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Stories from the Rubble: Analysis of the Mortuary Artifacts from the Spring Street Presbyterian Church Vaults

Rebecca L. White and Douglas B. Mooney

Archaeological investigations of the Spring Street Presbyterian Church vaults resulted in the recovery of coffin plates, hardware and other burial-related artifacts that convey information regarding the individuals interred within these chambers. These interments also offer a glimpse at mortuary customs and practices in vault burials during the first half of the 19th century.

Les fouilles archéologiques des caveaux de la Spring Street Presbyterian Church ont permis de récupérer des plaques de cercueils, des articles de quincaillerie et d'autres artefacts associés aux inhumations, ce qui amène de nouvelles informations sur les individus enterrés dans ces chambres funéraires. Ces inhumations dans des caveaux offrent également un aperçu des pratiques et coutumes mortuaires de la première moitié du XIXe siècle.

Introduction

During the winter of 2006/2007 construction crews working on a condominium hotel complex in New York City discovered human remains. Historical research determined that the site was the former location of the Spring Street Presbyterian Church from about 1811 to 1966 (Meade 2008: I-1). Subsequent investigations conducted by archaeologists from AKRF Inc. and URS Corporation recovered the skeletal remains of over 200 individuals and documented the remnant foundations of four burial vaults (Mooney et al. 2008, see Morin, Meade, Mooney, Crist, and Ellis this volume). The mortuary and personal artifacts recovered from the Spring Street Church vaults provide temporal data on mortuary practices in New York City during the first half of the 19th century. Despite the disturbed nature of the skeletal remains, the recovered artifacts provide useful information on mortuary practices.

Coffin plates recovered from the site supplied personal information that revealed the identities of some of the individuals interred in the vaults. In addition, the dates from the coffin plates extended the period of use of the vaults beyond the surviving documentary evidence to between 1820 and 1846. The recovery of wood shavings, pieces of ribbon, and decorative bows hints at the furnishing and embellishment of the interior of the coffins. The presence of ceramic vessels in association with some of the burials afforded the occasion to explore various circumstances and mortuary customs that might result in the inclusion of vessels in burial vaults or inside of individual

coffins. The coffin plates and other mortuary hardware from the Spring Street Church vaults present an opportunity to examine the transition of the industry from hand-crafted to machine-manufactured mortuary hardware.

The first half of the 19th century represents a transitional period in mortuary practices. In the 18th century, it was common for family and friends to prepare the body for burial. During that period, coffin building was a sideline business of the cabinetmaker or other related occupations. At the beginning of the 19th century, a rise in the population coupled with the rapid development of urban centers to create an increased demand for a variety of goods and specialized services. Various occupations evolved or expanded their roles to meet the necessity to bury the dead (Habenstein and Lamers 1995: 139–156). In 1826, Silas Wright was the only coffin manufacturer listed in the *New York City Directory*. By 1846, the year of the latest-dated coffin plate from the Spring Street vaults, the directory listed 21 coffin warehouses and 38 undertakers in the city. Advertisements for the coffin warehouses show that they maintained a stock of coffins, along with a variety of coffin hardware and burial attire. The undertaker provided a range of services from laying out the body to providing the transportation to the burial ground or vaults.

The increase in population during this period combined with close living quarters to accelerate the spread of contagious diseases. Among the early medical concepts of disease was the belief that they were caused and

spread by vapors or odors that permeated a place and created an unhealthy environment. The burial grounds and vaults of New York City were identified as contributing to the outbreaks of disease. The Common Council enacted Laws of Interment to prohibit burials in the southern, heavily populated portion of the city. Apart from the fear of disease, there was also the less noble desire to develop these parcels of land for the use of the living. In the 1830s, the establishment of rural cemeteries offered alternative burial places with a natural park setting away from the bustling city (Simon 1980: 53). From the mid-1840s through the 1860s, there were occasional newspaper descriptions of church vaults in New York City being cleared out as a condition of the sale of the property. The human remains removed during such clean outs were reinterred elsewhere. The coffin plates from the Spring Street Presbyterian church show that those vaults were still in use until 1846.

Coffin Plates

The most informative artifacts recovered from the Spring Street Presbyterian Church excavations were the metal coffin plates. Each of the plates was engraved in elegant script with the name of the deceased, their date of death, and their exact age recorded in years, months, and days. Within the burial vaults, these thin metal plaques functioned in a similar role as gravestones in a cemetery; they identified the individual within each coffin. In general, coffin plates were not exclusively for use in burial vaults; they were also placed on the lids of coffins destined for in-ground interments (Thomas et al. 2000: 5.24; Audin, Hlubik and Kavountzis 2005: 40–41,45). In the mid- to late 19th century, a coffin plate was sometimes displayed during a viewing or wake then retained as a memento by the family when the coffin was interred.

In all, 29 whole or nearly-complete coffin plates were uncovered and several additional plaques were pieced together from the remaining 164 fragments. Even the smaller pieces provided portions of engraved names and dates that set the estimated minimum number of coffin plates recovered at 40. The dates from the coffin plates that could be deciphered represent 17 distinct years of the

26 year period of use of the vaults spanning from 1820 to 1846. In most cases, the gaps represent a single year or two with the exception of a three-year span from 1836 to 1839. Since two new vaults were built a few years earlier in 1831, it seems unlikely that there were no interments during this three year period. A new church was under construction on the site in 1835 and completed in 1836 (Meade 2008: B:II-5, see also Meade this volume). The lack of plates dated to 1836 might reflect difficulty in accessing the vaults during the construction of the new church. It is also possible that the vaults constructed in 1831 were the vaults designated as Vaults 1 and 2 during the archaeological investigations. These two vaults were impacted during construction activities prior to the discovery of the human remains and only a single fragment of a coffin plate was recovered from Vault 2. The surviving piece was the right upper corner of a plate engraved with the middle and surname "Howard Harriott." A brief mortuary notice for Edgar Howard Harriott reported his date of death as February 15, 1840. His brother Franklin died a few days later on February 19th; they were the sons of Edgar Harriott. Although the ages of the boys were not provided in the notices, census records show that their father was 32 years of age in 1850.

A variety of different types of metal were used to manufacture the coffin plates. Plates recovered from Spring Street Church vaults were made of silver, plated copper alloy, an unidentified white metal, and a soft white alloy, probably Britannia metal. The majority of the whole coffin plates and fragments were plated copper alloy (n=177), 14 fragments were of soft white metal, one plate was silver, and one was formed from another type of white metal, possibly nickel silver. Most of the copper alloy plaques appeared to be plated with a white metal, probably tin, that gave them the appearance of silver (Hacker-Norton and Trinkley 1984: 12). While the numbers seem to suggest a preference for the copper alloy plates, it should be noted that the soft white metal examples were poorly preserved, and it is possible that other plates made from this material had completely deteriorated.

A search of period newspapers confirmed the availability of coffin plates in New York City during the interval of interments in the

Table 1. Coffin plate measurements for Spring Street Church burial vaults.

Year	Age	Sex	Length (in.)	Width (in.)
1820	1 Y	M	2.0	2.9
1822	34 Y	M	3.6	5.2
1822	46 Y	M	3.5	5.3
1822	5 Y	F	3.0	4.5
1823	19 Y	M	3.4	5.3
1823	47 Y	M	4.0	5.7
1823	60 Y	F	3.5	5.4
1823	48 Y	F	3.5	5.4
1824	48 Y	M	3.8	5.3
1824	76 Y	F	3.6	5.4
1824	12 Y	M	3.0	4.7
1825	16 Y	F	3.9	5.7
1825	14 Y	F	3.8	5.1
1825	20 Y	M	4.0	5.7
1826	70 Y	F	3.5	4.8
1827	18 Y	F	3.8	4.7
1829	40 Y	M	3.9	4.9
1829	11 M	M	3.0	3.8
1830	4 M	M	3.0	4.0
1830	2 Y	F	3.0	4.2
1832	3 Y and 6 Y	M	3.6	4.9
1832	37 Y	F	4.4	5.4
1832	45 Y	M	4.5	5.8
1835	1 Y	M	3.4	4.2
1840	28 Y	F	3.8	5.5
1841	74 Y	M	3.8	5.3

vaults. In 1830, Stout and Company advertised "silver and plated coffin plates (at two hours notice)" along with a variety of wares and engraving services (*New York Herald*, February 4, 1830). The parenthetical mention of two hours notice refers to the time required to complete the personalized engraving on a coffin plate. This may have been a selling point in instances where the deceased person was to be buried the next day.

The firm of Masters and Markoe announced in 1831 that they were the sole agents for the American Britannia ware manufactory and listed coffin plates among the tea

sets, shaving boxes, and medicine spoons available at 263 and 265 Pearl Street (*The New York Commercial Advertiser* November 8, 1831). The small sample of Britannia metal coffin plates from the vaults was fragmented and some had powdery, peeling surfaces making it difficult to establish dates. Only two of these plates were complete enough to supply any date information; one provided a partial date of 184_ (the plate was torn at the last digit); the other example was dated 1846.

Coffin plates from the vaults were originally attached to the exterior lid of the coffin at the head end with four small tacks through a

series of round perforations positioned at the outer edge of the plate. The method of attachment for the only silver coffin plate varied slightly, featuring four small eyes or loops that projected out from the edge of the plate. Although none of the Spring Street coffin plates were found attached to coffin boards, a fragment of one coffin lid exhibited a rectangular shadow surrounded by four small holes, marking the former position of a plate at the head end of the coffin.

In most cases, the dimensions of the coffin plate varied in proportion to the age of the deceased. Table 1 provides the length and width measurements for the most complete coffin plates with reference to the age, year of death, and sex of the deceased. (TAB. 1). There was no discernible change in dimensions over the time period represented by the Spring Street coffin plates. Exact measurements were difficult to obtain since most of the plates were

dented and deformed along the outer margins. The damage exhibited on many of the plaques seemed consistent with a force applied against the corners or the outer edge of the plate possibly resulting from attempts to slide another coffin into position on top of the lid. The four small tacks were insufficient to hold the plate in place, and the thin coffin plates appear to have been pushed up and torn away from the lid as the next coffin was added to the stack. A few of the coffin plates, such as that of Rudolphus Bogert, appear to have broken in place, probably from the weight of another coffin being lowered on top of the lid.

Despite the small number of surviving coffin plates from the Spring Street burial vaults, some temporal changes in the form of these artifacts were observed over the 26 year period of interments. Table 2 details the changes in shape and the metal used to form the plates, organized by date (TAB. 2). The

Table 2. Characteristics of dated coffin plates.

Date	Oval, slightly domed	Oval, flat	Rectangular, rounded corners, domed, no flange	Rectangular, rounded corners, domed with flanged edge	Totals by year
1820	1 white metal				1
1822	1* 1 silver	2*			4
1823	3*		1*		4
1824			1*	2*	3
1825	2*			1*	3
1826				1*	1
1827				1*	1
1829				2*	2
1830				2*	2
1832				3*	3
1835				1*	1
1840				2*	2
1841				2*	2
1842				2*	2
1843				1*	1
1845				1*	1
1846				1 soft white metal	1
Total	8	2	2	22	34

* = copper alloy



Figure 1. Coffin plate engraved: Samuel Curtis, Died 22nd Jan^y 1822, Aged 34 Years. (Photograph courtesy of URS Corporation.)

distribution shows a shift, over a relatively short period of time, in the aesthetic characteristics and style of these plates, with most of those manufactured prior to 1826 exhibiting an oval shape, and all of those made after that date having a more rectangular outline. While this shift may simply be evidence of changing personal tastes, other aspects of these artifacts suggest that changes in the broader funerary industry also may have played a role. Inspection of the earlier oval coffin plates revealed that most exhibited an irregular overall appearance, suggestive of having been cut out by hand (FIG. 1). The rounded rectangular plates with dates ranging from 1824 to 1846 displayed a more regular form, and most appeared to have been mass-produced through machine stamping. It is interesting to note that the change in shape and manufacturing technique appears to have been introduced into the Spring Street Presbyterian vaults in September of 1824 with the interment of Nicholas Ware. Elizabeth Cleveland’s coffin plate from November of 1826 is also a domed

rectangular shape; while two plates dated 1825 appear to mark the end of the handmade oval plates in these vaults.

A similar change can be observed in images of contemporaneous coffin plates displayed on the Ancestors at Rest web site. Two examples from Connecticut dated to the late 18th century feature a similar flat, oval handcrafted appearance. These plates identified the coffins of Governor Samuel Huntington, who died in 1796, and his wife Martha (died 1774). Three coffin plates at Ancestors at Rest with dates of 1844, 1848 and 1855 have a similar rounded-rectangular shape with a small flange around the outer edge—characteristics shared by the Spring Street coffin plates dated 1824–1846. None of the coffin plates recovered from Spring Street exhibited the flat, rectangular features that appear to be characteristic of the next temporal period of coffin plate design. Ancestors at Rest present images of ten coffin plates with a similar flat, rectangular form dating between 1844 and 1857 (Ancestors at Rest 2012).

Table 3. Spring Street coffin plate inscriptions. (Chronologically by vault.)

Machine-disturbed contexts		
Elizabeth Bush Died 27th March 1832 Aged 37 Yrs	James McGregor Died 5th April 1832 Aged 45 Yrs	Sarah Ogden Hubbard Died 29 Dec 1840 Aged 28 Yrs
Vault 2		
(Edgar) Howard Harriott (Died 15th Feb 1840)		
Vault 3		
James Rea Junr died 28th April 1823 Aged 19 Yrs 8 Mos 12 Da	Julia Radcliff died 25th June 1823 Aged 60 Yrs 4 Mons 13 Dys	Joseph C Smith Died 18th April 1825 Aged 20 Yrs 4 Mos 3 Days
Joseph R Murden Died April 20 1841 Aged 74 Yrs 7 M 12 D	(Thomas) Crawford Nov 7 1841 (Aged 87) Y	Benjamin N. (Abel) (Died) 3rd Oc(t) (1842) (Aged 21 years)
Rudolphus Bogert Died 15th Nov 1842 Aged 76 Yrs	(Jessee) W. Wadleigh Died () 1845	(Sarah) Conger Died (27) May 1846 (Aged 76 years)
() Coo... Died (Mar)ch 184() Aged 54 Years	() Hollenb(ack)	() Abel
Vault 4		
Charles Morgan Died 1(6)th Jany 1820 1 Yr 1 Month 12 Days	Samuel Curtis Died 22nd Jan ^y 1822 Aged 34 Years	Lewis Evens died 24th July 1822 Aged 46 Years & 5 Months
Emma Fitz Randolph died 16th Aug 1822 Aged 5 Yrs 8 Mo 12 Da	Oswald Williams Roe Died 27th Nov 1822 Aged 10 Mon 5 Days	Ja ^s Wadsworth Died 23rd May 1823 Aged 47 Y ^s 4 M ^s 12 D ^s
Ellinor Moore died 4th November 1823 Aged 48 Years	Nicholas Ware Died 7th Sept 1824 Aged 48 Years & 7 Mos	Mary Sturges Died 15th Sept 1824 Aged 76 Years
John R Clark died 21 st Sept ^r 1824 Aged 12 Yr & 10 days	Louisa Hunter died 1st Febr ^y 1825 Aged 16 Yrs 7 Months	Ann Semantha Whelpley Died Febr 19 th A 1825 Aged 14 Yrs & 2 D ^y s
Elizabeth Cleveland Died 23 Nov 1826 Aged 70 yrs 5 Mos 13 D	Sarah Sherwood Died 31 Dec 1827 Aged 18 Yrs 1 M 23 D	G(erri)t. Morgan Died June 24 1829 Aged 40 Yrs
James Kauck Died 24th Sepr 1829 Aged 11 Months & 13 Das	J W Root Died Nov 26th 1830 Aged 4 Mos 5 D	Josephine Dunham Died 23 Dec 1830 Aged 2 Yrs 10 Mos 22 D
Alfred Roe Cox Born Febr ^y 7, 1825. Edward Dorr Griffin Cox Born Sept ^r 18, 1828. Died Jan 1, 2 1832.	Miles Ray Died 19th April 1835 Aged 1 Yr 8 Mos 17 D	David (Sherwood) Died 2nd March 1843 Aged 71 Years...
*Note: information in () was not available on the coffin plate fragments. It was derived from newspapers, city directories, and genealogical information.		

Examination of the Spring Street coffin plates during cleaning revealed stylistic parallels in the lettering on at least seven of the coffin plates. These plates date from 1822 to 1825 and feature distinct similarities in the formation of certain letters that suggest the same hand lettered all of them. Specific examples are the use of a lower case "d" with an unusually tall curved section and short vertical line that is particularly noticeable in the formation of the word "died." The capital letter "A" in the word "Aged" consists of a large curved section with a long, vertical line at the right side, in the style of a cursive A. In contrast to these simply formed letters is the lower case "g" with a distinctive small hook projecting from the upper right side and an elaborately spiraled tail that winds broadly beneath the letters "ed" in the word "Aged."

On most of the plates, the elegantly engraved lettering was the only ornamentation; however, there were four fragmented plates

with additional engraved decoration. Three copper alloy and a soft white metal plate each contained the same stylized design engraved across the top of the plate above the name. The decoration featured a long, slightly arched line with a series of short lines emanating at an angle from each side possibly representing a laurel branch. Of the four plates with this decoration, two were complete enough to provide dates of 1842 and 1846. The other two fragmentary plates retained enough information to be matched to mortuary notices in the newspaper that date them to 1840 and 1842 respectively. Fragments of one of the Britannia metal plates appeared to have a pressed or stamped decorative element consisting of short raised ribs along the flange around the outer edge of the plate. Although the ribs might have functioned to reinforce the edge of the plate, the repeating pattern gave the plate the appearance of being trimmed with a cord.



Figure 2. Coffin plate engraved: Nicholas Ware, Died 7th Sept 1824, Aged 48 Years & 7 Mos. (Photograph courtesy of URS Corporation.)

At the time of excavation, many of the coffin plates were encrusted with debris and insect larva (maggot) casings, rendering them illegible. Mechanical cleaning performed at the URS laboratory in Burlington, New Jersey uncovered the finely engraved script that revealed the identities of some of the individuals interred in the Spring Street Church vaults. Table 3 provides the personal information recovered from the complete plates along with partial inscriptions from several fragmentary plates. (TAB. 3) The dates of death of the individuals recorded on the surviving coffin plates serve to extend the date range for active interment in the vaults from January 1820 through May 1846. Efforts to research the names engraved on the coffin plates yielded mixed results. While additional information was not available in all cases, some unexpected stories were recovered.

Oswald Williams Roe

Oswald Williams Roe was just 10 months and five days old (died November 27, 1822) when his small silver coffin plate was engraved over faintly etched guidelines. He was the son of Peter Eltinge Roe and Susan Elizabeth Williams (Beam 2008). Roe's coffin plate was found in the fill of Vault 4. His small, oval coffin plate showed no signs of the silversmith's hallmarks. Additional research indicates that Roe's uncles, James and William Roe, were silversmiths in Kingston, New York (Ensko 1983: 114) and may have provided the silver coffin plate.

Nicholas Ware

The coffin plate of Nicholas Ware was one of the few legible examples at the time of its discovery (FIGS. 2 & 3). Ware was born on February 16, 1776 in Caroline County, Virginia. His family lived for a time in Edgefield, South Carolina before moving to Augusta, Georgia. He received a degree in law and was admitted to the bar in Augusta. He went on to serve two terms in the Georgia House of Representatives (1808–1811, 1814–1815). In 1819, Ware was appointed mayor of Augusta to serve out the remainder of Freeman Walker's term when Walker was elected to the United States Senate. When Walker resigned from the Senate in 1821, Nicholas Ware was elected to fill the

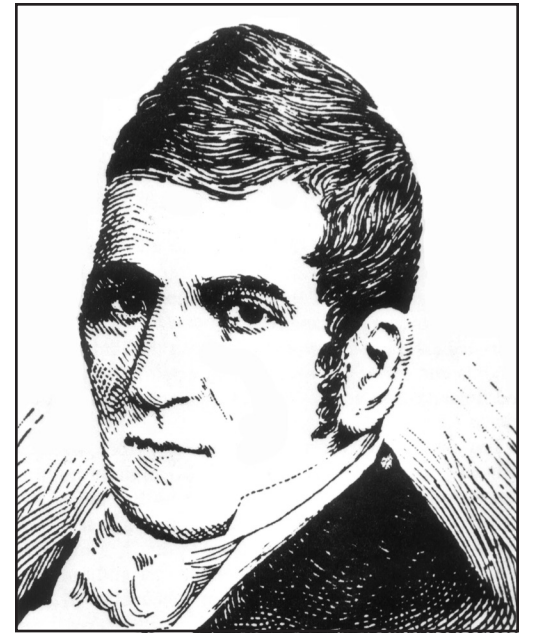


Figure 3. Portrait of Georgia Senator Nicholas Ware (1776–1824). (Image courtesy of U.S. Senate Historical Office.)

vacancy. He continued to represent Georgia in the Senate until his untimely death in New York City in 1824 (DeGidio 2003: 89–90, Biographical Directory of the United States Congress 2008).

Senator Ware was in New York City in 1824, at the time of Lafayette's visit to the United States, when he succumbed to an unidentified ailment and died on September 7 (Walker 1934: 22). On September 22, 1824, a Connecticut newspaper, *The American Sentinel*, reported: "Died. At New York, on the 7th inst. after a protracted illness for relief from which he had recently visited the springs, the Hon. Nicholas Ware, a Senator in Congress from Georgia."

The recovery of Ware's coffin plate from the Spring Street Church's vaults clarifies a contradiction about his birth while presenting a mystery concerning his burial. Accounts of Ware's life differ regarding the year of his birth; some state 1769 and others 1776 (Walker 1934: 22). On his coffin plate, his age was engraved as 48 years and 7 months, verifying February 1776 as the date of his birth. The mystery which remains unsolved is how Ware came to be buried in the vaults of the Spring Street Presbyterian Church. Several sources on Senator Ware's life, including those maintained by the United States

Congress and those presented on the Ware County website, state that he was buried under the annex of Grace Episcopal Church in the Jamaica, Queens County section of New York City (US Congress; Ware County Board of Commissioners).

It is not clear how or under what circumstances this account of his burial originated, or why a discrepancy exists at all. There is no indication that Ware ever visited the Spring Street Presbyterian Church during his time in New York; however, the Treasurer's Minutes dated September 24, 1824 seem to indicate that a man named D.H. Wickham paid the \$10.00 fee to have the Senator interred in one of the Spring Street Church vaults (Meade 2008: B.II-5, see also Meade, this volume). Although the discovery of Nicholas Ware's coffin plate in these vaults confirms that he was interred at Spring Street, to date his remains have not been specifically identified.

Louisa Hunter

The plate from the coffin of Louisa Hunter was recovered in the vicinity of Burial 13 in Vault 4. Concurrent forensic examination conducted by Dr. Shannon Novak and students from Syracuse University (Werner and Novak, this volume) revealed that Burial 13 is an adult, while Burial 16 was identified as an adolescent approximately 15.5 years of age. A mortuary notice appeared in the *New York Weekly Commercial Advertiser*, February 1, 1825: "Died. This morning, about 3 o'clock Louisa Hunter, in the 17th year of her age, after a long and painful illness, daughter of John Hunter."

The following day a newspaper notice invited her father's friends and

acquaintances to her funeral departing "from the east end of the New York Institution in Chamber Street. Also the male members of the Spring Street Church" (*New York Daily Advertiser* Feb. 2, 1825). This was the only mortuary notice to specifically reference members of the Spring Street Church. While the notices for several individuals from the Spring Street vaults invited friends of the closest adult male relative to attend the funeral, this was the only announcement to limit attendance along gender lines. City directories show that John Hunter held the position of Assistant Superintendent for the Almshouse, or New York Institution, from 1820 until 1831. A newspaper article in the *Spectator* March 18, 1831 announced: "Reform. We learn that the new commissioners of the almshouse commenced the work of reform on Saturday by removing John Hunter from the office of agent. Josiah Mann, Esq. was appointed in his place."



Figure 4. In situ skeletal remains of Rudolphus Bogert showing his coffin plate positioned on chest beneath his head. (Photograph courtesy of URS Corporation.)



Figure 5. Rudolphus Bogert, ca. 1806. Artist: Parmenas Howell (1784-1808) Watercolor on ivory 2 ½ x 2 in. (6.4 x 5.1 cm). Gift of Robert Stanley Vail, 1969 (69.187). Published with permission The Metropolitan Museum of Art, New York, NY, U.S.A. Image copyright The Metropolitan Museum of Art/ Art Resource, NY.

Rudolphus Bogert

The broken coffin plate of Rudolphus Bogert, the only plate recovered in direct association with intact, articulated skeletal remains, can be seen in a photograph taken during the investigation of the stacked burials in Vault 3. (FIG. 4) Dr. Thomas Crist's forensic analysis positively identified Bogert's remains as Burial 12 in Vault 3 (Crist, this volume). In the 1790s, Bogert was a captain in the New York State Militia (Hastings 1901: 367). During the 19th century, he worked as a merchant in New York City (New York Common Council 1917: 299). Bogert died on November 15, 1842, at the age of 76. A miniature portrait of

Rudolphus Bogert (watercolor on ivory) was painted in 1806 by New York artist Parmenas Howell (1784-1808) and is currently in the collections of the New York Metropolitan Museum of Art (FIG. 5).

Julia Radcliff

The faintly engraved inscription on this plate was misread and transcribed as "John" Radcliff aged "50" years. When no records for John were found, an additional search of all the death notices in New York City for June 25, 1823 uncovered an announcement for Julia Radcliff who died at age 60. Her husband was Jacob Radcliff who was appointed justice of the Supreme Court for the state of New York from 1798 until he resigned in 1804. He was twice appointed mayor of New York City to replace Dewitt Clinton in 1810 and again in 1815 (Street 1859: 190,191). Even more surprising, Julia was born Juliana Mather Smith, she was the daughter of the Reverend Cotton Mather Smith and granddaughter of Reverend Cotton Mather of Boston, Massachusetts (Worthington 1894: 53).

Relationships

Information from the coffin plates in combination with mortuary notices shows that some of those interred in the Spring Street Church vaults were related to each other. While two plates were engraved with the surname Morgan and two others with Sherwood the exact family connection between these people could not be determined at this time. Research into some of the other names provided a variety of relationships and family connections. Table 4 provides information on the occupation of the deceased or their surviving male relative and defines the relationship if known. (TAB. 4)

Table 4. Spring Street coffin plate relationships and occupations.

Name of deceased	Occupation or relationship	Name of husband / father	Occupation of husband / father	Address
Charles Morgan				
Samuel Curtis	accountant			154 Spring St.
Lewis Evans	lime cartman			5 Dominick
Emma Fitz Randolph	daughter of	Stuart Fitz Randolph	not listed	502 Greenwich
Oswald Williams Roe	son of	Peter Roe	merchant	Dey c. Washington
James Rea, Jun.	son of	Robert Rea	teacher	31 Vandam St.
Jas Wadsworth				
Julia Radcliff	wife of	Jacob (Esq.)	counselor, former NYC Mayor	13 Howard
Eleanor Moore	wife of	Henry	cartman	83 Laurens n. Prince St.
Nicholas Ware	senator from Georgia			funeral from 36 Broadway
Mary Sturges	mother-in-law	Capt. Nathaniel Jarvis	shipmaster	284 Spring St.
John R. Clark				
Louisa Hunter	daughter of	John Hunter	Assistant Superintendent, NY Institution	East End of the New York Institution in Chamber St.
Ann Semantha Whelpley				
Joseph C. Smith	son of	Ebenezer Smith	carpenter	127 Chapel St.
Elizabeth Cleveland	mother-in-law	Dr. Samuel Hanson Cox	minister	Charlton n. McDougal
Sarah Sherwood				
Garrett Morgan	jeweler			38 N. Moore St.
James Kauck				
J. W. Root	son of	James Root	fur merchant	20 Bedford
Josephine Dunham				
Alfred Roe Cox	son of	Dr. Samuel Hanson Cox	minister	3 Charlton
Edward Dorr Griffin Cox	son of	Dr. Samuel Hanson Cox	minister	3 Charlton
Elizabeth Bush	wife of	Thomas Bush	not listed	20 Jay
James McGregor	painter			rear 645 Greenwich
Miles Ray	son of	Dr. John E. Ray	medical doctor	1026 Franklin
Edgar Howard Harriot	son of	Edgar Harriot	tailor	21 Vandam St.
Sarah Ogden Hubbard	wife of	Luther P.	Agent, NY Marine Bible Society	65 Thompson
Joseph R. Murden	teacher			176 Hudson
Thomas Crawford	father-in-law	Dr. James Hart	medical doctor	95 Hudson
Benjamin N. Abel	probably son of	George Cook Abel	clerk	
Rudolphus Bogert			merchant	20 Charlton
David Sherwood			rope maker	72 Crosby
Jessee W. Wadleigh			bookseller	boards 222 Sullivan
Sarah Conger				

Sarah Ogden Hubbard

The coffin plate for Sarah Ogden Hubbard was found within the fill disturbed by construction machinery at the start of the project; as a result, her plate could not be linked to a specific vault. Her mortuary notice mentions her two young sons, who died around the same time. As reported in *New Hampshire Patriot and Gazette*, February 12, 1841: "Died, In New York City, Dec. 27, 1840, Theodore Frelinghuysen Hubbard, about 7, also suddenly, Dec 29 Sarah Ogden Hubbard, 28, And Jan 22, 1841 John Cleaveland Hubbard, about 5,—wife and children of Luther Prescott Hubbard, formerly of Hollis, N.H." Although coffin plates were not recovered, the boys were probably interred in the same vault with their mother.

Elizabeth Cleveland

Moving and stacking of coffins within Vault 4 may have caused Elizabeth Cleveland's plate to be torn from her coffin lid. Enough information survived to allow the identification of her name, and, consequently, of her very detailed mortuary notice. *The New York Weekly Commercial Advertiser* reported on November 28, 1826 that:

At 10 o' clock A.M. on Thursday, the 23rd inst. At the house of her son-in-law, Rev. Samuel H. Cox, of this city, Elizabeth Cleveland, relict of the late Rev. Aaron Cleveland, of Connecticut... Having survived two husbands, three (of eight) children, and seen many vicissitudes, her extraordinary bodily vigour first yielded to a paralytick [sic] shock, which brought her to a bed of debility, suffering and death. She was thus exercised exactly eight weeks and one hour...

Elizabeth Clement Breed was the second wife of Reverend Aaron Cleveland. They were married shortly after the death of his first wife, Abiah Hyde, in 1788. Aaron and Elizabeth named one of their daughters Abiah Hyde (born 1796), after Aaron's first wife. Abiah Hyde Cleveland married Reverend Samuel Hanson Cox, the second pastor (1820–1825) of the Spring Street Presbyterian Church (Moment 1877: 12). As an interesting side note, Reverend Aaron Cleveland and his first wife, Abiah, were the great-grandparents of U.S. President Grover Cleveland (*New York Times* July 20, 1884).

Alfred Roe Cox / Edward Dorr Griffin Cox

After cleaning a dozen coffin plates, each with three lines of text laid out in the same fashion, it was unexpected to see a plate that contained two additional lines. Cleaning the coffin plate revealed five lines and two names: Alfred Roe Cox and Edward Dorr Griffin Cox. The two boys were the sons of Reverend Samuel Hanson Cox and his wife Abiah (*née* Cleveland). A mortuary notice for the boys' younger sister Abiah provided an account of the deaths and burial of the three children:

Insatiate Archer, would not one suffice? – Abiah Caroline Cox, youngest daughter of the Rev. Dr. Cox, departed this life last evening, aged 20 months. Thus, in the course of four days and a half, three members of this afflicted family have been removed by death,—all by scarlet fever. Alfred Roe Cox, aged 6 years, died on Sabbath morning; Edward Dorr Griffin Cox, aged 3 years and 3 months, on Monday morning; and both were buried on Tuesday afternoon, in the same grave and the same coffin (*Rhode Island American and Gazette*, January 10, 1832).

Reverend Cox was the pastor of the Spring Street Presbyterian Church from 1820 until 1825. Reverend and Mrs. Cox were married for 48 years and, over that period, produced a total of 15 children. As was common for the times, many of these children died before reaching adulthood. A daughter, Elizabeth Rowe Cox (born November 14, 1822), was the first child to pass away, on July 29, 1823, and was likely one of the early interments in the Spring Street burial vaults. In late 1831 and early 1832, tragedy struck the family when four of the children died within a three month span of time: daughter Mary Liddon Cox (born November 23, 1831) passed away on November 25, 1831 and was followed in early January by Alfred (born February 7, 1827; died January 1, 1832) and Edward (born September 8, 1828; died January 2, 1832), and daughter Abiah Caroline Cox (born March 30, 1830) died on January 4, 1832 (Cox 1912: 93).

It is probable that all five of the Cox children along with their grandmother—Elizabeth Cleveland (discussed previously)—were interred in the Spring Street vaults, even though corresponding coffin plates were not recovered for three of the children. Although Reverend Cox was no longer the pastor of the

Spring Street Church, Mary, Alfred, Edward, and Abiah were most likely placed in the Spring Street vaults after their deaths in order to be close to the remains of their younger sibling, Elizabeth (Mooney et al. 2008; Meade and White 2013).

Lewis Evens and Emma Fitz Randolph

Lewis Evans surname was misspelled "Evens" on his coffin plate. No mortuary notice was located for 46 year old Lewis Evans or Emma Fitz Randolph who died shortly before her sixth birthday. A published genealogy for the Fitz Randolph family records the marriage of Lewis Evans to Esther Fitz Randolph in 1801. Esther was the elder sister of Stewart Fitz Randolph who was Emma's father (Christian and Fitz Randolph 1950: 52).

Joseph R. Murden

The *New York City Directories* recorded Joseph R. Murden's occupation as teacher until his death at age 74 in 1841. After his death, Murden's wife Keziah was listed as both his widow and a teacher. Some of Joseph R. Murden's lectures have been preserved in a volume published in 1818 by his son, Joseph T., who was a printer at 110 Pearl Street. The book was entitled *The Art of Memory, Reduced to a Systematic Arrangement: Exemplified Under the Two Leading Principles, Locality and Association: With a Specimen of a Mnemonic Dictionary*.

Benjamin N. Abel

Only a fragment of the coffin plate for Benjamin N. Abel was recovered; however, enough information survived to locate the brief notice of his death at age 21. His name did not appear in the city directories in the years leading up to his death. Research into the Abel surname uncovered a tentative connection between Murden and Abel. In 1833, the mortuary notice for George Cook Abel mentioned the place of departure for the funeral as 27 Renwick Street, the house of his father-in-law, Joseph R. Murden. When Murden's daughter Ellen S. married George C. Abel in 1826, Benjamin would have been about five years old. Although no direct connection could be established, it seems probable that

Benjamin was George's son from a previous marriage.

Some of those interred within the Spring Street Church vaults were probably members of the congregation. Others may have belonged to one of the other Presbyterian churches in the city, such as Laight Street, that did not have burial vaults. A few of the individuals like Georgia Senator Nicholas Ware may have been interred there out of necessity. Prior to the widespread use of embalming, the dead were often buried where they died; it was not common practice to transport them.

Coffin Letters and Figures

Three letters and a single figure cut from copper alloy sheet metal were recovered during the investigation of a soil and debris layer immediately above the burials in Vault 4. Two of the letters and the symbol were found with other coffin hardware and three coffin plates mixed with later 19th century artifacts. Although not found attached to a coffin, these metal letters appear to represent coffin letters that would have been fastened to the lid of the coffin to spell the individual's initials, age, and year of death. The recovered letters consisted of a single F, two Bs, and an ampersand (&) symbol; each measured two inches in height and 1.5 to 1.8 in. wide (FIG. 6). These pre-cut letters would have required less time and skill to apply to the coffin than the process of engraving a coffin plate. Similar brass letters and numbers were documented on the remnants of a coffin from an early 18th-century burial during excavations at St. Martin's churchyard in Birmingham, England (Brickley and Buteux 2006: 26). An image of the burial shows the letters and numbers arranged in four rows beginning at the level of the skull with the last row arranged over the pelvic region. In the St. Martin's burial, the coffin figures appear to form the initials of the name, the year of death "172()," followed by the word "(A)GE" and the number "85" indicating the age in years. A search of historical newspapers confirms that coffin letters and numbers were available for sale in America. In 1768, Abeel and Byvanck, near Coentries Market in New York, offered "coffin letters and figures" for sale in an extensive list of metal goods recently imported from London and Bristol



Figure 6. Letters and symbol trimmed from a sheet of copper alloy, excavated from Vault 4. (Photography courtesy of URS Corporation.)

(*New York Gazette and Weekly Mercury* October 31, 1768). During the first half of the 19th century, coffin figures were available from hardware merchants in Connecticut and New Hampshire. At their new store in Hartford, Wheeler, Bradleys and Company detailed their extensive inventory and mentioned "Large and small coffin letters, figures, nails and hinges" for sale in 1817 (*American Mercury* December 30 1817). It was not possible to match the surviving letters to a specific person or family. The ampersand symbol may have been used to record the exact age in years, months, and days, or it might suggest the interment of more than one individual in a coffin.

Coffins

Although the overall preservation of the coffin wood was poor, in the instances where coffin shapes could be discerned, they were hexagonal. Most of coffins would have had flat lids to facilitate stacking, although one fragment of a gabled coffin lid was noted in the field. Several fragments of coffin wood and a nearly complete hexagonal coffin lid were recovered from Vault 3. The coffin wood consisted of light brown, red-painted over light brown, medium reddish brown, and dark brown woods. Several of the fragments of dark

wood exhibited a layer of clear varnish particularly evident around intact copper alloy screws. An advertisement for Thomas Buchanan's Coffin and Furniture Warehouse from the *New York Morning Herald*, dated July 22, 1830, offers "coffins of superior workmanship, various kinds and qualities of wood, ready made at reduced prices."

One of the fragments of a varnished coffin lid recovered from Vault 3 exhibits a portion of a beveled oval cut-out near the head end of the coffin, below a shadow where a coffin plate was once attached. This is the only evidence of a coffin with a viewing window recovered from the Spring Street vaults. Although more commonly associated with later-19th-century coffins, there are other early examples of coffins with viewing glass. In 1993 the remains of Henry Opukaha'ia, who died at age 24 of typhus, were exhumed from the Cornwall cemetery in Connecticut for return to his native Hawaii. The excavations conducted by the State Archaeologist uncovered remnants of the original coffin from 1818 with a glass face plate (Renner 1993, Cornwall Historical Society 2011). Another later example was documented in the *Jamestown Journal* on April 21, 1841 in a published description of President William Harrison's mahogany coffin: "At the

head is a plate of glass, so to show the face distinctly, without exposing it to the air, or the touch of visitors."

Coffin Hardware

The majority of the mortuary artifacts recovered from the vaults consisted of hardware, such as nails, screws, and hinges related to coffin construction. Among the recovered screws and hinges, most were common hardware not specially manufactured for the construction and ornamentation of coffins. "In contrast to the 18th century use of generalized hardware forms on coffins (i.e., tacks or hinges that would not be out of place on household furniture), 19th-century coffin builders used hinges, tacks, and other fittings that were specifically designed to be used in a mortuary context" (Bell 1990: 57). The Spring Street coffin hardware suggests that a transitional period continued through the first half of the 19th century. The recovered coffin hardware reflects this shift toward mass-produced, mortuary-specific hardware.

Although iron coffin nails made up the majority of the coffin hardware (n=1413), the method of manufacture could not be established in most cases due to poor preservation. Of the nails that could be identified, 181 were cut and 11 appeared to be hand wrought.

Three types of metal screws were observed in this sample: iron, copper alloy, and screws with a solid white metal head attached to an iron shank (FIG. 7). Screws were used to secure the lid onto the coffin. "When mounted upon a coffin lid, coffin screws are usually found in either sets of four (or six), symmetrically arranged with one screw near each corner of the box" (Davidson 2004: 400). The majority of screws from Spring Street (n=244) were iron and some of the less corroded examples appeared to have domed heads. The brass screws (n= 35) appeared to be hand manufactured as evidenced by a narrow, slightly off-center slot in the head, irregularly spaced threads, and the absence of a gimlet point. Between 1834 and 1849, several patents were issued that relate to the development of the tapered end or gimlet point (White 2005: 4). The third type of screw (n=16) with an iron shank and solid white metal head was a type specifically advertised as a "coffin screw" in mid-19th-century trade catalogs (Russell and

Erwin 1865: 332). Two coffin tacks, each with a solid domed white metal head and short iron shanks, were recovered from Vault 3. Coffin screws and tacks with white metal heads were in use from about 1840 through 1900 (Davidson 2004: 420).

A total of 21 copper alloy coffin hinges were recovered, some with fragments of small iron fasteners still attached. The majority of the hinges (n=17) were small, plain, rectangular "butt type" examples; however, the remaining four were probably specifically made as coffin hinges and exhibited a more decorative U-, or butterfly, shape (FIG. 7). The size of the decorative hinges and the pattern of corrosion evident on their surfaces suggest that these hinges were probably used on a divided lid coffin.

Although coffin handles were available during the period of use of the vaults, no handles or other more elaborate forms of hardware were recovered from the Spring Street vaults. The absence of coffin handles seems to support the coffin plate data as handles were not in common use prior to 1850 (Davidson 2004: 111). The addition of coffin handles would have added to the cost of the coffin. It is unclear whether the absence of coffin handles at Spring Street relates to economic concerns, religious sentiments, aesthetic considerations, or some combination of factors.

Coffin Interior

A few samples of wood shavings and sawdust were found attached to the interior surfaces of some of the coffin wood from Vaults 2 and 4. The excavations of 18th- and 19th-century burial vaults at Christ's Church Spitalfields in England uncovered over 200 coffins with varying amounts of sawdust, ranging from a thin layer to examples where it completely filled the interior spaces of the container. Descriptions from the Spitalfields vaults further note that:

Coffin bases were filled with sawdust, wood shaving, etc, which are found on top of the mattresses, and were probably added after the body had been viewed, immediately prior to the coffin being sealed. Their purpose was twofold: firstly to absorb liquid from the body's decomposition, and secondly to stop the body rolling and bumping while the coffin was being moved (Reeve and Adams 1993: 102).

Among the various samples collected from the Spring Street vaults was a small clump of unidentified fibrous-looking material. Closer inspection (using a digital LCD microscope) subsequently revealed this sample to consist of the remnants of small quills, shafts, and plumulaceous and pennaceous barbs from feathers. The matted clump is thought to represent down stuffing from a fabric-covered coffin pillow or mattress pad, similar to those documented in the Spitalfield coffins (Reeve and Adams 1993: 103).

Fabric

A variety of fabric fragments were recovered from Vaults 2, 3, and 4. Most of the samples were small (only 1–2 in. in diameter). All were heavily stained, causing most to appear brown in color. Each piece of fabric was closely inspected; however, there were no examples of stitched seams, buttonholes, printed patterns, embroidery, or punched embellishments. The fragmentary nature of the sample made it

difficult to assign the fabric to any specific function such as clothing, shroud, or coffin lining. Specialized ready-made mortuary attire was available at this time, as evidenced by advertisements in the *New York City Directories* and newspapers. In 1830, Edward Coates, sexton of Trinity Church and undertaker, published a half-page notice in the *New York City Directory* informing the public that he had opened a warehouse and offered "Shrouds, Caps, Scarfs, Gloves &c." along with coffins, hearses and carriages for funerals (Longworth 1830: 3). There was no evidence of fabric covering on the fragments of coffin wood examined. Likewise the screws and other hardware did not reveal the impressions of fabric sometimes evident on under surfaces in the pattern of corrosion.

Ribbons

Pieces of finely woven ribbon, possibly silk, were among the fragments of fabric recovered from the Spring Street vault excavations. A few



Figure 7. Sampling of mortuary artifacts: (upper left) ribbon with picot trim; (lower left to right) copper alloy screw, coffin screw, plain rectangular butt-type hinge, decorative coffin hinge. (Photograph courtesy of URS Corporation.)

of the ribbons were trimmed along the outer edge by a series of small loops—a decorative feature known as a picot finish (FIG. 7). While some of the ribbons were thought to be associated with clothing and bonnet or cap ties, the Spitalfields Project report (1993) suggests another explanation:

A number of ties were used to stop the body from moving out of position in the coffin. In particular the legs were tied together, either at the ankles or by the big toes, and the arms were sometimes tied to the sides of the body. In modern practice medical bandages are used, but at Christ Church, the ties were sometimes torn-up strips of other materials or more commonly they were plain commercially produced silk ribbons...The function of trussing a body in this manner is to keep it in a neat, seemly position while being viewed, and to prevent the limbs banging against the coffin sides while the coffin is being moved (Reeve and Adams 1993: 104–105).

Re-examination of the ribbon fragments revealed that a few pieces had two ends tied together, forming a small knot. Inspection along the length of these examples showed heavy soiling, folds, and creases that appeared consistent with use in binding the extremities of the deceased, rather than with fastening articles of clothing. Several other ribbon samples were tied in such a way as to form large decorative bows. One of these bows had a copper alloy straight pin still attached near the center knotted portion. This bow may have been attached to the burial shroud or used to decorate the interior of the coffin. Two identical black bows, made of a slightly coarser woven thread, were also recovered; their original placement remains unknown.

Fasteners

Copper alloy straight pins were among the fasteners excavated from the Vaults 2, 3, and 4. Although many of the pins were corroded and fragile, some examples retained portions of their white metal plating. Pins were commonly used to fasten garments as well as to fix the burial shroud around the deceased. The Spring Street sample included pins with both handmade, wire-wound, spherical heads and machine-made flat heads.

A total of 31 buttons were recovered from the excavation of the vaults. Most of the buttons (n=24) were manufactured from

bone and featured recessed centers and either four or five holes for attachment. Of the remaining buttons, four were made of shell and three were Prosser-type pressed porcelain. A few (n=4) of the bone buttons and all of the shell buttons were found associated with specific burials from Vaults 3 and 4. Two of the shell buttons were recovered from Vault 3, Burial 18, with one recovered from the neck area and the other from the pelvis. The presence of buttons in these bodily associations suggests that this individual was wearing some sort of clothing when buried, rather than having been simply wrapped in a shroud. The report of findings from New York's African Burial Ground archaeological site (Perry et al. 2006) discusses several burials in which individuals were determined to have been interred wearing street clothing or clothing beneath a shroud. Several copper alloy wire hooks (n=3) and eyes (n=5) were also recovered among the remains in Vault 4, supporting the general interpretation that some of the deceased interred in the vaults were attired in clothing of one form or another.

Shoes

Leather shoe fragments from Vault 4 included three heels from at least two different pairs of shoes. Two of the heels had small iron nails arranged in a U-shaped pattern around the outer edge. The other heel had copper-alloy nails that appeared to be wire with a slightly thickened end forming a head. These copper alloy pegs or nails were arranged in a U-shaped pattern, and they were shadowed by a series of small, square iron nails. The iron nails were heavily corroded, and the leather was cracked and split in the areas with iron nails. The double nails may represent some type of repair to the heel. The interior sole of this latter heel and the exterior surface of several other recovered pieces of shoe leather exhibited traces of an unidentified red substance, possibly from a paint or dye. A few pieces of fabric with a coarse twisted thread, possibly remnants of knitted stocking, were recovered with the shoe leather. In some of the burials excavated at Christ's Church Spitalfields, individuals were found to be wearing knitted stockings made from wool, silk, and cotton (Reeve and Adams 1993: 108).

Miscellaneous Personal Items

Some of the miscellaneous small finds from Spring Street were directly associated with human remains while other objects were recovered from collections of commingled skeletal remains and, therefore, are of uncertain intentional placement with funerary remains. The following is a description of personal items recovered from the Spring Street site.

Coins

A total of four United States copper large cents were excavated from the site, all of which derived from Vault 4. All of the coins were minted in Philadelphia but were in such a poor overall state of preservation that their dates of manufacture were extremely difficult to identify, even after cleaning. The earliest recovered large cent (Draped Bust type) is dated 1806; the remaining three coins are Coronet type (Matron Head: 1816–1839) and dated 1819, 181_ (last digit unreadable), and 182_ (last digit unreadable), respectively. Coins were sometimes placed on the eyelids of the deceased to keep the eye closed. All of these coins were in circulation during the period of active use of the Spring Street vaults (1820–1846) and, therefore, could represent objects that were unintentionally left in clothing or deliberately placed with the deceased.

Jewelry

The only piece of jewelry excavated from the burial vaults was a gold wedding band with an interior diameter of 0.73 in. There were no hallmarks or engravings visible on the interior or exterior surfaces. The wedding band was found in Vault 3, along the left-hand (ring) side of Burials 5 and 7. These sets of remains were badly crushed, one directly atop the other, and very poorly preserved. Forensic analysis of Burial 5's remains identified this person as a young man less than 35 years of age at the time of death. Burial 7 was identified as a young woman somewhere between 20 and 24 years of age. Based on the diminutive size and appearance of this ring, it is believed to be a woman's wedding band and was most likely originally associated with the unknown woman represented by Vault 3, Burial 7.

When the technical report for these investigations was prepared, one other gold artifact was tentatively identified as a piece of jewelry, possibly part of a brooch. This thin strip of gold terminated on both ends with irregularly formed, asymmetrical curves somewhat hook-shaped in appearance, and exhibited a heavy pattern of wear represented by fine scratches on some surfaces. The artifact was recently re-examined and identified as a dental device (Crist, this volume).

Hair Combs

Large pieces of three tortoise-shell combs were recovered from the western half of Vault 4. Two of these combs had wide back/handle sections with widely spaced long teeth, suggesting that they were decorative combs used to hold hair in place. The third has a narrow back with closely spaced, short teeth more consistent with the type of comb used for grooming. Two fragments of a decorative, copper-alloy hair comb from the eastern half of Vault 4 mend to form an incomplete length of four inches. While one of the pieces of this comb was recovered with some dark hair still attached, DNA or other more intensive studies of this hair sample were beyond the scope of this investigation.

Ceramic Saucers

Three blue decorated saucers were recovered from Vaults 2, 3, and 4 where they were found in association with burial remains. Due to the disturbed nature of many of the vault remains and the poor preservation of coffin wood, however, it was impossible to establish the positioning of these artifacts or their exact relationship to historic burials at the time they were first introduced into the vaults. Because many of the remains were moved around within the vaults, it cannot be confirmed that the saucers were found in their original locations. The saucer in Vault 2 was found resting on badly decomposed wood above Burial 7 that could have been the lid of that individual's coffin. The Vault 3 saucer was identified beneath a deposit of crushed and comingled remains and found sitting on decomposed coffin wood within the fragmentary remains of Burial 7. Lastly, the Vault 4 saucer was found in the middle of a deposit of largely comingled



Figure 8. Blue printed saucers recovered from Vault 2, Burial 7 and Vault 3, Burial 7. (Photograph courtesy of URS Corporation.)

burial remains and decayed coffin wood above Burials 14-16.

Although all three were found in fragmented states, one saucer mended completely; the remaining two saucers appear to have been whole when they were originally introduced into the vaults (FIG. 8). Each of the saucers was decorated with a blue printed scene of a romantic or idealized landscape. The decorations on two of the saucers may suggest a possible connection between the individual they were associated with and the theme expressed on the ceramic vessel. The saucer excavated in association with Vault 2, Burial 7 features a young woman in a hat wearing a traditional costume in a flower garden with exotic buildings in the background. Although there is no maker's mark, this type of "European scene" was a popular theme probably manufactured between 1830 and 1850. Preliminary forensic analysis identified the remains from this burial as a child 4.5 to 5.5 years of age.

A scalloped rim saucer associated with Vault 3, Burial 7 was decorated in light blue and featured a central scene with a costumed man and woman seated in a formal garden and a small child leaning on the woman's knee. This unmarked piece dates to the same time period (1830-1850) as the saucer from

Vault 2. Analysis of the poorly preserved remains from this burial (the same one identified with the gold wedding ring discussed previously) suggests that they belong to a woman 20 to 24 years of age at death. During the excavation, her intact left thumb metacarpal was recovered from inside one of the largest fragments of this saucer.

The third piece, a "cup plate" measuring 5.5 in. in diameter and recovered within a deposit of non-articulated remains in Vault 4, was decorated with a central scene of Armitage Park, Staffordshire, England with a grapevine border (FIG. 9). The back was marked with an impressed maker's mark for Enoch Wood and Sons, an English pottery that produced this scene as part of a series from 1818 through 1846 (Coysh and Henrywood 1982: 27).

Research indicates that saucers similar to those found in the Spring Street vaults have been found in burials from various archaeological sites in England, the United States, and Jamaica. Evidence suggests that the tradition of placing saucers/plates with the deceased can be associated with a variety of cultures and with several related functions. Examples have been found in both European and African American cemeteries (Fremmer 1973: 58; McCarthy 1998).

The *New York Commercial Advertiser* published a story in 1819 on the "Superstitions of Scottish Peasantry" and included the following burial custom: "When the body is dressed and laid out, a Bible is often put beneath its head, while a plate with salt and another with a piece of green turf is placed on the breast" (*The New York Commercial Advertiser*, June 16, 1819). Similar burial traditions involving saucers or plates were also observed in Wales and Ireland later in the 19th century, as detailed in a book on Welsh folklore:

Of superstitions regarding salt, there are many in Wales. I have even encountered the special custom of placing a plate of salt on the breast of the corpse. In the case of an old woman from Cardiganshire, who was buried at Cardiff, and who was thus decked by her relatives, I was told the purpose of the plate of salt was to 'prevent swelling.' There is an Irish custom of placing a plate of snuff on the body of a corpse; hence the saying, addressed to an enemy, 'I'll get a pinch off your belly yet.' The Irish also employ the plate of salt in the same manner (Sikes 1880: 328).

McCarthy (1998) and other researchers have also raised the possibility that the placement of plates in graves might represent an aspect of traditional West African cultural practices retained by black populations transported to the New World. While this association remains a distinct possibility, few examples of this custom have been identified in African American cemeteries subjected to thorough archaeological study and documentation. In Philadelphia, two plates were excavated in 1984-1985 from burials at the First African Baptist Church Cemetery on Eighth Street. The plates were placed inside the coffins of the deceased, on the

stomachs of each individual. Interments at the Eighth Street burial ground were established between 1823 and the 1840s (McCarthy 1998), a date range that corresponds closely with that for Spring Street vaults.

The Spring Street Presbyterian Church did apparently possess a mixed-race congregation by the 1820s, and while it is tempting to hypothesize that the inclusion of plates in these burial vaults might indicate that African American church members were entombed there, analysis of the skeletal remains recovered during this investigation found no conclusive evidence that any person placed in these vaults was of African descent. Although ten burials did exhibit some skeletal features more commonly observed among people of African ancestry, there is no way to know whether or not they would have been socially recognized or self-identified as African Americans during their lifetimes. In any case, none of the plates were found in association with these specific individuals.



Figure 9. Dark blue printed cup plate in situ, recovered from Vault 4. (Photograph courtesy of URS Corporation.)

Another potential explanation for the presence of these ceramic vessels that deserves further scrutiny is their possible use in sanitizing or disinfecting the burial chambers. During the 19th-century, a considerable amount of time and effort was expended to study the effects on public health that resulted from the decomposition of human remains in both cemeteries and vaults. These studies were carried out within the context of a broader health, hygiene, and sanitation movement in the United States and abroad and involved not only the documentation of the various liquid and gaseous *effluvia* produced by the body as it decomposed, but also the study of how these various noxious substances contributed to the (real or perceived) spread of disease and deleterious health effects among populations living in close proximity to burial grounds and vaults. In conjunction with these investigations, efforts also were made to identify procedures and substances that could effectively neutralize or destroy the byproducts of decomposition. Based on a review of available published literature, it appears that the preferred method for accomplishing this task involved the use of relatively uncomplicated kitchen chemistry to produce chlorine-based or other acidic vapors for fumigating toxic enclosed spaces, such as sewers, privy pits, and burial vaults.

One of the earliest known applications of fumigation to destroy the unhealthy emissions from bodily decay occurred in 1773 when Louis Bernard Guyton de Morveau successfully employed chlorine gas (then called *muriatic acid gas*) to neutralize the putrid effluvia emanating from burial vaults beneath the floor of the Cathedral of Dijon in France (Aiken 1803: 813–816). In the early 19th century, the results of Morveau's experiment were recounted in numerous scientific journals on both sides of the Atlantic Ocean. By the 1830s and 1840s, his method of disinfecting confined spaces had become common subject matter in various domestic "encyclopaedias" and other widely circulated popular publications (e.g., Belinaye 1833: 126–127; Webster 1845: 138–140). As related to the ceramic plates recovered from the Spring Street vaults, these early accounts of "do-it-yourself" fumigation describe that the simplest way to produce chlorine vapor was to "put some common salt into an *earthenware dish* [emphasis added], and pour upon it some

sulphuric acid" (Webster 1845: 138). This procedure, in turn, produced a chemical reaction that releases chlorine gas into the air of the room or building being disinfected. Accounts indicate that this specific process of fumigation was utilized widely throughout Europe during the 19th century. In the 1860s, Dr. Henry Letheby, Health Officer of London, reported that "in this manner all of the [burial] vaults of the city churches have been disinfected" (Letheby 1866: 276–268); the container Letheby preferred to use in mixing his fumigation ingredients was a teacup.

Whether or not the ceramic vessels found in the Spring Street vaults were used in conjunction with similar fumigation efforts is not known; however, this remains an intriguing interpretation that has not been discussed in prior archaeological investigations. From surviving historical accounts, it is known that the Spring Street Church vaults were entered periodically—to deposit deceased members of the congregation, for the purposes of "regulation" by members of the congregation or persons contracted by the church, and to make repairs to the ceiling—and therefore occasional fumigation may have been desired or required to prevent injury to those carrying out these actions.

Conclusions

At the time the technical report for this project was prepared, there were few published documents on excavations of vault burials in New York City or elsewhere in this country. The mortuary artifacts recovered during the investigation of the Spring Street Presbyterian Church site communicate details of the practices and customs associated with interments in church vaults and provide some baseline data for further research. The analysis of these artifacts provides information on the coffin hardware in use during the first half of the 19th century as the mortuary industry was developing and funerary hardware was becoming more specialized. The names and dates of death revealed through cleaning and examination of the coffin plates enabled further research that uncovered the identities, occupations, and familial relationships of some of the individuals interred in the vaults. Although no patterning could be established

from the skeletal remains, the coffin plate information, when cross referenced with genealogical records, showed some effort to inter family members and relatives within the same vault. While it may not be possible to match the names on the coffin plates to the skeletal remains we know more for having met the Spring Street Presbyterians of the early 19th century.

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