS topographic map shows us the layout of streets around the John Brown House that are familiar to the 21st century residents of College Hill. The riverbank has been built up to such an extent that the river is hardly recognizable as the sizeable, bustling trading port that Providence of the past, with wharves along west shore of what used to be a wide river mouth. Four buildings are pictured on the John Brown House property, although none of them appear to be over where we are currently excavating.

In the Haley photograph from 1931, and Cady's 1942 map, we can see the development of railways and taller buildings downtown. The highway has not yet been built over the old wharves on the western bank of the Providence River, but there are new wharves growing up further out in the harbor. In this photograph and map, the John Brown House sits in the middle of a residential area packed with tree- and house-lined streets.

According to the 1957 USGS map, highways have begun to transect city and river, and the waterfront has been fully transformed into the coastline that we recognize today. The area around the John Brown House has continued to grow as a wealthy residential area, sharing space with colleges and churches, but little else. There are few commercially dedicated buildings in this area.

Over time, maps of Rhode Island from the 19th and 20th centuries show the rapid industrialization and development of Providence, and then the evolution of the area around the John Brown House away from an industrial center and towards a gentrified residential area. The city continues to grow and expand today, and so maps have also changed drastically to reflect this. Now, one can simply log onto the Internet to pull up a satellite image of Providence as it exists in this exact moment.

Landscape Contexts, Continuity, and Change

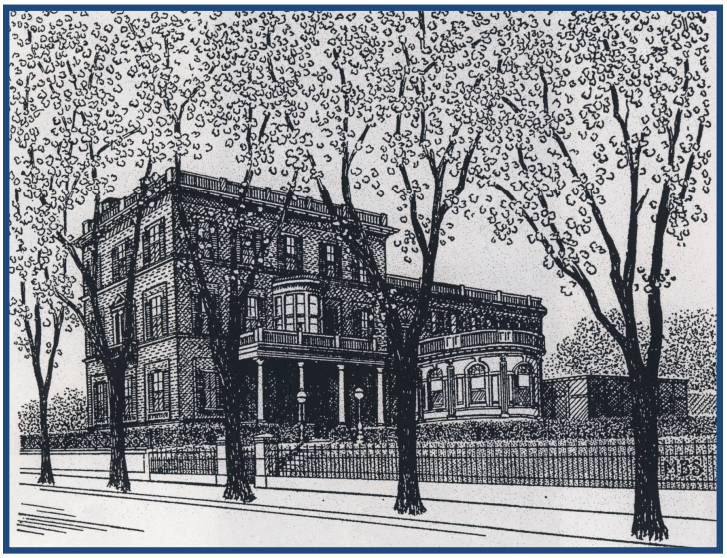
The John Brown House property, its College Hill surroundings, and the maps used to describe them have changed substantially over the past 400 years, and the changes in these three areas reflect each other: the property has continually changed hands and has changed its use from an open field to a grand residence to an educational museum. Similarly, Providence has given up

and re-annexed land from its surrounding municipalities, and has seen an ebb and flow of industrial activity.

Still, the continuous settlement of the area since Providence's earliest days has been used to connect the city to its colonial past, and the John Brown House is used by the Rhode Island Historical Society in much the same way. The graphical record of College Hill's history reflects seemingly opposing values: early Rhode Island's pre-capitalist facility with shifting land ownership contrasts with later Rhode Island's desire for historical and cultural continuity and preservation.

Rediscovering the Robert Hale Ives Homestead – 327 Benefit Street

The *Archaeology of College Hill* excavations uncovered the remains of a foundation in the northwest corner of the property. Further archival research identified this as the Robert Hale Ives Homestead, which was located at 327 Benefit St.



View of Robert Hale Ives house from Benefit St. ca. 1900 (from the *Pagentry of Benefit St.*).

The earliest map found of the Hale Ives property was dated to the year 1857. On the map, the Robert Hale Ives homestead was shown as already being built. Robert Hale Ives came into possession of the land, through a deed in 1832 from Nicholas Brown. Therefore, we know that the house was built at some point between 1832 and 1857. It can be hypothesized that the house was probably built more towards the latter date, as Robert Hale Ives did not officially move into the house until 1866. The Providence Directories, which themselves only date back to 1852, indicate that Mr. Ives lived in a house on 195 Benefit St until 1866, at which point he moved to the "house on the corner of Benefit and Charlesfield." From 1873-1875, Robert Ives Gammell (Robert Hale Ives' grandson) was a boarder in that house. In 1875, Robert Hale Ives bequeathed the property, along with the homestead, to his daughter, Elizabeth Amory Ives, who married William Gammell on Sept. 2, 1851.

Although the house was bequeathed unto William and Elizabeth, it seems as if the couple let their son, Robert Ives Gammell (who was already boarding the house), take over the residency of the backhouse while they lived in the John Brown House mansion. In fact, even before the house was officially bequeathed to their son in 1878. Robert Ives Gammell was listed in the Providence directory as owning the house in 1876. The official deed was not written until 1878, when Elizabeth and William gave the house to their son. Robert Ives Gammell continued to be listed in the Providence Directory as the official owner of the house until his death in 1915.

The Providence House Directory, which dates back to 1895, was a very useful resource as it indicated who was actually living in the house. Through this directory, it was discovered that the actual address of the house was 327 Benefit Street. From the address of the house in the Providence House Directory, the occupants living inside the house from 1895 onward were easily ascertained. From 1895-1896 members of the house included Robert Ives Gammell

(manufacturer), Anthony Breslin (cook), and Fred C. Phillips (butler). In 1897, the directory gave this description: "Mr. and Mrs. Robert Gammell, sum. Res. Newport, h."—thus, the couple lived in the house during the majority of the year, but summered in Newport. The same applied in 1898, except there was a Dr. Gammell who joined them during the year. It is interesting that this doctor was not listed as a boarder, but rather was presumed to be a resident/owner. It is unclear who exactly this man was. In any case, he only joined them in the house for that one year, because from 1899-1904 the residents reverted back to being just Mr. and Mrs. Gammell who summered in Newport. In 1905, residents were listed as Robert Gammell, Virgina Gammell (boarder), and C.F. Phelps (butler). The 1906 directory was missing from the collection at City Hall, but in 1907 the only residents were Robert Gammell and his butler, C.F. Phelps. From 1909-1915, the sole resident of the house was listed as Robert Gammell. Furthermore, in 1915, a star indicated that in this year, the house acquired a telephone connection.

From the list of Providence marriages and deaths, it was discovered that Robert Ives Gammell died on January 8, 1915. Although there were some holes in the collection, it is still clear that in 1917, as well as from 1919-1920, the house on Benefit Street was still standing, but vacant of any residents. It seems as if Mrs. Ives did not have the same affinity for the house as her deceased husband; in fact, she had not been living in the homestead since 1904. In 1920, in the Providence Directory, Mrs. Robert Ives was listed as the owner and resident of the house. The Providence House Directory confirmed that she resided in the house from 1920-1921. However, from 1923-1924, the house was again listed as being vacant. By the 1925-1926 edition of the directory, the house is no longer listed at all. Marsden Perry, who had bought the house from Eliza Anthony Hoppin Gammell in 1923, had knocked down the house; "[he] demolished the old homestead of Robert Ives Gammell and made the lawns of the two adjoining estates into a

beautiful lawn such as is now a part of the John Brown Mansion estate lands. Whereas a map of the property from 1921 showed the house as still standing, a map of the property from 1926 confirms the demolition of the house.

Property Deeds

The ability to trace land transactions through archived property deeds provides a further source of evidence about the nature of the changing John Brown House landscape over time. The following descriptions summarize these transactions:

Nicholas Brown sells to W Moses Brown Ives and Robert Hale Ives

DEED: July 30, 1832

"good wishes I feel towards my two nephews"

A certain piece of land, being the western part of the lot, which belongs to the estate of my Honored father, deceased, situated in the town of Providence a little northward of the residence of the subscriber, founded as follows, viz, beginning at the northwest corner, which is at the junction of Benefit and Charlesfield streets, thence running alongside Charles Field street in an easterly direction about two hundred and sixteen feet, thence in a southerly direction to the north east corner of a lot of land conveyed by James Brown Esq to Robert Hale Ives by deed, dated December 7th 1831, thence in a westerly course along said lot to Benefit street, thence northerly along said Benefit street to the first mentioned point at the junction of Benefit and Charles Field streets…

- This was the part of lot which was different and apart from the mansion house. Nicholas Brown gave the land to Nicholas Jr., and Nicholas Jr. gave the land to his two nephews

(everything apart from the section of land where the house was, which was given to Sarah Brown)

recorded July 30 1832

provided to Providence June 8 1832

book 62 deed 84

Robert Hale Ives to William Gammell:

1875

BEQUEATHED from Robert Hale Ives to his daughter, Elizabeth Amory Ives who married William Gammell on Sept 22nd, 1851.

- The bequeath not only included the old mansion house and its grounds but also Robert Hale Ives own homestead at the corner of Benefit and Charlesfield Street—thus giving Elizabeth Amory Gammell a much larger estate on the east side of Benefit Street that possessed of by John Brown.

William and Elizabeth Gammell to Robert Ives Gammell

DEED: Sept 27, 1878

"their free and voluntary act"

William and Elizabeth Amory Gammell…constitute and appoint our son Robert Ives Gammell our house (?) and lawful attorney for us and each of us and in our and each of our names and stead to take the charge care and management of all the property and estate real as well as

personal now of or belonging or which shall hereafter belong to us or either of us with power (?) in said Robert Ives Gammell to sell and dispose of any part or parts of said real or personal estate by public auction or private contract…also to release the power of said Elizabeth Amory Gammell in and to any part or parts of the said real estate.

- Received the house of his grandfather, not the John Brown Mansion. This was estate lands with a homestead at the corner of Benefit and Charlesfield Streets.
- Eventually Marsden Perry would knock this house down: "[he] demolished the old homestead of Robert Ives Gammell and made the lawns of the two adjoining estates into a beautiful lawn such as is now a part of the John Brown Mansion estate lands. The same tract of land as bequeathed by Robert Hale Ives unto his daughter Elizabeth Amory Gammell-wife of Prof. William Gammell" (not sourced).

Eliza Anthony Hoppin Gammell to Marsden J. Perry

DEED: July 6, 1923

"for and in consideration of the sum of $100"

I, Eliza Gammell….by virtue and in exercise of the power and authority vested in me in and by the last will and testament of my husband, Robert Ives Gammell, late of the said city of Newport, deceased, and for and in consideration of the sum of $100 and other valuable consideration to me paid by Marsden J. Perry…herein after called the grantee.

Beginning on the southeasterly corner of Benefit Street and Charlesfield Street; thence easterly, bounding northerly on Charlesfield Street 265 and 29/100 feet, more or less, to land now or

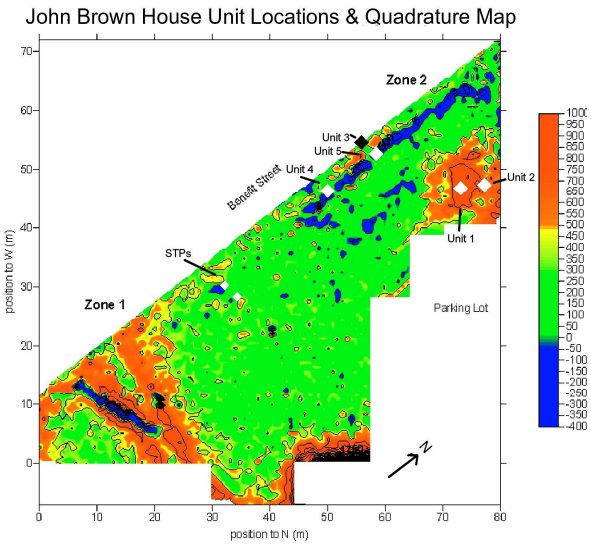
lately of Rhode Island Episcopal Convention (congregation?); thence southerly bounding easterly on said last mentioned land 132 and 28/100 feet, more or less, to the land of Marsden J. Perry; thence southwesterly, bounding southeasterly on said Perry land 137 and 52/100 feet, more or less, to Benefit Street; thence northwesterly, bounding southwesterly on Benefit Street 220 feet, more or less, to the point of the beginning.

- She is also known as Elizabeth Anthony Hoppin Gammell, and was the widow of Robert Ives Gammell. The property transferred was her deceased husband's "homestead estate at the corner of Benefit and Charles Field Streets." Marsden Perry would eventually demolish the building on this property, creating a landscape similar to the modern one (unsourced history).

Archival Evidence and the Archaeological Record

How does this documentary research relate to the excavation site?

These findings are very important as they give important contextual information to our excavation units. Not only do we have an idea of the structure that once stood on our site, but we also have a better understanding of who was living in the house. Throughout the semester, we dug in five different excavation units—two of the units ran along Charlesfield Street, while the other three units ran along Benefit Street. We had initially decided to dig the units that ran along Benefit Street as a result of a preemptive geophysical survey.



As indicated by the results from the survey, there are at least two main areas of interest. The blue running along Benefit Street, where we set up units three, four, and five, seemed to indicate the possibility of a linear, underlying, uniform feature. As well, the red circular area where we set up units one and two showed what appeared to be the footprint of an archaeological structure. Based on no other previous knowledge, excavation units were decided upon in this manner.

The geophysical survey was an important indication for future work. This survey very much correlates to structural design of the Ives homestead. The blue zone shown above is in the same spot where one of the outside walls of the homestead might have been. Furthermore, the red zone shown above appears to be in a similar location as the outhouses shown in the maps which were once built for the homestead.

Upon review of the artifacts found each unit, evidence appears to lend support to these claims. Excluding unit three which was deemed mostly irrelevant (as it was not in line with unit 4 or what now appears to be the wall of the homestead), unit four and five uncovered important finds. Besides evidence of ceramics, porcelain, and bottles which all indicate the use of a dining area

within a homestead, architectural evidence like mortar, bricks, and nails were all uncovered. Unit 4 was interesting because the western part of the unit to the left of a rock feature (closest to Benefit Street) contained smoother soil and less large pieces of architectural artifacts, while the eastern part of the unit, to the right of the feature, was full of large pieces of mortar and brick. Perhaps the rock feature marks the outside limit of where the homestead's wall once stood. Unit 5 contained similar rocky soil and architectural evidence.

Units 1 and 2 also seem to correlate with the map evidence of the homestead. Along the Charlesfield side, the maps indicate that there were once outhouses behind the actual residence. The excavation units appear to lend supporting evidence to the maps. Unit 1 artifacts included a lot of trash, lending credence to the presence of some sort of privy; the outhouses could have definitely been used for this purpose, after all, the trash had to go somewhere.

Unit 2, as shown below, more specifically showed evidence of what might have been present in the outhouses. The water pipe in the middle of unit 2 could have definitely been an assemblage of an outhouse building. As seen from the 1908 plat map, there were sewage lines running in a semicircular route between the homestead and the outbuilding—perhaps this feature is related.


In addition to the feature, a pile of bricks was also found in this unit. One of the bricks was branded by the Sayre and Fish Company which indicated that it was produced after 1870, probably sometime around 1905. This brick, along with the others around it, corresponds to map evidence of that the outhouses were brick as well as to a brick wall between the homestead and outhouse, which was probably built sometime between 1889 and 1900 in a similar location to the unit.

Chapter 1. Historical Background

Works Cited

Cady, John Hutchins. "Walks Around Providence." The Akerman-Standard Press; Providence, RI.: 1942.
Conley, Patrick T. "An Album of Rhode Island History, 1636-1986" The Donning Company/Publishers; 1992.
Gibson, Susan G. "Archaeological Resource Study: Roger Williams National Memorial, Rhode Island." 1979.
Haley, John Williams. "Providence Illustrated Guide." Hayley & Sykes Company; Providence, RI.: 1931.
Hopkins, Charles Wyman. "The Home Lots of the Early Settlers of the Providence Plantations, with Notes and Plats." Providence Press Company; Providence, RI.: 1886.

Recorder of Deeds and Land Evidences Office and City Hall Archives Office. Various Deeds, Book and Number provided in embedded references. Providence City Hall. Providence, RI. Accessed 14 October 2008.

Recorder of Deed and Land Evidence and City Hall Archives Office. Providence Platbook 1875, 1908, 1918, 1926. Compiled and published by G.M Hopkins Co., Philadelphia. Providence City Hall. Providence, RI.

Recorder of Deeds and Land Evidences office and City Hall Archives Office.

Map of Providence. Henry E. Walling map, 1857. Providence City Hall. Providence, RI.

Recorder of Deeds and Land Evidences Office and City Hall Archives Office. The Providence Directory. H.H. Brown, 1852-1926. Providence City Hall. Providence, RI.

Recorder of Deeds and Land Evidences Office and City Hall Archives Office The Providence House Directory and Family Address Book, Sampson and Murdock Co., 1895-1926. Providence City Hall. Providence, RI.

Rhode Island Historical Society Maps. Rhode Island maps. Providence, 1882. Atlas of the City of Providence and Environs (Philadelphia: Hopkins, 1882).

Rhode Island Historical Society Maps. Sanborn Fire Insurance Maps. Rhode Island, 1884-1951. Reel 4.

[*Unsourced Figure of Ownership Changes*]. Vol 7 p-51. Uncredited, undated. Black binders in the John Brown House. Accessed 4 October 2008.

Chapter 2. Stratigraphic Analysis of John Brown House Excavation Units

Jacob Combs

Introduction

The study of stratigraphy is an important part of the archaeological process. As Steve Roskams puts in his site-work manual *Excavation*, the maintenance of a thorough and methodical stratigraphic record gives the excavator a full idea of the "physical character and spatial disposition of the stratigraphic units on a site" (2007 [2001]: 153). Roskams argues that the study of stratigraphy does not simply provide the excavator with the means to better describe his or her finds, but rather gives the excavator the opportunity to comprehend artifacts within the "context of deposition and position in a sequence of development of the site" (*ibid.*) This, Roskams believes, is one of the key elements that separate modern archaeology from the treasure-hunting attitude that often characterized the discipline in the past.

During our work at the John Brown House, we excavated in 10 cm contexts. Starting from a datum point, we dug until we reached either a new natural stratum or were 10 cm from the datum point, at which point a new context was declared and recorded. This method combined natural strata and arbitrary contexts, and provided our class with the useful educational experience of carefully monitoring our digging, taking levels, and paying attention to how far down we were into our units. This paper will attempt to reconstruct those natural strata that were encountered during the dig, using final unit wall profiles, excavation notes and field blogs.

The first part of this paper will involve a unit-by-unit appraisal of the different natural strata encountered at the John Brown House. At the end of our time in the field, each unit took photographs of the profile view of their unit's walls and then made a sketch of one of these walls describing the unit's natural stratigraphy. These stratigraphic units will each be designated with

a name, and catalogued in terms of the context or contexts (natural or arbitrary) that defined them during excavation. The second part of this paper will look at strata across units. We opened five excavation units, each delineated in the geophysics results below. As the geophysics data show, Units 1 & 2 as well as Units 4 & 5 probably lie among elements of the same features. Using our stratigraphy results, this paper will attempt to either support or deny the impressions given by the geophysics data.

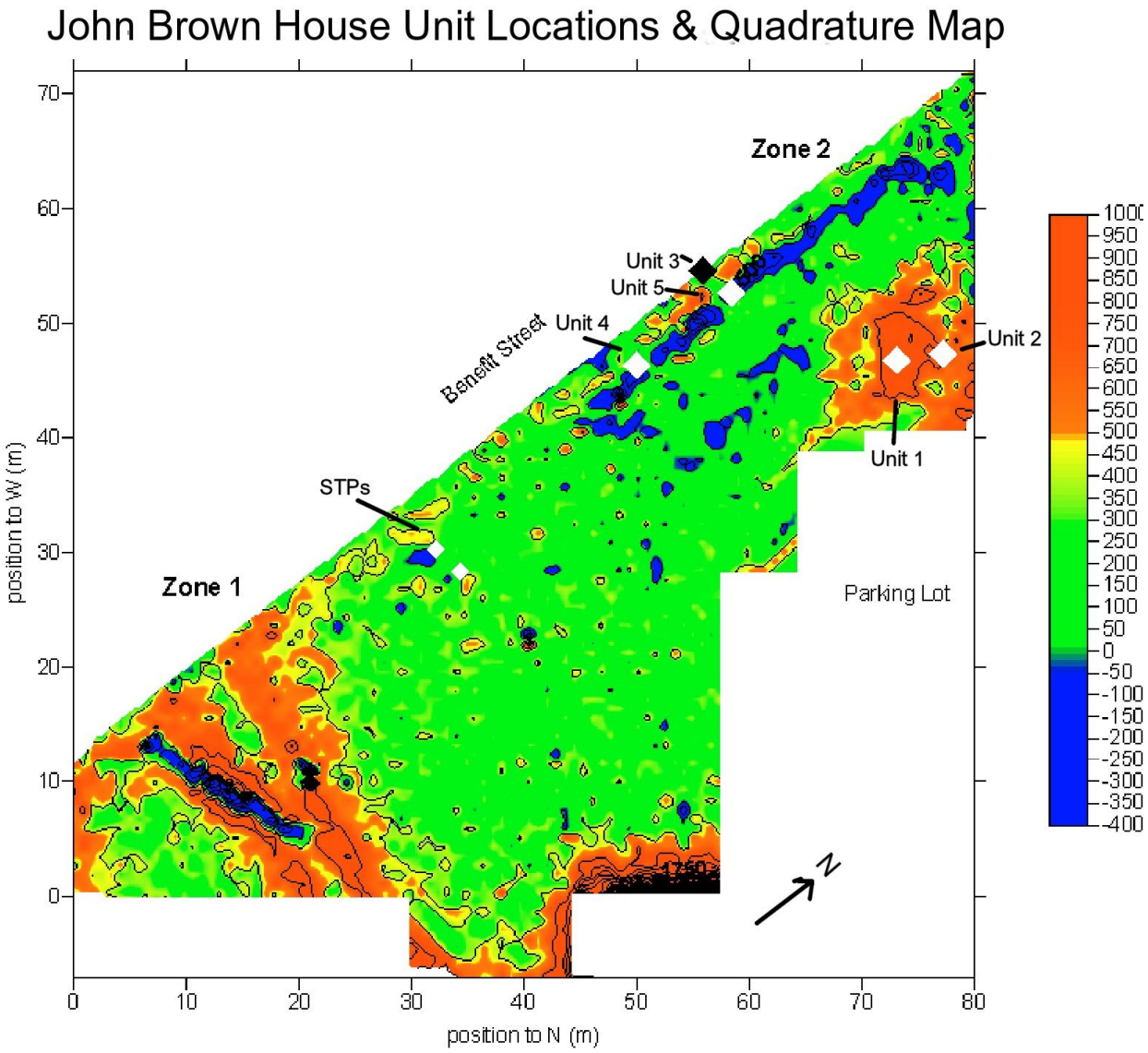
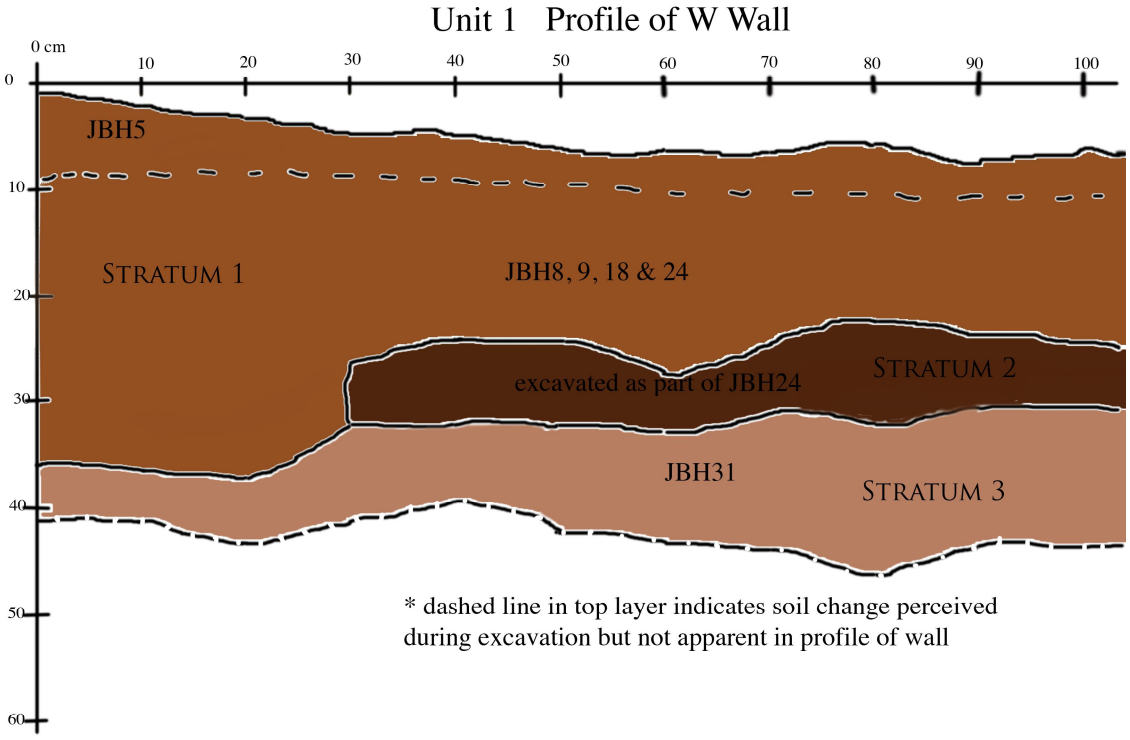


Figure 1: Geophysics results from John Brown House

Unit-by-Unit Analysis

Unit 1

Figure 2: Final profile photo of Unit 1's West Wall



Strata	Contexts	Munsell Value
Stratum 1	JBH 5, 8, 9, 18 & 24	10YR 2/2, very dark brown
Stratum 2	JBH24	7.5YR 3/4, dark brown
Stratum 3	JBH31	10YR 3/4

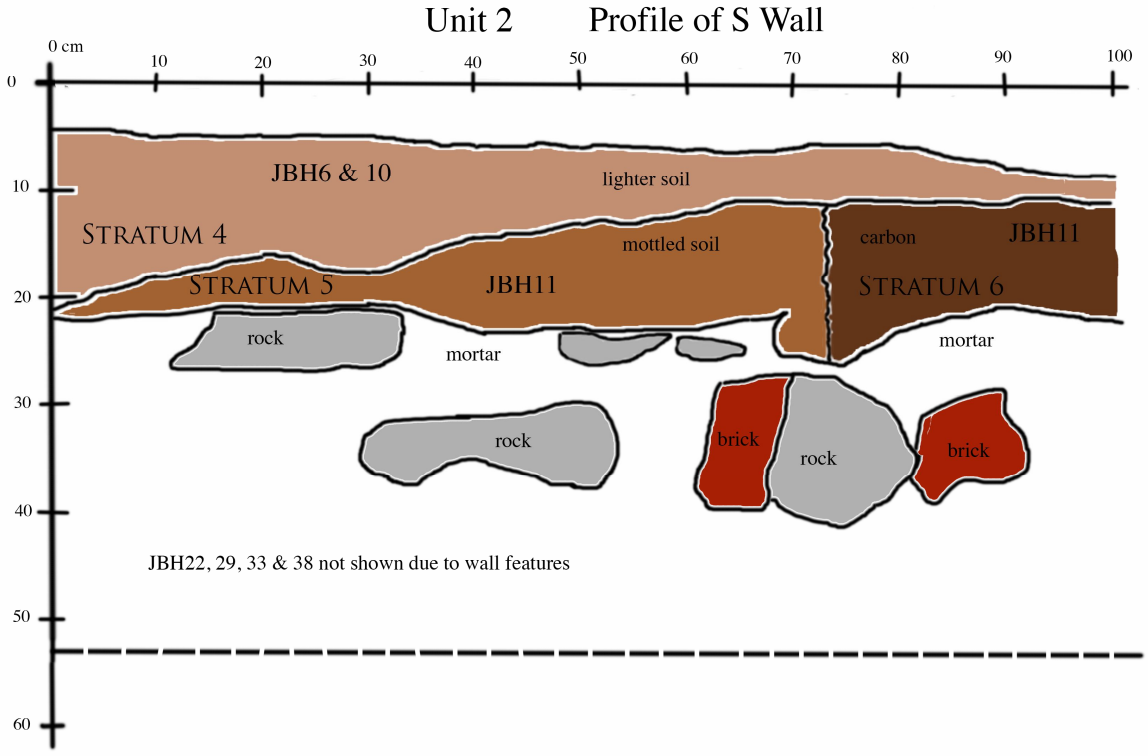
From the first unit, the difficulty of organizing strata based on contexts is already apparent. As the wall profile clearly shows, three strata are visible in Unit 1, marked Strata 1, 2 & 3 in the table above. The dotted line in the diagram shows a soil change that was perceived during digging (hence the differentiation of JBH5 and JBH8) but was not clearly visible in the profile view. As the Unit 1 team's excavation notes explain, JBH5 was clearly topsoil—it was dark brown, not very rocky and easy to dig into. A modern looking screw and two pieces of glass were encountered within JBH5 (Field Notes JBH5). The team then began a new context, JBH8, which they said contained a different natural stratum, one that was more wet and condensed than the soil in JBH5. In this context, the team encountered some small pieces of brick, glass, a few pieces of ceramic and a modern handkerchief (Field Notes JBH8). JBH9, 18 & 24 were all recorded as arbitrary contexts within a single natural stratum. In these contexts the team found a large quantity of modern trash: plastic bags, Easter grass, a milk carton, a McDonald's coffee stirrer, pieces of Styrofoam cups and modern-looking glass (Field Notes JBH9, 18 & 24). After the team had excavated JBH18, they decided to excavate JBH24 as a 20 cm context, with the aim of getting down through what appeared to them to be a layer of modern fill until they reached more historical soil (Field Notes JBH24). During digging, however, the team appears to have missed indentifying Stratum 2, which was present in the wall's profile view but was excavated as part of JBH24. Finally, the team excavated JBH31, a hard compact soil that constituted a natural context. In this context, they encountered a large quantity of coal, some

brick fragments, a few nails and pieces of pearlware and transfer print pottery (Field Notes JBH31).

Unit 1's experience was a bit unique compared to the experiences of the other excavation teams. The stratigraphic information, however, seems rather clear. JBH 5, 8, 9 18 & 24 all make up a single stratum: Stratum 1, the modern fill layer that the Unit 1 team wanted to get through. JBH5 & 8 were probably identified as different strata because of human error—often, when the site gets wet (or conversely when it dries off), identical soils can look different than they did before. Also, it is possible that during the first few weeks of excavation, the team was more careful about looking for stratigraphic changes even when they didn't exist. Stratum 2 could have seemed similar to Stratum 1 during excavation, and was thus excavated as JBH24. Either way, the historical stratum encountered in Unit 1 is clearly Stratum 3, which was excavated entirely as JBH31.

Unit 2

Figure 3: Final profile photo of Unit 2's South Wall



Strata	Contexts	Munsell Value
Stratum 4	JBH6 & 10	10YR 2/1
Stratum 5	JBH11	Not recorded
Stratum 6	JBH11	Not recorded

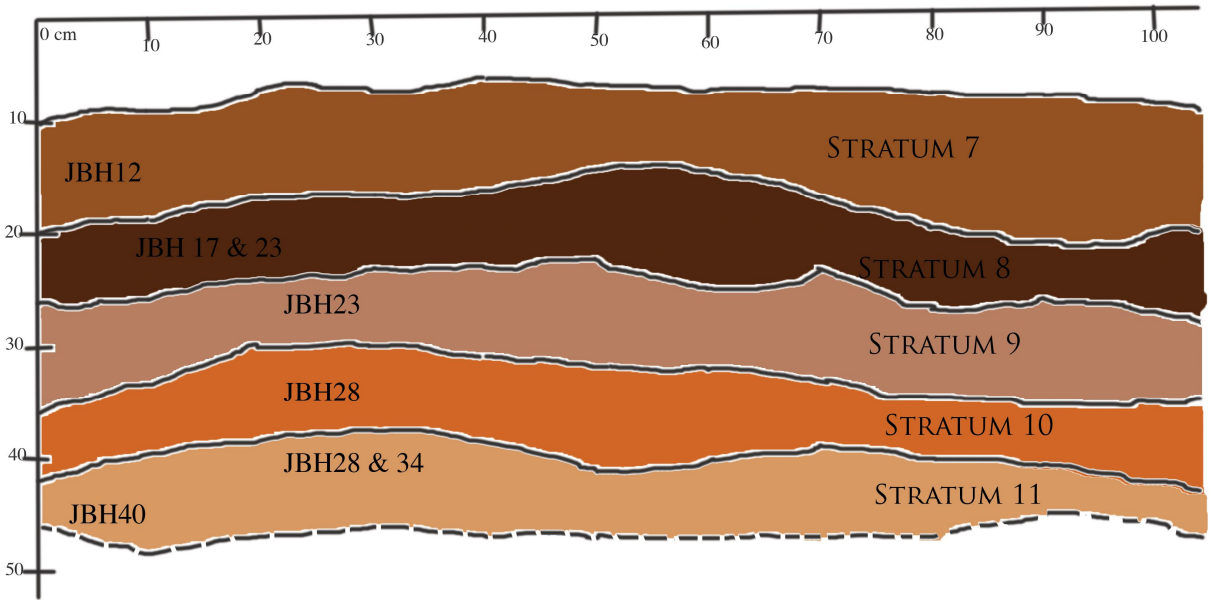
Three natural strata are visible in the south wall profile of Unit 2 along with several wall features. The first, Stratum 4, consists of two contexts, JBH6 & 10. JBH6 consisted of topsoil, and contained a red, machined piece of plastic, screws, glass and bricks. In this context, the excavators began to see signs of the eventual features of the unit—a circular pipe with a spigot handle in the center, and a feature consisting of concrete and bricks in the NE part of the unit (Field Notes JBH6). JBH10 was a much sandier soil that was found mostly towards the northern end of the unit. In the fill soil that comprised Stratum 4, the team found pieces of plastic, a nail and a wooden champagne cork (Field Notes JBH10). Two other natural strata are visible, each excavated as JBH11. JBH11 consisted of mottled soil, and contained a small piece of whiteware. The excavators also encountered another concrete feature and brick with a maker's mark in this context (Field Notes JBH11). While the Unit 2 team was digging, they did not perceive a stratigraphic change between what is marked on the diagram as Stratum 4 and Stratum 5. Because of this, both strata were excavated as JBH11, although the stratigraphic change is clearly visible on the photograph the team took during the last day of digging. The soil composition of Stratum 5, on the left side of the photograph, is much lighter and more mottled than the soil of Stratum 6, which is much darker and contains more carbon.

Because of the distribution of finds in Unit 2, it is easy to imagine that the soil that was excavated has previously been disturbed. The finds that the Unit 2 team encountered during excavation ranged from historic materials such as whiteware to modern plastics and concrete. Because modern finds were present throughout the unit and not only in upper layers of strata, it

can be inferred that this soil was disturbed as some point not too long ago. JBH6 clearly appears to be a fill layer, and it is possible that it was work on the pipes that are apparent in this unit that led to the disturbance in its contexts.

Unit 3

Figure 4: Final profile photo of Unit 3's North Wall



Unit 3 Profile of N Wall

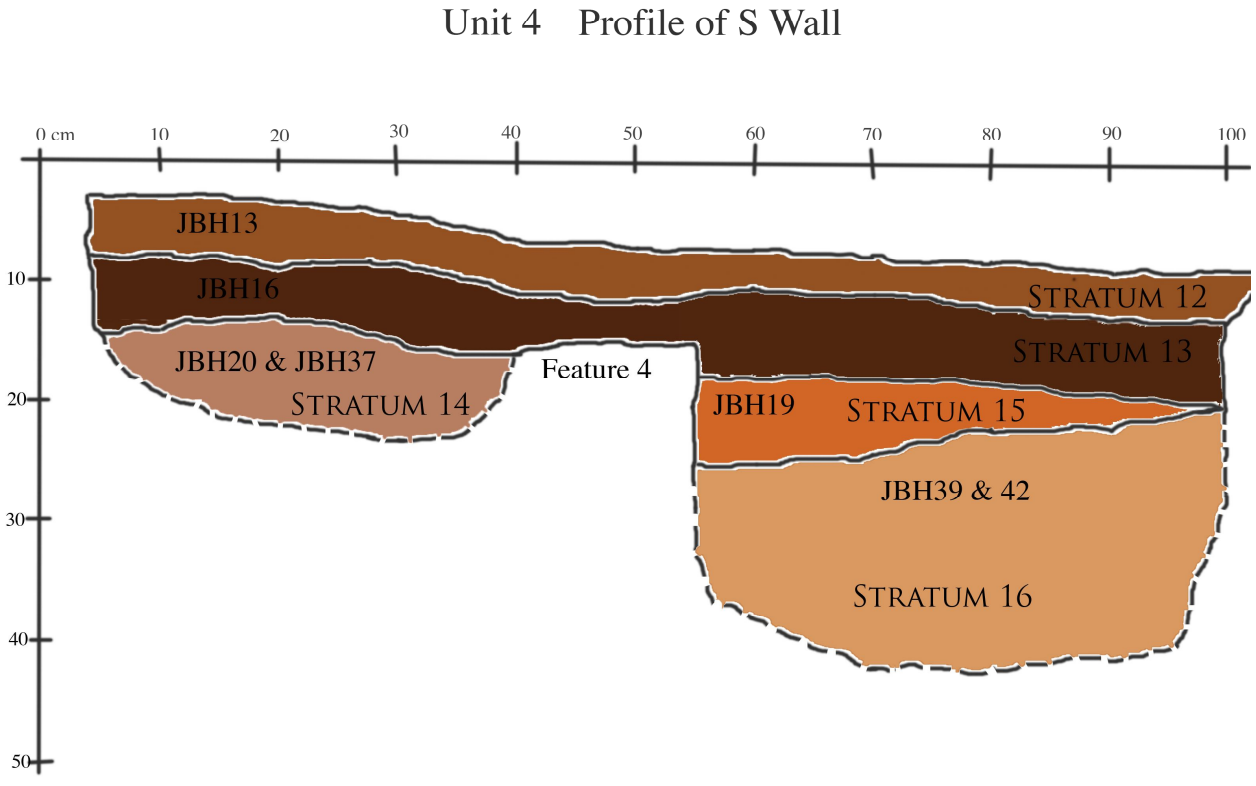
Strata	Contexts	Munsell Value
Stratum 7	JBH12	10YR 2/2
Stratum 8	JBH17 & 23	7.5YR 3/3
Stratum 9	JBH23	7.5YR 3/3
Stratum 10	JBH28	7.5YR 3/3
Stratum 11	JBH28, 34 & 40	10YR 4/6

Five strata can be seen in this unit, although the assignment of contexts is a bit difficult. Stratum 7 consisted of one context, JBH12, and was made up of mostly dark, moist, loamy soil that was easy to dig through. In this context, the team found a rusted nail and some pottery (a mulberry transfer print and a white glazed sherd). They also found the sherd of a tobacco pipe bowl, which appeared to be of 19th century construction (Field Notes JBH12). Right around 10 cm down, they came across a new stratum, Stratum 8, which they designated as JBH17. This context was a mottled yellow-black clay that contained two nails, a piece of glass and more ceramic sherds (this time a blue transfer print with a maker's mark) (Field Notes JBH17). Stratum 9 was recorded in the wall's profile view, but must have been missed during excavation, because JBH23, an arbitrary level, begins in Stratum 8 and continues into Stratum 9. JBH23 contained many pieces of pink sponge-decorated whiteware, a piece of glass, and a few pieces of red earthenware (one glazed green and one glazed blue). This stratum also contained pockets of mortar among the soil and many nail fragments (Field Notes JBH23). The excavators started JBH28 as a new arbitrary context, beginning at around 33 cm, but the beginning of this new context actually coincided with the beginning of Stratum 10 and continued on into Stratum 11. The soil in JBH28 was of a uniform moist, brown quality that contained a fair amount of pebbles. In this context, glass was more prevalent than pottery, and part of a modern key was found, along with a piece of Imari porcelain inlaid with gold leaf (Field Notes JBH28). JBH34, identified by the excavators as a new natural layer, lay entirely within Stratum 11. In this layer,

a lighter, tougher clay-like soil, the team found nails, coal, brick and a few stray pottery bits (Field Notes JBH34). A new context, JBH40, which contained a red clay soil, was identified right at the bottom of Stratum 11, but only about 2 cm of the context were excavated before digging stopped (Field Notes JBH40).

Unit 4

Figure 5: Final profile photo of Unit 4's South Wall



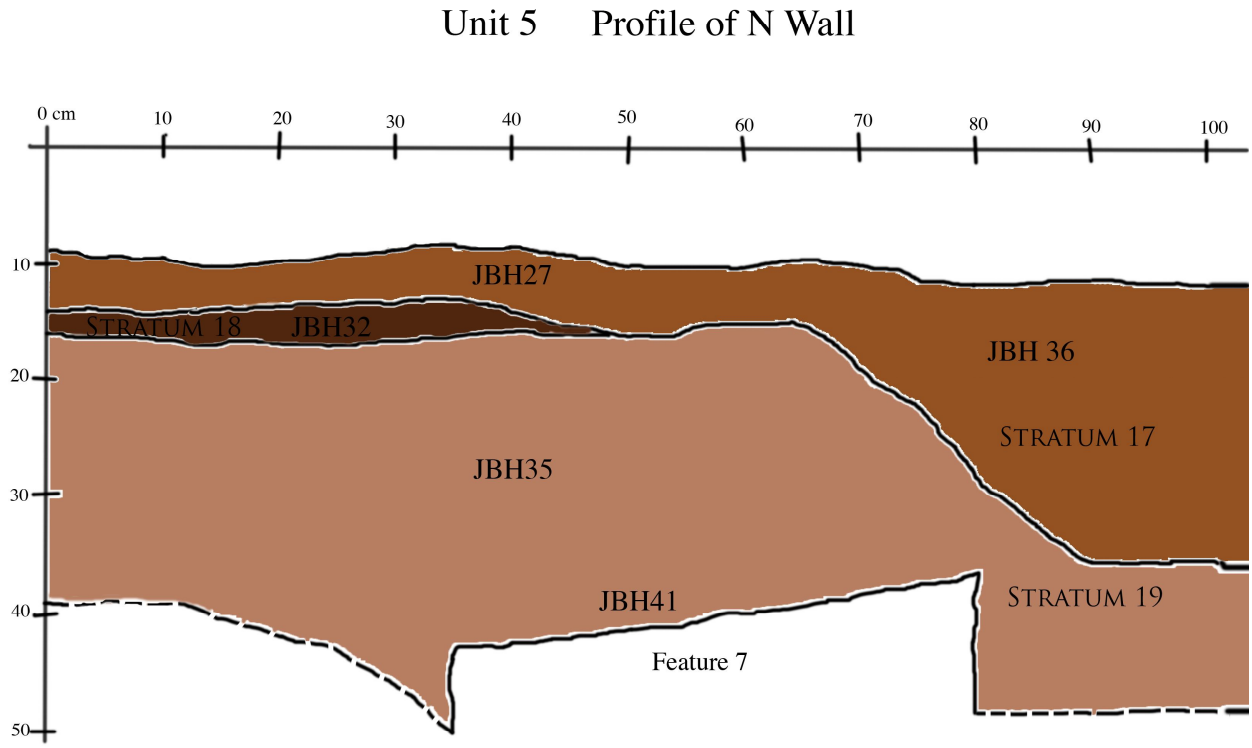
Strata	Contexts	Munsell Value
Stratum 12	JBH13	7.5YR 2.5/1
Stratum 13	JBH16	10YR 2/1
Stratum 14	JBH20 & 37	10YR 3/2
Stratum 15	JBH 19	10YR 3/2
Stratum 16	JBH39 & 42	10YR 3/2

Unit 4 contains five stratigraphic units, and is separated in the middle by feature 4. Stratum 12 consists entirely of JBH13, a loose topsoil in which the excavators found modern debris such as a plastic pen and two pennies from 1967 and 1971 (Field Notes JBH13). The second stratum, Stratum 13, contained JBH16, a much darker, gravelly layer. This context contained pieces of glass, brick, coal and undecorated creamware. At the bottom of this stratigraphic unit, the excavators uncovered feature 4, a large, flat stone in the middle of the unit. They then dug on either side of the feature in different contexts (Field Notes JBH16). Stratum 14 consists of two contexts, JBH20 & 37, which were excavated on the eastern side of the feature. JBH20 contained very rocky soil and some pockets of sand in the northeast corner. Nails and mortar were found, along with two large bricks (Field Notes JBH20). JBH37 was an arbitrary level that continued in the same stratum as JBH20, and digging within this context revealed more of the feature (Field Notes JBH37). Stratum 15 lay on the western side of feature 4, and consisted entirely of JBH19. JBH19 was opened as an arbitrary layer, but ended up coinciding mostly with Stratum 15. The soil in JBH19 was mottled, and the excavators found a large nail, some glass and brick and two sherds of ceramic (Field Notes JBH19). Stratum 16 was the final stratum encountered in Unit 4, and consisted of two contexts: JBH39 & 42. JBH39, another arbitrary context, contained pieces of ceramic, glass and coal (Field Notes JBH39). JBH42, also an arbitrary context, contained soft soil with small pieces of gravel in which the excavators found pieces of ceramic, coal, brick, glass and nails (Field Notes JBH42).

This unit is a good example of the diversity of soils that can be found in a very small area. Clearly, the discovery of the feature in the middle of the unit complicates the stratigraphy, and the difference between the soil to the west and the east of the feature is quite pronounced. In fact, this difference can be seen even in the final photograph of the wall. JBH37, the final context to the east of the feature, contains very rocky soil, while the final context to the west of the feature, JBH42, contains much softer and darker soil.

Unit 5

Figure 6: Final profile photo of Unit 5's North Wall



Strata	Contexts	Munsell Value
Stratum 17	JBH27 & 36	7.5YR 2.5/1
Stratum 18	JBH32	Not recorded
Stratum 19	JBH35	10YR 5/3

Three strata can be clearly seen in the profile of Unit 5's north wall. The first, Stratum 17, contained both JBH27 & 36. JBH27 was a layer of topsoil with mostly sandy silt and gravel (Field Notes JBH27). Two new contexts were encountered below JBH27: JBH30, which lay in strips on the west and east walls of the unit, and JBH32, which lay in the middle of the unit. JBH30, a dark grey brown soil that was fragile and loose, did not touch the north side of the unit, hence its absence in the wall profile (Field Notes JBH30). JBH32, however, which can be seen in the wall profile, comprised a new stratum, Stratum 18. JBH32 was very gravelly with sandy yellow patches, and inside this context the excavators found pieces of two bricks, one with a maker's mark on it, a piece of ceramic pipe, some white glazed ceramic and a piece of glazed red earthenware (Field Notes JBH32). The next context they encountered, JBH35, lay below JBH32, and consisted of sandy soil that was significantly more yellow than JBH30 or 32. JBH35 comprised a new stratigraphic layer, Stratum 19. The soil in JBH35 was very loose, and the context contained a few large stones in the center that were surrounded by crumbling mortar (Field Notes JBH35). The next context that the excavators encountered was JBH36, which consisted of the same soil type that had made up JBH27 but actually lay below JBH30 (Field Notes JBH36). Because JBH30 did not appear on the stratigraphic profile of the north wall, JBH17 and JBH36 appear to both be part of Stratum 17. Only one other context, JBH41, was encountered, which consisted of a layer of architectural rubble that the excavators uncovered

above Feature 7. This context does not constitute a new natural stratum, since it was most likely bits of the feature that had come off.

As one of the excavators of Unit 5 put it, the unit contained "convoluted contexts."[2] Essentially, the north wall of the unit reveals three distinct stratigraphic layers before Feature 7 is encountered. The confusion about JBH27 & 36 being a part of the same stratum comes from the fact that JBH30 was encountered as a distinct context between JBH27 & 36 but did not show up in the wall profile. Because JBH27 & 36 contained the same soil type, however, it is fitting that they would constitute the same stratum. The other two strata are a bit more self-explanatory, and follow the natural contexts unearthed by the excavators. This unit is a great example, however, of how complicated different contexts can become in an area as small as a one square meter unit.

[2] Elise Nuding's field blog, 10/27/08, http://proteus.brown.edu/archaeologyofcollegehill/6387

Comparing Strata Across Units

Comparing stratigraphic layers between units is incredibly valuable—it allows the excavation site to be considered as a whole instead of treating units as individual entities. In this way, it provides some help against 'exploding' the site, a process in which "the constituent elements of the site and its artefacts…become disengaged" (Jones 2003: 42), by maintaining to some extent the original relationships between the objects found during excavation. Our work at the John Brown House involved excavation units that were relatively small, only 1m x 1m. Units 1 and 2, like Units 3 and 5, were only around half a meter away from each other, and yet great changes in stratigraphy can be seen between Units 3 and 5, while similarities in stratigraphy are apparent between Units 1 and 2. For this reason, it is useful to consider these units in comparison with each other.

When we began our work at the John Brown House, the positioning of our units was greatly influenced by the geophysics results. Units 1 & 2 both lay on the same red-orange patch, indicative of a region with high conductivity, while Units 4 & 5 lay on a blue line, a region with high resistance. Unit 3, although located close to Unit 5, is not on this area of high resistance. Although we did not know much before we began excavation other than the fact that the area of high resistance might be some sort of building foundation, it was clear that regions of interest would be under these two pairs of units. It is not surprising, then, that significant similarities can be seen between the stratigraphies of Units 1 and 2 as well as Units 4 and 5.

Units 1 & 2

Both Units 1 & 2 were replete with modern trash, a phenomenon that occurred through most of the excavated strata. Because of these modern items, it seems reasonable to assume that

the top layer of both units, Stratum 1 (in Unit 1) and Stratum 4 (in Unit 2) were part of the same fill layer. Finds in these strata included modern screws, a handkerchief, a Mister Donut cup (shown to the right below) and foil wrappers in Unit 1, along with a piece of plastic and a champagne cork topper in Unit 2. The Munsell value, a three part color system that uses hue, value (lightness) and chroma (purity of color) to differentiate between different soils, is 10YR 2/2 for Stratum 1, while the value for Stratum 4 is 10YR 2/1. A possible hypothesis for the similarity of these units would be some sort of construction or maintenance activity, perhaps on the piping that was encountered in Unit 2. The original construction dates of those pipes (early 20th century, according to a man who visited the site on our community archaeology day[3]) greatly predate the refuse that were found in the two units, but maintenance of the pipes is certainly possible. The fact that the fill soil is similar between the two units, in addition to the general dispersal of the modern trash without the strata, lends credence to the idea that this soil has been disturbed since it was first laid down.

Drawing analogies between the deeper strata of the two units is a bit more complex. Contexts in Unit 2 got rather convoluted once features were revealed. Munsell values for these lower layers, however, all fell within the 10YR range, usually from 10YR 4/3 to 10YR5/6. The

[3] Personal correspondence with Megan Algeo, Dec. 14, 2008

Munsell value for Stratum 2, within Unit 1, was 7.5YR 3/4, which makes any connection between this stratum and those of Unit 2 unlikely. The final stratum of Unit 1, however, Stratum 3, had a Munsell value of 10YR 3/4, similar to those of the contexts surrounding the features in Unit 2. It is possible that there is some connection between Stratum 3 and the contexts around the features in Unit 2, especially considering the continuity of brick found between the two units (both visible in the wall profile photographs). This connection, however, is not quite as strong as the one between Stratum 1 and Stratum 4, mostly because the stratigraphy around the features in Unit 2 got very complicated and wasn't recorded on the final day of digging.

Units 3, 4 & 5

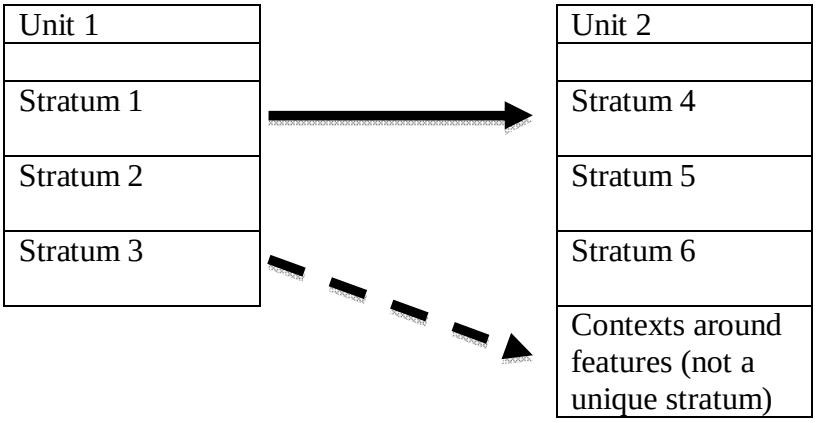
Comparisons between Units 3, 4 and 5 are a bit more complex to make. From the geophysics data, Units 4 & 5 appear to lie along the same highly resistive feature, while Unit 3 lies outside that feature. Once more, the top layer of both units, Stratum 12 in Unit 4 and Stratum 17 in Unit 5, are probably a continuous stratum. The Munsell value for the two soils is identical (7.5YR 2.5/1), and both team's descriptions of the soil are similar: "dark soil with gravel" for Unit 4 and "sandy silt and gravel" for Unit 3. This stratum could be another fill layer similar to the one in Units 1 & 2—Stratum 12 contained 2 pennies dated 1967 and 1971 (shown to the right above). The final strata of Units 4 & 5, Strata 14 and 16 in Unit 4 and Stratum 19 in Unit 5, however, are of the most interest. Although the Munsell values aren't

exactly the same—10YR 3/2 for Strata 14 and 16 as compared to 10YR 5/3 for Stratum 19, the three strata should be considered with regard to one another. Although Strata 14 and 16 have the same Munsell value, they are dramatically different in composition: Stratum 16, which lay on the west side of Unit 4, had much smoother soil, with only small pieces of gravel, than Stratum 14, which lay on the west side of the feature and had very rocky soil. Stratum 19 was composed almost entirely of this rocky soil—in fact, the final context in that stratum, JBH41, consisted only of architectural rubble, and was probably composed of bits of the feature that had come off. Because of the differences in soil, Stratum 14 and 19 seem somewhat related, with Stratum 16 being distinct. This is not surprising, given the geography of the site. As the geophysics data shows, Unit 4 is just a bit offset from the resistive feature, while Unit 5 is almost directly on top of it. This feature, which could be some sort of foundation or construction ditch, is most likely the source of the rocky architectural rubble found in Stratum 19 and Stratum 14. Stratum 16, on the other hand, is to the west of the feature, hence its smoother soil composition.

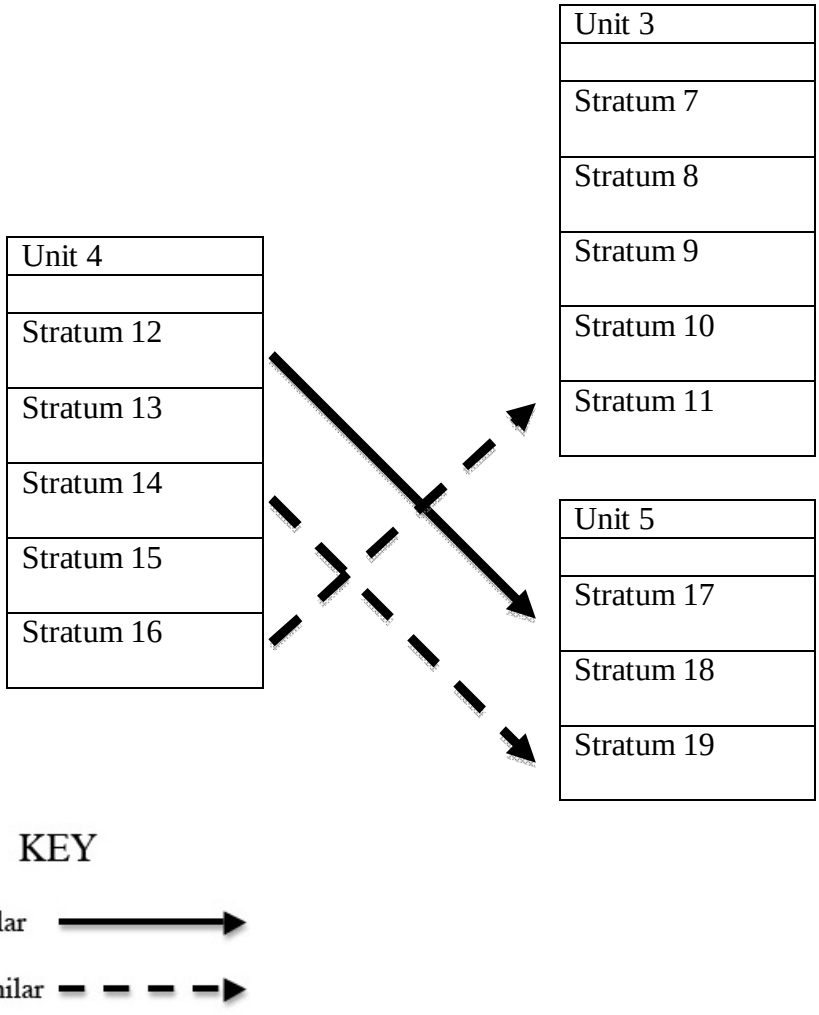
The shallower strata of Units 3 and 4 show less correlation to each other, but the bottom layers have similar Munsell values. In this vein, Stratum 16, with a Munsell value of 10YR 3/2, and Stratum 11, with a Munsell value of 10YR 4/6, show some similarity to each other. As with the comparison between Units 4 and 5, this makes sense considering the geography of the Units. Stratum 16, which lies to the west of feature 4 in Unit 4, is comprised of dark, brown, loamy soil, while Stratum 11 in Unit 3, which is completely removed from the resistive feature, had moist, uniform brown soil. In this way, Unit 4 was an interesting cross-section of similar strata in both Units 3 and 5. Because Unit 4 was bisected by feature 4, the bottom stratum to the west of the feature resemble the bottom stratum in Unit 3, while the bottom stratum to the east of the feature

represents that of Unit 5. Unit 4, then, is an excellent example of the complexity of strata that can exist in just one square meter of an excavation site.

Strata correlation between Units 1 & 2



Strata correlation between Units 3, 4 & 5



Conclusion

First and foremost, the aim of this course has been to introduce a group of budding archaeologists (or perhaps archaeology enthusiasts) to the practices of the discipline. Naturally, the work that we did at the John Brown House is important in its own right archaeologically, but a significant portion of the class was directed towards education and helping us as students to understand the methodologies of fieldwork and labwork. During our fieldwork, the decision to dig down in 10 cm arbitrary contexts was an educational tool: it encouraged us to move slowly and methodically through our work (for the most part), and forced us to be conscious about changes in the stratigraphy we were encountering. Our use of arbitrary contexts did make stratigraphic analysis a little bit more challenging. As I can say from first-hand experience, detecting stratigraphic changes in soil composition can be very difficult. Because of this, the wall profile that each unit drew up at the end of excavation did not always (or even often) match the stratigraphic notes taken during excavation.

To a large extent, the work that we've done at the John Brown House this semester is a work in progress—next year's class will pick up where we left off, and they will have the opportunity to excavate some of the units that we had to fill up just as things were getting interesting, such as Units 1 and 5. This stratigraphic analysis, for instance, will have to be modified after excavation next year to reflect the new data gleaned by that year's class. As always, archaeology is a continuous process—there is never any point at which one can declare a site "fully excavated." As we have learned from this course, lab work is just as essential as fieldwork, and even if one could remove every artifact from a site (which is, of course, next to impossible), the need to analyze and reinterpret would always exist. In describing the archaeological process, Gavin Lucas asks, "Why are we so professional about creating an

archaeology devoid of us?" (Lucas 2001: 13). In this course, we have tried to work against that idea. Our field blogs are an excellent example of a means by which we aimed to remain connected to our excavation. Our work at the John Brown House has been valuable for us as students, but as we learned from the frustratingly short time we were able to spend in the field, there is always more to explore and discover.

Chapter 3. Excavation Summary – Unit 1

Alexander Ruby

Introduction

Unit 1 was the first full excavation unit started at the John Brown House site this fall 2008 season. Over the course of the semester, it provided not only many challenges to our group of young archaeologists, but also many chances to experience a broad array of archaeological practices and procedures. Not only was the Unit 1 team faced with the task of leveling an excavation unit that spanned the bank of a large depression in the ground, but we subsequently passed many weeks digging through context layers that comprised a midden of modern material only to then come upon an historic context layer appropriate to our intended period of study. Unit 1 did not always provide the greatest level of relevant discoveries if one considers that this land was owned by some of Providence's most prominent and historic names, but one would be hard-pressed to find a unit that had higher levels of "interesting" artifacts. The excavations of this fall ended just as Unit 1's history began to truly reveal itself, and it will certainly take more exploration to craft a full history of this part of the John Brown House property. That said, a summary trip through the context layers of Unit 1 provides a wealth of information that indicates possible uses for this land and that can tell us that much more about the history and archaeology of College Hill.

Excavation Methods

Unit 1 was excavated in the same manner as all excavation units at the John Brown House site. While the Unit 1 team originally comprised four people—Jacob Combs, Maggie Ewing, Moira Kyweluk, and myself—Moira left after week three to help open a new excavation

unit (Combs, 9/29/08). Like the other excavation units, Unit 1 was a 1m x 1m square with a datum point (the highest corner of the unit) at the southeast corner.

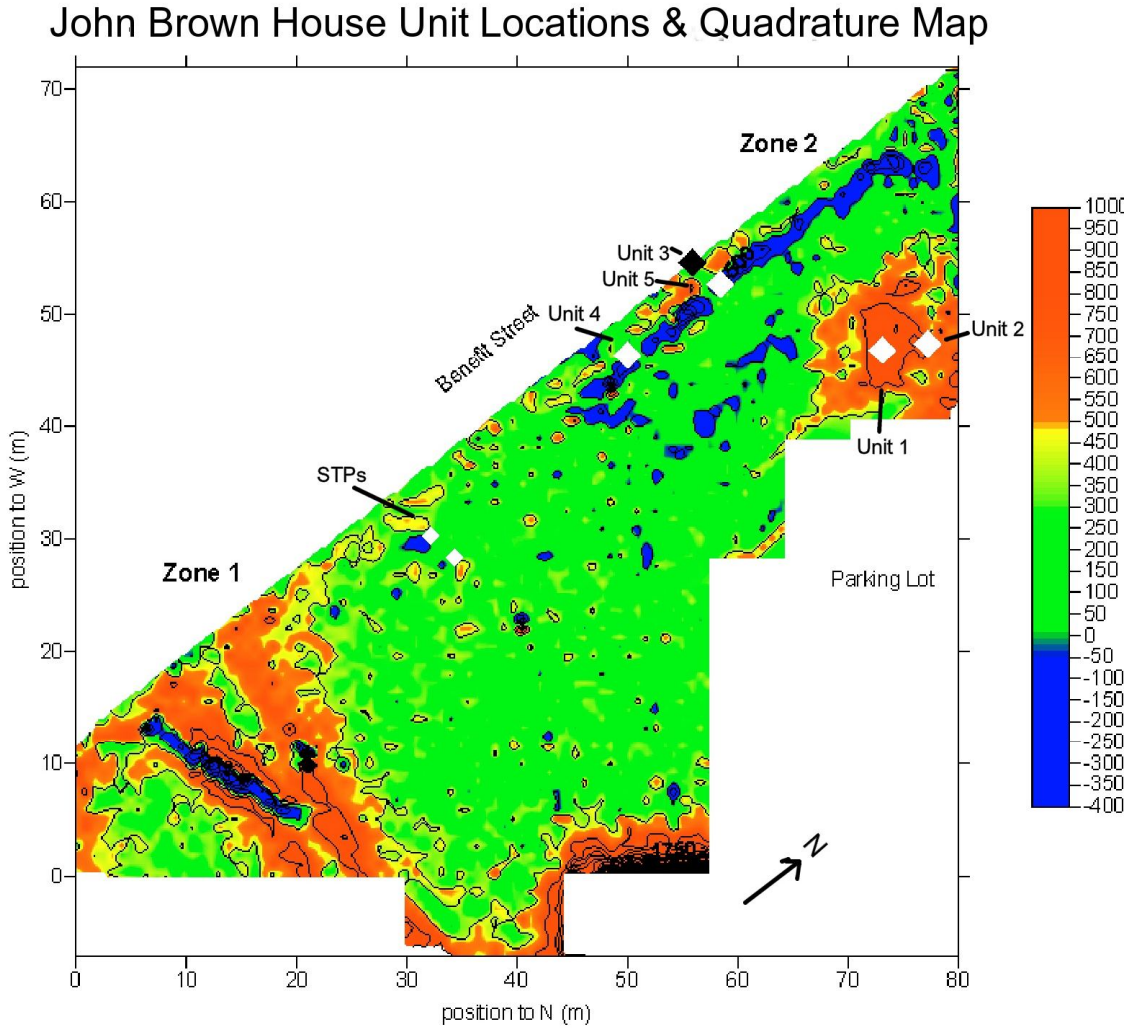
Placement of the Excavation Unit

The placement of excavation units is a crucial early step in any archaeological dig. It is usually impossible to excavate an entire area, so one must be selective with respect to where one digs holes. As Unit 1 was the first excavation unit assigned to any area, it was clear that there were some key reasons for its placement. The two strongest reasons for placing Unit 1 in the northern region of the John Brown House yard relate to the soil depression upon the edge of which it straddles, and to the geophysical analysis of the yard performed in the first week of the fall excavation season.

The depression in the yard is one of the most obvious soil disturbances one can see in the whole property. The soil makes a natural bowl, and the depression is surrounded with a series of protruding, shaped rocks that appear to create a border around it. The rocks are not naturally occurring, especially in that pattern, which indicates human activity in this area of the yard. Furthermore, depressions in the soil generally indicate some disturbance of the naturally packed soil that has been filled in with looser fill soil that then forms the characteristic dip as it settles. For these reasons, this area was of particular interest because it seemed a likely candidate for finding evidence of human activities.

In addition to the visible reasons to dig where Unit 1 was placed, the geophysical evidence also made it clear that this might be a prime spot for finding something of interest. During the first week of excavating, a geophysical analysis was conducted which revealed many potentially interesting features across the John Brown House site. In the area of Unit 1, the

geophysical analysis appeared especially red (on a green background; see map below), which represents the presence of particularly conductive substances below the surface (such as metals, etc.). Thus it was concluded that there may be some important, conductive structure below the surface that had been covered with fill soil, creating a depression. Unit 1 was placed along the border of the depression to examine any differences between the depression's edge and interior, while Unit 2, which was started one week after Unit 1, was placed one meter away, slightly to the northeast, and more centrally within the depression.



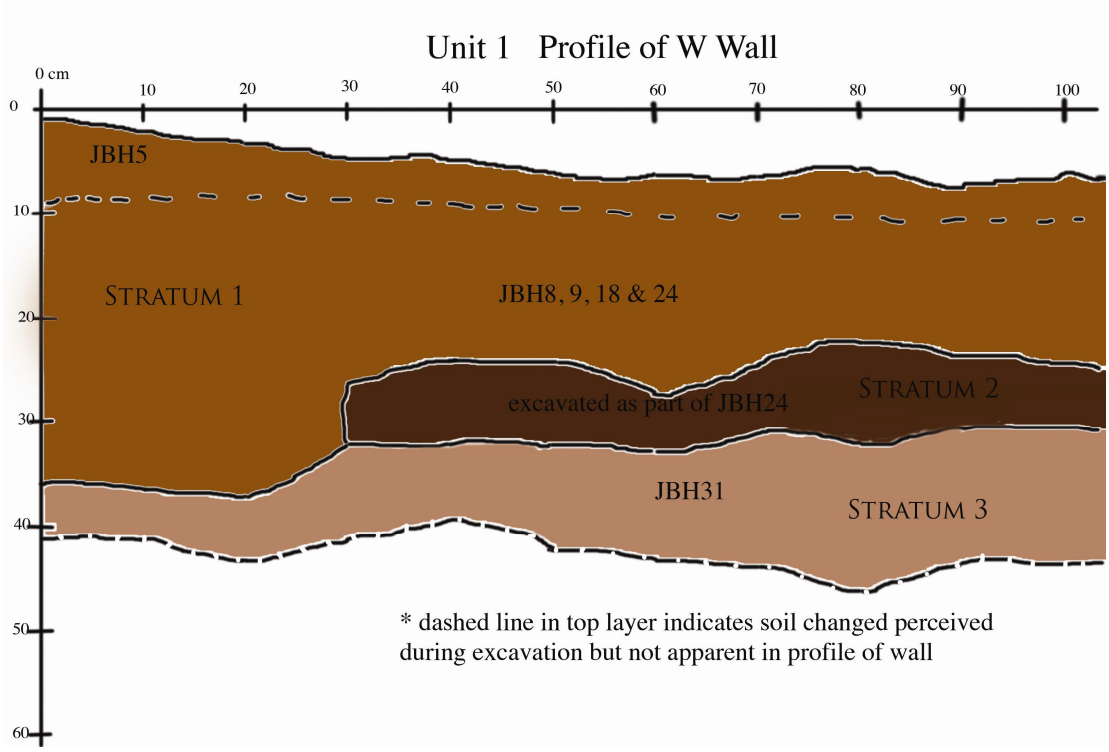
Geophysical analysis of the John Brown House site. Unit 1 appears in the northeast portion of the yard, near the top-right corner of the image. The red color around Unit 1 signifies high levels of conductive material in the ground.

The Stratigraphy of Unit 1

As it was alluded earlier, it is common in archaeological digs to divide the excavation unit into separate contexts, even arbitrary ones of the same soil type, in order to facilitate organization, only to merge certain contexts into larger strata (based on soil type, stratigraphic drawings, and artifact types) once the dig has been completed. The overall stratigraphy of the unit can then be used to demonstrate visually a timeline of activity in that unit or to explain differences between different parts of a unit. In the case of Unit 1, six context layers were assigned over the course of the excavation period: JBH 5 (the initial context layer, including the sod covering), JBH 9, JBH 8, JBH 18, JBH 24, and JBH 31 (JBH stands for John Brown House). The stratigraphy of Unit 1 is interesting in that it does not fully coalesce with the real-time analysis of the excavation team when digging was taking place, but it does provide a fairly straightforward and supportive view of many of the conclusions one can suggest for the overall history of Unit 1 as we know it thus far. Therefore, before any context-by-context analysis of Unit 1 takes place, it is prudent to understand some key aspects of this stratigraphy.

Only one stratigraphic drawing of Unit 1 was completed before soil was backfilled into it. This drawing was made on November 10, 2008, of the western wall of the Unit (Ruby, 11/10/08). The image, courtesy of Jacob Combs, identifies three strata that make up the whole of Unit 1: Stratum 1, Stratum 2, and Stratum 3. Stratum 1 includes JBH 5, JBH 9, JBH 8, JBH 18, and part of JBH 24. Stratum 2 includes the rest of JBH 24, and Stratum 3 comprises all of JBH 31. As it will become clearer as descriptions of each context layer are presented, JBH 5 and JBH 9 were considered the same soil type and were only declared separate contexts arbitrarily

due to the rule of declaring a new arbitrary context every 10cm. Conversely, JBH 8 was considered a new soil context that was followed with the arbitrary contexts of JBH 18 and JBH 24. Finally, JBH 31 was an entirely new soil context altogether and was considered the most historical context the Unit 1 team encountered. This breakdown, however, conflicts with the grouping of strata on the stratigraphic drawing (which is in turn based on soil layers seen in the side of the western wall of the Unit). The two main discrepancies concern the difference defined between JBH 5/9 and JBH 8/18/24 and the division of JBH 24 into two strata. The former discrepancy is resolved by the fact that the Munsell values of all five of these contexts was the same (10YR 2/2), and one can attribute the declaration of a new soil type to either an overzealous and inexperienced dig team or perhaps to some initial perceived differences that were more likely based on the sod layer discoloring the very tops of the contexts JBH 5 and JBH 9. The latter discrepancy, that of JBH 24, is probably due to either the fact that Stratum 2 corresponds to where a large root abutted the western wall and discolored the soil (causing a new perceived stratum) or to the tentative conclusion that the bottom of JBH 24 was used as a fire pit—a situation that will be explained further later on, but which could certainly cause some changes to soil color. The stratigraphic drawing includes all of these discrepancies while staying true to the actual strata seen along the western wall of the unit upon the last day of digging this fall season. In the analysis of the history of Unit 1, Strata 1 and 2 will be considered together as part of the same modern midden in fill soil that highlighted the Unit 1 experience for most of the fall.



Descriptions of Individual Context Layers of Unit 1

For a large part of the remainder of this unit summary, a context-by-context description of Unit 1 is provided in order to give a clearer picture of how this fall excavation season progressed and what was learned along the way. For each context layer, facts about that layer (depth below datum, Munsell values, etc.) are listed. Furthermore, a short description of that context's highlights is given, along with some analysis of the artifacts found in that context and how the context relates to the overall John Brown House site. Photos of the context or its artifacts are also presented. Finally, a spreadsheet listing the artifacts of that context is included to enhance one's appreciation for the diversity of objects found in Unit 1 and to demonstrate how some of the dating of context layers took place. An artifact printed in **bold** in a spreadsheet represents the artifact that defines the TPQ date for its stratum (either Stratum 1+2 or Stratum 3).

Many artifacts cannot be dated, or cannot be dated without further research, and these as-yet-nondiagnostic artifacts are listed simply to show what the Unit 1 team unearthed.

Excavation Context - JBH 5

- Depth: 0cm to 5.5cm below datum at datum (southeast corner); not dug in parts of the unit due to the large depression which rendered parts of the unit already below 10cm from the datum even before digging commenced.
- Soil Type: Munsell value of 10YR 2/2 (very dark brown)
- Stratum: 1

The digging of Unit 1 commenced with its first context layer, JBH 5. This context layer was interesting because it started with the sod covering the Unit but still provided a few artifacts just below the surface. The main challenge the Unit 1 team encountered when digging JBH 5 was the task of leveling out the Unit despite the fact that we were working on a slope. As Maggie put it, "[our] unit got complicated quickly" (Ewing, 9/22/08). Indeed, while JBH 5 started 0cm below the datum at the datum point (SE) corner, it was not dug at all at the shallowest, northeast corner, which started a full 11cm below the datum point. The soil of JBH 5 was not very rocky and was easy to dig, but it was damp, presumably because it was the most readily exposed to the elements. JBH 5 soon gave way to a new natural context layer, JBH 8, except in the northeast portion of the Unit where a new arbitrary context layer, JBH 9, was declared once JBH 5 had reached 10cm below the datum point (most of which happened to be airspace considering the slope in the Unit).

The artifacts of JBH 5 are few, but they are interesting nonetheless, if only because they were discovered so close to the surface. The screw discovered was in relatively good shape for being in the ground, which might make one wonder if it is the most modern artifact in this stratum (among the many modern artifacts we were yet to discover). But it is not possible to tell

for sure when the screw was produced, and because screws of that type can be older than many of the other artifacts we found, it does not define any sort of TPQ date. Moreover, if any TPQ date had been found from this shallowest context layer, it would likely be controversial because routine landscaping relating to the sod layer could introduce surface artifacts while leaving the rest of the same stratum undisturbed. While this was not an issue in the case of Unit 1, it is a factor worth considering.

While JBH 8 was discovered and declared before JBH 9, it was JBH 9 that continued the same subjective soil type as JBH 5. Thus, JBH 9 will be considered next.

Photo of artifacts from JBH 5

Artifact	Context	Notes (Reference)
glass (2 pieces)	JBH 5	
steel, flathead screw	JBH 5	modern-looking, but possibly older than Stratum TPQ date

Artifacts from JBH 5

Excavation Context - JBH 9

- Depth: 10cm to 13cm below the datum point at the center of the Unit; 11cm (sod) to 14.5cm below the datum point at the northeast corner.
- Soil Type: (same as JBH 5): Munsell value of 10YR 2/2 (very dark brown)
- Stratum: 1

JBH 9 continued as a new arbitrary context layer below JBH 5. In reality, the soil of JBH 9 is most likely so similar to that of JBH 5 because, for both, the digging took place just below the sod layer. JBH 9 was a new arbitrary context because JBH 5 had reached 10cm below the datum point without a natural soil change in that part of the Unit, but in truth most of that 10cm was the airspace caused by the depression of the Unit.

The artifacts of JBH 9 are few and nondiagnostic, although they do symbolize some of the first architectural artifacts the Unit 1 team encountered, foreshadowing the large number of brick and mortar fragments soon to come. JBH 9 soon gave way to a new natural soil context that coincided with the 10cm limit of JBH 8, which necessitated a new arbitrary context for it. Because the soil below JBH 9 and that of JBH 8 were the same, JBH 9 was followed with a unit-wide context layer: JBH 18.

Artifact	Context	Notes (Reference)
brick fragment	JBH 9	
mortar	JBH 9	
strand of Easter grass	JBH 9	

Photo of JBH 9 and JBH 8. JBH 9 is located in the northeast portion of the Unit (upper right quarter). Notice that due to the natural depression of the Unit, the northeasternmost portion of the Unit has yet to be excavated at all.

Excavation Context - JBH 8

- Depth: 8.4cm to 18.5 cm below the datum point at the southwest corner of the Unit; the depth dug differs across the Unit because the excavation team was still in the process of leveling the Unit at this point.
- Soil Type: Munsell value of 10YR 2/2 (very dark brown), but subjectively labeled a lighter brown than JBH 5/9. Recall the discussion of this discrepancy in the section regarding the stratigraphy of Unit 1.
- Stratum: 1

The first glimpse of JBH 8 occurred soon after digging commenced on JBH 5. While this new natural context layer was declared because it was perceived that the soil was lighter in color, the Munsell value assigned to this soil and its subsequent arbitrary contexts of JBH 18 and JBH 24 is the same as that of JBH 5 and JBH 9. Thus, it is most likely that the sod of JBH 5 caused us to think that there was a difference in soil qualities between the two contexts when in fact the under-sod soil of each was quite similar. Alternatively, the Unit 1 team may have simply been overzealous and overanalyzed the soil types. Regardless, JBH 8 was declared a new natural context layer and grew to include most of the Unit before a new arbitrary context layer was declared below it, JBH 18. JBH 8 may not have had a different soil type than the layer above it, but it did showcase one key difference that became an integral challenge to the Unit 1 team: the presence of tree roots. Roots grew to become a large problem in Unit 1 simply because their density made it very difficult to dig any significant amount of dirt at a time, and root cutting became a ritual the whole Unit 1 team would take a time-out to perform. Fortunately, during one of the weeks in which the Unit 1 team was excavating JBH 8, we were privileged to host a guest excavator, Noah Wiener of Brown University's Class of 2009 (Ewing, 9/29/08). Apart from roots, leveling the Unit also continued to be a difficult task. Jacob observed that "[one] of the hard parts […] involved the nature of shoveling: when you disturb soil, it has to go somewhere else. Because of this, even when we got a section of the unit down to the correct depth, we

would […] throw that off by shoveling dirt onto it" (Combs, 9/29/08). But despite all of the trials and tribulations (and the large amounts of water and worms covering the protective tarp after a tropical storm came through; Ruby, 9/29/08), digging continued, and the time for JBH 18 was eventually reached.

The artifacts of JBH 8 are much more plentiful than higher context levels. While some artifacts, such as the wire nail or the crown bottle cap, are diagnostic to a historical period (the late 19th century), it cannot be known whether these examples are actually that old. The fact that they are in this context layer could simply be an example of the time lag of artifacts, in which they are discarded after (occasionally a long time after) they are produced (Adams 41). Alternatively, they simply may not be that old, as nails and bottle caps continue to be produced. In any event, JBH 8 is part of Stratum 1, which includes many more modern materials that define it as being a stratum of a much more recent past. One especially interesting discovery from this context is a brick in the northern wall of the Unit. This brick was left in situ, but it represents a possible connection between Unit 1 and Unit 2 that is corroborated by discoveries in deeper context layers.

Handkerchief from JBH 8

Two ceramic sherds and one glass fragment from JBH 8

Artifacts of JBH 8

Artifact	Context	Notes (Reference)
bone	JBH 8	
brick	JBH 8	
crown bottle top	JBH 8	post-1892 (Jones and Sullivan)
dark blue transferprint sherd	JBH 8	1820-1860 (Stelle), although likely subject to time lag (Adams)
drainpipe fragment	JBH 8	
glass (2 pieces)	JBH 8	
glass bottle with letters "ON"	JBH 8	post-1860 (Ryzewski)
handkerchief	JBH 8	
painted wood	JBH 8	
wire duplex nail	JBH 8	late 19th century (Edwards and Wells)

Excavation Context - JBH 18

- Depth: 18.5cm to 26.5cm below the datum point at the center of the Unit; 18.5cm to 27cm below the datum point at the datum point (SE) corner.
- Soil Type: (same as JBH 8): Munsell value of 10YR 2/2 (very dark brown)

Stratum: 1

JBH 18 constituted the first unit-wide context layer of Unit 1. Having the context make up the whole floor of the Unit was very helpful for the process of digging, and Unit 1 finally became relatively level, but the problem of roots continued throughout this context. JBH 18 continued for 10cm before another arbitrary context layer was declared: JBH 24. In essence, JBH 18 appears to be little more than a filler layer in the large Stratum 1, but it is in the artifacts that JBH 18 became very interesting indeed.

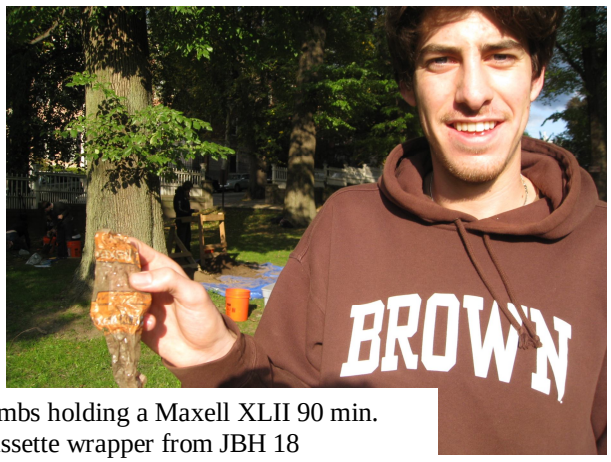
The artifacts of JBH 18 are numerous. It was in JBH 18 that the Unit 1 team realized that this Unit is a modern midden—a heap of fill soil punctuated by relatively modern trash. While the team was occasionally frustrated that the Excavation Unit was not revealing artifacts from a more historic time period—as Maggie put it, "I'm holding out hope for clues to historic use of the John Brown House property" (Ewing, 10/6/08)—it was still fun to discover so many modern items that were somewhat familiar but also somewhat before our time. Two objects in particular, a Mister Donut Styrofoam cup and a coffee milk container, provide possible terminus ante quem dates for Stratum 1. (The terminus ante quem (TAQ) is related to the terminus post quem but represents the latest date that this context could have been disturbed.) Both the milk container and Mister Donut were either bought out or went out of business in 1990 (Combs, personal correspondence, December 2008), and while time lag states that these artifacts could have stayed in use longer than that, with milk or a disposable coffee cup, it is likely that they were discarded fairly soon. All in all, the artifacts of JBH 18 provided a wonderful example of what a midden is like, albeit a modern one.

Artifact	Context	Notes (Reference)
asphalt fragments	JBH 18	post-1871 (CNEHAa)
blister pill pack	JBH 18	
brick	JBH 18	
clear/orange plastic with letters "AL"	JBH 18	
clinker	JBH 18	
cloth	JBH 18	
coffee milk container	JBH 18	1976 to 1990 (Combs, personal correspondence, December 2008)
cream colored ceramic	JBH 18	
crown bottle cap	JBH 18	post-1892 (Jones and Sullivan)
decorated brown paper	JBH 18	
duct tape	JBH 18	post-1942 (Ryzewski)
glass fragments	JBH 18	
gray caulk (3 strips)	JBH 18	
Maxell XLII 90 min. cassette wrapper	JBH 18	post-1980s
metal button	JBH 18	
metallic fragments	JBH 18	
painted wood	JBH 18	
plastic bag	JBH 18	
plastic coffee lid	JBH 18	
plastic fragments	JBH 18	
porcelain sherd with 2 thin gold lines	JBH 18	
quartz	JBH 18	
string	JBH 18	
Styrofoam cups (Mister Donut, Dunkin Donuts)	JBH 18	post-1962 (CNEHAb)
Styrofoam packing peanuts	JBH 18	post-1941 (Wikipedia: "Styrofoam")
Styrofoam with "origin"	JBH 18	post-1941 (Wikipedia: "Styrofoam")
walnut shell	JBH 18	

Artifacts of JBH 18

Mister Donut Styrofoam cup fragment from JBH 18

Coffee milk container from JBH 18



Jacob Combs holding a Maxell XLII 90 min. cassette wrapper from JBH 18

Excavation Context - JBH 24

- Depth: 26.5cm to 41.5cm below the datum point at the center of the Unit; 27cm to 40cm below the datum point at the datum point (SE) corner.
- Soil Type: (same as JBH 8/18 at top): Munsell value of 10YR 2/2 (very dark brown); near the bottom of JBH 24 the Munsell value changed to 7.5YR 3/4 (dark brown).
- Stratum: 1 and 2 (considered together for dating purposes)

JBH 24 was another arbitrary context layer with the same soil type as JBH 8 and JBH 18. But by the time the Unit 1 team was excavating JBH 24, it was clear that we were digging through fill soil, and the team received the go-ahead to dig the next context (JBH 24) down 20cm before declaring another arbitrary context layer, with the hope that we would more quickly get through the fill. In general, JBH 24 was extremely similar to JBH 18, excepting one thing. Near the bottom of JBH 24, the soil changed and large deposits of charcoal and charred artifacts were uncovered. While one could claim that the soil change necessitated the declaration of a new natural context layer, it was judged that the change was most likely due to fire and not a fundamentally different time period. Moreover, the burn layer was uncovered just before the dig team reached JBH 31, a much more historical layer. While it could be argued that the fire debris was actually a part of JBH 31, this situation is a bit less likely than it being part of a more modern stratum considering that the artifacts of JBH 31 did not show much evidence of fire and the fact that deeper evidence of fire layers has not yet been discovered. Perhaps the best conjecture for what JBH 24 represents in the context of Unit 1 is that JBH 24 was used as some sort of trash fire pit that eventually was no longer used and simply got piled high with trash and fill soil as landscaping reformed the yard. The large number of modern artifacts in JBH 24 suggests that there is little disconnect between it and the layers that precede it.

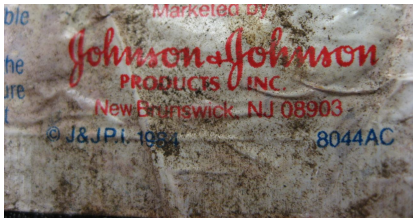
The artifacts of JBH 24 are very similar to those of JBH 18. One exciting object is a fragment of the fence that currently surrounds the John Brown House yard. But certainly the most interesting artifact with respect to the history of Unit 1 is a Johnson & Johnson burn cream wrapper from JBH 24. This wrapper has an obvious copyright date on its back of 1984. This is the latest certain date of any object from Strata 1 and 2, and thus it serves as the TPQ date for those two strata. Taken into consideration with the possible TAQ date mentioned earlier, the filling of this depression with modern refuse and loose soil would therefore have occurred sometime between 1984 and 1990—certainly not a particularly historic time!

While JBH 24 provided a large number of interesting artifacts, it was what was uncovered before the 20cm arbitrary level was reached that most excited the Unit 1 excavation team. After working through the fill soil and evidence of fire, the soil of Unit 1 changed dramatically once again, and historic items began to be uncovered without being surrounded by modern trash. JBH 31 had been reached.

Photo of the wooden fencepost fragment from JBH 24 alongside the current fence around the John Brown House yard

Photo of three crown bottle tops form JBH 24

North American Van Lines tape from JBH 24



Photos of a Johnson & Johnson burn cream wrapper from JBH 24 which defines the TPQ date of Strata 1 and 2. The lower photo highlights the date, 1984, on the wrapper.

Artifacts of JBH 24. Notice the Johnson & Johnson burn cream wrapper (bold typeface) which defines the TPQ date of Strata 1 and 2.

Artifact	Context	Notes (Reference)
aluminum foil wrapper	JBH 24	post 1947 (CNEHAb)
asphalt fragment	JBH 24	post-1871 (CNEHAa)
brick	JBH 24	
charcoal	JBH 24	
coal	JBH 24	
cobble	JBH 24	
coffee cup lid tab	JBH 24	
concrete	JBH 24	
copper cable wires with flat, gray casing	JBH 24	
copper electrical wire	JBH 24	
cork	JBH 24	
crown bottle top	JBH 24	post-1892 (Jones and Sullivan)
cut iron stake	JBH 24	
cut nail	JBH 24	1790-1900 (Ryzewski)
duct tape	JBH 24	post 1942 (Ryzewski)
glass fragments	JBH 24	
green cloth	JBH 24	
iron lightbulb base	JBH 24	post-1879 (CNEHAa)
Johnson & Johnson burn cream wrapper	**JBH 24**	**post-1984 (date on artifact)**
marble tile	JBH 24	
mold-made clear glass bottle	JBH 24	
North American Van Lines tape	JBH 24	post 1933 (Ryzewski)
paint chips	JBH 24	
painted wood	JBH 24	
paper	JBH 24	
peach pit fragments	JBH 24	
plastic BIC top	JBH 24	
plastic fragment	JBH 24	
plastic straw	JBH 24	
plastic tubing	JBH 24	
slag	JBH 24	
string	JBH 24	
strips of iron	JBH 24	
Styrofoam cup	JBH 24	post-1962 (CNEHAb)
Styrofoam packing peanut	JBH 24	post-1941 (Wikipedia: "Styrofoam")
tar paper for roofing	JBH 24	
unglazed red earthenware	JBH 24	
white plastic McDonald's coffee stirrer	JBH 24	
wood fencepost top	JBH 24	from fence currently surrounding the John Brown House property

Excavation Context - JBH 31

- Depth: 41.5cm to 50.5cm below the datum point at the center of the Unit; 40cm to 50cm below the datum point at the datum point (SE) corner.
- Soil Type: Munsell value of 10YR 3/4 (compact dark yellowish-brown soil)
- Stratum: 3

JBH 31 revealed itself very late in the fall 2008 excavation season. It was unfortunate that the Unit 1 team had so little time to explore this context layer because it was a much more historic layer than the fill soil preceding it. Apart from a few plastic fragments at the JBH 24/JBH 31 border, there were no exclusively modern items uncovered in this context. Furthermore, the roots disappeared, suggesting that we had reached a different climate of soil. In fact, the final battle against the roots occurred just as JBH 31 was reached when the large root running along the west wall of the Unit at the level of JBH 24 was removed using a handsaw. It was also once JBH 31 was uncovered that a distinct difference in the soil of the north wall and that of the south wall was seen, a difference which could represent the differences between the soil of the depression and that of the denser soil surrounding it. To be sure, JBH 31 brought with it many new insights into the intricacies of Unit 1.

The artifacts of JBH 31 are not as plentiful as the modern midden, but they are significant nonetheless. While the ceramic fragments are both historic and diagnostically helpful, it is a .22 caliber bullet casing that defines the TPQ date for this context and for Stratum 3 more generally. The bullet casing is most likely a .22 caliber Long Rifle casing, produced sometime after 1887 (Wikipedia: ".22 Long"), but it could also be a .22 Long, produced sometime after 1871 (Wikipedia: ".22 Long Rifle"). Thus the TPQ date for Stratum 3 is 1871, certainly leaving open the possibility that Unit 1 is historically significant. In addition to these small artifacts, some large artifacts were left in situ, including whole bricks and deposits of mortar that were

uncovered primarily near the northeastern corner of the Unit. These bricks are similar to those found in the (nearest to Unit 1) southwestern corner of Unit 2, suggesting a connection between the two units. Moreover, a deposit of green, crumbly powder was found in both Unit 1 (JBH 31) and Unit 2. This powder resembles copper and could suggest more architectural infrastructure running between the two units. Future excavations may want to consider combining Unit 1 and Unit 2 into a trenched unit in order to explore these relationships.

Digging at the John Brown House site came to a close on November 10, 2008, just as the Unit 1 team began to dig into the heart of JBH 31. The final measurements show that the Unit 1 team dug a full half-meter into the ground, passing through multiple types of soil and contexts along the way. The culmination of the digging, JBH 31, finally suggested than Unit 1 was not fundamentally different than the other areas of the John Brown House yard and provided a reference with which the story of Unit 1 can relate to the other stories produced by the fall 2008 excavation season.

Artifact	Context	Notes (Reference)
blue and white transferpring pearlware	JBH 31	1795-1840 (FLMNH)
bone fragment	JBH 31	
brick	JBH 31	
bullet casing	**JBH 31**	**post-1871 (Wikipedia: ".22 Long")**
creamware fragment	JBH 31	1762-1820 (FLMNH)
crushed shell	JBH 31	
glass fragments	JBH 31	
green-glazed red earthenware fragment	JBH 31	late 17th century (FLMNH)
iron stake	JBH 31	
mortar	JBH 31	
white salt glaze stoneware	JBH 31	1720-1770 (FLMNH)
whiteware	JBH 31	post-1830 (FLMNH)
wire duplex nail	JBH 31	late 19th century (Edwards and Wells)

Artifacts of JBH 31. Note that the bullet casing (bold typeface) defines the TPQ date (1871) of Stratum 3.

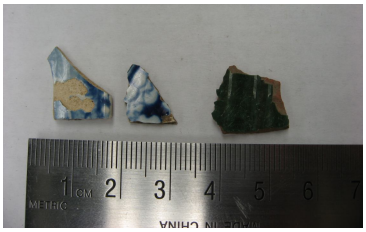


Photo of some example of ceramic sherds from JBH 31

Photo of the bullet casing from JBH 31. This casing defined the TPQ date of JBH 31 and Stratum 3.

Concluding Remarks Regarding Unit 1 and Possibilities for Future Investigation

The history of Unit 1 is by no means complete. In fact, when one considers that the historic layer, JBH 31, was only reached in the final two weeks of digging, one can be certain that there is more to learn about this excavation unit. However, one can reach some preliminary conclusions regarding the timeline of this Unit and the possible life it has led. To summarize, Strata 1 and 2 appear to represent the same period of history with the sole difference being due to either soil discoloration from a passing root or from a fire in Stratum 2. If one considers these strata together, then their TPQ date is 1984 with a possible TAQ date of 1990. The evidence of fire at the bottom of JBH 24 lends itself to speculation. One possibility is that the area of Unit 1 was used as a trash burning pit, or perhaps it was used for some sort of fire that was subsequently covered in trash and fill soil. Regardless of which took place, the upper layers of Unit 1 represent a modern midden of fill soil and refuse that is both interesting to study and difficult to fully understand.

In a presentation given December 8, 2008, Steffi Yellin explained that the area of the yard including Unit 1 was most likely a backyard area of the Robert Hale Ives residence that was either near a wall separating residences or a woodshed related to the house (Yellin, 12/8/08). In either case, it would not be unusual for this part of the yard to be used for fire-burning if, after the house was torn down, there was still some foundation that could protect against the spread of a fire. In addition, this area may also have been an alluring place to put trash if the foundation made for a natural receptacle. Alternatively, Steffi explained that this area also included some sort of utility infrastructure (Yellin, 12/8/08), some of which may still be seen in Unit 2. Perhaps some of this piping was removed, which caused the depression in the soil when it was not adequately filled. This situation could also invite the accumulation of refuse seen in the modern

midden. At this point such conjecture cannot be confirmed, but these scenarios are by no means unreasonable considering the circumstances.

With respect to the historic layer of JBH 31, more excavation is certainly warranted in order to discover how this Unit relates to the other units of the John Brown House site. When digging ceased, only the tops of some full bricks had been uncovered, but it appeared that larger architectural features may have extended across the entire Unit. More excavation of this area, and a combination of this Unit and Unit 2, could certainly reveal a fuller picture of this part of the yard. It would be wise to continue the work that has already been started, as both the archaeological evidence and the geophysical analysis point to this Unit being potentially significant.

The story of Unit 1 is a unique story from the fall 2008 excavations of the John Brown House site. No other unit had the same diversity of discovery as Unit 1, and while it was unfortunate that Unit 1 did not reach an historic layer earlier in the semester, it still provided an interesting tale that will only become more interesting as this Unit is further explored in the years to come.

Chapter 3. Works Cited

".22 Long". Wikipedia. 1 December 2008. Wikimedia Foundation, Inc. 13 December 2008 <http://en.wikipedia.org/wiki/.22_Long>.

".22 Long Rifle". Wikipedia. 13 December 2008. Wikimedia Foundation, Inc. 13 December 2008 <http://en.wikipedia.org/wiki/.22_Long_Rifle>.

Adams, William Hampton. "Dating Historical Sites: The Importance of Understanding Time Lag in the Acquisition, Curation, Use, and Disposal of Artifacts." Historical Archaeology 37 (2; 2003): 38-61.

Combs, Jacob. "Jacob's Field Blog." ARCH 1900: The Archaeology of College Hill: 2008 Season-John Brown House. 15 December 2008 <http://proteus.brown.edu/archaeologyofcollegehill/6496>.

Combs, Jacob. Personal Correspondence. December 2008.

Edwards, Jay D., and Tom Wells. Historic Louisiana Nails: Aids to the Dating of Old Buildings. Baton Rouge, Louisiana: Louisiana State University: Geoscience Publications, 1993.

Ewing, Maggie. "Maggie's Field Blog." ARCH 1900: The Archaeology of College Hill: 2008 Season-John Brown House. 15 December 2008 <http://proteus.brown.edu/archaeologyofcollegehill/6540>.

"Historical Archaeology: Digital Type Collection: Unglazed Coarse Earthenware (generic)." Florida Museum of Natural History. 2004. Kathleen Deagan, Curator. 13 December 2008 <http://www.flmnh.ufl.edu/histarch/gallery_types/type_index_display.asp?type_ame=UNGLAZED%20COARSE%20EARTHENWARE%20(GENERIC)>.

Jones, Olive, and Catherine Sullivan. "The Parks Canada Glass Glossary." Minister of the Environment, 1989.

Ruby, Alexander. "Alex's Field Blog." ARCH 1900: The Archaeology of College Hill: 2008 Season-John Brown House. 15 December 2008 <http://proteus.brown.edu/archaeologyofcollegehill/6520>.

Ryzewski, Krysta. Personal Correspondence. December 2008.

Stelle, Lenville J. "An Archaeological Guide to Historic Artifacts of the Upper SangamonBasin." An Archaeological Guide to Historic Artifacts of Central Illinois. Parkland College: Center for Social Research, 2001.

"Styrofoam". Wikipedia. 12 December 2008. Wikimedia Foundation, Inc. 15 December 2008 <http://en.wikipedia.org/wiki/Styrofoam>.

"Telling Time in the Second Half of the Nineteenth Century." Council for Northeast Historical Archaeology (a). Florence, New Jersey: URS Corporation Archaeology Laboratory.

"Telling Time in the Twentieth Century." Council for Northeast Historical Archaeology (b). Florence, New Jersey: URS Corporation Archaeology Laboratory.

Yellin, Steffi. "Historical Research on the Excavation Area." ARCH1900 Final Presentations. Room 305, Metcalf Chemistry Lab, Brown University, Providence, RI. 8 December 2008.

Chapter 4. Excavation Summary -- Unit 2

Megan Algeo

Introduction

Location

We decided to open an excavation unit on the northern boundary of the lawn by Charlesfield Street. The decision was made because exposed features hinted at structural evidence beneath the soil, and the geophysical survey confirmed a large anomaly in the area

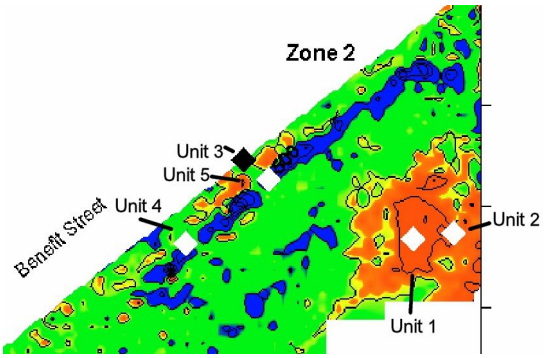


Figure 1 The relevant section of land from the "John Brown House Unit Locations & Quadrature Map." Geophysical anomalies shown in blue and orange.

(Urban 2008, 6). Although begun after digging, research into historic documents associated with the site pointed to a property in the general area of Unit 2 built by Robert Hale Ives before 1857 and demolished by Marsden J Perry between 1921 and 1926, further evidence that Unit 2 might offer interesting finds (Yellin 2008, 1-2). Confirming our expectations, Unit 2 was feature-laden; by the end of the dig, features took up roughly the same area at the base of the unit as soil did. Though many of the features were 20th century, the commingling of old materials from the 17th to 20th centuries suggested a complex history for the site. Through analysis of material finds, structural features, soil quality, and stratigraphy, we can put forward an accurate picture of the unit and tentative hypotheses unifying our data.

Methods

The group marked off Unit 2 as a 1m by 1m square by the north fence of the JBH lawn, approximately midway between Benefit Street and the JBH parking lot. The unit sloped slightly, with the 0cm datum level taken at the southeast corner, the highest point in the unit. The exposed feature was an outcropping of brick and concrete in the northeast corner. After staking the corners, stringing out the boundaries for the sidewalls, and taking initial levels, we began digging. The particular methods we used are outlined in the introduction of this report.

Artifacts were cleaned, labeled, and cataloged in the Archaeology Department laboratory at Brown. The digital representation of Unit 2 was created using Microsoft Office Suite. The graphic representations of Munsell values were created using the *Munsell Conversion* software package. To recreate the missing Munsell value for JBH 11, a representative soil area from a photograph of context JBH 10 and JBH 11 (Photo 00917) and the *Munsell Notation Picture Analysis* feature from the software package were used. Data for the Unit Summary are taken predominantly from the field notes. Other sources, including written material, personal correspondence, and field blogs are cited when used.

Excavation Summary

Shoveling with spades, we removed the initial sod layer from the top of context JBH 6, identifying the exposed brick and concrete feature as Feature 2, and proceeded through the first 10cm of topsoil, save in the southeast corner, where the discovery of a sandy patch of soil resulted in the decision to stop digging at 2cm-7cm (nonuniform surface) in order to excavate that area as a separate context, JBH10. The topsoil of the remainder of the unit had a Munsell value of 10YR 2/1. More modern finds, such as plastic and tape, were uncovered alongside

historic artifacts such as architectural hardware and a whiteware rim with geometric patterns. A screw exhibited a faint Phillips head pattern, indicating deposition post-1930s. A wire nail exhibited a unique ring below the nail head, and numerous other identical samples would be discovered throughout the site (see the Object Biography by Alex Ruby). At the bottom of JBH6, the beginnings of a water main—a spigot handle and surrounding pipe—were protruding vertically from the site. We declared a new arbitrary context, JBH11, for the area not including the sandy patch, named the water main Feature 3, and proceeded to excavate the sandy context JBH10.

JBH10 had a nonuniform surface, because while digging the group sought to uncover the boundaries of the sandy soil, which were rectangular horizontally but varied by 5cm vertically. We agreed to dig a maximum 10cm below the highest point of the context, which was 2cm below unit level. The soil had a Munsell reading of 10YR 4/2. At approximately 8-9cm below unit level, we observed the soil around the periphery of the context beginning to resemble the matrix of the rest of the unit. We decided to dig slightly over the 10cm boundary to see if the context could be reunited with the rest of the unit. Indeed, the sandy soil disappeared, and by 13.5cm below unit level, 10.5cm into JBH11, it was agreed that the soil now resembled that of the rest of the unit. After this point, excavation continued in tandem with JBH11. The fill from JBH10 yielded modern finds—plastic pieces, a champagne cork topper, glass—and a screw similar to that found in JBH6.

JBH11 yielded more ceramic and architectural finds, as well as teal and orange pigments and a metal flag emblem, and displayed a mottled soil quality throughout, though a Munsell reading is absent from the field notes. A cinder block appeared in the northwest corner, and excavation continued around the water main. The most exciting find of this context would turn

out to be a small piece of brick with a maker's mark suggesting that it was produced by the Sayre & Fisher Brick Company of Sayreville, New Jersey. Further research suggests that a brick bearing the place name "Sayreville" could only have been produced after 1876, and that a similar quality of brick with a slightly different makers mark was used in construction during 1905-1906 at another site. For a more detailed analysis of the Sayre brick, see the Object Biography by Megan Algeo.

We briefly turned our attention to the soil contained within Feature 2, the concrete and brick structure, and Feature 3, the pipe and spigot. Both contained soil pockets cordoned off from the rest of the unit, and their soil was sifted separately as JBH 14 and JBH15. The finds were similar to those in the rest of the unit, mixing modern and historic—a bottle cap in JBH 14, and small screws, two wire nails, a thin piece of plastic, and a piece of foil in JBH 15. The confined space of these contexts made excavation slow, and we elected to focus on excavating the bulk of the unit floor, leaving the soil cordoned off by these features in place after reaching 30cm in Feature 2.

Figure 3: A candid shot of JBH 22, including Features 3 and 5, as well as a cluster of bricks that were subsequently removed, revealing more bricks. The tan brick on top is made from the same clay as the diagnostic Sayre & Fisher maker's mark brick fragment.

Work on JBH22, established as an arbitrary context in continuation of the strata encountered in JBH 11, with a Munsell reading of 10YR 3/2,

extended over three days of digging, ending on October 25th, Parents' Weekend. One parent visiting the site estimated the production date of the pipe and spigot feature, which he described as a water main, to be around 1900-1930, and suggested that frost line considerations might have affected how the water line was situated and insulated. He postulated that it may have existed next to a basement wall. It was reported on October 6th that Alex, a mason working at the John Brown House, identified the metal strip as an angle iron, stating its age to be 100 years or older. At this point, the soil matrix became even more mottled, containing patches of sand, mortar, asphalt, and rocks approximately 2 inches around throughout the floor of the unit. Finds included glass, a screw, two diagnostic ceramic samples, foam, pipe, and more architectural finds, including the ubiquitous wire nail. Near the end of the unit, it became apparent that a brick and rock feature was emerging from the southern end of the unit, extending into the wall.

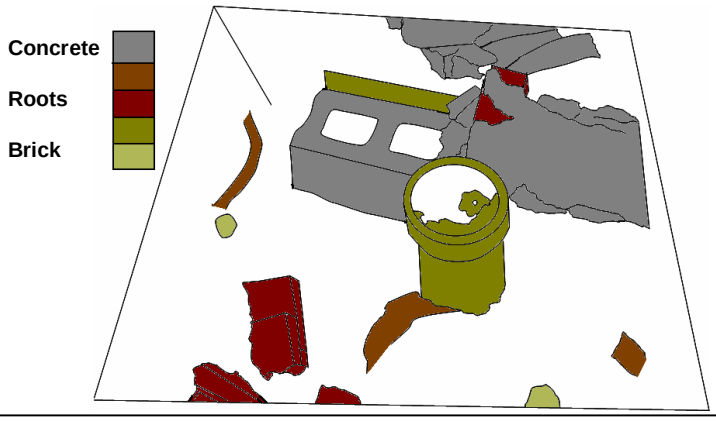


Figure 4: A sketch of the unit at the end of the dig, traced and digitized from a site photograph.

Development of the existing features, especially the southern wall, continued in the following arbitrary context, JBH 29. The soil became softer and less dense around the cinder block, with more green pigment. Overall, JBH 29 was determined to have a Munsell value of 10YR 3/4. Charcoal and small brick pieces were also uncovered from the matrix, suggesting possible inclusions in sand or mortar used as building materials. A clear soil line stretching east to west roughly midway across the unit was revealed about 3cm into this context. Consequently, JBH 29 continued north of the 50cm mark, and JBH33 was established south of

that mark. Excavation continued simultaneously on both contexts, with fill sieved separately. JBH 29 contained brick, glass, charcoal, coal, and mortar. JBH 33 exhibited similar soil inclusions, and contained metal fragments, oyster shell, and a knob. Three Munsell readings were taken for the different soil qualities observed in JBH 33—10YR 4/4 for the general matrix, 10YR 5/6 for clayey soil, and 10YR 6/3 for sandy soil. At 3cm to 8cm (uneven surface) into JBH 29, it became clear that the soils were starting to homogenize again. The two halves of the unit were reunited for the next context, JBH 38.

JBH 38 was an arbitrary context, and work proceeded until the last day of the field season, when the group reached a final level of 53cm at the deepest point. The soil still contained many sandy, mortary inclusions, with an overall Munsell value of 10YR 4/3. A yellowy plateau of sandy consistency emerged in front of the cinder block. Finds included oyster shell, asphalt, the base of a bottle (see Object Biography by Megan Algeo), and a metal staple.

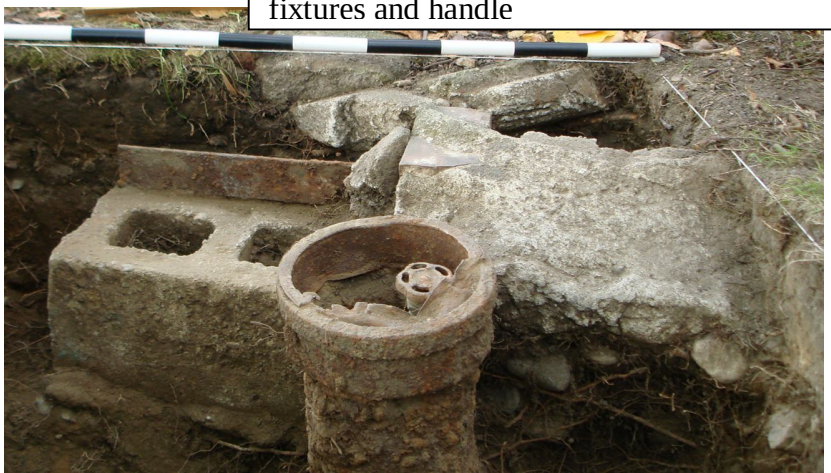
Analysis

Features

Features 2 and 3 spanned all our contexts. Loose brick fragments, presumably from Feature 5, were first unearthed in JBH 11, and Feature 5 was officially established with the discovery of whole bricks situated on top of one another at the base of JBH 22.

Feature 2, which began as an exposed brick and cement pile, was revealed to be much

Figure 5: Pipe and spigot feature, with view of additional details of plumbing fixtures and handle



more extensive, growing to include an angle iron and cinderblock. Angle irons were sometimes used above windows to support brick. The cinder block, which could have been produced anytime after the 1930s, was the only object with a definitive date. If the estimate of the mason we spoke to is accurate, and the angle iron is at least 100 years old, this means that the angle iron and cinderblock are different ages, and suggests that old and new materials were incorporated to create the feature, whose purpose is still unclear.

Feature 3, the pipe and spigot, did not terminate by the conclusion of excavation. It appears to have had a cover of some sort over the top, perhaps to protect the plumbing from harsh weather if it was situated outside. The large outer pipe may have also served to insulate the piping inside. No manufacturing stamps were found on any of the plumbing. While uncovering this feature, it was noted that the pipe was probably hollow when it was in use because, although dirt was found within it, pockets of air were noted as digging proceeded, suggesting the dirt was introduced as the cover wore away or was destroyed (Kellie's Field Blog, 9/22/08).

Feature 5, the brick and stone wall, had obviously been disturbed, either by human activity or by growing tree roots. Different types and sizes of brick were strewn together. Some were still mortared to each other, and others were situated loosely atop and behind each other, interspersed with stones. The only diagnostic brick fragment was the Sayreville brick, with a TPQ of 1876 (see Object Biography by Megan Algeo). Unit 1 also uncovered evidence of a brick

Figure 7: A partial view of the brick wall, Feature 5

wall, situated at 40-50cm in the northeastern corner such that it could be contiguous with Feature 5.

Strata, Contexts, and Soil

Stratigraphy and natural soil contexts were often difficult to determine over the course of the dig. The soil matrix contained many roots, which meant that in order to see the strata clearly, much root trimming had to take place. Larger roots often cut into the strata, obscuring the soil lines. Also, as the features were uncovered, a large area of the side walls and base of the unit was obscured by our finds, complicating stratigraphy and determination of arbitrary contexts.

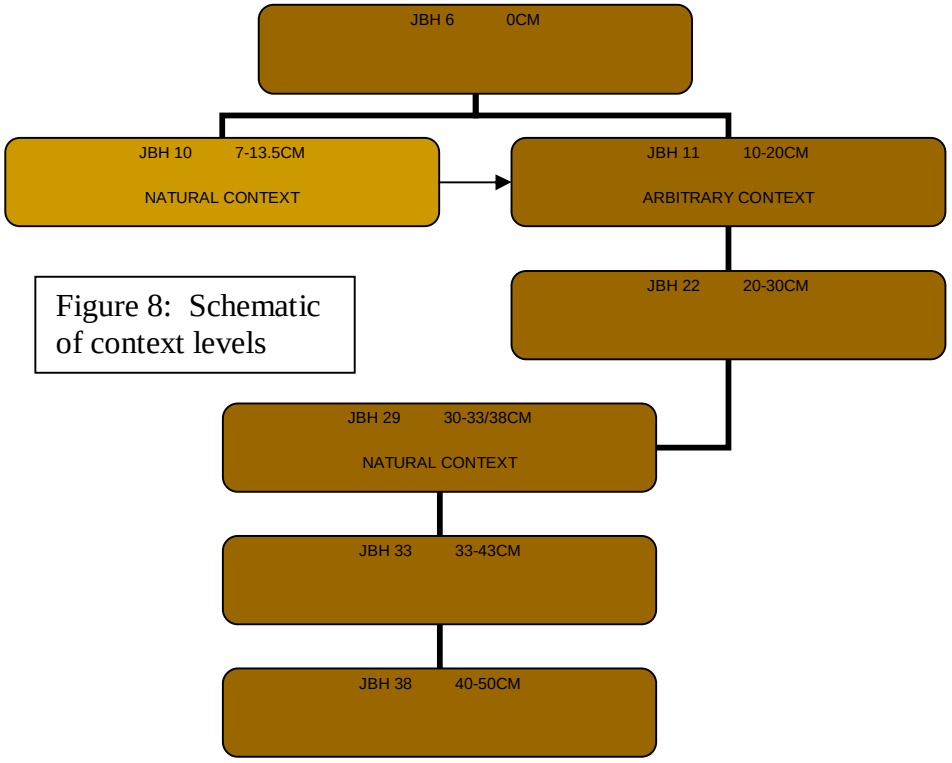
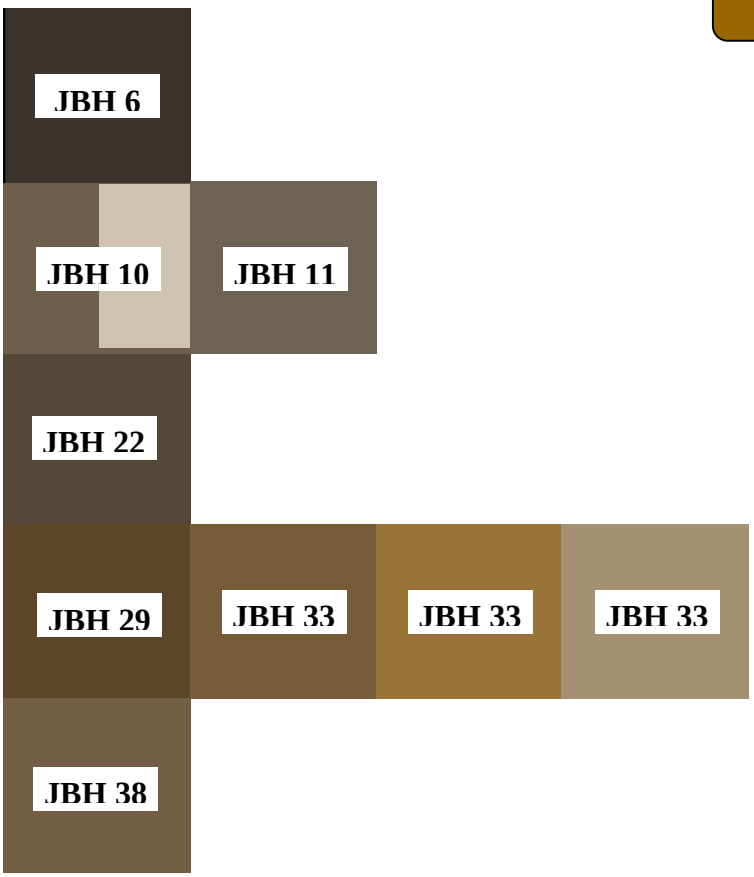


Figure 8: Schematic of context levels



Nonetheless, the soil matrix can be analyzed from multiple angles. Munsell readings, stratigraphy, artifact groupings, and natural soil contexts help to form an overall impression of Unit 2. The Munsell readings, which represent our best estimate of the color of the soil, are shown for each context in Figure 9.

The Munsell value for JBH 11, missing from field notes, was recreated digitally. JBH 10 shows two Munsell values. The value on the left was determined on site, while the value on the right was determined using the same method of digital approximation as that for JBH 11 (see methods). This was done to ensure that the digital value for JBH 11 could be compared to a digital value for JBH 10, since these values may differ from those obtained *in situ*. In fact, the digital value for JBH 10 does differ dramatically from the value recorded in the field notes. Nonetheless, the two digital values serve to highlight the difference in soil color between the two contexts.

The sandy pocket excavated as JBH 10 was initially believed to be a newer fill relative to the rest of the unit (Megan's Field Blog, 9/29/08). It contained a collection of modern finds, and the soil was of a loose consistency relative to the rest of the unit. Over the course of the excavation we came to realize that modern artifacts were present even in our deepest contexts, suggesting that they had all been disturbed in the 20th century. However, JBH 10 represents the most unique natural soil context from Unit 2, and the context with the most recent datable object (see Table 1).

A significant change in soil quality was also noted at 30cm, and JBH 29 was established. This divided the unit in half, with JBH 29 to the north and JBH 33 to the south. The soil in JBH 29 was very soft west of the cinder block, and looser everywhere else in comparison to JBH 33,

which was packed and striped through with carbon colored deposits and other inclusions, necessitating multiple Munsell values. As Krysta Ryzewski notes in the Excavation Summary for Week 7:

"We also reached the bottom of JBH 29 rather quickly, at 33cm in the center of the unit, 38cm in the NW corner, and 30cm elsewhere. The next context JBH 33 was a new natural soil composed of a sandy, mortar, and clay mottled soil deposit across the entire unit - possibly similar to JBH 31 in Unit 1. As the depth measurements indicate, the surface of this new natural soil deposit is uneven" (*Excavation and Unit Summaries*).

While the change in soil character was interesting, it did not last long and was likely associated with the brick wall, Feature 5, as described in the artifact groupings section below. The remainder of the contexts were arbitrary, established at 10cm intervals.

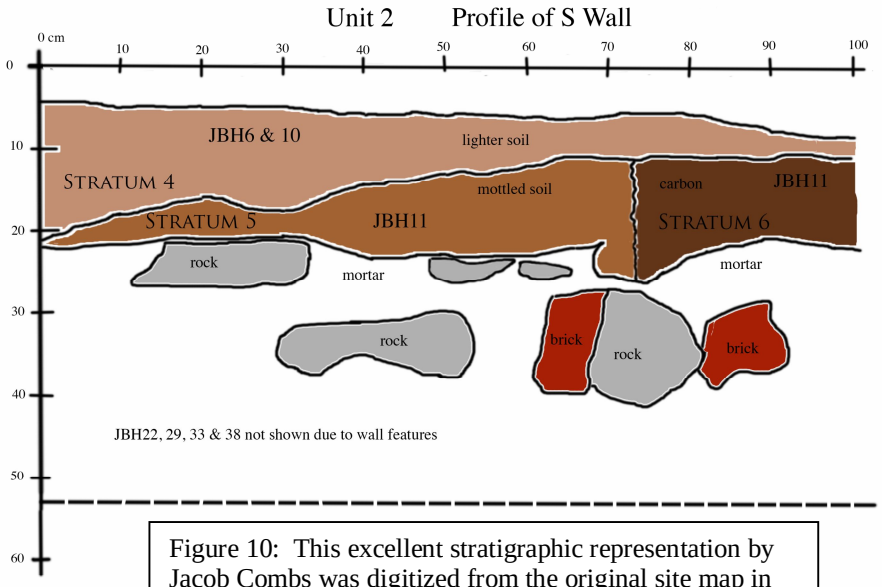


Figure 10: This excellent stratigraphic representation by Jacob Combs was digitized from the original site map in Photoshop.

Horizontal views of soil quality can be combined with vertical views of the trench walls to form a more accurate view of the different soil depositions in Unit 2. While the stratigraphy of the unit is discussed at length in Jacob Combs'

final project, a few issues are worth highlighting here. The wall did not show distinct JBH 6 and JBH 10 strata at the time it was mapped, though earlier photos show more clearly a possible point of division between topsoil and the sandy soil of JBH 10 (see, for example, Figure 3). It would be advisable in the future to create a stratigraphic map at some point in the middle of excavations as well as at the end, so the group may have more time to select optimal light and weather conditions. The stratigraphy does provide accurate information about the border between JBH 6/JBH 10 and JBH 11. When context depths are lined up with stratigraphic depths, the boundary between JBH 10 and 11 resolves nicely, as the group ended JBH 10 at 13.5cm below unit level, and the stratigraphic map ends the JBH 6/JBH 10 boundary at 13.5cm on the eastern border of the unit (Figure 10). The original stratigraphic map gives a distance of 3cm from the reference line to the ground and a depth of 17cm for the majority of the bottom of the eastern JBH6/JBH10 stratum, though the line is uneven. Subtracting the reference distance from the depth gives 13.5cm.

JBH 11 is divided vertically into two clear strata, a mottled soil and a carbon colored soil. The group chose not to designate different context numbers for these two soil types, because, although they show up quite clearly in the stratigraphic record, they were not as apparent during excavation. Megan Algeo observed in the Week 3 Excavation Summary, "A mottled context, containing clayey, sandy, and dark brown (possibly carbon-rich) deposits was noted. These variations in soil quality were not judged to be extensive enough to be set aside as new contexts" (*Excavation and Unit Summaries*). Any additional stratigraphic information was obscured by the brick and rock feature that was first observed at the base of JBH 22 (20-30cm), when the first bricks were uncovered.

The most significant artifact grouping occurred around Feature 5, where brick fragments,

architectural hardware, and building materials were found in conjunction with the remains of the wall. Charcoal, asphalt, mortar, and brick fragments may have all been included in the matrix used in the construction of the wall, or they may have been individual materials in their own right. Burnt concrete, the burnt edge of a brick, and charcoal suggest the possibility of a fire at the site, though the burnt brick edge may be a result of its manufacture.

Timeline for Deposition

When deciding how to date the depositions from Unit 2, we confronted two issues. First, we lacked the large quantities of finds required for mean dating methods, such as ceramics or pipe stems. Second, though many objects were diagnostic, no object in the unit save the Sayre & Fisher brick could be narrowed down to a date range of a few years. Therefore, we employed terminus post quem (TPQ) dates, organized by context and natural stratigraphic levels (Table 1). The term refers to the earliest possible time an artifact could have been deposited in the soil. For instance, if Phillips screws were not manufactured before 1930, they could not have been placed in the ground before 1930. Hence, 1930 is the TPQ for any deposition where Phillips screws are the newest datable object. The sources for each TPQ are referenced below Table 1. In Unit 2, all of the strata containing datable objects have TPQs from the 20th century. The rightmost column of Table 1 contains the dates for the earliest possible time these materials could have been introduced or, alternately, the earliest possible time the newest deposition or disturbance occurred. These modern artifacts are intermingled with older finds, all from 19th century except for two older ceramic finds. Furthermore, documentary evidence shows construction and occupation on the area from the 19th century. We can hypothesize that the finds within these contexts were deposited at multiple points in time over the course of construction, renovation, and demolition of property on the site. Additionally, finds with a TPQ date after 1921-1926,

when Marsden J. Perry razed the Robert Hale Ives property, suggest continued work around the remains of the building, perhaps connected with maintenance on one of the features, such as the water main.

Table 1: Termini post quem (TPQs) or date ranges for datable artifacts.

					TPQ
JBH 6 **Stratum 4**	Styrofoam post-1941[7]	Whiteware post-1830[1]			1941
JBH 10 **Stratum 4**	Champagne topper post-1960[2]				1960
JBH 11 **Stratum 5 and 6**	Asphalt post-1871[5]	Whiteware post-1830[1]	Safety Glass post-1950s[6]	Maker's mark brick post-1876[4]	1950
JBH 14 & JBH 15	Delftware 1630-1800[1]	Crown bottle cap post-1892[3]	Foil wrapper post-1947[3]	Styrofoam post-1941[7]	1947

JBH 22	Whiteware post-1830[1]	Styrofoam Post-1941[7]	Asphalt post-1871[5]	Brick post-1876[4]	1941
JBH 29					
JBH 33					
JBH 38	Creamware 1762-1820[1]	Asphalt post-1871[5]	Safety Glass post-1950s[6]	Bottle Glass pre-1880[8]	1950

1. Florida Museum of Natural History. *Mean Ceramic Manufacturing Dates.*

2. See Megan Algeo's Object Biography.

3. The "Telling Time" poster series, published by the Council for Northeast Historical Archaeology.

4. See Megan Algeo's Object Biography

5. *New International Encyclopedia*, 2nd ed. Dodd, Mead, and Co., New York: 1916, pp. 198.

6. *The History of Glass*. Smart Glass. http://www.smartglassinc.com/glasshistory.html. States that safety glass was marketed broadly and introduced into automobiles in the 1950s, though it appears to have been invented earlier. Its inventor was born in 1916, but no date for its introduction to the market could be found. Inventor biography at http://www.invent.org/hall_of_fame/385.html.

7. *Invention of Styrofoam*. Dow. http://building.dow.com/about/invention.htm.

8. Not a TPQ, but useful nonetheless. See Megan Algeo's Object Biography

A Note on Artifacts

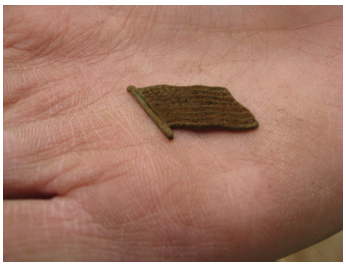


Figure 11: A small flag emblem unearthed in JBH 11

The material finds from Unit 2 are discussed in the "Excavation Summary" section within their respective contexts. Diagnostic artifacts are summarized in Table 1. The significant artifact grouping around Feature 5 is discussed in the "Strata, Contexts, and Soil" section. Object biographies were completed for the Sayre & Fisher brick, the plastic champagne topper, a piece of bottle glass, the wooden knob, and the wire nails. These should be consulted for more information.

Conclusion

In the initial geophysical survey, Thomas Urban recommended archaeological excavation to probe the anomaly in the area of Unit 2 (Urban 2008, 7). We found structural features corresponding with the geophysical anomalies. We believe these features belonged to the Robert Hale Ives foundation, with heavy modifications taking place during its occupancy, destruction, and subsequent maintenance. This has created a mixture of artifacts from different time periods within the same deposit, complicating analysis of the origins of the features and material goods. The modern finds may represent later work on the remains, for example grading the yard or maintaining or disabling the water main. However, the evidence fits with the history of the property, a place with a complex timeline of ownership and a great deal of human activity.

We believe the brick structure to be contiguous with the brick finds of Unit 1, which may indicate a destroyed building, wall, or trash heap. The dates of the oldest artifacts, save a rouge piece of delftware and possibly a creamware sherd, are consistent with the original occupation of

the area by Robert Hale Ives. This leads us to conclude that true pre-Robert Hale Ives strata were not reached, nor were Robert Hale Ives-era strata definitively exhausted. Features 2 and 3 may be part of a basement or a sewage system, as sewage pipes were present at one point in the area (Yellin 2008, 9). However, the strange combination of angle iron, cinder block, and concrete feature also leaves open the possibility that Feature 2 is nothing more than a pile of trash left over from previous construction projects in the area.

Unit 2 provided instructive challenges in proper archaeological excavation and documentation techniques. Each week, it revealed a new feature to be unearthed, a new soil context to be probed, or another interesting collection of artifacts. We feel as though, half a meter down, Unit 2 was still providing evidence of use in determining the cultural and landscape changes taking place over time at the site. Future archaeologists at the John Brown House are advised to continue work on Unit 2, in hopes of moving past fill disturbed during the 20th century and into purely historic contexts, perhaps exposing strata from the early 19th century, before Robert Hale Ives' occupancy. Alternately, future work might focus on uncovering the extent of Features 2 and 5, which were only partially exposed by our work this season. Though the John Brown House lost some sod and topsoil this fall, we believe it gained a greater understanding of the activities that took place in its yard during the 19th and 20th centuries.

Chapter 4. Works Cited

Algeo, Megan. *Megan's Field Blog*. http://proteus.brown.edu/archaeologyofcollegehill/6367

ARCH 1900 Field Notes. Fall 2008.

Excavation and Unit Summaries. Archaeology of College Hill. http://proteus.brown.edu/archaeologyofcollegehill/6346.

Slater, Kellie. *Kellie's Field Blog*. http://proteus.brown.edu/archaeologyofcollegehill/6393.

Urban, Thomas M. *John Brown House Preliminary Geophysical Survey Report.* 2008.

Yellin, Steffi. *Robert Hale Ives Homestead*. ARCH 1900 Final Project. http://proteus.brown.edu/archaeologyofcollegehill/7043. Accessed Dec 16, 2008.

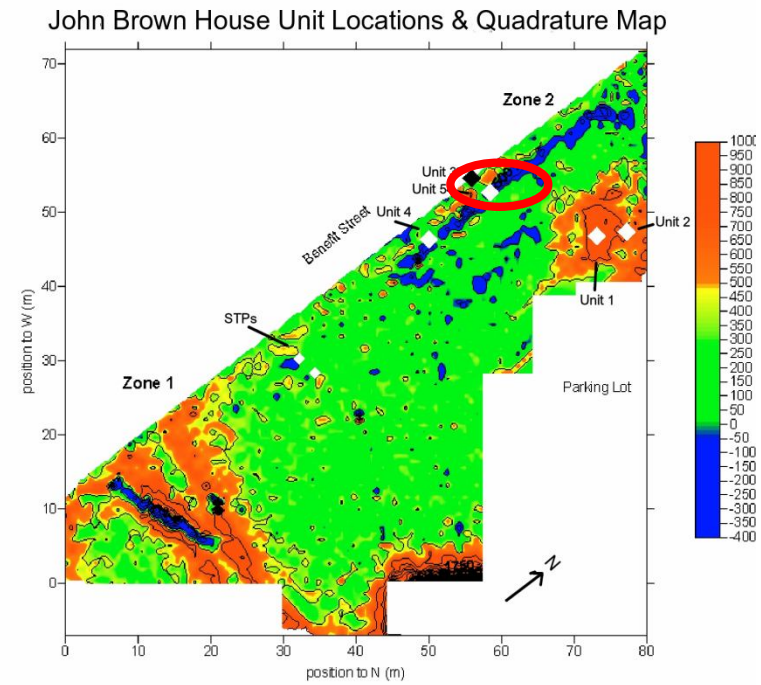
Citations for TPQs provided below Table 1

Munsell software available: http://livingstonmanor.net/Munsell/File%20Downloads.htm

Chapter 5. Excavation Summaries – Unit 3 and Unit 5

Elise Nuding

Units 3 and 5 were located 1.5 meters apart. Because of their close proximity, they are discussed in the same chapter here.



<u>Unit 3</u> was opened on the 29th September 2008, in the northwest quadrant of the lawn along Benefit Street. The location was chosen based on results from the geophysical surveys carried out in September, as a long resistive feature (blue on the map) had shown up along Benefit Street in Zone 2. The brief documentary research carried out at that point corroborated these results, with the mention of several structures in this area of the lawn.

The 1x1 metre unit was marked out, the turf was removed, and the topsoil was designated JBH 12. It was a dark, loamy context with dense soil that was hard to sift. The munsell reading was 10yr 2/2, and root matting occurred near the top of the context. The designation of arbitrary levels at 10cm intervals was planned, and it happened that a soil change occurred after the first 10cm,

defining the end of JBH 12 and the beginning of JBH 17. This definition showed up clearly in the stratigraphy of the unit, and is visible in the profiling of the north wall. The 10cm of JBH 12 revealed an iron nail, and red earthenware sherds, a sherd of white ceramic, glazed on both sides, and some diagnostic artefacts. There was a sherd of refined earthenware, glazed on both sides, with a mulberry transfer print (see right), and a sherd from the bowl of a tobacco pipe. The incised design is irregular, suggesting that it was hand-made rather than machine formed. JBH 17 was the context below JBH 12, and had a distinctly different soil composition of a "mottled yellow/brown clay-ish soil"[4] (shown left, the photo board was incorrectly marked). The planned 10cm was not accurately followed, resulting in JBH 17 extending down for 13cm to 3cm below the datum point (bd) in the NE corner. The artefacts found were 2 iron nails (one 10cm long),small brick shavings, a glass shard, small fragments of coal, and ceramic sherds. Two are diagnostic, a sherd of pearlware with a change of angle, and one with blue transfer print and a maker's mark in the shape of a flower/clover leaf on the reverse.

An arbitrary context, JBH 23 was assigned to the soil below JBH 17, as no soil change had been perceived. This lack of soil change between JBH 17 and JBH 23 is reflected in the stratigraphy of the north wall, however during excavation the soil change that occurred during

[4] Elise's field blog, Week Four 29/9/08, http://proteus.brown.edu/archaeologyofcollegehill/6387

JBH 23 was not allotted a separate context. The soil change does, however, seem to have been noticed, as the context sheet records observing "pockets of mortar" showing through towards the end of the 10cm, but it was not recognised as a separate context. There is a dichotomy between the total depths of the contexts excavated and the depths on the profile drawing of the north wall, but this aside, it is clear that there were natural strata on the north wall that were not identified during excavation. JBH 23 seems to span three strata on the profile of the north wall, starting at the end of the second, and finishing in places at the top of the fourth. JBH 23 was 10cm in depth, and was a loose brown soil, fairly uniform but slightly pebbly, with a munsell reading of 7.5yr 3,3, and pockets of mortar near the end of the context.

The artefacts recovered are of similar composition to the previous two contexts, but in greater volume. Nails (whole and fragmented), coal, and glass were frequent finds, with two pieces of thick dark glass found that were unlike the thin translucent glass found previously. The diagnostic finds were 9 pieces of whitewear decorated with a pink sponge print that dates at the earliest to 1830, found in the north west quadrant of the unit (see right), and a sherd of thick redware with a green glaze. The date range of production for glazed redware is 1700-1770[5], which is an earlier date range than the range for sponge printed whitewear. Redware vessels were utilitarian, which is corroborated by the sherd's thickness of 9mm as it was intended to be durable under frequent use. Its utilitarian nature also means that it would have been kept for use beyond the dates of manufacture, explaining how it

[5] Florida Museum of Natural History, 'Mean Ceramic Manufacturing Dates'. This date range is for dark brown/black glazes. The green glaze dates to an earlier period. For more information see the object biography on this artifact, by Elise Nuding.

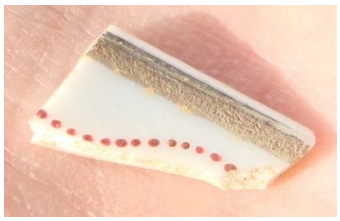
can be in the same deposit as the whitewear dating from after 1830. A modern pull tab for a drinks can was also retrieved, and patent for this design was first obtained in 1963.[6] Therefore, the earliest this stratigraphic layer could have been deposited is 1963. Consequently, the layers above JBH 23 must also have been deposited after this date.

The glass, brick and nails that consistently appear in the contexts from Unit 3 are usually associated with architectural remains. When excavating JBH 17, the excavators had addressed the theory that they "may find traces of the structure that showed up on the geophysics in an earlier context, or it may be that JBH 17 was part of a construction trench for the structure"[7]. However, no evidence of architectural features appeared in Unit 3 which can be explained by the fact that Unit 3 was deliberately placed out of line with the resistive feature that had appeared in the geophysical results. The uniformity of the soil, and the range of dates for the artefact content suggests that the contexts of Unit 3 are fill. One possibility is that this fill was deposited in a construction trench related to the potential architectural structures that appear on the geophysical survey and that was uncovered in Unit 4 during week five. The TPQ established by the pull tab, however, suggests that although the contexts may be fill, they may not be associated with the structure on the geophysics results.

[6] For more information, see the objects biography on this object by Elise Nuding

[7] Elise's field blog, Week Five 6/10/08, http://proteus.brown.edu/archaeologyofcollegehill/6387

JBH 28 was the next arbitrary context assigned, starting at 33cm and going until 43cm below the datum point in the north east corner. In examining the stratigraphy in the profile of the north wall, JBH 28 seems to begin near the top of the fourth strata, and extends down to the fifth.

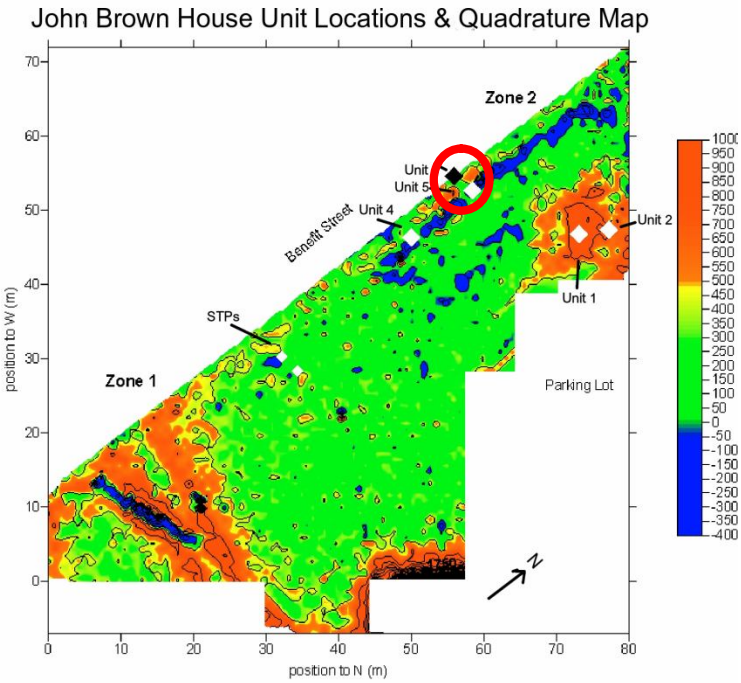


The soil was fairly uniform brown, quite moist, and it became pebblier as excavation continued. Fragments of coal and brick, as well as nails appeared in this context, in a continuation of artefact composition from the previous contexts. The number of ceramic sherds was significantly less than JBH 23, although significant diagnostic finds were the two sherds of Imari porcelain with gold leaf from the south west corner (see left), with a date range of 1700-1780[8]. Like JBH 23, JBH 28 contained a modern artefact, the blade of a key (seen in the artefact photo below). It lends weight to the interpretation that the contexts in Unit 3 were fill, and also means that the TPQ is within the second half of the twentieth century, and that the deposit dates of the contexts above (JBH 12, 17, and 23) are determined by the TPQ of JBH 28.

At 43cm below datum a new arbitrary context was assigned, JBH 34. The consistency was a loose medium brown soil, similar to the contexts above with a munsell value of 10YR 4/6. This context was only 2cm deep, as at approximately 45cm below the datum point a new natural

[8] FLMNH, http://www.flmnh.ufl.edu/histarch/gallery_types

layer appeared. This reddish, clay-y soil was assigned the context number JBH 40 (see right for end of JBH 34/top of JBH 40). On the profiling of the north wall, the start of the fifth stratigraphic layer seems to reflect the change observed during excavation. This is not consistent along the north wall, and JBH 28 breaches the fourth and fifth strata on the west side of the unit,



with parts of JBH 28, 34 and 40 in the fifth stratigraphic layer. JBH 40 revealed artefacts consistent with previous contexts, coal and brick fragments, some nails, and a few ceramic sherds, although again the amount was lessening, suggesting that the excavators were reaching the end of the fill deposit. Significantly two larger pieces of brick were found in the southwest corner , one of size 45x45x20mm. This was the largest artefact recovered from Unit 3, and their discovery coincided with the beginning of a soil change. According to the excavators, "damp, white, loose and powdery"[9] soil with a munsell reading of 7.5YR 4/4 began to show through, and it may be mortar associated with the bricks uncovered. Due to time constraints, this context was not able to be assigned a number, or excavated, and Unit 3 stopped excavation at 47cm below datum.

[9] Moira's field blog, 11.10.08, http://proteus.brown.edu/archaeologyofcollegehill/6385

Unit 5 was opened on 25th October, Community Archaeology Day during Brown University's Family Weekend. A feature, possibly part of an architectural foundation, had been uncovered in Unit 4 but Unit 3 was not looking likely to reveal any architectural remains as indicated on the geophysics. This was not entirely surprising as the "placement of Unit 3 didn't exactly correspond to the area on the geophysics map that indicated a potential wall feature"[10] It was decided to open up another unit, Unit 5, which was located 50cm to the east of Unit 3, in line with Unit 4 and in line with the resistive feature on the geophysics.

The topsoil, JBH 27, had a munsell reading of 7.5YR-2.5-1. It was sandy silty soil of loose compaction, with moderately frequent small stones and humic deposits, and extended across the whole 1x1 metre of the unit. The finds from the unit consisted of some red brick fragments, four glass shards (3 clear and one coloured pink), a nail, and a portion of a brick with a maker's mark. The soil composition is significantly different from the uniform brown soils in Unit 3, despite the mere 50cm in between, but is similar to the contexts excavated in Unit 4 above the feature. This suggested that the placement of Unit 5 coincided more with the geophysical survey.

A change in context was visible between 8-10cm bd, and a new context was assigned. There was a clear division of contexts running approximately N-S on the east side, and this east context was labelled JBH 30. As excavation progressed, it became clear that the "western side was also similar. The two portions of the context were combined to be the same"[11] The centre strip running N-S was labelled JBH 32. It was hypothesised on site that the disturbance might

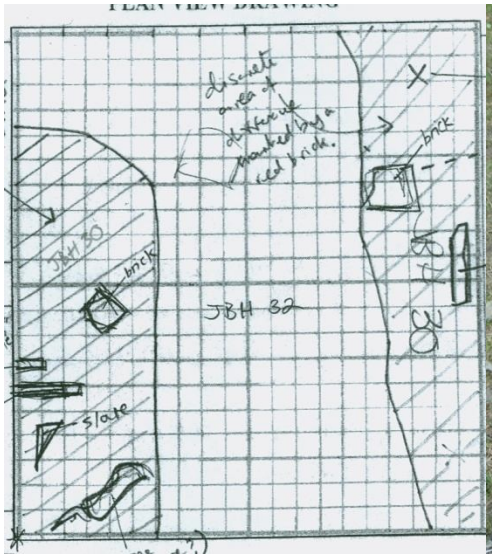
[10] Unit & Excavation Summaries, 'Community Archaeology Day & Week 7', http://proteus.brown.edu/archaeologyofcollegehill/6346

[11] Excavation form for JBH 30

have been due to tree and root action, but this looked less likely as more of the contexts were excavated.

JBH 30 was a dark greyish brown context with a munsell reading of 7.5YR-3-1. The soil was silty gravel, and of loose compaction. The context was later found to continue beneath the central context, but at this level the artefacts found were found to be continuous in composition from JBH 27, although they were greater in number. Mortar lumps, a 6x4cm shard of thick black glass, a lump of asphalt and lots of nails were removed. One diagnostic find was an object marked with '30 amp', and so thought to be part of some electrical feature. Some artefacts that might have been in situ features appeared in JBH 30. Two sizeable pieces of iron (see left), a piece of slate roofing, bricks, and a large stone. The plan drawing from the excavation sheet is shown juxtaposed with the site photograph (see below), to illustrate the layout of the contexts JBH 30 and JBH 32, and the placement of the larger artefacts within them as they were uncovered during excavation. The artefacts are clearly architectural debris that were probably disturbed by demolition and then deposited as some sort of fill.

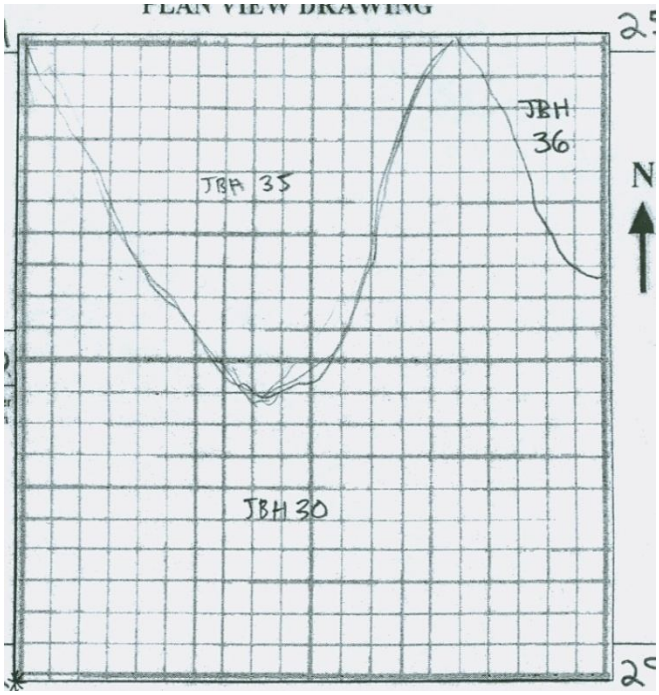
JBH 32, running N-S in the centre of Unit 5, was distinguished from JBH 30 by sandy yellow patches of soil. The composition however was very similar- silty and gravelly. Architectural artefacts were also found in this context, most notable 2 partial bricks, one with a maker's mark. It is the same maker's mark seen on a brick recovered from Unit 2, and what can be read from the JBH 32 brick is "Fisher Co./ILLE NJ" (see below). The whole mark would have read "Sayre & Fisher Co./ Sayreville NJ", and the town where the company was based did not change its name to Sayreville until 1870.[12] This is the only diagnostic artefact from the context, and working from this the most accurate TPQ date that can be established for the deposit is 1870. More architectural debris in the form of nails and a section of a ceramic drainpipe, lined with a lead glaze, a large cobblestone with asphalt attached, and some larger asphalt lumps were removed. The asphalt turned out to be diagnostic, dating from after 1871, also allowing

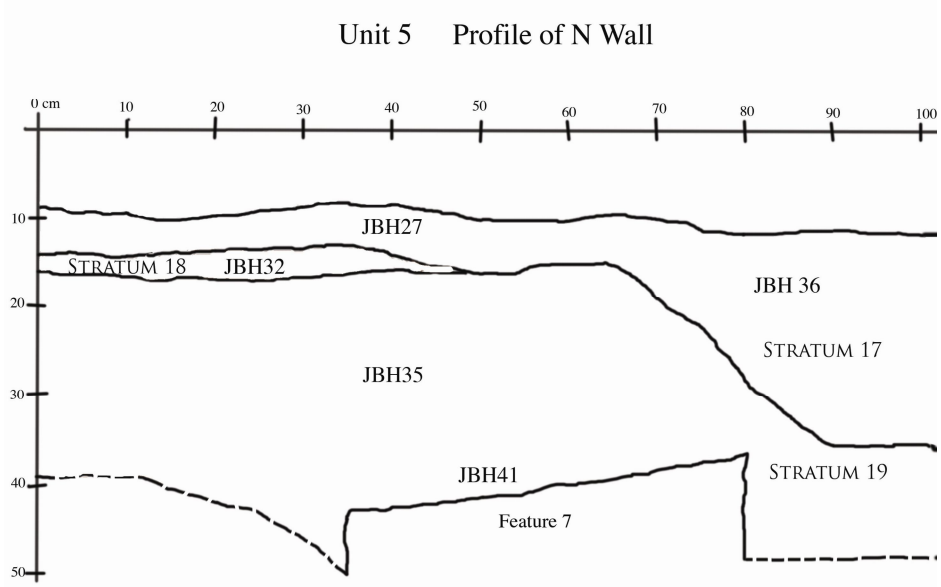


[12] For a more detailed history of the bricks, see the object biography of the brick from Unit 2 by Megan Algeo

the cobblestone to be dated. The other set of diagnostic artefacts recovered from JBH 32 were as yet unidentified objects that were similar to the one recovered from JBH 30 (see below). Finding these objects in different contexts could mean that JBH 32 and 30 were deposited at the same time, or that part of JBH 30 was removed and re-deposited with JBH 32. A ceramic sherd of whitewear with a pink sponge print was found in JBH 32 that matched the sherds found in JBH 23 in Unit 3. This find has important implications for the relationship between Units 3 and 5 that is addressed later.

JBH 32 disappeared from the centre as excavation progressed, revealing a triangular shaped context protruding southward from the north wall. This was labelled JBH 35. With JBH 32 removed, JBH 30 was seen to continue around JBH 35 below JBH 32. It continued as a dark greyish context, with extremely heavy gravel content. It was estimated that 60% of the context was gravel sized 1-5cm. It had relatively few artefacts, but continued to reveal some architectural debris of brick fragments and mortar lumps. Whilst removing JBH 30 in the very north east corner, a darker patch of soil had been identified, and was now seen to continue deeper, and so it was assigned a new context number, JBH 36. The plan view drawn on site indicates the layout of these contexts (see right).

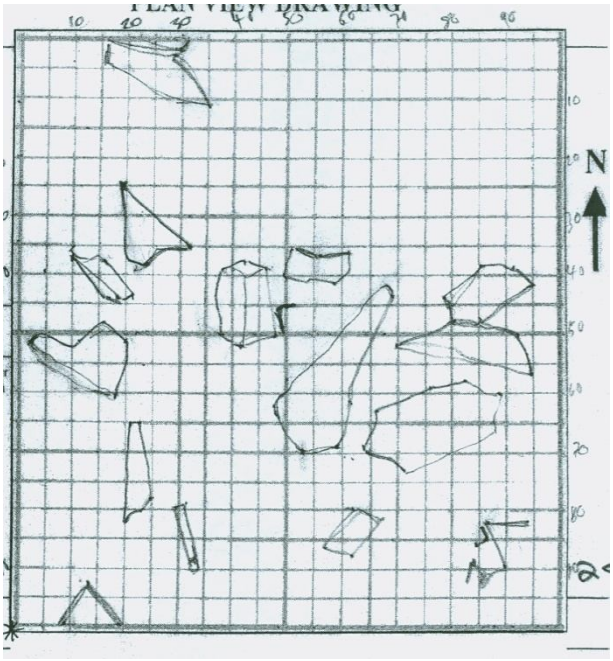




JBH 35 began at a depth of 21cm bd in the southwest corner. It was a darker yellow than the context above (JBH 32), and had a munsell reading of 10YR 5/3. It was described as sandy, loose soil, and had a high content of medium sized stones. Low artefact content, but a 25cm piece of iron bent at approximately a 100 degree angle was uncovered in the context. As more of the context was removed, it seemed to angle downwards towards the north wall. The context was not more than a few centimetres deep at the southern point of the triangle, but reached a depth of 20cm at some points, as seen on the profiling of the stratigraphy of the north wall (left). The deepening of the context suggests that a cut was made into the context of JBH 30 to deposit the context JBH 35, meaning JBH 30 predates JBH 35. Since JBH 30 was identified at approximately the same level as JBH 32, but continued deeper, JBH 32 also seems to have cut into JBH 30 when deposited. As JBH 30 did not extend as far as the north wall on the west side and centre of the unit, it is difficult to draw any conclusions about deposition sequence from the profile drawing, however it is clear that JBH 32 was deposited after JBH 35.

JBH 36 was a very dark brown soil, with a munsell reading of 10YR 2/2, starting at approximately 20cm bd. The stratigraphy of the north wall does not reflect this record made during excavation, as JBH 30 is not visible between JBH 27 and JBH 36 (see above). The

stratigraphy shows continuity between the topsoil and JBH 36 without showing a more gravelly section of JBH 30 in between. It may be that JBH 30 did not quite extend to the north wall, ending just before the end of unit perimeter, and creating a continuity of strata. If this is so, it may be that the excavators misidentified a continuation of JBH 27 as JBH 36.



The soil designated JBH 36 was semi-compact, being much clearer of gravel that the contexts surrounding it, and was interpreted to be a more natural soil that had been cut into when the fill contexts were deposited. If JBH 30 predates JBH 35, as is believed, then it would have been JBH 30 that cut into JBH 36 when deposited. The soil cannot have been entirely natural, however, as copper wires were discovered in JBH 36, protruding out of the eastern wall of the unit.

At 25-32cm bd a lot of moderately sized rocks were showing through the gravelly context, and after clearing away the loose soil it was decided to assign a new context number, JBH 41. The rocks in the centre of the unit surrounded a hole that was less than 10cm deep, and there was another air pocket in the south east corner. The composition of the soil around the rocks was similar to that of JBH 30 above,

although there were several large pockets of mortar showing through the gravelly gray soil. A plan of the unit was drawn to show the location of the rocks, (see above), with the air holes located at (55, 85) and (65, 70).

Excavating more of the gravelly soil around the rocks, and removing the ones that were loose revealed a large rock that protruded out from the north wall of the unit (see right) , and that was clearly related to the rocks already removed, and the ones still in place. These rocks were assigned feature number 7, but excavation was unable to progress any further due to time constraints. Feature 7 would seem to be an architectural foundation of the same type as found in Unit 4 several weeks earlier, and corroborates the geophysical survey that indicated the resistive feature running N-S in this location. Numerous lumps of mortar were removed from JBH 41, with several of them having a flat surface with imprints from the brick or stone they joined together. Five pieces of iron, ranging from approximately 4cm to 22cm in length were also removed (see right). One with a clearly defined ridge was related to one of the rocks that has rust marks on it, but it is not clear if this relation was from being juxtaposed after demolition, or from before. Excavation in Unit 5 was concluded between 49 and 58cm bd with Feature 7 exposed in JBH 41.

The historical documentation available for this part of the site informs us that the Robert Hale

Ives homestead was built between 1832 and 1857. This property, with the address of 327 Benefit Street existed on the site until the 1920s when Marsden Perry bought the house in 1923. By 1926 the structure was no longer standing. [13] It is likely that Feature 7 is related to the structure that was demolished in 1925-6, and that the architectural debris found consistently in Unit 5 is related to this demolition, even if it was removed and re-deposited at some point in the twentieth century. Research on the Robert Hale Ives homestead also revealed a 1908 Providence Platbook Map that shows a sewer line "running in a half circle between the house and the outhouse" (see above, sewer pipe circled in blue).[14] The map is drawn to a scale that makes it hard to overlay the exact position of Unit 5, however the sewer line is roughly in the region of Unit 5, and could provide an explanation for the section of lead lined ceramic pipe found in JBH 32.

The relationship between Units 3 and 5 is important to understanding the site. The contrast in soil composition between the units, despite their closeness has been noted. As excavation of Unit 5 progressed, comparing the west wall of Unit 5 with the east wall of Unit 3 revealed that the relationship is closer than would appear from analysing the soil (strata change

[13] For a more detailed hist tephanie Yellin's work on 327 Benefit Street.

[14] Ibid.

highlighted with a red line in Unit 5 (above) and Unit 3 (below)). The rubble line from the top contexts in Unit 5 appeared on the stratigtraphy of Unit 3's east wall, suggesting that the soil near the top of Unit 3 might have been more similar to the soil at the top of Unit 5 than was realised during excavation. During excavation it was hypothesised that the "lighter, yellowish soil of JBH 30 may represent the division between [the feature in Unit 5] and the natural stratigraphy beyond it", and a comparison with Unit 4 also suggests this. After uncovering the architectural feature, Unit 4 was excavated in two halves. The western half of the unit contained a "mottled orange-brown and dark brown, fine textured soil"[15] that contained smaller artefacts, such as ceramics and glass, without any architectural debris. The eastern half of the unit was significantly different with contexts of rubble-filled and rocky soil that contained "architectural finds of large bricks, nails, and mortar".[16] The soil in the western half is very similar in composition to the contexts of Unit 3, and the eastern half of the unit is strikingly similar to what was uncovered in Unit 5. The conclusions drawn about Unit 4 are that the two halves of the unit represent the interior and the exterior of a structure, and with relation to Units 3 and 5, this interpretation holds weight. The change in soil was not as clear cut in Unit 5, but the feature was by no means fully excavated, and it was not established where the boundary of the feature was.

The excavation of Unit 5 revealed architectural debris that is likely related to the demolition of the Hale Ives Homestead in the 1920s, although the material was probably disturbed and deposited in several fills. Unit 3 also contains fill, but of a very different nature. The date of deposit for the first few strata has been identified as after 1963, and since there is a relationship between the first strata of the corresponding walls of the units, it seems that the top

[15] Unit & Excavation Summaries, Week 6, http://proteus.brown.edu/archaeologyofcollegehill/6346

[16] Ibid., Community Archaeology Day & Week 7

strata of Unit 5 were also deposited after 1963. The presence of modern artefacts in Unit 3 means we cannot we cannot associate all the fill deposits with the Hale Ives structure, however it is possible that they were removed and re-deposited. This means that the interpretation of Unit 3 as originally being a construction trench, or in some way related to the architectural evidence of Unit 5, is still a valid one.

Unit 3 in the foreground with abundant architectural materials, Unit 5 in the background comprised of a fill deposit and no significant architectural remains.

Chapter 6. Excavation Summary – Unit 4

Peter Hatch

The purpose of this writing is to provide a day-by-day narrative summary and an idea of some of the preliminary conclusions regarding the excavations conducted in Unit 4 at the John Brown House during the fall 2008 field season of the Archaeology of College Hill class in the Joukowsky Institute for Archaeology and the Ancient World. These excavations were conducted by Whitney Knowlton, Stephanie Yellin, and Peter Hatch between September 29th and November 20th under the direction of Brad Sekedat and Krysta Ryzewski. The information is divided up by excavation context. A sampling of this same information was first presented to the class and representatives of the Rhode Island Historical Society on December 8th 2008, and this report will provide a more detailed version of the same information, based on the unit paperwork and field blogs and online summaries of the along with new findings from subsequent lab work.

Krysta and Brad placed unit 4 in order to investigate the very long linear resistive feature paralleling Benefit Street found on Thomas Urban's geophysical survey results (Urban 2008). This feature, appearing in blue on the map of the results, was thought not to something recent, since at the time we had to existing record of what it might be, and its resistive (vs. conductive) quality indicated that it was not, for example, a pipe of some kind. It was not initially known from the geophysical survey exactly where, particularly at what depth, this feature would be encountered, and we tailored our excavation strategy accordingly. The unit was placed about 3m from the south end of where the linear feature began and about 4m from the fence and wall along the edge of Benefit Street, in order to fulfill this goal. The unit was purposefully not placed in a grid based on the site datum, but according to where the expected edge of the feature would be.

The excavation strategy at unit 4 was also based upon a balancing of concerns between the need for good and accurate data collection and the practical limitations of our particular excavation schedule. The unit is 1m by 1m in size, for the purpose of providing a balance between covering a large enough area to be potentially variable within itself and a small enough area to be easily excavated by a small team over limited hours. Also this size unit was used for all of the others opened during this field season, creating the added benefit of making all four of them more easily comparable. It was decided that the unit would be excavated in a series of arbitrary 10cm levels, which could be freely reduced to adapt to the natural stratigraphy. The adoption of this common model for stratigraphic excavation proved a good basic model, but had to be adapted somewhat according to the practical concerns that arose from the specifics of excavating in unit 4. In terms of specific methodology it should be noted that we used trowels as opposed to shovels for almost all of the excavation unless specified otherwise, and we see this as evidence that our results are valid since our excavations were conducted with care.

Once unit 4 was placed, and the basics of the excavation strategy determined, work began in earnest on the fourth week in the field, Monday September 29th. String was drawn around the 4 corner stakes to delineate the boundaries of the unit, and the stakes were driven the rest of the way into the ground. The relative elevations of the stakes were observed, and the highest one (in the southeast corner) was selected to be the unit elevation datum, at which point a level line for taking elevation measurements was attached. Overall the top of the unit was relatively level but sloping slightly downward from the datum, with a difference of only 5cm between it and the lowest point, in the SW corner. With these preparations completed we designated our first context numbered, JBH 13, and began to dig.

Excavation Context - JBH 13

Excavation: This context was excavated entirely on the afternoon of September 29th, with the intention of it being a 10cm arbitrary context. The conditions on the day were warm and very humid, as a result of tropical storms that had passed through the area the in the days before. This left the soil very damp and had the result of breeding huge numbers of mosquitoes, which did not hinder progress in any measurable way and were dealt with partly with bug spray. We took photo #13 of the top of the unit. We continued by outlining the boundaries of the unit with our trowels. The turf was then shovel shaved off, and seemed to be composed mostly of grass and topsoil interspersed with "moss, twigs and roots" (Knowlton 2008), which hindered digging somewhat. The soil colors had a Munsell value of 7.5 YR 2.5/1, which may have been affected by the dampness of the day.

Soon after the excavation was underway, a natural change in the soil indicated that we were coming down upon a new soil context. This soil, compared to the topsoil, seemed to be dark and gravelly. This caused us to stop our excavations from going any deeper, and reformed our strategy to excavate according to the natural level. Using trowels we cleared down to the top of this new stratum in all parts of the unit. By our measurements this new stratum was 2-4 cm below the ground surface in the various parts of the unit. At the datum this layer ran from 0-3 cm, and at the center from 3-5cm. This new stratum was designated JBH 16.

Artifacts and Dating: We screened all of the backdirt through ¼ inch mesh. In terms of artifacts, this context contained all modern debris, including two shards of plastic, a ballpoint pen and most importantly two pennies, which proved useful in dating the layer. These pennies, dated 1971 and 1967 provide the basis for our dating for this context, demonstrating with certainty that

the topsoil and turf must have been deposited after the date on the later of the two, a solid *terminus post quem* date. Because of the relatively uniform appearance of the turf across the yard, it seems very possible that the TPQ date for this stratum at unit 4 could be applied more broadly to the yard itself, and that this could potentially be confirmed or refuted by investigation into any documentary record of landscaping work on the yard of the John Brown House property, if indeed such a record exists.

Excavation Context - JBH 16

Excavation: The top of this context was initially photographed, as photo #14, at the end of they day on September 29th, and then excavation of the unit happened at the beginning of the day on October 6th, or week 5. In terms of conditions, the official summary of the day described the day as "cool and much more fall-like" and noted that "the ground was still damp" from recent weather (The Archaeology of College Hill 2008). The recent rains had not damaged our unit so we quickly began to excavate. For efficiency and speed, we shovel shaved instead of troweling to begin with. The soil was extremely gravelly, as it had first appeared to be, which was the main hindrance to digging quickly. In color it was measured in as 10YR 2/1.

Whitney and Steffi excavating through JBH 16 – the large stone, Feature 4, is visible.

Once more just a few centimeters down we encountered what obviously appeared to be a new context, a large flat stone. We immediately observed that the stone seemed "angled in the direction of the linear feature from the geophys[ical survey]" (Hatch, Knowlton and Yellin 2008, 2). We suspected right away that this feature would be very important in the eventual interpretation of our unit, and it was designated Feature 4. We leveled off the entire unit as carefully as we could with trowels. As we continued to excavate we noted a marked difference in the soil to the east and west of the new feature, being "mottled in color and free of gravel" with a loamy texture, measured as 10 YR 2/2 in color on average, although the color varied between orangish and brownish shades. This contrasted sharply with the gravel and dark grayish sandy soil that had overlain it, and seemed to continue in the same color–10YR 2/1–in the approximate area made by extending parallel lines from either side of feature 4, and a slightly lighter color but similar texture to the east, 7.5YR 3/3. This context, following natural levels, was between 3-6 cm thick throughout the unit and ran from 3-9cm at the datum and 5-10cm at the center. For continued work in subsequent weeks, the westernmost smooth soil was designated JBH 19, the easternmost gravelly soil JBH 20, and the darker gravelly soil in line with feature 4 became JBH 21. This separation that would prove to be key to our continued work and subsequent analysis from that time onward, and the differences it is based on are illustrated in figure 1.

Artifacts and Dating: Feature 4 was the main important find in this context, and certainly appeared to be the result of cultural rather than natural deposition, but of course it does not on its own provide temporal information, but rather a clue as to what was to be found later and the relationship of the unit to the results of the geophysical survey. Otherwise, there were fairly few

artifact remains in this context. Most of the artifacts were parts of what became a familiar pattern of undiagnostic small shards of glass, brick and coal. The exceptions to this were two pieces of creamware, a type of refined earthenware that was produced between 1762 and 1820 (FLMNH 2008). It is likely that this context was deposited well after those dates because it directly underlies a stratum from at least 1971 and for other reasons covered later, but it can only be said with complete certainty that this context dates to after 1762. Finds in lower contexts could push this date significantly later, please see the subsection on JBH 37.

Excavation Context - JBH 19

Excavation: JBH 19 was first photographed on October 6th, with photo #18 (Figure 1), and not excavated until October 20th, after a break in the normal schedule in commemoration of the Columbus Day holiday. The conditions on the day were described as "a nice fall day with warm afternoon sun" (The Archaeology of College Hill 2008). We began the day with a summary of the previous weeks' results, thorough short tours given to the rest of the class. We then chose to continue our excavations by moving to JBH 19, a sector of the unit on the west side bounded by a line extending along feature 4 and beyond it diagonally across the unit from approximately 50cm from the west edge at the south and approximately 27cm from the west edge at the north. Elevations were taken at rough points near the corners and center of this section of the unit, rather than the whole unit (Hatch, Knowlton and Yellin 2008, 3) Because of the new smooth soil that this deposit represented, this unit was excavated as an arbitrary 10cm level into that new context.

Trowels were used to excavate, given the relatively small area. The soil was mottled between shades of orangish-brown and dark brown, but was uniformly smooth and almost clayey

in texture. It was noticeable that this type of soil had many more roots growing in it than the soil at the east of the unit, and these roots proved to be a significant obstacle to digging, requiring them to be cut off regularly at the floor and along the profile of the unit as we dug, using gardening shears. As we dug down the soil became more uniformly colored, but there was no clear transition to indicate the need to stop because of a natural level. The mottled layer later showed up as a distinct stratum, representing most of JBH 19 on the profile map made later. On average by the bottom of the 10cm context the soil was dark brown and 10YR 3/2 in color. As we began to overshoot our intended depth of 20cm all around in parts of the unit, we declared our arbitrary level finished. This context was between 6-11cm thick, with this unevenness being due to the fact that the top of the stratum was not level. In the southeast corner (used since the datum was not contiguous to the area excavated) this context ran from 10-19cm and in the center of the section it ran from 11-21cm. The context below, to be excavated later, was initially designated JBH 26, and photographed in photo #22. There were noticeable similarities in terms of soil composition and artifact assemblage to lead to a comparison between this context and what was coming out of unit 3 at the same time.

Artifacts and Dating: This stratum did not produce very many artifacts, due mainly to it being a small part of the 1x1m unit. Although not noted on the unit paperwork, it was important to note that while excavating this context it was observed that feature 4 turned out to be "relatively thin...the bottom of it was only a couple of cm down" (Hatch 2008) which cast temporary doubt on its importance and relationship to the larger feature observed on the geophysical survey. We continued to find small pieces of brick and glass, and in addition found charcoal. The diagnostic artifacts in this context were two sherds of pearlware, manufactured from 1780 to1840 (FLMNH 2008). Additionally we found a large nail or stake that was heavily

corroded, but appeared to be made with "cut nail" technology, as opposed to being hand-wrought, a technology which first appeared in 1790 (Edwards and Wells 1993). Therefore the TPQ for this context is 1790. Finds in lower contexts could push this date significantly later, please see the subsection on JBH 39.

Excavation Context - JBH 20

Excavation: On Saturday was October 25th the class hosted a Community Archaeology Day where visitors to the John Brown House were treated to a tour of the site. Visitors talked with members of the class, often offering their ideas and interpretations about what we were uncovering. For this day Kellie Slater was added to the normal excavation crew. This was very fun for those who participated, although its effects of the quality of archaeological data collected may have been mixed. In unit 4 for example a boy who was helping removed bricks that might otherwise have been left in place for longer, and since visitors require a large amount of energy there was not always enough time excavate efficiently or take careful notes. During this time and the Monday that followed, context JBH 20 was excavated. Both days were described as "gorgeous sunny days with warm weather" (The Archaeology of College Hill 2008).

The top of JBH 20 is recorded in photo #18, and it represents all of the eastern portion of the unit not excavated in JBH 19, since it was combined with JBH 21 which was initially designated as a separate context. The soil was very rocky. Underlying the gravel that had been initially visible were larger rocks and two large bricks whose location was mapped out on a sketched plan. Many pieces of brick and stone, and mortar turned up, which one excavator blogged as being "more foundational features" in due to the apparent relationship with feature 4 (Yellin 2008). When excavation resumed the following Monday, October 27th, this part of the

unit was dug into further. As we dug further we began to find pockets of packed sand, some of which were white in color, 10YR 7/3, and others that were more of a brown sugar color, 10YR 5/4. A larger lump found was white at the center and surrounded by the brown sand, perhaps indicating that the two colors represented the same material/ We took this to be mortar of some kind. It was noted by that the composition of the soil was much like what was coming out of unit 5, which was a new unit opened on that Saturday. Overall somewhere upwards of 5cm of this context were excavated between the two days, going from 8cm to 13cm at the datum. An arbitrary split was made between this context and a new one, to allow for mapping a detailed plan of the architectural debris feature, which was later designated feature 6.

Excavation of architectural debris in Unit 4.

Artifacts and Dating: It appears this context contained many artifacts, specifically the large quantity of architectural materials that were found, including two large bricks, and mortar, and various other materials. Notable among these finds were the sand mortar mentioned earlier, and a piece of mud brick that had an "impressed design" of parallel lines in its fragile surface (Knowlton 2008). Kysta, from her experiences with other historical archaeology in the area, particularly with the Greene Farm Archaeology Project, noted this architectural rubble was

similar to what had been observed there, with the debris possibly representing "the interior of a wall, which was probably two or three feet thick" (Knowlton 2008). Although these finds are interesting they do not by themselves give a firm indication of when this context was deposited and the architectural feature. The diagnostic artifacts that do bring us closer to a date were four sherds of plain creamware, which provides a TPQ date of 1762 (FLMNH 2008), and a large number of cut nails, which provide 1790 (Edwards and Wells 1993), the actual TPQ for this context. Finds in lower contexts could push this date significantly later, please see the subsection on JBH 37.

Excavation Context - JBH 21 – *Unused*

This context appears on the context log, but was unexcavated. The decision was made when excavations into JBH 20 began that this context did not appear noticeably different from the area originally designated as JBH 20, and thus JBH 20 was expanded to include it.

Excavation Context - JBH 26 – *Unused*

This context appears on the context log, and was photographed in photo #22, but was unexcavated. It appears on the excavation forms and was listed as a new arbitrary context to underlie JBH 19, to be used when we continued to dig on the west side of the unit. It was missed, and when excavation resumed on that part of the unit a new context number JBH 39 was used for the same area. In practice JBH 26 actually refers to JBH 39.

Excavation Context - JBH 37

Excavation: JBH 37 was the arbitrary context excavated below JBH 20 on the east side of the unit. It was mapped on October 27th and November 3rd and the excavated to a limited extent

on the 10th. It was initially created so that the architectural debris that started to appear more and more in JBH 20 could be mapped in clear detail. This author feels unqualified to perform any kind of detailed analysis as to what the results of this plan map might say as to the character of the rubble fill and what kind of feature it may be. The map was completed, with the measuring done mostly by the author, and drafting by Whitney Knowlton. The map (Figure 3) is included with this section. Unfortunately we made mistakes due to the shortened timeline of the last few field days that was significantly worsened by daylight savings time. First among these mistakes is that the mappers neglected to remember to add elevations on either the initial context form or the map, and that represents a hole in the data. Some elevations were recorded on November 10th, and that data should be taken into account. However a second context sheet that was begun for this context does have some elevations recorded, and so that data will be used where possible. In terms of conditions, the last two days of excavation began at 1:30 each afternoon to try to compensate for the rapidly failing light, and corresponding dropping temperatures.

The whole of context JBH 37, because of its architectural fill, was designated feature 6 on November 3rd. The actual excavation done on JBH 37 was conducted November 10th. The soil was characterized as "very dark grayish brown" or 10YR 3/2, and characterized as "full of rocks and broken bricks" (Hatch, Knowlton and Yellin 2008, 5). The excavation plan was an arbitrary 10cm level, made by removing small rubble but leaving pedestals around larger pieces of brick. This proved "very difficult since the dirt was relatively loose" (Knowlton 2008). In the end this level was not completed, and the elevations included were 15.5cm at the datum, 21.5cm written by the middle of the east wall, 18cm at the northeast corner and 9cm written in the middle of the north wall. These seem to reflect starting elevations, although it should be mentioned that the ending elevations are not too far below this.

Artifacts and Dating: Much more architectural debris was removed from this layer, although some of it may have gone uncollected due to it being essentially the same as the assemblage found in overlying contexts. Other than this very few diagnostic artifacts were recovered, including 8 cut nails, again providing the possible TPQ of 1790 (Edwards and Wells 1993). The most interesting diagnostic artifact thus far was a tiny shard of milky colored glass, which only began to be produced in 1869 (CNEHA 2000). This is an obvious TPQ for the stratum, and much later than any diagnostic artifact from the two contexts above it. According to the principal of superposition, that newer deposits will overly older ones, this means that both JBH 16 and JBH 20 may also be later than 1869. A reanalysis of this artifact as something other than milk glass, or an argument as to how it may have been artificially introduced into this architectural rubble could yet change this date, but neither have been presented. In any case, its important to note that the artifact assemblage and general characteristics of this context continued to match a similar rubble-filed quality to unit 5.

Excavation Context - JBH 39

Excavation: This context was an arbitrary level to be excavated below JBH 19 in the western portion of the unit, on November 3rd, the next-to-last day in the field. Although the conditions of the day pushed the end of class to around 4:30 from the usual 5:20 due to daylight savings, we worked as best we could. Excavations were opened at 1:30 in the afternoon for those who could make it then, and "students trickled in" between that time and the scheduled start of class (The Archaeology of College Hill 2008). It was decided that based on soil and artifacts from the excavation of JBH 19 that were very much comparable to those from unit 3, we did not need to excavate the western side of the unit as carefully, and we would attempt to make

this a 20cm context as opposed to the normal 10cm one. With that ambitious goal in mind we excavated as quickly as possible.

Once more new elevation measuring points in each corner and the center of the section, as opposed to the whole unit, were added in. Our target elevation was 20cm below the current highest point, or 37 cm, but digging was once more hindered by the roots laced all through the soil, a constant problem in the western part of the unit. As we excavated we noticed that the artifact density seemed to be higher than in the contexts above, and "interesting finds included animal bone, a button, some pottery pieces" along with the usual glass, coal, and brick (Yellin 2008). Another mistake made in the rush of the last couple of days was that this layer lacked a soil description, but a later form for the context below described that soil as "same as above" and describe it as "dark gray-brown loamy soil" and 10YR 3/2 in color (Hatch, Knowlton, and Yellin 2008, 8) so it is reasonable to attach that description to the soil from this context. Indeed for the purposes of stratigraphic analysis this arbitrary context can be treated as the same as the one below it, JBH 42. This context was not completed to the full 20cm, but for the sake of efficiency a new context was opened for the last day. This context was between 10 and 13cm thick across the section and went from 19-31cm in the SE corner nearest the datum, and 21-31cm in the center.

Artifacts and dating: As stated before this context had a large number of artifacts, which included a variety of things such as a small triangular piece of iron of unknown use, and a single brass button. Once more there was an example of a cut nail, two stakes in this case, dated after 1790 (FLMNH 2008). In terms of historic ceramics there were sherds of creamware and pearlware as had been observed in other contexts, which began to be produced in 1762 and 1780, respectively (FLMNH 2008). Also there was a single sherd of whiteware, which pushes only

began to be produced in 1830 (FLMNH 2008). Finally, there was a small piece of white colored plastic, which Krysta interpreted as cellulose plastic, a fairly modern material that was not produced until 1855 (Wikipedia 2008), which would appear to be the TPQ date for this context. Again invoking the idea of superposition, it would seem that JBH 19 and JBH 16 above are also brought up to this date. It could be argued that this plastic was introduced by rodent disturbance since the surface seemed chewed, or by some other means, but there is no similar evidence for the whiteware that is roughly contemporary, so this date seems usable until further research is conducted.

Excavation Context - JBH 42

Excavation: The final context to be excavated at unit 4 during the first season was JBH 42, another arbitrary context below JBH 39 that was intended to get another 20cm down into the western section of the unit, just before excavation needed to be stopped for mapping and backfilling. The conditions of the day were again affected greatly by daylight savings time and an overcast day, which led to a notable lack of light to work by. Even so "Brad and Krysta had to pry trowels away from" many of us, when digging had to cease at 3:30. We dug as quickly as possible, even using shovels in the small area being excavated. Once more there were problems with root disturbance that slowed excavation, and near the end an extremely thick tree root was discovered in the northwest corner of the unit. Otherwise the soil was the same smooth dark brown stratum as above, 10YR 3/2 in color. When excavation was halted, 7-10cm of the intended 20 had been removed, going from 31-39cm at the corner nearest the datum and 31-41cm in the center of the section. As digging down was conducted, we were also unstructed to cut into the wall on the east side of this section, below feature 4, to investigate what might be there in order to better connect feature 4 and feature 6, especially given how thin feature 4 had

turned out to be. As we cut across we found "several large stones beneath" (Yellin 2008) feature 4, indicating that it was indeed just the top layer of an architectural feature that went much deeper. After excavations were stopped we took photos of the whole finished unit on all sides, and made a map of the profile at the south wall, chosen because we thought it showed the two halves of the unit and the extreme differences between them most clearly. These differences are also illustrated well by photo #44 (Figure 2). With this step quickly finished in the fading light we put a tarp in as carefully as possible backfilled the unit with the help of members from the other crews.

Artifacts and Dating: Like JBH 39, JBH 42 contained a wider assortment and greater quantity of artifacts than the contexts above it. The large quantity of otherwise typical coal was notable. Glass shards and pieces of brick were recovered in the now familiar pattern. A wide variety of ceramic types were encountered in this unit. The plain pearlware was found, providing a TPQ of 1780 (FLMNH 2008). Several sherds of a blue decoated pearlware were found as well, pushing the date back to 1780 (FLMNH 2008). A redware with dark brown glaze showed up as well, a type dating from 1700-1770 (FLMNH 2008). The latest sherd in the assemblage was a single piece of blue and white Canton porcelain, produced from 1790 to 1835 (FLMNH 2008). Thus 1790 can be considered a TPQ for this context, but there was no noticeable difference in soil composition between it and JBH 39 above, so it may be comfortably suggested that this context must also date to after 1855.

Preliminary conclusions

The most basic conclusion of our excavations is the clear difference between the contexts at the west side of the unit, which were characterized by smooth soil containing many roots, and

larger numbers of diagnostic artifacts and the contexts east of feature 4, which were characterized by rocks and other apparent architectural debris, the manmade portions of which made up the artifact assemblage, resulting in fewer diagnostic artifacts. This difference was first visible on upon the excavation of JBH 16 and the finding of feature 4, and only became clearer as more excavation was conducted (see figures 1 and 2) and feature 6 was revealed. There are more conclusions to be made, on the basis of this information.

Photo # 44, bottom of excavations as of November 10th

Features 4 and 6 appear to both represent parts of a larger architectural feature, that seems to be rubble fill inside a more regularly built shell. Together these features are small parts of the large linear resistive feature observed in the geophysical survey results (see Urban, this volume) and this claim is made on the obvious difference between this architectural feature and the surrounding soil, and the orientation of the western edge of the feature, the boundary between the two halves of unit 4, almost exactly parallel to Benefit Street as was the feature at the same location observed in survey. Therefore if we extend the line made through the middle of our unit, with the expectation that the feature will continue, we may say that is sits on the dividing

line between the interior (on the east side) and the exterior (west side) of a larger architectural feature, likely a larger wall or the part of a structure of some kind. We can be firmer in this hypothesis given that the same difference seems to be illustrated in the difference between the smooth soil and large number of historic ceramic sherds recovered from unit 3, and the architectural rubble found in nearby unit 5 (see Nuding, this volume). The difference between these two units, several meters away, provides an illustration of just how large the overall architectural feature must be.

Units 3 and 5 are important in another way in the attempt to determine the temporal context of the construction and use of this architectural feature. Because unit 4 was subdivided into smaller sections of a single 1x1m unit, the resulting artifact assemblages from each context are small. These collections are not amenable to statistical dating techniques like mean ceramic dating or mean artifact dating, because they are not large enough to produce valid or exact results. For the time being we are limited to TPQ dating which does not provide an exact timeline. However, since units 3 and 5 seem clearly associated with the two halves of this unit, if the stratigraphy of the two can be closely associated then the dates from strata that appear to carry over can potentially be applied to unit 4. This creates the potential for larger artifact assemblages that can be associated with one another and more exact dating will result. This is dependent on the conclusions of the stratigraphic analysis (see Combs, this volume).

Finally, documentary evidence will be useful in the continued attempt to learn more about the archaeological research at the John Brown House. At this time there seems to be evidence pointing to the architectural features we are finding across all of the units, and including the one in unit 4, being parts of a 19th century house at Benefit and Charlesfield Streets constructed while the property was owned by Robert Hale Ives (see Yellin, this volume). More

information about this possibility, that should still be treated as tentative, but should definitely be investigated by future students of the Archaeology of College Hill.

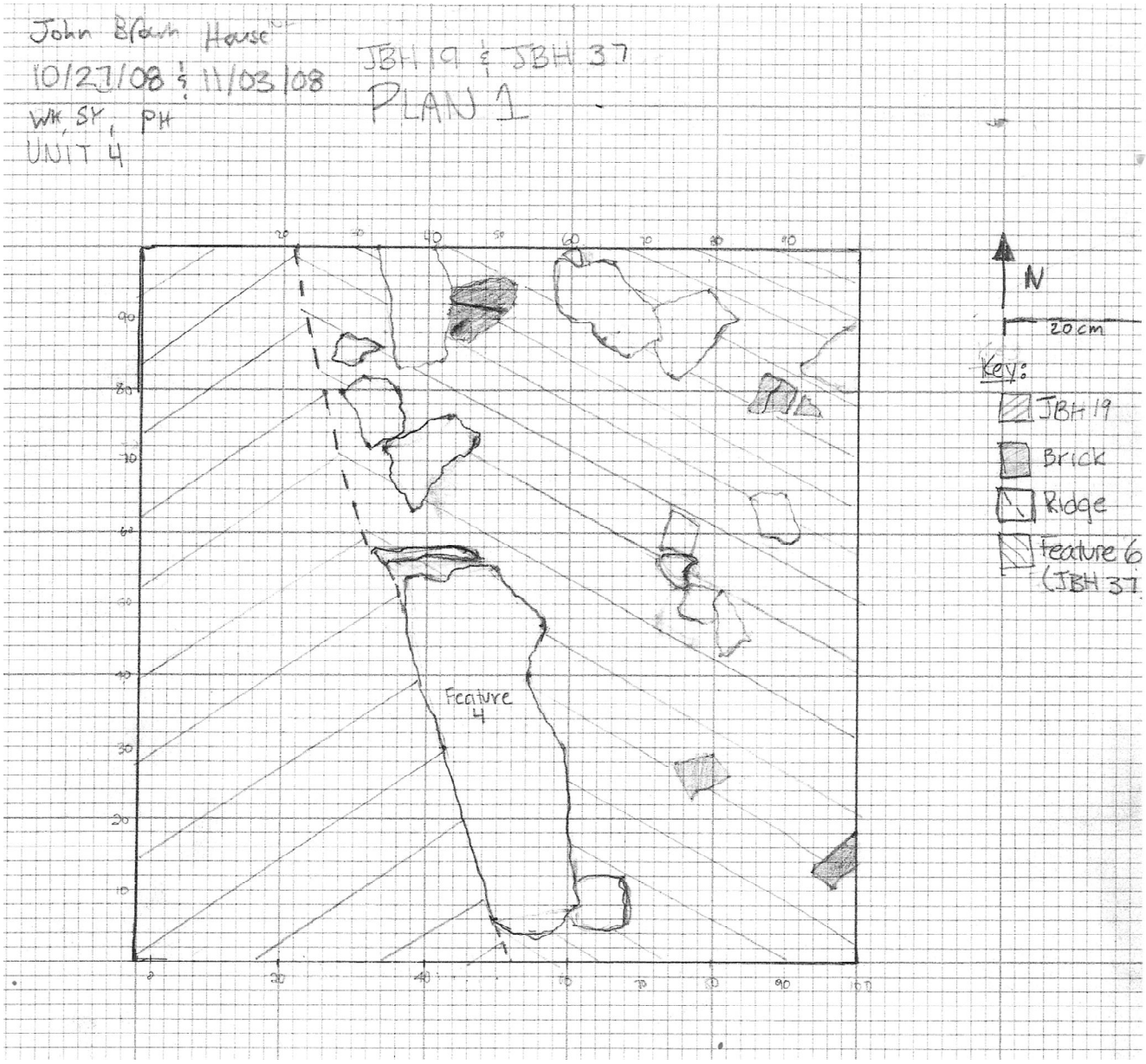
Summary Table

----------	**JBH 13**	**JBH 16**	**JBH 19**	**JBH 20**
date	29 Sept.	6 Oct.	20 Oct.	25-27 Oct.
soil color	7.5YR 2.5/1	10YR 2/1	10YR 3/2	10YR 2/2
description	topsoil	gravelly, black	mottled, brown	gravel, lighter
top elev. (range)	0-5cm	3-9cm	8-12cm	8-?cm
bottom elev. (range)	3-9cm	7-12cm	17-21cm	13-?cm
feature(s)	none	4	none	6
photo(s) taken	13	14	18,22	18
----------				
artifact giving date	U.S. penny	creamware	nail - cut	stakes - cut
TPQ date	1971	1762*	1790*	1790*
source	on object	FLMNH	Edwards and Wells	Edwards and Wells

----------	**JBH 37**	**JBH 39**	**JBH 42**
date	27 Oct.-10 Nov.	3 Nov.	10 Nov.
soil color	10YR 3/2	10YR 3/2	10YR 3/2
description	rocky, dark	smooth, dark	smooth, dark
top elev. (range)	15.5-21.5cm	17-21cm	29-31cm
bottom elev. (range)	?	29-31cm	37-41cm
feature(s)	6	none	none
photo(s)	30, 44	none	44

---

artifact giving date	milk glass	Plasic - cellulose	Canton Porcelain
TPQ date	1869	1855	1790*
source	CNEHA	Wikipedia	FLMNH



Plan 1 of the architectural rubble in JBH 37

Chapter 6. Works Cited

Archaeology of College Hill. 2008. Excavation and Unit Summaries. Joukowsky Institute for Archaeology. http://proteus.brown.edu/archaeologyofcollegehill/6346.

Council for Northeast Historical Archaeology (CNEHA). 2000. Telling Time in the Second Half of the Nineteenth Century. Ed. Lynda Bass. Florence, NJ.

Florida Museum of Natural History (FLMNH). 2008. "Mean Ceramic Manufacturing Dates." Artifact Identification Guide. Ed. Krysta Ryzewski and Brad Sekedat.

Hatch, Peter, Whitney Knowlton, and Stephanie Yellin. 2008. Excavation Forms. Ed. Krysta Ryzewski and Brad Sekedat.

Hatch, Peter. 2008. Archaeology of College Hill: Peter's Field Blog. Joukowsky Institute for Archaeology. http://proteus.brown.edu/archaeologyofcollegehill/6515.

Knowlton, Whitney. 2008. Archaeology of College Hill: Peter's Field Blog. Joukowsky Institute for Archaeology. http://proteus.brown.edu/archaeologyofcollegehill

/6498.

Urban, Thomas. 2008. John Brown House Preliminary Geophysical Survey Report. Joukowsky Institute for Archaeology. http://proteus.brown.edu/archaeologyofcoll

egehill/admin/download.html?attachid=4283873.

Wikipedia. 2008. Plastic. Wikipedia Foundation, Inc. http://en.wikipedia.org/Plastic

Yellin, Stephanie. 2008. Archaeology of College Hill: Peter's Field Blog. Joukowsky Institute for Archaeology. http://proteus.brown.edu/archaeologyofcollegehill

/6528.

Chapter 7. Managing and Preserving the Archaeological Record

Evelyn Ansel

Archaeology is both a scientific and a humanities based discipline. The knowledge generated in the production of archaeological knowledge is unquestionably cross-disciplinary. However, the scientific side of archaeology is quite an unconventional science. In the archaeological arena, data is gathered, hypotheses are tested, and theories and papers are written and published; all of these steps in the production of scientific knowledge would be familiar to any biologist or chemist. However, archaeology diverges from traditional scientific method when the idea of *repeated* experimentation is applied to prove or disprove a hypothesis; unlike many disciplines within the scientific realm, archaeologists cannot repeat the "experiment" that results in data collection. As soon as the first shovelful of dirt has been removed from a trench, the site has been changed irretrievably. Archaeology is an inherently destructive practice, but some destruction (or, more literally, deconstruction) is necessary in order to collect data. With this idea in mind, the ethical motives behind the pursuit of archaeological knowledge should be based on the idea of stewardship to the public and the addition of knowledge to the pool of cultural history that humanity lays claim to. This is something that we have kept in mind as we have excavated at what is both the historic home of John Brown and the home of the Rhode Island Historical Society in Providence, Rhode Island, for the fall season of 2008. But now that it is December, and we have traded trowels for keyboards as we analyze our artifacts and begin to piece together a site report, we must not leave the idea of stewardship behind. Our discussions throughout the semester have placed the ideas of education, accessibility, and preservation at the forefront of our responsibilities to the public in our archaeological studies. And our responsibilities certainly

don't end on the date of publication; because we have removed these artifacts from the ground, we must address the question of what happens to them after the site has closed for the season and we have finished our final papers. It is our responsibility to develop a plan for the care, storage and maintenance of these artifacts so that they may continue to add to the body of archaeological knowledge through study and preservation.

Elise shares a find with enthusiastic visitors on Community Archaeology Day.

In archaeology, it is common for the people who performed the physical excavation of the site to not be involved with the writing and publication of the site report. Archaeologist A. Jones points to the danger of "exploding" a site, wherein the traditionally linear path of excavation, post-excavation and then publication creates "an interpretive distance between those who have a primary engagement with the site, and those who report on the encounter" (Jones 2003, 39). We have been striving to overcome this inconsistency in interpretation by following through the process of producing knowledge about a site and being intimately involved with the material every step of that process. Designing a plan for the care and display of the artifacts post-"publication" for us is another attempt to continue to be involved, and to minimize the linear

nature of our findings. G. Lucas characterizes archaeology as a group practice where human interaction is a key component of interpretation, yet this step is often erased from the site report, and "there is a violence which accompanies this when people are silenced in the name of representation, the production of knowledge" (Lucas 1997, 13). Therefore, it is important that not only are we, the excavators, involved in the interpretation and in the publication of our work, but that we are also reflexive about our self-involvement within the site report. Discussing the treatment of the artifacts post-excavation and interpretation is a key component in including ourselves in an interpretative process that is both non-linear and open to further interpretation by other people who have an interest in this topic, from published scholars to casual museum visitors. Instead of presenting a unilateral interpretation that removes the people from the process, we are working together to create a site report that reflects current cross-disciplinary methods and thought processes in the production of knowledge within the archaeological field.

So, theoretical motives aside, what exactly happened to the artifacts once they left the relatively public sphere of the site during excavation? The artifacts were taken to the archaeological lab for further study and interpretation. First, the jumble of artifact bags were set out in numerical order by context. This seems to be a strange "explosion" of a site as contexts are assigned randomly based on chronology- whoever reaches the next soil change or arbitrary context simply takes the next number. The very act of assigning a context number is a form of decontextualization. However, sorting the artifacts by context number sorts them more or less into the order in which we found the artifacts generally over the site. By looking at the ordered contexts, we can see how our first basic interpretations in the field developed over the whole site. As a class, we took each context one at a time to clean the artifacts, and walked through the excavation as we experienced it in the field again in the lab. And because we were doing this all

together around a small table, and people were washing artifacts from all contexts regardless of which unit they worked in, we discovered that despite feeling like we had a good impression of what was going on around us on the site, we were largely buried in our own trenches with blinders on. Personally, it made me realize how limited my initial interpretations were, and how little I really knew about what was being found in other trenches, despite what I had believed at the time. Working in the lab with these artifacts granted the excavators a greater level of interaction and a deeper understanding of what was being excavated, and writing about the experience in a report allows the public access to a closed lab and various steps in the process from trench to display that are not usually visible to those outside of the interpretive process.

Moira, Evie, and Brad process artifacts in the lab.

After the artifacts had been cleaned, either dry-brushed or rinsed, we were able to examine them more closely in the labeling process, and more analytically in the cataloging process. Cataloging and identifying the artifacts is a very time consuming and labor-intensive process, but it is also imperative to the goals of stewardship to the public, accessibility, preservation, and education. Without first organizing and recording the numbers of artifacts

along with key identifying features, many things like research and preservation would be nearly impossible. But when the information is entered into a database, the curators of a museum can search the collection and be aware of what is there without physically going through every single object, which can increase wear and tear and reduce the life of the artifact; with a database, a conservator can search the collection for potential trouble spots for future care; with a database, a visiting scholar can peruse the collection that might be in storage so that they know what to ask for, and what they may be looking at; and with a database, we can calculate trends that would be extraordinarily difficult to determine if we were only working with a jumbled box of artifacts. One instance where cataloging would have been exceedingly helpful to our investigations is with the case of the artifacts mysteriously exhumed sometime in the 1970s or 1980s at the John Brown House; they are currently sitting in a box somewhere in the Rhode Island Historical Society attic. However, if these objects had been cataloged and this information was available to us before we began to dig, it would have provided us with an extraordinary amount of insight about everything from what types of artifacts we could expect to find to where we should excavate. If this excavation had been recorded properly, instead of starting fresh, we could have built upon the previous work of these students. It also demonstrates the value of keeping meticulous notes on excavations; you never know when that information could be called upon in the future, or who it might be useful to.

The catalog and database used for the John Brown house excavations was designed by Dana Munro of the Rhode Island Historical Society so that it can be collated with the RIHS' existing database and object catalog. A catalog entry includes identifying information about an artifact, from information about where and when it was excavated (context number, unit, depth, soil color, excavators, and date excavated) to details about the specific make-up of that particular

object (material, type, class, variety, fragment type). The catalog entry also tells the number of that type of artifact found in a particular context, whether the artifact is diagnostic or not, and any other notes that the cataloger feels should be included. The Rhode Island Historical Society object catalog is completely accessible online; therefore, once the cataloged information from our excavations is incorporated into the RIHS database, anyone with internet access will be able to search the collection and see the catalog information about what was excavated from John Brown's front yard. This is an excellent form of community accessibility (though, of course, it does require access to a computer and the internet), and will provide an excellent resource for any scholar wishing to search the collection.

The database is an exceedingly useful tool; with it, we can shuffle and arrange and rearrange our information by any number of variables to find certain trends across a site[17]. In this way, the catalog can serve the interests of many different users. For example, a scholar who is researching the occurrence of a variety of pottery designs throughout a site would use the database in a very different manner than the curator who must devise a storage and collections care plan for the artifacts. A scholar studying the different pottery designs would be more interested in the number of catalog entries for pottery across the site, because this would give an idea of how many different types of pottery were found in each context. One context could contain nine sherds of one type of pottery, and three of another type. This information would go into the database as two separate catalog entries; one for each type of pottery found in that particular context. However, the curator would more likely be interested in the raw count of

[17] The interpretations I make here are based on the information we currently have entered into our database. However, we have not cataloged all of the artifacts we collected. We are about 75% of the way through contexts (We're missing 11 of 42) Therefore, these interpretations are not completely accurate and are intended to give the reader an idea of what can be accomplished with a catalog like ours. However, these interpretations are by no means complete or "correct."

pottery sherds found overall on the site, because the curator has to think about how many pieces overall he or she must accommodate in the storage area. Alternately, knowing that there are 32 catalog entries for “brick” or that there are 241 individual pieces of brick is not very helpful when trying to decide on storage box dimensions. However, if you know that these sherds together weight 2,148g, and a brick weights maybe 2.5kg, the curator knows that he or she will need to make room for about two bricks worth of sherds. Using the various searching and sorting methods within the catalog can assist people with different aims in their research, and be a very versatile tool.

Figure 2 demonstrates one aspect of the catalog that can be very helpful in devising an artifact care and management plan for the future. A chart like this informs the viewer of the raw numbers of artifacts in the collection. A curator could use this chart to determine what percentage of the collection is stable, and what percentage of the collection will require more attentive care and storage to prolong the life of the artifacts. According to the chart, 24% of the material in the collection is either historic ceramic or glass. These materials can be delicate and will require careful storage (as with all artifacts in a collection) but aside from that, they are relatively inert and will require a fairly low-key treatment plan. Additionally, 26% of the collection is labeled as “other historic” according to this chart. When we search in the database, it is clear that “other historic” is mostly architectural materials, including slag, brick, mortar, clinker, concrete, and cement. Therefore, nearly half of the collection thus far is made up of relatively stable and inert artifacts that with proper preparation and careful storage, should last indefinitely. The organic materials in the collection may require slightly more care than the ceramic, glass, and architectural materials. But as these items make up less than 3% of the total artifacts in the collection, this should be quite manageable.

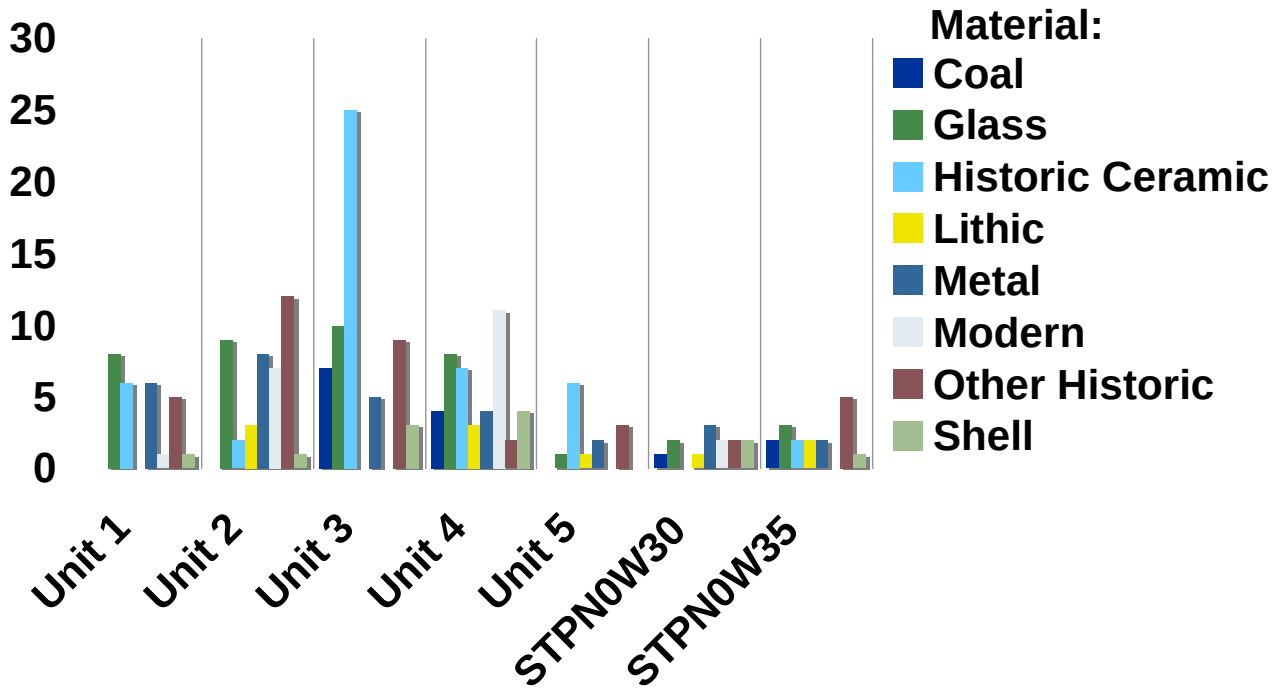


Figure 1. Graph of catalog entry frequency for most common materials encountered in excavations

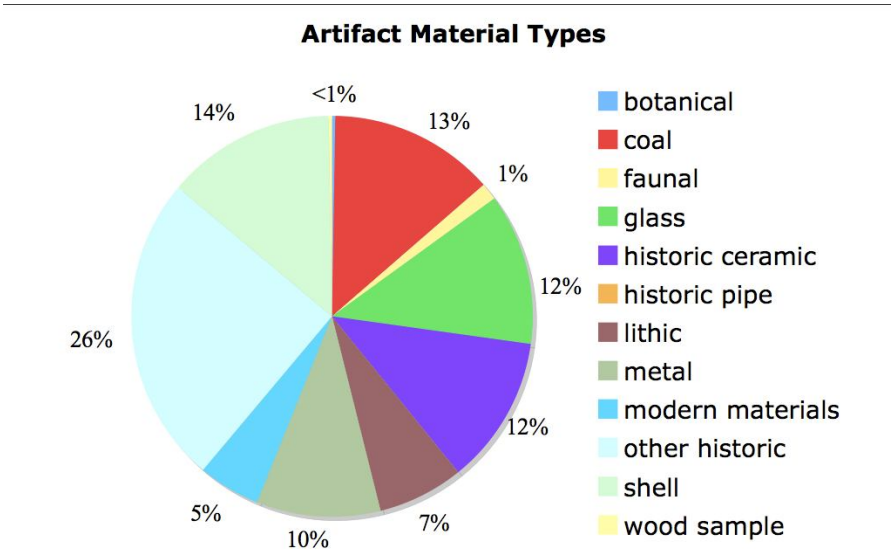


Figure 2. Artifact material type percentages

A careful storage plan, which includes both the initial set-up and periodic reviews of storage areas, is the most effective way to promote the longevity of a collection of artifacts. Ideally, artifacts should be stored in acid-free boxes or trays in a way that they are easily accessible without having to move many boxes of artifacts. Artifacts should never be stored in a manner that requires as little shifting of the collection overall to reach any given artifact. Metal cabinets with large, relatively shallow pull out drawers serve very well for a collection like ours, for they would allow for easy perusal of the collection without having to move too many objects. The more artifacts get handled, the higher chance that they will be damaged; therefore, objects

should be packed and carefully labeled for accessibility. Fragile small pieces such as ceramics and glass should be wrapped in acid-free tissue or placed in small archival plastic bags. Non-archival bags will off-gas as they break down, possibly staining artifacts or speeding rates of deterioration. Likewise, wooden cabinets can release acidic gases as they age, providing a poor storage environment for objects.

Artifacts should be stored in an area where temperature does not fluctuate too greatly, and for our collection, humidity would be ideal at or below 55%. About 13% of our collection is metal, according to the catalog. Because the metal in this collection may have been in the ground for more than two centuries, much of it is already quite corroded due to exposure to water. Therefore, the humidity should be monitored in the storage facility to discourage further corrosion. For this reason, a damp basement, for example, is a poor location to store metals. Likewise, an attic is a poor choice for a storage facility for a collection, because temperatures tend to fluctuate greatly throughout the year. Different materials react differently to extreme temperature changes; materials such as wood and other organic materials expand and contract with temperature and humidity change, which can cause wear and deterioration in a collection.

Storage space is often in high demand in museums, considering the vast majority of a collection is generally not on display. It can be a challenge to find ideal storage space, especially in an historic house that has been converted to a museum or historical society. But wherever objects are stored, temperature and humidity should be monitored and checked regularly, and the space should be examined for evidence of pests often. Pests are one of the most feared visitors in a museum. Because some of the material that we will be introducing to the RIHS is organic, and all of it came out of the ground, steps should be taken to ensure that we will not be introducing any unwanted critters to the Rhode Island Historical Society collection. The wood samples are

the prime suspect for unwanted visitor introduction; this can especially be a problem in this time of year, when the artifacts were in a cool outdoor shed for a time before they came to the lab. It is fairly common that things that have lain dormant in wood in cold weather will begin to wake up once they have been stored in a nice warm museum for a time. Several steps can be taken to ensure that the Rhode Island Historical Society won't be receiving any unwanted guests from our collection. Because the possible problem area is a small portion of our artifacts, and the pieces themselves are relatively small, the easiest method of pest eradication is to place the wood samples in sealed plastic bags with iron filings and leave them there for a few weeks. The iron filings will oxidize, thereby removing the oxygen from the air in the bag, and any critters in there will be taken care of. Alternatively, objects can be left outside in sealed plastic bags if it is very cold for a few weeks, or the objects can be fumigated.

Artifacts should be displayed with as much care as they are stored. Display stands should be stable and secure. The objects should be displayed out of direct sunlight if at all possible, as UV exposure will damage many types of artifacts over time. If the artifacts are in a particularly bright room where the lightning cannot be changed, the display should be designed so that artifacts can be traded out after a few months time. If the display is interactive, steps should be taken to insure the safety of the artifacts. If docents will be handling the objects, they should be instructed on proper handling techniques. Gloves should always be worn when handling metals, as fingerprints may become permanently etched into the surface of the metal due to corrosion where oils have been deposited on the surface of the piece. However, gloves should not be worn when handling glass or pottery, as cotton may be slippery against a glazed surface and this may make the artifacts harder to handle safely. With proper storage and display procedures, the artifacts should remain a part of the collection indefinitely.

Efforts have been made throughout the excavation and investigation of this site to keep the participants in the production of knowledge about this site engaged at every step of the process. In designing a display and adding our information to the Rhode Island Historical Society, we are ensuring that this site is adding to a body of knowledge that is deeply tied to both Providence and the University. We have disrupted the site with our tarps and our backfill, but we know more now than we did before, and have left room for other scholars, students, and visitors to continue to interpret and reinterpret the data we have made available to them.

Chapter 7. Works Cited

Jones, Andrew. 2002 Archaeology observed, pgs. 39-62, In Archaeological theory and scientific practice. CUP: Cambridge.

Lucas, Gavin. 2001 Introduction, pgs. 1-17, In Critical Approaches to Fieldwork. Routledge: London.

Lucas, Gavin. 2001 Chapter 3, "Splitting Objects", In Critical Approaches to Fieldwork. Routledge: London, pgs. 64-106.

Silberman, Neil A. 2008 Virtual Viewpoints: Multivocality in the Marketed Past? In J. Habu, C. Fawcett, and J. Matsunaga, eds, Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies. New York: Springer, pgs. 138-143.

The Rhode Island Historical Society website: http://www.rihs.org/ December 3, 2008.

Chapter 8. Interactive Contexts: A Digital Media Documentary

Whitney Knowlton and Kellie Slater[18]

The Documentary Process

As we collected digital media footage and edited them over the course of the semester, foremost in our minds was the importance of connecting with every type of viewer. In our opinion, in order for someone to appreciate the film they need to enjoy watching it. This was the main reason behind our decision to combine the scenes that were originally designated for the structured, serious film and those labeled for the unconventional film. Also, in our opinion it would not do our area of study justice to divide the movie into such decisive categories. We wanted our project to reflect how archaeology as a discipline integrates the community. We read several articles throughout the semester that stressed the importance of connecting with the study's surroundings. Many people gave suggestions on how best to accomplish that goal, and what we have produced is our own interpretation. We feel that our project is a good combination of the factual information gathered and the atmosphere of the excavation. The film is structured as a progression of the units; we felt that this made it easier for everyone to follow.

Still Photos

Our multi media project begins with several photos selected from a collection gathered over the semester. We chose snapshots that we felt exhibited all aspects of the excavation process. We were required to include still photos and we thought that this would be a nice

[18] This project was presented as a film; this chapter is a summary of the authors' multimedia process.

representation. The scenes depicted include touring the house with Dan Santos, digging, drawing with the grid, cleaning the unit prior to photographing, labeling in the lab and, of course, video recording. From our main menu there are four sub categories, three of the four exhibit pictures either from midterm projects or other photos of the John Brown House, increasing the viewer's vision of the property.

Photo Sequence

Our Photo Sequence is a compilation of still photos taken by our classmates during the excavation. We felt that it was important to include this progression because it gives a better understanding for the information portrayed in the film. Also, we added Jacobs color representation of the stratigraphy in an effort to illustrate some of the work that goes into a site report. We wanted to involve the efforts of our classmates as much as possible.

Whitney filming Unit 3 excavations.

Transects

The transects were an integral part of the media project because they offered a full view of the John Brown House property. These scenes will allow viewers to grasp the bigger picture

of the John Brown House. The majority of the movie takes place at the excavation units themselves, but it is important to take into account that we are in fact working with a home centered in an urban city; without the transects we think that the 'bigger picture' would be confused. We felt it necessary to add soothing and enjoyable music to these scenes.

Visitors

Over the course of the semester we had several groups of people visit the site. We thought this was one of the best ways our team reached out the community. Engaging in the conversations sometimes would bring to light knowledge of the site that we had not yet encountered. Many people mentioned their interest in our excavation and our finds, which we felt was a good way to raise the overall understanding of the history of the John Brown House. We noticed that our visitors appreciated our efforts to engage them in conversation and get their opinions.

Kellie & Whitney take a flip video of a find.

A Cohesive Project

We wanted our final edit to be more of a cohesive project; in an effort to do this we included additional music, explanatory text boxes, and quotations from the context sheets. The

music helped aid the flow of our overall media presentation. We carefully selected each song to fit each scene. The point of the text boxes was to provide clarification while watching the movie. Since our excavation took place in an urban setting, there are a few times when the background noise is over powering the speaker and to remedy this we used text to help fill in the blanks. In order to show our efforts in daily note taking while in the field we used our classmate's descriptions of what was being uncovered in our film. We hope that these details accomplish what we intended.

Future Directions

The issue of curation faces the digital archive much as it does the artifacts that we excavated. One future direction that will integrate and preserve our digital records is the Archaeotechnics database, which we helped to form along with Krysta Ryzewski, Elise Nuding, and members of the Scholarly Technology Group at Brown. The hope is that this will be a resource that will enable us to share our findings with a wider community of researchers and those non-archaeologists interested in our work. The initial formation of this program took place during the Spring semester of 2009, and an early version of the operating program was debuted in May 2009.

Part II.

Object Biographies

As part of their final projects, the *Archaeology of College Hill* students each selected three diagnostic objects to research in detail. Diagnostic objects are those whose manufacture, function, shape, origin, or age can be determined, or at least estimated, based on available clues, such as decoration, embossed lettering, maker's marks, material composition, or other information. This information is an especially valuable tool for archaeologists to use in dating the stratigraphic layers, or the processes of deposition, that constitute the archaeological record. The following object biographies examine the histories of individual artifacts, considering their manufacture, use, social significance, and relationship to particular excavation contexts.

The object biographies and associated bibliographies are grouped alphabetically by author. The following objects were examined:

- McDonald's Coffee Stirrer | Pearlware Sherds | Porcelain Fuse
- Brick | Champagne Stopper | Glass Bottle Fragment
- Coffee Milk Carton | Button | Fence Post
- Duct Tape | Styrafoam Coffee Cups
- Copper Wire | Two Pennies | A Sherd of Transfer-Printed Ceramic
- Pearlware ceramic sherd | Lead-glazed Redware ceramic sherd | Green Glass Bottle and Bottle Cap
- Nails | Transfer-printed Ceramic Sherd | Pearlware Sherds
- Clay Tobacco Pipe | Green-glazed Coarse Earthenware Ceramic Sherd | Beverage Can Pull Tab
- Bullet Casing | Redware Ceramic Sherd | Wire Nails
- Sponge-decorated Ceramic | McDonald's Coffee Stirrer | Blue-edged Ceramic
- Porcelain (Canton) Sherd | Bottle Cap | Machine-cut Spike

McDonald's Coffee Stirrer | Pearlware Sherds | Porcelain Fuse

Evelyn Ansel

Coffee Lid from JBH18 (17cm-27cm), Unit 1

This coffee cup lid came from the affectionately named "modern trash heap" that was Unit 1. The first indication that it is a coffee lid is the raised words on the top half of the cover reading "OTHER" and "DECAF." The Braille symbols beneath read "O," "THE," "R" for other and "D," "E," "C," under "decaf." There are three grades of Braille, and this is an example of the use of grade two. Grade two Braille includes contractions such as the one symbol that stands for "the." This would suggest that the cup once contained coffee.

Furthermore, it is a logical conclusion that this cup came from the fast food chain McDonald's due to the appearance of the trademark "golden arches" symbol on the lid of the cup. According to the official McDonald's Corporation website, Raymond Albert Kroc opened the first McDonald's restaurant in 1955 in Des Plaines, Illinois. The golden arches symbol was first officially introduced as a part of the McDonald's logo in 1962.

In 1994, an elderly woman in Albuquerque NM spilled coffee in her lap while opening a cup of McDonald's coffee in a parked car. The woman, Stella Liebeck, suffered third degree burns and as a result underwent several skin-grafting surgeries. She sued McDonald's, and was awarded "$2.7 million in punitive damages and $160,000 in compensatory damages" (Ramirez, 1). As a result of this lawsuit, McDonald's began to produce coffee lids with warnings that said "caution: hot!" to avoid future legal battles. Because this lid does not contain a warning label, it must date to before 1994.

The "Egg McMuffin," the first item on McDonald's breakfast menu, was test-marketed in the U.S. in 1971, and officially added to the menu in 1973, and the company's first drive-thru was introduced in 1975. The complete breakfast menu was officially introduced in America in 1977 (A Brief History of McDonald's). It would be logical that coffee was introduced to the McDonald's menu at this point.

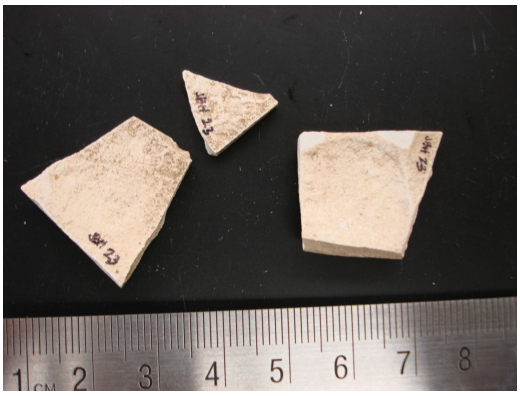
In 1989, Hardee's, a similar fast-food chain, introduced a coffee lid with a tab on the cover that could be opened and closed repeatedly, so that the lid could still contain the coffee even after the drinker began drinking. According to a New York Times article, this innovation was introduced to facilitate "to go" orders, and "Hardee's executives acknowledge that some of their ideas come now from their own research but from careful observation of the competition, especially McDonald's" (McGill 1989, 3). The article continues to admit that "although Hardee's is known for its breakfast menu, for instance, McDonald's was the first to offer fast-food breakfast and create an enormous market for breakfast foods" (McGill 1989, 3). This would suggest that by 1989, McDonalds were using re-sealable coffee tops, unlike the top found in JBH18 where the tab is completely removed prior to drinking. The fact that the tab is absent here would suggest that the buyer of that particular cup of coffee was drinking his or her coffee on the

go, as leaving the top on keeps the coffee warm for a greater duration, and prevents the coffee from spilling.

With artifacts such as ceramics and glassware, it is difficult to determine the "life-span" of the artifact, because an object may have been passed down in a family over time, or been used for several generations before it was discarded for whatever reason. Often, "one must be careful when using ceramics to date sites by accounting for the lifespans of certain types of wares and the ways in which ceramics enter and leave the household system" (Adams 2005, 38) However, in our fast-food crunching, disposable society, it is unlikely that this McDonald's coffee cup lid had a very long lifespan; this lid is for a disposable paper or Styrofoam coffee cup. It is likely that the object was not carried far from the restaurant at which it was purchased before being discarded, and that the owner of the cup did not save the lid for any great duration. It is made of thin plastic, and would serve little purpose beyond the life of the coffee it once contained.

The information above would suggest a tentative date range from 1977, with the introduction of the breakfast menu to 1989, with the presence of re-sealable coffee lids. However, it may be stated that this lid couldn't possibly date to before 1962 and the introduction of the golden arches as McDonald's logo, and could not possibly date after 1994 when the words "caution: hot!" were added to all coffee lids in the U.S. to prevent lawsuits.

Three pearlware sherds from JBH23 (23-33cm), Unit 3



These three sherds were excavated from context JBH33 in Unit 3. It has been hypothesized that unit 3 was a construction trench dug next to the building that once stood upon the site to allow the workers access and space to construct the foundation of the building. This falls in line with the results of the geophysical survey, which indicate the presence of a foundation running N/S just west of unit 3. The results of the survey were corroborated by findings in the field of rough construction fill and foundation stones along that axis. Also, the fact that unit 3 was fairly rubble-free soil with few context changes attests to the fact that it may have been filled all at once and supports the construction trench theory. If that is the case, it is likely that these fragments were deposited shortly after the construction of the building on the Hale/Ives half of the property.

These three sherds are a ceramic type known as pearlware. Pearlware was introduced as a type of pottery by Josiah Wedgewood in 1779 (Stelle 2001, 4). Wedgewood coined the moniker "pearl white," although he appropriated pre-existing techniques to a degree. The contemporary name for this type of ceramic was "china glaze," and this was produced in Staffordshire as early as 1775 (Orser 2002, 415). Pearlware is identifiable by the blue-tint to the glaze that is visible in

places where glaze pools during firing, e.g. around a base rim. The blue tint is attributed to the presence of cobalt in the glaze, which was added to make the piece appear whiter and more porcelain-like. The body of this ceramic can be differentiated from creamware by its slightly harder and whiter quality. Generally, pearlware can range in color from "deeply blue to almost colorless" (Stelle 2001, 5). The median production value of pearlware is 1805, and Hume suggests "that by 1810, pearlware had become the common tableware of America" (Stelle 2001, 6). Pearlware was often molded, painted or printed, and shell edges were very common. It is difficult to say whether this piece was either decorated or had molded edges, for the majority of the extant glaze exists on the reverse of the pieces, underneath the base in a location that would not normally be decorated. It is difficult to say precisely when pearlware fell from favor in the American home, as "essentially, all of these common types [whiteware, pearlware, and creamware] evolved out of and around each other, and start and end dates are elusive" (Orser 2002, 416). However, by the 1830s, whiteware had firmly replaced pearlware as the most used type of ceramic in American homes.

The fragments of pearlware found in JBH23 are particularly interesting because two of them were broken at one time, but can now be pieced back together very accurately. This would suggest that this context had not been disturbed after the pieces were deposited. The two pieces that fit together contain enough of a base to allow the base diameter to be estimated fairly accurately; it is estimated that the plate had a diameter of about five inches, which would suggest that it could have been a bowl, saucer, cup plate or child's plate (Umass Archaeology Lab Codebook). When the pieces are examined from the side, the slope of the rise from the base is gradual enough to exclude the possibility of this having been a bowl; it is more likely that this piece was a saucer, cup-plate or child's plate.

Pearlware during this time period was imported from Great Britain. All of the major British ceramic factories produced pearlware at the height if its popularity, especially Stoke-on-Trent, Yorkshire, Newcastle-upon-Tyne and Sunderland, South Wales, Scotland and Belfast (Orser 2002, 416). The fragments from JBH23 were probably imported to the United States with a shipment of pearlware somewhere around the late 18th and early 19th centuries. It is possible that this piece came across the Atlantic on one of the merchant vessels much like the ones owned by John Brown himself. Maybe Mr. Wedgewood's new "pearlware" was advertised in a newspaper like those mentioned in the Mrozowski article, and a woman of the household or perhaps a steward decided it was time to purchase a new dinner set. This small plate or saucer may have been a part of a larger set that was used for a time. Then, this particular plate was dropped while being scrubbed, or perhaps this piece lost favor with its owners as whiteware took the place of pearlware at the table setting, and the pieces were lost and discarded. Somehow, they made their way to the fill of the construction trench. Perhaps the broken plate was thrown on the pile of rubbish that would soon become back-dirt for the construction trench, and that is where they lay until they were excavated this fall, cleaned, and labeled. And soon, these pieces of pottery that were once simply refuse will become accessioned artifacts in the Rhode Island Historical Society- back in the John Brown House again.

Porcelain Fuse/Plug Holder (8 fragments) from JBH32, Unit 5

These pieces of porcelain were removed from the construction rubble of Unit 5. There are eight fragments altogether, five of which do fit together. All of the fragments have at least one smooth glazed surface, though few of these surfaces are planar and un-contoured. There are many elements of the fragments that include circular or cylindrical indentations that are also glazed. Three of the pieces fit together to make a shape that has both cylindrical and angular elements. The two largest pieces that fit together have a channel running lengthwise across the piece; the channel is also glazed. Below this there are three roughly printed raised numbers, possibly reading "8 1 9." The obverse of these two pieces also has small sections of glazed surface, suggesting that the piece was hollow. Another base fragment is imprinted with the words "30 amp" along the lower edge.

This is a very strange piece. At first, it was identified as an electrical insulator; both porcelain and glass were commonly used for insulators on telephone and telegraph poles. Porcelain was a well-suited material for insulation because it is "a poor conductor of electricity and heat, a non-absorbent of moisture, with a surface repellant of water, and free from pores or cracks. It should also remain unaffected by exposure to the weather" (Pope 1881, 91). However, porcelain was less than ideal because of its ability to absorb heat; as temperatures fluctuated in

the sun or depending on the season, condensation could at times form on the surface of the porcelain, lessening the effectiveness of the insulator. However, there are several characteristics of these fragments that would lead one to believe it is not, in fact, the type of insulator that was used on telegraph and telephone poles in the 19th century.

First of all, the fragments from JBH32 do not even remotely resemble the type of insulator that was used on telegraph and telephone poles. First of all, it appears that the groove in the two larger pieces that fit together travels around a corner; if this was a telegraph insulator, this is where the wires would have wrapped around the insulator. However, these were all circular, because the tension of the wires was such that a rectangular shaped insulator would not structurally have been the soundest form. However, the raised "30 amp" print on the base fragment would suggest that this porcelain piece was electrical in function.

Porcelain was used for other electrical purposes aside from telegraph insulators. This material was also used within the house for fuse blocks and lamp sockets. A modern day Google search for "porcelain 30 amp" will result in many advertisements for 30 amp fuse blocks or simply "porcelain fuses." Photographs of antique porcelain light sockets will yield results that vaguely resemble the basic shape of the porcelain fragments from JBH32. With this information in mind, it is likely that these pieces of porcelain once served as insulators within a household setting. Porcelain blocks were useful in connecting wires and insulating smaller appliances (e.g. light bulbs) from administering unpleasant shocks to their users.

Brick | Champagne Stopper | Glass Bottle Fragment

Megan Algeo

The Sayre & Fisher Brick

Figure 1: The Unit 2 brick sample

The spotted, red-yellow brick fragment shown in Figure 1 was unearthed in JBH 11, a natural soil context beginning with an uneven surface 7 cm at the shallowest corner and ending at a uniform depth of 20 cm. Field notes describe the soil quality as mottled, and the Munsell value, reproduced digitally from a representative site photo, was .09Y 4.11/1.67. Other notable finds from this context included asphalt, slate, burned concrete, a small plastic tube, quartz, architectural hardware, safety glass, a metal flag emblem, and a whiteware sherd.

Figure 2: The Unit 2 brick sample *in situ*

Below JBH 11 was the arbitrary context JBH 22, which we believe belonged to the same strata, despite the fact that the stratigraphy was complicated by roots and features obstructing a clear cross section of the wall. Its contents should be considered as well. JBH 22, with a Munsell reading of 10 YR 3/2 contained patches of sand and mortar, and was somewhat rockier, with rocks around two inches in diameter throughout the layer. We unearthed asphalt in the southwest corner. Finds included a screw, foam, bottle glass, whiteware, and most significantly a

chunk of brick a few centimeters around made from the same clay as the brick fragment from JBH 11, supporting our theory that JBH 11 and 22 are the same deposit.

Near the end of the context JBH 22, a brick and rock feature (Feature 5) was exposed abutting the southern wall. The uppermost brick in the feature was another brick in the same style as the previous findds, this time a large corner fragment. A section of Feature 5 soon after its discovery is shown in Figure 2. The relevant brick appears brown, and sits atop three red bricks, disappearing into the wall of the unit. Feature 5 continued until we reached the end of excavation, at 53 cm. Unit 5 found a larger chunk of an identical brick in context JBH 32 (Figure 3), also with a maker's mark, which reads "FISHER Co./ILLE NJ" (Nuding 2008, 8).

Figure 3: The Unit 5 brick sample

It was originally thought that the brick might have been a part of the original Robert Hale Ives Homestead, under construction by 1857 (Yellin 2008, 1). We knew through historical documentation and maps that Ives had brick walls and brick outbuildings around the area where Unit 2 was situated (Yellin 2008, 7). However, further research revealed the brick could not have appeared on site until 1876, at the earliest.

The maker's mark allowed us to define an absolute date of earliest production, as well as a more specific, but less certain, date when the brick might have been used in construction. Brick companies began including maker's marks on some of their bricks in the 1860s, and the practice continued until the 1950s (Vogel, 1995).The letters from the brick fragments provided enough

data for an internet search, which turned up the Sayre & Fisher Brick Co. of Sayreville, NJ, a perfect fit for the text on our brick.

Once the largest producers of brick in the world at its peak, the Sayre & Fisher Brick Company was founded in New Jersey in 1850 (Ecology & Environment 2008). In 1876, the town where the company was located changed its name from Wood's Landing to Sayreville (Ecology & Environment 2008). Samples of marketing materials from the company contained representations of bricks similar to ours, defining them as "front bricks," which were of better quality than regular "common brick" (Ecology & Environment 2008). Further research uncovered a photograph from the "Frank and Jane Clement Brick Museum," a private collection, of a complete brick with striking similarities to the samples from The John Brown House site. The unique clay composition and content of the text are identical, though the typeface used in the maker's mark is slightly different. The matching brick (pictured in Figure 4), was found at the Darwin Martin House in Erie, PA, which was constructed between 1905 and 1906. Taken together, these dates suggest that a brick would not have contained the new name of the town until after 1876, and that the bricks from our site, while not identical to the brick deposited after 1905 in Pennsylvania, were likely produced around that time.

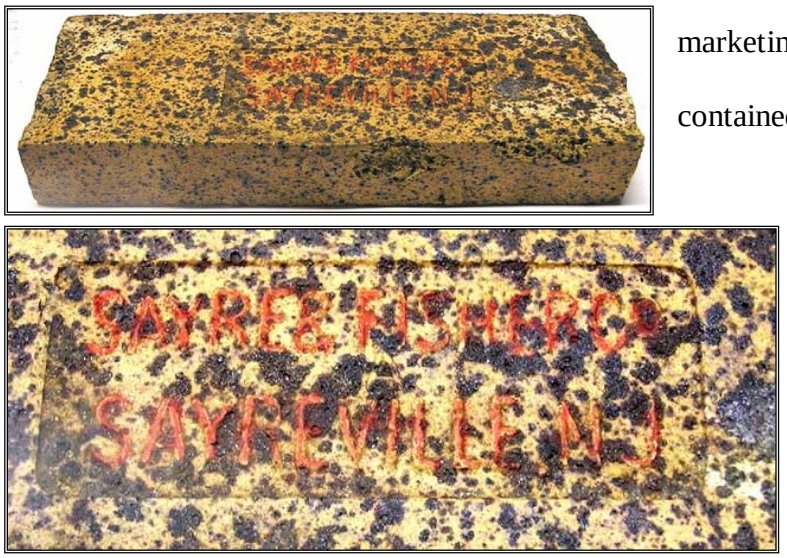
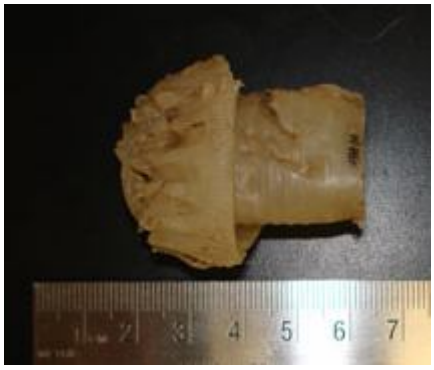


Figure 4: Brick from the Darwin Martin House, whole and in detail (red paint added).
Source:http://www.buffaloah.com

The Sayre & Fisher brick samples were important in determining TPQ dates for deposits in Units 2 and 5. It is possible that these bricks were used in subsequent renovations to the Robert Hale Ives property. The presence of similar bricks, in Western Pennsylvania and in Rhode Island is a testament to the popularity of the company in the late 19th and early 20th centuries. The Darwin Martin House was constructed by Frank Lloyd Wright, the renowned architect, which suggests that the brick was perhaps of superior quality, and expensive to import to Rhode Island, especially given the number of local brickworks, for example the Barrington Brick Works, that could have been substituted (Quinan 2008; Barrington 2008).

History of a Plastic Champagne Stopper

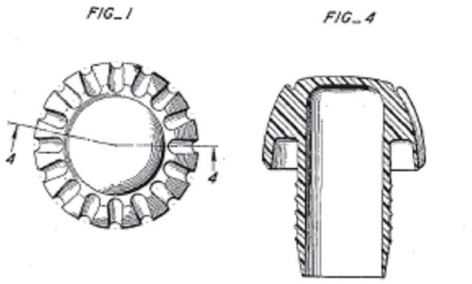
The plastic champagne stopper (photograph below) was uncovered in the sandy fill of JBH 10 and, though crushed, was easily identifiable. Seeking to determine a definitive TPQ for the fill, I chose this object for closer analysis, and in fact it proved to be the newest datable artifact in Unit 2. The stopper is approximately 4.5 cm long and 4 cm wide at its widest point. No brand name or identifying symbol is present. The surface is torn, and the body is crushed. The color is a faded tan. The Munsell value assigned to JBH 10 was 10YR 4/2, and the context spanned from 4.5cm (southwest corner) and 7cm (northwest corner) deep to 13.5 cm deep. Other finds within JBH 10 included plastic pieces, a chunk of reflector, glass, and a screw. The glass was consistent with modern bottle glass, but was otherwise undiagnostic (Algeo, *Unit 2 Summary* 2008).

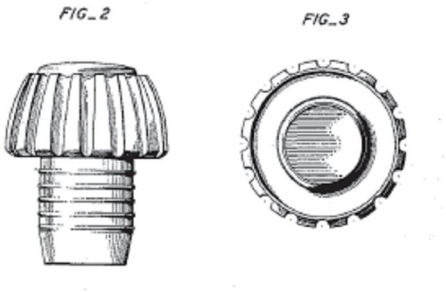


An internet search for terms related to the history of the stopper provided the website of Scott Laboratories, based in Petaluma, CA. The company supplies products to beverage producers, and has an extensive selection of winemaking equipment. The website provided a timeline of the company's history, and between 1933 and 1963, Scott Laboratories, then operating as The Berkeley Yeast Laboratory, produced the "first American plastic champagne cork" (Scott Laboratories, Inc). Unable to find more information and seeking to narrow the date range for the stopper's initial production, I called Scott Laboratories, speaking with two representatives before being referred to Bruce Scott, president of the company and its resident historian, according to one of the employees.

I informed Mr. Scott of the nature of my request, and our work at the John Brown House. After agreeing that mine was the strangest request he had received in awhile, Mr. Scott kindly provided me with more information about the origins of the plastic stopper. It was patented in the U.S. by Julius Fessler, and Mr. Scott approximated the year of the patent to be the "late 1940s."

Mr. Scott's information led to another internet seach query, this time for Julius Fessler's patent (diagram shown at right). Patent number 187,402 submitted on June 10, 1958 in Berkeley, CA and approved on March 8, 1960 for a term of 14 years, illustrated Fessler's "ornamental design for a champagne bottle stopper" (Fessler 1960, 1). Therefore, we can reasonably take the TPQ for JBH 10 to be at least 1960.





While the Unit 2 Summary indicates that all excavated contexts bear some evidence of modern finds mixed with historic artifacts, suggesting subsequent disruptions of preexisting features, JBH 10 also exhibited a unique soil compostion. The loose, lightly colored soil in the southeast corner, bordered by loamier, darker topsoil, suggested an area of fill even in absence of modern finds (Algeo *Unit 2 Summary* 2008). In February 1942, John Nicholas Brown deeded the property upon which the site is situated to the Rhode Island Historical Society, which remains in possession of the land today (Algeo and Yellin 2008, 10).

The earliest known tenant on the land was Robert Hale Ives, whose house was already under construction by 1857. It was occupied continually until 1915, then occupied sporadically

until its destruction by Marsden J. Perry around 1925-26 (Yellin 2008, 1-2). If we accept the hypothesis that work was proceeding on and around the remains of the Robert Hale Ives estate even after Marsden J. Perry tore down the estate, then perhaps the Champagne stopper is the remnant of a celebration at the site, for the completion of work on that portion of the property, or for an entirely different affair that took place concurrently with the disruption of the JBH 10 fill.

Since excavations at the John Brown House occurred every Monday this field season, the group often arrived to find remnants of the weekend's activities. The lawn of the John Brown House is easily accessible to pedestrians when the museum is closed, and the property is situated along busy streets midway between Brown University and the Rhode Island School of Design. It is also a convenient stopping point for those heading back to the East Side after enjoying the downtown nightlife. During the excavations, our site provided a perfect place for drunken revelry, and the large plastic tarps spread across the property likely attracted even more attention. On October 20th, Megan noted in her blog that a beer bottle was discovered on top of one of the tarps (Megan Algeo, Megan's Field Blog, October 20, 2008). The field notes for that week reveal that the west wall of the Unit 2 trench was damaged, possibly stepped on. There is no reason to assume that certain students or locals behaved any differently when the stopper was deposited on the site, though they were certainly drinking better.

A piece of reflector was unearthed in the same deposit as the stopper, with a different reflector fragment in JBH 6, the topsoil context directly above JBH 10 (Algeo 2008). It is possible that the reflectors began in the same strata, but were pushed out of context by root activity. The dates or purposes of the reflectors are unknown, and they bear no identifying marks. They could be from a bicycle or construction equipment, which would fit with either hypothesis proposed to explain the presence of the stopper. Though tempting to equate the modern finds in

Unit 2 with the great deal of modern finds in Unit 1, which included multiple sampes of coffee container remnants, Unit 1's finds were uncovered predominantly in JBH 18, termed a "modern midden," which lies at a depth of 18.5-27 cm below the datum point, well below the JBH 10 deposit. The munsell value assigned to JBH 18 was 10YR 2/2, a very dark brown unlike the light colored soil of JBH 10 (Ruby 2008, 14-15).

The champagne bottle stopper proved important in fulfilling multiple aims of this dig. It allowed us to assign a definitive TPQ date to a clearly defined natural soil level, and theorize about how the fill and associated artifacts of JBH 10 came to be deposited within Unit 2. Perhaps more importantly, researching the origins of the stopper allowed us to connect with the community who first produced the device, on the other side of the country. The information they supplied was crucial to determining the initial date of production of the stopper. This exchange drives home the importance of including "the community" in archaeological inquiries. Though excavations at the John Brown House do not raise such thorny ethical issues as concern Shepherd in his case study of Green Point, his criticism of archaeology as "giving the past back to the people" raises the issue of engaging multiple perspectives in an analysis of any site (Shepherd 2007, 112). In our case, the community includes not just local passerby, but everyone who was connected with the finds that our site produced. It is our hope that, with their interest piqued by a strange phone call, Scott Laboratories found our wiki and engaged with the site as well.

Investigation of a Dark Olive Green Bottle Base Fragment

This bottle fragment was recovered from "sandy, mortary soil" in context JBH 38 in Unit 2 on the last day of excavations. JBH 38 was a natural soil context extending from 41 to 53 cm, with a Munsell value of 10 YR 4/3. The glass is so dark and thick that it appears opaque at its

Figure 1: The inside of the fragment

Figure 2: The outside of the fragment

widest point. Consequently, the initial field notes misidentified it as "glassy ceramic." Once cleaned, it became apparent that the object was actually the base of a glass bottle. Using the lab's glass typology, we determined the color to be a very dark olive green. Though the artifact is nondiagnostic in the sense that no precise date or method of manufacture can be provided, the bottle base can still provide insight into the culture of the site, processes of site formation, and hypotheses about its origins and function.

Very dark olive glass can be classified under the larger category of "black glass," which also includes amber and purple hues, though the olive color predominates. Its coloring is created by introducing iron, and sometimes carbon, copper, or magnesia (Lindsey 2008). Our sample is much deeper than any of the more moderate olives found in the BLM/SHA online typology consulted as the main source for this analysis, but matched nicely with the black glass samples. The type sample shown in Figure 3 was blown by the *New England Glass Bottle Company*

between 1827 and 1845 (McKearin & Wilson 1978; referenced by Lindsey 2008). According to the BLM/SHA website, "black glass bottles and fragments are ubiquitous on historic sites that date prior to 1870," often serving as inexpensive containers for alcohol, but becoming uncommon after 1880 (Lindsey 2008).

The shape of the base and its thickness suggests a cylindrical bottle, which in turn adds weight to the hypothesis that this is a liquor bottle, as opposed to something such as an ink bottle, which often assumed a more complex shape but was also frequently produced in black glass. If the sample was a part of a liquor bottle, the opacity of the glass aided in the preservation of photosensitive alcoholic beverages (Lindsey 2008). The exact type of cylindrical bottle cannot be determined from the fragment. Fortunately, in this case the dates that we obtained from the classification of the find as black glass are more useful than shape in determining when the bottle was produced.

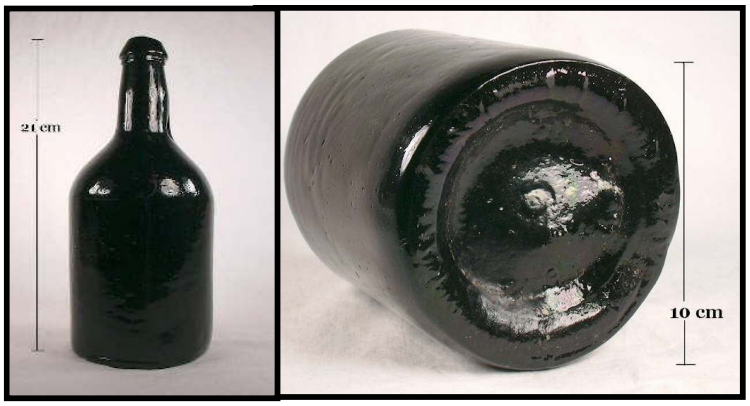


Figure 3: Two views of a black glass, cylindrical bottle

The tentative pre-1880 date of manufacture also allows us to theorize about the method of production. If the sample is from a liquor bottle, its base could be either free-blown, or mold-blown. The base seems relatively uniform, favoring the use of a mold during production. Of the numerous methods of producing mold-blown bottles, two are common choices for liquor bottle production—the cup base mold and the post base mold. The cup base mold was used after 1880, while the post base mold was employed until 1880, making it a viable possibility for our base

fragment (Lindsey 2008). This method would have produced multiple diagnostic seams on the base, none of which are present in our sample. Ultimately, the color of the bottle and the area of the bottle that the fragment came from are the only characteristics we can reliably conclude with such a limited sample to work from.

If we assume that the glass was deposited sometime prior to 1880, this would coincide with the tenancy of Robert Hale Ives, his children, and their grandchildren on the property. Therefore, it would be reasonable to conclude that the bottle may have belonged to a member of the family or someone associated with them. While these bottles were surely possessed by members of varying social classes, their abundance and low cost means that it is possible the bottle belonged to an employee of the family. We know that, at the least, Robert Ives Gammell, grandson of Robert Hale Ives, was living in the home with a cook and a butler around 1895 (Yellin 2008, 1). Perhaps the family had household staff prior to this date, as well, who consumed spirits from the mass produced bottles.

It is equally possible to construct middle class origins for the bottle. During the 19th century, the temperance movement was on the rise, and the middle class, at least outwardly, was beginning to hew to changing social norms. Many bottles produced during this time for supposed medicinal purposes were actually liquors in disguise, allowing members of the middle class to imbibe under the pretense of health (Smith 2008, 80-81). While technically "medicine bottles," these bottles were used just like liquor bottles in practice, and form would have followed function. Black glass was used to bottle alcohol imported from Europe to the east coast. If this bottle was an import, it is probable that it belonged to someone of middle to upper class social standing. It is also possible that the bottle is somewhat newer if it is an import—European-made black glass liquor bottles were on the decline approximately ten years later, in the 1890s

(Lindsey 2008). It is unfortunate that we were not able to recover more diagnostic pieces of the bottle, which would have enabled a more definitive description of the bottle's morphology, method of production, and function. Hopefully future field seasons will dig below JBH 38 and uncover more historic finds.

Coffee Milk Carton | Button | Fence Post

Jacob Combs

Coffee Milk Carton

Few things are as beloved by Rhode Islanders as coffee milk. In a way, it is, as some would put it, the state drink. It is only fitting, then, that we would encounter a coffee milk carton during our excavation of the John Brown House. The carton was found in Unit 1 within context JBH18, which was part of Stratum 1, the modern fill soil. Other modern refuse found in this trash pile included a McDonald's coffee stirrer, a plastic bag, pieces of plastic and string, and a Mr. Donut cup (Field Notes JBH18).

When laid flat, the carton measures 12.5 cm long and 7.6 cm across. Taking into account what the carton would have looked like with its original three-dimensional shape, it measures 11 cm tall, 6 cm across the larger face and 5 cm across the thinner face. Thankfully, the carton is still remarkably legible, so there is a lot of interesting information that can be gleaned from it. As the pictures show, the milk is a product of East Greenwich Dairy Co., of East Greenwich, Rhode Island. This half pint (236 ml) carton contained pasteurized, homogenized, lowfat (1% milkfat) coffee milk, with both Vitamins A & D added in. One of the smaller faces has tabs to be pushed up for opening the carton, and the

words ‘For best quality sell by date shown on top,’ a date that, frustratingly, is missing. The other face says Champion International Corporation DairyPak Division, and has the Champion Corporation’s logo. Also on this side is some text that says “Blanks made under license from Ex-Cell-O Corporation.” To the touch, the carton feels almost nothing like the way one would expect it to—it is nearly tissue paper thin, clearly due to the fact that it has been buried in the ground for some time.

Although this milk carton is highly diagnostic, giving it an exact date of production or use is nonetheless quite difficult. The issue of time lag, discussed in depth by William Hampton Adams (2003: 38) regarding ceramics, is not much of an issue in this case—the time from the production to the consumption of the carton’s contents was probably relatively short, given the perishable nature of the milk itself. It is a bit frustrating that the sell-by date, which was clearly included on the carton at some point, is now missing, since that date would be quite definitive. Without that, other diagnostic elements of the carton must be used to provide a range in which the milk carton could have been produced or used.

The most obvious diagnostic element of the carton is its very material and shape. Folded paper milk cartons were first patented in 1915 by John Van Wormer, who called his system “Pure-Pak.”[19] Ex-Cell-O Corporation, a Detroit car manufacturer, bought the system in 1934.[20]

[19] http://www.associatedcontent.com/article/409477/milk_cartons_history_and_interesting.html

[20] *ibid.*

Before 1960, milk cartons had no spout, and instead a hole had to be cut into the carton before pouring.[21] Another diagnostic feature of the carton is the "REAL" sign visible on its face. The REAL sign was created in California during 1976 to identify foods that used real dairy products rather than substitutes. It is now administered by Dairy Management Inc.[22] Ex-Cell-O corporation was bought out in 1986 by Textron, providing a possible end date, unless Textron continued to operate Ex-Cell-O under the same name. In a similar vein, Mister Donut (the maker of a coffee cup we also found in the unit) was bought out by Dunkin' Donuts in 1990[23]. According to Marianne Migliori, a longtime resident of Providence, the area's Mister Donut stores adopted the new Dunkin' Donuts name at that time.[24] Information about the East Greenwich Dairy is a bit scarcer, but that company was bought out by West Lynn Creamery of Lynn, Massachusetts in 1990[25].

Together, these data provide a good amount of support for a date range for the milk carton between 1976 and 1990. The REAL sign provides a definite post-1976 dating, while the presence of the Mister Donut cup in the same stratum (although a fill soil) makes 1990 a good end date. It could also be argued that a good end date would be 1986, when Textron bought out Ex-Cell-O.

It is not difficult to imagine how a coffee milk container would end up buried in the front lawn of the John Brown House. Clearly, the milk was produced in East Greenwich, Rhode

---

[21] *ibid.*

[22] http://web1.msue.msu.edu/dairy/nobones7.html

[23]http://proquest.umi.com/pqdweb?did=961657971&sid=1&Fmt=3&clientId=7344&RQT=309&VName=PQD

[24] Personal correspondence, Dec. 15, 2008

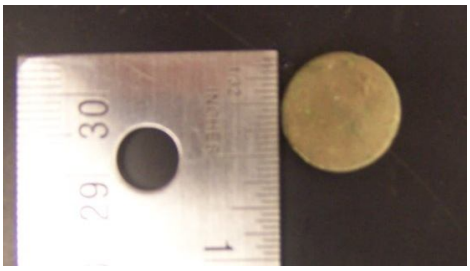
[25] http://findarticles.com/p/articles/mi_m3301/is_n4_v91/ai_9081597

Island, and was probably packaged somewhere nearby. My hypothesis for the refuse found in Units 1 and 2 is maintenance work, probably on the piping system that was found in Unit 2. I remember when my home was being remodeled, and every day we would come home to find fast food trash, essentially, all over the site. I believe that a construction worker had some coffee milk one day and then threw the carton into either what was a trash pile or just on the ground, and it ended up being buried. I also believe that the other trash we've found, such as the Mister Donut cup and the McDonald's coffee stirrer, ended up buried in the soil in the same way.

There is something fitting about finding a coffee milk carton when excavating a site in Rhode Island. Excavating Unit 1 gave me great insight into the assumptions that non-archaeologists make about the archaeological process. There is something equally fascinating about a coffee milk carton from 20 years ago as there is with a piece of creamware from a few centuries ago, even if the mystery of another time period isn't there. During Maggie's presentation about setting up an installation at the John Brown House, she talked about using the coffee milk container as a way to show kids that history is actually everything that came before, not just objects from another century. Our own material culture is entering the archaeological record in ways that we probably never really think of. The coffee milk carton we found in Unit 1 is a valuable reminder that even modern items have stories of their own.

Button

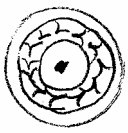
Even the smallest and least assuming of artifacts can be illuminating. A small button



measuring 1.5 cm in diameter with a broken shank that is 3 cm long was found in JBH39, a context within Stratum 16 from Unit 4. Other finds in this context included various pieces of ceramic, brick, glass and nails (Field Notes JBH39). Although the button is extremely corroded, especially on its face, an analysis of it is valuable, especially considering the importance of buttons as elements of fashion throughout the last few centuries.

As Carolyn White puts it, "buttons were more than functional fasteners; they were a primary way of embellishing a garment of clothing, particularly for men" (White 2005: 50). The button making industry thrived in England during the 1700s, particularly in Birmingham, and most of the buttons used in America during that century were made in England, although some came from France or the Netherlands (*ibid.*). An American version of this button making enterprise did not develop until the 19th century.

In terms of the button itself, there are only a few definitive conclusions to come to. The shape itself resembles button type 9 from Ivor Hume's *A Guide to Artifacts of Colonial America*, a flat, brass disc with a well-soldered eye that has no foot (Hume 1969: 91). Although the shank is broken, it is similar in shape to a brazed omega shape (White 2005: 52). This typology, borrowed by Hume from Stanley South, places this variety of button in the time period 1726-

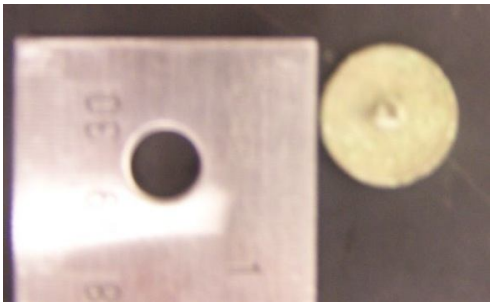


1776. It is interesting, though, that Hume mentions a "hand stamped face design" in his description of this button type (Hume 1969: 91). The face of the

button found in Unit 4 is far too corroded to discern any design, but there is a decoration visible on the button's rear face that I have reproduced here which resembles a laurel wreath.

Why would this decoration would appear on the back of the button and not the front? Clearly, if the button were serving some sort of decorative purpose, one would expect the side with the decoration to be the more prominent one. In this case, there is clearly decoration on the back of the button, since the shank is obviously present to fasten the button to clothing. According to White, however, "many coats had false buttonholes with corresponding decorative buttons" (White 2005: 58). This could be a possible explanation for the decoration being on the 'wrong side.' If the button were merely some embellishment on a coat, it could have decoration on the back simply as a nice stylistic touch.

Buttons are generally divided into three sizes based on diameter: small, less than 12 mm, medium, 12 to 18 mm, and large, more than 18 mm. The button from JBH 39 is 15 mm, placing it firmly in the medium category. According to white, this size would be consistent with either a waistcoat button, which are usually between 14.5 and 19.5 mm, or a sleeve button, which are usually between 13 and 17 mm (White 2005: 55-57). Waistcoats usually had only a few functional buttons, while most were included for decoration and had no real buttonholes. The double-breasted waistcoat became popular in the 1750s, and a second row of buttons was added to the front of the garment. These buttons usually coordinated with coat buttons (White 2005: 59). Sleeve buttons, on the other hand, were used mostly to fasten shirtsleeves.



These buttons usually had two smaller buttons connected with a link and were inserted into slits on either side of the cuff (White 2005: 61). Because of this, is in unlikely that the button from Unit 4 is a sleeve button, which means that it is most likely a waistcoat button.

The *terminus post quem* (TPQ) date for Unit 4 so far is 1855 because of a piece of cellulose plastic that was found in the unit during excavation. Without this plastic, the TPQ is still in the 1830s. Because of this, there is some issue of the "time lag" that Adams discusses regarding ceramics when considering the dating of the button (Adams 2003: 38). Although the deposition date for Stratum 16 is much later than the probable manufacture date of the button, this does not necessarily have to be a contradiction, per se. A date range from 1726-1776 would put the button's manufacturing in a reasonable time frame considering the early history of the John Brown House. It is easy to imagine the button being ripped off of a garment somehow and falling to the ground, especially considering the fact that the shank is broken. But even if this were not the correct scenario, a deposition date in the early to middle 19th century is still very plausible. Clothing is often handed down family lines, so it is easy to imagine some situation in which a waistcoat is handed down from parent to child. Another possible scenario could involve a piece of clothing kept by a family member for sentimental reasons. In any of these scenarios, the manufacturing date of the button does not necessarily have to be the same as its use date (and in fact, almost certainly is not), and of course also does not have to be the same as the deposition date.

It is interesting how different it was to analyze the button compared to more recent artifacts like the milk carton and fence post. With both of the modern trash items, information was (for the most part) readily available, whether on the Internet or from oral sources. In terms of the button, however, I was only able to use written information. A major part of my argument

depends on both White and Hume's analysis, and to some extent I have to accept their information secondhand. In turn, Hume's classifications are of course themselves taken secondhand from South. In a way, this is all just a part of the archaeological process, but nevertheless a lot of my analysis of the button depended on the research of others, whereas my analysis of the modern trash finds depended mostly on my own analysis.

Fence Post

As Robert Emlen, Brown University Curator, puts it, the fence surrounding the property of the John Brown House "has a pretty short shelf life."[26] A combination of wind and salt air causes the fence to deteriorate quickly, so it often requires maintenance to keep it presentable. It is not surprising, then, that a large chunk of a fence post would be found in JBH24, part of the modern fill that was uncovered in Unit 1. If the fence commonly requires maintenance, it is quite feasible that, at some point, an old, deteriorated piece of fence ended up on the ground and was incorporated into the fill at some point when the ground was disturbed.

Nevertheless, this fence post fragment must be considered in light of the other finds in Unit 1. The Unit contained a large quantity of painted wood that we didn't really consider as we were excavating. There was clearly some connection between the different wood chips we were unearthing, but we didn't consider any possible function for the wood. In terms of the fence post, however, this painted wood takes on a different significance. Clearly, the pieces of wood that we found were of the same type as the post—painted white and rather beat up. Did the splintering of the wood happen after the post was placed intact in the unit, or did it occur sometime before? Both explanations are plausible, since either human action or the simple effects of time and damp

[26] personal communication, Dec. 8, 2008

soil could affect the wood's composition. It seems more likely, though, due to the pattern of splintering, that the wood was broken before it made its way into the ground.

The fence post is diagnostic, although not precisely so. Nineteenth-century representations of the John Brown House do not have a fence around the property (instead, there is another house towards the west of the lawn—the house that Steffi has been investigating). When Marsden Perry bought the John Brown House in 1901[27], he razed the house on the west of the lawn and enclosed the now larger property with a version of the fence that is seen today. A matching fence was constructed at the brick carriage house property across the street around 1904.[28]

In terms of the actual fence post that we found during excavation, a closer dating is possible. As the accompanying photo demonstrates, the fragment (which measures 7.8 cm tall and 2.7 cm across its longest face) is clearly part of the decorative embellishment atop the fence posts, so it is safe to assume that it came from this fence. The John Brown House celebrated its bicentennial in 1986, at which time the Providence company August Mende Inc. was contracted to repair the fence. I spoke with Robert Mende, who oversaw the repairs, about any information he could provide regarding the fragment we had found. Mende made the gates now

[27] *Providence Journal*, Oct. 8, 1901

[28] personal communication with Robert Emlen, Dec. 8 & 9, 2008

visible at the John Brown House, and replaced between 21 and 31 sections of the fence. The original wood used was Cyprus, which he replaced with Spanish cedar. Around two or three years ago, he also replaced the wood fence at the carriage house with an iron one. He estimated that the work occurred in the late 1980s and continued for a few years into the early 1990s.

These dates match the other materials found in the site, such as the coffee milk carton that I profiled above. The dates for the milk carton seem to point towards an early 1990s cutoff, just as Robert Mende's dates do. I believe that sometime during maintenance work on the fence, parts of the old fence were removed and dropped on the ground, eventually becoming part of the fill layer found in Unit 1. It is possible, actually, that the maintenance work that I described before, which I attributed to possible work on the piping found in Unit 2, could have been this restoration of the fence. Given the fact that work went on for several years, it is not too difficult to imagine such a scenario.

This fence post, and the means I have used to look into its history, demonstrates the importance of the oral record to the archaeology of the recent past. As Laurie Wilkie puts it, "Oral traditions are [a] powerful source for documentary archaeology" (Wilkie 2006: 19). Although neither conversation would really constitute an element of an 'oral tradition,' both are a component of the oral record. In her case study, Wilkie uses oral history as a complement to material history. In a similar way, my correspondence with Robert Emlen and Robert Mende filled a gap in the written record regarding the history of the John Brown House. In cases of the recent past, oral recollection can often be more helpful than the written record, although, as Robert Mende put it, thinking back 20 years can sometimes be inaccurate.

In the end, the history of the fence post fragment is much harder to discern than that of milk carton, since the latter is much more diagnostic. The large amount of writing present on the milk carton provided several opportunities to compare dates, while the lack of any visible writing on the fence fragment requires other means of dating. It is encouraging, though, that the oral history obtained from both Robert Emlen and Robert Mende regarding the fence fragment matches the dates from my investigation of the milk carton. It is my hope that next year's class may be able to explore the history of the John Brown House in more detail, which might reveal further insight into the fill soil that we uncovered in Unit 1. Perhaps some record of maintenance work exists in the museum's records that could be used to determine how the modern trash actually ended up in the fill soil. Even if this isn't the case, though, it is still interesting to consider the fence post in a hypothetical situation until more evidence is unearthed.

Duct Tape | Styrofoam Coffee Cups

Maggie Ewing

The Quick Fix: Duct Tape from JBH 24

In JBH 24, the Unit 1 team found a small piece of duct tape, about a 4 cm square. It was no longer adhesive and had two visible layers, one of silvery backing and one of a cloth 1 mm^2 mesh, which were physically separating from each other.

Duct tape was invented during World War II and produced by Johnson and Johnson for use by the military when they needed a waterproof seal (Cole). It has three layers: a polyurethane backing, a layer of cloth weave resembling surgical tape, and a rubber-based adhesive because of its strong, pressure-sensitve adhesive, its strength in its lengthwise direction, and the ease with which it can be torn in its widthwise direction, duct tape has been a popular quick-fix for a variety of problems since it was sold to the public (Wohleber).

Several manufacturers produce duct tape, and there are a variety of duct tape "strengths" based on the strength of the adhesive and the tightness of the cotton mesh. The mesh on the JBH 24 duct tape has a thread count of about 25 threads per inch. According to a non-scientific survey by Backpacker Magazine, the rolls of tape reporters found in hardware stores in 2001 ranged from 18 to 66 threads per inch, but no silver duct tape they examined had a thread count near 25. Though not possible at this time, duct tape thread counts might one day be recorded and compiled to form a diagnostic brand and/or time period measure.

In the absence of thread count dating, we can attempt to date the duct tape fragment by examining the stratigraphic context in which it was found. JBH 24 was part of a larger

stratigraphic unit that included JBH 18. Though these two contexts are considered one deposit, they showed some variation in color, according to the field notes. JBH 18 and 24 had Munsell values of 10 YR 2/2 and 7.5 YR ¾, respectively. In both contexts, the soil was loose and filled with an abundance of roots that made excavation difficult. Both contexts were rich in modern trash and contained little historical material. (Field Notes) Because of the looseness of the soil, the depth of a deposit with artifacts spanning such a short time, and the fact that Unit 1 underlay a visible depression in the JBH lawn, I suspect that this stratigraphic layer represents an area that was filled in with soil and trash in the late 20th century. Large amounts of charcoal at the base of the deposit suggest that the hole that was filled in might have been a fire pit where trash was burned.

Duct tape has a prominent place in our popular culture, both as a multipurpose quick repair and for other more artistic uses. The first Stuck at Prom scholarship competition was sponsored by Henkel in 2001, however, and a Google Books search of the phrase "duct tape" from before 1990 does not turn up any mention of these all-duct tape crafts. In the context of the modern fill deposit, then, this duct tape fragment was probably used for a repair or other functional use, rather than as decoration or as a novelty.

Review of the Rhode Island Historical Society's newsletters from 1972 to 1992 shows that the John Brown House lawn hosted repair workers as well as public events several times over the years in which the fill could have been deposited (RIHS Newsletters). There were two candlelight Galas in heated tents on the lawn, both of which would have had plenty of use for duct tape to hold electrical wires or other technical elements in place. Repair workers could have used duct tape on their tools or vehicles. Duct tape is prevalent enough in modern American

culture that its presence in the fill gives us minimal information about how the deposit was laid down.

What cultural clues are hidden in a 4 cm square of duct tape? It might speak to our culture's quick-fix mentality: where earlier eras left nails and other more permanent methods of affixing one object to another, late twentieth century Rhode Island left a temporary adhesive tape. It certainly gives information about the materials available to manufacturers and the goods available to consumers and how both groups used those resources in the last few decades of the last century.

Coffee Wars: Styrofoam fragments from JBH 18/24

Several pieces of Styrofoam were found in Unit 1, fragments bearing a "Mister Donut" logo in JBH 18, a fragment with a "Dunkin' Donuts logo " in JBH 24, and other unmarked Styrofoam pieces in both contexts. Since the two contexts are part of the same stratigraphic unit, I will consider the fragments together.

Because of their logos and cylindrically curved shapes, I believe the Styrofoam pieces come from coffee or other hot drink cups from coffee and donut franchises. The fragments' material is diagnostic in itself, because Styrofoam coffee cups were first used in 1962. But the most striking diagnostic characteristics of the Styrofoam pieces are their two logos. These physically and functionally similar pieces with different graphics imprinted on them tell a story first of competing brands, but ultimately of the fast food franchise culture that makes the cups, and the restaurants from which they came, more alike than different.

The history of the two doughnut brands underscores this similarity. William Rosenberg and Harry Winokur were partners in founding the first Dunkin' Donuts stores between 1948 and

1955. When Rosenberg wanted to create Dunkin' Donuts franchises and Winokur did not, Rosenberg bought Winokur out of the operation (UNH library). Winokur, however, went on to found the Mister Donut brand in 1956. In 1990, Allied Lyons bought both Dunkin' Donuts and Mister Donut brands, and most U.S. Mister Donut stores became Dunkin' Donuts. The competing coffee and donut companies, born of the same partnership in Southern Massachusetts, were finally reunited.

The competing brands' coffee cups have different logos, but otherwise their form and function is strikingly similar. Both cups were made of white Styrofoam of similar thickness, and both were used for carrying hot beverages out of coffee shops. Both cups were emblazoned with the signs of nationally franchised brands. Both cups describe a culture where coffee is drunk on the run and food franchises are prominent.

The first food franchises were started in 1924, but franchising of the restaurant chains we know today took off in the early 1950s. (Allen and Albala) The Dunkin Donuts and Mister Donut brands are both parts of this franchise explosion. They were used made in a context that valued entrepreneurship and widespread business growth, and used in a cultural context of nationally recognized brands providing standardized products.

Just as they were used within a cultural context, the artifacts were deposited and eventually excavated in the stratigraphic context of the modern fill deposit discussed above. By the post-1962 date of the Styrofoam coffee cup and the 1990 name change of U.S. Mister Donut stores, we can bracket the Mister Donut fragments, at least, to this 28-year date range. If the modern fill layer was deposited all at one time, we can further refine this dates by the 1976 TPQ given by the coffee milk container (Jacob Combs's object biography).

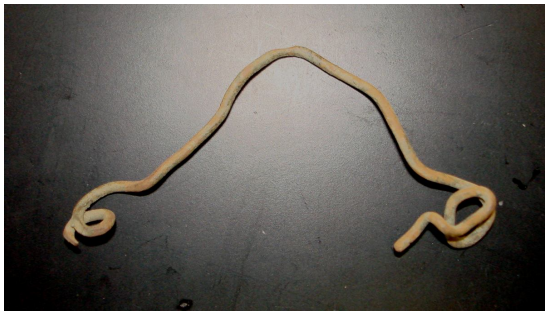
In 1976-1990 trash heap, we also found a McDonalds coffee cup lid and a school-lunch-sized carton of coffee milk. Together, these artifacts give us an idea of the coffee culture of Rhode Island in the late twentieth century. Coffee is something that people carry with them, something that people return to familiar brands to get, something that children cannot drink at full strength but enjoy in a diluted form. Coffee is a way for multiple companies to profit and expand.

Looking at these modern remains shows us how our own culture, or at least one very similar to our own, appears in the archaeological record. Modern trash shows distinctive logos for different brands, and indeed we see the prevalence of national brands all around us. Modern trash shows us disposable Styrofoam and duct tape, a product used for quick and temporary repairs, and indeed we look at our world and see that much of our material culture is temporary, breakable, and not considered worthy of permanent repair. Spending time studying these material leftovers of our recent past has shone light on a few particular aspects of modern American and Rhode Island cultural history.

Copper Wire | Two Pennies | A Sherd of Transfer-printed Ceramic

Peter Hatch

A copper wire



The piece of thin wire pictured, found in excavations at the John Brown House in unit 4, is rather mysterious. It is made of copper, and has been bent roughly into an uneven V shape, with twists and bends in its shape every centimeter or so. If the wire were stretched out flat it would be perhaps five inches long. It is greenish except where the surface corrosion has been rubbed off by being scraped during excavation and subsequent cleaning in the lab. At each end the wire is twisted tightly into loops perhaps half a centimeter in diameter. On one end the wire is bent through two full loops and then trails off before coming to a blunt end, at the other it makes a single loop before coming to a tapered end. Copper itself, because it has been worked by people since for thousands of years, is not at all diagnostic as an indicator of the chronology of the site. We do not have the time or resources to gather information about its exact chemical composition. Therefore the information gleaned from it must come from its shape, and its possible function.

Because copper wire is so commonly used as an electrical conductor, that seems like a good place to start. If that were the case then the tight twists at either end might indicate where it

attached to contacts of some kind. If this were the case, the artifact would be diagnostic, since the first major electric company in Rhode Island was established in 1884 by Marsden Perry, later the owner of the John Brown House (Redwood Library 2004). However if this were an electrical component of some kind, it would have had insulation covering it, rather than being bare wire, and there is no evidence of either insulation or marks where insulation would have been stripped off, so this theory seems implausible.

The general inverted v-shape of the object, and the twisted ends are also reminiscent of a hanger or some kind, like one that would be attached to a picture for hanging on a wall. This seems like a plausible hypothesis, but there are no obvious material associations to confirm it, in that no evidence remains of the small nails or screws that would have held it in place in either the context where the object was found or in related ones. Also, there is no reason to suspect that the object was originally that shape, and the fact that the object is so bent indicates that it likely wasn't, and the tapered end indicates that the wire was perhaps roughly cut or broken from being originally part of a larger whole, so at some time the object has had a lot of force applied to it, an it most likely in its original shape.

Another possibility to consider is that the wire was part of a kind of common late 19th century bottle or jar closure mechanism, called a Lightning-type closure. Also known as a swing-type or toggle closure, this was a very common and popular way of sealing soda and beer bottles for which normal corks did not provide a strong enough seal, and was also very widely employed on canning jars. The type was invented and patented in New York in 1875 by Charles de Quillfeldt as an improved way of sealing carbonated beverages (Lindsey 2008). The mechanism was made up of a stopper (either metal or ceramic with a rubber gasket) attached to a thick wire bail that looped over the top of the bottle and was clamped down by a lever wire, itself

attached to the bottle by a thinner tie-wire that wrapped around the neck of the bottle, this mechanism is illustrated in Lindsey, included below. De Quillfeldt sold the rights to several parties, including Henry Putnam who adopted the design for storage jars that began to appear in 1882 (Lindsey 2008). The design was adapted and improved upon but remained popular on many kinds bottles, typically soda and beer, from the 1880s up to the 1920s. The earlier part of this period would seem very reasonable on the late 19th century time frame that historical documents seem to indicate our excavations are associated with (Yellin 2008). There is also the possibility that it was not part of a Lightning-type closure exactly, but similar non-resalable cork closures with wire fasteners that were used on early and mid-19th century bottles which might work even better with our time-frame (Lindsey 2008).

The twisted circles on the ends of the wire are what indicate that the wire could be from something similar to a Lightning-type closure, since many kinds of accidental processes could create its bent and twisted overall shape, but fewer could create the tight and fairly regular loops in the ends. That fact makes the strong resemblance of the object to half of the neck tie-wire of a Lightning-type closure, as in the highlighted portion of the figure, into a plausible explanation of what this object may have originally been. The wire is apparently part of a larger whole from which it was cut at some time, and that whole could be the rest of the closure mechanism. This interpretation is made even more plausible because of how commonly curved glass, likely the remains of bottles of some kind, was encountered in the excavation units at the John Brown House. Whatever force shattered those bottles initially would also have acted on their closures, and closures of other, newer types were found in more modern strata, so it seems very likely that older types would also be similarly discarded, bent and unusable, and thereby enter the

archaeological record. Although this interpretation is not definite, it provides a very plausible possibility for the function of this unusual object.

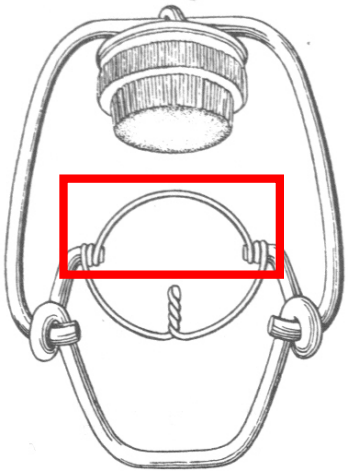


Image: Lindsey 2008.

A pair of Lincoln cents

The two pennies pictured are from context JBH 13 of unit 4, at the John Brown House. One is dated 1967 and the other to 1971. Although the United States Mint's official name for coins of this type is the Lincoln head cent, they are equally if not more recognizable by the colloquial name "penny" and will be referred to as such. These are very familiar objects to most anyone who has spent time in the United States, but since we are less likely to look closely at familiar objects it is all the more important to describe them. Each coin is small, designed to be exactly .750 inches in diameter (19.05mm) and 1.55mm in thickness (U.S. Mint 2008).

The obverse of each coin bears a portrait of Abraham Lincoln in profile facing to the right side of the coin. The portrait is calm and slightly smiling, and his symbolic value as an emancipator underscored by the world "LIBERTY" appearing just behind his shoulder across from the year that makes these objects diagnostic, and the official motto of the United States, "IN GOD WE TRUST" in an arc above the top of his head. The design was originally created in 1909 in commemoration of the centennial of Lincoln's birthday by Victor David Bremmer, a Lithuanian immigrant well-known as a medalist, who was commissioned by Theodore Roosevelt after he saw a relief statue of Lincoln done by the artist. It replaced the "Indian Head" pennies that had been the design used since 1859 (Wikipedia 2008a). The design was the very first portrait of an individual, rather than a type figure such as the personification of Liberty. Considerable

controversy was the result, because of the monarchical associations with having individuals on coins, but this was greatly outweighed by a public love for Lincoln (Margolick 2007).

Initially the design on the reverse was of two wheat stalks, and for a short time carried the initials of the artist, VDB. Later these initials were moved the obverse of the coin, engraved in very small type on the bottom of the Lincoln portrait. The fact that these small letters are not visible on the pennies from the John Brown House is an indication of that they were worn down, either while still in circulation or after being deposited. Additionally the original text on the reverse has remained the same, bearing "ONE CENT" in the largest type, along with "UNITED STATES OF AMERICA" and the unofficial motto "E PLURIBUS UNUM" or "from many, one" in Latin. The initial wheat design was changed in 1959, to mark the 150th anniversary of Lincoln's birth, and from that point a depiction of the Lincoln Memorial in Washington D.C. appeared. The design on the contemporary reverse side was designed by Frank Gasparro, the Assistant Engraver at the United States Mint at the time and most renderings of this design include the artist's initials "FG" beside the Lincoln memorial (Wikipedia 2008b) although there is no evidence of these letters on either of the excavated pennies, due to wear or corrosion.

United States coins minted at the Denver mint carry a "D" to identify them as having been made there, because it is the original mint, coins produced in Philadelphia traditionally carry no mark at all (U.S. Mint 2008). Therefore it is usually distinguishable where a penny is made. The 1971 penny has no evidence of a mint mark This is not the case for the 1967 penny, which, although it has no evidence of a mint mark, may have be from either Denver of Philadelphia. This is because of the Coinage Act of 1965, among the provisions of which was a prohibition on mint marks. The bill was an attempt to remove "distinguishing features that could tempt people to remove the coins from circulation while the Mint was striving to meet the

country's need for coins" (U.S. Mint 2008). These coins were minted in an era where rising metal prices made the composition of U.S. coins a major potential issue, just three years after the second coin was minted there was a brief failed attempt to introduce one cent coins made out of aluminum (Wikipedia 2008b). Even so, demand for coins has continued to hold steady, even in this very low monetary denomination, and the penny has continued to be produced in larger numbers than any other denomination, so the most specific thing that can be said about the 1967 penny is that it represents one of 3,048,667,100 created in that year. The origin of 1971 penny can be narrowed down more, and it was one of 1,919,490,000 pennies created at Philadelphia in that year (Wikipedia 2008b).

The 1971 penny is better preserved overall, the 1967 being greener in color and the features of the portrait being very hard to distinguish exactly. A lot of the wear seems to have taken place around the edges of the coins, with the text that arcs around the edges of the 1967 example so worn down as to be barely visible. This is an indication that the coin was in circulation for some time, as opposed to the 1971 penny that is relatively well preserved and, if the two objects were deposited at the same time, could not possible been in circulation as long. In each, where the corrosion layer broken they are orange-brown in color, the result of being made of 95% copper and 5% zinc, as pennies were until 1982, after which that balance was almost reversed, with pennies being made of just a thin copper plating (2.5%) and the rest being made up of Zinc (U.S. Mint). These pennies are therefore heavier than those currently being minted, they would have been 3.11 grams at the time of minting as opposed to the 2.5 grams of current pennies (Wikipedia 2008b). It is interesting to reflect on how an object which is almost worthless monetarily can have such an interesting and varied history when considered in detail.

In terms of what these coins might represent archaeologically, and how they may have been deposited, there are a number of possibilities. It cannot be said definitively where these objects fit in the depositional history of the context in which they reside, since they were found in a stratum that is constantly disturbed by foot traffic, lawn mowing, and whatever else took place on the lawn since they were deposited. These facts about the pennies shed light on archaeological dating in an interesting way, in showing that even when the year of something's production is stamped on its face, that does not provide any certainty about when it entered the archaeological record, demonstrating the importance of proper context in getting solid information about any archaeologically recovered object. This has larger implications in demonstrating how much can potentially be lost when objects that are marketable in a way these pennies could never be, are looted or otherwise ripped from their proper context in order to be sold. It could be that the coins were introduced separately into the archaeological record at completely different times, but because they were found in the same one by one meter area as one another and in the same soil stratum, it seems plausible that they are associated in some way. That same day a modern ballpoint pen was found, so it is conceivable that all three objects represent the spilled contents of a single pocket, years or decades ago.

A Transfer-printed Sherd

Because pottery in a general sense, as a material that does not degrade, is so important to both prehistoric and historic archaeology, even a single tiny sherd of broken pottery like the pictured piece of English mulberry under-glaze transfer printed whiteware, can be of significant importance to a variety of archaeological approaches. The small details of an already small object can be of great importance. The sherd is small and decorated on both sides in a purple design made up of tiny dots that are regular and uniform in appearance, indicating that it was transfer printed as opposed to hand-painted. Additionally the fact that the It is made of a compact and solid earthenware that is tan in color, and the surface treatment is a very pure white glaze that provides the indication that it is whiteware. From these basic facts, there are a number of ways to interpret this object.

The first angle to explore is to interpret this sherd as the result of technological and economic development. Earthenware decorated in this manner was made in great quantities in England from the 18th century onward in an attempt to capitalize on the demand for ceramics that emulated the style of imported porcelain wares from China. Various technologies were adapted in order to make these wares well and cheaply, most notably in the English pottery producing district of Staffordshire. One such technology was the transfer printing process. This is done by

engraving a copper plate with the desired design, inking it, and applying damp paper. The paper is carefully laid out on the piece to be decorated, so that the ink transfers onto the earthenware. This process was invented in Liverpool in 1756 for tiles, and was then adapted for pottery by placing the transfer pattern underneath the glaze and adapting the compounds in the ink to produce different shades of blue, and later other colors, that held up though firing. Another refinement on this technology was the use of "bat" printing, which replaced the tissue paper with a block of glue (Hayden 1912). These technologies allowed for identically decorated full sets of ceramic ware in great mass-produced quantities. Around 1810 a new type of ceramic, producing a truer white than the previous creamware and pearlware shades, was invented (Stelle 2001). Huge amounts were produced and exported to meet the demands of a booming American market, to the point that for some historical archaeologists transfer printed whitewares represent "the most conspicuous surface treatment" if the era (Stelle 2001). One way to view this tiny sherd is as the result of the great technological and economic strides of the 19th century.

In a more directly archaeological sense, this sherd is important because of how readily it can be used to refine the chronology of a deposit in a site. Since types of pottery were made in response to changing market demand, different wares and types were produced and consumed over very definite periods of time. A chronology of popularity can be built form "potters invoices, trade catalogs, and store accounts" and that can be correlated with what has been found archaeologically (Samford 2000). This is even true down to the level of specific colors of transfer-printed whiteware.

This sherd in particular is a shade of purple often called mulberry. One source that has studied the patterns of these color changes separates mulberry and purple, and indicates that purple corresponds to the era 1827-1838 and mulberry to 1837-1852 (Samford 2000). On the

other hand, a very similar table from another source seems to conflate the two colors, indicating that this type was produced from 1829-1860 but popular mainly during 1829-1839 (Stelle 2001). The lack of exact agreement between the two sources is notable, and illustrates how even something extremely specific and straightforward can be a source of debate in archaeology.

Another approach to analysis of this sherd is based in an attempt to understand what the owners of the original vessel would have thought about it, before it became trash and thereby entered the archaeological record. Because this vessel is decorated on both sides, it very likely came from a fancy vessel of which both sides would be seen, like a teacup of a bowl. It may have been a status symbol when new, in an era when matching sets of dishes were still rare and taste for whiteware in new colors was coming into vogue. This is evidenced by a history of the Stratfordshire pottery workshops written in 1827, immediately before purple wares began to be made.

> Very recently several of the most eminent Manufacturers have introduced a method of ornamenting Table and Dessert Sevices, similarly to Tea Services, by the Black Printers, using red, brown, and green colours, for beautiful designs of flowers and landscapes; on Pottery greatly improved in quality and shapes formed with additional taste and elegance. This potter has a rich and delicate appearance, and owing to the Blue Printed having become so common, the other is now obtaining a decided preference in most genteel circles." (Shaw 1829, 234-5).

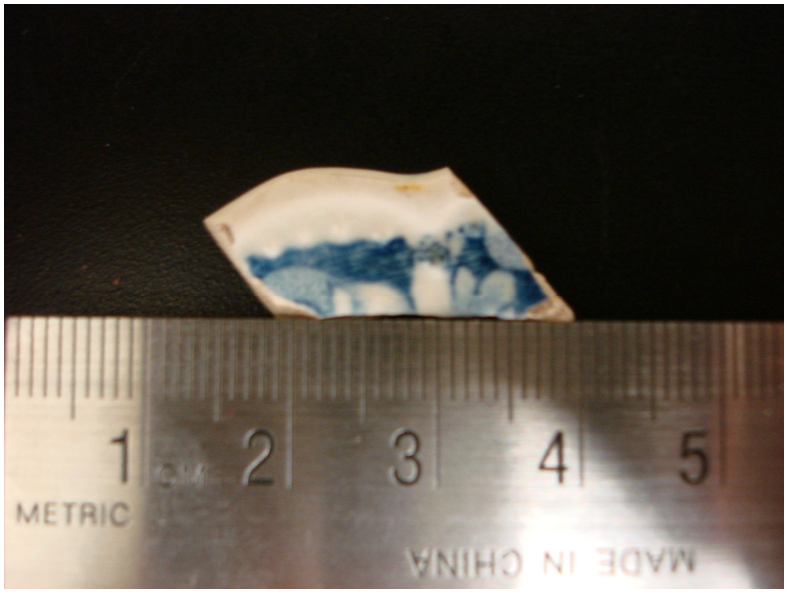
This is a good indication of how the change in taste, the ever-shifting way that people relate to the objects around them, realigns the market so that the latest and greatest thing comes to symbolize wealth and sophistication, is purchased, loses those associations, and is eventually discarded. The ability to compare these kinds of accounts with the material evidence provided

by the archaeological record is the unique strength of historical archaeology, allowing us to access how people in the past built, used, and thought about the material world around them.

Pearlware ceramic sherd | Lead-glazed Redware ceramic sherd | Green Glass Bottle and Bottle Cap

Whitney Knowlton

Pearlware, shell edge, transfer-print



A small sherd of pearlware was uncovered in Unit 4 JHB 42. This was unlike the other pieces of pearlware found in this context, it was a piece of a molded or embossed shell edge rim decorated with a blue and white transfer print. These three additions to the simple and common type of ceramic, pearlware are important diagnostic features.

Pearlware is one of the most common ceramic types found on early nineteenth century sites. It was produced in England and it is considered to be refined earthenware. “Pearlware deliberately imitated Chinese porcelain, both in color and decoration” (Barker 415). The faint tint of blue in the glaze that is noticeable in the crevices, where small pools of glaze would settle,

distinguishes it from creamware. The glaze on creamware would appear yellow or green in the tableware's crevices.

The Florida Museum of Natural History reports that a pearlware with a shell edge has a date range of production from 1785-1840, with a mean date of 1812. These rims either appear to be scalloped, which is depicted by a wave-shaped profile of the rim, or plain, the rim was standard with a smooth circular profile. If the sherd found had a plain rim it would have been smooth and circular, similar to the standard basic rim found on flatware today. This type of edge is important for deciphering the form of vessel this sherd would have come from. The vessel forms for shell edge pearlware are bowl, plate, or platter. The *Ceramic Profiles and Rim Diameters: Guide to Function* instructs the user of the rim diameter chart to, "Hold the sherd against the profile chart, or use a ruler, to help determine the function of the tablewares." After doing this, the rim diameter was determined to be between four and five inches. At the five-inch mark the types of vessel the chart notes are bowl, saucer, cup plate or child's plate. We can rule out a few of these options based on the shell edge, the sherd found in context 42 most likely belonged to a cup plate or child's plate.

The technique of transfer printing under the glaze is also a diagnostic feature; the FLMNH's date of production range for transfer-printed pearlware is 1795-1840, with a mean manufacturing date of 1818. The method of production began with a design engraved onto a copper plate. The plate was then heated to help thin and speak the ink. The ink color was a result of the metallic oxide; the more deeply the plate was engraved, the darker the color on the ceramic. Cobalt produced the blue color seen on this sherd. The copper plates could be used repeatedly. Popular designs were often sold to several manufactures. Similar to blue painted wares, early blue printed earthenwares were also done in Chinese patterns, which remained

popular until around the War of 1812. Early in the 19th century the copper plate engravers began to use stipples, small dots, as a shading device allowing the prints to have greater perspective. As a result of the War of 1812, English and American landscapes became a more popular motif.

Patricia M Samford argues that the production of English underglaze transfer-printed wares is primarily based on a response to the market. The author points our that the technique of transfer printing under the glaze had been possible for over two decades, "…it was not until after the War of 1812 that printed wares began to appear in great numbers in America" (Samford 57). The increase after the war was probably the result of the substantial fall in ceramic prices. The design of the print on the sherd shows small flowers, it is likely that is was a floral motif. This type of decoration was popular throughout the nineteenth century. The most prevalent designs had a central floral motif or an overall repeating pattern, known as a sheet pattern. Floral boarders are mainly divided into two types: those with continuous repeating unbroken motifs and those where the motif is broken with unprinted white areas. The artifact found in JBH 42 is too small to determine what the entire vessel's design would have looked like.

Comparing this piece of pearlware with other artifacts found in the context JBH 42 it is possible to suggest a date range, after which the layer was deposited, terminus post quem. There were several small pieces of plain creamware also found in the context. FLMNH provides a date range of production for this type of ceramic and it states that it would have been produced between 1762 and 1820. This diagnostic information along with the three sherds of redware with a dark brown lead glaze, FLMNH gives 1700-1770 as a range of production, suggest that this context was deposited between the late 18th through early 19th century.

Redware with Lead Glaze

"The most commonly ceramic found around the globe is red earthenware, commonly called 'redware'" (Turnbaugh 469). This ware is constructed of red-clay found in abundance around the world. Ivor Noel Hume states that the majority of ceramic pots were of course earthenware, coated with a leadglaze. "Body colors varied from buff coated with an apple-green glaze, to red covered with a purplish-brown tortoise-shell leadglaze" (Hume 146). Basically every western European country had its own coarse earthenware traditions for producing utilitarian vessels necessary for daily life activities. Most earthenwares have similar manufacturing techniques; first they were thrown or formed, then dried, decorated (if at all), glazed and then fired (usually only once). "Utilitarian vessel forms…often look quite similar, so much so that the geographic origins of their clays or slips may be distinguished…only through chemical or spectroscopic analysis…" (Turnbaugh 471).

Redware could be decorated, like other wares, by piercing, incising, or applying molded reliefs prior to firing. The sherds found in context JBH 42 do not show any decoration, however, because of their very small size it is nearly impossible to determine if the vessels from which

they came were decorated. The body of the redware is the softest of all the earthenwares because of this it fractures easily. This is why it is usually recovered in small pieces.

Some of the European redware industries were able to export their wares for trade, especially in those countries with colonial interests in the Caribbean and the Americas. English coarse earthenwares reached North America during the seventeenth century. “Typical eighteenth-century English coarse wares included black leadglazed storage jars, dishes, pans and jugs” (Barker 167). Other common seventeenth and eighteenth century English earthenwares include black leadglazed drinking vessels. Three sherds of dark brown to black leadglazed earthenware were discovered in Unit 4, JBH 42. These sherds were probably apart of a utilitarian vessels related to food storage or preparation (these were the dominate forms from this period). In some communities redware forms remained popular until about 1770, when production declined as a result of the increasing availability of refined earthenwares. As a result many local redware potters ended their production.

The Florida Museum of Natural History (FLMNH) gives a production date range of 1700 through 1770 for redware with a dark brown/black glaze. This information alongside other artifacts also recovered from JBH 42, sherds of creamware and pearlware, allow for a terminus post quem of late 18th century to early 19th century for this context. Even though creamware (1762-1820) and pearlware (1785-1840) had a later dates of production than the end date given for this type of lead glazed redware, it is still likely all three types of ware were in use around the same time.

There are several issues surrounding the use of ceramics as an instrument for dating a site. It is important that researchers do not solely use ceramics to date sites, dates need to be

complied based on documentary and artifact evidence. Even though there is a large amount of information available on the dates of manufacturing it is very difficult to account for the entire lifespan of a ware. It is important for any researcher attempting to use ceramics to aid in dating their site to understand the context in which the artifacts were found, for example how the finds were originally used and discarded. William Adams study suggests that the lifespan for ceramic tableware vessels can be fifteen to twenty years or longer, "The manufacturing date fact cannot be equated with an artifact's use date" (Adams 41). The time over which a piece of tableware used depends greatly on the cultural factors surrounding the type of ware. George Foster derived five basic categories that affect the duration of use for ceramics, those are: basic strength, pottery uses, mode of use, cause of breakage, and price of pottery.

The Mean Ceramic Date of a piece of ware can be vital way to gain an understanding of the time when a piece was at its peak in popularity during the time of its manufacturing. However, it is necessary to keep in mind the several factors that can result in a piece of ceramic surviving beyond its popularity curve. William Adams describes what he believes to be the five main categories. The first is the Heirloom Effect, a new house maybe a compilation of new items as well as acquired gifts, heirlooms, from family and friends. Also these types of pieces can be attached to the estate and can be passed from owner to owner. Adams also mentions a frugality effect; since the Brown's were one of the city's most distinguished families it is not likely that they took into account a budget when purchasing items. However, the author does note that while this effect is usually linked to people or families with a low income, the behavior can cut across economic classes. A wide range of patterns indicating that pieces were acquired individually rather than as sets is a primary characteristic of the frugality effect. On the other hand, this type of assemblage could also be a sign of the hand-me-

down effect, which is more likely on the Brown estate since there is historical documentation of the family owning slaves.

Green Glass Bottle

During the late 19th century the significant improvements in the finish portion of glass containers in addition to the development of convenient, reliable closures aided in the increased demand for glass commercial containers. “Two very important closures were the crown top for bottles and the Phoenix cap for jars, both patented in 1892” (Miller &Sullivan 161). Around the same time, automatic canning and bottling machinery were being developed. As well as, better knowledge of sterilization and a wider availability of refrigeration. These developments are apart of a broad change in food consumption patterns and emerging brand-name products.

For cataloguing purposes, glassware is divided into several broad categories usually based on functional classifications. For the large fragment of green glass, from the base of the neck up, found in Unit 1, JBH 24 it falls under Parks Canada’s classification term ‘container’. It is a general grouping of commercial bottles and jars; these items would have been acquired for their contents. Although some of the containers in this category would have been purchased for their use, for example nursing bottles. Another category that is of importance, considering the green glass fragment in question, is that of closures. These are regarded as separate items associated with containers.

The artifact being discussed has symmetrical seams running up either side of the neck of the bottle continuing through the string rim and lip. This is the primary characteristic of a two-piece mould bottle. "The base, body, shoulder, and neck of the bottle are formed together in a two-piece bottle mould which is hinged either at the bottom or at the side" (Jones & Sullivan 26). However this type of mould decreases in use during the last third of the 19th century. It seems to be replaced by the two-piece mould with a third base part. The primary characteristic of this type is that the seams begin at the edge of the base part on each side of the bottle and extend up the bottle as high as the finish. In terms of dating this method of bottle production, there is a wide range since this type is still being manufactured in the present. "The two-part vertical mould with separate base part becomes the most common container mould type for the late 19th and early 20th centuries" (Jones & Sullivan 29).

During the late 19th century there was a general move towards machine-made containers. These are holloware bottles and jars that are shaped by machine supplied pressure. There are two types of machines, semi-automatic and automatic. Both allow for several containers to be produced at once. Semi-automatic machines require manually supplied gobs of molten glass; where as fully automatic machines do not require any manual labor. The glass is distributed and given its initial shape by the parson mould. Next the container is relocated to a full-size mould that forms its final shape and size, as well as adds and embossed letters or designs to its surface.

Dating this artifact is somewhat difficult since the fragment does not include any portion of the body or base of the bottle. "Many machine-made glass bottles carry the name of their manufacturer embossed or stamped on their bases" (Orser 69). If that were the case it would be possible using books of makers' marks to date the bottle fragment found in JBH 24. Even though the artifact is only a portion of the bottle, from the neck up, it is possible to narrow down its

possible production range based on its closure type. The closure was an important feature on a bottle because most consumers were purchasing such containers solely for their contents. The producers of the contents would do business with bottle makers who could ensure a secure enclosure. Corks were some of the earliest and popular bottle stoppers. Bottles that used such closures had bores that were either straight or gently sloped. Bottle manufacturers became interested in new closure designs during the 19th century with the invention of products containing gas. "Without question, the crown finish, invented by American William Painter in the early 1890's, was the most effective closure for carbonated drinks" (Orser 69). The crimped bottle cap characterizes the crown cap and this type of closure is still widely used today. The crown finish on the bottle used to have a lip with a flat top and rounded sides over which the skirt of the cap would hook. "The original crowns were plain, unmarked metal, one or both sides lacquered, with approximately 20 corrugations and an internal disc of natural cork" (Jones & Sullivan 163). Since the crown caps found in JBH 24 are very corroded it is impossible to see whether or not there used to be a design on them. However, the plastic internal disc has survived and is still attached to the inside of all three caps signaling their relatively recent production. The fragment of the bottle in question has a double bead finish indicating its recent production. Although the caps are slightly bent and corroded it is obvious that they fit the bottle in question, further proving that the bottle has a crown finish.

Other finds in context JBH 24 include a piece of duck tape, Styrofoam, and Johnson and Johnson burn cream. Permacel created duck tape in 1942. Styrofoam, otherwise known as polystyrene, is post 1941. On the back of the Johnson and Johnson burn cream packaging it dates 1984. These finds along with the fragment of the bottle and three bottle caps date JBH 24 to the late twentieth century.

Nails | Transfer-printed Ceramic Sherd | Pearlware Sherds

Moira Kyweluk

Five Rusted Nails and Fragments

I examined one nail in particular from Unit 5 found in context JBH 35. This nail was one of five included in a group catalogued from this context. The nail in question is approximately square, with parallel sides coming to a sharp point and measures 67.4 mm. The second nail which from this grouping which has a discernible shape through the rust is bent, most likely from being hammered into place, and measures 74.4 mm. Each nail is very corroded, suggesting it is crafted from iron.


Figure 1. JBH 35

Nails fall into several categories. They are crafted from iron or steel, but form and construction has changed considerably through the centuries. The most significant change was the development of the round-profile wire nail in France during the mid 1830s. Wire nails replaced the more common machine-made cut nails (Edwards and Wells 17). In 1885, Henry Bessemer patented the first inexpensive industrial process for the mass-production of steel—that is, mass-producing steel from molten pig iron. This innovation made producing wire nails far more efficient and cheaper than crafting cut nails. Galvanized wire nails are extremely strong, and are drawn from long thin rods of steel. Nails can be made by cutting, forging, and drawing. The two examples from JBH 35 are without a doubt cut nails.


Figure 2. JBH 35

The development of cut nails has a prolific history. The nails from JBH 35 can be dated from some time between 1790 and the late 19th century. Towards the latter half of the 19th century, steel became favored as a result of the Bessemer process. The two corroded nails from JBH 35 are cut nails, which are created by cutting triangular "nail blanks" from flat pieces of iron (Edwards and Wells 2). Crafting nails in this manner was first popularized in America during the time of the American Revolution—indeed, cut nails by old nail companies such as the Tremont Nail Company in Mansfield, Massachusetts still produce nails in this manner for period restoration projects and remodeling (Tremont Nail Company Online).

The 1800s were a time of rapid expansion of the nail industry and falling prices for production. By the turn of the 17th century, machine-made cut nails were commonly available throughout the Northeast (Edwards and Wells 17). Cut nails made from nail blanks were considered superior to hand-forged nails, the heads more uniform and the pieces stronger. A majority of cut nails were still finished by hand, but machine-cut blanks were much cheaper to manufacture. Hand-made nails were still used for special purposes and projects, but machine-generated cut nails were ubiquitous (Edwards and Wells 19).

These nails found at the John Brown House could have been crafted several places between 1790 and 1900. The Hope Furnace, a smelting and crafting enterprise of the Brown family, was producing cut nails during this period. The convenience of the Furnace as the production location for nails used in the Brown family businesses and private constructions is an important consideration. During the postulated manufacture dates from 1790 to 1900, the Furnace was in operation and producing nails. Other production companies, such as the Amesbury nail works in Massachusetts were far more prolific in their output of cut nails. In the

year 1800, the company produced 100 tons of cut nails, selling cheaply at 9.5-9.9 cents per pound.

The latest proposed date for these two cut nails, assuming they were not historical revival pieces, is the early 1900s. By the turn of the 18th century, with the exception of heavy-duty roofing nails, the cut nails industry was in serious decline (Edwards and Wells 19). 7.23 million kegs of galvanized steel wire nails were manufactured in 1900 but only 1.57 million kegs of cut nails (Edwards and Wells 19). Eventually, steel wire roofing nails were introduced to end complaints of rapidly rusting roofing nails—still mostly cut iron nails at that time. By 1920 only only 8% of the U.S. production of nails consisted of cut nails. Advertising stressed the greater holding power of these nails (Historic Nails).

Trends in nail production and consumption hold a great deal of significance when considering the dates and provenance of the two nails founds in Unit 5. A second important consideration is the practice of recycling nails. The two nails found were possibly reused from previous constructions, particularly in a dynasty family like John Brown's with many generations constructing homes and performing renovations. Nails did not deteriorate excessively, and thus were sometimes used in many different incarnations, making exact dating difficult. Furthermore, throughout the 18th century, carpenters were "conservative" when using nails in their constructions (Edwards and Wells 3). The expense of nails before mass-production was a consideration of many builders. A mix of old and new nails, as well as nails taken from recycled lumber were common components in many constructions built at the time of the John Brown House. "Thus, any new house might have been built with two or three different kinds of nails, each dating to a different period in the evolution of nail technology. To complicate matters further, most wooden houses required repairs every twenty to forty years" (Edwards and Wells

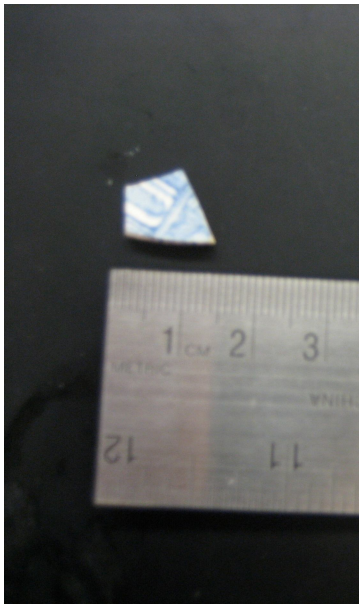
3). The structures at the John Brown House could have been repaired several times during their incarnation as outbuildings.

Because of these various complications, accurate dating and establishing the provenance of nails is better accomplished with a large sample of nails. Although the deposit of nails from JBH 35 has five nails or nail fragments, three are too corroded to work with in their present state. They appear to be simply lumps of iron (Figure 3). Two are more visibly nail-like, and the features of them can be seen. One of the nails is bent (see Figure 2), and longer than the other (see Figure 1). The shaft of the nail in Figure 1 tapers to a point, but because of extensive rusting and corrosion, it is difficult to ascertain whether the sides of the shaft are all tapering to a point or whether the nail was tapered on only two sides. These nails appear to both have been machine-cut nails, with hand-finished heads. These qualifications date these two nails from some date post 1790 until late 19th century when machine-produced wire nails became the norm. Both are iron nails, but are different from the multitude of nails found in JBH 1 and JBH 8 (more than 8 individual nails with a unique double head) at the John Brown House. These two nails may be older as they show evidence of hand-tooling. Unfortunately, due to the extreme rusting of the head and portions of the shaft of the two distinguishable nails, more accurate use of diagnostic features is not possible to date these artifacts. Cleaning and possibly splitting the nails to see the grain of the metal would yield more diagnostic information.

Figure 3. The JBH 35 nail collection

Transfer-printed Pearlware Sherd

I also examined a sherd of pearlware printed with a light blue transfer print. This piece of earthenware pottery from was found in Unit 3 in context JBH 23. The reverse side from the printing is a white glaze with some sort of makers crest, a small six-leaved flower or clover imprinted in the glaze. This imprint measures approximately 4.1mm in diameter and is located in the middle of the fragment. The sherd itself has edges measuring 10.9 mm by 11.4 mm by 8.0 mm by 9.3 mm and is a rough quadrangle, closer to being triangular than square. This pearlware fragment is about 2.1 mm thick.



The sherd was uncovered in JBH23. This context contained a multitude of different sorts of artifacts, that spanned several centuries in possible production and use dates. JBH 23 was rich in earthenware pieces. These included several fragments of a pink sponge-printed white-wear; many smaller sherds of transfer-printed earthenware; and what appears to be a one of the oldest finds from the site thus far, a thick red earthenware

piece with a heavy green glaze. In addition to these older finds, a some modern midden—including the pull tab from a drink can—was found and several heavily corroded nails and pieces of thick black glass. The soil in this context was quite uniform, which offers little explanation for how the range of dates became so jumbled.

This sherd is an example of a type of refined earthenware called pearlware. Pearlware is defined as "earthenware similar to early creamware, but rendered white or very pale grey by the addition of some cobalt stain to the glaze to neutralize the yellow effect caused by the lead. This was the most common sort up to about 1830 and may often be identified by the blue color of surplus glaze around foot-rings or handles or on the underside of dishes" (Copeland 6). While this piece of pearlware is too small to identified by the pooling of glaze, the purer white of the pottery itself make identification possible.

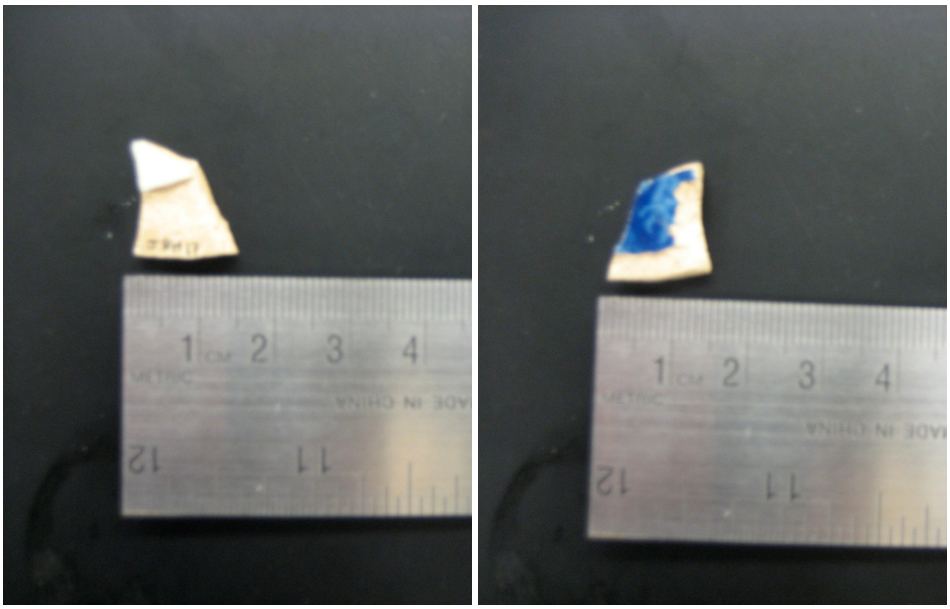
Although this particular sherd is very small, some distinctive features about the light blue transfer-printed pattern can be discerned and are the best indicators of manufacture date. The design appears to be a portion of an archway, pagoda, or temple. Assuming this interpretation of the design is correct, it most likely is part of a neoclassical motif depicting a temple or marble facade of a building or is an example of Asian-inspired chinoiserie (Copeland 2). According to the Florida Museum of Natural History guide to pottery, the heavier brush strokes of hand-painted Chinese motifs on pearlware "were eclipsed by transfer printing by about 1812-1815." This sets the date as later than 1812, and using the dates from the rise in popularity of transfer printing on pearlware and the peak of popularity for pearlware as a pottery form, this sherd can be roughly dated to a production date some time between 1812 and 1830 (FLMNH Online).

Several possibilities for the predominant motif of this blue transfer print must be considered since the sherd is so small. According to the Florida Museum of Natural History catalog of pottery styles, techniques and common motifs for transfer printing on pearlware evolved between the basic dates of 1784 and 1840. This piece does not have the cruder designs of earlier 18th century transfer printing, but rather is the motif employs stippling—using many small dots to create precise shading and more dynamic two-dimensional designs. If this piece indeed portrays a pagoda or a Chinese-inspired design, it would more likely be from some time before 1815 based on peak popularity. From 1815-1830, classical and historical scenes were popular. The shred does not seem to be painted with a later 19th century romantic landscape motif, but rather depicts buildings, and thus was likely not produced post 1830 (FLMNH Online). Overlapping these possible dates, this sherd most likely comes from the fifteen year period between 1815 and 1830, a light blue transfer print on pearlware with a classical motif.

One final component of this sherd worth noting is the small stamped design on the reverse of the blue transfer print. Written maker's marks on all types of pottery are common, and most likely this small imprinted clover or six-leaf flower was close to a painted-on mark. The clover was likely only centimeters away from the printed name or mark of the manufacturer, that fragment lost to time or perhaps elsewhere in the John Brown House lawn. Databases of stamped makers' marks were common online, but I could find no record of this particular one in catalogs of common marks from the time period.

Pearlware Sherds

A final find were two light aqua glazed sherds of pearlware, with a cobalt blue glaze on the opposite side of the smaller sherd. The larger sherd was 33.2 mm long by 23.9 and is a rough square. The second fragment is 13.3 mm wide and 15.0 mm long. Both sherds vary from 4.5 mm at their thickest points to 2.2 mm at the thinnest. The lip on the larger sherd is the thickest portion between the two pieces.



These sherds of plain pearlware came from JBH 23 (see description in Kyweluk Object Biography above) the same context as the small fragment of light blue transfer-printed pearlware. Notably, the two fragments appear to be from the same vessel, as the glaze on the outside of the smaller sherd matches the light aqua glaze on the chip-free side of the larger fragment. Possibly all of the deep cobalt glaze on the larger fragment chipped off through time, and the smaller fragment represents the true glaze pattern for this vessel.

The larger fragment has a raised rim running along top third of the segment. Using this crescent as a diagnostic tool and a diagram of rim diameters of various vessels from "Diagnostic Artifacts in Maryland," I was able to estimate the intact rim diameter of this vessel as 4 inches wide. The fragments could have been a portion of a teacup, tankard, or mug. The deeper blue cobalt glaze from the smaller fragment could have been painted on the inside of the mug. The Florida Museum of Natural History database corroborates this speculation listing possible vessel forms for plain pearlware as bowls, cups, plates, and platters. More likely this was a rounded vessel such as a cup or mug than a flat plate or platter.

The light aqua color of the glaze on the majority of the larger fragment is due to the addition of cobalt to the glaze. Only certain colors of glaze can withstand the temperatures needed to fire the lead glaze on pearlware. From 1780-1840, addition of minerals like antimony for yellow, copper for greens, and, in this case, cobalt for blue were the most common colors of glaze. Each of these could withstand kiln temperatures of 1000-1100 degrees Celsius (Lockett).

The lack of a transfer print or decoration on this piece does not rule out the possibility. According to the Florida Museum of Natural History database, "many archaeologically-recovered sherds without decoration were undoubtedly fragments from decorated wares." Without decoration, the color of the glaze is the most indicative feature of the shred. This variety of "plain pearlware" often has a light blue cast to the glaze, similar to the light aqua color on this piece, particularly where glaze pools. Along the raised ridge, the glaze is slightly darker.

The small patch of bright blue cobalt glaze on the reverse side of the smaller sherd was most likely produced using the addition of more cobalt to a heavy lead glaze. This color may have coated the inside of the vessel. Another possibility is that the bright blue glaze was an

underglaze for a transfer print piece or hand-painted piece, despite no decorated fragments being found. The two sherds appear to belong to the same vessel, although precisely what form and whether decoration existed cannot be determined.

Undecorated pearlware vessels were not as common as hand-painted, sponge painted or transfer printed ones. The paste of pearlware became heavier and whiter after 1810, and the difference in thickness between these fragments and other sherds of pearlware found at the John Brown House site is notable. The thicker lead glaze also indicates this piece may be the rarer undecorated pearlware, narrowing its estimated manufacture date to between 1810 and 1840. Glazes on undecorated pieces varied from almost white to a deep blue tint, much like the colors seen on this fragment. The product origin is England, as it is for most pearlware pieces found in North America during this time.

Clay Tobacco Pipe | Green-glazed Coarse Earthenware Ceramic Sherd | Beverage Can Pull Tab

Elise Nuding

An object biography of a clay tobacco pipe- Unit 3, JBH 12

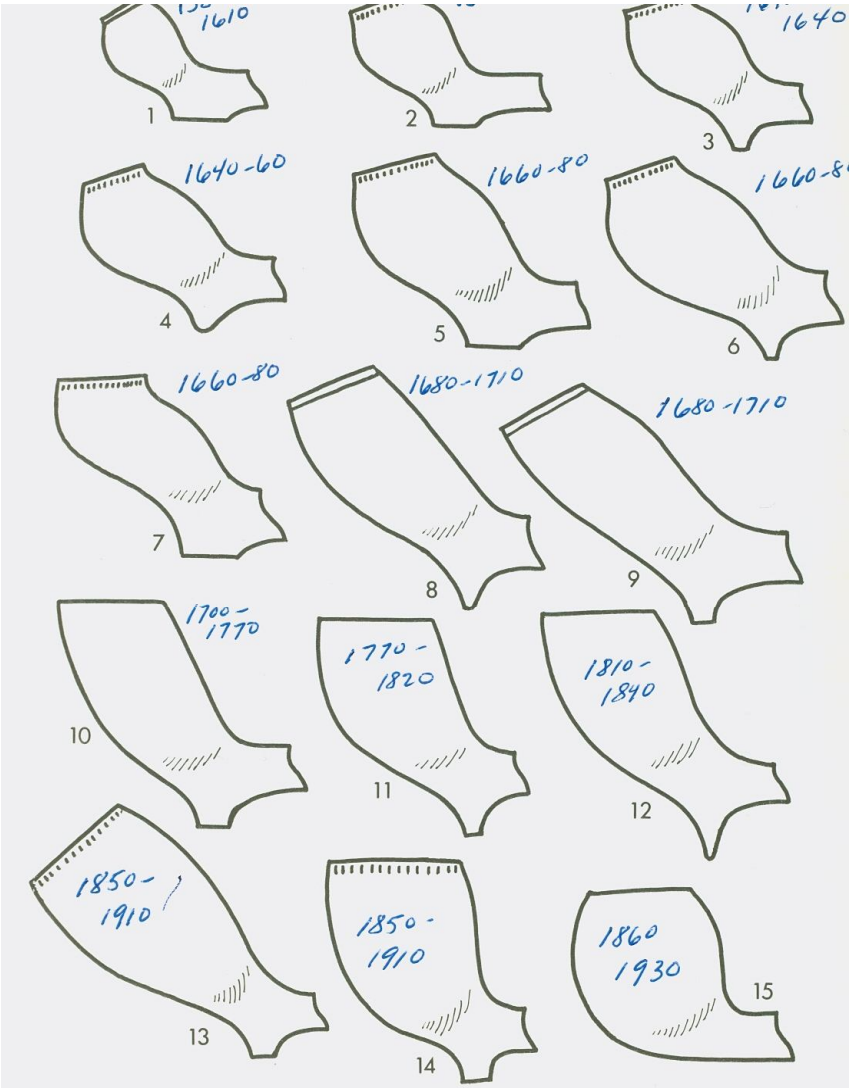
This artefact was uncovered on the 29th September 2008 in context JBH12, the first context assigned in Unit 3. Its measurements are 8 x 8 x 2mm, and it was identified as a shard of a tobacco pipe bowl by the clay material, and by the incised design that runs vertically down from the bowl edge.

Clay tobacco pipes were common household items from the late sixteenth to early twentieth century. The unfired kaolin clay was rolled and placed in moulds, where the pipes were shaped using a gin-press to create the bowl, and hand tools for piercing the bore hole and trimming the edges. They were then stacked, several thousand at a time, in an up-draught kiln and fired. The nature of the pipe as "an item that was manufactured, imported, smoked, and

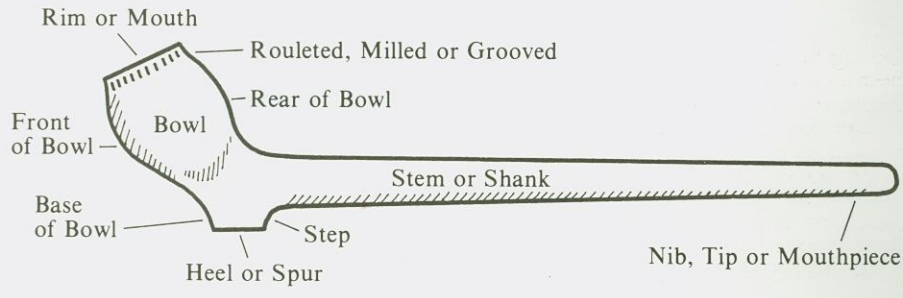
thrown away, all within a matter of a year or two"[29] mean they are richly found in the archaeological record, and dating methods based on the change in bowl shape, and bore diameter have been established through the work of Jean Harrington and Adrian Oswald that can help date the JBH12 sherd.

The incisions around the rim of the bowl are a decorative process known as rouleting, and on the artefact from JBH 12 the irregular marks are an indication of a hand-made rather than machine-made process. Incisions of this sort appeared on pipe bowls as early as 1610, although the marks tended not to extend as far down the bowl as they do on the JBH12 sherd. Rouleting also appeared on the stem,

[29] Ivor Noël Hume, *Artifacts of Colonial America*, 1969, p.296



Bowl shapes: 1, c. 1580-1610, heart-shaped base; 2-3, c. 1610-40, flat bases and development of spurs, milling common; 4, c. 1640-60, small increase in size; 5-6, c. 1660-80, notable increase in size; 7, c. 1660-80, west country style; 8-9, c. 1680-1710, development of long bowls; 10, c. 1700-70, top of bowl parallel to stem; 11, c. 1770-1820, thin and brittle walls, pedestal spurs; 12, c. 1810-40, long pointed spurs; 13, c. 1850-1910, Dutch style, copied by some English makers; 14, c. 1850-1910, Irish style, made by some English makers from standard type mould; 15, c. 1860-1930, copy of briar.



The different parts of a clay tobacco pipe. An early seventeenth-century style is illustrated.

Diagrams from, *Clay Tobacco Pipes*, by Eric G. Ayto *Shire Album 37*, Shire Publications Ltd., 1979

as can be seen in a stem from Greene Farm (GF1258, artefact ID 7119, Level 5, see right)) with the oblique hachure motif. There is no curvature from the bowl to the rim on the sherd, which is helpful for dating. The diagram on the previous page that illustrates the change of the bowl shape over time suggests that the JBH12 artefact dates from 1850-1910 as it has the roulleting, but does not have curvature in the top of the bowl.

The thinness of the bowl wall (2mm) is also an indication that the JBH12 sherd is of a later date. Manufacturing changes after 1700 resulted in a smoother finish, and allowed the wall of the bowl to be thinner. [30] Comparisons with other tobacco pipe fragments found in Rhode Island demonstrate this change. The pipe bowl from Greene Farm (GF1550, 8897.01, top left) can be dated by its bore hole size of 7/64" which reached its peak of production between 1650-1680 (Harrington). The pipe bowl is significantly thicker then the JBH12 sherd, which is closer in size to a pipe bowl from the site of Smith's Castle (RI375, N5 24, E600, Level 1, middle left, and compared to the JBH12 sherd bottom left). This pipe bowl dates from the nineteenth century, and suggests that the JBH12 sherd also dates from the nineteenth century, on the basis of the thinness of the bowl wall.

The technology for smoking tobacco in pipe form was adopted from the Native Americans in the sixteenth century, and the earliest description of an English clay pipe comes from William Harrison who wrote in 1588 that "the taking in of the smoke of the Indian herb called

[30] Eric G. Ayto, *Clay Tobacco Pipes, Shire Album 37,* Shire Publications Ltd., 1979

Tobacco by an instrument formed like a little ladle...is greatly taken up and used in England." [31] In 1619 the pipe industry formally began in London when James I granted a chart to the Worshipful Company of Pipemakers in Westminster. The English and the Dutch dominated the pipe making industry until the nineteenth century when the "previously almost non-existent American pipe industry burgeoned."[32]

Based on this information, and dating the JBH12 sherd broadly to the nineteenth century, it is hard to establish whether it was imported from England or Holland, or if it was manufactured in America. However, considering the large amount of shipping trade that was undertaken by the inhabitants of Providence, it is perhaps more likely that the pipe was part of a cargo imported from Europe on one of the merchant ships.

The sherd was found in the topsoil of Unit 3, along with two glass shards, an iron nail, a piece of coal, two sherds of creamware, and white glazed sherd of ceramic with a mulberry transfer print. The date ranges for the ceramics are from approximately the 1760s-1820, and the date range for cut nails is c. 1790-1900. The artefacts from JBH12 date to similar periods, however the TPQ established for the deposit below is 1963.[33] The pipe bowl sherd is part of a fill that was removed and re-deposited, perhaps more than once, meaning that artefacts from the nineteenth century ended up in contexts above twentieth century artefacts. The disturbance and re-deposition might account for the fact that this was the only evidence of a tobacco pipe across the whole site, despite their ubiquitous nature in the seventeenth to nineteenth centuries, and the smallness of the sherd. The tobacco pipe artefacts from the Greene Farm and Smith's Castle

[31] Diane Dallal, "Pipe Analysis" from *Stadt Huys Block Excavation site report,* p. 9

[32] Ibid., p. 8

[33] See the Summary of Units 3 and 5 by Elise Nuding

sites are larger, and it is likely that the removal and re-deposition caused the pipe bowl to be broken into smaller sherds, one of which was recovered from JBH 12.

The nineteenth century saw the production of many decorated pipes, some with coats of arms, and intricate designs such as an eagle's claw clutching an egg, or a hand holding a wine glass, and even faces on the bowl.[34] These fancy pipes were not the ones smoked by the working class, who used plain clay pipes, often with a shorter stem so that they could be gripped by the teeth. They were called "cutties", and were smoked by women as well as men.[35] The documentary evidence concerning 327 Benefit Street indicates that there were several buildings apart from the house- outhouses, a carriage house, a woodshed, two barn-like buildings. The Providence directory lists a cook and a butler living there in 1895-6, and a different butler in 1906.[36] The list of buildings and directory information makes it clear that there were servants associated with the property, and it is possible that these working class people would have smoked tobacco in their leisure time. Domestic service is a very different working class occupation from the textile mill workers in Mrozowski's study, but it is possible that the servants associated with the property at 327 Benefit Street smoked the plain clay tobacco pipe with a roulleted design around the rim of the bowl, a sherd of which was found in JBH12, Unit 3.

[34] Eric G. Ayto, *Clay Tobacco Pipes, Shire Album 37*, Shire Publications Ltd., 1979

[35] Stephen A. Mrozowski, *Living on the Boott:Historical Archaeology at the Boott Mills Boardinghouses, Lowell, Massachusetts*, 1996

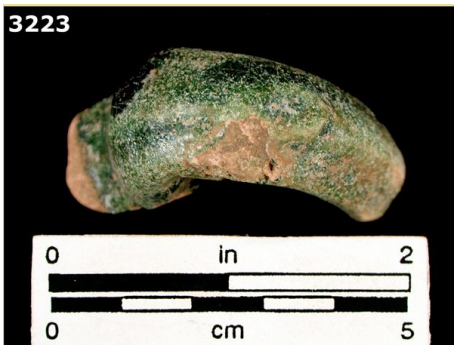
[36] For further information about the buildings and residents see Stephanie Yellin's research on 327 Benefit Street.

An object biography of green glazed coarse earthenware

This sherd of green glazed coarse earthenware, measuring 30 x 28 x 9mm, was uncovered in context JBH23, in Unit 3 on 20th October 2008. The glaze is lead based, and the green colouring identifies it as an early glaze. The date range of production for glazed redware coloured dark brown or black is 1700-1770[37] but the green glaze predates these ceramics. Coarse earthenware is baked clay, fired at a relatively low temperature of 900-1200°C (porcelain is fired at 1300-1450°C), of porous composition. Glazes are applied to protect the body beneath, and lead glaze is applied to the earthenware using lead oxide as a flux to lower the melting point of the glaze. When the glaze melted onto the surface of the clay, it was fired again. The green

[37] Florida Museum of Natural History, Mean Ceramic Manufacturing Dates, http://www.flmnh.ufl.edu/histarch/gallery_types

colouration is achieved by adding copper oxide to the glaze.[38] The tempering of the earthenware, which reduces the shrinkage, warping or splitting that may occur in firing, was with large quartz grains or pebbles that can protrude through the glaze, [39] and there are a few small protrusions on the artefact from JBH23 that may be due to this stage of the manufacturing process.



The date range for green lead glazed coarse earthenware on the online digital type collections of the Florida Museum of Natural History is 1490-1650 (two pieces from their collection are shown below), and Deetz informs us that the manufacture of earthenwares by colonists in America began around 1620.[40] Ivor Noël Hume includes some green glazed earthenware vessels in his *Artifacts of Colonial America* (1969)- an "apple-green" lead glazed coarse earthenware chamber pot discarded c. 1700, glazed inside and out (p.146), a "spouted jug of a hard redware, white slip coated and covered with a green lead glaze, second quarter of the seventeenth century" (p. 77). The sherd from JBH23 is only glazed on one side, however as some of the glaze has flaked off on this side, it may well be

---

[38] "lead glaze." In *The Concise Oxford Dictionary of Art Terms*. *Oxford Art Online*, http://www.oxfordartonline.com/subscriber/article/opr/t4/e989 (accessed December 14, 2008)

[39] FLMNH

[40] James Deetz, *In Small Things Forgotten*, 1977, p. 70

that the other side was also glazed, but has not survived. If only one side was glazed, it is likely that it was the inside.

Coarse earthenware was used primarily for utilitarian vessels, and required the glaze to prevent liquid from being absorbed by the porous clay. One of the artefacts in Hume's publication is an Iberian storage jar, made of "coarse redware streaked externally with white slip and lead-glazed on the inside, common c. 1745-80. Height 32.5""(p. 143). The FMNH, however, describes the green lead glaze as "usually occurring on both sides of the earthenware", so perhaps it is more likely that the glaze has not survived on the other side of the sherd from JBH23.

The utilitarian nature of the vessels use is indicated by the thickness of the sherd, as the vessel would have received a lot of use. Some of this use is evident in the small scratches in varying directions that can be seen on the glazed surface. The durable nature of this vessel means that it would have had a long lifetime of use. Practical ceramic objects are not subject to changes in fashion the same way as ceramics intended for entertaining, and it is likely that the utilitarian earthenware vessel continued to be used after the production dates given for the green glaze. This time lag in objects is addressed by Deetz when he examines factors that introduce error into the specialised dating methods for ceramics. People of lower social status might have been forced to keep ceramic around for longer through necessity, or might have received some second-hand objects, that could be diagnosed with an earlier date than was actually so. [41]

The sherd was uncovered in JBH23, a context that contained a wide range of artefacts. Architectural artefacts- nails, brick, glass, coal- were found along with artefacts that indicate

[41] James Deetz, *In Small Things Forgotten*, 1977, p. 26

domestic activity- pink sponge-printed whitewear, several other types of refined earthenware (plain and decorated), two brown glazed sherds of coarse earthenware, and one black glazed sherd of earthenware. These artefacts fall within the date range of the mid-eighteenth century to the mid-nineteenth century, however a pull tab from a drinks can was also found in JBH23, bringing the TPQ for the deposit up to 1963.[42] It is hard to identify whether the pull tab was from the same deposit as the earthenware sherd, as a change in strata that shows up on the north wall was not noticed during excavation, and it is likely that this soil change is a result of two different deposits. However, the pull tab was uncovered after the earthenware sherd meaning it was located below it in the ground, and therefore TPQ of 1963 must apply to the green glazed earthenware. The deposit that contained the artefact must have been removed and re-deposited to explain this sequence of artefacts.

Other coarse earthenware was found in JBH23, and one sherd with a brown glaze also appeared in JBH28. Although a total of five sherds is nowhere near enough of a sample to form conclusive interpretations about the site, the presence of three different glazes within these five pieces suggests that there was a range of earthenware vessels being used. The standing structure in the area of the excavation units from between c.1866 and 1926 was the Hale Ives Homestead, and there would have been domestic activity involving earthenware objects for probably all of that period. Although the range of production dates for the green glazes earthenware ended over a hundred years before the house was built, it is plausible that the storage or utilitarian vessel that the earthenware sherd was part of was an object that was still in use during the nineteenth century.

[42] For more detailed information see the object biography on this item by Elise Nuding

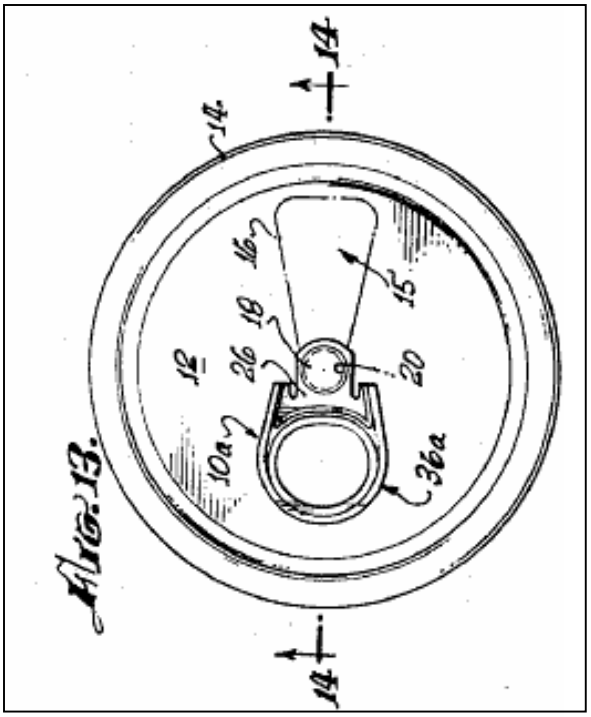
Ceramics, as every archaeologist knows, are broken easily, but are extremely resistant to corrosion. The experience of finding sherds covered with vibrant and detailed designs that look like they were made a year ago rather than a century ago is familiar yet incredible, and if ceramics can survive in the earth for centuries, it is not hard to imagine that a robust earthenware vessel with a green glaze could survive into the nineteenth century. The glaze dates the manufacture of the sherd from JBH23 to one of the earliest dates we have across the whole site, but due to time lag, the date of use, and the date that it was finally discarded do not correspond to the dates of production.

Object biography of a beverage can pull tab

This pull tab from a beverage can, measuring 45 x 23 x 1mm, was uncovered in JBH23 in Unit 3. It is a modern artefact, and due to the high amount of recording and documentation of products that has occurred within the last fifty years it is possible to date it fairly exactly and accurately.

Cans were first used for beverages in the 1930s, and were originally made of steel. Aluminium began to be used in the 1950s, and eventually became the standard material for beverage cans. These early cans had no tab incorporated into the design- they required a can piercer that punched two holes in the lid, a larger one to drink from, and a smaller one to let air in (this device was commonly known as a "church key" in the USA).

In 1959 Ermal Fraze invented the first pull tab to open cans, supposedly, according to common folklore, as a result of having to resort to a car bumper to open cans when he forgot his 'church key' on a picnic. The design consisted of a ring attached to a rivet that would tear out a strip of the can lid, providing an opening to drink from. He seems to have received a patent in 1963, but perhaps modified his design and re-patented it in 1965, receiving a patent in October, 1967. This was US patent number 3,349,949 (one of the drawings included in the patent is



shown below), and is almost identical to the artefact recovered from JBH23. Working around this patent, a date range for the artefact can be established. As many as seventy-five percent of beer brewers in the United States of America had adopted Fraze's can by 1965, before this patent was issued.[43] The pull tab had some disadvantages, as they were a common form of litter, and they could cause injuries if dropped inside the can and then accidentally swallowed. Various types of stay tab were invented in the 1970s, and stay tabs, from which the tab on the twenty-first century cans derives, had replaced pull tabs in the Western world by the 1980s. An approximate date range for the artefact from JBH23, therefore, is 1965-1980.

The artefact was found between 23cm and 33cm below the datum point of Unit 3, and as it was the most recent artefact recovered in JBH23, it means the earliest the soil at this depth could have been deposited was 1965. The wide range of production dates for the artefacts in JBH23 (from the seventeenth century to the 1980s) indicates that the context was part of a fill.

The fill in Unit 3 contained another modern artefact that came from the context below JBH23. The key blade was uncovered in JBH 28, just under 6cm into the 10cm assigned for the arbitrary context. During excavation, it seems that a change in strata was overlooked. In JBH23,

[43] Online Encyclopedia of Ohio History, "Ermal Fraze", http://www.ohiohistorycentral.org/entry.php?rec=2637

as the excavators "got nearer to the 33cm below surface level, pockets of mortar began to show up in the context"[44], and it is possible that this soil should have been assigned a new context, as the profiling of the north wall seems to indicate a change in strata around this depth. If this is so, it is possible that the pull tab was in the same stratigraphic layer as the key blade, as the pull tab was uncovered towards the end of JBH23. Working from this interpretation, the deposit consisting of JBH28 and the end of JBH23 would have a TPQ of 1965 (the key has not been dated beyond being from the second half of the twentieth century), and the strata above this would have to have been deposited after this date. There is not enough information on the activity on site during the 1960s, 1970s or 1980s about when or why removal and deposition of earth occurred that might explain the presence of two modern artefacts approximately 30-40cm below the surface. However, it is clear that the removal of earth disturbed some older artefacts already in the ground that were then re-deposited with the addition of modern material as part of a fill.

1970s aluminium can pull

The removable nature of the pull tab created a litter problem, as users would discard the tab after opening the can. This discarding of the tabs is likely how the artefact from JBH23 came to be included in the deposit. As a common form of litter, it could have been associated with any number people, from visitors to the John Brown House, to pedestrians walking down Benefit Street, to somebody mowing the lawn, or even to the people who used the lawn as a hang out (this still occurs today, with beer bottles on the tarps and left items of clothing discovered through the course of the semester). It does not allow us to make any interpretations about the

[44] Elise's Field Blog, Week Six

structures on the site, or the people associated with these structures, as they predate the pull tab. It does however give an indication of the way the John Brown House property has been perceived and used since the 1960s, as the person who discarded the pull tab viewed the property as an appropriate place to throw their litter.

The recent nature of the soil disturbance on site is a characteristic of archaeology of the historic, rather than the prehistoric period. Earth removal and deposition occurs very frequently in the modern world, and results in wide ranges of artefacts within one area of soil, as see in Unit 3. As Deetz informs us, "fill is an artefact in itself, and intelligent study of it can be most instructive".[45] Modern artefacts such as the pull tab and key blade from Unit 3, or the Styrofoam cups, and plastic from Unit 1 can be viewed by excavators as mundane finds that lack the excitement of older materials, such as ceramics. However in Unit 3 the pull tab has been highly significant in understanding the relationship between the strata, and the ways in which the older artefacts have moved around as the soil was removed and re-deposited a number of times.

[45] James Deetz, *In Small Things Forgotten*, 1977, p.23

Bullet Casing | Redware Ceramic Sherd | Wire Nails

Alexander Ruby

Object Biography of a Bullet Casing

The Archaeology of College Hill class uncovered a number of interesting artifacts during the course of the John Brown House excavation. From ceramic sherds and corroded wire nails to modern materials such as coffee cups and rubber erasers, the diversity of findings was both surprising and impressive. One artifact that particularly drew some excitement from the excavation teams was a tarnished copper bullet casing from Unit 1, JBH 31. While the history of this particular bullet casing is still shrouded in mystery, its presence is a helpful guide to learning more about the John Brown House site.

It was a chilly afternoon (Ruby, 11/10/08) on the last day of digging the John Brown House site, November 10, 2008, when from the soil protruded what first appeared to be another greenish plastic tube. But the chilliness subsided to enthusiasm when Professor Ryzewski informed us that what we had found was in fact a bullet casing. Not only was the dig team happy that this object was not necessarily another example of modern refuse, but also that this casing came from what appeared to be a significantly more historic context layer of Unit 1 than had previously been encountered. Much of Unit 1 was characterized by a modern midden in fill soil, but JBH 31, the deepest layer that Unit 1 had time to dig, revealed a change in soil (Munsell value of 10YR ¾) and much older artifacts. The bullet casing only served to heighten our interest in this context layer.

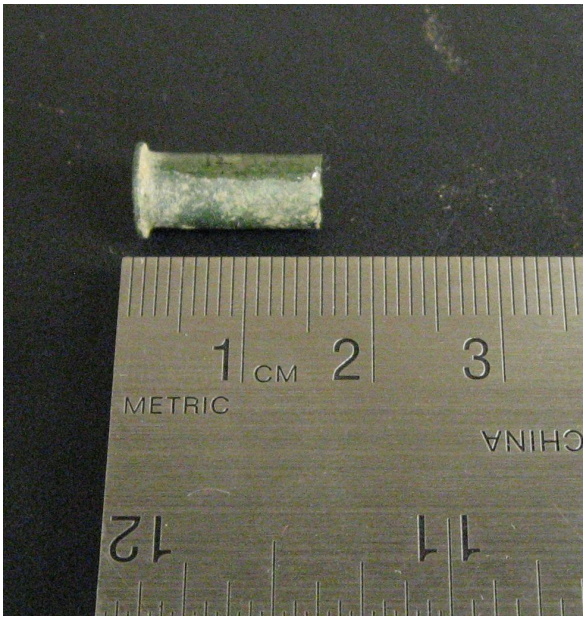


Photo of the bullet casing found in Unit 1, JBH 31

The details of the bullet casing are diagnostic to both its identity and its possible date of production. The bullet casing as unearthed is a dark green color, which suggests that it is either tarnished copper or an exceptionally tarnished piece of brass, both of which are common to bullet casings. The artifact's dimensions are 15.4mm in length with a barrel diameter of 6.2mm and a rim diameter of 7.8mm. The fact that the casing has a rim is significant because it shows that this bullet was a rimfire cartridge, an idea first patented in 1831 in which the rim at the base essentially serves as an internalized percussion cap (Wikipedia: "Rimfire ammunition"). There are no visible maker's marks on the casing, but the dimensions suggest that it is either a .22 caliber Long or a .22 caliber Long Rifle bullet casing. (While there are slight differences between this casing's dimensions and the standard dimensions of a .22 Long or Long Rifle casing, these are minimal and probably due to either degradation in the ground or from inconsistencies during the manufacturing process.) The .22 Long was an evolution of the .22 Short and was first produced in 1871 (Wikipedia: ".22 Long"). It was soon superseded by the

.22 Long Rifle (first developed in 1887 by the J. Stevens Arms and Tool Company) which used a longer, heavier bullet with better range (Wikipedia: ".22 Long Rifle"). The casings for both the .22 Long and .22 Long Rifle are identical, rendering it difficult to determine for sure to which category this particular casing belongs. However, one can predict that the bullet casing from JBH 31 is a .22 Long Rifle casing simply based on the fact that this cartridge is much more popular. The .22 Long is considered obsolete, whereas the .22 Long Rifle is the most common cartridge ever produced (Wikipedia: ".22 Long Rifle"). While it is certainly possible that a .22 Long was used back in the late 19th century and found its way into this context layer, statistically it is more probable that this example is a .22 Long Rifle casing.

Considered as part of the JBH 31 context layer, this bullet casing provides a terminus post quem (TPQ) of 1871 (retaining the possibility that the casing is of a .22 Long cartridge). Many of the other diagnostic artifacts in JBH 31 are ceramic sherds with TPQ dates forty or more years earlier than that of the bullet casing. However, this observation can serve as an example of the time lag that can occur between an object's production and its date of discard (Adams 41). A bullet casing may not be subject to the same level of time lag because it has the possibility of being used and discarded soon after its production, whereas a ceramic would generally only see this fate if it were broken or considered exceptionally hideous. Therefore, it is not especially surprising that the bullet casing shows a later date of production than other artifacts in the context layer.

This bullet casing also proves valuable to understanding more of the overall history of the John Brown House site. In her presentation on historical research of the excavation area, Steffi Yellin explained that the area of the excavation site in which Unit 1 was placed was most likely near a wall separating outbuildings on the site or was the site of a woodshed located behind the

Robert Hale Ives house (Yellin, 12/8/08). Both of these scenarios correspond well to the potential of having a modern midden such as was found at Unit 1, but in the more historical context of JBH 31, these scenarios continue to be relevant. If one were to use a gun for the killing of livestock or for whatever other purpose, it is not unlikely that it would be used in the back of the house or in a shed. Furthermore, a woodshed might also be a likely place for keeping one's gun supplies. Indeed, if one can claim that there are parts of the John Brown House property that are more likely to contain a bullet casing than others, then this site behind the Ives house site is certainly one of them.

The bullet casing from the John Brown House site was one of those artifacts one hopes is significant when it was first discovered. While it is not possible at this time to say with any certainty how this bullet was used or why, the information gleaned from its presence has helped shed light on this part of the John Brown House property and has provided a fuller history of the JBH 31 context than one can make with ceramic sherds alone.

Object Biography of a Redware Ceramic Sherd

Ceramic sherds were one of the more common finds at the John Brown House site, and some very interesting examples were unearthed. A simple redware sherd found in Unit 1's context JBH 24 may not, at first glance, seem like one of those examples, but its placement in this context layer and the family of pottery it represents make it an interesting item for further investigation and a worthy subject of an object biography.

Photo of redware fragment from Unit 1, JBH 24

The redware fragment in question is a small, triangular piece of unglazed, coarse earthenware. It is about 40mm across its longest side and is orange in color. This fragment was found on October 27, 2008, near the bottom of JBH 24 (approximately 40cm below the unit datum point). At this level of JBH 24, the soil had dramatically changed from a Munsell value of 10YR 2/2 to one of 7.5YR 3/4. What had been a large, modern midden of debris and refuse amid fill soil suddenly transformed into what appeared to be the site of a fire, perhaps a trash fire or perhaps something else. Large amounts of charcoal were found at these lower levels, as was

evidence of charring on other artifacts. It is certainly possible that the fire caused the change in the soil composition, although another explanation could attribute the change to the imminent transition into JBH 31, a much more historic layer. It was among these variables that the redware fragment appeared. And it is for these reasons that its story is interesting.

Redware is one of the most common types of pottery in history. Historically, it has been used most often as a kitchenware, as it is cheap and easy to produce, and it is not a huge loss if it breaks or becomes dirty. Redware is fired at a low temperature (900-1200°C), and it is quite porous (Mount Vernon Ladies' Association, 2008). While redware is usually not considered diagnostic when unglazed, it does have some characteristic production dates. The only problem is that types of redware have been produced for centuries, and coarse earthenware of this type is so common throughout history that it is rarely useful for dating context layers. Indeed, unglazed coarse earthenware has a range of greatest production of 1490 to 1900 (Florida Museum of Natural History, 2004) and has been present in American pottery production since 1725 (Stelle, 2001). And while it may be rarer to see redware as a commonly produced utilitarian ceramic in America today, it is still produced at not insubstantial levels. Thus, one cannot tell for certain from the unmarked fragment found in JBH 24 whether it is two-hundred years old, or only two.

Yet the possibilities of how this redware fragment made its way into JBH 24 can certainly guide our interpretations of the history of Unit 1. One option is that when the modern midden was created, a piece of redware happened to be part of it. Perhaps it was a new acquisition, possibly a planter, which lost favor or broke and was thrown away in the recent past along with the many pieces of plastic and Styrofoam found in the Unit 1 midden. Alternatively, it is possible that this redware fragment was much older and had been discarded long in the past, only to be unearthed during some form of landscaping and discarded once more along with other

debris from the site. Finally, it is entirely possible that this fragment was part of an historic redware ceramic, produced long ago, that only recently cracked and was discarded. This final case may seem unlikely because unglazed redware is rarely an heirloom, but it would still be a prime example of the time lag objects can undergo between the time they are produced and the time they are finally discarded (Adams 41).

While simple, this redware fragment is representative of a huge family of ceramics that are often overlooked but rarely negligible. Redware pottery has been an old standby that families both rich and poor rely on for all sorts of household tasks. Such ceramics may not be as glamorous as the hand-painted or heavily glazed sherds also found at such sites, but their role in history has been just as great, if not greater. There is no telling for sure what life this fragment led, but its mystery helps us as researchers trying to piece together the history of the John Brown House site by forcing us to juggle all manner of potential histories. It is through this obligatory thinking-outside-the-box that true historical archaeology finds the real answers to the difficult question of "what happened here way back then?"

Object Biography of Wire Nails

Nails were discovered as early as the first day of excavation at the John Brown House site, and they always served as a source of excitement to those of us new to such excavations, even if only because they're corroded and bent nature made them seem more historic than they actually were. While that first day of digging only lent itself to the discovery of one such nail, over the course of the excavation many more nails of the same type were found popping out of the soil or causing a characteristic clang against our trowels. While some artifacts define their own story or perhaps the story of their context layer by their specificity or uniqueness, the wire nails of the John Brown House site take a different approach; they make their mark via their ubiquity throughout the site and present the archaeologist with a view of the excavation site characterized by similarities and parallels not necessarily seen when examining the excavation through the lens of other artifacts.

The nail found on the first day of excavation was found in the first shovel test pit (STP) located 0 meters north and 30 meters west of the overall site datum point (STP N0,W30). The context in which it was found was called JBH 1, the excavation's first assigned context. While this STP was not foreseen to be a site of great discovery—the geophysical analysis did not strongly indicate that there would be anything of interest at that site—it was soon realized that this initial nail was simply the tip of the iceberg. Before the STP was vacated and backfilled at the start of week four (September 29, 2008; "Excavation & Unit Summaries": Week 4), six more similar nails were found for a total of seven in this particular context layer alone. Furthermore, nails of the same type were also discovered elsewhere in the site. In Unit 1, at the northern region of the excavation site, a nail was found in JBH 8 (excavated from 5.5cm to 18.5cm below the unit datum point) and again deeper in JBH 31 (excavated from 40cm to 50cm below the unit

datum point). The fact that these nails were so prevalent, as well as the fact that they were found in contexts from different historical periods, certainly makes one wonder what role they may have played across the John Brown House site.

Various types of nails were found at the John Brown House site. Cut nails are nails that are hammered from a larger piece of iron and then cut at the tip, leaving a nail with a rather blunt end (unless it is further sharpened). While a number of cut nails were found in various context layers, the nails considered here (and which were certainly the most prevalent) are wire nails. Wire nails were an evolution from cut nails in that they were machine-produced (cut nails has some mechanization of the process but human labor still did much of the work; Glasgow Steel Nail 1997-2008) and much more standardized. In addition, wire nails were round with a sharpened tip, perhaps making them easier to use. On the other hand, cut nails retain about four times the load-bearing potential as wire nails, but this advantage often did not matter when cost and ease of use were also relevant issues. Wire nails soon overcame cut nails in popularity, and they are still the most common nail used today (Fourshee, 1992).

The nails from JBH 1 (Munsell of 10YR 2/2), JBH 8 (Munsell of 10YR 2/2), and JBH 31 (Munsell of 10YR 3/4) are similar not only in the fact that they are all wire nails, but also in their size. While some were bent and some were relatively straight, the average dimensions of all of the nails were 86.8mm in length with a 7.9mm head diameter and a 5.0mm body diameter. However, all of the nails were corroded to some degree, so the dimensions may be a little distorted due to the layers of rust. Perhaps more interesting than the size similarity was another commonality found among these nails: they all had a bulge about 1cm down from the head of the nail. This bulge is most likely the characteristic bulge of what is called a “duplex nail”, a nail with a second head a bit removed from the main head which can be used in some instances to

secure the nail more tightly, but which is more commonly used to leave a small piece of nail to grab which renders them much easier to remove, especially in situations when one needs to remove nails frequently (for example, in the construction of scaffolding; BWG Wire Nails Co.). The presence of such a specialized design may be important in the interpretation of these nails' role at the site.

Wire nails such as these were first produced in the United States during the mid-1850s on machines that were probably brought from or based on ones in France, where the technique was invented (Fourshee, 1992). They did not become prevalent until after the Civil War, and the iron variety found at the John Brown House site were superseded relatively soon by steel varieties. Thus the terminus post quem for these nails is sometime in the 1850s, but it is highly likely that they are from later in the 19th century at the earliest (Edwards and Wells 70).

The fact that these wire nails were found throughout the John Brown House site is perhaps the most intriguing aspect of their discovery. One wire nail was unearthed in JBH 31, the "historic" context layer of Unit 1 which appears to date perhaps as far back as the late 19th century. Yet another nail was excavated from JBH 8, a part of Unit 1's Stratum 1, a stratum of modern fill soil characterized by a large midden of modern artifacts. Perhaps this nail was elsewhere in the sight or was unearthed during some sort of landscaping and found its way along with other modern trash to the fill soil of Unit 1. Alternatively, it is possible that the wire nail in JBH 31 was deposited in that layer much later as part of some other form of landscaping, although this alternative seems less likely considering the other historical artifacts in the context layer. The seven nails of JBH 1 could be part of an older midden uncovered at that site. However, their bent nature suggests that they were pulled from some sort of structure, so perhaps they were once part of a building that was razed in that area of the yard. It is impossible to make

any definite conclusions about the wire nails at the John Brown House site, but it is likely that some of them were introduced to the ground decades ago and others remained “on the job” until much later when they too were discarded, albeit at higher strata.

The wire nails of the John Brown House site are but one example of the many artifacts found during the excavations of fall 2008. Yet they pop up everywhere, like an old friend, and we are wise to learn from their story.

A comparative view of duplex wire nails from JBH 1, JBH 8, and JBH 31, with photos of each individual context below.

JBH 1

JBH 8

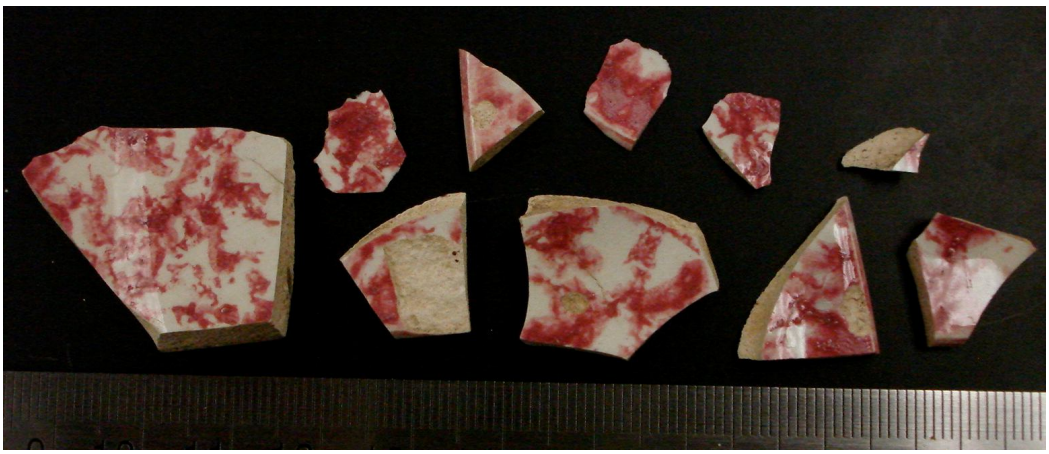
JBH 31

Sponge-decorated Whiteware | McDonald's Coffee Stirrer | Feather-edged Ceramic

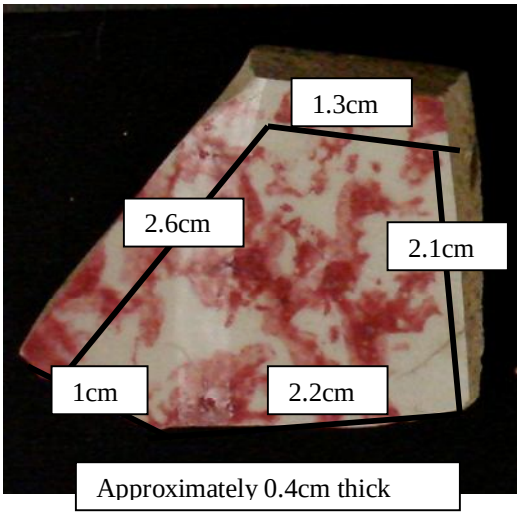
Kellie Slater

Sponge-decorated Whiteware

Ten sherds of cut-sponge decorated whiteware were found in excavation Unit 3, context level JBH 23 at a depth of 23cm -33cm below the lawn. All of the sherds are whiteware and were decorated with red paint before the glaze was applied; the paint was applied by a cut-



sponge. All of the sherds range in size, shape and thickness but the largest sherd has the dimensions as drawn below. Three of the ten pieces contain part of the rim, which proved useful in identifying the size and use of the original ceramic. Elise, Ben and Moira uncovered these ten sherds but I have the honor of writing their biographies.



Pearlware and whiteware are very similar, as whiteware was developed from pearlware; whiteware does not have a particular date of introduction but it is known that by the 1820's it had begun developing from pearlware. Potters were trying to move away from the blue tint and they did

so by reducing the "amount of cobalt in the glaze" or by adding "cobalt to the body and give it a very light blue tint which through a clear glaze looks much whiter" (Miller; 1991; 53). The color of the glaze provides the difference between the two types of wares: pearlware has the bluish glaze and is fairly easy to identify, especially near the base where it may puddle, while whiteware lacks this bluish tint. The sherds uncovered from JHB 23 have been identified as whiteware precisely because they do not have the blue tint.

The decoration on these sherds was applied by sponge and is therefore referred to as sponge-decorated ware. The sherds that I am examining appear to be purely sponge-decorated, as they do not contain any additional painting. George Miller states: "sponge wares without painting are not common before the introduction into the Staffordshire potteries of cut sponge with simple patterns in the late 1840's" (Miller; 2000; 91) The late 1840's date that Miller applies to cut-sponge whiteware holds well against other dates that have been suggested. The *Archaeological Laboratory Artifact Codebook* dates the range of production of cut-sponge ware from 1845 to 1930 and the *Historical Archaeology at the Florida Museum of Natural History* website says that "after 1840 decoration was applied exclusively with sponges, cut into desired shapes and without accompanying painting." With all of these coinciding dates, I am therefore comfortable to say that these sherds of sponge-decorated whitewares were produced no earlier than 1845.

Of the ten sponge-decorated sherds that were uncovered in JBH 23, three of them are pieces that contained part of the rim, which allowed me to get a rough estimation of the diameter of the original ceramic. Two of the three sherds fit together to make a larger piece of the rim and the third piece of rim was also large enough to be used for measuring the diameter. Using the *Archaeological Laboratory Artifact Codebook*'s rim measurer, both of the rim fragments

suggested an original diameter no smaller than 8 inches. A diameter of 8 inches or greater implies that the original ceramic would have been some sort of plate. *Pearlware: Origins and Types (Part II)*, states that cut-sponge decorated wares were nearly all tablewares. Additionally, *The Knopf Collectors' Guide to American Antiques: Pottery and Porcelain* says that: "plates were among the earliest pieces with sponged decoration." All the evidence suggests that this cut-sponge decorated pearlware was originally a plate.

Cut-sponge ware originated in North Staffordshire, England and appears to have been exclusively destined for the American market until approximately 1860. This imported pottery was generally inexpensive: "for their period, sponged wares are usually the cheapest vessel available with decoration" (Miller; 1991; 91).

These ten sherds were found in Unit 3, context JBH 23. The remains from this context were primarily domestic remains: many pieces of ceramic (pearlwares, whiteware), numerous shards of glass, oyster shells, etc. Unit 3 lies near what appears to be a wall or foundation of a once standing structure, which fits well with the fact the remains are part of, what appears to be, a domestic assemblage. Another sherd of cut-sponge decorated ware was found in Unit 5, context JBH 32. This Unit 3 lies very close to Unit 5 and JBH 23 and JBH 32 are at similar depths: JBH 23 lies 23-33 cm below the surface and JHB 32 lies 9-32 cm below the surface. Because Unit 3 and Unit 5 lie close to one another and the contexts are approximately the same depth, it is possible that the sherds from JBH 32 and JBH 23 belong to the same, original ceramic.

According to our (Megan Algeo and Steffi Yellin's) research, we have found that the structure that once stood in the area we were excavating was the Robert Hale Ives homestead.

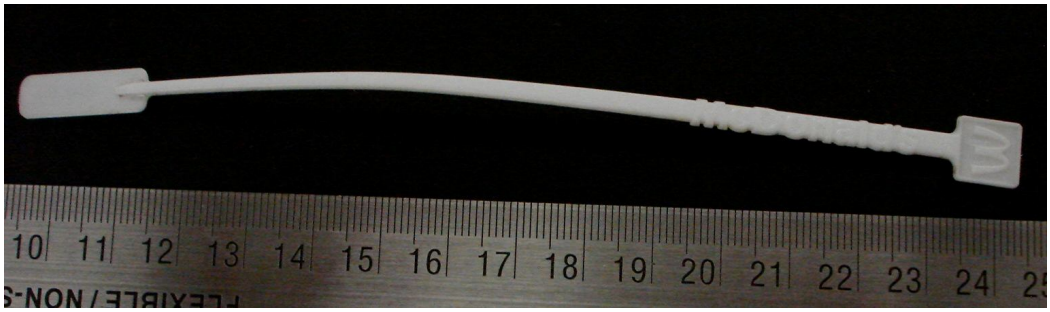
Records show that it was built sometime between 1832 and 1857 and was destroyed between 1925 and 1926. The dates for the Robert Hale Ives homestead fit well with the dates I have found for the sponge-decorated ware.

All of the people that inhabited the John Brown property throughout history were fairly well off. During this time in America many people flaunted their wealth and influence by purchasing expensive tablewares and other ceramics; they wanted to "elevate their status above their daily routine through the acquisition of material goods" (Mrozowski; 2006; 57). However, due to the cheap price of the sponge-decorated ware I suspect that it did not belong to the property owners but rather the servants who were unable to elevate their status.

Robert Ives Gammell lived in the Robert Hale Ives homestead from 1875 to 1915. For part of the time that he inhabited the homestead a cook and a servant lived with him. It is possible that these shards of sponge-decorated whiteware once belonged to the cook and/or the servant rather than Robert Hale Ives or Robert Ives Gammell. This would account for the fact that this type of ceramic was inexpensive for the period.

McDonalds Coffee Stirrer

McDonalds is an iconic American tradition dating back to the 1940's. Founded in San Bernardino, California by Dick and Mac McDonald, McDonalds serves nearly 47 million customers daily. Virtually every American has enjoyed a burger, fries and shake from McDonalds. And surely coffee lovers of all age have been enticed by the rich aroma of a McDonalds coffee. However, not all McDonalds coffee drinkers know the rich history of the device they use to stir their milk and sugar into their coffee: the McDonalds stirrer.



The McDonalds stirrer that was uncovered in the lawn of the John Brown House in excavation Unit 1, context level JBH 24 was surely not used by John Brown himself but it does allow us to draw some conclusions about the use of the lawn over time. The McDonalds stirrer that was uncovered by Maggie, Jacob and Alex is 15.3 cm long. The square on top that houses the famous McDonalds M-arch is 1 cm by 1 cm. The stirrers width is approximately .3 cm and the flat rectangle on the end is 2.2 cm by 0.7 cm. If the stirrer is held horizontally one side contains the word McDonalds. The entire stirrer is an off white color. It has a slight bow shape to it, which I image is a consequence of being buried for so many years; originally this stirrer would have be very straight.

This specific type of McDonalds stirrer was gradually introduced to the public in the 1980's. Prior to this time McDonalds stirrers had a slightly different design.

The earlier design was very similar to the stirrer that was uncovered in the lawn of the John Brown House. It had the 1 cm by 1 cm square with the trademark arches and was approximately the same length; however, the significant difference is that the earlier version had a small spoon at the bottom of the stirrer rather than the flat rectangle. This spoon perfect "for adding very tiny amounts of sugar to your joe" but apparently it was also helpful for cocaine users (Euphrates; 2000*)*. It was the perfect size to measure out cocaine, it eliminated the need to carry around scales because "sets of scales, if found, can be used as incriminating evidence" (BBC; 1998). The stirrers were being used as evidence in drug cases and McDonalds was contacted by law enforcement and the request was made to discontinue using that design… McDonald's immediately complied with the request to discontinue using that design" (Bonisteel 2007). As such McDonalds redesigned their stirrers and phased them in during the 1980's.

The type of stirrer that was uncovered in the lawn are provided at no cost to McDonalds customers; in fact, they are usually free to all whom visit McDonalds and are set out on the counter. This stirrer is by no means a luxury item and everyone who wanted one could own one. I am sure there are many different uses for such a stirrer (as cocaine users proved in the 70s); however, it is likely that this stirrer was used for its original purpose of mixing coffee, sugar and cream because it was found with other McDonalds trash deposits that are directly related to coffee consumption.

This McDonalds coffee stirrer was excavated in Unit 1, context level JBH 24. This context has been described as "modern rubbish pit" by a few of our excavators (Jacob Combs Field Blog). Within this context we found remains of other coffee paraphernalia, most important for the purpose of determining the original purpose of this stirrer is a McDonalds coffee lid. It is highly likely that these two artifacts were deposited together and it is probable that the same McDonalds coffee consumer left them both in the lawn of the John Brown House.

The new stirrer with the flat end was gradually introduced in the 1980's. This date fits well with the dates that have been provided by Jacob and Alex for the average date of the other remains found in this context; this context is littered with trash mostly dating to sometimes in the 1990's. According to Alex's research "the filling of this depression with modern refuse and loose soil would therefore have occurred sometime between 1984 and 1990" (Ruby 2008; 17). These dates fit very well with the 1980's date in which the new design was incorporated. JBH 24 contains a lot of trash including: aluminum foil, a coffee cup lid, cables and wires, bottle tops, a cork, Johnson and Johnson burn cream wrapper, straws, etc. and it is obvious that the McDonalds stirrer fits very well within this context. Before 1984-1990 it is possible that the John Brown House did not put a lot of emphasis on the lawn and therefore this trash heap was allowed. However, it is clear that at some point in recent history the John Brown House decided to focus more attention on the appearance of the lawn and backfilled the trash heap.

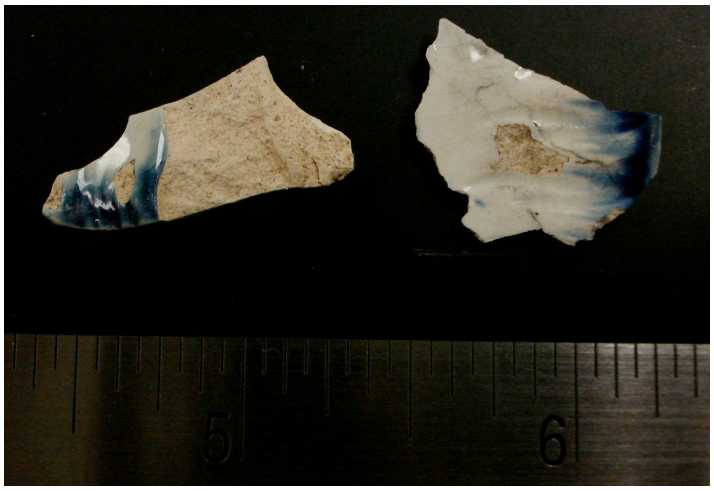
The new design was introduced in the 1980's, but even today the same basic design is being used. I recently visited McDonalds to check out the selection of stirrers. The stirrers that are provided now still have the same 1cm by 1cm square on top with the M-arch, the word 'McDonalds' that is read horizontally and the flat rectangle at the end. The only difference between the two is that the new stirrer is black and longer. I would attribute this change in

length to the change in consumers taste. Nowadays people want larger coffees and in order to suit consumers needs a new, longer stirrer was required to stir the larger cups of coffee.

Feather-edged Pearlware

Two sherds of feather-edged pearlware were uncovered in Unit 3, context layer JBH 23. It is clear that the sherds are not from the same ceramic because the style in which they are decorated differs slightly. Both have a feathery style, but one has darker blue, inward painted stripes over the lighter blue color. The length of the decoration on each plate also differs: the length of decoration on the sherd with strips is approximately 0.7cm, while the decoration on the strippy decorated sherd is approximately 1cm. Both pieces are very thin and contain pieces of the rim.

Pearlware was developed in 1779 by Josiah Wedgewood, as a new type of earthernware. It "was created by the simple expediency of covering a creamware fabric with a blue-tinged glaze" (Sussman 2000: 37). Creamware was a more yellowish color and Wedgewood decided that "a change from 'creamcolor' was due" and began to develop pearlware (Sussman 2000: 37). Pearlware has a blue tint, which comes from the addition of cobalt to the glaze. When this glaze was applied over a blue decoration it gave the appearance of a whiter body. Pearlware is easy to identify because of the blue tint when it pools near the base. Pearlware made its debut in the 1780's and was common until about 1840.



Pearlware, because it was very similar to creamware, "had to depend on its decoration rather than the nature of the ware," and many different types of decoration were common (Miller 1991: 52). But "by far the most common decoration on excavated 18th century pearlware is the molded shell edge pattern….and it was probably one of the first patterns used to decorate pearlware" (Sussman 2000: 38). Blue and green are the most common colors for this type of under-glaze decoration, with pink occasionally occurring. The production dates of edged pearlware are 1785 to 1840 and throughout this time period subtle changes were taking place. Early examples, 1785-1795, are well painted and the brushwork is drawn inwards in order to create a feathery look but on later examples, dating later than 1800 or 1805, it was a common practice to brush the paint laterally around the plate edge to create a mere strip (Hume 1969: 131). Many of the rims were also embossed or impressed with different designs and "although they were often better painted than their plain cousins they are unlikely to date prior to 1800" (Hume 1969: 131).

Both of the sherds that were uncovered in JBH 24 appear to have the feathery design that would have been created by stroking the brush inwards. One of the sherds is also impressed with curved lines. The decoration on both of these sherds would lead me to give them a date of sometime around 1800. Neither of them were painted with a single stroke around the rim, which developed later, rather they have the earlier feathery look and one of them is impressed, which also appeared later.

The rims on both of the sherds proved very useful when trying to determine their original size and diameter. The *Archaeological Laboratory Artifact Codebook* suggests that both sherds originally had a diameter of 6 inches or greater, which puts them into the plate category. This diameter fits well with other evidence, which says the most common form of pearlware was in

shell-edged plates (Hume 1969:131). In addition, Miller suggests that "edged wares are generally limited to…a general class known as tablewares" (Miller 2000: 91).

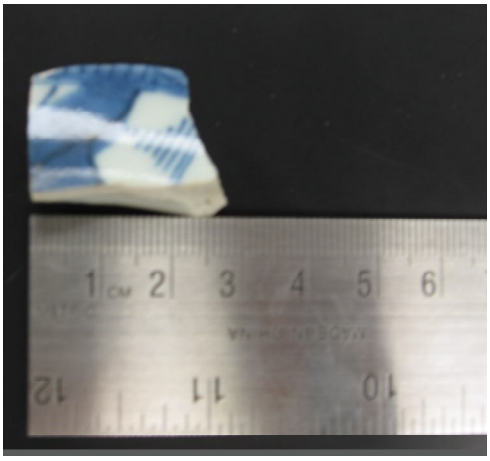
Edged pearlwares were generally one of the cheapest decorated tableware avaliabe for the majority of the 19th century (Miller 2000: 91). Evidence from the Boott Mills Boardinghouse also supports this claim. At the boardinghouse blue-edged ware comprised a large portion of the identifiable plate assemblage. Because there is such a large percentage of the blue-egded ware, there appears to be some sort of attempt to "obtain matching patterns of printed ware" (Boott Mills 1989: 92). The residents of the boardinghouse were by no means wealthy, but because they could afford to try and match this type of ware is strong evidence that it was relatively inexpensive.

The Robert Hales Ives homestead was built on the Brown property between 1832 and 1857. These dates do not directly correspond to my hypothesized date for the edged sherds but it is completely possible that these blue-edge wares were moved to the house shortly after it was built. Another possibility to explain the difference in dates is that these wares may have been heirlooms that were passed down through the family. Another, more plausible explanation, is that the wares belonged to the cook and/or servant that lived with Robert Ives Gammell in the homestead. This would account for the cheap price and the old date of the ceramics. Robert Ives Gammell was probably fairly well off and would have wanted to show his influence through purchasing expensive ceramics, whereas the cook and/or servant would have been quite content with a blue-edged pearlware plate; they would have no qualms using "the out of fashion hand-me-downs" (Bankoff and Winter 2005:22).

Porcelain (Canton) Sherd | Bottle Cap | Machine-cut Spike

Steffi Yellin

Porcelain (Canton) Sherd



The origins of this type of porcelain are from China—Canton is actually the place where the tableware was sent to be painted before it was exported to America. The Canton style is a specific style of porcelain whose production dates range from 1790-1835. 1800-1860 was the principal market for Chinese export porcelain although there was virtually no production from 1829-1860 as a result of the Opium Wars. There are certain features which distinguish this style of porcelain from other types: it is white or grayish white, often with a glass-like vitreous paste that is slightly thicker than other porcelain types; the glaze is poorer in quality, having a slight oatmeal texture to the surface, with occasional pinholes; the background color is grayish white, and the designs are executed in broad brush strokes using a range of blues (from navy to powder blue); the design execution is simple and always done in a similar way; the motifs in the central medallion might usually illustrate a Chinese garden or village scenes that would include objects like pagodas, bridges, and boats; the rim decoration is a crude blue lattice network with an inner

border of wavy or scalloped lines. Its vessel forms include bowls, plates, and platters (www.flmnh.ufl.edu).

These porcelain vessels were mass produced in China after the American Revolution, as an export ware to America. It is sometimes referred to as Ballast Ware for its low cost and the huge amounts shipped to this country. The dinner and tea sets were favored by the likes of George Washington, as well as members of the merchant class. It was thought of as "everybody's porcelain," because indeed a majority of Americans were in possession of this table ware. However, within the Canton collection, there were some differentiations. Some was as fine as better trade porcelain, while others had bad decorations and many imperfections. The texture also might have ranged from at its best very smooth and glossy, to at its worst, feeling like the skin of an orange (Gordon).

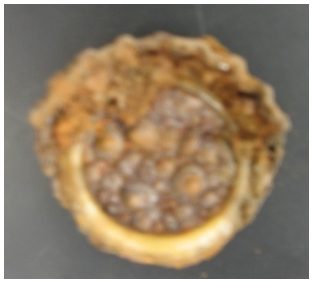
The recovered piece of porcelain is a little less than three centimeters in width and a little over one centimeter in length. It is definitely a rim fragment; the protrusion on the outside of the fragment would be part of the foundation upon which the dinnerware would rest evenly. The base color on the front and back was a grayish-white and the paintings on the front of the fragment are a navy-royal blue color. The specific design is indecipherable, but the brush strokes are definitely sweeping and broad. The texture of the Canton fragment feels more like an intermediary between the two afore mentioned textures; the texture feels almost like an egg-shell. The particular piece found has about an eight inch diameter and seems to be about one inch deep, giving credence to the supposition that it might have been a soup plate. Because of its texture, it can also be assumed that whoever owned it, was not lower class, but was neither a part of the upper-echelons of society; they were willing to spend more money on the porcelain than the cheapest, but not willing to spend for the most expensive type. The owner of the porcelain

clearly had adequate means for both meals and entertainment. Although the owner could have easily gotten the cheapest porcelain, the fact that the middle grade was acquired suggests a possible desire to show the appearance of wealth to the rest of society (Shifting Focus: Archaeology of the Urban Household).

This find also further proves that there was some sort of household on the excavation site—this type of porcelain was clearly used as dinnerware. The production rates of Canton range from 1790-1835, earlier than the date when the house Robert Hale Ives homestead was projected as being built. However, as learned from William Hampton Adams article on dating historical sites, just because the item is dated as being produced between those years, does not necessarily mean that the site can be dated to these years. This item could have been an heirloom, a hand me down, or might have been specially curated due to its fragile nature. The item could have been brought by Mr. Ives from his previous home and then passed down through owners of the house—however, this can never really be determined

We do know for certain the porcelain fragment was found in excavation unit 4, context JBH42. This was the unit running along Benefit Street, which contained what we believe to be part of the foundations for the Robert Hale Ives homestead. This particular context was to the west of the unit at an elevation between about 40 and 50 cm deep. Other artifacts found from that context included ceramic of various types, chunks of bricks, and shards of glass and nails. The pieces of brick along with the already exposed rock feature suggest that the remnants might be part of the outside foundational wall of Robert Hale Ives homestead. The pieces of glass, ceramic, and porcelain point to artifacts which might have been found within the actual house. This porcelain fragment definitely provides evidence of a homestead and even points to certain aspects of character and social positions of the possible occupants of the household.

Bottle Cap



The crown finish and cap was first patented in 1892 in the United States by William Painter. It proved to be the ideal single-use closure for carbonated beverages. Original crowns were plain, unmarked metal. One or both sides of the cap were usually lacquered and there were approximately 20 corrugations around the side skirt. There was also an internal disk of natural cork. Later crowns had proprietor marks on them and discs of composition cork, or as in the case of one of Painter's competitors, linoleum discs. Modern caps may have had plastic liners. The finish on the crown is distinctive and was part of the original patent—it is a two part finish with a lip that has a flat top and rounded sides over with the skirt or flange of the crown was to hook. Originally, crown finishes were hand made with a finishing tool. However, foot operated crowning machines could reconcile slight variations in lip shapes and seizes to standard crowns. In 1898, Painter introduced the first foot-powered, syruper-crowner. A good operator could fill and cap 24 bottles a minute. The caps appear to have been made in only one size-- in order to fit small mouthed bottles like sodas and beers (Jones and Sullivan, 163-164)

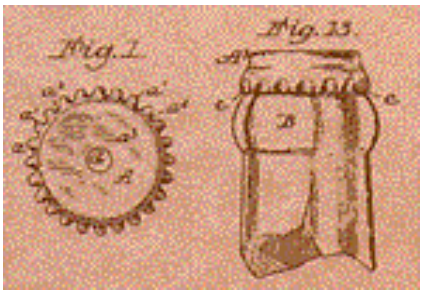
By 1906, bottling had gained more popularity and began to spread quickly. Painter's company, Crown Cork and & Seal, had opened manufacturing plants in Germany, France, the

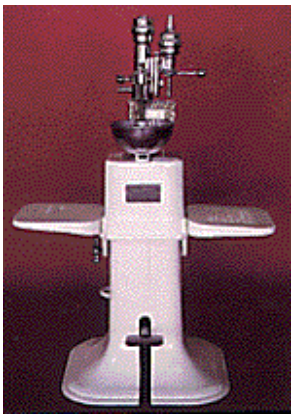
United Kingdom, Japan and Brazil. By the time Painter died in 1906, the Crown Cork & Seal Company of Baltimore had greatly expanded its manufacturing base in Europe, South America and in the Orient. By around the year of 1919, recovering from major business disruptions as a result of World War I, Crown Cork & Seal started to shift its manufacturing production from beer to soft drinks. This was an adjustment necessary in order to survive Prohibition, which began to seriously impact the bottling industry (www.crowncork.com)

Because of the rust on the cap fragment, it is impossible to find a brand or proprietor mark. The only known information about this cap is that it probably had 20 corrugations like the cap patented in 1892 by Painter (the fragment, roughly ½ of the cap, shows 10 corrugations). However, the inside disc appears to perhaps be made of a grey, shiny material; this material is most likely linoleum. It is definitely not the plastic commonly found in modern caps, or the cork liners which were more common of Painter's original caps. Perhaps this cap was made from one of Painter's competitors, sometime in the late 19th or early 20th century. The cap was definitely not made before 1892, but could technically have been produced anytime after that. At this point, the timeline for linoleum line caps is unclear; who exactly they were produced by and when they were produced remains a mystery. The best conjured estimate is that the caps were probably produced shortly after Painter's patent, but definitely before modern plastic caps were produced.

The bottle cap fragment is about the three centimeters in diameter. Only half of the cap skirt remains, containing ten corrugations in total. Inside of the cap, a white/grey ring outlines the circular shape. The cap is covered in rust and the rust on the inside almost looks bubbly. This particular cap was found in Unit 1, context JBH 8. This was the unit running along Charlesfield Street. The bottle was found in a relatively shallow context, indicating that it might be a more

recent find—however, it is impossible to guess what its specific date might be. Other finds in this context included small pieces of brick, glass, a handkerchief, a nail, a small piece of bone, a small piece of glazed ceramic, and paint chips. JBH8 also contained a brick in the central north part of the unit and a large rock at the southwestern corner. The other ceramic finds and the handkerchief suggest that the cap belonged to somebody in particular, not just a random passerby. The cap could possibly have come from an owner of the house, a worker of the house, a boarder of the house, or even a visitor. There were outhouses running along that space until 1925-1926, when the outbuildings (as well as the house) were knocked down. Thus, it is more possible that the cap was in use sometime between 1892 when the cap was assuredly produced and 1925 when the house was destroyed. The presence of the rock and brick further indicate some sort of correlation in time and space to the architectural structure that once stood there. As soda and beer is, and was, drunk by nearly everyone in society, it is impossible to make any social distinctions based on the artifact. Anyone could have bought, drank, or sold the soda.





Pictures of crown cap and crowning machine. ttp://www.crowncork.com/about/about_history.php

Machine Cut Spike

The artifact chosen is a machine made cut spike. Cut nails were historically made by cutting triangular nail blanks from flat planes or strips of iron and then heading the blanks. The only difference between spikes and nails are size; Spikes are any nails which are, in today's measurements, at least four inches long. Nails were once measured in America in terms of its *penny size,* written with a number and the abbreviation ***d*** for penny (e.g. - 10d). A smaller number indicates a shorter nail and a larger number indicates a longer nail. Spikes are only nails which are measured as being 20d or over. This spike is approximately five inches long, so would thus have a measurement of 40d (www.wikipedia.com).

Nail making machines were not officially invented until 1790, but in 1775 Jeremiah Wilkinson of Cumberland, Rhode Island devised a method for cutting blanks from thin strips of cold iron to make textile card tacks. Later this method would be improved upon. In 1790, Jacob Perkins of Newbury, Massachusetts invented a nail making machine capable of producing about 10,000 nails per day; the invention was patented in 1795. The first machine patented to create

cut nails was introduced in 1791 by Sam Briggs Sr. and Jr.—however these nails were still hand headed (Edwards and Wells, 16).

Machines that headed nails were experimented with for several years, but the invention was not patented until 1796 by Isaac Garretson. This machine had essentially three parts. Flat metal strips of around two feet (600mm) in length and the width slightly larger than the nail length was presented to the machine. The first lever cut a triangular strip of metal giving the desired width of the nail, the second lever held the nail in place while the third lever formed the head. The strip of metal was then turned through 180° to cut the next equal and opposite nail shape off the strip. These nails are known as cut nails. Because the nail up until then was handmade, the first machines were naturally designed to re-produce the same shape of product - a square tapered nail with a rosehead, but only tapered down two sides of the shank (www.wikipedia.com).

However, it was not until 1798 that nails up to 20d in size were produced in large quantities in two factories north of Boston. By 1800, cut nails were commonly available in most cities in the northeast. By 1811, three major cut nail factories were in competition in the Boston area, and by 1816, 2/3rds of all rolled wrought iron in the United States was devoted to nail production. Cut nails no overwhelmed hand wrought iron nails completely, driving them into the special purposes market. In the mid 19th century nails were being used more and more in domestic architecture. In 1839, the Burden railroad spike machine was introduced which forged a complete spike in one operation and produced 50 spikes per minute. It was not until 1884 that steel began to replace iron. By 1900, except for roofing nails, the cut nail industry was in serious decline. In 1920, only 8% of U.S. production was in cut nails (Edwards and Wells, 16-18).

Therefore, the spike found was most likely from the early 19th century when machine cut nails and spikes were at their most popular, especially in the northeast where they were being manufactured by three separate factories. Since spikes were not produced in large quantity until after 1798, it can be assumed that the nail was probably produced at that time or later. In addition, the nail was probably produced and used sometime before 1900 when the iron nail industry went into serious decline. These dates fit with the projected time when the Robert Hale Ives Homestead was built. The home was probably built sometime between 1832 and 1857, when the machine cut iron nail industry was at its peak.

One can tell that this five inch nail was in-line grained cut as the point is flat and square, and as viewed from the side, there are sharp corners. The shaft appears more square than circular in formation; there are clear lines separating each side of the nail. The spike found is slightly bent indicating that it was a nail with prior use which was probably pulled out of something. Unfortunately, the nail is too rusted to tell much else about it (although the rust indicates its material as iron).

It is very possible that the spikes were used to build the Robert Hale Ives homestead which was supposed to have been built sometime between 1832 and 1857. Spikes from Louisiana homes were often used in two situations. First, they were used to prevent the splitting and weakening of lap joints in which one timber was notched over another at an angle. The second situation called for spikes where timbers intersected one another at an acute angle, leaving the end of one member in the form of a tapered point (Edwards and Wells, 21). It is very possible that the spikes found on the excavation site were used in a similar manner. The spike was found in Unit 4, JBH 20 running along Benefit Street. The context was on the east side of the rock feature and the nail was found between 8 and 13 cm deep in the ground. Other finds in that

context included bricks, nails, and mortar. Two large bricks were founds. Pockets of brown sugary colored sand and beach sand found randomly throughout. Perhaps when the house was destroyed by Marsden Perry, some of the nails and spikes from the foundational structures were buried in the ground.

Part II. Bibliography

From **Ansel** McDonald's Stirrer | Pearlware Sherds | Porcelain Fuse

"A Brief History of McDonald's"

http://www.mcspotlight.org/company/company_history.html

Adams, William Hampton. "Dating Historical Sites: the Importance of Understanding

Time Lag in the Acquisition, Curation, Use, and Disposal of Artifacts." Historical Archaeology, 2003.

"Big Jury Award for Coffee Burn," New York Times. August 19, 1994.

McDonald's Corporation official website: http://www.mcdonalds.com

McGill, Douglas C. "At Hardee's, Fast Food and Trends." New York Times.

January 9, 1989.

Mrozowski, Stephen A. 1988 "For gentlemen of capacity and leisure: the archaeology of

Colonial newspapers." In M. Beaudry, ed. Documentary archaeology in the New World, CUP: Cambridge, 184-191.

Pearlware" in Charles E. Orser Jr., ed. Encyclopedia of Historical Archaeology:

Routledge, 415-416.

Pope, Frank L. "Modern Practice of the Electric Telegraph: A Handbook for Electricians

and Operators." New York: D. Van Nostrand, 1881. (can be found online at

http://www.insulators.info/books/mpet/#cont05)

Ramirez, Anthony. “Word for Word/Hot Water; For McDonald’s, British Justice is a Different Cup of Tea.” New York Times. April 7, 2002.

Stelle, Lenville J. “An Archaeological Guide to Historic Artifacts of the Upper Sangamon Basin.” Parkland College: Champaign, Illinois. 2001.

“The Archaeological Laboratory Artifact Codebook.” University of Massachusetts Boston Center for Cultural and Environmental History, 2004.

“Telling Time in the Second Half of the Nineteenth Century.” CNEHA 1966 URS.

From **Algeo** Brick | Champagne Stopper | Glass Bottle Fragment

Algeo, Megan. *Unit 2 summary*. ARCH 1900 Final Project. http://proteus.brown.edu/archaeologyofcollegehill/7043. Accessed Dec. 18, 2008.

Algeo, Megan. *Megan’s Field Blog.* http://proteus.brown.edu/archaeologyofcollegehill/6367

Algeo, Megan and Steffi Yellin. *Ownership Contexts | Property Transfers, Inheritances.* ARCH 1900 Midterm Project. *Barrington, Rhode Island.* Wikipedia. http://proteus.brown.edu/archaeologyofcollegehill/6590. Accessed Dec 16, 2008.

Ecology & Environment, Inc. A History of the Sayre & Fisher Brick Company. Neptune, Regional Transmission System, LLC. http://sayre-fisher.com/default.htm. Accessed Dec. 16, 2008.

Fessler, Julius H. 1960. Champagne Bottle Stopper. U.S. Patent 187,402, filed June 18, 1958, and issued March 8, 1960.

Frank and Jane Clement Brick Museum. *Group 1 - Museum brick collection from Buffalo, NY, area.* http://www.buffaloah.com/a/DCTNRY/mat/brk/clement/1/index.html. Accessed Dec. 16, 2008.

Lindsey, Bill. Historic Glass Bottle Identification & Information Website. Managed by the Bureau of Land Management and the Society for Historical Archaeology. http://www.sha.org/bottle/index.htm. Accessed Dec 17, 2008.

McKearin, Helen and Kenneth M. Wilson. *American Bottles & Flasks and Their Ancestry*. Crown Publishers, Inc., 1978.

Nuding, Elise. *Summary of Units 3 and 5.* ARCH 1900 Final Project.

http://proteus.brown.edu/archaeologyofcollegehill/7043. Accessed Dec. 16, 2008.

Quinan, Jack and Timothy Tielman. *Martin House.*
http://preserve.bfn.org/bam/bflobest/martin/martin.html. Accessed Dec.. 16, 2008.

Ruby, Alex. *Unit 1 summary*. ARCH 1900 Final Project.
http://proteus.brown.edu/archaeologyofcollegehill/7043. Accessed Dec 16, 2008.

Scott, Bruce, CEO Scott Laboratories, telephone conversation with author, November, 2008.

Scott Laboratories, Inc. "History of Scott Laboratories." Scott Laboratories, Inc.
http://www.scottlaboratories.com/company/history.asp. (accessed Dec 16, 2008).

Shepherd, Nick. *What does it mean 'To Give the Past Back to the People'?* Archaeology and Ethics in the Postcolony. In Y. Hamalakis and P. Duke, eds. Archaeology and Capitalism, From Ethics to Politics. Left Coast Press; Walnut Creek, 99-114, 2007.

Smith, Frederick H. *The Archaeology of Alcohol and Drinking*. University Press of Florida, 2008.

Vogel, Michael N. *Up Against the Wall: An Archaeological Field Guide to Bricks in Western New York.*
http://www.buffaloah.com/a/DCTNRY/mat/brk/vogel/index.html. Published 1995. Accessed Dec. 16, 2008.

Yellin, Steffi. *Robert Hale Ives Homestead*. ARCH 1900 Final Project.
http://proteus.brown.edu/archaeologyofcollegehill/7043. Accessed Dec 16, 2008.

For **Combs** *see in-text citations* Coffee Milk Carton | Button | Fence Post

From **Ewing** Duct Tape | Styrafoam Coffee Cups

Allen, Gary, and Ken Albala. *The Business of Food.* Westport: Greenwood Press, 2007.

Cole, David et.al. *Encyclopedia of Modern Everyday Inventions.* Westport: Greenwood Press, 2003.

Combs, Jacob. Object Biography for Archaeology of College Hill. December 2008.

Field Notes. Archaeology of College Hill, Fall 2008. JBH 24.

"Corporate History." http://www.dunkinbrands.com/aboutus/history.html. 2007 (accessed December 17, 2008).

Google Books search for "duct tape" date:1950-1990. http://books.google.com/books?as_q=&num=10&btnG=Google+Search&as_epq=duct+tape&as_oq=&as_eq=&as_brr=0&as_pt=ALLTYPES&lr=&as_vt=&as_auth=&as_pub=&as_sub=&as_drrb=c&as_miny=1950&as_maxy=1990&as_isbn=&as_issn= (accessed December 17, 2008).

Howe, Steve. "The Great Tape-Off." *Backpacker,* October 2001. http://www.wulfden.org/NVQS/ductape.shtml (accessed December 17, 2008).

Miller et al.. "Telling Time in the Twentieth Century." Poster produced for the Council for Northeast Historical Archaeology developed by the URS Corporation archaeology laboratory in Florence, New Jersey.

Newsletter of the Rhode Island Historical Society. Providence, 1972-1992.

"Stuck at Prom: Duck Brand Duct Tape Scholarship Contest." http://www.ducktapeclub.com/contests/prom/media.asp (accessed December 17, 2008).

University of New Hampshire Library. "William Rosenberg, 1916-2002." Durham, New Hampshire: 2008. http://www.library.unh.edu/special/index.php/william-rosenberg#photo (accessed December 17, 2008).

Wikipedia contributors, "Duct tape," *Wikipedia, The Free Encyclopedia,* http://en.wikipedia.org/w/index.php?title=Duct_tape&oldid=257444282 (accessed December 18, 2008).

Wikipedia contributors, "Mister Donut," *Wikipedia, The Free Encyclopedia,* http://en.wikipedia.org/w/index.php?title=Mister_Donut&oldid=256420420 (accessed December 17, 2008).

Wohleber, Curt. "Duct Tape: It's not for ducts any more. In fact, it never was." *Invention and Technology*, Summer 2003, Volume 19, Issue 1. http://www.americanheritage.com/articles/magazine/it/2003/1/2003_1_12.shtml (accessed December 17, 2008).

From **Hatch** Copper Wire | Two Pennies | A Sherd of Transfer-Printed Ceramic

Hayden, Arthur. 1912. *Chats on English Earthenware*. London: T. Fisher Unwin.

Lindsey, Bill. 2008. "Bottle Finishes and Closures." Society for Historical Archaeology.

http://www.sha.org/bottle/closures.htm#General%20Closure%20Types.

Margolick, David. 2007. "Penny Foolish." The New York Times. http://www.nytimes.com/2007/02/11/opinion/11margolick.html.

Redwood Library. "Marsden Jaseal Perry." Newport Notables. http://www.redwoodlibrary.org/notables/perry.htm.

Samford, Patricia. 2000. "Response to a Market: Dating English Underglaze Transfer-Printed Wares." Approaches to Material Culture Research for Historical Archaeologists. Ed. Ronald L. Michael. California, PA: Society for Historical Archaeology.

Shaw, Simeon. 1829. *History of the Staffordshire Potteries*. Reissued, London: Scott, Greenwood and

Co. 1900.

Stelle, Lenville. 2001. An Archaeological Guide to Historic Artifacts of Central Illinois. Parkland College. http://virtual.parkland.edu/lstelle1/len/archguide/documents/

arcguide.htm.

United States Mint. 2008. "About The United States Mint." The United States Mint. United States Department of the Treasury. http://www.usmint.gov/about

_the_mint/.

Wikipedia. 2008a. Cent (United States coin). The Wikipedia Foundation. http://en.wikipedia.org/wiki/Cent_(United_States_coin).

Wikipedia. 2008b. Lincoln cent. The Wikipedia Foundation. http://en.wikipedia.org/wiki/Lincoln_cent.

Yellin, Stephanie. 2008. Presentation to Archaeology of College Hill class.

From **Knowlton** Pearlware ceramic sherd | Lead-glazed Redware ceramic sherd | Green Glass Bottle and Bottle Cap

Adams, William Hampton. Dating Historical Sites: The Importance of Understanding Time Lag in the Acquiition, Curation, Use, and Disposal of Artifacts. Historical Archaeology, 2003, 37(2):38-61.

Jones, Olive, Catherine Sullivan, George L. Miller, E. Ann Smith, Jane E. Harris, and Kevin Lunn. The Parks Canada Glass Glossary. Revised Edition ed. National Historic Parks & Canadian Parks Service Sites Environment Canada, 1989.

Miller, George L., and Catherine Sullivan. Approaches to Material Culture Research For Historical Archaeologists. Comp. David B. Brauner. 2nd ed. The Society For Historical Archaeology, 2000. 161-74.

Miller, George L. Approaches to Material Culture Research For Historical Archaeologists. Comp. David B. Brauner. 2nd ed. The Society For Historical Archaeology, 2000. 86-110.

Noel Hume, Ivor. A Guide to Artifacts of Colonial America. Philadelphia: University of Pennsylvania P, 1986. 102-46.

Orser Jr., Charles E., ed. "Bottles." Encylopedia of Historical Archaeology. New York, NY: Routledge, 2002.

Orser Jr., Charles E., ed. "Earthenware." Encylopedia of Historical Archaeology. New York, NY: Routledge, 2002.

Orser Jr., Charles E., ed. "Pearlware." Encylopedia of Historical Archaeology. New York, NY: Routledge, 2002.

Orser Jr., Charles E., ed. "Redware." Encylopedia of Historical Archaeology. New York, NY: Routledge, 2002.

Samford, Patricia M. Approaches to Material Culture Research For Historical Archaeologists. Comp.

David B. Brauner. 2nd ed. The Society For Historical Archaeology, 2000. 56-85.

White, John R. Approaches to Material Culture Research For Historical Archaeologists. Comp. David B. Brauner. 2nd ed. The Society For Historical Archaeology, 2000. 139-48.

From **Kyweluk** Nails | Transfer-printed Ceramic Sherd | Pearlware Sherds

Ceramic Type Collection: Florida Museum of Natural History Online (FLMNH Online) <ww.flmnh.ufl.edu/histarch/galler_types/tyep_index_display> Accessed: 10 December 2008

Copeland, Robert. Blue and White Transfer-Printed Pottery. London: Shire Publishing. 2nd Edition. 2008.

"Diagnostic Artificats in Maryland." <http://www.jefpat.org/diagnostic/Site_Map.htm> Accessed: 10 December 2008.

Edwards, Jay and Tom Wells. Historic Louisiana Nails Aids to the Dating of Old Buildings. Baton Rouge: Geoscience Publications. 1993.

Lockett, Terence. "Pearlware: Origins and Types." The Potteries Online. <http://www.thepotteries.org/features/pearlware.htm> Accessed: 10 December 2008.

Tremont Nail Online. Revised 2008. <http://www.tremontnail.com/> Accessed: 12 December 2008.

For **Nuding** *see in-text citations* Clay Tobacco Pipe | Green-glazed Coarse Earthenware Ceramic Sherd | Beverage Can Pull Tab

From **Ruby** Bullet Casing | Redware Ceramic Sherd | Wire Nails

".22 Long". Wikipedia. 1 December 2008. Wikimedia Foundation, Inc. 13 December 2008 <http://en.wikipedia.org/wiki/.22_Long>.

".22 Long Rifle". Wikipedia. 13 December 2008. Wikimedia Foundation, Inc. 13 December 2008 <http://en.wikipedia.org/wiki/.22_Long_Rifle>.

Adams, William Hampton. "Dating Historical Sites: The Importance of Understanding Time Lag in the Acquisition, Curation, Use, and Disposal of Artifacts." Historical Archaeology 37 (2; 2003): 38-61.

"Coarse Earthenwares." George Washington's Mount Vernon Estate & Gardens. 2008. Mount Vernon Ladies' Association. 13 December 2008 <http://www.mountvernon.org/visit/plan/index.cfm/pid/867/>.

"Duplex Head Nails (Double Head Nails)." BWG Wire Nails Co. 13 December 2008 <http://www.wirenails.net/duplexheadnails.html>.

Edwards, Jay D. and Tom Wells. Historic Louisiana Nails: Aids to the Dating of Old Buildings. Baton Rouge, Louisiana: Louisiana State University: Geoscience Publications, 1993.

"Excavation & Unit Summaries: Week 4." ARCH 1900: The Archaeology of College Hill: 2008 Season-John Brown House. 13 November 2008 <http://proteus.brown.edu/archaeologyofcollegehill/6346>.

Fourshee, Paul. "A Two-Bit History of Nails." The Blueprint: Vol. 1, No. 2 (27 April 1992). 10 July 2002. Fourshee, Inc. 13 December 2008 <http://www.fourshee.com/history_of_nails.htm>.

"Historical Archaeology: Digital Type Collection: Unglazed Coarse Earthenware (generic)." Florida Museum of Natural History. 2004. Kathleen Deagan, Curator. 13 December 2008 <http://www.flmnh.ufl.edu/histarch/gallery_types/type_index_display.asp?type_ame=UNGLAZED%20COARSE%20EARTHENWARE%20(GENERIC)>.

"Rimfire ammunition". Wikipedia. 5 December 2008. Wikimedia Foundation, Inc. 13 December 2008 <http://en.wikipedia.org/wiki/Rimfire>.

Ruby, Alexander. “Alex’s Field Blog: November 10, 2008.” ARCH 1900: The Archaeology of College Hill: 2008 Season-John Brown House. 13 December 2008 <http://proteus.brown.edu/archaeologyofcollegehill/6520>.

Stelle, Lenville J. “An Archaeological Guide to Historic Artifacts of the Upper Sangamon Basin.” An Archaeological Guide to Historic Artifacts of Central Illinois. Parkland College: Center for Social Research, 2001.

“The History of Nail Making.” 1997-2008. Glasgow Steel Nail Co. 13 December 2008 <http://www.glasgowsteelnail.com/nailmaking.htm>.

Yellin, Steffi. “Historical Research on the Excavation Area.” ARCH1900 Final Presentations. Room 305, Metcalf Chemistry Lab, Brown University, Providence, RI. 8 December 2008.

From **Slater** Sponge-decorated Ceramic | McDonald’s Coffee Stirrer | Blue-edged Ceramic

Bankoff, H. Arthur and F. Winter. 2005. The Archaeology of Slavery at the Van

Cortlandt Plantation in the Bronx, New York. *International Journal of Historical Archaeology*, 9(4): 291-318.

Bonisteel, Sara. 2005. Gold Art Object Stirs Up McDonald's 'Cokespoon'

Controversy. 2007. http://www.foxnews.com/story/0,2933,253422,00.html (accessed Dec. 15, 2008)

Ceramic Profiles and Rim Diameters: A Guide to Function. *Archaeological Laboratory*

Artifact Codebook. University of Massachusetts Boston, Center for Cultural and Enviromental History. 2004.

Combs, Jacob. “Jacob’s Field Blog: October 6, 2008.”

http://proteus.brown.edu/archaeologyofcollegehill/6496 (accessed Dec. 15, 2008)

Cultural Resources Management Study No. 21. 1989. Interdisciplinary Investigations of the Boott Mills. *The Boarding House System as a Way of Life*. Cultural Resources Management Study No. 21

Euphrates. 2000. McDonald's Coffee Stirrers.

http://www.bigredtoybox.com/cgi-bin/toynfo.pl?mcdonaldscoffeestirrersindex (accessed Dec. 15, 2008)

Florida Museum of Natural History.

http://www.flmnh.ufl.edu/histarch/gallery_types/type_index_display.asp?type_name=PEARLWARE,%20SPONGED%20OR%20SPATTERED

Hume, Ivor. 1969. *A Guide to Artifacts of Colonial America*. Univeristy of Pennsylvania Press: Philadelphia, Pennsylvania.

Ketchum, William C. *The Knopf Collectors' Guides to American Antique: Pottery & Porcelain*. Alfred A. Knopf: New York. 1983.

Lockett, Terence A. "Pearlware: Origins and Types (Part 2)."

http://www.thepotteries.org/features/pearlware2.htm (accessed Dec. 15, 2008)

Miller, George L. 1991. Classification and Economic Scaling of 19th Century Ceramics.

In R. Micheal, ed, *Approaches to Material Culture Research for Historical Archaeologists*. The Society for Historical Archaeology: Ann Arbor, Michigan.

Miller, George L. 2000. Revised Set of CC Index Values for Classification and Economic Scaling of English Ceramics from 1787 to 1880. In R. Micheal, ed, *Approaches to Material Culture Research for Historical Archaeologists*. The Society for Historical Archaeology: Ann Arbor, Michigan.

Mrozowski, Stephen A. 2006. *Shifting Focus: Archaeology of the Urban Household.* Cambridge University Press: New York.

Ruby, Alexander. 2008. *Summary of Activity at Excavation Unit*.

Spoons cause drugs stir. 1998

http://news.bbc.co.uk/2/hi/uk_news/234685.stm (accessed Dec. 15, 2008)

Sussman, Lynne. 2000. Changes in Pearlware Dinnerware, 1780-1830. In M. Ronald, ed., *Approaches to Material Culture Research for Historical Archaeologists*. The Society for Historical Archaeology: Ann Arbor, Michigan.

From **Yellin** Porcelain (Canton) Sherd | Bottle Cap | Machine-cut Spike

Adams, William Hampton. Dating Historical Sites: The Importance of Understanding Time Lag in the Acquisition, Curation, Use, and Disposal of Artifacts.

Crown History. http://www.crowncork.com/about/about_history.php

Edwards, Jay and Wells, Tom. Historic Louisiana Nails, Baton Rouge: Geoscience Publications, 1993.

Florida Museum of Natural History. http://www.flmnh.ufl.edu/histarch/gallery_types/type_index_display.asp?type_name=PORCELAIN,%20CANTON

Gordon, Elenor. Chinese Export Porcelain: A Historical Survey. New York: Main Street/Universe Books, 1975.

Jones, Oliver and Sullivan, Katherine. The Parks Canada Glass Glossary. Canada: Minister of Supply and Services, 1985.

Mrozowski, Stephen A. Shifting Focus: Archaeology of the Urban Household. New York: Cambridge University Press, 2006.

Wikipedia. http://en.wikipedia.org/wiki/Nail_(fastener)