THE ANTRAM-GRAY HOUSE AND EXPERIMENTAL STUDIES OF RAT MIDDENS

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Honors Thesis Title_	The Antram-Gráy House and Experimental Studies of Rat Middens
Honors Course	
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ABSTRACT

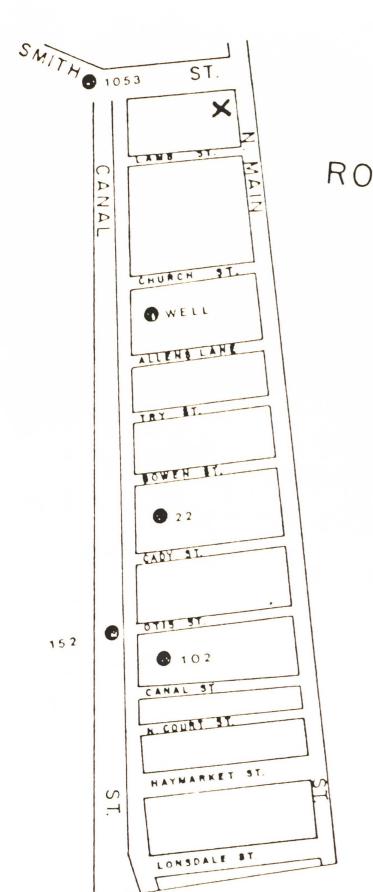
The Antram-Gray House is currently being utilized as the Visitor Center for the Roger Williams National Memorial (NPS) in Providence, Rhode Island. An architectural study of this building in 1980 led to the discovery of large rodent middens in the attic and walls. An archaeological study of these deposits yielded over 900 cultural (and non-cultural) materials and a body of data which compliments architectural and social histories of the house. Little information is available for this type of study, necessitating the use of experimental methods and data recovery techniques which are problematic.

Introduction

The Antram-Gray House is currently being utilized as the Visitor Center for the Roger Williams National Memorial (NPS) in Providence, Rhode Island. It is an early eighteenth century house with a late eighteenth century addition (see figure 1).

The original house comprises the northern half of the structure and is of wood frame construction, two and one half stories and has a ridge roof. A late eighteenth century addition is two and one half stories, has a ridge roof and is of wood frame construction, with the exception of its south wall, which is brick (Gilmore 1980).

This building was occupied up until 1970 and was then condemmed. It was moved approximately 100 feet from its original spot and was taken over by the National Park Service in 1975. In 1975 only the first floor of the building was refurbished and utilized as the Visitor Center.



ROGER WILLIAMS NATIONAL MEMORIAL



Figure 1

(Brown University Public Archaeology Laboratory 1979)

An architectural study of this building was conducted in 1980 by Andrea Gilmore, Historic Preservation Conservator with the National Park Service. In the course of this study, large volumes of rat midden debris were discovered under the floorboards between the second floor and attic, and in two walls on the second floor. The midden debris, amounting to a volume of approximately ten bushels, consisted of rat fecal matter, newspaper shreds, scraps of cloth and wallpaper, desicated bodies of rats, large and small mammal bones, nut shells, clam shells, and over six hundred cultural artifacts dating from the early 1700's to the 1950's.

Removal of this material was necessary for the completion of the architectural study. An archaeological study was begun to carefully extract and study these midden deposits.

General Purposes of the Study

- 1. To salvage as much information as possible in removing the deposits.
- 2. To do a comprehensive study of the deposits for possible future interpretive purposes at the Visitor Center.
- 3. To demonstrate the value of studying these deposits.

Methodology and Recovery Procedures

A thorough search of the literature available turned up no information on past studies of this type. Thus, the methodology employed was largely experimental and not without problems.

As the study progressed, five separate midden areas were defined. Each area represented its unique excavation problems, and as such, each area was excavated in a slightly different manner.

Area I is located on the second floor in the west wall of room 203 (figure 2), which served as the bathroom for the last residents of the house. The midden debris in this area fell from the attic through a space (which was later sealed) in the ceiling between the second floor and attic. It was discovered when part of the wall was opened by Ms. Gilmore and the debris fell to the floor. This area could not truly be "excavated", and the material was swept up and sorted through.

Area II is located to the left of the chimney in the north-west part of the attic (figure 3). Sections A,B,C,D (exposed when one floorboard was removed) and sections J,K,L,M (also exposed when one floorboard was removed) were excavated in two 3" deep levels per section. The material taken out was then sorted through, and artifacts were bagged and recorded. Each level was mapped prior to excavation. Section E, a space in front of the chimney, was excavated in the same manner as the previously mentioned sections. Sections F,G,H, and I were not exposed in the course of the architectural study and had to be removed in a more crude manner. Each of these sections was removed as a whole unit,

Second Floor Plan

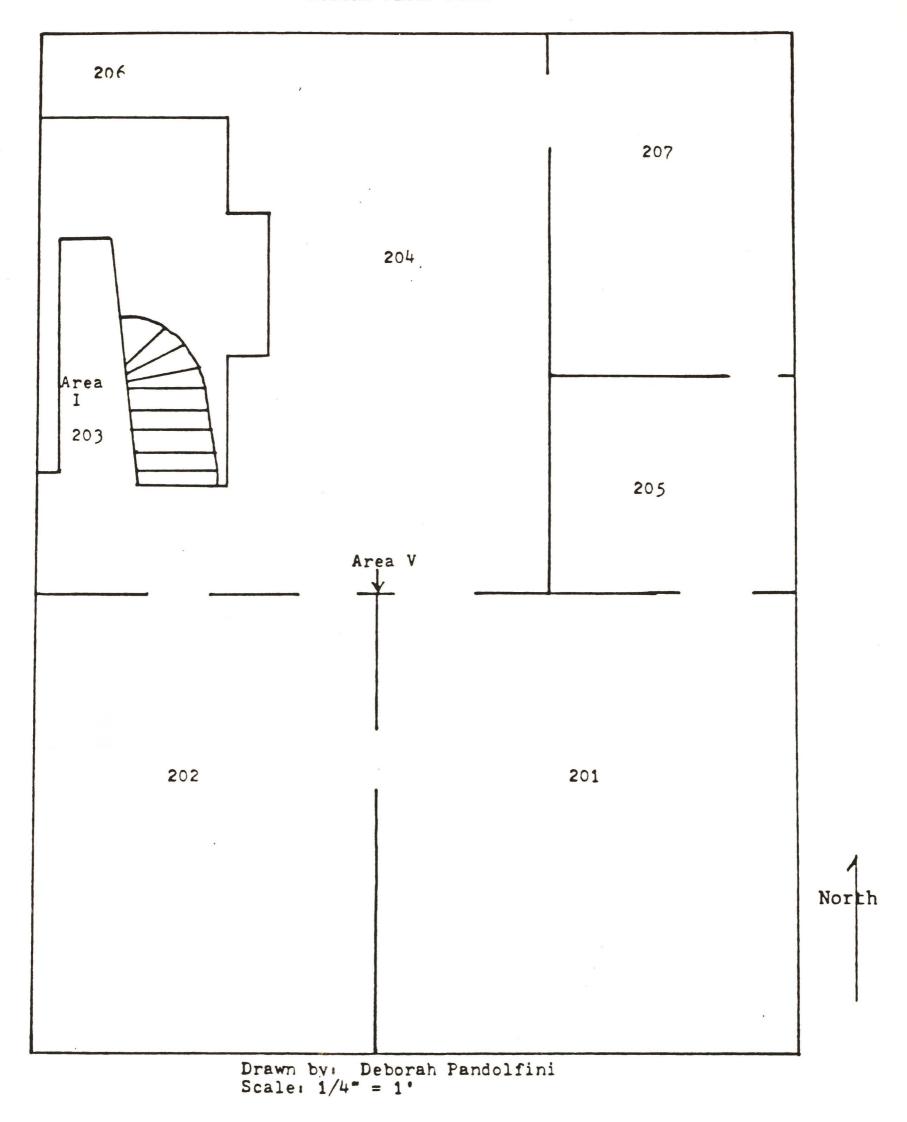


Figure 2 Antram-Gray House floor plan, second floor.

Attic Floor Plan

	Area III	I						
S	Stairway	I						
	Chimney	E						
M	I	D				F	L K	
L	н	С				D	J	
v	0	-	Area II		Area	c C	I	
K	G	В				В	Н	
J	F	A				А	G	
								Nor
			Drawn by:					

Pigure 3 Antram-Gray House floor plan, attic.

sorted through, and all artifacts were bagged and recorded.

Area III is located in the extreme northwest portion of the attic (figure 3). Removal of the material in this unit was carried out by Ms. Gilmore, The material was just taken out as a whole unit and sorted through later. No maps or photographs could be produced prior to the excavation, and vertical and horizontal control were lost. All artifacts were bagged and recorded.

Area IV is located in the eastern part of the attic (figure 3). Sections A,B,C,D,E, and F (exposed with the removal of one floorboard) were excavated in two 3" deep levels per section. The material taken out was sorted through, and all artifacts were bagged and recorded. Each area was mapped prior to excavation. Sections G,H,I,J,K, and L were not exposed in the course of the architechtural study. However, some of the floorboards were partially lifted to gain access to the debris. Each of these sections was removed as a whole unit, sorted through, and all artifacts were bagged and recorded.

Area V is actually a column between two doorways on the second floor (figure 2). The lathe and plaster was removed to expose the top 12 inches of the column, and all debris was removed as a single unit. Midden materials were located only in the top 10 inches of this column, and all materials were sorted through, bagged, and recorded. Mapping of this area was not possible.

Research Questions

- 1. How does what was found conform or not conform to what is known about rat hoarding and nesting behavior?
- 2. How well do food remains reflect the total diet of rats and of people in the house?
- 3. What changes have occurred in the composition of the surrounding neighborhood from 1700 to the present?
- 4. Do any objects reflect structural changes in the house over time?
- 5. Can the amount of midden debris and number of rat skulls found be used to predict a time span for occupancy of the building by rats?
- 6. Is there any evidence to suggest that persons in the house tried to eliminate the rats at any point(s) in time?
- 7. Do any objects found suggest human deposition rather than deposition by rats?
- 8. How well do artifacts compare to assumed activities in the building over time?
- 9. What problems were encountered in the excavation and study of the materials?
- 10. What are the limitations of using rat depositions to interpret human behavior?

How does what was found conform or not conform to what is known about rat hoarding and nesting behavior?

This question was posed because the lack of information on previous studies of this nature was thought to be an indication that rat nests in aging buildings were not common occurences.

Based on skull measurements and body measurements the species of rat has been determined to be <u>Rattus rattus</u> or more commonly, the black or roof rat. Measurements range from 12.5 to 18.7 inches (body); and 5 to 9 inches (tail) (Godin 1977).

Black rats will eat almost anything. They will gnaw on paint, paper, cloth, soap, and leather. They are generally arboreal and do not often inhabit underground burrows. Black rats have been known to inhabit rafters, attics, walls, and other above ground-level spaces in buildings (Godin 1977).

The types of objects found in the house, such as the leather shoes, the wooden thread spools, cloth scraps, the bar of soap, and the paint brush (some of which show evidence of having been gnawed upon) corresponds to what is known about black rat hoarding behavior. The wide variety of other types of artifacts reflects the rats' tendency to incorporate almost anything available into their nests (Godin 1977). The location of the middens in the house, namely in the walls, and under the floorboards in the attic coincides with what is known about black rat nesting behavior.

How well do food remains reflect total diet of rats and of people in the house?

This question was posed to better help understand the behavior of both the rats and the persons in the house.

Black rats require food equal to one-third of their body weight (average weight equals 150 - 540 grams or 5.3 - 19.0 oz.) each day to survive (Godin 1977). The sea shells, nut shells, corn cobs, mammal and bird bones, and eggshells reflect the variety of the diet of the rats and of the people in the house over time. However, the small amount of these items found (only 204 total) can in no way represent the total intake of food for the rats (23 is the minimum number of individuals) over the some 220 years they occupied the building.

Therefore, it must be assumed that not all food remains were incorporated into the nests. It is also possible that some food remains were obtained from outside of the building. It is most likely that the hazel nuts (see Table 4) were obtained from outside of the building. It is also probable that some items in their diet were totally consumed, leaving no trace of their presence in the nests.

What changes have occurred in the composition of the neighborhood from 1700 to the present?

This question was posed to offer some basis for comparison between the changes of use in the Antram-Gray House and the changes of use in the neighborhood.

The source for the following information is the Roger Williams

National Memorial Archaeological Resource Study prepared by the

Brown University Public Archaeology Laboratory, 1979 (see Table 2 for the social history of the Antram-Gray House).

- Pre-1700 Roger Williams settled Providence in 1636. He and his followers laid out home lots (west to east) along Towne Street (present-day North Main Street) (see figure 1). They took their fresh water from "Roger Williams' Spring" which is located on the Roger Williams National Memorial (ROWI) property. The ROWI site itself was not occupied at first because it was a marsh area at the waters' edge. This area was gradually filled in during the 18th and 19th centuries.
- By 1750 Homes and the first two commercial buildings, Bowen's Warehouse and Antram's Distill House, were erected on the ROWI land.
- By 1775 Growth in the area continued and the ROWI land included 18 houses, a tavern, a jail, a barn, 3 stores, 4 wharves, and 4 shops. Among the items produced here

were rum and barrels.

By 1798 The ROWI land contained 24 houses, 8 barns, 5 shops, 4 wharves, and a distillery.

In 1805 "Towne Street" was changed to Main Street, broken into North and South Main.

In 1847 The Blackstone Canal was completed. This enabled trade between Providence and Worcester, Massachusetts to occur.

In 1874 The Providence and Worcester Railroad began and the wharves on the ROWI land fell into disuse. As a result of this the area changed to a more residential atmosphere with a few small businesses interspersed.

By 1900 Liquor, meat, grain, hay, and produce warehouses sprang up along Canal Street. The area was a residential-commercial mix.

Post 1900

The Providence Redevelopment Authority acquired the ROWI property in 1969. At this time all buildings on the site were demolished with the exception of the Antram-Gray House. This house was purchased by the National Park Service in 1974, moved 100 feet south, and opened as a Visitor Information Center.

Do any objects found reflect structural changes in the house over time?

This question was posed in the hopes that it would help shed some light on the evolution of the building which could not be found during the architectural study. It was hoped that datable wallpaper or plaster fragments might be found.

Although the study did turn up hand-wrought nails (pre-1900), machine-cut nails (post-1900), a paintbrush covered with green paint, window glass, and some shreds of wallpaper, these did not help to solve any of the mysteries in the evolution of the house.

Area I (see figure 2) is the only area that gives an indication of a structural change in the house. A space in the attic above the wall on the second floor had to be open for the material to fall into the wall. However, since the space was subsequently sealed off (post-1870), this does reflect modifications to the second floor and attic (Gilmore 1980).

Can the amount of midden debris and number of rat skulls found be used to predict a time span for occupancy of the building by rats?

There is a direct correlation between the amount of midden debris (per unit area), the number of rat skulls, and the number of artifacts and their range of dates (see Table 1).

Table 1. Comparisons between size of middens, number of rat skulls, amount of midden debris, number of artifacts, and dates artifacts.

AREA NUMBER (ranked by size in descending order)	NUMBER OF RAT SKULLS	ESTIMATED AMOUNT OF MIDDEN DEBRIS (bushels)	NUMBER OF ARTIFACTS	RANGE OF DATES
II	15	5	763	1700-1950
IV	6	3	563	1850-1960
III	2	2	191	1930-1960
I	0	1/4	137	1800-1960
V	0	1/4	47	1850's

Area II is the largest midden and contained artifacts with the largest range of dates. This probably indicates the smallest amount of debris and artifacts. It also has a range of dates of only a ten year period.

Is there any evidence that persons in the house tried to eliminate the rats at any points in time?

Each area represents a unique set of dates ranging from the early 1700's to the late 1950's. With the exception of one mouse-trap (1950's) located in the attic, there is no evidence that the occupants of the house tried to eliminate the rats at any time. There is also little evidence that the rats were a recognized problem, as the nests appear to have been ignored and untouched. In Area IV, electrical wires were snaked through the nest with apparently no attempt to remove the debris.

Do any objects found suggest human depostion rather than deposition by rats?

This question was posed because it was not immediately known which types of artifacts rats would tend to accumulate.

According to Godin (1977), black rats will take almost anything into their nests. This explains the presence of most of the artifacts found. However, the abundance of such items as nails and window glass leads to the probable conclusion that these items were mostly deposited in the vicinity of the nests by workers making structural changes in the building. Then probably these items were gradually incorporated into the nests via a combination of both human and rat activity.

How well do artifacts compare to assumed activities in the building over time?

In all, five separate midden area were located (Areas I - V). Areas I and V are located in walls on the second floor. Areas II, III, and IV are located in the attic under the floorboards between the second floor ceiling and the floor of the attic. Midden debris included rat fecal matter, paper shreds, scraps of cloth and wallpaper, desiccated bodies of rats, large and small mammal bones, bird bones, nut shells, clam shells, and a large selection of cultural artifacts dating from the early 1700's to the late 1950's. Each midden area represents a unique set of dates (see Table 1).

Over the years the Antram-Gray House was used as a tavern, a restaurant, a boarding house, a liquor store and a dry goods shop, as well as for other uses (see Table 2). The bulk of the artifacts are daily household items such as ceramics, glass bottles, cloth, etc. (see Table 3) which could easily have been found in the house at any given point in time.

To illustrate the point that this body of data generated in this study can compliment the social history and architectural development studies of this building, Area V will be discussed in detail.

Area V, the column on the second floor (see figure 2), appears to contain the belongings of Mary Martin who used the building as a dress shop from 1855 to 1859. The list of materials from this

area includes:

- 47 Scraps of cloth representin 31 types and patterns (most of floral or other designs and of a better quality than were found in other midden areas).
 - 1 Wooden thread spool
 - 1 Brass thimble
 - 1 Leather doll (German, of a type used by dressmakers to display the latest styles in their shop windows).
 - 2 Safety pins
 - 3 Curtain pins
 - 1 Bobbie pin
 - 6 Common pins
 - 1 needle

All of these remains can only be associated with Mary Martin. Additionally, Area V is the only area where all artifacts appear to belong to only one person. Prior to this study it was only known that Mary Martin was a dressmaker. With the discovery of these items a visual display of the tools of her trade is now available. Not only are some items unusual, but they also indicate the part Mary Martin played in the international role of Providence as an industrial center.

Another example of artifacts which can be connected to individuals include the lease, electric bill, and letter with the name James Pina on them (see Table 3, Area IV secs. B & C). The dates on these articles correspond to the house social history (see Table 2), and give a little better insight into the Pina

family and their financial situation during their occupancy of the house.

What problems were encountered in the excavation and study of the materials?

The experimental nature of this study lends itself to a necessary discussion of the problems encountered.

The main difficulty with excavation of these deposits was trying to delimit discrete units. Strips of cloth and newspaper tangled throughout the middens made excavation difficult.

The large number of artifacts (well over 1,000), and the varied nature of the artifacts made dating and identification of them extremely difficult and time consuming. The lack of reliable sources played a major role in delaying the completion of the artifact analysis. For example, one pair of scissors was examined by six "experts" in cutlery. The result was six different dates and places of manufacture.

A major difficulty in interpreting these remains was that many of the artifacts cannot be tied to specific persons or activities in the house. Approximately one-half of the artifacts fall into this category. This makes addressing some of the research questions difficult. However, these artifacts can be placed in time periods, and can therefore be linked to several persons and activities in spans of time. Artifacts that fall into this category include nails, glass fragments, and ceramic fragments. This does not imply that the artifacts are useless, just that the information they supply is less useful for these questions.

It is also difficult to interpret which artifacts were "chosen"

by the rats from different parts of the house, and which artifacts were incorporated simply because they were stored in the attic within easy reach of the middens. These two factors probably account for the wide variety in the nature of artifacts recovered.

Shifting within the middens by rats and redeposition by later rats makes interpreting the stratigraphy of the middens difficult.

All excavation levels examined represent a wide variety of dates.

What are the limitations of using rat depositions to interpret human behavior?

Rat middens, like any archaeological resource contain some limitaions as far as what they can tell you about human nature. In this study does exemplify the fact that these deposits can present a body of data comparable to any other type of archaeological site, that is, the types of food eaten, and what types of objects were used by the inhabitants of the house over time.

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Conclusions

Surely this is not the first time that rat middens have been encountered in aging buildings. The relative unpleasantness of the middens may account for the lack of any studies of them in the past. However, any unpleasantness soon becomes outweighed by the benefits of the more personal data base which will result.

It is hoped that this study will generate enough interest among preservation groups so that more recorded cases of rat middens in buildings undergoing restoration will result in more studies of this nature. As the methods used in this study were largely experimental, only future studies can help to refine the methodology.

With the completion of this study not only will the National Park Service know the evolution of the house, and who lived there and when, but it will also have some of the possessions (the visual record) used by the individuals during their occupation of the Antram-Gray House.

FOOTNOTES

1. "All documentary research - tax records, insurance records, deed of ownership - done to date indicates that the structure was never used as a single family home after ca. 1809. Therefore referring to the structure as a house is somewhat of a misnomer. A multiple-use structure is more technically correct" (Gilmore 1980).

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APPENDIX

Table 2. Social History of the Antram-Gray House

DATE	ADDRESS N.MAIN ST.	OWN	OCC.	SOUTH HALF	ADDRESS N. MAIN ST.	OWN	æc.	NORTH HALP	ADDRESS	Sun	occ.	SMITH ST. ENTRANCE 2nd & 3rd floor
17.04				History of land	177	Х	Х	Benjamin Whipple wills to son John, land and dwelling house.	No Smith St.	Х	χ	Same
1737/8				only, unsure of building history.	177	х	х	John Whipple sells to Wm. Antram house with improvements	until 1850	X	X	Same
1765					177	x	Х	Wm. Antram sells to Darius Sessions a dwelling house.		x	X	Same
pre 1798	175	х		Thomas Sessions, son of Darius Sessions, builds a southern addition to the Session house as a separate residence.	177	х	7	Owned by Darius Sessions, may have been occupied by his son Thomas or himself.		x		2nd & 3rd floors may have been divided and occupied separately by Thomas & Darius Sessions, or connected and occupied by Thomas Sessions.
1809	175	x		Darius Sessions wills to Thomas Sessions the land on which this residence stands. House belonged to Thomas Sessions before.	177	x	х	Darius Sessions wills this half of house & lot to his 3 daughters Mary, Sara, & Amy. They sell it to Thomas S.		X	X	Unknown if 2nd & 3rd floor connected inter- nally or divided as separate residences.
1809	175	x	?	Thomas Sessions sells to Thomas &Josiah Snow, housewrights, use un- known from 1809-1824.	177	х	?	Thomas Sessions sells to Thomas & Josiah Snowhousewrights, use unknown from 1809-1824.		X	7	Same
1813	175	x		Thomas & Josiah Snow sell to Wimthrop Pidge and Jeremiah Whipple.	177	X	?	Thomas & Josiah Snow sell to Winthrop Pidge and Jeremiah Whipple.		x	7	Same
1824	175			Residence, Silvanus G. Martin	177		x	Grocery and Dry Goods Shop. Silvanus Martin.				No Smith St. address listed, possibly Marti residence.
*												

(Weaver, no date)

Table 2. Continued

DATE	ADDRESS N. MAIN ST.	للزياه	000	SOUTH HALF	ADDRESS N.MAIN ST.	OWN	8	NORTH HALF	ADDRESS	OWN	S.	SMITH ST. ENTRANCE 2nd & 3rd floor
1831	175	x		Winthrop Pidge sells his share to J.Whipple	177		X	Winthrop Pidge sells his share to Whipple	No Smith St.	X		Winthrop Pidge sells his share to J.Whipple
1838	175	X	x	Whipple sells to Martin, residence	177	x	X	Whipple sells to Martin Dry Goods Shop	until 1850	X	?	Whipple sells to Martin
1847	197	x	x	Martin residence assumed, no listing for Martin residence	199	x	X	Martin Dry Goods Shop		X	?	Possibly Martin residence
1850	197	x	x	same.	199	х	х	same	1		x	David Holmes, doctor
1852	197	x	x	same	199	х	X	same	1		?	Office-1, res-#3 No address listed
1854	197	x	x	same	199	x	X	same	1		x	John McGowan, Doctor Office & residence
1855	197	x		Martin residence, S. Martin dies	199	х	X	Martin Dry Goods S. Martin dies	1		X	same
1856	197	x	x	Residence, Ann Martin, widow and Mary Martin, dressmaker	199	x	X	Occupancy unknown. Possibly Mary Martin Dress Maker Shop	1	40	X	same
1857	197	x	x	same	199	x	?	same	1		x	Thomas Dowling, hair- dresser, bds.
											x	Michael Grady, black- smith, bds.
											X	Patrick Ahern, black- smith, bds.
											x	Thomas Kelly, sales- man, bds.
•											x	John Kindred, shoe- maker, bds.
•											X.	Chris Nugent, tinsmith
											x	Michael O'Brien, pioker maker, bds.

Table 2. Continued

DATE	ADDRESS N. MAIN ST.	√ 300	occ.	SOUTH HALF	ADDRESS N.MAIN ST.	aun	SCC.	NORTH HALF	ADDRESS	awn	SCC.	SMITH ST. ENTRANCE 2nd & 3rd floor
1858	197	х	х	Residence, Ann Martin, widow; Mary Martin, dress maker	199	х	?	Address not listed, no record of occupancy. Perhaps Mary Martin's dressmaking shop.	11		х	Patrick Ahern, Black- smith, boards
1864	197	x	x	Ann Martin dies estate sold to John Keeffe. Mary Martin, dress- maker maintains res.	199	х	?	Ann Martin dies; estate sold to John Keeffe. No address listing. Perhaps used by Mary Martin as dress shop.	1	x	x	Ann Martin dies, estate sold to John Keeffe. Patrick Ahern, Black- smith, boards
1865	197	x	1	Mary Martin, dressmaker Silas Hall, boards John Keeffe, owner	199		?	No address listed, perhaps used by Mary Martin's dress shop.	1	x	x	Catherine Duffey, widow, house John Keeffe, owner
45//	•		_		0.00	X	.,	John Keeffe, owner	1		?	unknown
1866	231		X	John Keeffe, Liquor	233		Х	John Keeffe, Liquor	•		?	unknown
1870	231	X	X	John Keeffe, Liquor	233	X	Χ	John Keeffe, Liquor	1	_	'	
1875	290	X		John Keeffe, Liquor Michael J. Leyden clerk	294	Х	X	John Keeffe, Liquor	1	X	?	John Keeffe, owner unknown
1885	290	x		John Keeffe dies, Mrs. Julia Keeffe owner	294	x		John Keeffe dies, Mrs. Julia Keeffe owner	1	X		John Keeffe died, Mrs. Julia Keeffe, owner
1885	290		x	P.F. Hoye, Liquor	294		?	P.F. Hoye, Liquor	1		?	unknown
1886	290		x	P.F. Hoye, Liquor	294		?	P.F. Hoye, Liquor	1		?	unknown
1887	290			Weisman Bros. Dry Goods Shop	294			Weisman Bros. Dry Goods Shop	1		?	unknown
1889					294		x	Simon Weisman, Dry Goods Shop	1		X	Julia A. Warfield, widow of Ziba C. War- field, house
								-				

7

Table 2. Continued

DATE	ADDRESS N. MAIN ST.	Sus	300	SOUTH HALF	ADDRESS N. MAIN ST.	SW	8	NORTH HALF	ADDRESS	Owo	300	SMITH ST. ENTRANCE 2nd & 3rd floor
1890	290		X	Beckett Bros. Liquor	294		?	No address listed. assumed Beckett Bros. Liquor	1		?	unknown
1891	290		x	Beckett Bros. Liquor	294		?	No address listed, assumed Beckett Bros. Liquor	2		х	G.A. Macomber
1894	290	x		Mrs. Julia Keeffe dies sold to Eleanor K. Burdick	294	x		Mrs. Julia Keeffe dies sold to Eleanor K. Burdick	2	x		Mrs. J. Keeffe dies, sold to E.K. Burdick
1894	290		X	Beckett Bros. Liquor	294		?	No address listed. Assumed Beckett Bros. Liquors	2		x x	Fred Berry, brakeman J.T.Hennessey, brakeman Mrs. Annie Joslin, widow
1896	290		x	Beckett Bros. Liquor	294		?	same	2		X	Mrs. A. Joslin, widow
1898	290		X	Beckett Bros. Liquor	294		х	John McDermott, hair- dresser	2		X	Mrs. A. Joslin, widow
1899	290		x	Beckett Bros. Liquor	294		X	Beckett Brothers Res- taurant	2		?	Assumed Beckett Bros.
1903	290		x	Beckett Bros. Liquor	294		х	Beckett Bros. Restaura	2		?	Assumed Beckett Bros.
1904	290	x		Eleanor K. Burdick dies owned by the E.K. Burdick estate	294	х		Eleanor K. Burdick dies, owned by the E.K. Burdick estate	2	x		E.K. Burdick dies
1905	290		x	McGinn and Smith, Liquor	294		x	McGinn and Smith, Restaurant	2		?	Assumed McGinn & Smit
1909	290		x	E.D. McGinn, Liquor	294		x	E.D. McGinn, restauran	2		x	Assimed Rodinn & Smit
1913	2 90		x	E.D. McGinn, Liquor	294		x	E.D. McGinn, Restauran	2		x	Turkish Lodging House

Table 2. Continued

DATE	ADDRESS N. MAIN ST.	0 € N	330		ADDRESS N. MAIN ST.	SW	200	NORTH HALF	ADDRESS	000	ΩC,	
1915	290		χ	E.D. McGinn, Liquor	294		Х	Tatro Donate, barber	2			E.D. McGinn, Lodging House
1917	290		X	E.D. McGinn, Liquor	294		X	Bernice B. Gray, watch shop, moved from 322 N. Main	2		X X X	Bernice B. Gray Eliza Driscoll Kay Hobson Irving W. Burdick Henry Fox
1919	290		X	vacant	294		х	Bernice B. Gray watchshop	2			Bernice B. Gray Irving W. Burdick
1923	290		х	John Leach, wholesale crockery	294		х	Bernice B. Gray watchshop	2			Bernice B. Gray May Hobson
1925	290		x	vacant	294		х	Bernice B. Gary watchshop	2			 Bernice B. Gray Kay Hobson
1927	290		x	George Andrews, pool	294		х	BBernice B. Gray watchshop	2			Bernice B. Gray May Hobson
1929	290	х		John K. Burdick, owns	294	х	1	John K. Burdick, owns	2	X		John K. Burdick, owner
1930	290		?	No address listed, per- haps part of 294 and used by B. Gray	294		X	Bernice B. Gray watchshop	2		х	James Pina rents home
1932	290		x	Listed as vacant	294		Х	Bernice B. Gray watchshop	2		X	James Pina rents home
1937	290	x		Bonded Municipal Corp.	294	x		Bonded Municipal Corp.	2	x		Bonded Municiple Corp., owner
1938	290	х		Isabella O'Neil, owns	294	х		Isabella O'Neil, owns	2	x		Isabella O'Neil, owner
1941	290	X	х	Thomas B. Gray, owner	294	х	х	Thomas B. Gray, owner	2	x		Thomas Gray, owner

Table 2. Continued

DATE	ADDRESS N. MAIN ST.	and	0 00,	SOUTH HALF	ADDRESS N. MAIN ST.	022	JCC.	NORTH HALF	ADDRESS	0 20	g	SMITH ST. ENTRANCE 2nd & 3rd floor
1945	290	x	χ	Thomas Gray, watches	294	Х	χ	Thomas Gray, watches	2		X	James Pina, home(rents)
1969	290	x		Providence Redevelop- ment Agency, owner	294	х		Providence Redevelop- ment Agency, owner	2	x		Providence Redevelop- ment Agency, owns
1970	290		X	Thomas Gray, watches	294		x	Thomas Gray, watches	2		X	James Pina, rents home
1975	290	x	x	National Park Service	294	х	х	National Park Service	2	x		National Park Service, Roger Williams Nation- al Memorial
			-									
			1		! 							
] 			+				

Table 3. Artifact Inventory

Unless otherwise stated all artifacts are twentieth century.

Area I

- fragments representing 2 "Westford Glass Company" flasks, olive amber in color, produced in Westford, Connecticut between 1857 and 1873. Both flasks bear a "wheat stalk" design and are of a type considered relatively rare among bottle collectors.
- 80 amber bottle glass fragments (19th century)
- 18 aquamarine bottle glass fragments and stopper representing 1 bottle (19th century)
 - 1 pair of scissors (19th century)
 - 4 hand-wrought nails (19th century)
- 11 machine-cut nails
- 1 wooden matchbook (not box type) (19th century)

Area II - Section A

- 6 common pins
- 2 safety pins
- 1 needle
- 4 window glass fragments
- 1 plastic hair comb
- 1 bone button
- 1 metal eyelet
- 20 hand-wrought nails (19th century)
- 11 machine-cut nails

Area II - Section B

- 15 window glass fragments
 - 1 metal pill container "Dr. Edward's Olive Tablets" (1930's)
- 13 hand-wrought nails (19th century)
 - 8 machine-cut nails
 - 2 rat skulls

Area II - Section C

- 9 window glass fragments
- 2 shell buttons
- 1 plastic bead
- 1 garment label "United Hatters, Cap, and Millinery Workers Union"
- 1 paper matchbook
- 1 green and white ceramic plate fragment
- 13 hand-wrought nails (19th century)
 - 3 machine-cut nails

3 rat skulls

Area II - Section D

- 2 leather parts from shoes (with eyelets)
- 8 window glass fragments
- 1 half of an "Ex-lax" can (1930's)
- 1 aluminum "Swift's Golden West Fatted Fowl" poultry tag
- 2 plastic buttons
- 6 redware ceramic fragments (late 19th or early 20th century)
- 1 "Wrigley Doublemint" gum wrapper
- 1 pearlware ceramic fragment (mid 19th century)
- 4 salt-glazed stoneware fragments (1730's 1760's)
- 1 yellow-ware ceramic fragment (early 19th century)
- 1 ink cartridge for a fountain pen
- 17 hand-wrought nails (19th century)
 - 5 machine-cut nails
 - 3 rat skulls
 - 1 "Wescote" paint brush
 - 1 "Maxwell House" coffee can lid
 - 4 newspaper fragments (no dates)

Area II - Section E

- 2 metal buttons
- 1 shell button
- 1 plastic button
- 2 "Rexall Gypsy Cream" labels (ca. 1938)
- 2 ceramic fragments (unknown type)
- 1 pair of scissors (embroidery)
- 1 bottom of a hand-blown glass bottle (19th century)

- 1 brass thimble (ca. 1880)
- 1 wooden brush handle (ca. 1930)
- 1 ceramic fragment (type unknown)
- 3 glass slag fragments
- 2 redware ceramic fragments (ca. 1830)
- 1 "Squibb" medicine tube top (aluminum)
- 1 wooden hair comb
- 4 children's leather shoes (early 20th century)
- 32 hand-wrought nails (19th century)
 - 8 machine-cut nails
 - 1 rat skull

Area II - Section F

- 1 brass button
- 1 iron fork (ca. 1900)
- 1 iron skeleton key
- 1 "James Hanley Brewing Co." label (ca. 1950's)
- 10 window glass fragments
 - 3 metal bottle caps
 - 2 newspaper fragments
- 37 hand-wrought nails
 - 6 machine-cut nails
- 2 rat skulls

Area II - Section G

- 1 wooden thread spool
- 1 metal jar cap
- 12 window glass fragments

- 1 "Dr. Edward's Olive Tablets" can (ca. 1930's)
- 43 hand-wrought nails (19th century)
- 11 machine-cut nails

Area II - Section H

- 1 purple and white ceramic fragment
- 12 window glass fragments
 - 1 iron clothing hook
 - 2 metal buttons
- 60 hand-wrought nails (19th century)
- 10 machine-cut nails
 - 1 bone eyelet
 - 1 bone button

Area II - Section I

- 1 wooden thread spool
- 1 porcelain doll's head
- 1 clay marble
- 1 metal button
- 2 wooden buttons
- 1 shell button
- 1 wooden clothes pin
- 5 window glass fragments
- 1 part of a kerosene lamp
- 12 "blue willow-ware" ceramic fragments
 - 1 clay pipe bowl (ca. 1860)
 - 2 clay pipe stem fragments (ca. 1860)

- 1 partial ceramic plate (ca. 1880)
- 26 lamp globe glass fragments
- 21 hand-wrought nails (19th century)
 - 7 machine-cut nails
 - 2 rat skulls

Area II - Section J

- 1 pair scissors
- 1 piece of slate (possibly from old roof)
- 21 hand-wrought nails (19th century)
 - 1 machine-cut nail

Area II - Section K

- 1 plastic button
- 1 shell button
- 4 window glass fragments
- 23 hand-wrought nails (19th century)
 - 9 machine-cut nails
 - 2 rat skulls

Area II - Section L

- 8 spent wooden matches
- 2 metal buttons
- 1 metal snap
- 1 plastic button
- 1 bone button
- 1 partial paper matchbook
- 18 window glass fragments

- 9 hand-wrought nails (19th century)
- 11 machine-cut nails

Area II - Section M

- 1 part of a gas lamp
- 29 glass fragments representing 1 "Narragansett" beer bottle quart size (ca. 1950's)
 - 3 clay flower pot fragments (scalloped edge)
 - 9 clay flower pot fragments
 - 2 metal bottle caps
- 13 "blue willow-ware" ceramic fragments
 - 1 redware ceramic fragment
 - 3 brown glazed ceramic fragments (1700-1720)
- 42 window glass fragments
- 13 glass lamp globe fragments (ca. 1775)
 - 9 creamware ceramic fragments (ca. 1775)
 - 1 creamware chamber pot fragment (ca. 1775)
 - 8 hand-wrought nails (19th century)
 - 7 machine-cut nails

Area III

- 25 window glass fragments
- 40 spent wooden matches
 - 1 spent bullet (lead 9mm.)
 - 1 "Miraglo" nailpolish bottle (1950's)
 - 1 painted gourd rattle
 - 1 "Waldorf Cadet" pen cartridge
 - 1 ceramic plate fragment
 - 1 plastic swan head
 - 3 metal tobacco clips
 - 1 metal hinge
 - 1 plastic liquor bottle cap
 - 1 latch door hook
 - 6 newspaper scraps
 - 1 metal lid
 - 1 paper milk bottle cap "Woodrow Wilson"
- 63 hand-wrought nails (19th century)
- 43 machine-cut nails
 - 2 rat skulls

Area IV - Section A

- 7 hand-wrought nails (19th century)
- 4 machine-cut nails
- 94 spent wooden matches
 - 1 piece of metal pipe
 - 1 metal nut pick
 - 1 plastic toy cowboy
 - 7 tobacco clips "Mayo's"
- 17 window glass fragments
 - 6 bottle glass fragments
 - 1 rat skull

Area IV - Section B

- 1 "Burkhardt's Sparkling" Boston bottle cap
- 2 wooden clothes pins
- 1 "Bon-ami" soap bar
- 1 lease form Pina family (1916 1917)
- 1 Narragansett Electric Co. bill, James Pina 1934 (June 14 .76¢)
- 11 hand-wrought nails (19th century)
 - 5 machine-cut nails
- 17 bottle glass fragments
 - 2 rat skulls

Area IV - Section C

- 3 plastic buttons
- 1 shell button
- 1 paper label or tag

- 1 "Aetna Finance Co." receipt (1950)
- 1 personal letter James Pina (1936)
- 4 newspaper scraps
- 8 hand-wrought nails (19th century)
- 9 machine-cut nails
- 3 bottle glass fragments

Area IV - Section D

- 2 brass buttons
- 2 bone buttons
- 1 electrical fuse
- 2 tobacco clips "Mayo's"
- 1 piece of flooring tile
- 8 machine-cut nails

Area IV - Section E

- 1 metal bottle cap
- 1 plastic bottle cap
- 1 ladies bar pin of plastic and wood
- 6 bottle glass fragments
- 7 hand-wrought nails (19th century)
- 3 machine-cut nails

Area IV - Section F

- 1 "J.J. Newberry Co. 5-10-25¢ Stores" label
- 1 paper matchbook
- 1 "Highland View" milk bottle cap (paper)
- 1 paper lid

- 1 piece of lace
- 1 piece of wallpaper
- 1 hand-wrought nail (19th century)
- 6 machine-cut nails

Area IV - Section G

- 9 branches from a Christmas tree painted silver
- 1 brass Arabic religious medal
- 1 bone-handled tooth brush made in Paris, France (ca. 1898)
- 1 sterling silver pocket watch case "C.W.C. Co." (ca. 1898)
- 1 "Burnett's Vanilla Extract" bottle
- 2 wooden dominoes
- 103 spent wooden matches
 - 26 bottle glass fragments
 - 3 hand-wrought nails (19th century)
 - 11 machine-cut nails

Area IV - Section H

- 2 metal washers
- 2 brown bottle glass fragments
- 9 clear bottle glass fragments
- 4 hand-wrought nails (19th century)
- 7 machine-cut nails

Area IV - Section I

- 1 paper package from "Reflexo" phonograph needles
- 2 plain metal bottle caps
- 1 "Burkhardt's Sparkling" Boston bottle cap

- 8 machine-cut nails
- 2 bottle glass fragments
- 1 rat skull

Area IV - Section J

- 2 safety pins
- 1 plastic silver bead
- 4 glass bottle fragments
- 14 hand-wrought nails (19th century)
 - 2 machine-cut nails
 - 1 rat skull

Area IV - Section K

- 1 leather sole from a child's shoe
- 17 hand-wrought nails (19th century)
- 11 machine-cut nails

Area IV - Section L

- 7 bottle glass fragments
- 43 hand-wrought nails (19th century)
 - 8 machine-cut nails
 - 1 rat skull

Unless otherwise stated all artifacts are circa 1850 - 1860.

Area V

- 1 wooden thread spool
- 31 different types and patterns of cloth scraps
 - 1 brass thimble "Forget Me Not" pattern
 - 1 Sonneberg, Germany leather doll stuffed with sawdust (ca. 1820 1860)
 - 2 safety pins
- 3 curtain pins
- 1 bobbie pin
- 6 common pins
- 1 needle

Table 4. List of Organic Remains

Organic Remains	Amount
Large mammal bones	28
Small mammal bones	6
Bird bones	11
Corn cobs	9
Eggshell fragments	29
Clam shells	12
Peanut shells	3 0
Hazel nut shells	52
Feathers	27