MORTUARY DISPLAY AND STATUS IN A NINETEENTH-CENTURY
ANGLO-AMERICAN CEMETERY IN MANASSAS, VIRGINIA

Barbara J. Little, Kim M. Lanphear, and Douglas W. Owsley

In this study of an Anglo-American cemetery used between the 1830s and 1907, contemporary mortuary trends and cultural attitudes toward death provide the historical context necessary to interpret variation in mortuary display. Analysis of skeletal remains provides information on dental caries, dental care, and enamel hypoplasia and allows comparison of the relatively high-status Weir family’s health with that of other population samples. Analysis of artifacts reveals four styles of grave decoration attributed not to intrasite status variability but to the appearance, peak, and decline of Victorian era cultural expressions of the “beautification” of death. Within this wider cultural trend, intersite comparisons may be made of status display. The rise and decline of the nineteenth-century ideal of the beautification of death adds vital cultural content for understanding the material expression of an observed process that is a cycle of display.

En este estudio de un cementerio anglo-american utilizado entre 1830 y 1907 las tendencias en la mortandad y las actitudes culturales respecto a la muerte proveen el contexto histórico necesario para interpretar las variaciones en las manifestaciones mortuarias. El análisis de restos esqueléticos proporciona información sobre caries, cuidado dental e hipoplasia de esmalte, a la vez que permite comparar la salud de la familia Weir, de status relativamente elevado, con otras muestras de la población. El análisis de los artefactos revela cuatro estilos de decoración de tumbas que no son el resultado de variaciones de status dentro del sitio sino que reflejan el surgimiento, apogeo y decadencia de las expresiones culturales de la era Victoriana relacionadas con el “embellecimiento” de la muerte. Dentro de esta amplia tendencia cultural se pueden efectuar comparaciones acerca de las manifestaciones de status. El surgimiento y declinación del ideal decimonónico del embellecimiento de la muerte añade un contenido cultural vital para comprender la expresión material de un proceso que constituye un ciclo de exhibición.

Prehistoric burials have long been a major focus of archaeological interest and effort (e.g., Bartel 1982; Brown 1971; Chapman et al. 1981; O’Shea 1984; Tainter 1978), but now, as historical archaeologists and physical anthropologists broaden the scope of their research, burials from the historic period are receiving increased attention (e.g., Bell 1987, 1990; Elia and Wesolowsky 1991; Parrington 1987; Thomas et al. 1977; Trinkely and Hacker-Norton 1984). As Cannon (1989) has recently emphasized, knowledge of the historical context of burials is essential to developing an understanding of their significance. The equating of “elaborate mortuary behavior with high social status” (Cannon 1989:437) cannot be assumed unless social context is understood, a point relevant to prehistoric as well as to historic burials. Such historical context need not be gleaned from written documents but may be constructed from the diachronic use of archaeological data in conjunction with models such as that of cyclical process of display.

To interpret status on the basis of burial goods requires recognition of at least two factors: (1) the cyclical quality of status display as a manifestation of social competition balancing elite innovation and nonelite emulation (Cannon 1989), and (2) the ideologically charged symbolism of burial ritual (Parker Pearson 1982). Thus, for the research presented here, the historical context of nineteenth-century mortuary trends in the United States must be understood to interpret variations in “status display.” Status may be based on power, economic wealth, social standing, or a combination of these (see Berreman 1981; Stine 1990). Display may be of recognized status or of status that is

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aspired to. Depending on the cycle of elaboration, high status may be displayed by expensive grave goods or, for example, by “tasteful” post-Victorian understatement. When lower-class emulation reaches a certain point, one elite evasive technique is to change the rules. McCracken (1988:34) terms this the “invisible-ink” strategy, wherein a group cultivates certain kinds of knowledge, such as proper burial custom, that identifies group or status membership, and then changes the requisite knowledge often enough to identify and exclude outsiders. Such cyclical display tends to occur in cultural contexts where status is achievable rather than in situations where class structure is rigid and unassailable (McCracken 1988). By the nineteenth century, when mass manufacturing and marketing allowed mass consumption of goods, a common alternative elite strategy of marking status with special, closely guarded objects became much more difficult to sustain, and elite strategies changed in response.

This report presents the results of excavation of a family cemetery in Manassas, Virginia, and discusses these observations in relation to the mortuary trends and social context of this period. The study of historical-period burial practices allows archaeologists to test assumptions and to refine the logic of interpretation. Historic context provides enough detail for such studies to be “cautionary tales,” but therein lies part of their value in broadening the range of factors that must be considered in hypothesizing explanations for burial variability. Therefore, the study of historical-period mortuary practices contributes to a long-standing interest in prehistoric burials by contributing test cases for theory building. Comparable contributions may be sought from modern material-culture studies (e.g., Rathje 1979).

PROJECT BACKGROUND

Excavation of the Weir family cemetery (44PW507) was undertaken at the request of family members who were concerned because ownership of the cemetery grounds had not been transferred to the city of Manassas together with the ancestral home in 1986. The cemetery, located several hundred meters from the house and relatively isolated until recently, had been vandalized, resulting in damage to stones and digging into at least one of the graves. New townhouses had been constructed around the cemetery, some no more than 6 m from its perimeter. The family felt that the historical integrity of the cemetery had been compromised and obtained a court order to relocate the burials to the nearby grounds of the antebellum family house. Excavation and study of the osteological remains and associated artifacts were part of the approved relocation plan. The Museum of Natural History of the Smithsonian Institution, the Armed Forces Institute of Pathology, and the University of Maryland, College Park, cooperated in the analysis of the burials and artifacts. Barbara Little and Douglas Owsley were coprincipal investigators; Kim Lanphear performed much of the skeletal analysis. Excavation and analysis were done on a volunteer basis. The Manassas City Museum coordinated the effort and the reburial of remains in a plot near the standing house. With the exception of a lumbar vertebra retained for histochemical examination and testing for blood proteins, all the skeletal material was reinterred in September 1990. Samples of soft tissue and hair were retained for research. The iron coffin and clothing from Burial 23 and the pessary from Burial 13 were donated to the National Museum of Health and Medicine. Some of the coffin furniture was given to the Smithsonian Institution’s reference collection. Other artifacts were reinterred in June 1991. All reinterred material was sealed in airtight plastic containers with the intent of allowing future examination.

HISTORICAL BACKGROUND

The Weir family plantation was within the original Lower Bull Run Tract of nearly 2,834 ha (7,000 acres) patented in 1724 by Robert “King” Carter. Harriet Bladen Mitchell, a great-great-granddaughter of “King” Carter, received a land tract of 672 ha (1,660 acres) from her mother. She married William J. Weir in 1817, and in the mid-to-late 1820s the home known as Liberia was constructed. The historic property, now owned by the city of Manassas, covers 8.1 ha (20 acres), which is much less than its original area. It is now listed on the National and Virginia Registers of Historic Places.
The Weir family was quite wealthy, particularly in real estate and slaves. In 1856, William J. Weir owned 239 ha (590 acres) of farm land in addition to Liberia, with a total farm value of nearly $33,000 (Prince William County Land Tax books, in Henschell [1991]). Listed as "farmer" in the 1860 census, William Weir’s total value of real and personal estate was nearly $113,000. At that time he owned more than 80 slaves. Fewer than 10 percent of southern slave owners owned more than 50 slaves in 1860 (U.S. Federal Census and Slave Schedules 1860, in Henschell [1991]).

Most of the upper-middle-class plantations in the area produced grain, livestock, and dairy products for the urban markets of Alexandria, Virginia, and Washington, D.C. (Goldfield 1977; Harrison 1987 [1924]:397–418). These cities doubtless afforded the Weirs opportunities to sell their farm products and buy supplies.

The Liberia property was used by both armies during the Civil War. After the First Battle of Manassas (First Battle of Bull Run), General Beauregard, in command of the Confederate Army of the Potomac, used Liberia as his headquarters. He established Camp Pickens on the surrounding grounds and occupied the property from late July to September, 1861 (Douglas Harvey, personal communication 1991). In the spring of 1862, a Union officer reporting on action in Virginia indicated that the Weir house was in use as a rebel headquarters and "hospital dead-house." He further stated that the rebels retreated in such panic that they left four bodies awaiting burial (Scott 1882:545). In June 1862, General McDowell, commander of Union forces in Northern Virginia, made the Weir property his headquarters for several weeks. Still later in 1862, General Sickles headquartered there while guarding the Orange and Alexandria Railroad, a vital supply line for Union troops.

The Weir family left the property prior to the arrival of Union troops after burying a daughter, Julia (Weir) Willcoxon, in March 1862. They returned after the war but in substantially diminished economic circumstances. When William J. Weir died in 1867, he left Liberia to his son Walter. When Walter died in 1870, his estate, including personal property and farm equipment, amounted to little more than $4,000 (Conner 1981). Robert Portner, a German immigrant and inventor, acquired Liberia in the 1890s. Although the home had passed out of the Weir family, the cemetery continued to be used until 1907.

THE ABOVE-GROUND CEMETERY

During the fall of 1988 investigators cleared and mapped the cemetery (Little 1989). Prior to this work the developers of the surrounding townhouses had bulldozed the ground west of the chainlink fence, but reportedly there were no finds of either markers or other buried materials. The ground surface sloped, with the southeast portion of the cemetery being about 1.2 m higher than the northwest portion and approximately .6 m higher than both the northeast and southwest sections. Above ground in the Weir cemetery were 15 marked headstones, several of which were associated with footstones. All except two bore dates of death. In addition, six small, unmarked, red sandstone slabs were assumed to be grave markers. A number of stones and at least one grave had been disturbed by extensive rodent activity. A modern chainlink fence surrounded a plot that occupied about one-third of the 13.4-x-19.5-m (44-x-64-foot) area that had been set aside "forever" as a burying ground.

Of the 15 marked graves, two were of children three years or younger, six were of individuals from 20 to 39, four were of persons from 40 to 59, and three were of individuals older than 70. Nearly all of the marked graves were arranged in two long rows; a third was indicated by a few stones in the northwest corner of the plot. The eastern row contained the graves of Harriet and William Weir, the builders of Liberia, and four of their adult children. The middle row contained some of their married children with spouses, and other relatives. The western row contained too few markers to suggest any intentional organization.

Head and footstone styles varied less by date than by immediate family association. The six sandstone markers in the eastern row were tall, broad, and thin; C. J. Neale of Alexandria had signed two of them and, judging from the similar style, shape, and material, he probably carved all six. The epitaphs on these stones were similar and apparently were composed by William Weir. His wife’s stone reads:
SACRED to the memory of my beloved & affectionate wife Harriet Bladen Weir Daughter of Robt. Mitchell, Grove Mount Richmond Co. & Grand-Daughter of Robt. Carter Nomyin Hall, Westmoreland Co who died the 14th July [illegible] aged [illegible] months. She was the mother of thirteen children of whom nine survived. She was amiable in disposition Guileless in Spirit & passed through life most beloved by those who knew her best.

Other stones are dedicated to “my beloved Son” or “beloved and affectionate” daughter or son. The epitaphs tend to be lengthy and include such epithets as guileless, amiable, gentle, and affable. The stones from the middle row are shorter, and some are thicker than those in the eastern row, and the construction material varies. Epitaphs tend to be short. Only three stones, all in this row, were decorated with images. The stone of Robert A. Weir, Burial 6 (died 1869), has a lamb motif. That of Bettie Weir, Burial 5 (died 1907), shows a lyre and leaves. The stone for Martha Weir, Burial 13 (died 1886), shows clasped hands in a circle; the decorative elements on her coffin also include a cast white metal hand pointing, the “one way” symbol. This hand imagery was common during the Second Great Awakening, the effects of which were concentrated in New York state but affected much of the nation to varying degrees (Wurst 1991:126, 131–133, Figures 8.1 and 8.2). Figure 1 shows the locations of marked graves and of burials, which were numbered arbitrarily in the field. Name, age, sex, and date of death for each known individual are listed in Table 1.

EXCAVATED REMAINS

After mapping the above-ground remains and procuring the necessary court order, a test unit was excavated in fall of 1989 to reveal stratigraphy. Topsoil was then stripped away with a backhoe to reach the grave shafts. Archaeologists monitored the backhoe operation closely for artifacts, which consisted of fragments of headstones and footstones and parts of an earlier fence. After shovel skimming to the top of the outlines of the graves, smaller hand tools were used to expose the burials.

Excavation revealed 24 burials in three rows, all with heads to the west (Figure 1). Depth below present ground surface to the base of the coffins ranged from 1.9 to 2.7 m. With one exception, all coffins had collapsed. Fifteen were hexagonal; eight were rectangular. The nine unnamed burials included five adults and four children. The red sandstone markers indicated children’s graves, with the exception of one footstone marking the grave of an adult. Several of these sandstone markers had been displaced horizontally.

Although her epitaph indicated that four of Harriet Weir’s children died in infancy, it is unlikely that all four of the unidentified children are hers. Assuming that child-bearing began relatively early in the marriage, the spacing of birthdates of the nine children who survived to adulthood (1820, 1825, 1827, 1828, 1831, 1832, 1835, 1838, 1839) and the dates of Liberia’s occupation (beginning in the mid-to-late 1820s) suggest that at least two of the unidentified children could be hers and may be conservatively dated to the 1830s. These Weir children probably occupy the two children’s graves that lie in the easternmost line of graves containing the immediate family. One of the five unidentified adults also lies in that row. This unidentified adult grave might be one of the Weir sons whose burial place is unaccounted for. Members of the family who have studied its genealogy could offer no other suggestion about the possible identity of this individual. Other unnamed burials possibly include that of William Weir’s second wife, Louisa Ball Weir, and their daughter, Sarah Carter Ball Weir (Jane Council, personal communication 1989). It is expected that soldiers who died in the main house during the war were buried elsewhere on the property, presumably closer to the house.

In one grave, that of Walter Weir (Burial 23), was a complete skeleton, some brain tissue, and a suit of clothing. The excellent state of preservation was the result of burial in a cast-iron coffin. (The skeletal remains of this burial are described in detail below.) Little bone remained in the other burials. All that survived of most coffins were bits of wood, nails and screws, remnants of lining and covering fabric, glass viewing plates, and decorative hardware. One coffin, however, had been lined with metal sheeting of lead/tin alloy. This coffin (Burial 21) had collapsed but did not preserve the contents any better than did the wooden containers. Apparel found with the burials included scraps of fabric, buttons, buckles, hundreds of glass beads from a dress, and leather scraps from
shoes. Many of the buttons were common utilitarian buttons for underwear or shirts. Most of the children probably were buried in simple shifts, buttoned at the neck. Some cloth-covered vest and coat buttons in the men’s graves suggest burial in suits common for the period. Walter Weir (Burial 23) was clothed in a black waistcoat with quilted lining, matching trousers, and socks. His feet were bound by fabric. A shirt with detachable collar and black bowtie and a discolored vest were worn beneath the waistcoat. Buttoned longjohns were worn beneath the trousers. Across his chest was the remnant of a lace material containing the remains of a medallion woven from hair (Wagner 1990). Other personal effects in the cemetery included one woman’s decorative hair combs, a pocketknife, a woman’s piece of jewelry, a man’s monogrammed cufflinks, and an intrauterine device (pessary). Figure 2 shows this device, an artifact rarely recovered in excavations of nineteenth-century burials. Pessaries were used to support a prolapsed uterus, common in the era due to frequent childbirth and whalebone corsets. The device relieves pressure on the bladder and is still used, although less frequently, as a prolapsed uterus often can be surgically corrected. The presence of the pessary suggests access to and use of professional medical treatment. There are not, however, enough comparable archaeological finds to suggest frequency of actual use among different economic classes. Table 1 summarizes basic information about the materials recovered. Dating of unmarked graves and decorative elements are discussed in a subsequent section.
Table 1. Weir Family Cemetery Summary Chart by Date of Interment.

<table>
<thead>
<tr>
<th>Burial Number/Date</th>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Coffin Shape and Material</th>
<th>Decorative Elements: Number of Types</th>
<th>Decorative Elements: Total Number</th>
<th>Grave Goods Other than Coffin Decoration</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/1830s?</td>
<td>unknown</td>
<td>C</td>
<td>?</td>
<td>rect/wood</td>
<td>0</td>
<td>0</td>
<td>1 button</td>
</tr>
<tr>
<td>20/1830s?</td>
<td>unknown</td>
<td>C</td>
<td>?</td>
<td>hex/wood</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>17/1841</td>
<td>Harriet Bladen Mitchell Weir</td>
<td>48</td>
<td>F</td>
<td>hex/wood</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>22/1841</td>
<td>Olevia Ann Weir</td>
<td>21</td>
<td>F</td>
<td>hex/pine, spruce, or larch</td>
<td>0</td>
<td>0</td>
<td>10 buttons</td>
</tr>
<tr>
<td>7/1842</td>
<td>Robert Marye Weir</td>
<td>57</td>
<td>M</td>
<td>hex/yellow pine</td>
<td>1</td>
<td>1</td>
<td>1 button</td>
</tr>
<tr>
<td>19/1852</td>
<td>Dr. John Marye Weir</td>
<td>25</td>
<td>M</td>
<td>rect/white pine</td>
<td>3</td>
<td>18</td>
<td>1 button</td>
</tr>
<tr>
<td>21/1855</td>
<td>Bladen Weir</td>
<td>27</td>
<td>M</td>
<td>hex/lead lined (yellow pine floor) w/ in rect black-walnut box</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>24/1856</td>
<td>Carter Weir</td>
<td>21</td>
<td>M</td>
<td>hex/white pine</td>
<td>7</td>
<td>20</td>
<td>6 buttons</td>
</tr>
<tr>
<td>11/1850s?</td>
<td>unknown</td>
<td>A</td>
<td>F</td>
<td>hex/wood</td>
<td>2</td>
<td>22</td>
<td>3 buttons</td>
</tr>
<tr>
<td>15/1850s?</td>
<td>Johny</td>
<td>3</td>
<td>M</td>
<td>rect/yellow pine</td>
<td>9</td>
<td>21</td>
<td>6 buttons</td>
</tr>
<tr>
<td>1860s?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/1861</td>
<td>Josiah Willcoxon</td>
<td>48</td>
<td>M</td>
<td>hex/yellow pine</td>
<td>3</td>
<td>37</td>
<td>7 buttons; cufflinks w/&quot;JW&quot;</td>
</tr>
<tr>
<td>14/1862</td>
<td>Julia Elizabeth (Weir) Willcoxon</td>
<td>30</td>
<td>F</td>
<td>hex/yellow pine</td>
<td>3</td>
<td>4</td>
<td>1 button</td>
</tr>
<tr>
<td>16/1867</td>
<td>William J. Weir</td>
<td>75</td>
<td>M</td>
<td>hex/white pine</td>
<td>4</td>
<td>72</td>
<td>13 buttons; 2 buckles; collar stays; clothing fabric</td>
</tr>
<tr>
<td>6/1869</td>
<td>Robert A. Weir</td>
<td>14 mo.</td>
<td>M</td>
<td>rect/yellow pine</td>
<td>6</td>
<td>92</td>
<td>1 button; shoe heel</td>
</tr>
<tr>
<td>4/1869</td>
<td>Clara B. Weir</td>
<td>78</td>
<td>F</td>
<td>rect/yellow pine</td>
<td>6</td>
<td>21</td>
<td>3 horn hair combs</td>
</tr>
<tr>
<td>2/1860s?</td>
<td>unknown</td>
<td>A</td>
<td>M</td>
<td>hex/wood</td>
<td>7</td>
<td>97</td>
<td>9 buttons; 1 buckle</td>
</tr>
<tr>
<td>9/1860s?</td>
<td>unknown</td>
<td>C</td>
<td>?</td>
<td>hex/wood</td>
<td>1</td>
<td>52</td>
<td>2 buttons</td>
</tr>
<tr>
<td>Burial Number/Date</td>
<td>Name</td>
<td>Age</td>
<td>Sex</td>
<td>Coffin Shape and Material</td>
<td>Decorative Elements: Number of Types</td>
<td>Decorative Elements: Total Number</td>
<td>Grave Goods Other than Coffin Decoration</td>
</tr>
<tr>
<td>--------------------</td>
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<td>-----</td>
<td>----------------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>10/1860s†</td>
<td>unknown</td>
<td>A</td>
<td>M</td>
<td>rect/wood</td>
<td>1</td>
<td>1</td>
<td>6 buttons; 1 buckle</td>
</tr>
<tr>
<td>23/1870</td>
<td>Walter Weir</td>
<td>31</td>
<td>M</td>
<td>hex cast iron w/in rect wood box</td>
<td>2</td>
<td>10</td>
<td>full suit of clothing preserved</td>
</tr>
<tr>
<td>13/1886</td>
<td>Martha S. Weir</td>
<td>55</td>
<td>F</td>
<td>rect/white pine</td>
<td>5</td>
<td>7</td>
<td>3 buttons; glass-beaded dress with 21 buttons; 1 pessary (intrauterine device)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(+2 iron)</td>
<td>(+4 iron)</td>
<td></td>
</tr>
<tr>
<td>5/1907</td>
<td>Bettie Weir</td>
<td>80</td>
<td>F</td>
<td>rect w/in rect box/white pine</td>
<td>7</td>
<td>18</td>
<td>1 button; 1 black-glass (imitation jet) brooch set on brass</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(+5 iron)</td>
<td>(+21 iron)</td>
<td></td>
</tr>
<tr>
<td>1/?</td>
<td>unknown</td>
<td>2–3</td>
<td>?</td>
<td>hex/wood</td>
<td>0</td>
<td>0</td>
<td>7 buttons; 1 buckle; pocket knife; associated white quartz, redware lip</td>
</tr>
<tr>
<td>3/?</td>
<td>unknown</td>
<td>A</td>
<td>?</td>
<td>rect/black walnut</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>8/?</td>
<td>unknown</td>
<td>A</td>
<td>F</td>
<td>hex/wood</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

* C = child; A = adult.

† rect = rectangular; hex = hexagonal.

* Decorative elements. Lining fabric and nondecorative lining tacks are not included in counts of decorative items. Lining tacks that are decorative are included. Decorative lining textiles such as edging and decorative threading are included but each is counted only once, regardless of the number of fragments or threads. Handles are counted in the total number of items, even though the number of handles can vary on a box.

* Both Burials 18 and 20 are located in the eastern row containing immediate family of Harriet and William Weir. They are probably children who died in the 1830s.

* Harrier Weir died in 1841, however the date on her gravestone is obliterated.

† The tack style is identical to that in Burials 19, 21, and 24.

‡ Johny is the son of Julia Willcoxon (Burial 14). Given the age of his mother and the family's absence from Liberia from the spring of 1862 until the end of the war, Johny probably died between 1850 and 1862.

* The handles and decorative caps are identical to those of Burial 16. Other material is similar to that in Burials 16, 4, and 6.

* Contains decorative screw caps like those in Burials 2, 4, 6, and 16.

* Contains decorative brass identical to that of Burials 2 and 6.
OSTEOLOGICAL AND DENTAL ANALYSIS

The skeletal sample affords a rare opportunity to examine health among a wealthy nineteenth-century plantation family. However, with the exception of the individual preserved in a cast-iron coffin (Burial 23), the skeletal remains were in poor condition (Table 2). Bone recovered was generally so fragmentary that no gross paleopathological analysis could be done. However, the teeth and the single well-preserved skeleton provide insight into the health of the Weir family members. Dental pathology is influenced by diet, oral hygiene, and individual health. Therefore, dental observations can contribute substantially to the assessment of socioeconomic status. The Weirs show relatively little dental attrition, a finding that reflects dependence on highly processed, nonabrasive foods.

Dental examination was possible for 18 of the 24 individuals. Mandibular and maxillary alveolar bone (lower and upper jaws) was present only in Burial 23. Tooth crowns present in the other burials were examined for carious lesions and for enamel hypoplasia. Because teeth are frequently lost, either antemortem or postmortem, bioarchaeological investigations of dental pathology often are more accurately assessed using the number of teeth available for examination rather than the total number of individuals (adults) examined. Because of differential preservation or other reasons, some individuals had only a few teeth available for examination; others had more. The approach based on tooth count by tooth type was the best way to evaluate the frequency of dental caries and hypoplasia in this series.

Dental Caries

Dental caries result from the activity of bacteria that, without intervention, cause progressive destruction of a tooth (Pindborg 1970) and can spread to surrounding bone, possibly resulting in widespread infection and death. Populations with diets high in carbohydrates (including refined sugar and flour) typically have high frequencies of caries (Ortner and Putschar 1981).

There were 20 individuals with at least one permanent tooth present and 12 of them had at least one caries. However, many individuals had only a few teeth or had teeth that were not in good condition, therefore using percentage of individuals would be misleading. Of 197 teeth recovered from the Weir cemetery, 35 (17.8 percent) have carious lesions (Table 3). Of these 35 cavities, 19 (54.3 percent) had been filled with gold or a combination of gold and amalgam (Tables 2 and 3).

Enamel Hypoplasia

Nutritional or disease stress (e.g., infant diarrhea) experienced before the age of seven can manifest itself in depressed “lines” on the teeth known as enamel hypoplasia (Goodman and Armelagos 1985; Goodman et al. 1987). These hypoplastic lines occur when a stress event is lengthy enough
Table 2. Weir Family Cemetery Skeletal Summary.

<table>
<thead>
<tr>
<th>Burial</th>
<th>Age</th>
<th>Sex</th>
<th>Teeth</th>
<th>Carious</th>
<th>Number with Gold Fillings (%)</th>
<th>Bone Recovered*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>?</td>
<td>0</td>
<td>0</td>
<td>none</td>
<td>skull, L + R femora, L + R tibia, L + R humeri, L + R scapulae, L + R clavicles, L + R radii, L + R ulnae</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>M</td>
<td>4</td>
<td>0</td>
<td>skull, mandible, L + R tibiae, L + R patellae, L femur</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>A</td>
<td>?</td>
<td>3</td>
<td>2</td>
<td>2 (100)</td>
<td>skull, (hair)</td>
</tr>
<tr>
<td>4</td>
<td>78</td>
<td>F</td>
<td>3</td>
<td>1</td>
<td>0 (0)</td>
<td>skull, thickened; (hair)</td>
</tr>
<tr>
<td>5</td>
<td>80</td>
<td>F</td>
<td>6</td>
<td>3</td>
<td>3 (100)*</td>
<td>skull</td>
</tr>
<tr>
<td>6</td>
<td>14 mo.</td>
<td>M</td>
<td>0</td>
<td>—</td>
<td>none</td>
<td>skull</td>
</tr>
<tr>
<td>7</td>
<td>57</td>
<td>M</td>
<td>4</td>
<td>0</td>
<td>skull</td>
<td>skull, radius, ulna, femur, tibia, fibula</td>
</tr>
<tr>
<td>8</td>
<td>A</td>
<td>F</td>
<td>17</td>
<td>3</td>
<td>0 (0)</td>
<td>skull</td>
</tr>
<tr>
<td>9</td>
<td>C</td>
<td>?</td>
<td>0</td>
<td>—</td>
<td>none</td>
<td>skull, ribs, R humerus</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
<td>M</td>
<td>19</td>
<td>1</td>
<td>0 (0)</td>
<td>skull, mandible, L + R humeri, R radius, L ulna, ribs, sternum, L + R femora, L + R tibiae</td>
</tr>
<tr>
<td>11</td>
<td>A</td>
<td>F</td>
<td>5</td>
<td>0</td>
<td>skull</td>
<td>skull</td>
</tr>
<tr>
<td>12</td>
<td>48</td>
<td>M</td>
<td>5</td>
<td>0</td>
<td>teeth only</td>
<td>skull</td>
</tr>
<tr>
<td>13</td>
<td>55</td>
<td>F</td>
<td>10</td>
<td>4</td>
<td>4 (100)c</td>
<td>skull</td>
</tr>
<tr>
<td>14</td>
<td>30</td>
<td>F</td>
<td>2</td>
<td>2</td>
<td>1 (50)</td>
<td>teeth only</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
<td>M</td>
<td>0</td>
<td>—</td>
<td>skull</td>
<td>skull, ribs, R humerus, R fibula, R tibia</td>
</tr>
<tr>
<td>16</td>
<td>75</td>
<td>M</td>
<td>11</td>
<td>1</td>
<td>0 (0)</td>
<td>skull, mandible, L + R humeri, R radius, R ulna, ribs, sternum, L + R femora, L + R tibiae</td>
</tr>
<tr>
<td>17</td>
<td>48</td>
<td>F</td>
<td>5</td>
<td>0</td>
<td>teeth only (and one nonhuman bone)</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>C</td>
<td>?</td>
<td>0</td>
<td>—</td>
<td>none</td>
<td>skull, L femur, L + R tibiae</td>
</tr>
<tr>
<td>19</td>
<td>25</td>
<td>M</td>
<td>21</td>
<td>3</td>
<td>2 (66.7)</td>
<td>teeth only</td>
</tr>
<tr>
<td>20</td>
<td>C</td>
<td>?</td>
<td>0</td>
<td>—</td>
<td>none</td>
<td>skulls</td>
</tr>
<tr>
<td>21</td>
<td>27</td>
<td>M</td>
<td>28</td>
<td>6</td>
<td>0 (0)</td>
<td>skulls, L + R humeri, L + R femora, L + R tibiae, L + R patellae</td>
</tr>
<tr>
<td>22</td>
<td>21</td>
<td>F</td>
<td>3</td>
<td>0</td>
<td>—</td>
<td>skulls</td>
</tr>
<tr>
<td>23</td>
<td>31</td>
<td>M</td>
<td>30</td>
<td>3</td>
<td>1 (33.3)</td>
<td>complete skeleton, good condition</td>
</tr>
<tr>
<td>24</td>
<td>21</td>
<td>M</td>
<td>21</td>
<td>6</td>
<td>6 (100)</td>
<td>skulls</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>35</td>
<td>19</td>
<td>54.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Bone recovered is in addition to teeth noted. Note that all skeletal remains are fragmentary and in poor condition with the exception of Burial 23.

* Fillings include one of gold and amalgam.

* Four loose fillings were found in association with this burial.

to disrupt growth of the tooth enamel. When growth resumes, a characteristic line indicates that growth disruption occurred, and its position on the tooth indicates the approximate age of the event.

Of the 197 teeth recovered, 57 were too fragmentary or stained to determine whether hypoplastic lines were present. Eleven (7.85 percent) of the remaining 140 teeth display hypoplasia (Table 3). Thirteen individuals had at least one tooth crown that could be examined; seven of these (53.8 percent) displayed this evidence of stress (Table 4). The relatively small number of hypoplastic lines makes it difficult to determine the age of peak stress. None of the individuals have lines that formed before the age of two years. Most of the childhood stress occurred between the ages of two and four, with one individual experiencing a stress episode at about age five.

Burial 23

The well-preserved remains of Burial 23 were associated with a gravestone indicating the death of 31-year-old Walter Weir in 1870. Standard measures and techniques for determining age, sex, and race indicate that the remains are that of a white male of 30–34 years (Bass 1987; Gill and
Table 3. Weir Family Cemetery Teeth: Carious Permanent Teeth and Enamel Hypoplasia.

<table>
<thead>
<tr>
<th>Tooth Type</th>
<th>Number (Total)</th>
<th>Number Carious (%)</th>
<th>Number Filled (%)</th>
<th>Number Examined for Hypoplasia</th>
<th>Number with Hypoplasia (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxilla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incisor</td>
<td>10</td>
<td>2</td>
<td>0</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(20)</td>
<td></td>
<td></td>
<td></td>
<td>(40)</td>
</tr>
<tr>
<td>Canine</td>
<td>15</td>
<td>0</td>
<td>—</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(33.3)</td>
</tr>
<tr>
<td>Premolar</td>
<td>28</td>
<td>4</td>
<td>16</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(14.3)</td>
<td>(50)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molar</td>
<td>48</td>
<td>14</td>
<td>28</td>
<td>1</td>
<td>(29.2)</td>
</tr>
<tr>
<td></td>
<td>(57.1)</td>
<td>(3.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>101</td>
<td>20</td>
<td>66</td>
<td>9</td>
<td>(19.8)</td>
</tr>
<tr>
<td></td>
<td>(50)</td>
<td>(13.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandible</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incisor</td>
<td>14</td>
<td>0</td>
<td>—</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Canine</td>
<td>12</td>
<td>0</td>
<td>—</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(10)</td>
</tr>
<tr>
<td>Premolar</td>
<td>29</td>
<td>3</td>
<td>25</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(10.3)</td>
<td>(33.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molar</td>
<td>41</td>
<td>12</td>
<td>26</td>
<td>1</td>
<td>(29.3)</td>
</tr>
<tr>
<td></td>
<td>(66.7)</td>
<td>(3.8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>96</td>
<td>15</td>
<td>74</td>
<td>2</td>
<td>(15.6)</td>
</tr>
<tr>
<td></td>
<td>(60)</td>
<td>(2.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>35</td>
<td>140</td>
<td>11</td>
<td>(17.8)</td>
</tr>
<tr>
<td></td>
<td>(54.5)</td>
<td>(7.9)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


An autopsy was performed on the remains of Walter Weir at the Armed Forces Institute of Pathology in April 1990 (Wagner 1990). Walter Weir survived combat in the Civil War without any apparent bone lesions or major trauma. Vertical fractures on all anterior teeth indicate minor anterior-facial trauma (R. C. Zalme, personal communication 1990). Also, the right talus has an unusual projection of the lateral neck that was probably caused by a severe sprain. The left femur shows evidence of osteoblastic activity over the proximal and distal articular surfaces, suggesting a considerable time on horseback in life (Wagner 1990).

The right mandibular first-molar socket displays a smooth-walled periapical abscess that was active at the time of death and that had begun to involve the second molar. The right-mandibular first molar is missing, and the smooth walls and lack of alveolar-bone resorption suggest that it was extracted just prior to death. The left maxillary first molar has a gold filling, and there is an unfilled carious lesion on the left mandibular second molar. No evidence for the cause of death was apparent from autopsy except for the possibility of septic infection resulting from the tooth abscess. Associated complications could have included meningitis, myocarditis, or pneumonia, all potentially fatal without antibiotics.

Hypoplastic lines are visible on the maxillary central incisors and the left maxillary canines. The position of these lines indicates an illness episode between the ages of 2.5 and 3.5 years, that is, ca. 1842.

Summary and Comparison With Other Populations

Table 4 summarizes data on dental caries and enamel hypoplasia for several population samples, although some of these are quite small. The percentage of carious lesions in the Weir family is
consistent with the range of other nineteenth-century data noted in Table 4. The Weir family sample differed from other populations in that 19 (54.3 percent) of 35 cavities in the sample had been filled with gold or a combination of gold and amalgam (Tables 2 and 3). This percentage of filled teeth is unprecedented in the literature for any period and is further indication of the medical advantages provided by wealth (Lanphear 1988). The number of caries with fillings for all other populations listed in Table 4 is zero, except for the Oneida County Poorhouse where one caries had a gold filling.

Compared with contemporary groups listed in Table 4, the occurrence of hypoplasia in the Weir family is fairly low, although the numbers suggest that additional comparative data are needed in order to define and understand historic population differences and trends. The data suggest that the privileged social position of the Weirs reduced the frequency of childhood nutritional or disease stress that some other, poorer groups suffered.

Differences between these groups reflect, in part, economic factors, as well as regional and temporal differences in subsistence patterns and access to certain kinds of foods. It is likely that the Weir family members received adequate nutrition and better health care, thus greater protection from prolonged childhood illnesses. The findings suggest high economic status, especially with regard to professional dental care.

**ANALYSIS OF ARTIFACTS**

Artifacts are discussed in order of interment. It was possible to estimate dates for 8 of 11 undated burials. Most of these dates are based on the style of coffin decoration, and the others are suggested by spatial location or genealogical information. Reasons for assigning dates to unmarked graves are noted on Table 1. Burials are listed by date in Table 1, which also includes name, age, sex, coffin description, and summary counts of decorative elements and other grave goods.

All except two of the coffins were constructed of wood, and fragments of wood remained for many of the coffins. Nails and occasionally wood screws were recovered. Table 1 notes the coffin shapes as hexagonal or rectangular and the species of wood if known.

The number of types and the total number of decorative elements varies among coffins (Table 1). Decorative elements counted here include white metal hinges, white metal screw caps and tacks of various designs, brass tacks of several designs, coffin handles, cap lifters, lid fasteners, escutcheons or screw plates, glass viewing plates, name plates, latches, and other decorative elements with no discernible function. For example, Burial 19 has two hinges, three white metal screw caps of one style and 13 screw caps of a second style. Therefore there are three types of decorative elements and 18 decorative items in total. Many of the styles of coffin decoration available during the period of cemetery use are illustrated in the 1865 catalog of the Russell and Erwin manufacturing company (Russell and Erwin 1980 [1865]).

*Artifacts from Burials 1842 and Earlier*

Burials dating to the 1830s and early 1840s (Burials 18, 20, 17, 22, and 7; Table 1) show little ornamentation. Both 18 and 20, presumed to be the earliest, are of children and have no decorative elements. The coffin of the adult man (Burial 7, died 1842) has a hinge, but those of the two adult women (Burials 17 and 22, died 1841) have no elaboration. The man was buried in clothing (buttons remain). There is no evidence that the two women were buried in clothing and, although there are no pins to indicate the use of shrouds, their use seems likely. Burials 18, 17, 22, and 7 contain small tacks, suggesting, contrary to Farrell (1980), that lining was used in some coffins prior to 1850.

*Artifacts from Burials Between 1852 and 1862*

Following the death of Robert Mayre Weir in 1842 (Burial 7), there were no dated burials for 10 years. From 1852 to 1862 at least 5, and probably 7, bodies were interred before the family left for the duration of the war (Burials 19, 21, 24, 12, and 14 are dated by marker; 11 and 15 are dated by artifact style; Table 1).

Burial 24, Carter Weir (died 1856), has the first of two occurrences of handles in this period: four
Table 4. Frequency of Carious Teeth and Enamel Hypoplasia in Various Skeletal Samples.

<table>
<thead>
<tr>
<th>Population</th>
<th>Date</th>
<th>Description</th>
<th>Number of Teeth</th>
<th>Number of Carious Teeth (%)</th>
<th>Number of Individualsa</th>
<th>Number with Hypoplasia (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dupontb</td>
<td>2535–2150 B.C.</td>
<td>Native American hunter-gatherers</td>
<td>159</td>
<td>4</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Georgia Coastc</td>
<td>1000 B.C.–A.D. 1150</td>
<td>Native American hunter-gatherers</td>
<td>1,633</td>
<td>16</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Williams Cemeteryd</td>
<td>A.D. 850</td>
<td>Native American hunter-gatherers</td>
<td>956</td>
<td>10</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Georgia Coaste</td>
<td>A.D. 1150–1550</td>
<td>Native American horticulturists</td>
<td>2,983</td>
<td>408</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Indian Hillsf</td>
<td>A.D. 1400</td>
<td>Native American horticulturists</td>
<td>662</td>
<td>72</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Pearson Villagesg</td>
<td>A.D. 1610</td>
<td>Native American horticulturists</td>
<td>2,772</td>
<td>269</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Jordan’s Pointkh</td>
<td>A.D. 1624–1700</td>
<td>White rural colonists</td>
<td>274</td>
<td>32</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Newton Plantationl</td>
<td>A.D. 1660–1820</td>
<td>Black slaves, Caribbean</td>
<td>nd</td>
<td>nd</td>
<td>103</td>
<td>(81.8)</td>
</tr>
<tr>
<td>Cliffs Plantationi</td>
<td>A.D. 1700–1730</td>
<td>Black rural slaves</td>
<td>267</td>
<td>72</td>
<td>12</td>
<td>(54.5)</td>
</tr>
<tr>
<td>St. Peters Street Cemeteryk</td>
<td>A.D. 1720–1810</td>
<td>Black urban slaves</td>
<td>251</td>
<td>56</td>
<td>nd</td>
<td>(91.7)</td>
</tr>
<tr>
<td>Rae Hall Plantationl</td>
<td>A.D. 1761–1836</td>
<td>White wealthy</td>
<td>166</td>
<td>19</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Catcotic Furnacelm</td>
<td>A.D. 1790–1830</td>
<td>Black slaves, white iron workers</td>
<td>386</td>
<td>61</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Fort Eriann</td>
<td>A.D. 1814</td>
<td>White soldiers</td>
<td>599</td>
<td>71</td>
<td>nd</td>
<td>(46.0)</td>
</tr>
<tr>
<td>First African Baptist Church, Philadelphiao</td>
<td>A.D. 1823–1841</td>
<td>Black, free urban</td>
<td>nd</td>
<td>nd</td>
<td>73</td>
<td>60 (82.2)</td>
</tr>
<tr>
<td>Monroe County Poorhouseo</td>
<td>A.D. 1826–1863</td>
<td>White urban poor</td>
<td>3,988</td>
<td>356</td>
<td>181</td>
<td>153 (84.0)</td>
</tr>
<tr>
<td>Uxbridge Pauper Cemeteryo</td>
<td>A.D. 1831–1872</td>
<td>White, Black poor</td>
<td>345</td>
<td>36</td>
<td>22</td>
<td>2 (9.1)</td>
</tr>
<tr>
<td>38CH778o</td>
<td>A.D. 1840–1870</td>
<td>Black rural slaves</td>
<td>nd</td>
<td>nd</td>
<td>31</td>
<td>24 (77.4)</td>
</tr>
<tr>
<td>Weir Cemetery</td>
<td>c. A.D. 1841–1907</td>
<td>White wealthy</td>
<td>197</td>
<td>35</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Civil Waro</td>
<td>A.D. 1861–1865</td>
<td>White soldiers</td>
<td>406</td>
<td>88</td>
<td>nd</td>
<td>(53.8)</td>
</tr>
<tr>
<td>Port Hudsonl</td>
<td>A.D. 1863</td>
<td>White soldiers</td>
<td>108</td>
<td>5</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Indian Warsa</td>
<td>A.D. 1866–1899</td>
<td>White soldiers</td>
<td>193</td>
<td>27</td>
<td>nd</td>
<td>nd</td>
</tr>
<tr>
<td>Oneida County Poorhouseo</td>
<td>A.D. 1880–1894</td>
<td>White rural poor</td>
<td>689</td>
<td>174</td>
<td>39</td>
<td>24 (61.5)</td>
</tr>
<tr>
<td>Cedar Groveo</td>
<td>A.D. 1890–1927</td>
<td>Black rural</td>
<td>875</td>
<td>104</td>
<td>nd</td>
<td>nd</td>
</tr>
</tbody>
</table>

a nd = no data.

b Schneider (1986).
c Larsen (1983).
d Schneider (1986).
e Larsen (1983).
f Schneider (1986).
g Schneider (1986).
h Owsley et al. (1990).
brass bail handles depict angels (Figure 3). Similar handles may be found in an 1865 hardware catalog (Russell and Erwin 1980 [1865]). There are also two white metal caplifters on this coffin as well as three styles of white metal screw caps.

Bell (1987:117) notes that white metal coffin screws and tacks were available throughout the second half of the nineteenth century and, indeed, they appear in the Weir burials during this period. In the 7 burials there are 14 different styles of white metal decorative screw caps or tacks. The only burial lacking these, that of Bladen Weir (Burial 21, died 1855), contains the lead-lined coffin with white metal upholstery tacks for the interior lining.

Metallic coffins of various types became available after 1848 (Bell 1987). Crane, Breed & Company's 1867 price list provides examples of patent metallic burial cases and caskets and various styles of sheet-metal caskets. Among their offerings is a zinc and wood case, probably much like the lead alloy and wood case of Bladen Weir (Burial 21). This lead and tin hexagonal coffin was cloth covered and had an internal wood frame that was lined with cloth. At burial it was probably covered with an exterior wood box that had no base of its own.

The most elaborately decorated coffin in the group is that of Johny (sic), aged three years (Burial 15). Four bail handles, caplifters, a lid fastener, floral (lily) pieces of white metal, escutcheons or screwplates, and a glass viewing plate embellish the coffin. Commercially produced glass viewing plates came into use after 1848 with the Fisk metallic coffin. However, glass viewing plates could have been inserted into locally made coffins and also may have been used prior to that time (Bell 1987:57–58).

Burials 12 and 14 occurred during the war. The first, that of Josiah Willcoxon (died 1861), is distinguished by a relatively large number of decorative screw caps. The second, that of Josiah's wife Julia (died 1862), was interred just before Confederate (and Weir) withdrawal from the property; it has little decoration.

Artifacts from Burials Between 1867 and 1870

The Civil War created the next gap in the dated burials. At least four and probably seven bodies were interred from 1867 to 1870 (Burials 16, 6, 4, and 23 are dated by marker; 2, 9, and 10 by artifact style; Table 1). Brass decorative tacks first appear during this period, occurring on five of the seven coffins. Neither Burial 9, that of an unknown child, nor Burial 23, with the cast-iron coffin, has brass tacks. White-metal decorative elements continue, appearing on five of seven coffins. The same style screw cap appears on each of these, often accompanied by another style of white metal cap or brass tacks or both. Most burials in this period have a large number of decorative elements, although the variety of types is similar to that of the 1850s. Four of the seven have handles; three have hinges. Decorative lining trim appears in three. Fragments of a name plate appear in Burial 2, that of an unknown adult.

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1 Corruccini et al. (1985).
3 Owsley et al. (1987).
5 Kelley and Angel (1987); Lanphear (1989).
6 Rose (1985).
9 Wesolowsky (1991a, 1991b); an additional 12 teeth with alveolar abscesses increase the percentage of diseased teeth to 13.9. The poor condition of the teeth in general obscures the rate of enamel hypoplasia.
12 Owsley et al. (1988).
14 Lanphear (1990b).
Burial 23, that of Walter Weir (died 1870), was in a rounded, hexagonal cast-iron coffin with a glass viewing plate and cast-iron cover over the glass. The coffin was fitted with 10 handles: four on each side and one on each end. It is similar to the “Plain Case” offered by the Crane, Breed & Company of Cincinnati in their 1867 catalog and was probably manufactured for them by the Barstow Company of Providence, Rhode Island (Melissa Johnson Williams, personal communication 1990). The iron coffin was buried in its shipping box, complete with four handles. The 1867 price list notes that caskets are lined and boxed: “Our boxes are made of dressed pine lumber, and strongly put together, with a view being made use of for burial purposes” (Crane, Breed & Company 1984 [1867]). The wholesale cost of a coffin of this type would have been approximately $70 (Melissa Johnson Williams, personal communication 1990).

**Artifacts from Burials Between 1886 and 1907**

Sixteen years elapsed between Walter Weir’s burial and the next known use of the cemetery. Only Burials 13 (1886) and 5 (1907) date to this last period of use (Table 1). The types of decorative elements common earlier—white metal caps and brass tacks—are no longer used, although there are white metal cap lifters and finials from the 1886 burial.

Burial 13, that of Martha Weir, is the second in the cemetery to contain a glass viewing plate. Two bar-type handles are present. The coffin had a latch and was painted or lacquered white.

Burial 5, that of Bettie Weir, also had bar handles, three shorter ones on each side, each made of two end pieces with a wooden dowel for the grip (Figure 4). A gold-washed plate and silver-plated decorative disks, possible latch fragments, and thumbscrews also adorned this coffin. Four iron-bail handles from the shipping box were also recovered. The coffin was covered in cloth, as was increasingly common in the later nineteenth century. The Stein Manufacturing Company (1885) noted the “increased demand for Silk Velvet or Plush Covered Caskets,” which came with outside boxes, themselves finished and covered with burlap.

Both burials had miscellaneous iron hardware of undetermined function; it is unclear whether it was meant to be decorative. Table 1 provides counts for decorative types and totals with and without these iron pieces.

Martha S. Weir and Bettie Weir were sisters, neither of whom married. They lived with their sister and brother-in-law on a neighboring farm after their mother, Clara B. Weir (Burial 4), died.
Martha and Bettie may have been in mourning when they died. Martha's bodice of black beads and black molded glass buttons with a tree-of-life design suggest mourning costume (Dennis Scott, personal communication 1989). The fashionable brooch worn by Bettie is black glass in imitation of jet, a mineral used for expensive mourning jewelry. The other personal item of interest is the pessary mentioned above (Figure 2) found in Burial 13 (Martha Weir).

**Artifacts from Burials of Unknown Date**

Burials 1, 3, and 8 could not be dated by gravestone or style of decoration. Burial 8 has no material except coffin nails associated with it. Burial 1 has lining tacks and some lining cloth, as well as one button. Burial 3 has three white metal decorative screws and evidence of coffin lining. A pocketknife was found in the location of the right-hand trouser pocket. A small piece of white quartz and a fragment of a redware lip were found while screening the soil from the burial.

**DISCUSSION**

"**Beautiful Death**" in the Nineteenth Century

The so-called “beautification” of death in nineteenth-century Western culture has been studied by both historians (e.g., Bowman 1959; Coffin 1976; Farrell 1980; Jackson 1977; Mitford 1963; Pike and Armstrong 1980; Stannard 1975) and archaeologists (e.g., Bell 1987, 1990; Elia and Wesolowsky 1991; Little 1990). During the nineteenth century there was a marked increase in the expense and ritual associated with death, demonstrated in mourning clothing, adornment of the home of the deceased with funeral crepe and wreaths, erection of elaborate grave markers, and encouragement of decorative arts commemorating death, or memento mori. The rural cemetery movement in the United States and England was connected with this trend; cemeteries became designed and used as parks for the living (Farrell 1980). Coffin designs and hardware reflected the trend toward increased embellishment. Such visual display mirrored the emotional intensity of Romanticism and the sentimentalization of death. Mourning became a ritualized public ceremony, presented as a spontaneous, emotional expression of grief, and the expression of sentimentality became regarded as a civic virtue (see Aries 1982; Farrell 1980).

Farrell (1980) analyzes changes in the American “way of death” from 1830 to 1920. Urbanization, industrialization, developments in medicine, science, and other fields, and professionalization of services associated with death, such as mass production of coffins and emergence of undertaking establishments, contributed to the reinterpretation of death and new modes of behavior associated with its observance and commemoration. Although Farrell’s analysis focuses on the industrial
northern region of the United States, the general trend, if not each specific detail, occurred in the South as well.

McGuire (1988) discusses cemeteries and markers in nineteenth- and twentieth-century Broome County, New York. Although the focus of his analysis is the effects of changing capitalist-ideological strategies on gravestones and cemeteries, his data are also affected by the broader cultural phenomenon that changed the treatment of death and the deceased. The cultural shift involved in the treatment of death “derives from and promulgates changed in the nature of the capitalist economy, but does so as part of a larger cultural whole” (McGuire 1988:473).

The pervasiveness of the romanticized view of death was not limited to the United States but characterized Western culture in general. Philippe Aries (1982:610) writes that, “untamed nature invaded the stronghold of culture, where it encountered humanized nature and merged with it in the compromise of ‘beauty.’”

The Weir Cemetery in Context of Changing Attitudes Toward Death

During each of the four short periods described above (i.e., until 1842; 1852–1862; 1867–1870; 1886–1907), there are distinct differences in the kinds of material culture associated with burials. Figure 5 illustrates the variation in number of types and total number of decorative elements on coffins. Coffin decoration is one measure of the “beautification” of death that can be expected in archaeological contexts, although it is recognized that rituals connected with death include far more. In Figure 5, each burial is represented by a dotted line, indicating the number of types of decorative elements, and a solid line, indicating the total number of decorative items. “Plus” marks for the final two burials indicate the presence of iron hardware, the decorative intent of which is unknown.

During the first period (1842 and earlier) there is almost no decoration. Only one of the five burials is represented on Figure 5; the others have no elaboration. The beautification of death had not yet been accepted in this region and/or by this family. In the second period (1852–1862) coffins become more decorated as the cycle of elaboration begins. The Victorian influence is best illustrated qualitatively by the praying angels on the coffin handles of Burial 24 (Figure 3). The histograms of the third period (1867–1870) are striking, as the decoration of coffins obviously peaks. Burials in the final period (1886–1907) have a distinct style of ornamentation. Burial 5 was impressively decorated: black cloth-covered coffin with gold-colored handles, name plate, and silver-plated decoration. It has fewer total elements, however, than earlier coffins studded with dozens of white metal screw caps.

Burials before the Civil War show signs of the broad cultural trend toward elaboration in treatment. The increase in decoration and expense after the war is marked. At least three factors may have contributed to these antebellum and postbellum intensifications. The first is the growing trend toward beautification in mortuary display. The second is the availability of manufactured coffins and coffin hardware and the increasing ease of distribution to the rural South. For example, the 1867 Crane, Breed & Company catalog indicates a widespread distribution network and use of similar burial goods. The proprietors write: “Our business, extending so nearly over the entire country, enables us to consult the wants and receive suggestions from every section; and we are not backward in adopting every improvement possible, and in making changes to suit the taste of any individual” (Crane, Breed & Co. 1884 [1867]). A third factor concerns the use of mortuary display to support desired status. Descendants and the documentary record indicate that the family’s economic status declined drastically after the war, yet they began to spend more rather than less on burials. In order to maintain social status even in the face of economic decline, families who experience economic reversals may spend more on publicly visible displays to maintain status than would be dictated solely by monetary considerations. Such display, commensurate with desired status, has been documented archaeologically, by Shackel (1987) in reference to nineteenth-century Long Island, New York ceramic assemblages and by Parker Pearson (1982) for burial ritual in Victorian and modern England.

Before the war the Weirs held an effectively legitimated claim to local status: They were both wealthy and could claim a longstanding tie to their land and wealth through genealogy. Harriet
Bladen Weir's epitaph quoted above emphasizes this genealogical claim. In the postbellum period the economic and social structures of the southern United States were destabilized. Wealth and status were not so clearly correlated, giving rise to an elite need to display status in order to emphasize claim to it. In this atmosphere of competition, the postbellum intensification in display in the Weir cemetery may be interpreted as a clue to an elite social and ideological strategy that takes advantage of an existing broad cultural trend in the treatment of the deceased and elaborates it in this local context.

The changing style of decoration in the final period suggests either a different expression of the "beautification" process as styles of elaboration change or the beginning of a downturn in the cycle of elaborate mortuary display that is associated with social presentation during the Victorian era (Cannon 1989). By the very late nineteenth and early twentieth century, the trend toward increasing expense associated with funerals was coming to a close (Farrell 1980), at least within the dominant
culture. However, McGuire (1988) documents some ethnic differences in the choice of elaborate grave markers.

In assessing what the historic context of the "beautification of death" contributes to our understanding of this cemetery, it is useful to consider what interpretations might have been suggested without it. It is necessary to note that few graveyards are excavated with such clearly dated burials; without the benefit of headstones the brief periods within the 68-year use of the cemetery probably could not have been determined. Without clear dating, the temporal groupings of burial expense depicted in Figure 5 probably would have been attributed to status differences. Among the lowest ranking in expense and elaboration, that without grave furnishings, is the founding mother of the family (Burial 17), but it is not reasonable to assume that she was accorded little respect or that she had no status to display. At the other extreme is a 14-month-old child (Burial 6, Robert A. Weir, died 1869) buried at the height of the elaboration cycle. It cannot be assumed that this boy had an ascribed status other than that as a loved and mourned son. It seems clear that we are not seeing "status" expressed here so much as sentimentality. Indeed, as noted above, part of the whole Victorian beautification of death involves the material expression of sentiment.

The Weir Cemetery and Status

We cannot satisfactorily distinguish status distinctions within the cemetery; differences in coffin decoration among the four short time periods within the 68-year use of the cemetery are explained primarily by reference to the cultural trend of the beautification of death that has been tied to social, economic, and cultural developments in the United States (Farrell 1980) and to Western culture in general (Aries 1982). We have also suggested a probable elite strategy of the Weirs in the use of status display within this cultural trend.

It is tempting to suggest gender biases in the expense afforded each burial: adult women tend to have fewer items than adult men. During the first period, only the adult man's coffin has any elaboration. In the second period most of the burials are of men and are relatively elaborate. The poorly decorated coffin of a woman may be due to the rush of her burial during the war. The only woman buried in the third period has a relatively poorly decorated coffin. The poorest, however, belongs to a man. No gender comparison is possible for the final period, as only two women were buried. However, within each of the four periods, and for the cemetery as a whole, the number of burials is small. The sample size precludes a meaningful discussion of gender differences.

Much of the difficulty in determining possible status differences within the Weir cemetery results from its being a family graveyard. Intersite comparison, using both osteological and archaeological data, is a more fruitful means of studying status. Here, we compare the Weir data with those of a pauper cemetery dating to roughly the same period.

The Weir family's status is reflected by better-than-average health conditions, indicated by the relatively low rate of enamel hypoplasia (Table 4). The relatively high rate of dental caries suggests greater access to such foods as refined sugars (see Mintz 1986). The dental care provided the family clearly indicates a privileged condition (Tables 2 and 3). The presence of the pessary in Burial 13 also indicates access to and use of professional medical care. At the Uxbridge almshouse cemetery in Uxbridge, Massachusetts, the rate of dental caries is relatively low but extremely poor dental health is evidenced by avascular abscesses, broken teeth, and excessive attrition (Wesolowsky 1991a; Table 4). There is no evidence for dental care of any sort. Although enamel hypoplasia is noted for only two individuals, Wesolowsky suspects that the poor preservation and frequent antemortem tooth loss prevent the accurate assessment of this condition (Wesolowsky 1991b).

Comparisons with archaeological material also demonstrate intersite-status variation. Bell (1990) reports on the material found at the Uxbridge pauper cemetery in use between 1831 and 1872 and notes the lack of highly ornamented containers. Of 31 graves, 14 (45 percent) showed some sort of decorative hardware (compared with 18 of 24 [75 percent] at Weir cemetery). White metal hardware was found in 12 [39 percent] burials at Uxbridge (compared to 13 [54 percent] at Weir). There were 2 glass viewing plates and 5 brass tacks, in addition to lining tacks. Weir also had 2 glass viewing plates; there were 44 brass tacks recovered. The Weir coffins exhibited other decoration not found
at Uxbridge, including handles in 8 of the 24 graves. The two most elaborately decorated Uxbridge coffins had 48 pieces of three decorative types and 49 pieces of 2 decorative types respectively. In degree of elaboration, these burials would fall between the second and third temporal groups at the Weir cemetery. Most of the Uxbridge coffins had little decoration. At Uxbridge, pauper graves are provided some of the embellishments that came to be regarded as culturally necessary during the nineteenth century. However, there is less investment in "beautifying" the coffins than at the more affluent Weir graveyard.

CONCLUSION

The beautification of death phenomenon, which peaked in the late 1860s and 1870s, is an example of a cyclical process in burial display as described by Cannon (1989). A direct and invariable relation between rich grave goods and high social status cannot be assumed. A consideration of the social necessity of maintaining status and power helps in interpreting the meaning of that display by connecting it with ideology and social control (McGuire 1988; Parker Pearson 1982). The invisible-ink strategy of the elite manifests itself in this process. The process of a cycle of display, wherein goods are in turn elaborately displayed and then intentionally withheld in order to prevent lower-class emulation from becoming a threat, is a process that may be sought in the prehistoric record. Content and expressed meanings of the display is provided in this case by contemporary records and by the association of artifacts and rituals associated with death but not directly included in burials. Draping of homes in crepe, mementos of the dead, mourning pictures, jewelry, and clothing all provide other material clues to the cultural importance of death. From such historical contexts, prehistorians may discover analogies to prompt new questions about burial practice and display. Biological data in particular may be of use in such contexts, particularly in comparing displayed social status with physical evidence of privilege discovered through the presence or absence of nutritional and disease stress. Not much work of the type described here has been done, but work on such known families has particular importance. As more family cemeteries are impacted by development there will be more opportunities for this type of study. There is anthropological value in increasing this data base and gaining additional reference points for comparisons.

In conclusion, we agree with Cannon (1989) that an understanding of historical context is essential for interpreting burial data. However, Cannon suggests that a cycle of elite innovation, lower-class emulation, and elite abandonment of particular styles or practices suffices for historical context. In our opinion, a specific historic context, with all its attendant complexities, must be sought in the available data. Such an understanding adds cultural content to processual form. The rise and eventual decline of the nineteenth-century ideal of the beautification of death adds the vital element for understanding the rationale and material expression of this particular observed cycle of display.

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REFERENCES CITED

Aries, P.
Bartel, B.

Bass, W. M.

Bell, E. L.
1990 The Historical Archaeology of Mortuary Behavior: Coffin Hardware from Uxbridge, Massachusetts. Historical Archaeology 24(3):54–78.

Berreman, G.

Blakey, M. L.

Bowman, L. E.

Brown, J. A. (editor)

Cannon, A.

Chapman, R., I. Kennes, and K. Randsborg (editors)

Coffin, M.

Conner, E. R. III
1981 100 Old Cemeteries of Prince William County, Virginia. Lake Lithograph, Manassas, Virginia.

Corruccini, R. S., J. S. Handler, and K. P. Jacobs

Crane, Breed & Company

Elia, R. J., and A. B. Wesolowsky (editors)

Farrell, J.

Gill, C. W., and J. C. Rhine (editors)

Goldfield, D. R.

Goodman, A. H., and G. J. Armelagos


Harrison, F.

Henschell, E.

Jackson, C. O. (editor)
Kelley, J. O., and J. L. Angel  

Krogman, W. M., and M. Y. Iscan  

Lanphear, K. M.  

1989  Skeletal Indicators of Health in Several Historic Populations. Ms. on file, Department of Anthropology, Smithsonian Institution, Washington, D.C.


1990b  Health in a 19th-Century American Poorhouse. Ms. on file, Department of Anthropology, Smithsonian Institution, Washington, D.C.

Larsen, C. S.  

Little, B. J.  


McCracken, G.  

McGuire, R. H.  

Mintz, S.  

Mitford, J.  

Ortner, D. J., and W. G. J. Putschar  

O'Shea, J. M.  

Owsley, D. W., K. M. Lanphear, and B. Compton  
1990  Osteological Examination of 17th-Century Burials from Jordan's Point, Prince Georges County, Virginia. Ms. on file, Virginia Department of Historic Resources, Richmond, Virginia.

Owsley, D. W., M. H. Manhein, and A. M. Witmer  
1988  Burial Archaeology and Osteology of a Confederate Cemetery at Port Hudson, Louisiana (16EF68). Ms. on file, Department of Anthropology, Smithsonian Institution, Washington, D.C.

Owsley, D. W., C. E. Orser, R. W. Mann, P. H. Moore-Jansen, and R. L. Montgomery  

Parker Pearson, M.  

Parrington, M.  

Pike, M. V., and J. G. Armstrong  

Pinborg, J. J.  

Rathbun, T. A.  

Rathje, W. L.  


Stein Manufacturing Company 1885  *Supplementary Price List.* Rochester, New York.


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