SON CEMETERY:
A BIOANTHROPOLOGICAL INVESTIGATION OF A SMALL LEXINGTON COUNTY, SOUTH CAROLINA BURIAL GROUND

CHICORA FOUNDATION RESEARCH SERIES 73

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Research Series 73

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September 2011

Library of Congress Cataloging-in-Publication Data

Trinkley, Michael.
Son Cemetery : a bioanthropological investigation of a small Lexington County, South Carolina burial ground / Michael Trinkley, Debi Hacker, Nicole Southerland.
p. cm. -- (Research series, ISSN 0882-2041 ; 73)
"September 2011."
Includes bibliographical references.
ISBN 978-1-58317-076-2 (alk. paper)
1. Son Cemetery (Lexington County, S.C.) 2. Excavations (Archaeology)--South Carolina--Lexington County. 3. Burial--South Carolina--Lexington County--History. 4. Human remains (Archaeology)--South Carolina--Lexington County. 5. Physical anthropology--South Carolina--Lexington County. 6. Material culture--South Carolina--Lexington County. 7. Son family. 8. European Americans--South Carolina--Lexington County--Social life and customs. 9. Lexington County (S.C.)--Antiquities. 10. Lexington County (S.C.)--Genealogy. I. Hacker, Debi. II. Southerland, Nicole, 1978- III. Title.
F277.L5T74 2011
929'.5--dc23

2011037847

ISBN 978-1-58317-076-2
ISSN 0882-2041

We all grow up with the weight of history on us. Our ancestors dwell in the attics of our brains as they do in the spiraling chains of knowledge hidden in every cell of our bodies.

-- Shirley Abbott

ABSTRACT

Between January 3 and 24, 2011 Chicora Foundation personnel conducted excavations at the Son Cemetery in Lexington County, South Carolina. This cemetery was used by the Son family from the 1860s through 1976 and was thought to contain 11 Euro-American burials. However, one infant was not identified, one vaulted burial was removed by the Barr-Price Funeral Home; ultimately nine burials were removed from the cemetery.

The investigations were conducted for Lexington County in order that the property could be available for industrial development. While no federal funds were involved, the next of kin requested recovery using archaeological methods and analysis of the remains.

This research included historical and genealogical investigations in order to place the family in a broader context. An effort was also made to identify other bioanthropological research from South Carolina for comparative study. Regrettably little was identified.

The investigations document a range of burial morphology. Marking of graves using fieldstones, while common during the mid to late nineteenth century, was abandoned by the middle of the twentieth century. Burial depths are noticeably shallower than many reported from elsewhere in the mid-Atlantic, averaging only 3.9 feet below grade at the Son Cemetery.

Grave arches were used until the turn of the century, being abandoned about the same time that outer boxes and vaults became popular. The burials at the Son Cemetery reveal a concrete vault fabricated on-site, a commercial concrete vault, as well as the use of dry mortar mix placed over burials to form burial linings.

The transition from coffin to casket appears to have taken place somewhat later at Son Cemetery than elsewhere. Hexagonal coffins were not replaced with caskets until the early twentieth century. Even so, several rectangular containers were identified in nineteenth century burials. The early coffins, however, were not decorated and hardware or trimmings were not found until the twentieth century.

Embalming was also not documented until the early twentieth century when one individual was found with very high levels of arsenic.

Those burials from the early twentieth century on produced significant quantities of textiles. These are associated with both caskets and the bodies, allowing research on both the style of caskets, as well as burial clothing.

Skeletal remains were poorly preserved prior to the twentieth century, but the later burials provided ample opportunities to examine both metric and non-metric details. As representatives of a rural farming community both males and females evidenced extensive skeletal degeneration and arthritis. Pronounced musculature revealed evidence of farming activities.

South Carolina law does not require bioanthropological research when burials are removed and, in fact, the law requires only that the work be conducted by a licensed funeral director. The information generated about the Son family and associated mortuary data for rural Lexington County was possible only because the Son family requested that bioanthropological methods be employed. South Carolina must change its law, helping to ensure that the dead have the opportunity to teach the living.

Another law that requires revision involves disinterment and reinterment permits. These documents, essential if future generations are to be able to determine where family members were reinterred, are currently not maintained by

any state agency. This must be changed to ensure that graves – and entire cemeteries – do not become lost.

At the conclusion of this study, a small sample of the cultural remains were retained by the S.C. State Museum. The human remains and bulk of the cultural remains were reinterred by the Barr-Price Funeral Home at the C. Edgar Johnson Cemetery in Saluda County, South Carolina. The graves were marked with the granite monuments removed from the family cemetery.

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ACKNOWLEDGMENTS

Many individuals deserve our thanks and appreciation. Most significantly, Mr. Joel H. McGee, a descendent of those buried in the cemetery not only allowed this investigation, but actively encouraged it. Since South Carolina has no law requiring bioanthropological investigations of burials being relocated, without his insistence that the remains be excavated and studied, this report would never have been possible. Throughout the entire process Mr. McGee was consistently supportive and always enthusiastic.

Lexington County made every effort to ensure this project was successful. Deputy County Administrator Joe Mergo, III was consistently cooperative and supportive. He was always passionate that the right thing be done and typically visited the site at least daily.

Mr. Mergo, in conjunction with Captain John Jones, West Region Commander of the Lexington County Sheriff's Office, made certain that a deputy was stationed on-site whenever we were not actively working to ensure the security of the remains. This included nights and weekends. A list of those responsible for providing this exceptional protection, including the deputies who were stationed at the site is provided below and we want to thank each one for their commitment and attention.

Cpt. J.J. Jones	Terry Hall
Cpt. Lee Marshall	Marc Isphording
Lt. Jim Crawford	Billy Laney
Lt. Hampton Taylor	Marty Longshore
Lt. Thomas Hamilton	Brannon Marthers
Sgt. Sam Gunter	Wilson Matthews
Sgt. Brad Melton	Matt McCaw
Sgt. Olyn Sexton	Lonnie McElwain
Joe Auckerman	Scott Morris
Dominique Blasingame	Johnnie Nesbitt
Ron Byrd	Don Parnell
Joe Chappelle	Will Patterson
Billy Derenbacher	Miles Rawl
Michael Dominy	Brian Smith
Heyward Douglass	Dean Smith
Frank Finch & K-9 Ben	Opie Smith
Bill Freund	Ty Smith
Todd Garrick	Trish Stoner
Johnathon Grooms	Emmerson Stoudemire
Ty Haigler	Reggie Ward
Roy Hall	Billy Womble

Also participating were the following Reserve Deputies under the jurisdiction of the Lexington County Sheriff's Office:

Bernie Bourne	Steven Little
Lenny Busby	John Lookabill
Daniel Creamer	Worth Rogers

The Sheriff's Office was supplemented by South Carolina Constables who are listed below.

David Churilla	Dan Orta
Randy Hodge	Richard Spangler
Keith Lindler	Dave Ward

We were also fortunate to have the experience and dedication of the Lexington County Public Works Department. These individuals, also listed below, provided not only the careful and attentive expertise to strip the overburden off graves, but also provided the skill necessary to open a concrete vault.

John Fechtel, Director	Melvin Taylor
Doug Padgett, Supt.	Mike Lindler
Jodie Riddle, Supervisor	Scott Rawl

The funeral home oversight mandated by South Carolina law was graciously provided by the Barr-Price Funeral Homes of Batesburg-Leesville, South Carolina. Mr. Landis Price was on-site during much of the work and when he was unable to be there one of his staff, including Ronny Fickling, Jr., Bob Hill, Jimmy Killingsworth, Lan Price, and Bobby Smith, was always present. All gladly shared their expertise with us as we exposed a variety of different burial features. Assisting in the exposure of graves were Stanley Hite and Elvis Cannon.

Chief Wallace Oswald with the Batesburg-Leesville Police Department was also supportive of our efforts and loaned us a large tent that made the project far more bearable during the rain and snow that affected the project.

Ms. Ashley McIntyre gave up a week of her paying job to volunteer and we greatly appreciate her assistance and enthusiasm – in spite of the bitterly cold weather. She also contributed time to conduct laboratory work and for that, too, we are grateful.

The radiographs were graciously provided by The Columbia Cat Clinic, Dr. Neal Atkinson, DVM and Dr. Leigh Sheridan, DVM. We greatly appreciate their kindness and assistance in this process.

Finally, our report was peer reviewed by Dr. Ted Rathbun, D-ABFA and we greatly appreciate his comments, assistance, and observations. Nevertheless, any remaining errors or omissions are entirely our responsibility.

Introduction

This project involved the identification, recovery, and analysis of burials from what is known as Son's Cemetery in Lexington County, South Carolina (38LX608). The field investigations were conducted by Chicora archaeologists between January 3 and January 21, 2011. The cemetery is situated in western Lexington County

Figure 1. Location of Lexington County in South Carolina.

southeast of the Batesburg-Leesville communities (Figures 1 and 2).

The cemetery is on the 95 acre Batesburg-Leesville Industrial Park (TMS 006000-10-014); nearby the $10 million Fisher Tank facility was completed in 2010 and is today operating. The disinterment of the Son Cemetery represents the culmination of several years of efforts by Lexington County to ensure that the property is attractive to industry while still ensuring the preservation of Lexington's history (http://www.wistv.com/Global/story.asp?S=11249934&clienttype=printable).

Since no federal funding, licensing, or permitting is involved in the industrial park development, the project was not subject to Section 106 requirements of the National Historic Preservation Act. Moreover, under South Carolina Code of Laws, Section 27-43-10 et seq., cemetery relocation is "done under the supervision of the governing body of the county, who shall employ a funeral director licensed by this State" (SC Code of Laws, Section 27-43-40). Unlike many states, South Carolina does not require burials be removed archaeologically; nor is any study of the remains mandated.

Fortunately, the next of kin's local representative, Mr. Joel McGee, was adamant in his desire to ensure that the disinterment be done with dignity as well conducted in a manner that the process could contribute to the history of the Son family, as well as Lexington County. Mr. McGee desired that Chicora conduct the work and also permitted laboratory study of the remains.

As a result, this is one of the few bioanthropological studies available for South Carolina. The work provides important information on the mortuary practices of a middling status Euro-American farming family in rural Lexington County. While bone preservation varied, the twentieth century burials all provided preservation sufficient to allow fairly detailed metric and non-metric study of the population.

Table 1.
Individuals Reported to be Buried at Son Cemetery

Mary Buzzard (1822-)	Henry R. Son (1830-1908)
Leah K. Son (1840-1866)	Francis W. Son (1846-1918)
Shelton H. Son (1879-1950)	Rosie E. Son (1882-1883)
Noah C. Son (1884-1947)	Corrie Son (1887-1927)
Francis V. Son (1892-1976)	Annis Son (1860-1862)
Josephine Son (1862-1863)	

Lexington County saw this work as a unique opportunity to learn about local history, work cooperatively with its citizens, and show appropriate respect to past residents, while at the same time allowing the county to promote economic growth. Efforts at the county level were

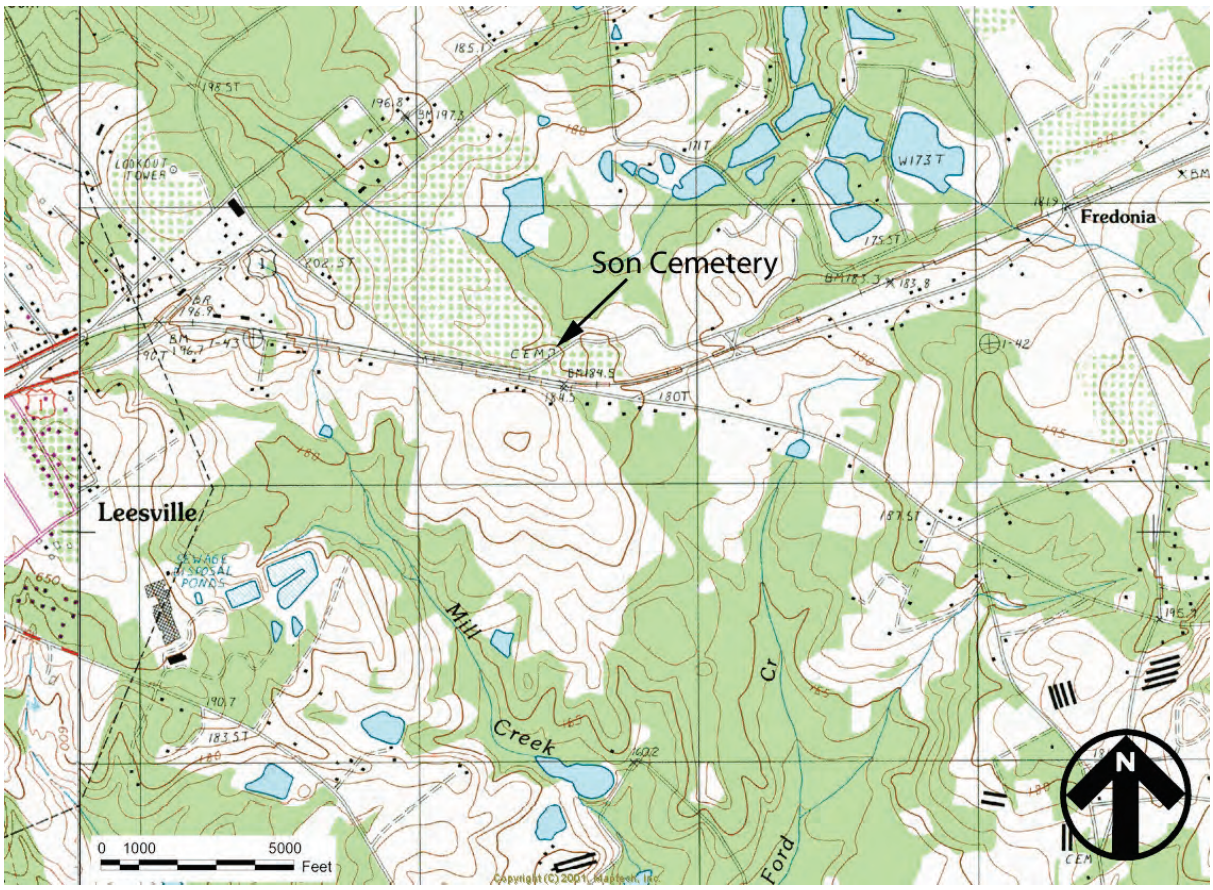


Figure 2. Portion of the Batesburg and Gilbert USGS topographic maps showing the Son Cemetery.

lead by Deputy County Administrator Joe G. Mergo, III.

Family history reported the presence of 11 burials (Table 1). Initial examination revealed that the most recent, Francis Viola Son, was buried in a concrete vault. She would be moved by a funeral home without opening the vault. The remaining burials were all expected to be fully skeletonized and successful removal would require bioanthropological efforts. Ultimately the investigations revealed the presence of nine burials; the grave of Rosie Ella Son, who died in 1883 could not be located in the cemetery in spite of extensive stripping.

The excavations were conducted by Debi Hacker, Nicole Southerland, and Michael Trinkley. Ms. Ashley McIntyre assisted the excavations as a volunteer. While Dr. Trinkley directed the excavations and had ultimate responsibility for the research, Ms. Hacker was the project bioanthropologist and was responsible for the exposure and removal of the remains. Approximately 88 person hours were required for the exposure and excavation of the remains.

In retrospect, there is little question that the cemetery would have been considered eligible for the National Register of Historic Places under Criterion D, based on the high degree of site integrity and the overall good preservation of skeletal remains, coffins, and coffin hardware.

Human skeletal remains and associated material recovered from the graves during the course of excavations were reinterred at the C. Edgar Johnson Cemetery in Saluda County, South Carolina by the Barr-Price Funeral Home.

Field notes, skeletal analysis, photographs, and other records relating to this relocation will be maintained by Chicora Foundation, Inc. Copies were provided to the South Carolina State Museum, which also retained some samples from the collections.

This report includes sections on the genealogy and history of the Son family, as well as history of Lexington County to help place the study in a broader historical context; a section on the methodology of the exhumation; studies of the human remains, the coffins and associated hardware, and other artifacts present; and finally a discussion of the mortuary behaviors identified at the site and a summary of the investigations.

Project Description

Project Area Description

The Batesburg-Leesville Industrial Park consists of 95 acres of gently rolling topography ranging in elevation from 590 to 662 feet above mean sea level (AMSL). The property is bounded by Diamond Road and Carmel Court on the northwest, Windmill Road on the west, and Clover Road (and the Norfolk Southern Rail Line) on the south (Figure 3). Private land holdings form the northeastern and eastern boundaries.

As shown in Figure 3 Son Cemetery was situated along the southern edge of the industrial tract. This location placed the cemetery in the way of a rail spur and also necessitated the construction of an access road cutting through the industrial park.

Site Description

Son Cemetery was situated on a slight sandy rise at the south edge of a large field that had been used for pasture and more recently had been planted in pecan trees. Topography drops to the north toward a drainage known historically as Cut Log Branch and to the east into a drainage known historically as Joe's Branch. Today both are unnamed tributaries of Little Creek that flows northward into the Saluda River (today Lake Murray).

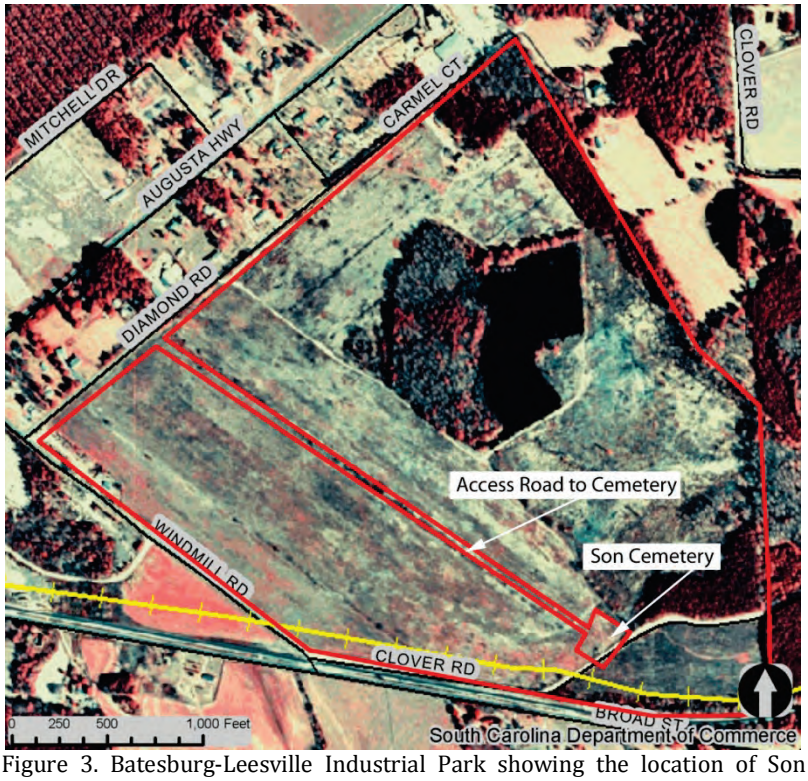


Figure 3. Batesburg-Leesville Industrial Park showing the location of Son Cemetery (courtesy S.C. Department of Commerce).

The plot was marked by a dilapidated bow and picket Stewart Iron Works fence measuring about 20 feet east-west by 20 feet north-south. Entrance was a gate set in the western line. Within the plot was a central granite die on base marker listing those buried in the plot. Graves formed two north-south lines with graves oriented approximately east-west. Each grave was marked by a low granite footstone. In some cases fieldstone markers were also present.

Years of plowing around the cemetery further accentuated its elevational prominence in the field. Access was by way of a county dirt road

running east from the Windmill Road crossing the railway immediately north of its intersection with Broad Street.

The cemetery was thought to lack intentional plantings, although several scrub oaks have been established along the fence line and one was found within the fence. A single Eastern red cedar (*Juniperus virginiana*) was found at the northeastern edge of the fence. While the cedar is a common tree in both Euro-American and African American cemeteries, it is one of the first trees to repopulate cleared, eroded, or otherwise damaged land and can be spread by birds or other animal droppings. During excavations spring flowering bulbs, representing intentional plantings were found on several graves.

Figure 4. Son Cemetery prior to removal, view to the north (top photo) and to the southwest (bottom photo).

Research Orientation

Research Design

Because of antiquated laws that do not require bioanthropological investigation of early burials, South Carolina has relatively few studies on which to formulate a comprehensive research design. In fact, when burial relocations attract media attention they usually include some comment about how little was found – typically in association with information that the relocation was conducted using a backhoe and shovels.

Table 2 lists the burial relocations that we have been able to identify for South Carolina. Unfortunately there is no agency (such as SCIAA or SCDHEC) tracking removals so this list is likely not complete. Nevertheless, it provides some interesting clues. For example, while over 1600 burials are known to have been removed, there are professional reports on only 473, representing less than a third of those removed. In addition, there appears to be a greater tendency for African American burials to be relocated than for Euro-American graveyards to be removed. Not all professional publications are equally thorough. Some archaeologists seem unusually preoccupied with the artifacts associated with their burials, giving rather scant attention to the osteological remains. Finally, it is surprising that some removals that have professional involvement are not reported.

The previous work in South Carolina is not especially conducive to the development of a sophisticated research design. In spite of this, the benefits of bioanthropological studies are well documented (see Bybee 2003b and Rathbun 1985 for examples).

Table 2.
Cemetery Relocations in South Carolina

Date	A-A	E-A	County	# of Burials	Relocation	Report
2006	X		Charleston	1	1 burial removed as part of data recovery excavations at 93 Queen Street in Charleston; 38CH2117	none
2004	?	?	Charleston	341	341 burials removed from 3 cemeteries at Johnson Hagood Stadium, 38CH1648	Shuler and Poplin 2005
2003	X		Charleston	1	1 burial found in association with plantation structure, 38CH932	Trinkley et al. 2006
2002	X		Berkeley	1	1 burial recovered from marsh for Berkeley County Coroner; 38BK1929	Hacker and Trinkley 2011
2001	X		Richland	123	123 burials overseen by Richland County Coroner with involvement by SCIAA	none
2001		X	Richland	4	4 burials of Lorick family	none
2001		X	Newberry	18	18?; including 6 iron caskets; SCIAA involvement	none
1990			Spartanburg	15	15 burials relocated as part of SCDHPT project at 38SP105	Rathbun 1990; Joseph et al. 1991:209-226
1990			Spartanburg	61	61 burials relocated as part of SCDHPT project at 38SP106	Rathbun 1990; Joseph et al. 1991:2226-254
1987	X		Charleston	18	18 Union Army burials removed from Folly Island burial ground by SCIAA with osteological analysis, 38CH920	Rathbun 1989
1984		X	Berkeley	5	5 burials in family cemetery removed as part of SCDHPT project at 38BK202	Rathbun 1986
1983	X		Charleston	36	36 burials in a community cemetery removed by development, 38CH778	Rathbun 1987
1979		X	Charleston	13	13 burials encountered during construction, 38CH434	Rathbun and Scurry 1983
1977		X	Charleston	11	11 burials removed from the Moultrie family graveyard by SCIAA; no osteological report; 38CH230	South 1979
1976	?	?	Richland	692	692 burials removed from potter's field by the Highway Department using low bid removal, 38RD227	none
1972	X		Charleston	1	1 burial in large cemetery at Charles Town Landing; no osteology; 38CH1	Combes 1974
1957	?	?	Richland	300	300+ burials removed from potter's field by the Highway Department using low bid removal, 38RD227	none

A-A = African American ancestry
E-A = Euro-American ancestry

In virtually every case we can think of, the information derived from bioanthropological studies were not available from any other source. The above ground features, such as fencing and markers provides a cultural context and clues regarding social and religious beliefs.

The analysis of mortuary items (coffin hardware, for example) and personal remains (clothing, for example) contributes to our understanding of social status, ideologies, possible age and sex, as well as temporal dating of burials. The work may also supplement folklore, oral history, and genealogical research.

The analysis of the skeletal remains, including morphological characteristics, discrete traits, dental features, and pathological conditions provides critical data on diet, disease, mortality, and health.

There are other studies that can address a range of questions. Many of these techniques are destructive and costly. Parasite analysis requires the use of soil collected from the grave that is treated in an effort to rehydrate the ova of any parasites that were present in the lower intestines, such as hookworm, echinococcus, and tapeworm. Blood grouping, HLA typing, and antibody absorption require the use of a vertebra. Contamination remains a significant problem and the benefit depends on specific genetic questions. Histomorthometrics requires the sectioning of long bones to count osteons for aging. Carbon isotope analysis may be able to ascertain differences in diet, although interpretation of results can be difficult if humans ate animals that grazed on plants (a typical scenario). Trace element analysis may also address dietary questions, with zinc, copper, molybdenum, and selenium usually associated with animal protein and strontium, magnesium, manganese, cobalt, and nickel generally associated with vegetable materials. Most studies focus on the level of strontium to calcium ratio, Heavy metals analysis, often focusing on lead, can be examined to explore health and sources of contamination in the diet. Nevertheless, both modern contamination and

diagenetic effects must be considered when interpreting results. Finally, radiographic studies can identify transverse lines of increased density on the ribs, on both ends of the tibia and on the distal end of the femur to study dietary stress.

The research design for the Son Cemetery was focused on discerning taphonomic processes, dietary reconstruction, and the quality of life. To achieve these goals a variety of specific bioanthropological analyses were proposed:

- Mortality – age and sex of the burials
- Quality of life – examination of age-specific pathologies, degenerative joint disease indicators, frequency of trauma, data relating to infections, and the collection of childhood stress indicators.
- Dietary Reconstruction – examination of dental wear, caries frequency, presence of porotic hyperostosis/cribra orbitalia, and incidence and location of calculus. Destructive analyses were not proposed.
- Population Affiliation – collection of metric and non-metric data when possible to facilitate comparison of these remains with other relevant skeletal populations.
- Taphonomy – examination of movement of remains within the coffin.
- Burial Patterns – examination of how the burial findings reflect cultural, regional, and environmental use.

It is perhaps also useful to explain that our research design specifically excluded some research procedures. There was no need to pursue aDNA studies since the affinity and sex of the individuals was known. Histomorthometrics would require destructive analysis and the age at death of most individuals was firmly established. Destructive analyses for dietary reconstruction seemed needless given the level of historic documentation available. Analysis of heavy metals did not appear to be a significant research goal given the available information regarding the Son family.

As Table 2 reveals, there are very few comparative populations within South Carolina. Two of the Euro-American populations were never studied and the remaining two are both colonial, pre-dating the Son Cemetery by 50 years or more. This alone reveals the importance of this assemblage and analyses.

Ethical Issues

Bioanthropological studies in the post-NAGPRA (Native American Graves Protection and Repatriation Act, Public Law 101-601, 1990) era have become more ethical and fair to the deceased and their families than they were in the past – at least if they are Native American. This is because NAGPRA requires the same consultation process for the relocation of historic cemeteries as it does for the exhumation and analysis of ancient human remains.

The disturbance of human remains is usually as agonizing for African or Euro-Americans as it is for Native Americans. Yet, there is no such law or provision for burials of either African Americans or Euro-Americans. Consequently, there is still a long way to go in creating equity between the legitimate interests of descendents and the scholarly interest of archaeologists – and the public that certainly has a right to understand their collective past.

While NAGPRA does not apply to the vast majority of burial or cemetery relocations, the Vermillion Accord on Human Remains and the Tamaki Makau-rau Accord on the Display of Human Remains and Sacred Objects do.

The Vermillion Accord, adopted by the World Archaeological Congress in 1989 recognizes the respect due to human remains, as well as the legitimacy of scientific research. It also requires that agreement concerning the disposition of human remains be achieved through negotiation based on mutual respect,

balancing the legitimate concerns of descendents with the legitimate concerns of science and education.

The Tamaki Makau-rau Accord, adopted by the World Archaeological Congress in 2006, stipulates that permission should be obtained from the affected community prior to the display of human remains.

The American Society of Physical Anthropologists has a Code of Ethics last modified in 2009 that integrates many of these principles. For example, the Code of Ethics stipulates that researchers have a primary ethical obligation to those that they study and this obligation supersedes the goal of seeking new knowledge. It mandates that researchers "must do everything in their power" to ensure that their research does not harm the dignity or privacy of those being studied and that the researcher obtain informed consent for the research undertaken.

In compliance with these codes and recommendations, we have obtained consent from the Son's family representative (Mr. Joel McGee) for the excavation, cleaning, and analysis of the remains, as well as for the publication of the findings, including photographic documentation pertinent to the discussions. In addition, Mr. McGee permitted the donation of coffin wood to the S.C. State Museum.

Changing Views of Death

When colonial views of death are discussed attention is often directed to the Puritan view that death was a grim and terrifying reality. Historical statistics reveal that this view was well founded – 40% of the children failed to reach the age of 30. But there was considerable tension in Puritan views for while they recognized that death was a release from the pain of this life and a promise of everlasting life, they also realized that death was God's punishment for sin and it presented the possibility of eternal damnation.

In fact, Puritan theology denied any certainty of salvation. God has already determined the fate of each man, woman, and child at their creation and His will was inscrutable. Sins were not forgiven. Given that the fate of a dying Puritan was predetermined, there was no effort to intercede in their behalf and there were no elaborate rites or ceremonies. In an effort to avoid "graven images" the earliest Puritan monuments were simple and included no graphics (Ferrell 1980:18-23; Stannard 1977).

The Puritan view of death began to soften after about 1650 and by the early eighteenth century when the Great Awakening swept through the colonies, views were far different. Death was no longer feared, but was increasingly viewed as an opportunity to reunite with loved ones that had gone before. Adults were more likely to believe that active piety would assure salvation.

Southern colonies, such as South Carolina, were being settled during this period of religious revival. Eighteenth century Anglicanism was characterized by reason, simple devotional activities, and moral living. Nevertheless, religion was comfortable and respectable. Unitarianism and Romanticism both arose as reactions not only to Puritanism, but also Anglicanism. It was Evangelicalism, however, that dramatically changed religion and the American view of death.

Evangelicalism arose in eighteenth century in part as a reaction against the lack of spiritual fervor and enthusiasm. Ferrell also notes that it was a reaction "to the irreligion of the Enlightenment and as a response to the material preoccupations of the frontier experience" (Ferrell 1980:35). Evangelicals emphasized the importance of scripture and a conversion experience. God was viewed as a persuasive force and viewed sin as voluntary, not innate. People were free, not predestined.

Going into the nineteenth century Ferrell comments on the rapid rise of Methodism. While Congregationalists, Presbyterians, and Anglicans claimed the bulk of church membership at the time of the American Revolution, the Baptists had surpassed the Congregationalists by 1800 and the Methodists were close behind. By 1850, the Methodists' 20,000 churches made them the dominant religious force in America (Ferrell

1980:36).

By 1826 Mills noted that the Methodists, who made their first appearance in South Carolina in 1785, were the most prominent religion, followed by the Presbyterians, Baptists, and Episcopalians (Mills 1972:216 [1826]). In Lexington, however, the most common church was the German Lutheran, with seven in the Dutch Fork area and an additional seven on the southwest side of the Saluda River (Mills 1972:620 [1826]).

The 1850 census for South Carolina reveals that Baptists and Methodists each claimed just over 165,000 members while the Presbyterians claimed over 135,000 members (Debow 1854:136-137). Lexington County, however, was still dominated by Lutherans, who had 19 churches and over 6,700 members. In contrast, there were only six Baptist and eight Methodist churches in the county with 1,500 and 2,600 members respectively. Regardless, doctrinal differences between the Protestant denominations were minor (Ferrell 1980:36).

Regardless of religious affiliation, America's view of death was changing in the nineteenth century. Arminianism, accepted by all Protestant religions, held that the individual could gain salvation through good works. This repudiated Calvinism and Puritanism, and provided a new spirit of hope. Many people began to feel assured of a happy eternal life and the grave became the site of somber celebration. Death took on a sentimental, melancholic glow.

In America, the "beautification of death" movement began in the late eighteenth century and dominated the nineteenth century. Spurred by Romanticism, the movement was a way to cope with the reality of death. Major features of the movement included elaborate mourning rituals and funerary practices, rural cemeteries with their natural and park-like landscaping, and elaborate memorials. The movement was tied to the wide availability of burial receptacles and decorative hardware, as well as embalming (Laderman 1996:55-58; LeeDecker 2009).

Family Cemeteries

There was no precedent in British Protestant tradition for the family burial ground. Western European tradition dictated that the dead be buried in churchyard burial grounds and even there some locations were preferred over others. This practice tended to be followed by the Puritans who buried around the meeting house.

Southerners also had churchyard burial grounds, especially in the larger cities such as Charleston and Savannah. But even there family burial grounds were not uncommon since travel even a few miles could be arduous. The more dispersed the settlement pattern the more likely that family burial plots would be used. Sloane also observes that, "the lack of clergy and churches led settlers to make the funeral a community affair, symbolic of the settlement's continuation despite the individual's death" (Sloane 1991:17). The symbolism may also have been used by family itself, denoting the continuation of the family in spite of the loss of a family member. Mytum (2004:43) notes that these rural farmstead burials continued even in long-settled regions, although he offers no explanation for the phenomenon. Crissman (1994:10-13) observes that familism was especially visible in Appalachia. This may explain the prevalence of family burying grounds throughout the South.

Mytum (2004:44) does recognize that distinct regional styles developed. One of the best documented is the Upland South Folk Cemetery (Jeane 1989). This cemetery type, well established by 1830, is characterized by a "hilltop location, scraped ground, mounded graves, east-west grave orientation, creative decorations expressing the art of 'making do,' preferred species of vegetation, the use of graveshelters, and cults of piety" (Jeane 1989:108). "Making-do" is correlated with the absence of gravestones or, where present, the use of fieldstones. Mounding of graves was another means of marking their location and they were typically about 18 inches high. The cultural imperative to ensure the mounding was maintained was perhaps reinforced by local beliefs that if a mounded grave collapsed then another death would soon occur in the family.

The most common vegetation is the cedar. Graveshelters disappeared about 1900, although the "cult of piety," as evidenced by various days devoted to clean-up of the burial ground, continued until the 1940s.

Jeane also notes that the origin of these burial grounds was likely associated with the dispersed settlement pattern of the region. He also notes that just as they were not churchyard burial grounds, they were not necessarily restricted to a single family, but might often exhibit extended family ties "characteristic of the rural South, ties based on kinship patterns which evolved through intermarriage of frontier families" (Jeane 1989:113). This same view has been voiced by Jordan (1998:13), who recognizes that while the burial ground may have been begun by one family, it might have been used by others as the settlement increased or property owners changed.

Spatial Arrangement

It is common to report that individuals were aligned with their heads to the west and feet to the east. This orientation is generally associated with Christian beliefs since it allowed the dead to rise up and meet Jesus during the Second Coming as he arrived with the rising sun (Crissman 1994:62, Jordan 1982:30).

Relying on the Judeo-Christian account of Eve created from the left rib of Adam, wives would be buried to the left of their husbands (Jordan 1982:31).

Nevertheless, interments were not always so uniform. Mytum notes that burials were not always oriented east-west in the colonial period, but were at times oriented with other features, such as buildings or fences (Mytum 2004:30).

Organization within the burial ground might also vary from linear rows to nucleated family clusters. While rows in family cemeteries may appear to include unrelated individuals or present no obvious patterning, often genealogical research can identify an implicit order that is not immediately recognizable.

Environmental Setting

Physiographic Province

The Son Cemetery is situated in western Lexington County on a sandy terrace overlooking a slope to the north toward what was historically known as Cut Log Branch (Figure 2).

Lexington County, situated in the approximate center of South Carolina, is bounded to the northeast by Richland County with a portion of the boundary marked by the Congaree River; to the east, Lexington is bounded by Calhoun County and to the southeast is Orangeburg County. Newberry and Saluda counties comprise the northwestern and western boundaries, while to the southwest is Chinquapin Creek and the North Fork of the Edisto River, which separate Lexington from Aiken County.

The Saluda and Congaree rivers drain the eastern portion of the county, and the north fork of the Edisto River drains the western portion. Numerous smaller streams (such as Cut Log Branch or Joes Creek) are found throughout the county and generally flow either northward into the Saluda or eastward into the Congaree.

The county is located within two distinct physiographic provinces — the Piedmont Plateau and the Atlantic Coastal Plain (Figure 5). The northern quarter of the county falls into the piedmont, while the southern three-quarters are part of the Atlantic Coastal Plain known as the sandhills. These two provinces are divided by an irregular line, known as the fall line, that extends easterly from Columbia (in neighboring Richland County) roughly parallel to and just north of US 1, with the piedmont to the north and the sandhills to the south.

Son Cemetery falls entirely into the sandhills, a discontinuous belt between 5 and 15 miles in width. The area is sculpted by the erosion

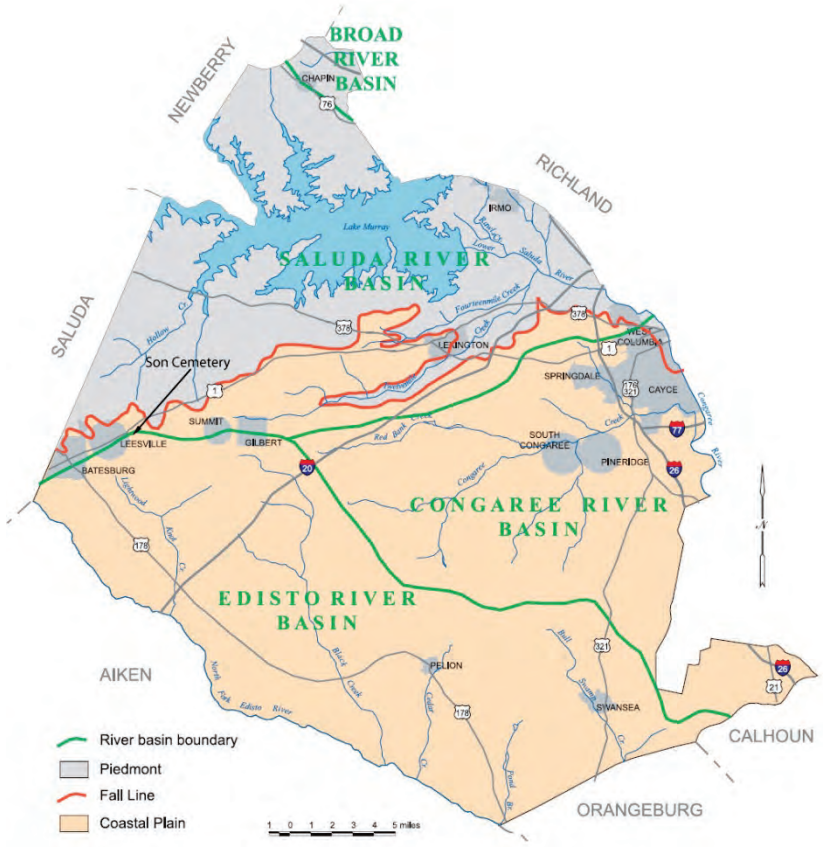


Figure 5. Physiographic provinces and drainage basins of Lexington County, showing the location of Son Cemetery.

of streams passing from the hard crystalline bedrock of the piedmont to the unconsolidated clay and sand formations of the coastal plain. The sandhills are most likely the remnants of former beaches of the Cretaceous period. Local topography is characterized by rolling hills with elevations commonly ranging from 250 feet above mean sea level (AMSL) along the major rivers to nearly 750 feet AMSL in the northeastern part of the county.

Geology and Soils

The geology of the sandhills is characterized by unconsolidated marine deposited sediments.

Son Cemetery is situated in an area of Blaney Sand with slopes ranging from 2 to 10%. These are deep, well-drained soils with moderately slow permeability. The typical soil has an A horizon of very dark gray (10YR 3/1) sand to a depth of 0.25 foot. It is very strongly acidic and friable. The A horizon is found overlying an E1 horizon to a depth of about 0.8 foot consisting of a dark grayish brown (2.5Y 4/2) sand. Below this lies an E2 horizon to 2.1 feet consisting of a pale brown (10YR 6/3) sand. A Bt1 horizon consisting of light brown (7.5YR 6/4) sandy clay loam is found to 3.2 feet. The Bt2 horizon is found to a depth of 4.2 feet and consists of a light brown (7.5YR 6/4) hard and compact sandy clay loam. The pH of the soils ranges from 3.5 to 5.5.

A detailed assessment of the soils in this area is provided by the undated (ca. 1930) *Reconnaissance Erosion Map of Lexington County*, produced by M.W. Lowry and C.B. Gay (National Archives, RG 114, MB10-4). This map reveals that the area on the south side of the Saluda River was classified as "Severe Sheet Erosion Occasional Gullies."

Although Lexington County is not directly incorporated into Trimble's study of erosion in the Southern Piedmont, it is adjacent to the portion of his study area, which has lost up to 1.1 foot of soil through erosion in the nineteenth and early twentieth centuries (Trimble 1974:3). It is adjacent to, and actually part of, the area classified by Trimble as having high antebellum erosion land use with postbellum continuation and belonging to his Region III — the Cotton Plantation Area (Trimble 1974:15).

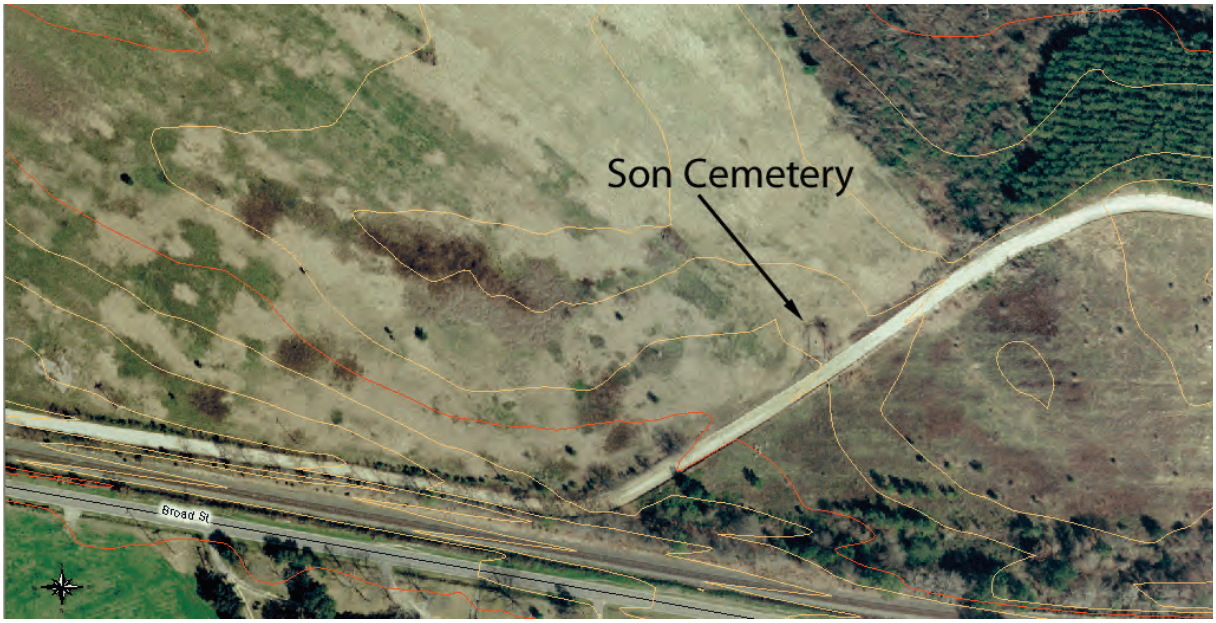


Figure 6. Aerial photo showing vegetation around the Son Cemetery.

Floristics

Vegetation in the sandhills region is characterized by two major forest types: the longleaf and loblolly pine communities (Frothingham and Nelson 1944:19-21). These communities consist primarily of pine with several species of hardwoods including gum and oak (Braun 1950: 285-286). Barry classifies the sandhills as consisting primarily of xerophytic flora, but notes that a transition from a xeric turkey oak barren to a hydric bay can occur within a short distance depending on soil drainage (Barry 1980:100).

Currently, the vegetation in the surrounding area consists of mixed pine and hardwood with a light to moderate understory. An area of planted pine is found to the northeast. Vegetation at the cemetery was limited to Eastern red cedar (*Juniperus virginiana*) and scrub oak (*Quercus sp.*). Only a few hundred yards to the east, however, the topography drops and the soils become more hydric with a pocosins or bay forest. Similar vegetation shifts are also found in the drainages of Cut Log Branch to the north and Joes Creek to the east.

The vegetation today, however, has been shaped by years of cultivation, as well as occasional fires. Nevertheless, the area would likely be clearly recognizable to the Son family since the alterations of the vegetation began during their occupation of the area as farmers.

In 1826, Robert Mills stated that the quality of lumber in the district was excellent:

> It is no uncommon thing to find trees of this description girthing six or seven feet. Besides the poplar, walnut, maple, and various species of the oak, there are the mock-orange, evergreen, elm, hickory, ash, gum, &c. Of the fruit trees there are, the peach, plum, cherry, pear, quince, and apple; besides the native grapes, and various nuts and melons (Mills 1972:617 [1826]).

Climate and Health

Lexington's climate is humid, sub-tropical. The Appalachian Mountains to the northwest and the Atlantic Ocean to the east provide a moderating influence in winter. Summer heat, however, is not moderated by these factors and Lexington County is often the hottest part of the State.

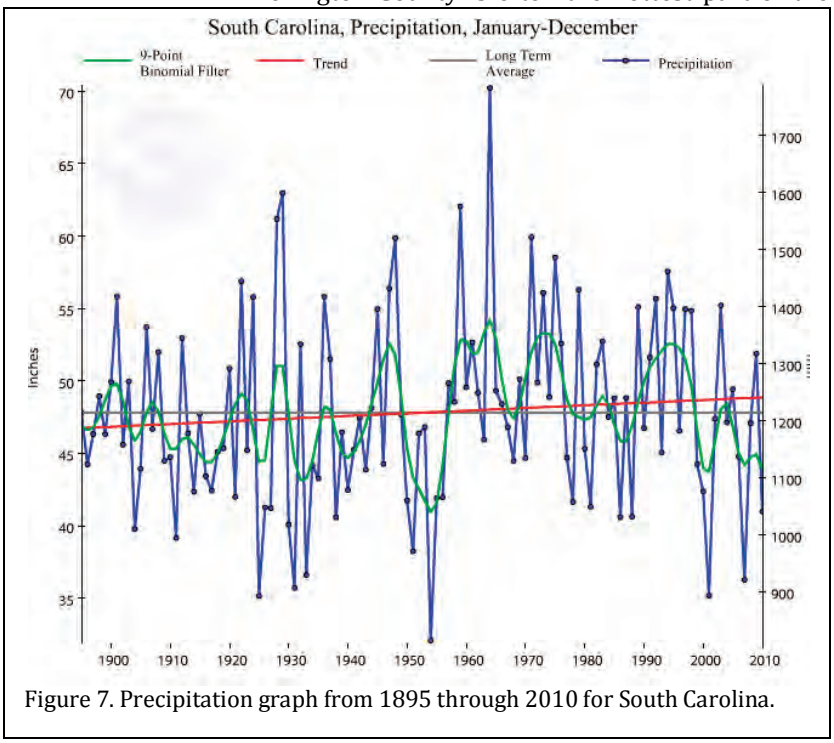


Figure 7. Precipitation graph from 1895 through 2010 for South Carolina.

The average growing season in Lexington County is about 218 days. Typically, the last spring freeze occurs in late March and the first fall freeze is in early November. The annual average temperature is 63.1°F.

The summer season in Lexington County is long, extending from May to September. Few

cold fronts reach Lexington County during the summer months, owing to the blocking influence of the Bermuda High. As a result, the summer heat persists, with temperatures in the 90s being common. On average, there are about six days with temperatures above 100°F during the summer. The average maximum temperature in July is 92°F.

In contrast, winters are mild in Lexington County and consist of warm and cold days, with the average temperature in the mid 40s. A typical winter day could see clear skies with a high temperature in the 70s or rain and temperatures in the 30s.

Precipitation is variable throughout the year, with midsummer normally being the wettest period and fall the driest. Rainfall measures from 46 to 48 inches a year. Figure 7 illustrates the change in precipitation from 1895 through 2010. While the overall trend indicates an increase in yearly rainfall, it also reveals many years of substantially reduced precipitation that would have affected crops.

In 1826 Mills described the climate as:

> mild and salubrious, except immediately bordering on the water-courses; what few diseases prevail are mostly confined to the bilious remittent fevers (Mills 1976:621 [1826]).

The 1850 federal mortality schedule includes Lexington in the "southern" part of the state with Barnwell, Edgefield, Newberry, and Orangeburg – a mix of piedmont and sandhill locations. The most common cause of death, accounting for 13.7% of the 1883 reports, was listed as pneumonia. Following, at 12%, was "unknown." Hernia and dropsy accounted for 5.7% and 5.4% of the deaths respectively. In comparison, state-wide the most common cause of death was identified as "unknown" (15.1%), followed by pneumonia (9.2%), fever (6.9%), and yellow fever (5.1%).

In 1850 the most common season of death in the Lexington area was autumn, accounting for 29.6% of the reported deaths.

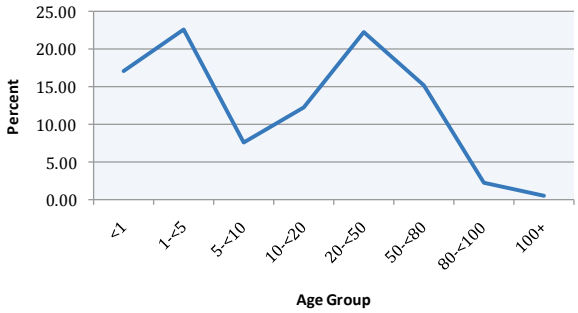


Figure 8. Mortality in the Lexington area, 1850 (sexes combined).

Curiously, only 19.6% of the deaths occurred in the winter.

Figure 8 shows the mortality for this time period with the sexes combined. Most children were at risk from birth to about 5 years of age, at which time the rate of death dropped. Death peaked again at "middle age" with relatively few South Carolinians living past age 50.

By 1900 the federal mortality schedules combine counties so it is no longer possible to pull out data specific to the Lexington area. Looking statewide the primary cause of the death was

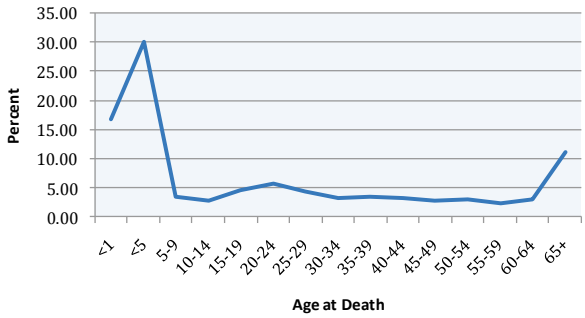


Figure 9. Mortality in South Carolina, 1900 (sexes combined).

consumption (known today as tuberculosis), accounting for 12.8% of the deaths. This was followed by pneumonia (7.7%), typhoid fever (5.6%), "diseases of the heart" (5.2%), and

malarial fever (4.4%).

The mortality graph, shown as Figure 9, reveals a fundamental change since 1850. By 1900 most deaths, nearly 47%, occurred under the age of 5. Past 5 years of age the potential for death stabilized at around 4% until 65 and up, when the chance again increased.

Historical Synopsis

The Son Family

The Son family is listed in various historical records as Son or Sun, sometimes with one "n," sometimes with two. There are also more inventive spellings, such as Sund or even Sand. We use the "Son" spelling consistently throughout this study. To help readers follow the family members, we are including a partial family tree as Figure 10.

Eighteenth Century

Family history suggests that Andrew Son, Sr. emigrated from Germany arriving first in Pennsylvania and then moving to South Carolina about 1750 (Brewer 2010:6). Early Son family deeds refer to the holdings of Andrew Son having derived from land granted to John W. Lee on September 7, 1807. This is the son of Andrew Lee and both father and son operated the tavern shown on Mills' *Atlas* (Figure 11; Carson 1983:7).

We found Andrew Son listed in the 1790 census for Orangeburg District. Since Lexington District was not created until 1804, the 1790 census district of Orangeburg would have included what is today Lexington. At the time Andrew Son's family included Andrew and his wife as well as two children under the age of 16.

Andrew Son, Sr. (Andrew, Jr. was not born until 1793) served in the South Carolina militia during the American Revolution under Captain Summer and Colonel Waters. His enlistment ran from January 9 until July 8, 1779 (Moss 1983:2:884). For his 80 days of duty he was paid £5.14.3¼ (SCDAH, Accounts Audited of Claims Growing out of the Revolution, Reel 138, Frame 436).

The "Col. Waters" is Colonel Philemon Waters, discussed at length by O'Neall (1949:178-185). Pension applications reveal that the "Captain Summer" was Captain John A. Summer of Lexington District (Pension Application of George Summers, National Archives Microseries M804, Roll 2322, Application #S22001). This application reveals that the company spent time along the Savannah River and in the Brier Creek, Georgia area, in the Augusta area, and also in Charleston.

Andrew Son also filed a claim in the amount of £4.5.8 for an anvil, hammer, and tongs taken in 1781. An attached note requested that his indent be delivered to Capt. John Adam Summer (SCDAH, Accounts Audited of Claims Growing out of the Revolution, Reel 138, Frame 436).

In 1794 Andrew Son signed a petition requesting incorporation of St. John's Lutheran Church and St. Peter's Lutheran Church, both of which are located in the Dutch Fork section of Lexington County (Quattlebaum 1950:76).

Early Nineteenth Century

In 1800 the federal census reports two Andrew Sons and while they are not identified as such, it is likely that they represent Sr. and Jr. Andrew Son, Sr. was listed as owning one African American slave. His family consisted of one male child under the age of 10, one male between the ages of 16 and 26, and Andrew, Sr., listed as between 26 and 44. His wife was the only female in the family and her age was listed as 45 or over.

The family of Andrew Son (spelled Sun) included one male under 10, one between the age of 16 and 44, and two between 26 and 44 years. The one female in the household was listed as 26-44 years old. Also present was one slave. Andrew Son, Jr. had married Mary Schmitz, sometimes incorrectly identified as Mary Smith (Brewer 2010:6). Family history also refers to

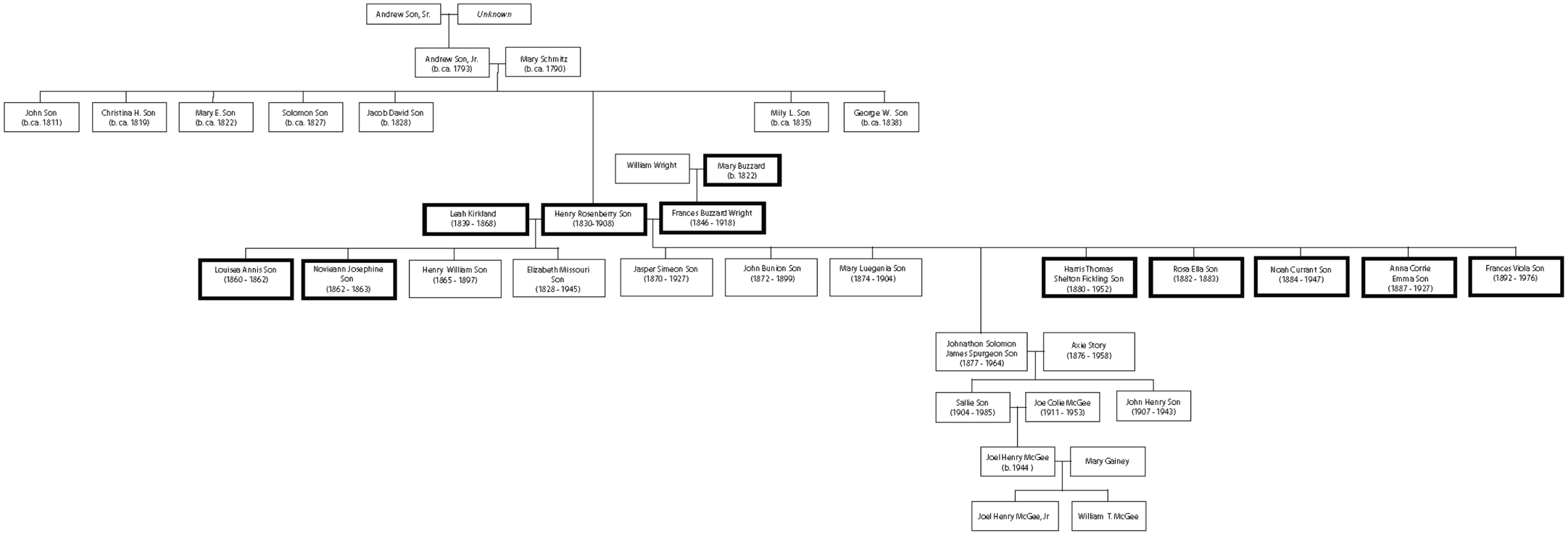


Figure 10. Son Family Tree (those buried at the Son Family Cemetery are shown in bold).

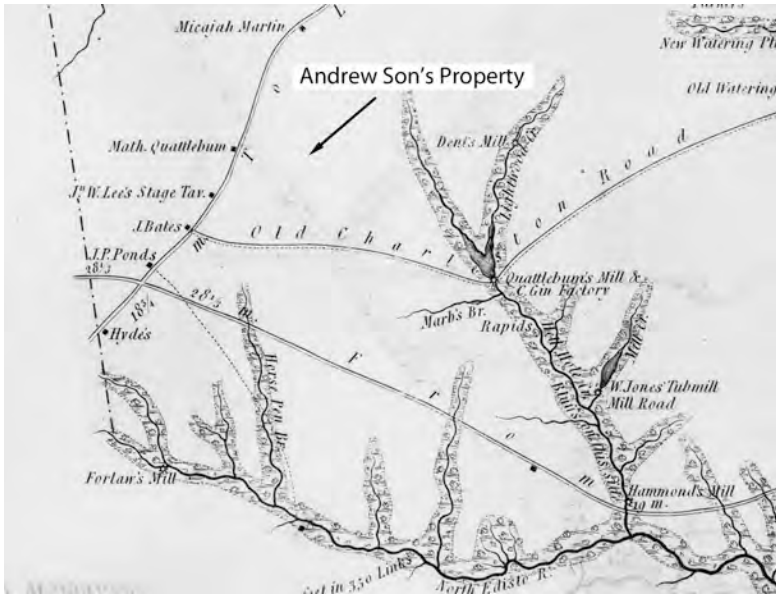


Figure 11. Mills' *Atlas* of 1826 showing the general location of Andrew Son's property.

Andrew, Jr. as a physician (Brewer 2010:3), although he is consistently referred to as a farmer in the various census records. This appears at least partially based on the recollections of Andrew Lee Son, a grandson of Henry R. Son (and great-grandson of Andrew), writing in 1977 (Brewer 2010:47-48). Since Andrew Lee Son would have been only 10 years old when his own father died, it is difficult to determine how much of the family history was passed to him by knowledgeable individuals.

By the 1810 census, the Son families are shown in Lexington County and both Sr. and Jr. are clearly itemized. At the time, the Andrew Son, Sr. family consisted of two individuals. Since both are listed as over 45 years old, they are presumed to be husband and wife; they would also have been born prior to 1765. Also enumerated were four enslaved African Americans. The listing for Andrew Son, Jr. included only two individuals – Andrew and his wife, both identified as 16-25 years old; they would have been born perhaps as early as 1785 and perhaps as late as 1794 (the 1850 census reveals that Andrew, Jr. was born in 1793).

Andrew Son, Sr. apparently died before the 1820 census since he is not listed. His son, Andrew, Jr., however, is found. He and his wife are listed as between 26 and 44 years old and they have three children – one male between 10 and 15 years old and two females under 10 years old. Also present were three African American slaves, two between 14 and 25 and one under 14 years old. The census indicates that three persons were engaged in agriculture.

By 1830 the number of slaves held by Andrew Son, Jr. had declined to two – both 10-23 years old. Also in the family were three males under 5, one between the ages of 15 and 19, and one (presumably Andrew) between 30 and 39. There were four females, two between 5 and 9, one between 10 and 14, and Andrew's wife, listed as between 30 and 39 years.

The 1840 census continues to list Andrew Son in Lexington County. The family consisted of one male between 5 and 9, two between 10 and 14, and Andrew, listed as between 40 and 49. Also enumerated were four females, including one under 5 years old, one between 15 and 19, one between 20 and 29, and Andrew's wife, listed as between 50-59 years old. The number of slaves, which had been declining since 1810, continues that decline; only one, a male between 24 and 35 years old, is listed.

The 1840 census also reveals that of the nine individuals in the census household, four were engaged in agriculture. This likely meant all of the males except the youngest child. Two of the children were also in school.

The 1850 census was the first to provide a detailed listing of family members. Andrew Son was listed as 57 years old and was married to Mary E. Son, identified as 60 years old. Various genealogies list Mary as either Schmitz or Smith. Their household consisted of seven children,

Figure 12. Value of real estate claimed by Lexington County farmers in 1850.

including four sons: John (39), Jacob D[avid] (22), Henry R[osenberry] (19), and George W. (12). There were three daughters: Christina H[arriett] (31), Mary E. (28), and Miley L[ucinda] (15).

The census reveals that Andrew's wife, Mary, and their two daughters, Christina and Mary, were unable to read or write. The remainder of the family was apparently literate.

Andrew's occupation was listed as farmer, along with his sons Jacob and Henry. His eldest son, John had the specific notation of "none" under occupation. This suggests that John may have been unable to work. Andrew Son also claimed real estate valued at $3,000 ($76,400 in 2009$).

This was a significant amount of money for the period. When all of the reported real estate values are examined for Lexington County, the average is $1,548. The average for the 725 farmers enumerated was $1,540, although William Baker, another area farmer, reported real estate valued at $46,816. Figure 12 shows that most Lexington farmers claimed relatively small holdings. Only 73 of the county's 725 farmers claimed holdings with a greater value than Andrew Son's.

The 1850 slave schedules do not show Andrew owning any African American slaves. The earlier census records reveal that the number, never great, declined steadily. Probably as his family grew and there were more hands to tend crops, he divested himself of slave labor.

There were 559 slave holders in Lexington, most of them being farmers, and the average slave holding was 10. Andrew Son, with no slaves, was in the minority. Yet given the value of his property he could have purchased slaves had he chosen to do so.

Figure 13 reveals that large holdings were relatively uncommon in Lexington and most slave owners (nearly 53%) held 1-5 slaves. Only 7.3% of the owners held more than 25 slaves.

The 1850 agricultural schedule (Table 3) helps us to understand how Andrew Son was operating his farm. Son's improved acreage – that

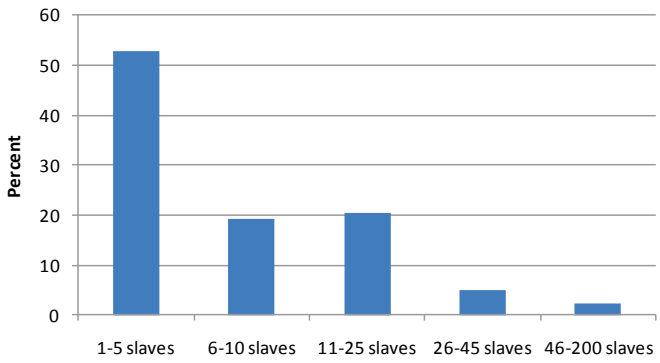


Figure 13. Size of slave holdings in Lexington County, 1850.

actually under cultivation – was only about two-thirds of the county average. The unimproved acreage was about typical for the district. Son had devoted more resources to agricultural implements than the average Lexington farmer.

In terms of livestock, Son had twice as many horses, suggesting that they were used for plowing. He had the average number of cattle, milk cows, and pigs. Son did not, however, have any mules, oxen, or sheep. In spite of this the value

Table 3.
Agricultural Production of the Son Family compared to the Lexington District Average in 1850 (top) and 1860 (bottom).

	Acres																								
	Improved	Unimproved	$ Value	Value of Implements	Horses	Asses	Milk Cows	Oxen	Other Cattle	Sheep	Swine	$ of Livestock	Wheat (bu)	Rye (bu)	Corn (bu)	Oats (bu)	Rice (lbs)	Tobacco (lbs)	Cotton (bales)	Wool (lbs)	Peas (bu)	Potatoes (bu)	Sweet Potatoes (bu)	Butter (lbs)	Hay (tns)
Andrew Son	130	500	1,400.00	100.00	6		4		11		25	412.00	100	8	600				3		5		12	52	
Lexington Co. average	74.37	460.40	1,055.71	75.02	2.77	0.76	3.84	0.19	11.33	6.27	26.48	305.52	38.85	0.49	402.23	35.82	53.45	0.03	4.85	9.60	20.64	1.39	63.85	43.94	0.25

	Acres																								
	Improved	Unimproved	$ Value	Value of Implements	Horses	Asses	Milk Cows	Oxen	Other Cattle	Sheep	Swine	$ of Livestock	Wheat (bu)	Rye (bu)	Corn (bu)	Oats (bu)	Rice (lbs)	Cotton (bales)	Wool (lbs)	Peas (bu)	Potatoes (bu)	Sweet Potatoes (bu)	Butter (lbs)	Hay (tns)	
Henry R. Son	70	185	2,000.00	50.00	1						16	105.00	30		70	5				30	1	50		1	
Leesville Average	90.15	246.15	2,071.43	96.10	2.76	1.06	3.24	0.33	5.33	3.59	17.81	503.68	56.89	0.88	292.74	12.89	15.75	8.75	6.60	42.63	1.80	62.03	55.88	2.16	

of his livestock was about 35% higher than the average farmer. This may reflect the larger number of horses.

In terms of agricultural production, Son produced significantly greater quantities of wheat, rye, and corn at the expense of oats, peas, and potatoes. Andrew Son, in fact, produced no Irish potatoes and only a fifth of the sweet potatoes produced by other farmers. The low sweet potato production may, however, reflect the absence of slave labor on his farm and thus the reduced need for internal consumption.

What also stands out is that while Son produced cotton, his yield was only two-thirds of the district average in spite of his larger acreage of improved land. It appears, based on this very limited information, that Andrew Son may have focused equally on subsistence and money crops, producing a more diversified yield.

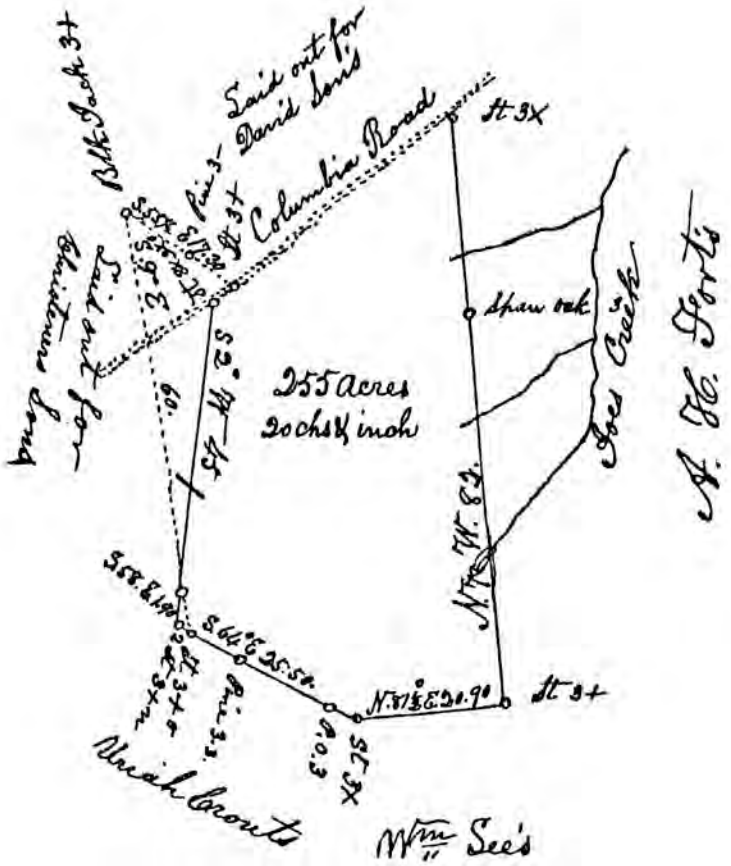


Figure 14. Plat of the lands deeded by Andrew Son to his son, Henry R. Son in 1855 (Lexington County Register of Deeds, DB T, pg. 317).

This single year's production suggests that Andrew Son was a successful farmer in the Lexington District, balancing the needs of his family and their livestock with the need for producing a cash crop. It suggests that Andrew Son invested in his farm, improved his lands, and acquired the equipment to farm productively. And all of this was done without the use of slave labor.

In the 1850s Andrew Son began selling his lands to his children. For example, in 1850 he sold Jacob D. Son 118 acres on Holly Creek. That same year he sold Andrew S. Son, 108 acres, also on Holly Creek (Lexington County Register of Deeds, DB Q, pg. 173). In 1855 he sold his daughter Miley Lucinda Son 68 acres on Cut Log Creek (Lexington County Register of Deeds, DB T, pg. 409). Christener [Christina] Harriet Son purchased 171 acres on the Columbia Road at the head of Cut Log Creek in 1855 (Lexington County Register of Deeds, DB T, pg. 408) and Mary E. Son acquired 68 acres on Cut Log Creek that same year (Lexington County Register of Deeds, DB T, pg. 407).

It was during this process of providing for his children's future success that Andrew sold his son, Henry R. Son, 255 acres on Joes Creek. The deed specified that the property was "part of [a] tract granted to John W. Lee Sept. 7, 1807" (Lexington County Register of Deeds, DB T, pg. 317).

Looking back to the 1850 census, Andrew provided for all of his children except John, who

was listed as having no occupation, and his youngest, George W. Son. In addition, he included Andrew S. Son, who we have not thus far accounted for. Since Andrew Son died intestate, this may have been his way of ensuring for the long-term success of his family.

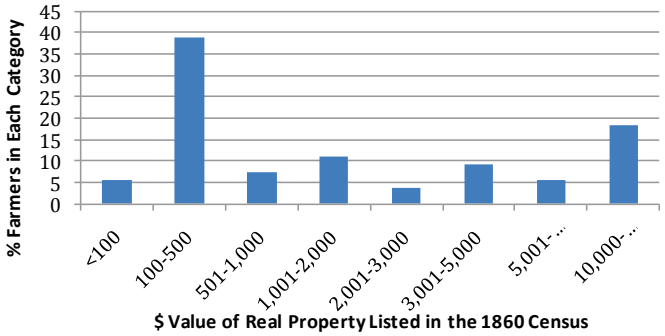


Figure 15. Value of real property claimed by Leesville area farmers in 1860.

Figure 14 shows the plat prepared for the property deeded to Henry R. Son in 1855. The tract bordered what is today US 1 (then known as the Columbia Road) on the north. Surrounding land owners included Uriah Crouts, William Lee, and A. H. Forts.

By the 1860 federal census Andrew Son is not listed. His wife, Mary E. Son, was 70 years old and head of a household consisting of Christina Harriet (41), Mary E. (38), and Milly Lucinda (25). All four listed their occupation as "day laborer". Christina listed $600 in real estate and $33 in personal goods, Mary E. and Milly L. each claimed $400 in real estate and $33 in personal goods. In each case the real estate would have been the property sold them by their father before his death.

We have found no listing for either George W. or Andrew S. Son.

In a separate household was Henry R. Son, who by this time was 29. He had married Leah on November 11, 1855, who was 20 years old (Brewer 2010:3). Various genealogies list her as Leah Kirkland, although we have not found her listed for Lexington County. Henry listed his occupation as farmer and claimed $2,000 in real estate and $200 in personal estate. Without children and owning no slaves, it may be that his mother and sisters, who listed their occupation as day laborers, might have worked on his farm.

The 1860 census allows us to specifically examine the Leesville area – where Henry R. Son was enumerated. Using that data alone we see that Henry – like his father before him – seemed to be a relatively wealthy farmer in his area.

The average Lexington farmer held 9 slaves in 1860 – not appreciably different than a decade earlier when the average was 10 slaves. The average in Leesville was slightly higher – 11 slaves. Most owners continued to hold relatively few slaves. Figure 16 compares slave owning in 1850 to 1860 in the Lexington District. There appears to have been little significant change over the decade.

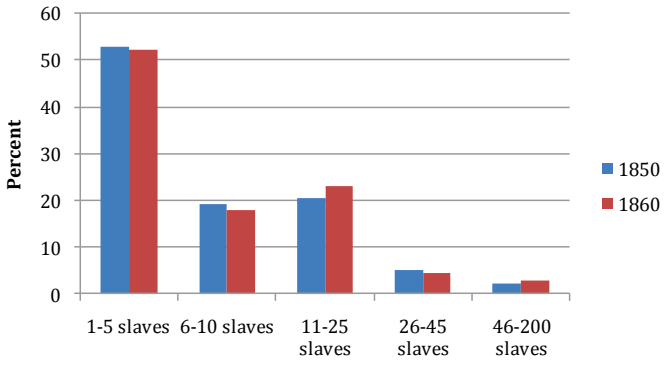


Figure 16. Slave holders in Lexington District, 1850 compared to 1860.

In spite of appearances, if we examine the 1860 agricultural schedules, comparing the report

of Henry R. Son with the district average, it appears that Henry may have been having some difficulties. The Leesville average improved acreage was 90 and Henry had only 70 (although Henry valued his farm very close to the area average). Henry also possessed about half the average value of agricultural implements.

When we examine the livestock we immediately see a farm that was deficient – only one horse, and no cattle or milk cows. Only the number of pigs came to the Leesville average.

Henry Son produced significantly lower quantities of wheat, oats, and corn than his neighbors. He came closer to the average in peas, Irish potatoes, and sweet potatoes.

What is most noticeable – and perhaps most economically telling – is that Henry R. Son produced no cotton in 1860, while his neighbors produced on average 8.75 bales. This stands out particularly when we consider that his farm was not an especially strong producer of subsistence crops.

It may be that the division of Andrew's property among his children placed everyone at a disadvantage, creating a situation where the best lands were so divided that no one had the resources necessary to make production profitable. It may also be that Henry was simply not an especially good farmer. Unfortunately, we will likely never know the answer to that question since the Civil War intervened.

The Civil War

"H.R. Sone" enlisted as a private in the 17th Regiment, South Carolina Infantry, Company G. (National Archives, Film M381, Roll 30). The 17th Regiment was organized in the early part of 1862 with all but two companies coming from York, Chester, Lancaster, and Fairfield. Company G was one of two organized in Barnwell District (McCrady 1888:22). Why Henry R. Son enlisted in Barnwell is not known.

McCrady notes that the regiment first served on the coast of South Carolina, but then became what he called a "tramp brigade," serving in almost every state of the Confederacy, noting that the brigade:

> fought in Virginia, Maryland, North Carolina and Mississippi. It traversed Alabama and Georgia, and served for some time on the Island of Hope, in the latter State, including in its service a term of bombardment in Fort Sumter. . . . Its first battle was the Second Manassas, and in this battle it lost in proportion to its numbers more than any other regiment from this State during the whole war did in any single engagement. There were but three other regiments in the Confederacy which had a greater percentage of loss in any single battle. Its loss was 189 killed and wounded out of 284 carried into action (McCrady 1888:22).

During the Civil War the brigade fought at Second Manassas, Virginia (August 24, 1862), South Mountain, Maryland (September 14, 1862), Petersburg, Virginia (July 30, 1864, August 6, 1864 and April 1, 1865), Fort Steadman, Virginia (March 25, 1865), Sailor's Creek, Virginia (April 7, 1865), and Burkesville Junction, Virginia (April 9, 1865).

Henry's company went into the Civil War with a roster of 144 enlisted men. Of these, two died in prison, three died of their wounds, seven died while on duty, nine were killed in action, and seven were captured as prisoners (http://freepages.genealogy.rootsweb.ancestry.com/~york/17thSCV/G.html).

Another memorable event in Henry's life was his baptism as a Baptist in the icy Rappahannock River in the winter of 1862. He was likely a participant of what has been called the "Great Revival" in the Army of Northern Virginia from 1862-1864 (Bennett 1877; Brinsfield 2005:197).

There is family history that Henry

purchased Confederate War Bonds (Joel McGee, personal communication 2011). The Confederate Congress established a minor tariff and a small direct tax, but neither produced sufficient funding for the war effort. The Confederate government therefore turned to loans, raising $15 million in 1861 with the sale of their first bond issue. The second issue, however, was not received with the same level of patriotic enthusiasm. Few Southerners had the cash to purchase them and the 8% interest offered no real promise of financial return when confronted by the reality of a 12% inflation rate. Investors bought the bulk of these bonds, using newly minted Confederate Treasury notes. By the war's end Southerners faced a 9,000% inflation rate – largely the result of the government's effort to finance the war using $1.5 billion in paper dollars that began depreciating before the ink had a chance to dry.

Whether to raise funds for war bond purchase or simply to feed his family in his absence, Henry sold 160 acres of his property in February 1863 to Henry P. Barr for $225 in Confederate money (Lexington County Register of Deeds DB V, pg. 347). In the 1860 census, Barr was listed as a 22 year old farmer in Lexington who held $5,400 of property. In 1860 Barr owned six slaves. At the beginning of the war he enlisted as a private in Company D, 2nd Cavalry Regiment South Carolina.

Barr did not hold the property long, selling it to Zilpah Hallman in December 1864 (Lexington County Register of Deeds, DB V, pg. 346). Hallman is shown in the 1860 census as a 55 year old widow with only $350 in real estate and $350 in personal property.

The Postbellum

After the Civil War times were likely very difficult for Henry Son. He and his wife had lost one child, Annis, at the beginning of the war and another, Josephine, during the war. In 1868 Leah died in childbirth, leaving Henry with perhaps two children, Henry W. (born ca. 1865) and Elizabeth M. (born ca. 1867).

Within about a year Henry had married Francis Wright (1846-1918). In 1870 Jasper S. Son was born, followed by John B. Son in 1872 and Mary C. in 1874.

With new mouths to feed and an economy that was in tatters, Henry R. Son sold an additional 30 acres of his property in February 1874 to Lewis Shealy for $150 (Lexington County Register of Deeds, DB Z, pg. 260). In 1860 Lewis Shealy was a 31 year old farmer who claimed $800 in real estate and $1,500 in personal property. This was probably the Lewis Shealy who entered Company C of the 15th Infantry Regiment as a private and was mustered out as a Lieutenant at the end of the war. The unit was organized in 1861 near Columbia and consisted of individuals from Richland, Union, Lexington, Kershaw, Fairfield, and Williamsburg counties (National Archives, Microfilm M381, Roll 29).

During Reconstruction Andrew Jackson, largely following Lincoln's plan, sought to readmit the Confederate states as quickly as possible. Radical Republicans in Congress, however, felt that the citizens of the Confederate States must be punished for secession. They passed the Reconstruction Act of 1867, a sweeping law that required, among other things, a new loyalty oath superseding Jackson's previous oaths. Called the Ironclad Oath (or "The Damnesty Oath" by many Southerners), it was required for any candidate for political office. The oath required that the individual swear that he had never taken up arms against the Union or supported the Confederacy.

Henry R. Son, along with 52 other residents of Lexington County, signed this oath (Reconstruction and Military Government in the South, 1867-1870, Part 1, First and Second Military Districts, Reel 10, 0835). It is likely that Henry felt he had little choice but to acquiesce. We have not identified what political office he was seeking.

Henry Son does not appear in the 1870 census, although we have found his mother, Mary E. Son in the Gilbert Hollow enumeration district where the family had been since the early 1800s. She is listed as an 80 year old farmer with $510 in real estate. Also in her household were her son,

John, listed as a tinker, and Christina, listed as a farmhand.

In November 1875 Henry R. Son was sued in the Lexington Court of Common Pleas by Daniel Drafts for a debt of $98.75 plus interest. The court ordered that Henry's property be seized and sold by the Sheriff in satisfaction of the debt. The sale by H.H. Geiger, the Sheriff, occurred on January 3, 1876 and the 72 acres brought $300. The property was described as "lying on both sides of the Charlotte Columbia and Augusta Rail Road adjoining lands of the Estate of Fort, Lands of Lewis Shealey [sic] and others, and known as the home place of said H.R. Son" (Lexington County Register of Deeds, DB AA, pg. 226).

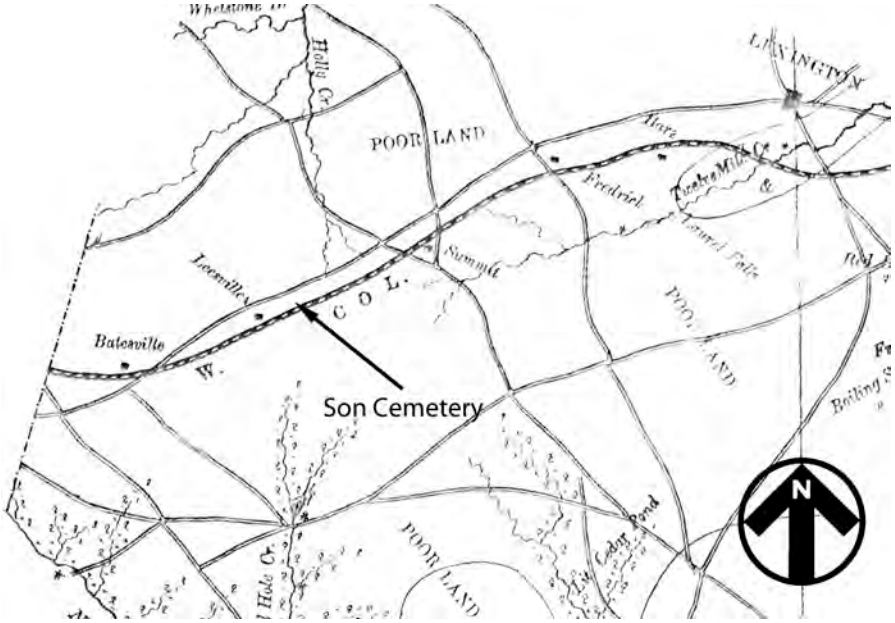


Figure 17. Portion of Stroeber's 1873 Agricultural Map of Lexington. The vicinity of Henry R. Son's property was classified by Stroeber as "Poor Land," revealing its limited agricultural potential.

The property appears to be the last parcel in Henry's name and its description appears to place it at the southern edge of the original purchase from his father (Figure 14). The description as the "home place" means that the family home was on the parcel and it is likely that the cemetery was also part of this 72 acre parcel.

The three sales of 160 acres, 30 acres, and 72 acres total 266 acres, which is in close agreement with the original purchase by Henry of 255 acres. We believe that this accounted for all of Henry Son's land.

The next time we find Henry R. Son in the federal census is in 1880 when he and his family are living in Norris Township, Edgefield County.

Edgefield lost acreage to the creation of Aiken County in 1871, but still included all of today's Saluda and Edgefield counties, as well as parts of Greenwood and McCormick counties. Chapman notes that the Norris Township "lies in the eastern border of [Edgefield County] and embraces a considerable portion of the famous Ridge Plateau, from the Lexington County line west to Ward Township" (Chapman 1897:156). He also notes that the towns in this township include Ridge Spring and Monetta, with Batesburg just over the county line (Chapman 1897:160). Thus Son and his family did not move far.

By 1880 Henry was listed as 49 years old, living with Frances, 30, and seven children, Henry W. (15), Elizabeth M. (13), Jasper S. (10), John B. (8), Mary C. (6), Jonathan S. (3), and Harris T.F. (1 month). Henry is listed as a farm laborer, Francis was "keeping house," and both Henry W. and Elizabeth M., the two oldest children, were also listed as farm laborers.

Andrew Son, Jr., who is not found in any census since 1850, suddenly reappears in 1880. At this time he was 87 years old, living with his 62 year old daughter, Christena, and a 21 year old niece, Sallie. All listed their occupation as "works on farm."

South Carolina passed several benefit

programs for Confederate veterans. Prior to 1919 decisions were made by local pension boards and approval for public support was generally given to men disabled by the war or widows of men who died in Confederate service. By 1919 the South Carolina legislature included all veterans and widows over the age of sixty who had married veterans before 1890.

Several members of the Son family applied for benefits. Mrs. Catherine Son of the Leesville area was approved to receive $400 a month. In contrast, John David Son was disapproved since he owned too much property (South Caroliniana Library, Lexington County Pension Board Records, 1896-1916). There is no record of Henry R. Son ever applying for support.

There were a number of Confederate veterans' reunions throughout the South in the years following the Civil War. The United Confederate Veterans (UCV) was organized in 1889 as a benevolent, historical, social and literary association. One of its primary functions was the organization of reunions and it was active into the 1940s. Throughout this period it was common for the UCV to produce medals, ribbons, and other assorted memorabilia (the records of this organization are stored at the Hill Library, Louisiana State University).

Louise Pettus reports that the first reunion for the 17th South Carolina Regiment occurred near the town of Blacksburg in Cherokee County in August 1889 and that badges were distributed. Afterwards most of the reunions were held in Columbia at the State Fair Grounds (http://freepages.genealogy.rootsweb.ancestry.com/~york/17thSCV/Reunion.html).

Twentieth Century

The 1890 census for South Carolina has been destroyed, but the 1900 census identified Henry, by this time 70 years old, living with Frances, 46. The census reveals that Frances had nine children, but only seven were still living. These included Spengum (23), Noah C. (15), Corry (13), and Frances V. (8). By this time the family had at least partially recovered financially since they are listed as owning their farm in District No. 7 of Saluda County. Saluda was separated from Edgefield in 1896, so while the name of their census tract changed, they were apparently still in the same general location.

With the death of Henry in 1908, the family again relocated and by the 1910 federal census are in Aiken County. The head of the household is 39 year old Jasper S. Son. He had taken in his mother, 56 year old Frances. Also present are Cory (20), Viola (17), Noah C. (25), Shelton (30), and Crossland, a 19 year old nephew. Jasper is listed as a farmer; the census indicates that he was the owner of mortgaged property. Everyone else, with the exception of Frances, was listed as a laborer on a home farm. Between the census takings of 1910 and 1920, Jasper married Nancy Rodgers (1819-1914); their children were James Simeon (b. 1911), Polly Frances (b. 1912), and Nancy Mae (b. 1913)

Frances died in 1918, being transported back for burial in the family cemetery. Her death certificate reveals that she died on March 30 of "carcinoma of stomach and duodenum" or first section of the small intestine (South Carolina Death Certificate, Saluda County, 1918, 12036). The informant for the certificate was Noah Son and it reveals that she had been receiving treatment by a Ridge Spring physician since the previous December.

September of that same year Noah registered for the World War I draft. While the remainder of the family continued to live in Aiken, he listed his residence as Ward, Saluda County. His occupation was listed as a farmer and he was of medium height and stout build. While blind later in life, he was not at this time. He listed his sister, Corrie Son, as his nearest relative (National Archives, World War I Selective Service System Draft Registration Cards, 1917-1918, Saluda County, South Carolina, Roll 1877680.)

By the 1920 census the Son family had split into three groups. Jasper, now 42, had married Annie May Jackson (1888-1939) and continued to live in Aiken where he was listed as a farmer on Settlement Road. His family included

his wife, Annie (42), a daughter Sallie (15) and a son, John Henry (12). Jasper continued to farm and his two children were listed as laborers.

Meanwhile Shelton, 38 years old, had moved to Aiken County and the census places him in Gregg Township, at an unincorporated town called Inadisin Village. There Shelton worked in a cotton mill. His wife, Edna, was 25 and the family included Jenna (6), Willie (5), and Frances (3 months).

Noah Son was listed in Township No. 4 of Saluda County on Mt. Williams and Johnston Road. He was renting a farm where he and his two sisters, Carrie and Viola, were working.

By 1930 Noah, now 45 years old, was listed in McTier Township in Aiken County. He was still single and listed his occupation as a farmer. Also in the household was Viola, with no occupation listed, and Shelton, now 50. Shelton was still listed as married, although he had separated from his wife when their children were "very little" (Brewer 1910: 44). (Edna died in 1944 in Aiken County and her death certificate, while indicating that she was married, did not list the name of her husband).

Corrie had died on March 22, 1927 from acute nephritis with Vincent angina as contributory at Baptist Hospital in Columbia (SC Death Certificate, Richland County, 1927, 4344). The informant for the certificate was Noah and Corrie's occupation was listed as a "domestic."

Acute nephritis is an inflammation of the kidney and it occurs most often after an infectious disease. In the case of Corrie, this was likely the Vincent angina listed on the death certificate. This is usually called trench mouth or sometimes acute necrotizing ulcerative gingivitis. It is a progressive painful infection with ulceration, swelling and sloughing off of dead tissue from the mouth and throat due to the spread of infection from the gums.

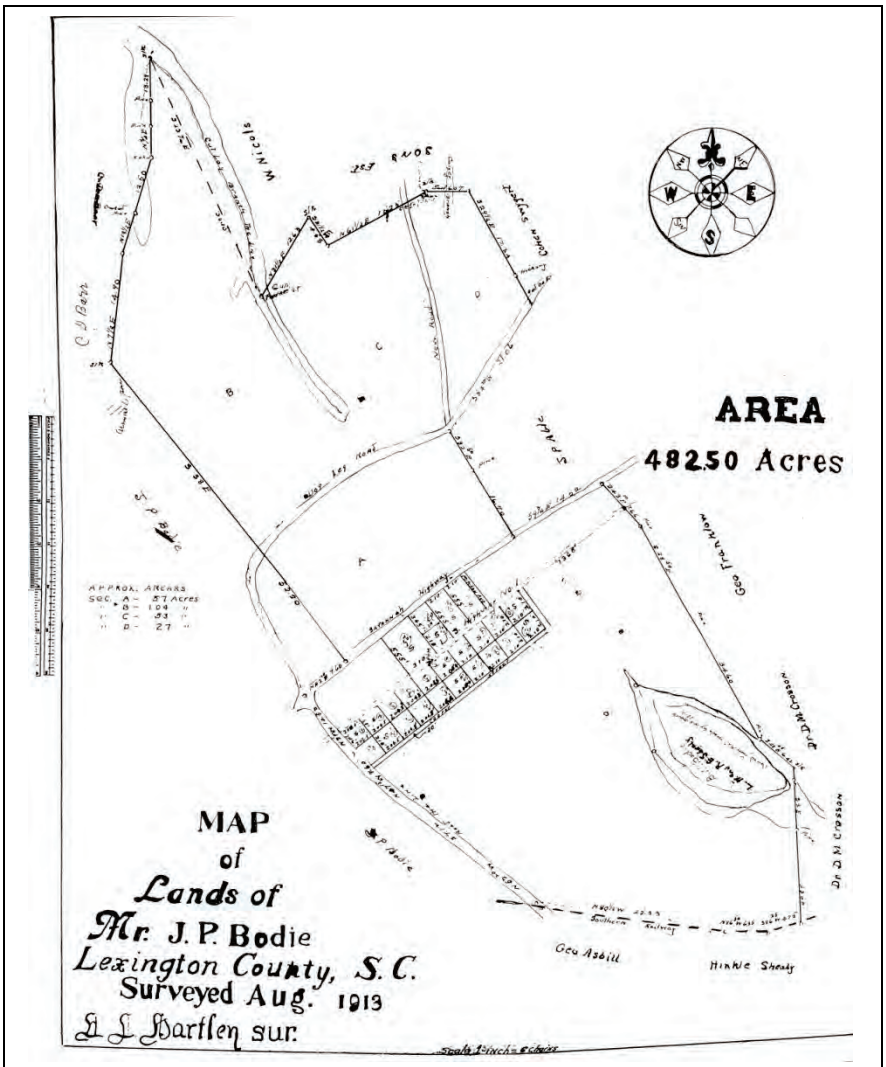


Figure 18. Survey of J.P. Bodie holdings in 1913 (Lexington County Register of Deeds, PB 53G, pg. 43).

As mentioned, Shelton's wife died in 1944 and Noah, with whom he was living the last time we find him in census records, died in 1947. Sometime around 1949 Shelton was transferred to institutional care. On September 30, 1950 Shelton Son, who had most recently been living at the Lake Side Rest Home in Lexington County, died of myocarditis. This is an inflammation of the heart muscles. It resembles a heart attack, but the coronary arteries are not blocked and it is often caused by a viral infection.

Ownership After the Son Family

As explained, Henry was sold his holdings in three transactions. The first, of 160 acres, was conveyed to Henry P. Barr who in turn sold the property to Zilpah Hallman. Hallman subsequently sold the property to John Hallman in 1873 (Lexington County Register of Deeds, DB Y, pg. 509). In 1884 it was sold to J.P. Bodie (Lexington County Register of Deeds, DB EE, pg. 346).

The remaining two tracts were also acquired by J.P. Bodie who also obtained large holdings of Son property that extended north of US 1, eventually amassing 482.5 acres (Figure 18; compare with Figure 14). Bodie would have acquired the Son cemetery, located in the southeast corner of the plat.

The property passed from J.P. Bodie to Bessie W. Bodie. From there it passed to Ida S. Mitchel, who sold it in 1965 to Ernestine and Robert L. Rose (Lexington County Register of Deeds, DB 13-T, pg. 502). They in turn conveyed the property to Fred A. Rose, initially as a series of small conveyances subsequently in one corrective deed in 1999 (Lexington County Register of Deeds, DB 5212, pg. 207). A tract of 175.62 acres, including the Son Family Cemetery, was sold by Fred A. Rose to Lexington County for $500,000 in December 1999 (Lexington County Register of Deeds, DB 5577, pg. 195).

The cemetery was not shown on the Bodie plat, nor is it shown on the 1922 Soil Map of Lexington County. It is, however, shown on the 1944 15' Gilbert topographic map, as well as the following 1949 topographic maps.

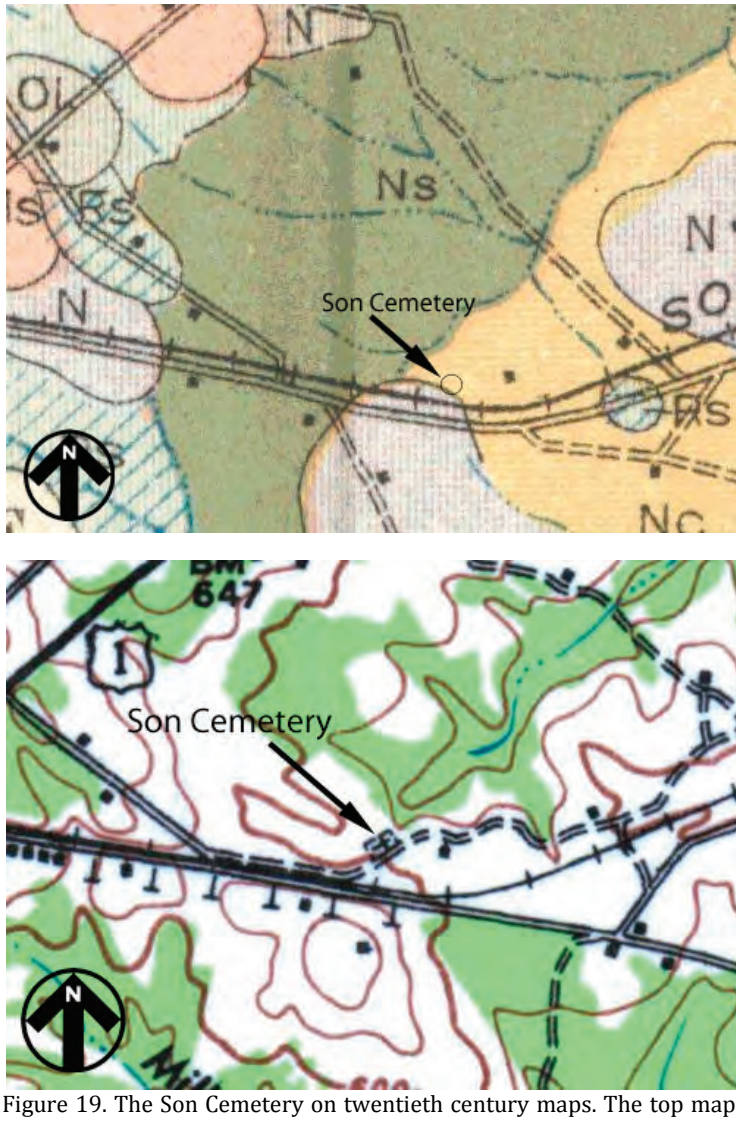


Figure 19. The Son Cemetery on twentieth century maps. The top map is the 1922 Soil Survey of Lexington County. The bottom map is the 1944 Gilbert 15' topographic map. Note the house to the east of the cemetery on both maps.

In addition, the 1922 and 1944 maps show a structure to the east of the cemetery, on the opposite side of the dirt road that may be the Son family home place (based on proximity to the cemetery). Additional work should be conducted to determine if this is, in fact, the original homestead since it may date back to the early nineteenth century.

A Synopsis of Lexington History

Eighteenth Century

After the establishment of South Carolina as a British province in 1670, organization and delineation into more manageable territorial units began. In 1685, the Proprietors sectioned the new province into four counties. Present Lexington County was largely included in the most southern of these, Colleton County, although the interior remained Indian territory.

When South and North Carolina were divided in the early 1700s there were no interior settlements. In 1730 George II ordered that eleven townships be established in the back country to promote settlement. Within each township, a town would be drawn up fronting the river and each settler would receive a town lot and 50 acres of plantation lands for each family member. Two of these townships, Amelia and Saxe Gotha, are south and west of Columbia and a third, Orangeburg, was located immediately to the west of Amelia, in the Orangeburg area. Lexington has its origins in the Saxe Gotha township.

By the late 1730s settlers were moving into the area between the Wateree and Congaree rivers. These first settlers included not only South Carolinians from the coastal region, but also individuals from Pennsylvania, Maryland, and Virginia. In the Lexington area the first settlers were Swiss bounty settlers who arrived about 1735. In 1744, 600 "Palatine" German immigrants followed, and all-told upwards of 8,000 Germans settled in the Saxe Gotha, Orangeburg, and Amelia townships. All were drawn to the region by the availability of bounty lands and a promotional tract by John Jacob Riemensperger, a Swiss immigrant who was paid a shilling a head for bringing in settlers (Meriwether 1940). By the 1760s there were additional settlers from the Pennsylvania area, spurred by the Indian attacks on Scotch-Irish settlements in Pennsylvania during the French and Indian War.

There was also a wave of English immigrants, lured not only by cheap land, but also displaced by the defeat of Braddock in 1755. Eventually these English settlers would comprise less than half of the settlers in the Lexington area, but would dominate both politics and trade. Nevertheless, it was the strong German and Swiss population that would make the area the cradle of Lutheranism in the southern United States. This concentration of Swiss-German (Deutsch) yeoman farmers and mechanics along and between the Broad and Saluda rivers gave the region its name of Dutch Fork. It has been described by historians as a "homogeneous community of ethnic cohesiveness characterized by a society of small farms, disdain for politics, intricate ties of kinship through generations of intermarriage and firm adherence to Lutheranism" (Fox and Harmon 1982).

In this early period of European settlement there was little connection with the legal authorities on the coast (i.e., Charleston), leaving the Up County largely autonomous. This led to the emergence of the Regulator Movement of the 1760s, a vigilante organization that attempted to maintain order and provide security through a system of courts and offices (Racine 1980:13). By the eve of the Revolution, two-thirds of the South Carolina population lived in the Up Country (Racine 1980:14).

By the onset of the American Revolution, the population of the Carolina Up Country was quite diverse in its ethnic, religious, and political backgrounds. These differences seemed to localize the hostilities between Whigs and Tories living side by side. The Swiss-German disinterest in politics initially made the Dutch Fork farmers take little notice of the Revolution, or its political and economic causes. What did attract their eventual attention was the behavior of the Tories and

British regulars, which eventually made the region a battleground. Fox and Harmon (1982) report skirmishes near Gilbert (The Juniper), Pelion (Lynch's Mill), Hollow Creek, near Lexington (Tarrar Spring), and Clouds Creek. During the Revolution Fort Granby (actually a residence and store built about 1765 by John Chestnut and Joseph Kershaw of Camden) was used as an outpost by the British forces. In May 1781 it was taken by Lt. Col. Henry Lee and his forces.

Though the end of the Revolutionary War brought few changes to the life of the Up Country farmers, a solid framework of social and political organization was beginning to emerge. In 1785, an act of the State Legislature formed Lexington County and provided that a court be held at the county seat every three months. The town of Granby was established as the county seat. Initially an important commercial center because of its location at the head navigation on the Congaree, Granby began to decline as Columbia was established and found to be healthier and less flood prone. By 1837 Granby was virtually deserted.

Antebellum

By 1826 Mills described the principal products of the district as cotton and corn, with smaller quantities of wheat, rye, and oats. Between 100 and 1,000 pounds of cotton was being raised per acre, but he observed that, "the same ruinous system of culture is pursued in this, as in other districts, namely, taking all from, and giving back nothing of nourishment to the soil; wearing out the land, and then abandoning it" (Mills 1972:612 [1826]).

Mills observed that most of the property was fairly equally divided – a trait he attributed to their German ancestry, which "forbid a monopoly" and encouraged equality (Mills 1972:613 [1826]). The settlers tended to stay in the area and the census for 1820 reported 5,267 whites, 2,801 slaves, and 15 free blacks. The only settlement of any consequence was Lexington, which contained 15 houses in addition to the public buildings. Nevertheless, there were no more than 10 families in the village and the population did not exceed 80 (Mills 1972:613-614 [1826]).

When visited by Edmund Ruffin in 1843 he found more corn than cotton, but noted that "those two crops cover nearly all the open land, for scarcely any is rested," indicating that little had changed since Mills agricultural observations 17 years earlier (Mathew 1992:258). The only other crops that caught Ruffin's attention were potatoes and wheat, with him noting that the latter had already been harvested, although it was "badly done." He commented that as he crossed the district and approached the head waters of the Edisto, the land was markedly worse – "very poor sand barren, of pines & small scrub oaks" (Mathew 1992:259),

Table 4.
1850 Agricultural Production of Lexington Compared to Richland and Edgefield

	Farms	Acres Improved	Acres Unimproved	Value of Implements	Cattle	Wheat, bu	Corn, bu	Potatoes, bu	Peas & Beans, bu	Cotton, 400 lb. bales
Lexington	837	70,730	437,841	2,680,544	14,609	36,942	382,518	62,042	19,625	4,608
Richland	543	89,426	235,695	2,075,052	11,575	6,538	433,998	95,328	49,098	11,365
Edgefield	2,030	263,379	688,042	5,654,033	38,001	62,810	1,155,489	180,115	60,558	25,880

The 1850 agricultural schedule for the District has already been briefly discussed as it relates to the farming of Andrew Son; Table 4 compares the farms and production of Lexington with Richland to the east and Edgefield to the west.

Lexington had the smallest farms of the three, averaging only 85 acres, compared to 165 acres in Richland and 130 acres in Edgefield. Lexington also had the lowest proportion of their lands improved, only 13.9%, compared to 27.5% in Richland and 27.7% in Edgefield. The average

value of Lexington's farms was $1,284. Only Horry ranked lower, with an average value of $527. The average value in nearby Richland County was $1,388.

While Lexington's farms were small, their owners seem to have invested in them relatively heavily. The value of implements per farm in Lexington was $3,202, compared to $3,821 in Richland and $2,785 in Edgefield.

Nevertheless, production in Lexington lagged behind that of both its neighbors. Lexington produced an average of only 457 bushels of corn per farm, compared to nearly 800 in Richland and 569 bushels in Edgefield. Statewide, Lexington County ranked 21st in corn production. Only when wheat is considered did Lexington excel. While Richland and Edgefield produced an average of 12 and 31 bushels per farm respectively, Lexington produced 44 bushels per farm.

The difference is most telling, however, when we look at the production of cotton – the area's cash crop. Richland produced nearly 21 bales per farm and Edgefield produced 12.7 bales. Lexington produced only 5.5 bales. Lexington ranked 22nd (out of 29) in cotton production statewide.

In the decades immediately prior to the Civil War, Lexington remained a rural enclave of relatively small farmers. The total population of Lexington in 1850 was only 12,930, placing it 24th out of 29 counties. Over 40% of the population were enslaved African Americans (DeBow 1854:302-305). Curiously, its church accommodation ranked 18th out of 29 – so there were an abundance of churches in the county. By 1860 it appears that much of the county supported itself on timber and there were 75 saw mills, but only one cotton mill (Fox and Harmon 1982).

Civil War

There remained an uneasy peace between yeoman and plantation owner in the Up Country. In order to maintain the political support of the yeoman majority, planters were forced to moderate their economic and legal power, molding themselves to the community mores and opinion.

Ford argues that the Up Country actively participated in Secession because of the:

> "country-republican" ideal of personal independence, given particular fortification by the use of black slaves as a mud-sill class. Yeoman rose with planter to defend this ideal because it was not merely the planters' ideal, but his as well (Ford 1988:372).

Lexington saw little of the Civil War until its final days as the Sherman's Left Wing drove through Blackville, Lexington, and Winnsboro. Sherman's army lived off the land and, in South Carolina, implemented a policy of devastation that surpassed that of the Savannah campaign (Glatthaar 1985:12). Lexington was one of the communities that was burned as Union troops passed through Lexington and from there to the ferry at Zion Church, called in the accounts Youngier's (OR 98, page 452; Glatthaar 1985:142).

The Postbellum

Efforts to intimidate African American voters immediately after the Civil War were wide spread in Lexington. Several hundred white men from Edgefield County crossed the county line and voted in Lexington during the 1868 elections. While violence was not as prevalent as in other counties, at least 900 Republican voters, 600 of them African American, were prevented from voting in Lexington (Cox 1886:464-465).

The most important effect of the Civil War on Lexington was the destruction of the plantation system and the creation, in its place, of a tenant system that relied on the hiring of farm laborers for a portion of the crop, a fixed amount of money, or both.

Immediately after the Civil War cotton prices peaked, causing many Southerners to plant

cotton again in the hope of recouping losses from the War. The single largest problem across the South, however, was labor. While some freedmen stayed on to work, others, apparently many others, left. An Englishman traveling through the South immediately after the war remarked that, "Thirty-seven thousand negroes, according to newspaper estimates, have left South Carolina already, traveling west" (quoted in Orser 1988:49).

The hiring of freedmen began statewide immediately after the war, with variable results. The Freedmen's Bureau attempted to establish a system of wage labor, but the effort was largely tempered by the enactment of the Black Codes by the South Carolina Legislature in September 1865. These Codes allowed nominal freedom, while establishing a new kind of slavery, severely restricting the rights and freedoms of the black majority (see Orser 1988:50). Added to the Codes were oppressive contracts that reinforced the power of the plantation owner and degraded the freedom of the Blacks. The freedmen found power, however, in their ability to break their contracts and move to a new plantation, beginning a new contract. With the high price of cotton and the scarcity of labor, this mechanism caused tremendous agitation to the plantation owners.

A village in the area known in the census as Gilbert Hollow became Leesville in 1875, being named for an early prominent citizen, John W. Lee (who, with his father, had operated the tavern on the road to Columbia). The community of Possum Hollow to the west became Batesburg in 1877. It was also named for a prominent early citizen, Andrew David Bates (Crawford 1983:2).

In 1883 Lexington County had 11 towns and "trading establishments" (crossroads with a store) with 63 stores. Batesburg had 19 stores, Leesville had 16. In comparison, there were only 12 stores in Lexington. Gilbert Hollow has six stores, Countsville had three, Rish's had two, and Bars, Keisler, Pine Ridge, Rishston and Sinclair had one store each. Only four of the stores sold liquor (Butler 1883:698).

Leesville was situated on the Columbia and Augusta Rail Line that shipped out 4,000 bales of cotton along with fruit valued at $15,000. With a population of 177, the town boasted two hotels, as well as both a Methodist and Lutheran church (Butler 1883:689).

In 1884 the labor system of Lexington County was described:

> the share system is most in use, part of the crop being given to labor. When land is rented, price is regulated by quality of the land. [When wage labor is used, wages are] eight dollars per month with board to males, and four to five dollars per month with board to females (The News and Courier 1884:n.p.).

The account continued by "the relative prosperity of the different classes of farmers,"

> 1st. The white men who do their own work.
> 2d. The white men who work themselves and employ additional (colored) labor.
> 3d. The white proprietors who employ colored labor exclusively.
> 4th. The colored farmers (The News and Courier 1884:n.p.).

This same article reported that black labor was inefficient and difficult to find in Lexington. Whites provided three-fifths of the farm labor. The typical day on a farm was 10-12 hours.

Cotton, in 1884, cost Lexington farmers about 8¢ a pound to produce yet was selling for just 9.19¢ that year (Bureau of Census 1949:E211-224). Considering the lien law, the author explained that where owners grew crops in addition to cotton, they were prosperous and avoided taking out liens (The News and Courier 1884:n.p.).

By 1893 the country, including Lexington County, was faced with a severe double cycle depression that did not truly end until 1901-1902.

Nationwide unemployment crept up to double digits and didn't come back down to single digits until 1900 (Hoffmann 1970; Steeples and Whitten 1998). Of the 158 national banks that failed, 153 were in the South and West. With the collapse of the Richmond Terminal, no trunk line in the southern states remained solvent. Only textile manufacturing prospered, becoming a safe haven – capital investment increased by 131%, the number of plants increased by 67%, and the number of spindles increased by 100%. Nevertheless, most of this growth occurred either at the beginning or ending of the depression – in the middle even cotton mill workers were not fully employed (Cooper and Terrill 1991:488).

The greatest impact, however, occurred to Southern farmers and their families. Cotton prices fell from 8.4¢/pound to 4.6¢. The economic crisis brought about the birth of the Southern Farmers' Alliance (the official name was the National Farmers' Alliance and Industrial Union) and the Colored Farmers' Alliance. It also brought about Jim Crow laws and dramatically affected the lives of African Americans. In fact Cooper and Terrill observe that although the economic upheaval largely ended even before the decade did, "the damage done by that upheaval affected life in the South long afterward" (Cooper and Terrill 1991:489).

The Twentieth Century

Cotton gradually became more important in Lexington's agricultural base, so that by 1900 the county's second largest crop (by acreage) was cotton, with the 32,904 acres planted in cotton producing 13,637 bales. The only crop on more land was corn, planted on 51,408 acres and yielding 401,390 bushels. Nevertheless, there was substantial acreage in wheat and oats. Truck farming was increasing, with 1,818 acres in vegetables.

The 3,518 farms in Lexington County had an average size of 134 acres, ranking Lexington third behind Georgetown and Horry counties in average farm size. Moreover only 38% of the county's farms were operated by tenants (22% by cash tenants and 16% by share tenants).

In 1915 Lexington County was home to three cotton mills. In Lexington there were the Lexington Manufacturing Company with 6,784 spindles and 214 looms producing ticking and Saxe Gotha Mills with 11,200 spindles and 274 looms producing sheetings and pajama checks. In Batesburg there was the Middleburg Mill with 10,624 spindles and 328 looms producing shirtings and tickings. All three were owned by I.R. Stewart and they used nearly 7,800 bales of cotton yearly. The mills employed 389 whites and 28 African Americans (Watson 1916).

There was a single cotton seed oil mill in Lexington County, the Leesville Cotton Seed Oil Mill Co. in Leesville. Nearby Richland County had three, Aiken had one, and Edgefield had two.

There were six timber and saw mills in Lexington, including two in Batesburg (D.R. Rawl and J.M. Hook). There were three flour and grist mills in Lexington in 1915, including one in Leesville, C.D. Barr. The Brodie Light and Power Co. provided electricity to Leesville, while the Lexington Electric Light and Power Co. operated in the immediate Lexington area. Lexington also boasted a single bottling plant, the Batesburg Bottling Co. Richland County had five, including Coca-Cola, Pepsi-Cola, Chero-Cola, Gay-Ola, and Bloodwine.

The Leesville Coffin and Casket Co. was one of four casket manufacturers in South Carolina (the others were Branchville Casket and Novelty Works in Orangeburg, Witherspoon Brothers in Sumter, and Kingstree Manufacturing in Williamsburg County (Watson 1916). Just a few years earlier the list also included J.M. Connelly & Co. in Charleston (Wolfe 1913:51).

The Leesville Coffin and Casket Co. was begun in 1903 by C.D. Barr, Sr. and C.D. Barr, Jr. (Anonymous 1983:184). This manufacturing process was apparently an outgrowth of Barr's saw mill operations, as well as his undertaking business. In 1912 Barr's businesses were rated as between $50,000 and $75,000 in "pecuniary strength" and was given a credit rating of "good" (R.G. Dun & Co. 1912:90). By February 1929 the company was incorporated as Imperial Casket Company. The company distributed throughout

the Southeast, with warehouses in Raleigh, NC, Lynchburg, VA, Charleston, SC, and Daytona, FL. The company ceased its casket business in 1985 when the name was changed to Imperial Woodlands (South Carolina Secretary of State, Columbia). Between the Leesville Coffin and Casket Co. and Imperial Casket Company, the Barr family apparently also operated the Palmetto Casket Company.

Travel through Lexington County in the early twentieth century was difficult. The county had 1,600 miles of roads; 1,100 miles of these were classified as "unimproved – ungraded earth, clay or sand" (Watson 1916). The main road from Columbia to Aiken was identified as

> fair-to-good with occasional stretches of sand. One clay stretch which is practically impassible after heavy rains; detour thru woods (Anonymous 1912:702).

By 1920 the average farm size in South Carolina had dropped to 78.6 acres and the rate of farm tenancy had climbed to 46.2%. The 1920s, as one historian has noted, did not roar very loudly in the Midlands (Edgar 1998:483). While cotton prices opened high in 1921 (around 40¢ a pound), they dropped steadily, so that in December the price was down to 13½¢. A crop that cost farmers $250 million to plant was worth only $140 million. County populations showed little growth, rural poverty was rampant, and the boll weevil sucked what little life was left out of cotton. Farmers who had been on a spending spree in the teens had no ability to weather the economic crisis and Edgar observes that, "by 1930, after nearly a decade of difficulties, South Carolina agriculture was about to go under" (Edgar 1998:485).

Things were marginally better in Lexington County. While a third of the state's farms were mortgaged, only 29% were mortgaged in Lexington. And tenancy had actually dropped slightly — to about 42%. In spite of this, Lexington was still a poor county.

In 1927 nearly 74% of its occupants lived outside villages or towns – in what was called "open country" (Shealy 1927:326). The economic base of the county were its "sturdy small farm owners" and it was reported that "no county in the state is more self-sufficing, none produces a greater variety of crops" (Shealy 1927:327). Truck crops were becoming an important staple to Lexington farmers, who brought most of their produce to Columbia markets.

One of the disruptions in South Carolina agriculture was the arrival of the boll weevil. At the door to Savannah in 1917, the weevil had spread through much of South Carolina by 1919 (including Richland County) and by 1922 had covered most of North Carolina as well. Planters paid their tenants a penny per weevil in an effort to slow the spread and millions of pounds of arsenical dusts (primarily calcium arsenate) were applied. In spite of these efforts, losses ranged between 30 and 60% of a crop (Haney et al. 1996). The most devastating year was 1922, when production statewide was only 30% of that it had been two years earlier (Anonymous 1927:130).

Edgar notes that in 1930 the situation among South Carolina farmers was dire. Having gone on a spending spree when money was flowing, they had no reserves, and the decade of the 1920s was so bad that:

> South Carolina agriculture was about to go under. Farmland and buildings had lost more than one-half their value. One-third of the state's farms were mortgaged, and 70 percent of the state's farmers survived on borrowed money (Edgar 1998:485).

Moore adds to this that, "except for foodstuffs and bare necessities, hundreds of families living in Richland and surrounding counties seldom could buy what Columbia merchants were trying to sell" (Moore 1993:329). Schultz remarks that many remember the Depression years not for the "coming" of hard times, but instead "recall those days as a continuation of long-standing hardship" (Schultz 1992:3). By 1933 state government itself

was on the verge of collapse – state employees were laid off and those that remained were paid with "state I.O.U.'s."

By 1930 the number of farms in Lexington had dropped from 4,816 in 1920 to 3,295 – a decline of 32%. Most of these (77%) were operated by whites. The average size had also declined, from 76.9 acres in 1920 to 78.6 acres in 1930.

Statewide the proportion of tenancy had increased from 64.5% in 1920 to 65.1% in 1930. In Lexington County, however, the proportion had actually declined, from 46.2% to 42.3% in 1930. In addition, although statewide 33.6% of the farms were mortgaged, only 28.9% in Lexington County were mortgaged.

Statewide the average farm value per acre was $38.10 and the average mortgage debt per acre was $15.26. In other words, the mortgage debt was about 40% of the total value. In contrast, while Lexington farms were worth slightly less per acre – $36.30 – the mortgage debt per acre was only $10.26, or about 28%. Thus, Lexington farmers were in better overall economic condition than many throughout the state.

Lexington remained a rural area. Of the nearly 3,300 farms, only 167 (5.1%) had electricity and only 748 (22.7%) had telephones. Piped water was available in 141 (4.3%) of the farms. Over 1,755 (53.3%) were still located on unimproved dirt roads. The entire county had only 2,133 automobiles and the 3,295 farms continued to rely on mule and horse drawn plows – there were only 104 tractors in the county.

Methods

This section provides information on the general field and laboratory methods followed by Chicora for the excavation of the Son Cemetery. Field procedures were intended to ensure the thorough and respectful excavation of all human remains, associated personal items, and coffin furniture that were present. While the work was certainly designed for use in our research on the social and historic contexts of the burials, it was also developed to ensure that the dignity of the remains would be respected at all times.

Field Procedures

Work at the site began with mapping and culminated with the removal of the burials. Each burial received several stages of investigation and these are discussed in detail here.

Mapping

Prior to the initiation of the field

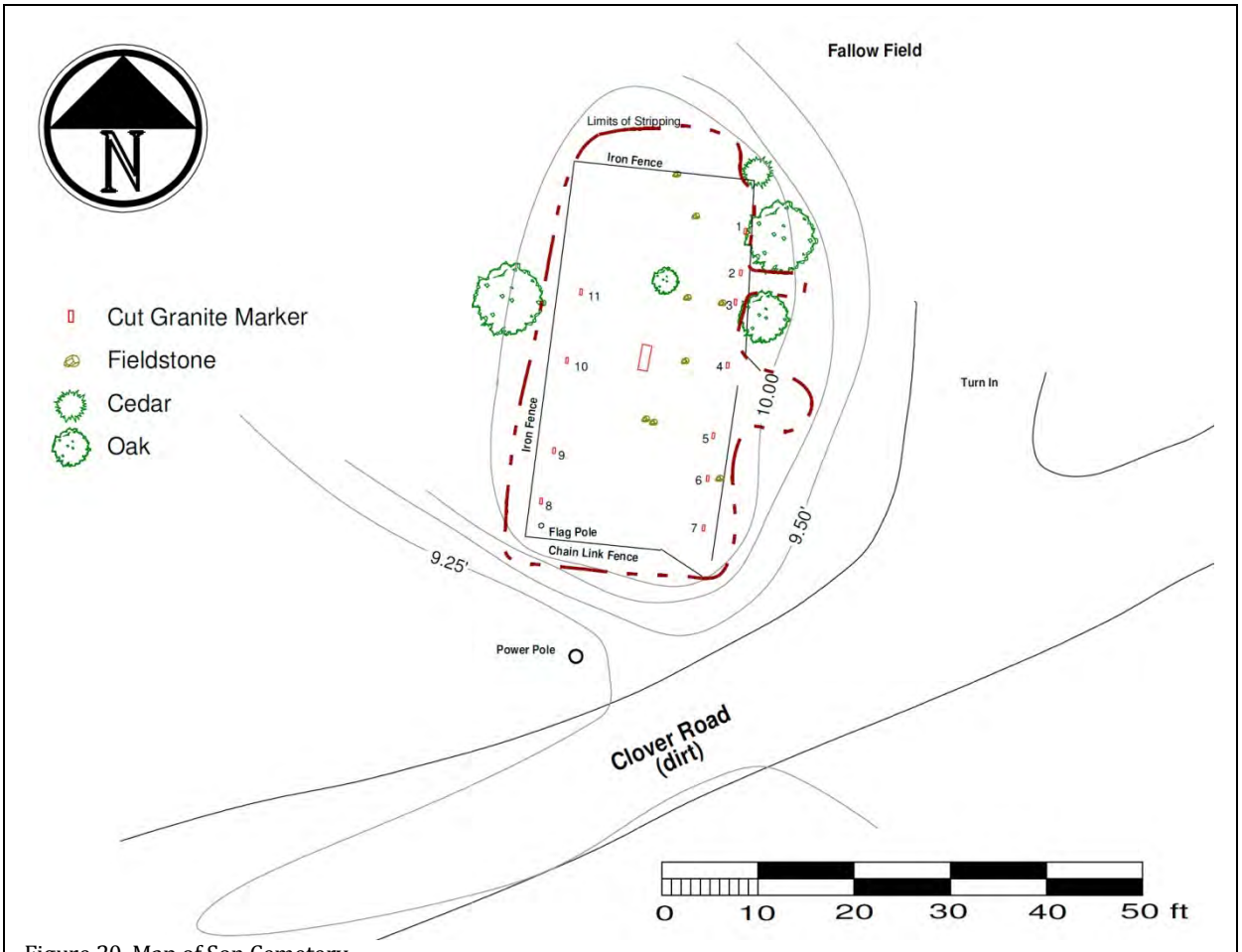


Figure 20. Map of Son Cemetery.

Figure 21. Using a backhoe to remove overburden and expose the coffins.

investigations, a map of the cemetery setting was prepared using a total station. The fence surrounding the burials, the granite die on base family marker, the individual granite markers, and all visible fieldstones were included on the map, as well as the few trees present in the immediate area. This map was subsequently modified by the addition of contours based on a datum in the center of the cemetery with an assumed elevation (AE) of 10 feet above mean sea level (AMSL). The limits of the eventual stripping were also added to the map to identify the areas examined for burials. This map is produced here as Figure 20.

In addition, detailed maps of each burial were drawn, showing the various stages of excavation. Typically these drawings included pre-excavation features, such as the grave shaft as identified at the base of mechanical stripping or occasionally at several stages of this stripping; the base of the grave shaft showing the position and condition of the coffin; the arrangement of coffin hardware as encountered; and the position of human remains relative to the coffin itself.

Mechanical Stripping of Soil

A backhoe was used for the mechanical removal of soil over each burial and in areas examined for any possible additional burials. In the absence of the grading bucket (i.e., a bucket without teeth), a cutting bar was welded across the teeth to allow the backhoe to provide a clean, flat surface (Figure 21).

This equipment was used to remove the overburden, including the bulk of the grave shaft. Excavation was stopped at the first evidence of

wood. This was typically an outer box, although in several graves it was the grave arch. From that point on excavation was by flat shovel or trowel (see discussion under "Methods" below).

Figure 22. Exposure of graves 3 and 4 after initial backhoe excavation, followed by flat shoveling and troweling. View to the northeast.

In general, graves were well defined both at subsoil (Figure 22) and even considerably higher up. In most cases the first evidence of the burial (other than the fieldstones or granite markers) was the center dark soil stain, representing fill that was deposited in the depression created as the grave container collapsed. However, even the backfill of the grave shaft was usually well defined as all of the grave shaft excavations extended into the clay, resulting in the grave fill containing abundant clay mottles. In this sense identification of graves in the piedmont is much easier than in the coastal plain where fill is often similar in texture and color to the surrounding sandy matrix.

Soil Testing for Heavy Metals

Embalming began in response to battlefield deaths during the Civil War and was authorized by President Lincoln as a means of safely transporting bodies home. It was not, however, a policy in the South and virtually all of the bodies embalmed during this early period were of Northern troops.

Initially, arterial embalming was used whenever possible, usually injecting a fluid into the femoral or carotid artery without drainage. Cavity treatments were done only when the wounds or decomposition made arterial treatment impossible. In such cases the torso might be eviscerated and refilled with sawdust or powdered charcoal or lime. The body would then be placed in a coffin filled with sawdust to absorb leakage. Chemicals used in these early efforts included arsenic, zinc chloride, bichloride of mercury (also known as corrosive sublimate; today mercuric chloride), aluminum salt (aluminum sulfate), or sugar of lead (lead(II) acetate) (Mayer 1996:440).

Of all of the chemicals perhaps the most common was arsenic, which one of the earliest battlefield embalmers, Dr. Thomas Holmes, made famous as his "Innominata" fluid sold extensively after the Civil War. Realizing that most embalmers had no medical or surgical skills, he sold his fluid by emphasizing its disinfecting qualities and external applications. He even promoted it as being easily poured into the mouth and nose of a body to permeate the lungs and stomach – allowing cavity embalming by the unskilled. This fluid is reputed to be primarily arsenic. Testing of tissue from a body at the National Museum of Health and Medicine embalmed by Thomas Holmes revealed arsenic levels of 28,000 ppm, lead levels of 350 ppm, mercury levels of 162 ppm, and zinc levels of 152 ppm (Curley 2010). Another early mixture, patented to C.H. Crane in 1868 included a powdered mixture of alum salt, ammonium chloride, arsenic, bichloride of mercury, camphor, and zinc chloride (Mayer 1996:446). Others used mercury or creosote.

Until about 1910 embalming fluids were dominated by arsenic because it killed or halted microbial growth associated with decomposition. From 1856 to 1873 six patents were issued for arsenial embalming fluids containing anywhere

from 4 ounces to 12 pounds of arsenic per body (Konefes and McGee 1996:15).

By the 1890s, however, formalin (a saturated water solution of formaldehyde that contains methanol, often with various metallic impurities) was introduced and began replacing the use of arsenic. About 3.5 gallons of a formaldehyde-based embalming solution are required per body (Chiappelli 2008:24).

Formaldehyde, however, is of relatively minor concern to archaeological excavations. While a known human carcinogen, the half-life of formaldehyde is relatively short since it is removed from the air by photochemical processes, precipitation, and biodegradation (http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s089form.pdf). In water its half-life is estimated to be between 2 and 20 days (http://www.environment.gov.au/atmosphere/airquality/publications /sok/formaldehyde.html). Even in closed mobile homes, the half-life of formaldehyde emitted from plywood and particle board is reported to average only about 53 months or 4.5 years (National Research Council 1981:55).

Of far greater importance are the heavy metals, such as arsenic and mercury. As basic elements these will not degrade or change, but will either stay with the remains or more commonly move into the environment (Konefes and McGee 1996:16).

Both the Louis Berger Group (Myers et al. 1998) and Cultural Resource Analysts, Inc. (CRA) (Borstel and Niquette 2000) have developed protocols for working in historic cemeteries. Borstel and Niquette, for example, report that sometimes elemental arsenic may be seen as a vivid blue or blue-green crystal formation on bones and they urge caution if "unusual odors, soil colors, lusters, staining, or unfamiliar materials (particularly in finely divided or crystalline form) are noted [in the grave]" (Borstel and Niquette 2000:2). They recommend that a site assessment process include a thorough historical search and if the graves date from 1850-1910, then soil testing should be undertaken. Soil testing would consist of using a bucket auger to extract approximately 8 ounces of soil near the center of the grave (since this would be the thorax and where the greatest amount of arsenic would be located). Soil should also be collected from off-site as a control sample to evaluate naturally occurring arsenic levels.

It is perhaps worth noting that these are the only two firms we have identified with clearly articulated protocols (others may exist and we may simply not have access to their publications). Nevertheless, it should be noted that auguring the body may result in significant damage to bones. In addition, we have found that in Columbia, South Carolina through 1915, only 37.6% of the bodies handled by the J.W. McCormick Funeral Home were embalmed (Trinkley and Hacker 2004:9). As more research is done, we anticipate that the vast majority of Southerners accepted embalming relatively late. This may be the result of social conservativism, religious beliefs, lack of disposable income, or other factors; regardless, by the time that embalming became "popular" in many rural Southern enclaves, we suspect that only formaldehyde was being used.

Borstel and Niquette developed three primary action thresholds based on the testing results (the original study should be consulted for more detail than provided here):

- If the test samples are similar to the control sample and less than 20 ppm, then arsenic is likely absent and only routine health protection procedures are necessary.

- If the test samples reveal arsenic levels greater than 20 ppm, but less than 100 ppm, then arsenic contamination may be present and they recommend instituting dust control and thorough excavator hygiene.

- If the test samples reveal levels of arsenic greater than 100 ppm then contamination is probable and they recommend additional testing prior to any excavation.

They emphasize the importance of good

Table 5.
Arsenic, Mercury, and Lead Levels for Several Kentucky and West Virginia Burial Projects

	Arsenic (ppm)		Mercury (ppm)		Lead (ppm)		
Site	Control	Range	Control	Range	Control	Range	Source
15Mm137	37	6.07-80	0.053	0.53-0.089			Bybee and Richmond 2003
15CP61	11	8.9-15	0.034	0.02-0.042			Bybee 2003a
15Fd94	<4.56 -5.60	<4.36 - 6.76	0.14-0.061	0.14-0.424	8.93-21.0	6.61-29.00	Bybee 2004
46MD62	11.6-13.4	6.03-10.08	<0.038 - <0.040	<0.036 -0.06	9.18-14.90	9.54-19.10	Bybee 2007

hygiene throughout the excavation process, for example wearing latex (or nitrile) gloves, using eye protection for dusty jobs, washing hands and face before eating or drinking, preventing contamination of food and water, using barrier pads to minimize soil contact, wiping shoes and boots down to eliminate adhering dust, and using other mechanisms to control dust at the excavation site.

Table 6.
Arsenic, Mercury, and Lead Levels for Son Cemetery

Burial	Arsenic (ppm)	Mercury (ppm)	Lead (ppm)
5, Leah Son	0	0	>100
6, Henry R. Son	18	<0.025	>300
7, Frances Son	0	<0.025	>100
11, Shelton Son	0	<0.025	>100

While site specific controls are best, the literature suggests an average of 7.2 ppm (http://www.atsdr.cdc.gov/toxguides/toxguide-2.pdf?id=21&tid=3). The range is from 1 to 40 ppm (http://www.eco-usa.net/toxics/chemicals/arsenic.shtml).

A brief cross-section of CRA reports from Kentucky and West Virginia reveal the highest control level for arsenic was 37 ppm and the highest level in a burial context was 80 ppm (Table 5). Levels for mercury and lead are also provided in this table.

We made the choice not to test the soil of the burials at Son Cemetery until the completion of the field study. This was based on several factors. First, we felt there was a significant possibility of causing damage to the skeletal remains. While safety is important, so too is respect for the remains that we were entrusted to remove.

In addition, we felt that several factors would mitigate against any serious health risks. The soils during the excavation were consistently damp and this served to eliminate any air borne contaminants that might be present. We routinely used pads that provided a barrier between the soils and workers' clothing. Nitrile gloves were also worn throughout the excavations. Finally, careful sanitation was practiced.

At the conclusion of the removal we tested soil from four of the burials (5, Leah Son; 6, Henry R. Son; 7, Frances Son; and 11, Shelton Son). For arsenic testing we used a field test kit produced by Industrial Test Systems of Rock Hill, South Carolina. The test has been verified through the AMS Center, which is part of the EPA's Environmental Technology Verification Program. Lead was tested using the Industrial Test Systems' SenSafe Lead Soil Test Kits. This test protocol is described in detail by Jaunakais et al (2010). Finally, the presence of mercury was tested using the Osumex Specific Heavy Metals Test Mercury Kit.

These field tests are not meant to replicate the precision of EPA approved laboratory tests. They are, however, less expensive, very accessible, and provide near immediate results. They can serve as an initial phase of testing. In this case, since the work was done after excavation was complete, our goal was to determine if any of the burials gave any indication of heavy metal contamination. The results are shown in Table 6.

Mercury levels are typically low and suggest no contamination. Arsenic levels for all burials except that of Henry Son are also very low.

This one burial was sufficiently high that we retested, using small fragments of the bone. These produced a result of >150ppm. This is strongly indicative of a body that had been embalmed with arsenic containing fluids. Finally, the lead levels appeared elevated at all of the burials, although again the soil associated with Henry Son gave especially high readings.

These results suggest that while all of the burials exhibited rather high readings of lead (soils in the US rarely produce background readings above 20ppm unless there is contamination), the burial of Henry R. Son was noticeably contaminated with both lead and arsenic, likely the result of embalming.

Figure 23. Excavation of the Burial 7 grave arch.

Excavation

Excavation combined mechanical stripping, shovel skimming, and hand excavation. Generally only one burial was exposed at a time to ensure site security and reduce the potential for damage from weather events.

As previously explained, mechanical stripping took the soil down until the grave shaft was clearly identifiable. At that point the grave was troweled, photographed using digital equipment, an elevation was obtained, and the grave was drawn at a scale of 1"-1'. Then stripping continued until the first evidence of wood was encountered. In some graves this was the overlying grave arch; in others it was the outer box. Regardless, mechanical stripping was discontinued at that point and the grave was again troweled, photographed, an elevation was obtained, and the drawing modified as necessary.

In some cases where it appeared that we had not reached the coffin, excavation continued by carefully shovel skimming the grave shaft. At other times the use of shovel skimming was discontinued and excavation was entirely by hand using trowels, bamboo splints, and other small tools.

With the identification of skeletal remains or coffin hardware, all excavation was conducted using trowels, bamboo splints, brushes, and other small tools. Often, through decomposition and collapse of the overlying coffin, skeletal and cultural remains were compressed into the final 0.2 to 0.4 foot of fill within the grave shaft.

We elected not to screen any soil from the upper excavation; the hand excavation was adequate to identify and collect larger artifacts, such as nails. Once the final 0.2 to 0.4 foot of the grave shaft was left, all of this soil was collected for careful water screening in the lab. The field setting did not have a ready source of water and we felt that hand screening would be too harsh for many of the artifacts. In addition, laboratory water screening allowed us to use ¼, 1/8, and 1/16-inch mesh screens to ensure recovery of even very small artifacts.

The soil for water screening was divided into five locations: head; upper right; upper left; lower right; and lower left. This assisted in retaining some control over small bones as well as cultural remains.

Notes were taken regarding the location

of coffin hardware and personal items as they were exposed. Once the skeletal remains were exposed basic osteometric data were collected and the remains were examined for visible non-metric traits. This step was especially critical for remains that were friable and where data might be lost in the removal or transport of the remains. Skeletal remains were photographed, key features were drawn, and elevations of pelvis and skull were obtained. Wood, cloth, and soil samples were routinely collected.

The remains were then removed and wrapped in tissue to help support the bone and allow very gradual drying. Each skeleton was packed in one or more bone boxes for transport. In only one case was it not possible to fully record and remove the skeletal remains and cultural materials on the same day as they were exposed. In that one case the remains were carefully covered. As previously noted a Lexington County Sheriff's Department Deputy was present overnight to ensure the integrity of the site.


Figure 24. Removal of bones from Burial 8 after in situ analysis.

Given the very firm, dense red clay subsoil, the base of the historic excavation for the coffin was clearly identifiable in each case. Our excavation went to that level.

All remains were returned to the Chicora Laboratory each night where remains were inventoried.

Laboratory Procedures

Cleaning and Processing

Because all of the skeletal and cultural remains are to be reinterred (except for some items that the family agreed to donate to the S.C. State Museum), long-term preservation and curation approaches were unnecessary. It was, however, critical that all remains be treated with dignity and respect throughout the laboratory processing. All remains were stored in a secure, climate-controlled facility.

All human remains were inventoried and then cleaned of adhering soil that could hinder osteological analysis. Most of the remains were very friable and cleaning was done by placing the bones on screens and gently and briefly submerging them in water. Occasionally additional cleaning was conducted using bamboo splints or cotton. No chemicals were used in the cleaning process.

Other more durable artifacts, such as buttons, nails, and coffin hardware were cleaned using running water. Coffin wood was lightly brushed to remove adhering soil and permit more detailed analysis. Fabric remains were placed on screens and gently submerged in water with very dilute Orvus Wa Paste for cleaning.

All washed materials were slowly dried in a controlled laboratory setting with a relative humidity that was maintained at 50% RH. Materials were repacked in polyethylene bags.

A few of the specimens were subjected to electrolytic reduction in a bath of sodium carbonate solution in currents no greater than 5

volts for periods of less than 24 hours. Since all materials were being reburied the goal of this was simply to make features more distinct for analysis or photography. A few of the ferrous items were treated with phosphoric (10% v/v) and tannic (20% w/v) acid solutions to provide temporary stabilization for photography. A few items were coated with a 10% solution (w/v) of acryloid B-72 in toluene, also for short-term stabilization.

Osteological Methods

Following the recommended procedures in *Standards for Data Collection from Human Skeletal Remains* (Buikstra and Ubelaker 1994), specific data sets were recorded for each individual where preservation allowed. These data included: skeletal and dental inventories; age-at-death estimations; sex assessments; ancestral attribution; presence of pathology; and both metric and non-metric observations. A variety of standard osteological manuals were used (e.g., Bass 1995, Mann and Hunt 2005, Ubelaker 1998, Schwartz 2007, White and Folkens 2000), as well as protocols developed for forensic cases (Rathbun and Buikstra 1984, Steward 1978, Moore-Jansen and Jantz 1986).

The analysis was supplemented with the radiometric documentation of extant long bones. This information can be useful for age determination, Harris line formation, pathology evaluation, and osteoporosis assessment. Bones were placed directly on the x-ray film and the cone was at 40 inches. All radiographs used the anterior-posterior orientation and exposure typically was 10 MAS at 50 kV.

Dental casts were also prepared for some specimens.

Fabrics

Fabric remains were examined without magnification, and at 10x, 20x, and 30x under reflected light. Small amounts of fiber from some of the larger samples were subjected to burn tests to confirm visual identification of fiber type. More information regarding textile analysis is provided in the section on that analysis.

Yarn and fabric identifications are based on Emery (1966) and Von Bergen and Krauss (1942), but fiber identifications are tenuous in some cases because of the degraded nature of the specimens.

Coffin Wood

Wood samples were broken in half to expose a fresh transverse surface. The samples were then examined under low magnification (3x to 30x) with the fragments identified, where possible, to the genus level using comparative samples, Panshin and de Zeeuw (1970), and Koehler (1917). The presence of wood did not, however, guarantee identification. In some cases the wood was so decayed that cellular structure was disrupted and identification was impossible.

Other Cultural Remains

Materials such as nails and buttons were classified using common archaeological guides, such as Noël Hume (1978) and South (1977a). Coffins and associated hardware were identified using common terminology (Trinkley and Hacker 2007) and a number of sources (e.g., Davidson 1999, Lang 1984), as well as a wide variety of catalogs available in the Chicora collection.

Disposition

At the conclusion of the study all materials were turned over to the Price-Barr Funeral Home in Batesburg-Leesville. At that time the cultural remains were examined by the family representative, Mr. Joel H. McGee, and some items were selected for permanent curation by the S.C. State Museum. Selected items included examples of hardware and personal items. Chicora has provided the State Museum with our report, as well as all of the photographic material on a Kodak Gold Archival DVD.

The human remains and all other associated remains were reburied at the C. Edgar Johnson Cemetery in Saluda County, South Carolina.

Burial 1 – Mary Buzzard Wright

Burial 1 is believed to be that of Mary Buzzard (sometimes spelled Buzhard) Wright, based on information cast into the concrete in which the granite marker was set. She was the mother of Frances Buzzard Wright Son and mother-in-law to Henry Rosenberry Son (Brewer 2010:3). Mary Buzzard was born in 1822; her death date is unknown, but was likely after the marriage of Frances and Henry in January 1870, giving her an age at death of over 48 years.

Figure 25. Fieldstone markers recovered from Grave 1. The specimen on the left was recovered from the west end of the grave; the specimen from the right was recovered from the east end.

Field Procedures

Work began with the removal of the granite marker at the east end of the grave and the recovery of a fieldstone at the west end. As additional stripping took place a similar fieldstone was recovered from the east end where it had slumped into the grave over time (Figure 25). None of the stones had identifiable markings.

A rectangular grave stain, measuring 7.0 by 3.1', became visible at a depth of about 1.4' below grade. Mechanical stripping continued to a depth of about 1.8' at which point hand excavation was begun. At a depth of 3.0' below grade evidence of the wood staining within the burial pit was identified. This was determined to be the grave arch, or wood placed on ledges over the coffin in order to support the backfilled soil. These boards were about 6" in width. As additional cleaning was conducted, a hexagonal coffin shape, measuring approximately 6.2' by 2.2', was found immediately below the grave arch. The coffin wood was evidenced by gray staining and nails were identified at the corners of the casket pointing inward.

Soil surrounding the burial was a brownish-yellow (10YR 6/8) clay and sand. The soil within the burial was a yellowish-brown (10YR 5/6) sand.

Burial fill continued to a depth of 4.5' when the base of the burial pit, a very stiff clay, was encountered. The casket outline is oriented 280°.

Figure 26. Burial 1. The top photo shows the grave arch and the coffin stain along the edges. The bottom photo shows the base of the excavation.

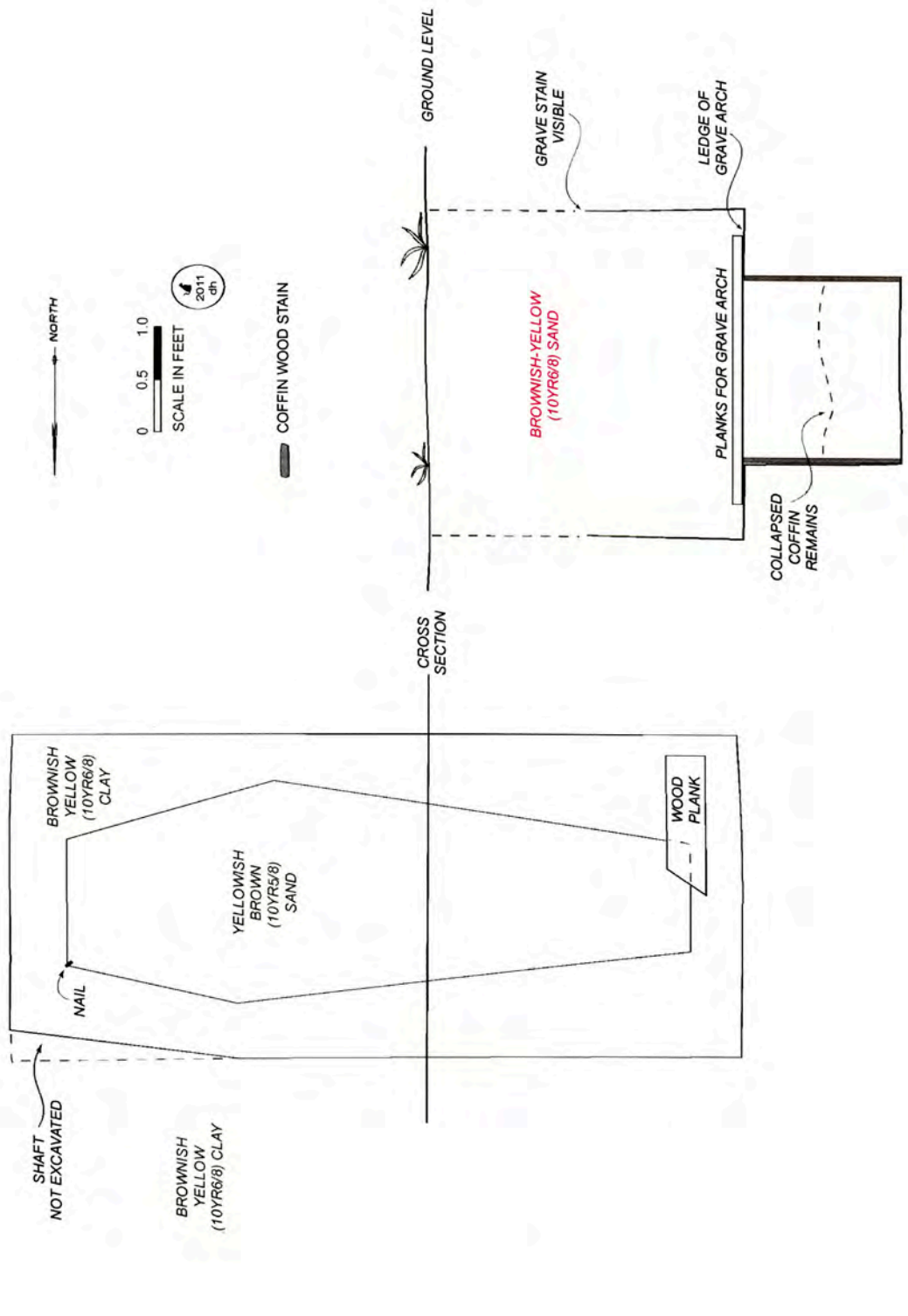


Figure 27. Drawing of Burial 1, plan and profile.

The Grave Arch

A portion of one plank was recoverable from the foot end of the grave. This plank appeared to be about 6-inches in width. Thickness could no longer be determined. The wood has been identified as pine (*Pinus* sp.).

The Coffin

While wood staining was recognizable, none was recoverable. The wood stain appeared to measure about 6' by 2' , although it was difficult to account for slumping or movement of the wood during collapse.

The excavation produced 100 nails and nail fragments, probably representing about 35 nails (based on identifiable heads). All of these nails are machine cut. This type of nail was introduced about 1780 and can be distinguished from the earlier wrought nails by their taper on only two sides, rather than four (see Howard 1989:54; Nelson 1968). More detailed typological information (e.g., Wells 1998) cannot be determined given the condition of the specimens.

At least two nail sizes are present. Ten specimens are clearly identifiable as 10d nails (SAE=3"), a size that in carpentry was typically used to attach sheathing. The other size present, representing 15 specimens, is probably 7d (SAE=2¼"). These were nails commonly used for smaller work, such as attaching shingles.

Coffin Design

Archaeologists generally distinguished coffins and caskets based on their shape, with coffins being hexagonal and caskets rectangular (e.g., Lang 1984:30). Some have suggested that the coffin was designed essentially to encase the dead for disposal, while the casket was intended to display the dead. Rotman et al. suggest that a rectangular shape was less of a reminder that the device contained a body (Rotman et al. 2000:60). In any event, caskets were introduced about 1849, but did not dominate until the first quarter of the twentieth century. One authority noted in 1913 that there were still differences in how the terms were used,

> the coffin is almost out of use in the form in which it once was common, and its place has been taken by the casket. The cheap article is sometimes called a coffin, though it may not have the well known "coffin shape" (Wolfe 1913:29)

Prior to the last third of the nineteenth century most coffins were produced by local cabinet and furniture makers, and local carpenters. The only design books we have identified are from England and both date from the early twentieth century. They illustrate several designs (Figure 28), all of which are more tapered than those that often appear in the archaeological literature.

While the head dimensions vary from 9 to 13", the head of the coffin for Burial 1 is about 14". The foot ends vary from 8 to 12"; Burial 1 is 12". The width of the shoulder on the different

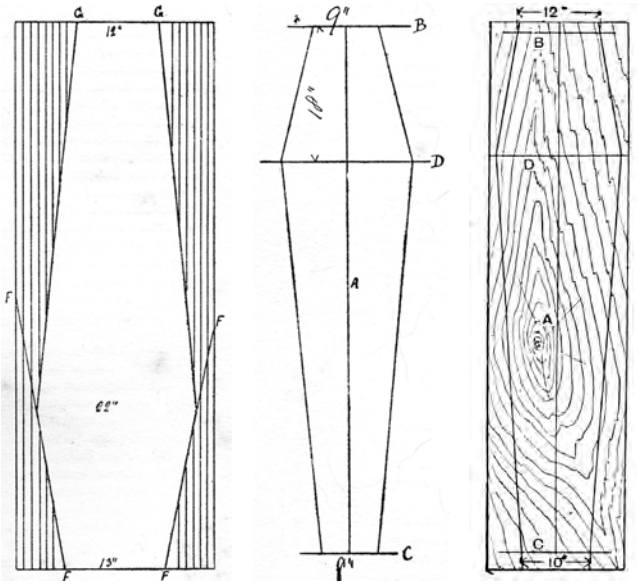


Figure 28. Coffin designs. The two on the left are found in Plume (1902:Figures 4, 9). The design on the right is from Hasluck (1913:Figure 17).

examples scales out to about 18 to 22". Burial 1 measures about 25", although as Figure 27 reveals either the original hole or coffin was slightly misshapen. The distance from the head to the shoulder of the coffin is the same as the shoulder width (18-22"). This closely matches that found in Burial 1. Thus, the Burial 1 coffin closely resembles the measures and styles portrayed in the English literature.

Coffin Hardware

No coffin hardware of any description was recovered from Burial 1. There was no staining or any other indication that any handles or decorative elements were present.

Clothing Remains

No clothing artifacts were recovered from the burial in spite of water screening. The absence of clothing suggests either that the burial was wrapped in a winding sheet or perhaps dressed in a shroud.

In the nineteenth century a shroud, among Christian populations, was a backless garment with sleeves, usually with ruffling to decorate the front, that covered the body from neck to feet. Being backless, they were easily placed on the corpse, giving it the appearance of being clothed while minimizing the labor involved. By the early twentieth century undertakers were offering what were called "robes." These were still backless, but had been updated to reflect more normal clothing – such as a shirt, blouse, or coat.

The shroud in popular Christian usage, of course, was very different from the Jewish shroud, or tahrihim (also tachrichim), that includes a shirt, pants, head and face covering, and belt. In both religions, however, the shroud, lacking pockets (for the accumulation of wealth) and being of a relatively standard form, provided equality in death and avoided the embarrassment at not being able to afford lavish burial clothes. These have historically been made of linen (which, at least early on, reflected the religious belief that Christ was buried in linen), cotton (in the South probably a matter of socioeconomic status since it was so common and affordable) or occasionally wool.

Technically the shroud did not require the use of a "shroud pin." These pins, typically found at the head or on the skull of burials, would have been associated with what was sometimes called a "winding sheet." These were used to wrap or wind the body tightly for burial, usually being pinned at the head. By the mid to late nineteenth century the use of these sheets, also called by the trade a "sanitary sheet," "shipping sheet," or "sterilized shipping sheet," had changed. The body was no longer actually "wound" in the sheet, but was simply covered. The sheet was placed under the body in the coffin and folded over the body as the lid was closed. While the lid was open they would be pulled back and extended over the sides. Usually the body would be dressed in some other clothing.

Human Remains

The skeletal preservation in this interment was very poor, resulting in the recovery of only 11.5 g of highly fragmented and eroded bone. The only identifiable bone was a possible frontal bone skull fragment.

Given the size of the coffin, we can speculate that she was approximately 5 feet 6 inches in height at the time of death.

The poor preservation of the remains is probably due to the clay soil that would hold moisture, the soil acidity, and the lack of a burial vault to protect the coffin and skeleton.

Burial 2 – Rosa Ella Son

The location of Burial 2 was marked with a granite stone set in concrete, identical to the other burials in the cemetery. Rosa Ella Son was the sixth child of Frances Wright and Henry Rosenberry Son. She was born on July 4, 1882 and died just over a year later on July 14, 1883.

No evidence of this burial was identified, in spite of extensive stripping at the posited grave location, as well as at several other "open" areas in the cemetery.

Even where bone preservation was poor, the grave excavations were clearly discernable and even evidence of the coffin was distinct. It is not likely that the grave was missed during these recovery efforts. It is far more likely that either her grave was destroyed by a subsequent burial or that family oral history is incorrect and Rosa Ella was buried in another cemetery.

Figure 29. Granite markers for Burials 1-3; Burial 2 is in the middle. View is to the north.

Burial 3 – Novieann Josephine Son

Burial 3 is believed to be that of Novieann Josephine Son, based on information cast into the concrete in which the granite marker was set. She was the daughter of Henry Rosenberry and Leanna Son and was born on September 5, 1862. She died on June 24, 1863, at the age of 9½ months.

Field Procedures

Work began with the removal of the granite marker at the east end of the grave, as well as the two field stones that also marked the grave (Figure 30). None of the stones had identifiable markings.

Figure 30. Fieldstone markers recovered from Grave 3. The specimen on the left was recovered from the east end of the grave; the specimen from the right was recovered from west end.

A rectangular grave stain, measuring 4.4 by 3.2', became visible at a depth of about 1.7' below grade. Mechanical stripping continued to a depth of about 2.6' at which point wood remains were encountered and hand excavation was begun. These wood fragments were revealed to be a grave arch, or wood placed on ledges over the coffin in order to support the backfilled soil. The actual ledge was identified at a depth of 2.7' below grade. We anticipated identifying a hexagonal coffin, but this was not present. Wood remains for a rectangular coffin or casket were encountered instead and this box had measurements of 3.5 by 1.6'. Depth could not be precisely determined, but was probably 1' or less. The base of grave was identified at a depth of 3.95'. The grave outline is oriented 270°.

Soil surrounding the burial was a brownish-yellow (10YR 6/8) clay and sand. The burial excavation terminated on a very stiff clay. The soil within the burial was a yellowish-brown (10YR 5/6) sand.

The Grave Arch

Remnants of the grave arch wood were heavily decayed. A few fragments were recoverable and these have been identified as pine (*Pinus* sp.). No information, however, is available on the width or thickness of the planks, which ran the short dimension across the grave (north-south).

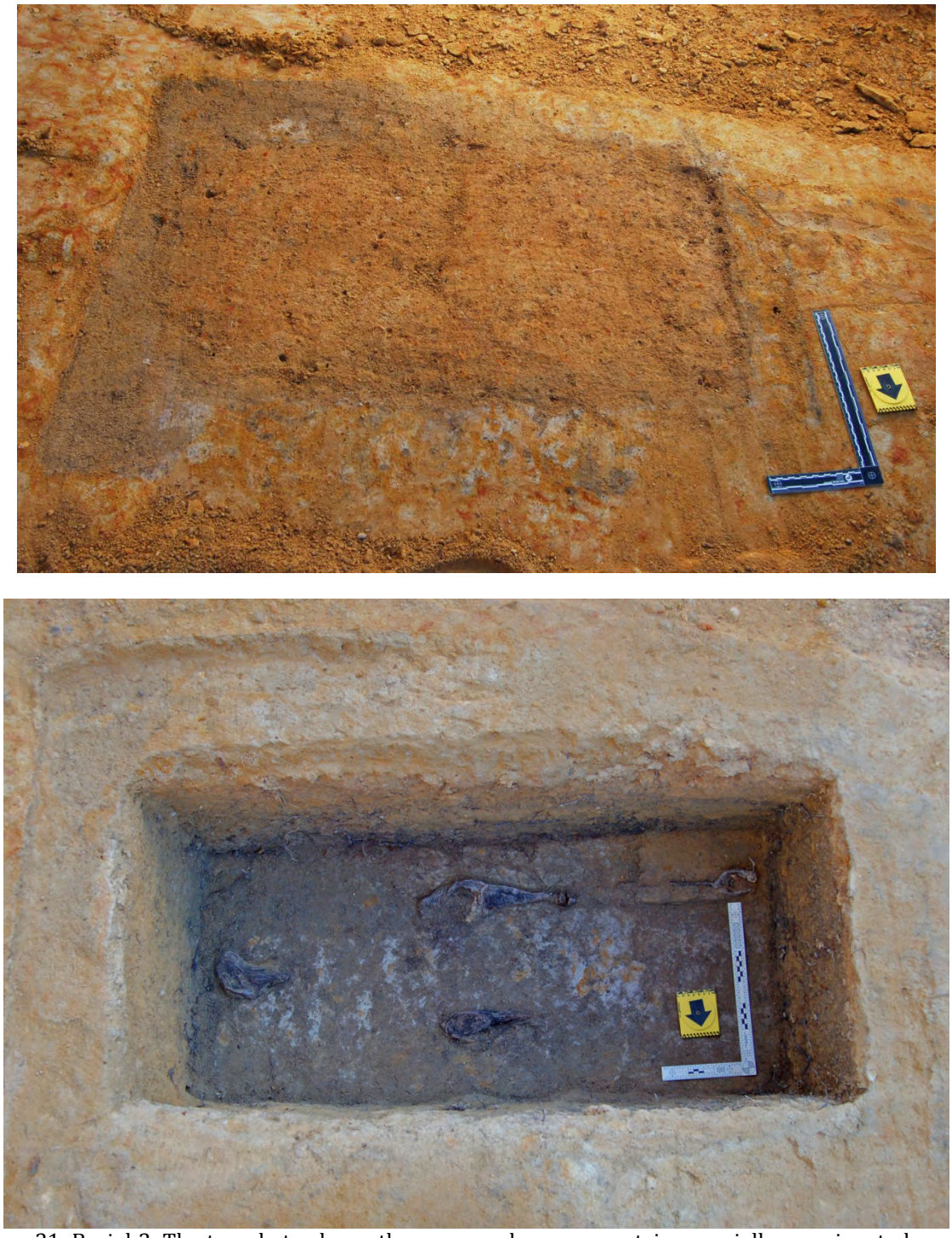


Figure 31. Burial 3. The top photo shows the grave arch as a gray stain especially prominent along the eastern edge. The bottom photo shows the grave excavated with remnant wood in the base of the burial pit. The collapsed coffin wood is visible as a dark stain along the edges of the pit.

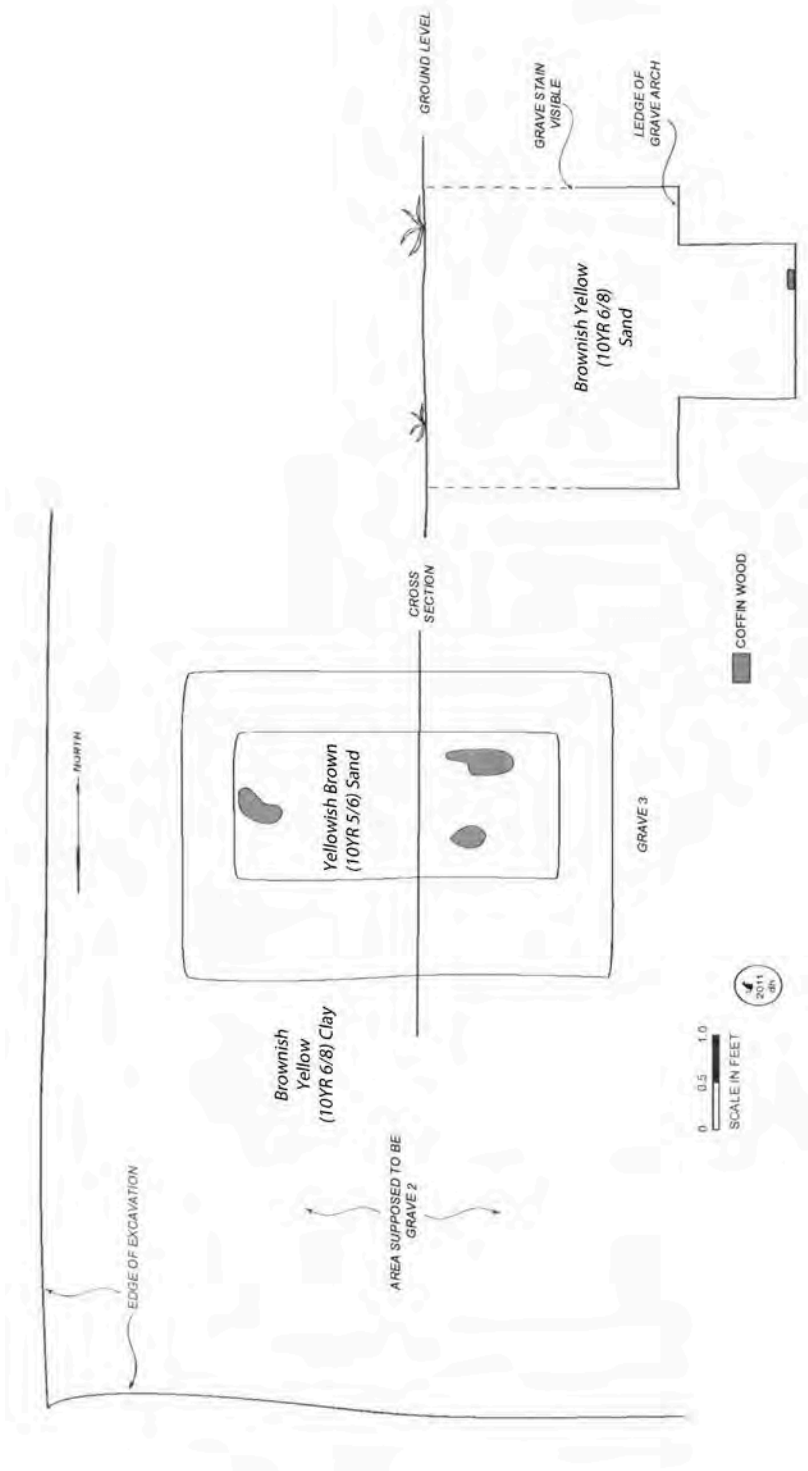


Figure 32. Drawing of Burial 3, plan and profile.

The Coffin

As explained in the discussion of Burial 1, the distinction between coffins and caskets is typically the shape, with the former being hexagonal and the latter rectangular. While the container for Burial 3 was casket shaped, its overall construction was more reminiscent of a coffin. Wolfe (1913:29) mentioned that "cheap" rectangular containers were, during the period, still called coffins.

The box measured about 3.5' in length by 1.6' in width.

One of the earliest catalogs we have is a Crane, Breed & Co. from 1867. It advertises a "Plain Case," a rectangular metal casket "so well known, and deservedly adhered to for its strength and reliability" that it was promoted for its "cheapness" which gave it "an advantage over all other styles" (Crane, Breed & Co. 1867:2). The plain case, lined and boxed, cost (wholesale) $15.50 when lined with cambric (or chambray, a lightweight plain weave cotton cloth). This container measured 42 by 12 by 8½", which closely approximates the one used in Burial 3.

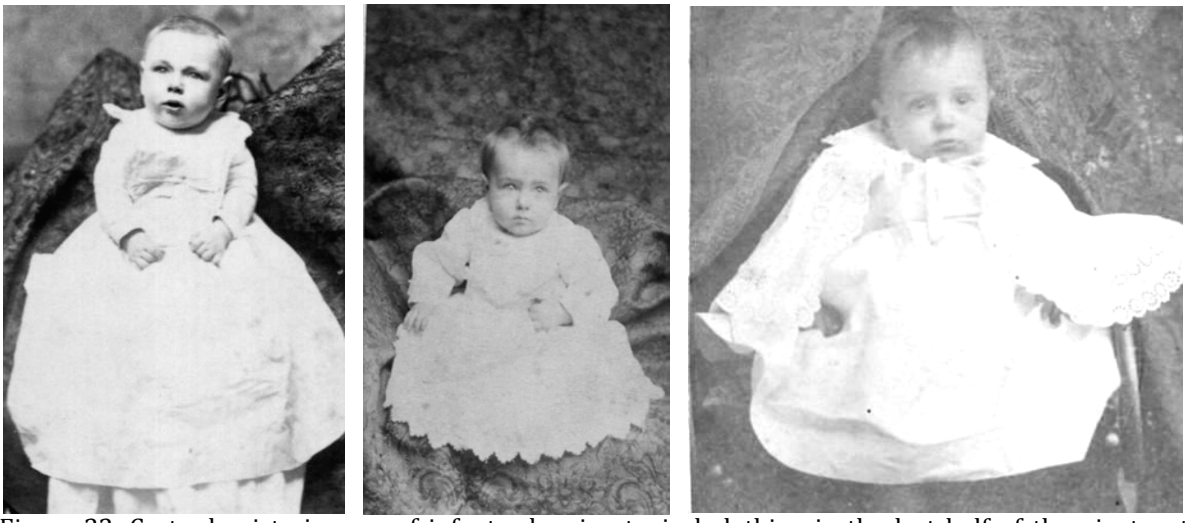


Figure 33. Carte de viste images of infants showing typical clothing in the last half of the nineteenth century when Novieann Josephine Son was buried.

While wood staining was present along the sides of the grave, no sound wood was recoverable in these areas. Considerable wood was, however, present at the base of the grave where several substantial knots had helped preserve sound wood. This wood was readily identifiable as pine (*Pinus* sp.) and it may be that the heavy rosin content of the knots helped preserve adjacent wood.

The excavation produced 79 nails and nail fragments, probably representing about 16 nails (based on identifiable heads). All of these nails are machine cut, except for one wrought nail. Cut nails were introduced about 1780 and can be distinguished from the earlier wrought nails by their taper on only two sides, rather than four (see Howard 1989:54; Nelson 1968). More detailed typological information (e.g., Wells 1998) cannot be determined given the condition of the specimens.

At least two nail sizes are present. Three specimens are clearly identifiable as 9d nails (SAE=2¾"), a size that in carpentry was typically used to attach sheathing. The other size present, including the one wrought specimen and two cut specimens, is 5d (SAE=1¾"). These were nails slightly smaller than typically used for shingles, but at the large end for molding and other more delicate work.

Coffin Hardware

No coffin hardware of any description was recovered from Burial 3. There was no staining or any other indication that any handles or decorative elements were present.

Clothing Remains

No clothing artifacts were recovered from the burial in spite of water screening. Since children during this time period wore simple gowns or frocks until at least the age of 3, the absence of buttons and other clothing items is not surprising. Figure 33 shows several examples of period infant clothing from carte de viste photographs.

Human Remains

The skeletal preservation in this interment was very poor, resulting in the recovery of only 3.0 g of highly fragmented and eroded bone. None of the bone fragments could be identified.

The poor preservation of the remains is probably due to the clay soil that would hold moisture, the soil acidity, and the lack of a burial vault to protect the coffin and skeleton.

Burial 4 – Louisea Annis Son

Burial 4 is believed to be that of Louisea Annis Son, based on information cast into the concrete in which the granite marker was set. She was the daughter of Henry Rosenberry and Leanna Son and was born on July 30, 1860. She died on July 28, 1862, at the age of 2 years.

Field Procedures

Work began with the removal of the granite marker at the east end of the grave, as well as a single field stone that also marked the grave on the head or west end (Figure 34). As stripping was conducted, an additional stone was identified at the head and two were recovered from the foot or east end. The use of multiple stones may suggest that as the grave sank and stones disappeared into the grave, new ones were erected. This is interesting since it suggests that the grave was maintained over at least the first decade of burial.

None of the stones had identifiable markings. One of the stones does, however, reveal

Figure 34. Fieldstone markers recovered from Grave 4. The top row shows the two markers from the west end. The bottom row shows the two markers from the east end.

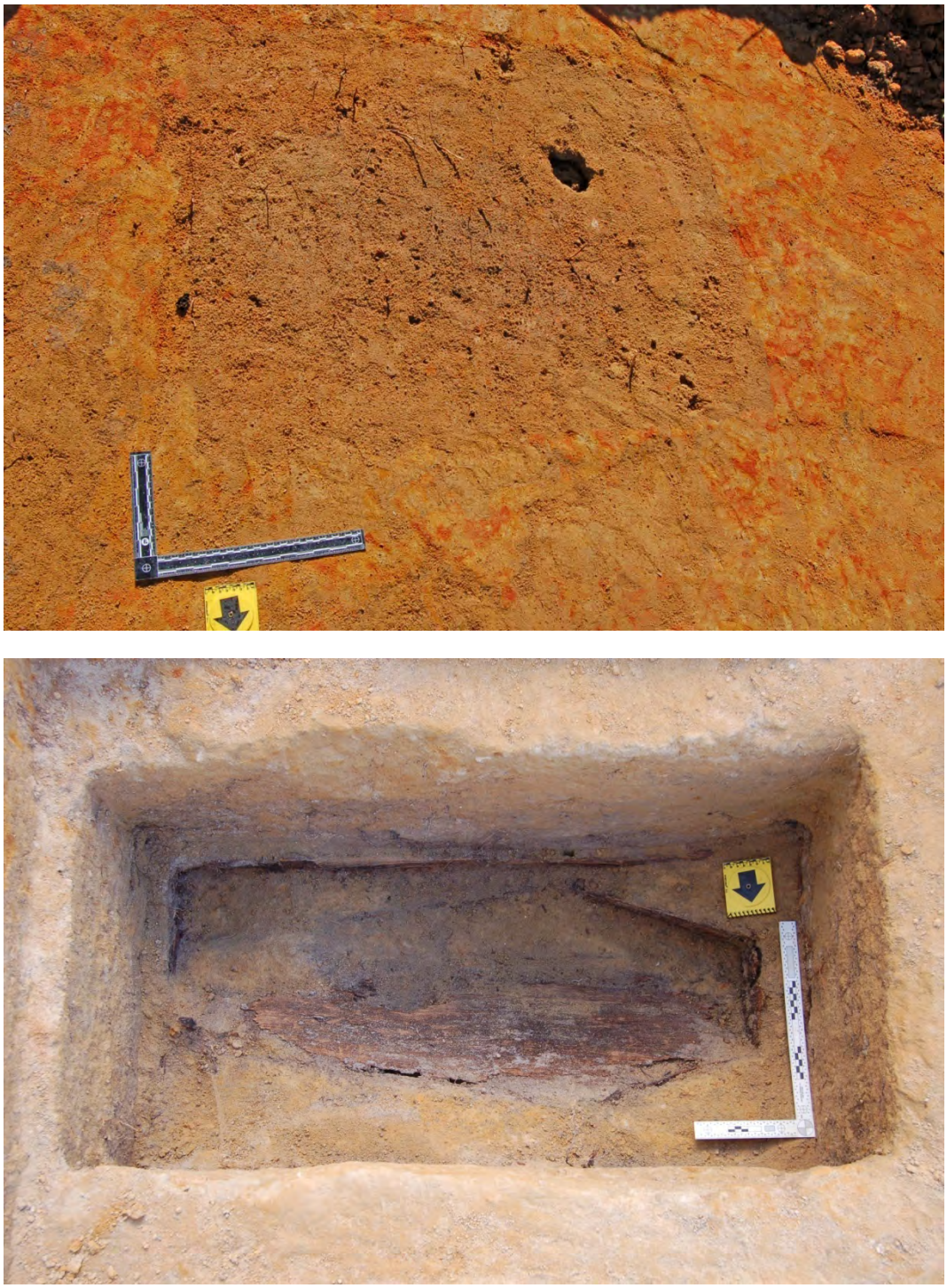


Figure 35. Burial 4. The upper photo shows the stain observed during mechanical stripping. The lower photo shows the fill excavated to the collapsed lid (shown on the north side of the coffin slumped downward).

Figure 36. Burial 4. The upper photo shows the coffin fill excavated and the base of the coffin exposed. The lower photo shows the coffin removed and the bottom of the grave lining exposed.

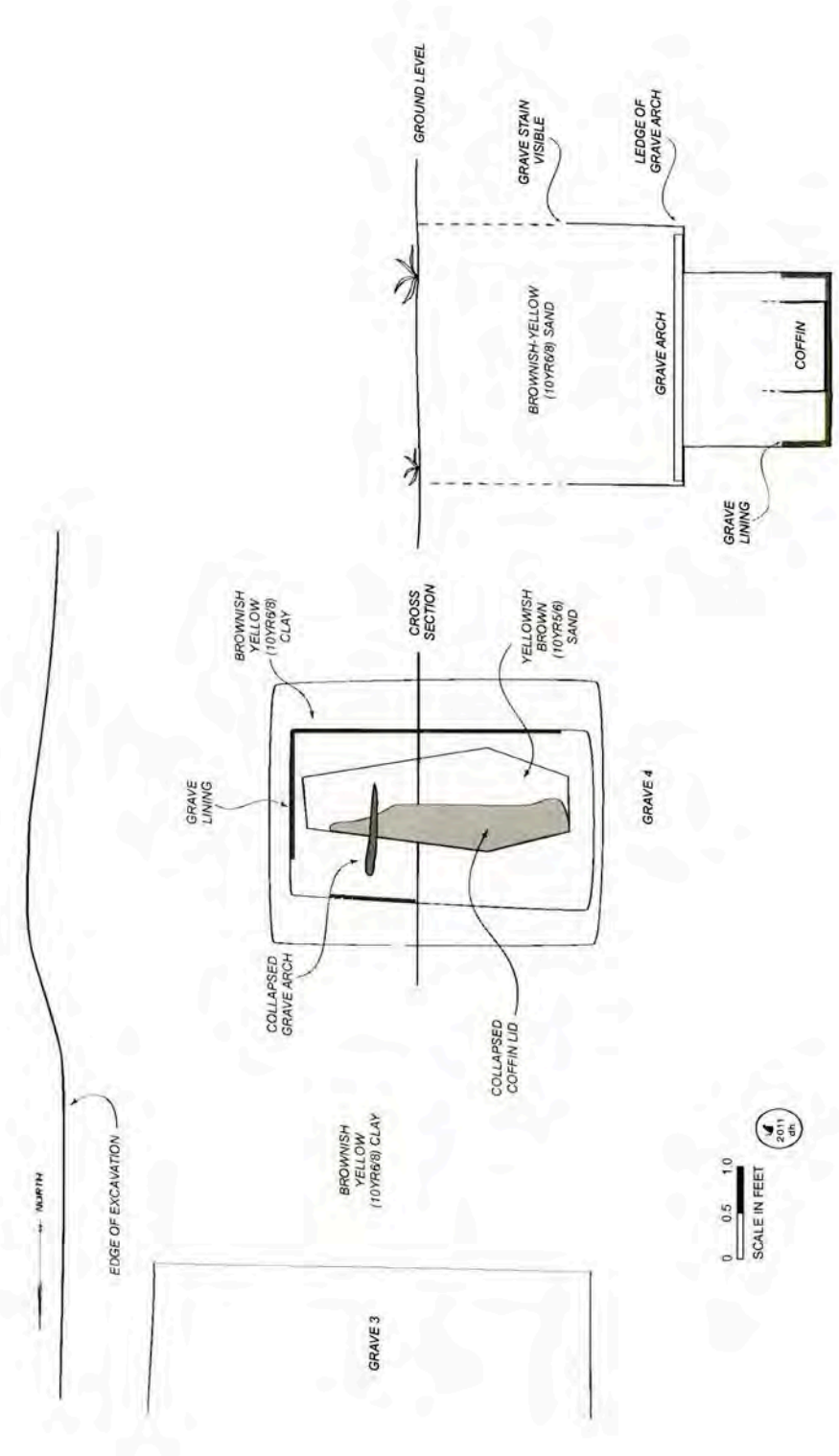


Figure 37. Drawing of Burial 4, plan and profile.

scoring and intentional working, revealing that some effort went into the effort to mark the grave.

A rectangular grave stain, measuring 3.6 by 2.8', became visible at a depth of about 1.6' below grade. Mechanical stripping continued to a depth of about 2.7' at which point wood remains were encountered and hand excavation began. These wood fragments were revealed to be a grave arch, or wood placed on ledges over the coffin in order to support the backfilled soil. This arch was found at a depth of 2.9' below grade.

As the remnants of the arch were removed we identified wood lining the grave, clearly identifiable on all four sides. In so far as possible, this lining was left in place as excavation continued. The collapsed top of a small hexagonal coffin was identified at a depth of 3.9'. The coffin fill was largely identified between 4.1 and 4.2' below grade, represented by a relatively thin zone of dark humic fill. This soil was removed in its entirety for waterscreening.

The sides and base of the hexagonal coffin were exceedingly well preserved. The coffin measured just under 3' in length by 1' 2⅜" in width at the shoulder. Both the head and foot of the coffin measured 7¼" and the distance from the head to the shoulder was 11½". Both the top and base of the coffin consisted of single boards. The coffin depth could not be determined with accuracy since it had collapsed, but is estimated to have been about 9 to 10".

With the removal of the coffin and the collapsed fill within the burial chamber, we found that the base of the grave had also been lined with wood. These planks ran the short width of the burial chamber and were about 1 foot 2 inches in width.

The base of the grave was identified at 4.5' below grade. The grave was oriented 280°.

Soil surrounding the burial was a brownish-yellow (10YR 6/8) clay and sand. The burial excavation terminated on a very stiff clay. The soil within the burial was a yellowish-brown (10YR 5/6) sand.

The Grave Arch

Remnants of the grave arch wood were identified as pine (*Pinus* sp.). No information, however, is available on the width or thickness of the planks, which ran the short dimension across the grave (north-south).

The Grave Lining

In addition to an arch covering the grave, the sides of the burial chamber were also lined with wood. This wood was identified as pine (*Pinus* sp.) about ¾ to 1" in thickness.

There is little historical documentation of this practice. For example Crissman (1994) does not mention the practice and even Habenstein and Lamers (1955:302) mention only the use of rough or outside boxes. Yet as late as 1911 Prospect Hill Cemetery in York, Pennsylvania listed the cost of "lining graves with spruce" was $5.00 (compared to walling with brick, which was $26.00) (Stagemeyer 1911:21).

The practice was the antecedent of using shipping boxes as outside or rough grave liners. By at least the turn of the century outside boxes were routinely sold. For example, the St. Louis Coffin Company sold 5' to 6' 3" boxes for $3 (Anonymous 1904:48). National Casket Company sold a similar box for the same price (Anonymous 1903:46). By the 1930s the price had increased to $7 (Anonymous 1932:9).

The Coffin

As explained in the discussion of Burial 1, the distinction between coffins and caskets is typically the shape, with the former being hexagonal and the latter rectangular. Burial 4 evidences a coffin measuring about 3' in length. Wood preservation was excellent and was identified as pine (*Pinus* sp.).

The size of the coffin is suitable for a 2 year old girl. The World Health Organization Child Growth Standards for girls (http://www.cdc.gov/growthcharts/data/who/GrChrt_Girls_24LW_9210.pdf) indicates a height

from 31½ to 36½" for today's children.

The excavation produced only three nail fragments. No nail type or size range is discernable, although the width of the fragments suggests fairly small nails, appropriate for the relatively small coffin present.

Coffin Hardware

No coffin hardware of any description was recovered from Burial 4. There was no staining or any other indication that any handles or decorative elements were present.

Clothing Remains

No clothing artifacts were recovered from the burial in spite of water screening. Since children during this time period wore simple gowns or frocks until at least the age of 3, the absence of buttons and other clothing items is not surprising.

Figure 38 shows several examples of period infant clothing from carte de viste photographs. Several are of infants in coffins to demonstrate typical burial clothing.

Figure 38. Children's clothing under the age of 3 years. The two photos on the left are of children in caskets. The one on the right is a cart de viste.

Human Remains

The skeletal preservation in this interment was very poor, resulting in the recovery of only 10.0 g of highly fragmented and eroded bone. None of the bone fragments could be identified.

The poor preservation of the remains is probably due to the clay soil that would hold moisture, the soil acidity, and the lack of a burial vault to protect the coffin and skeleton.

Burial 5 – Leanna Kirkland Son

Burial 5 is believed to be that of Leanna (Leah) Kirkland Son, based on information cast into the concrete in which the granite marker was set. She was the first wife of Henry Rosenberry Son and was born on December 20, 1839. She died on August 16, 1868, at the age of 28 years (Brewer 2010:3).

Field Procedures

Work began with the removal of the granite marker at the east end of the grave, as well as a single field stone at the head or west end of the grave (Figure 39). As stripping was conducted, an additional stone was identified at the head and one fieldstone was recovered from the foot or east end. The use of multiple stones may suggest that as the grave sank and stones disappeared into the grave, new ones were erected – a scenario also suggested for Burial 4.

None of the stones had identifiable markings.

A rectangular grave stain, measuring 6.6' by 2.6', became visible at a depth of about 2' below grade. Since we anticipated, based on previous graves, that this rectangular stain would resolve itself into a clearly defined coffin shape or would reveal ledges for a grave arch, we continued mechanical stripping. At a depth of 3.7' below grade wood was identified in the grave spoil and this was interpreted to be the grave arch. Additional stripping was conducted to a depth of 4.2', but no evidence of a ledge was identified, calling into question the previous interpretation. At that point mechanical stripping was stopped and excavation was conducted by hand. Since previous graves had produced little bone, all of the fill was collected for waterscreening.

At 4.8' below grade, wood was identified running lengthwise in the grave. This was identified as the base of a rectangular container. Using the wood, the box was thought to measure about 6.8' by 2.9'.

The base of the grave was identified at 4.9' below grade. The grave was oriented 274°.

Soil surrounding the burial was a brownish-yellow (10YR 6/8) clay and sand. The burial excavation terminated on a very stiff clay. The soil within the burial was a dark grayish brown (10YR 4/2) sandy loam.

The Grave Arch

No evidence of a grave arch was identified for this burial. This of course means that soil would have been backfilled directly on the burial container, which seems to be an anomaly for this family cemetery.

Grave Lining or Coffin

The investigations reveal a burial container measuring about 6.8' by 2.9'. There is convincing evidence that this container was about 0.9' in depth. What is not entirely clear is whether this is an exterior box or if it represents a coffin. The fill within this enclosure was relatively homogenous and a relatively dark color.

As a result we are inclined to believe that the container was a coffin, although it does seem rather large. We are forced to acknowledge that Leanna may have been buried using only an outer box or that the interior coffin may have completely decomposed, leaving no archaeological trace. Arguing against these competing theories, however, is the small quantity of nails recovered and their association with the recovered wood.

Dying shortly after the Civil War, at a time when her husband was likely very short on cash, it

Figure 39. Fieldstone markers recovered from Burial 5. The top and middle rows show the two markers found at the head of the grave. The bottom row shows the one footstone.

may be that Leanne received only the most modest of burial container.

We have previously discussed that rectangular burial cases were available by the late 1860s. Moreover, simple containers such as this could have been easily constructed on the farm.

The wood from the base of the grave was identified as pine (*Pinus* sp.) and several pieces still had a very strong pine rosin smell.

The excavation produced 56 small and badly fragmented nails. None were suitable for measurement, although nine heads were identified. These all appear to be machine cut nails (see Howard 1989:54; Nelson 1968). More detailed typological information (e.g., Wells 1998) cannot be determined given the condition of the specimens.

Coffin Hardware

No coffin hardware of any description was recovered from Burial 5. There was no staining or any other indication that any handles or decorative elements were present.

Clothing Remains

The single clothing item recovered is a 7/16" (or 18 lines) white porcelain 4-hole button (Figure 42). Archaeologists classify this as a South Type 23 button (South 1962). Also called a Prosser button, these were patented in the United States by 1841 (Sprague 2002:113) and are commonly found in the second half of the nineteenth century through the first quarter of the twentieth century. It is consistent with the posited date of this burial.

The 1908 Sears catalog refers to shirt and dress buttons as lines 10 to 20. Luscomb (1971:129) suggests that shirt buttons are 18 lines. This suggests that the one button recovered from Burial 5 was likely associated with either a dress or perhaps a gown of some sort. The one item recovered is not, however, sufficient to make any strong statement regarding the clothing worn.

Figure 40. Burial 5. Upper photo shows the burial outline at the termination of mechanical stripping. Wood is in evidence along the edges. The lower two photos show the base of the coffin.

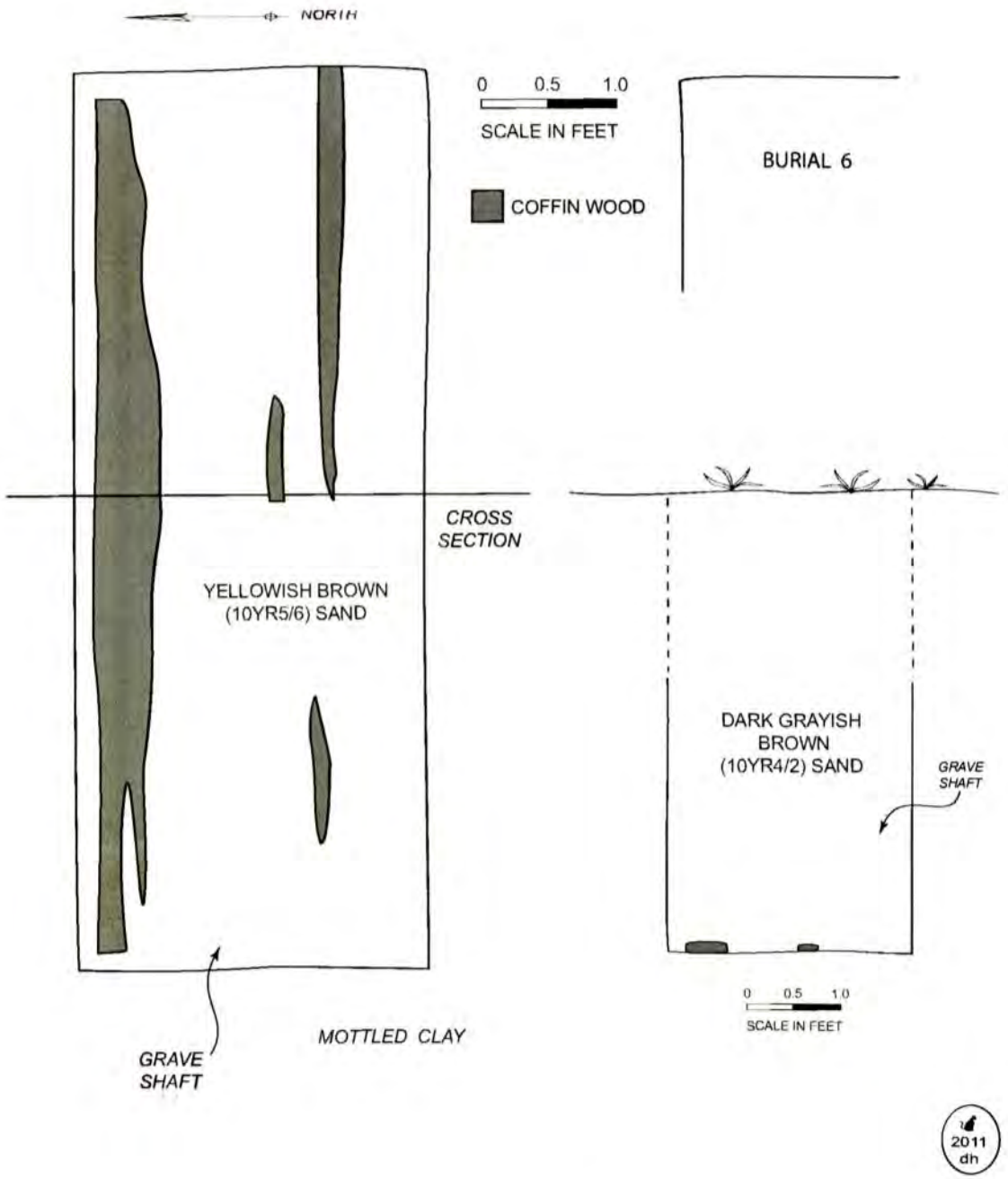


Figure 41. Drawing of Burial 5, plan and profile.

Figure 42. Button associated with Burial 5.

Human Remains

The skeletal preservation in this interment was very poor, resulting in the recovery of only 30.0 g of highly fragmented and eroded bone, as well as eight permanent teeth (1.5 g; see Table 7). None of the other bone fragments could be identified.

The extant teeth were crowns in good, stable condition, despite the fact that pre-mortem they would have been considered in poor condition. Although only one tooth exhibited caries, all exhibited wear facets and were discolored brown, indicating a dead tooth. The black or brown color is the accumulation of blood and debris where the pulp had been when the tooth was alive (White and Folkens 2005:328). It is likely that all other teeth were lost pre-mortem. The condition and location of the teeth suggests that this individual likely had difficulties eating and may have had facial changes due to loss of teeth.

The poor preservation of the remains is probably due to the clay soil that would hold moisture, the soil acidity, and the lack of a burial vault to protect the coffin and skeleton.

Figure 43. Teeth from Burial 5. Upper row, lower left central incisor, labial and occlusal views. Middle row, lower right central incisor, labial and occlusal views. Bottom row, upper right second premolar, distal and occlusal views.

Table 7.
Teeth from Burial 5

Type	Position	Description	Wear Stage
Central Incisor	Lower Left	Discolored to brown	Moderate dentin exposure no longer resembling a line; large dentin area with enamal rim complete
Central Incisor	Lower Right	Discolored to brown	Moderate dentin exposure no longer resembling a line; large dentin area with enamal rim complete
Lateral Incisor	Lower Left	Discolored to brown	Point of hairline of dentin exposed
Lateral Incisor	Lower Right	Discolored to brown	Moderate dentin exposure no longer resembling a line. Large dentin area with enamal rim complete
Canine	Upper Left	Discolored to brown	Unworn to polished or small facets (no dentin exposure)
1st Premolar	Lower Right	Discolored to brown	Moderate cusp removal (blunting)
2nd Premolar	Lower Right	Discolored brown; faceting on occlusal surface; calculus along gum line and on general surface	Moderate cusp removal (blunting)
2nd Premolar	Upper Left	Discolored brown; faceting on occlusal surface; calculus along gum line and on general surface; caries on distal surface	1 Moderate cusp removal (blunting)

Burial 6 – Henry Rosenberry Son

Burial 6 is that of the family patriarch, Henry Rosenberry Son. This is based on information cast into the concrete in which the granite marker was set, as well as definitive archaeological and bioanthropological data. Henry was born on September 26, 1830 and died on August 30, 1908 (Brewer 2010:3). Family history reports that he died by accidentally impaling himself on the stile of a chair. As unlikely as this may sound, there are actually multiple reputable accounts of similar impaling accidents in the twentieth century. It is possible that he died either of massive blood loss or the resulting infection.

Figure 44. Undated image of Henry Rosenberry Son (courtesy Brewer 2010).

Regardless, we are fortunate to have a photograph of Henry, taken later in life, after the Civil War (Figure 44). The image shows him wearing five different Confederate reunion badges, buttons, and ribbons. In the photograph he is wearing a dark jacket and dark Victorian style men's waistcoat or vest with black buttons. The combination is likely a sack suit, with the trousers a matching dark color. His shirt has a high, stand up collar and bow tie.

He had a receding hairline and his right shoulder is dropped, possibly suggesting an injury.

Field Procedures

Initial work revealed that Henry Son was buried in a concrete vault or had some sort of concrete slab over his grave. Unlike other burials in the cemetery, it did not appear that this concrete had collapsed into the burial chamber and excavation procedures were focused on ensuring that the concrete was removed intact to minimize damage to the remains.

Figure 45. Fieldstone marker recovered from Burial 6.

Work began by removing the granite slab marker at the east end of the grave, as well as a single field stone at the foot or east end of the grave (Figure 45). The field stone lacked any markings. No original marker was found at the head of the grave.

Soil was then carefully removed from the top and sides of the vault by hand in order to expose what appeared to be a large, somewhat amorphous concrete vault (Figure 46). External evidence suggested that the vault was poured on-site, accounting for its less than perfect features. This vault, however, was far more sophisticated than other burials at the cemetery where it appeared dry Portland cement had simply been placed over the wood casket, eventually causing the casket to collapse.

The Vault

The top of the vault was identified 0.3' below the modern ground surface.

We were fortunate to have the assistance of the Lexington County Public Works Department, whose skilled team found the vault, and its safe opening, to be a challenge. We were relatively certain that the cement was not reinforced and were therefore concerned that it might crumble or collapse upon opening. The joint between the top cover and bottom receptacle was also poorly defined – likely another artifact of the vault's creation on-site.

As Figure 47 reveals, the vault was carefully supported along its length and lifted off the bottom of the vault. These photos also show evidence that the vault was cast in-place, prior to the casket being deposited.

This was further confirmed by the vault

Figure 46. Burial 6 vault upon initial exposure, looking northwest.

Figure 47. Raising, supporting, and removing the top of the Henry Rosenberry Son vault.

lid (Figure 48), that showed the impressions of 18 parallel lathes that had been fastened using small nails to arched boards. While the boards themselves had been removed prior to the placement of the casket (since there was no evidence of them in the grave), many of the lathes were still adhering to the vault top and were left in place as the lid was sealed. These lathes eventually collapsed off the lid and are seen overlying the remains of the casket. The wood was identified as pine (*Pinus* sp.). Nails were little more than rust stains, but appeared to be less than a 5d.

The seal between the lid and the bottom of the vault was distinct, indicating that the bottom had fully set. There was, however, no application of tar or other material to prevent water intrusion. As a result, the vault clearly evidenced much soil and silt, as well as numerous roots that had penetrated between the lid and vault base.

The external dimensions of the vault were 7.8' in length by 3.15' in width. The depth from top of the arch to the base was about 3.3'. The internal dimensions were 7.15' by 2.3'. The bottom portion of the vault was 1.8' in depth, while the vault lid added about 0.3' of interior space.

The vault in most areas was about 0.4 to 0.5' in thickness, although in one area the concrete expanded to a thickness of about 0.7'. Along the south wall, the concrete pour extended only a foot below the lid, below which was only clay lining the grave. Concrete was found across the bottom of the vault. This suggests that there was an interior form placed in the excavated grave; the excavated walls served to retain the concrete on the exterior, while the form retained the concrete on the interior. Apparently the form was adjusted too close to the south wall, preventing any concrete from reaching the base of the vault.

This is the first such cast-in-place concrete vault we have identified. Our search of

Figure 48. Concrete vault associated with Burial 6. The top photo shows the interior of the lid and the lathe impressions. The lower photo (taken looking to the south) shows lathes from the lid, as well as the bottom portion of the vault. Note the roots and silt that penetrated the vault.

the available archaeological literature reveals no similar accounts. Archaeologists should be alert to similar features that preceded the introduction of commercial vaults sometime between ca. 1880, when the predecessor of the Wilbert Vault Co., L.G. Haase Manufacturing Co., began producing two-part concrete vaults (http://www.wilbertonline.com/about/history/lined/) and 1900 (Habenstein and Lamers 1955:296).

With the removal of the lid the remains were immediately visible, although not necessarily accessible. Everything was caked in silt and intertwined in roots. Initially the wood lathe remains were removed, then major roots were gently cut out. Gradually the outline of human remains became more visible (Figure 50), although even at this point silt and fabric remains made identification of individual elements difficult.

Eventually it was necessary to divide the vault area into five locations: head; upper right; upper left; lower right; and lower left in the hope of providing some control over where remains were found. This was largely successful since remains had shifted considerably in the vault. Nevertheless, all soil was collected and subsequently water screened. It is likely that we recovered all remains present in the grave.

Casket

Although lathes from the top of the concrete vault were preserved, the interior

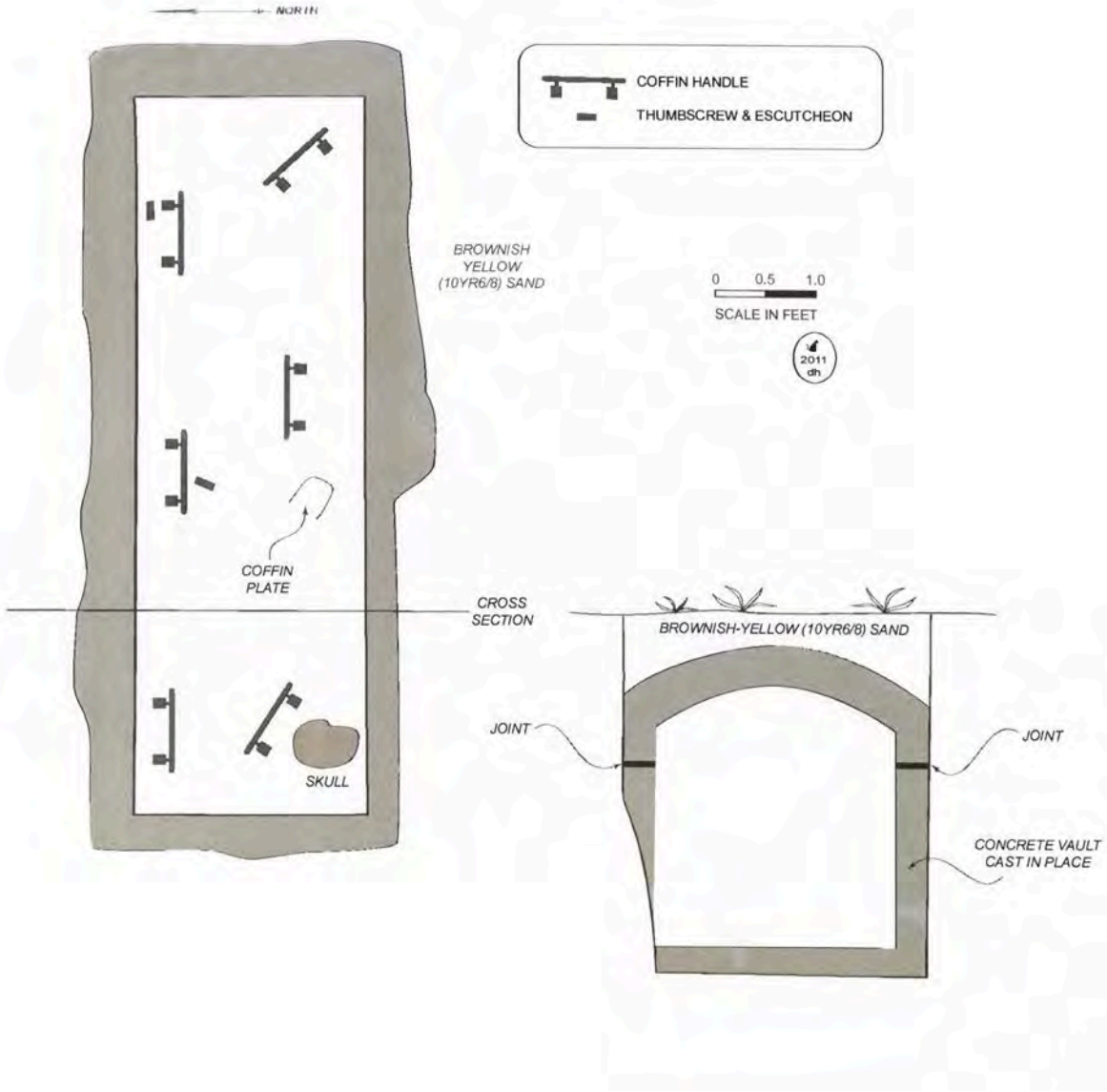


Figure 49. Drawing of Burial 6, plan and profile.

Figure 50. Burial 6 after removal of wood debris and overlying silt.

produced no wood that could conclusively be associated with the casket. Small fragments of wood were identified in the foot area and these were found to be pine (*Pinus* sp.). Whether they represent more of the support for the lid or possibly remnants of the casket is uncertain. The fact that deterioration was so complete suggests that the casket was manufactured of relatively inexpensive soft woods, such as pine or poplar.

Also present in the remains are a small quantity of highly degraded turned or worked wood fragments covered in red and white material. The red is more common and when spot tested it is identified as lead – probably red lead paint.

It is unlikely these materials are associated with the casket, primarily because of their colors and form. One possible alternative is that they represent remnants of the stile or ear of the chair upon which Henry was impaled.

Casket Hardware

While no remains of the casket (or coffin) were found, Burial 6 produced a number of coffin remains, including nails, screws, tacks, a coffin plate, six handles, cap lifters, thumbscrews, and escutcheons. Also present were casket closure devices. Taken together these items provide a fairly complete picture of at least the ornamentation and general style of the burial enclosure.

A very large number of nails were recovered, including 100 specimens identifiable as wire nails 1½" in length (4d). There were also 63 machine cut nails 2" in length (6d). Also present were an additional 198 nail fragments of indeterminable size or form. The nail collection also produced 13 examples of nails (or pins) ⅝ or ⅞" in length – what some catalogs term escutcheon pins (see, for example, F.H. Hill 1925:123).

Screws were consistently broken, making it impossible to determine with any accuracy their original lengths (although at least two sizes are present). The collection, however, did produce 13 specimens. Those present were all modern (post-1848) gimlet screws with tapered shafts,

even threads, and pointed tips. They were likely used to attach the casket handles.

Figure 51. Lead headed coffin lining tacks from Burial 6. Scale is in centimeters.

Tacks were also abundant in the collection, consisting of at least two distinct types. The most commonly preserved were 30 with white metal (tested as containing abundant lead) domed heads ¼" in diameter and ⅛" in height (Figure 51). These tacks are shown in a variety of funeral hardware catalogs, appearing at least as early as the Russell & Erwin (1865:331) catalog as "Lining Tacks," with solid white metal heads. The Sargent & Co. (1871) catalog identified them as "Coffin Lining Nails, No. 10 Round Head, White Metal" and sold them for 12½¢ per paper. In the Stolts, Russel & Co. (1880:32) catalog they are called "Lead Head Tacks" and were packed 12 gross to a package. They continued to be offered in the C.M. McClung & Co. (1912:1057) catalog where they were called "Coffin Lining Tacks" and were noted to have white metal heads. At that time they were being sold for 30¢ per gross. In fact, these tacks were offered at least as late as 1920 in the Sargent catalog, still called "White Metal Lining Tacks."

The second type identified consists of a ferrous metal tack. The domed head is about ½" in diameter and raised about ¼". They are about ¾" in length. Miller Brothers & Co. (1870) illustrate several such tacks in different sizes, suggesting that they were to be used to attach and decorate escutcheon plates. Only the tacks were recovered from Burial 6, although the plates may simply have succumbed to corrosion in the concrete vault. Likewise, there may have been more than the three tacks recovered, but they are fragile and may have disappeared.

Four bell-shaped coffin studs made from a very thin copper plate were identified in the vault (Figure 52). These are identical to decorations found in several catalogs. Stolts, Russell & Co. (1880:34) illustrate this item as a "No. 14 Stud." The Columbus Coffin Co. (1882) catalog shows it as a No. 37 Silver Plated Stud." The Louis J. Lamb (1900:3) catalog shows a similar stud, identified as their No. 13. It is also shown in the Chattanooga Coffin & Casket Co. (1905:162) catalog as their No. 84. While no prices were provided in any of these catalogs, these simple stamped decorations were typically very inexpensive, being sold by the gross.

Figure 52. Coffin stud from Burial 6 shown at top. Below is a drawing of the stud from the Louis J. Lamb catalogue.

Figure 53. Coffin plate from Burial 6, before and after conservation treatment.

The coffin plate was recovered from the abdominal area and consists of a silvered, white metal plate measuring 5¼ by 2½". It is stamped "At Rest" and on the reverse is a two digit number, although only one digit, a "0" is legible. It was attached to the casket using two ferrous pins, one centered on each side of the plate. We were unable to identify a match to this particular design.

One cap lifter was recovered from above the waist, suggesting that the casket was a half couch design, allowing the lid over the face and torso to be lifted. This cap lifter is similar to one in the Chattanooga Coffin & Casket Co. (1905:157) catalog, identified as their No. 29. It is also similar to one in the Sargent & Co. (1920:871) catalog identified as their No. 190. While the cap lifter is a match to both catalogs, the base present in Burial 6 is decorated and the catalog bases are plain.

Henry's casket also included six thumb screws and escutcheons identical to those illustrated as No. 936 in the Sargent & Co. (1920:874) catalog and No. 1007 in the Chattanooga Coffin & Casket Co. (1905:157) catalog. There are slight differences in the size and placement of the decorative border on these two designs. The difference is how companies avoided design patent infringements, making their products just different enough to avoid law suits. The two designs are so similar that the undertaker mixed the designs on the casket, either unaware of the differences himself or assuming that his clients wouldn't notice.

This one hardware item provides a caution that matching actual hardware items to catalog cuts is not always possible, or perhaps even useful.

Originally these were used around the edges of a coffin to secure the lid after viewing. As the coffin evolved into the casket and closure mechanisms (see below) were developed,

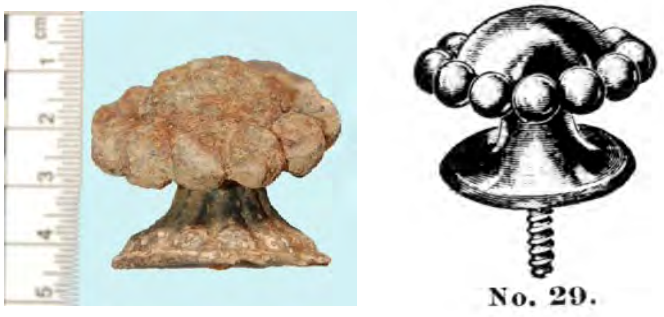


Figure 54. Cap lifter from Burial 6 (left) and example from the Chattanooga Coffin & Casket Co. catalog.

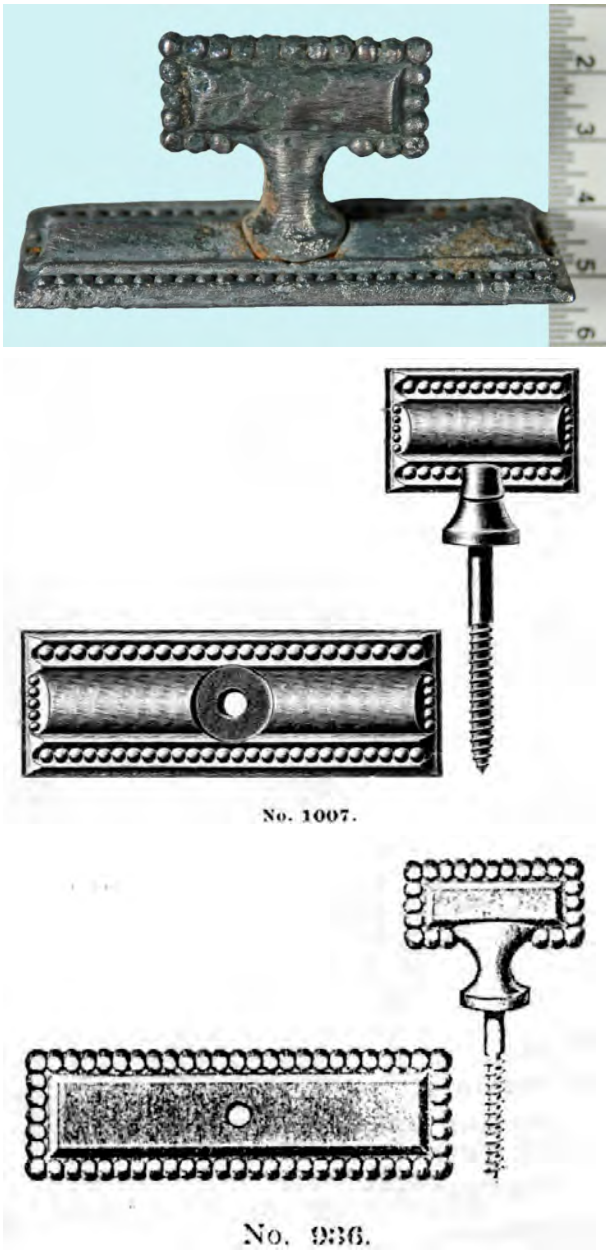


Figure 55. Thumbscrew and escutcheon from Burial 6 (top). Middle engraving is a similar thumbscrew and identical escutcheon from Chattanooga Coffin & Casket Co. The bottom engraving, from Sargent & Co. shows an identical thumbscrew and similar escutcheon.

these thumbscrews appear to have continued to be placed on the casket, although their function may have been primarily decorative.

Three closure devices were also recovered from the excavations. These include a two part latch system. One part consisted of a spring catch and the other consisted of a fastener. Also present is a handle that was likely part of the closure, although we have been unable to determine its precise function. Unfortunately there is a dearth of shell hardware catalogs available and there is tremendous variation in these devices.

Four casket rests were recovered from the vault. These were devices attached to the bottom of the casket that served to raise it off the vault floor, allowing the straps used to lower the casket into the grave to be easily removed. The rests were typically placed in the four corners of the casket.

Figure 56. Two closure devices recovered from Burial 6.

The style found in Burial 6 is comparable to No 4J shown in the Sargent & Co. (1920:913) catalog. After careful cleaning, the recovered items revealed small amounts of Japaning still in place.

The last items recovered from the burial are six double lug swing bail handles. They are of white metal, probably originally silvered with wood handles. At each end are caps and the handles themselves were probably cloth or metal covered. No match for the handles were found in any available catalogs.

Henry Rosenberry Son's casket was rather ornate, especially considering the others in

Figure 57. Casket rest from Burial 6 shown in the top photo. Below is the rest from the Sargent & Co. catalog.

the Son Cemetery. Whether this was the result of his status as the family patriarch or simply an indication of the love and admiration is not known, but his casket – as well as his vault – stands out in the cemetery.

This, however, does not necessarily translate into great cost. Although we don't have the casket itself, research using data from the J.W. McCormick Funeral Home in nearby Columbia for the period from 1906 through 1915, we note that the average coffin cost was $64.23 and the mode was $70.00. These prices take on greater meaning when we realize that the average farm income in 1910 was less than $350 (Derks 200:128).

The trimmings for most caskets were not necessarily a significant expense. Short bar handle costs, during this period, probably average about $1 per handle. H. Cloud Bryan (1917) published a small handbook in which he argues that the funeral director is "justly entitled to liberal compensation" and a "legitimate profit." To assist, he outlines how to match the value of hardware to that of the casket. Thus, a simple $65 casket might be matched to between $8.55 and $9.60 in hardware.

Clothing Remains

Clothing remains consist primarily of buttons. Eight of the buttons are of 4-hole hard rubber with no back marks. Four measure 11/16" (or 28 lines) and are almost certainly coat buttons. Gentlemen's sack suits in the late nineteenth and early twentieth centuries typically had four buttons. The remaining four buttons are 9/16" (22 lines) and are associated with the vest that Henry

Figure 58. One of the six swing bail handles associated with Burial 5.

was wearing in Figure 44. Vests also traditionally had four buttons during this period.

There are four 11/16" (or 28 lines) Japanned metal buttons that were associated with his pants. An additional four 9/16" (22 lines) buttons (plus a small number of fragments) are also of Japanned metal and were suspender buttons on the waist of the pants. There should be eight such buttons and we presume that the fragments are the remaining buttons, probably from the back of the pants. These buttons are suggestive of suspenders and indeed two ferrous metal suspender clips were recovered.

Figure 59. Clothing items. Upper row (L to R) includes coat button, vest button, and shirt button. Lower row (L to R) includes pants button, suspender button, and cuff button or stud.

The shirt had three white porcelain 4-hole buttons, each 7/16" (18 lines) in diameter. Archaeologists classify this as a South Type 23 button (South 1962). Also called a Prosser button, these were patented in the United States by 1841 (Sprague 2002:113) and are commonly found in the second half of the nineteenth century through the first quarter of the twentieth century. Men's dress shirts during this period were often pull overs, typically with three small buttons on the placket front. The 1908 Sears catalog refers to shirt and dress buttons as lines 10 to 20. Luscomb (1971:129) suggests that shirt buttons are 18 lines.

Also associated with the shirt were two white celluloid cuff buttons, as well as a collar stay. The cuff buttons measure 7/16" in diameter. The collar button is ½" in diameter and has a gilt surface.

The final clothing items are four brass grommets, likely eyelets from leather shoes. Although only four were recovered, it is likely that more were originally present and did not survive.

Of particular note are the five decorations that Henry was photographed wearing (see Figure 44 and 60). On the right lapel were two celluloid buttons, each with an attached ribbon. The larger button may have an individual's image. The small button appears to have an image of a cross, possibly a Confederate flag. Such pins were commonly distributed at the various Confederate veterans' reunions.

On the left lapel at the top is a Southern Cross of Honor. This is a bronze cross pattee, bearing in the center a laurel wreath encircling the inscription in four lines, DEO VINDICE 1861 1865. The four arms of the cross are inscribed

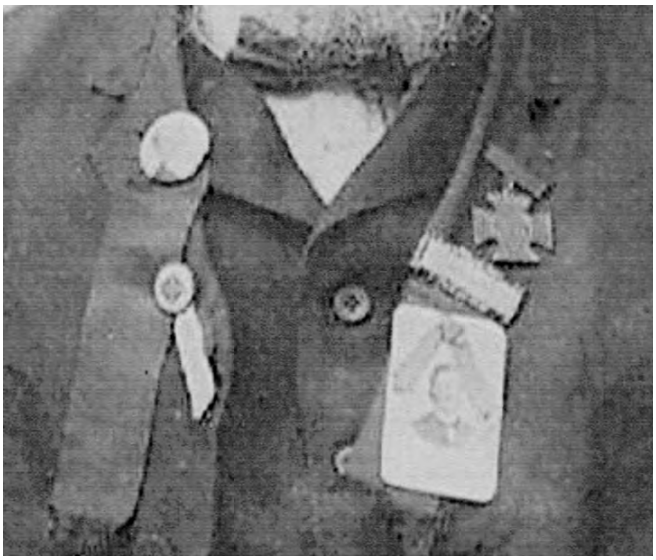


Figure 60. Confederate decorations worn by Henry Rosenberry Son (see Figure 44).

Figure 61. Confederate veteran reunion buttons and the front and back of the Southern Cross of Honor recovered from Burial 6.

SOUTHERN CROSS OF HONOR. On the reverse in the center is a similar wreath encircling the Confederate battle flag, the four arms of the cross inscribed UNITED DAUGHTERS CONFEDERACY TO THE U.C.V. This medal was suspended from a plain bar on which the name of the recipient was often engraved. On the reverse was PATENTED CHARLES W. CRANKSHAW ATLANTA.

The proposal to provide this medal was first raised at the Athens, Georgia Chapter of the Daughters of the Confederacy meeting during the summer of 1898 by Mrs. Mary Cobb Erwin. The resolution proceeded through the Georgia state division of the UDC and was approved by the main society in November 1899. The cross was designed by Mrs. S.E. Gabbett, of Atlanta and the crosses were manufactured by an Atlanta jeweler, Charles W. Crankshaw. The first presentation to Confederate veterans took place on Confederate Memorial Day (April 26) in 1900, with about 2,500 being distributed. By 1913 a total of 78,761 Crosses had been distributed (http://www.hqudc.org/so_cross/). Ironically, a subsequent manufacturer of this medal was Whitehead & Hoag of Newark, New Jersey.

Also on Henry's left lapel is a bar pin and below that a celluloid card and ribbon. This card also appears to have a man's photo on it. These, too, were likely souvenirs or awards from various United Confederate Veterans (UCV) meetings or reunions. Photographs were often of a favorite general, such as Robert E. Lee, Stonewall Jackson, or James Longstreet; Jefferson Davis; or Winnie Davis, "Daughter of the Confederacy." The bar pin was likely a holder for a printed insert.

Henry was buried with all of these buttons and metals on his suit and all were recovered. The celluloid buttons and card are in poor condition, but clearly recognizable. The Southern Cross of Honor, because of its size and weight, was best preserved (Figure 61).

Fabrics

Burial 6 provided good fabric preservation with samples of at least seven different fabrics from a variety of contexts (Figure 62).

Figure 62. Fabrics recovered from Burial 6. Upper left is wool fabric from coffin covering (50x); upper right is brown wool pants fabric (20x). Middle left is a machine stitched buttonhole on the left lapel (20x); middle right is interfacing from the lapel (20x). Lower left is the collar button with impression of shirt fabric (50x); lower right is the collar button with remnants of white cotton thread (230x).

Fabric with wood attached to it appears to be the cloth covering of the coffin. It is wool, in a simple weave with 32 threads per inch, and brown in color. At least one catalog indicates that broadcloth was provided in 14 colors, with darker shades including black, tan drab, coachman drab, medium slate, and dark slate (National Casket Co. 1904:2).

Fabric from the torso and femur area is brown wool, once woven, but now felted, due to 100 years of water seeping in and out of the grave. Remnant impressions of woven lines can be seen in some areas. The lapel and collar were interfaced with a stiff, loosely woven black wool fabric (thread 0.03" on average, simple over-under weave, with 0.05" openings between threads). The buttonhole on the left lapel, and the seam on the lower coat edge are machine stitched; the seam on the coat edge is a double finish seam, 1/8" apart, six stitches per inch.

The collar button, used to attach the collar to the shirt, had a slight impression of a closely woven fabric, as well as white cotton threads. These appear to belong to the shirt.

This information reveals that Henry Son was buried wearing a suit with a wool single breasted square cut sack coat, with a vest, matching pants, and a white cotton shirt with detachable collar. Because both the seams and the buttonhole of the suit coat are machine sewn, it is virtually certain that this was a store bought suit, not one handmade by Frances. Clothes of this type were readily available by catalogue through Sears Roebuck and Montgomery Ward. An 1897 Sears catalog advertised such suits for prices ranging from $4.75 up to $6.25 (Israel 1993:169).

Other Remains

Under the abdominal area six fragments of flat, probably window, glass were recovered. The origin or function of these remains, none of which mended, is unknown. Absent any reasonable explanation we assume they were accidental inclusions.

Human Remains

The skeletal preservation of this interment was good to poor, due to the burial having been placed inside a concrete vault that remained intact until disinterment. The skull, 4 teeth, 168 identified bones, and 61.5g of small, unidentified fragments were recovered (Table 8).

The cranium was in good condition, with small amounts of erosion on the mastoid processes and external occipital protuberance. The anterior portions of the nasal bones, and fragile interior bones of the frontal and maxilla had crumbled post-mortem. The left styloid process was short (2.58mm) with a concavity on the anterior and posterior aspects, giving it a bifurcated appearance; the right styloid process was missing post-mortem, but its base also had the bifurcated appearance.

The right mastoid process was large, the External Occipital Protuberance was a rugged, down-curved hook, and the chin was square in shape; these characteristics indicate that the individual was most likely male (Buikstra and Ubelaker 1994: 20). The sagital, coronal, squamosal, and lambdoidal sutures were almost completely obliterated, indicating an age at death of over 50 years (Buikstra and Ubelaker 1994: 36). Moderate lipping on occipital condyles indicates osteoarthritis, which could have been the result of strenuous activity or advanced age (Mann and Hunt 1990: 82). The left mandibular condyle was heavily lipped and lumpy, another indicator of advanced age (Mann and Hunt 1990: 81) The posterior of the occipital was slightly lumpy in appearance, and the gonial angles of the mandible were rugged and ridged; these indicate increased musculature (White and Folkens 2000: 78, 104). The palatine process of the maxilla was ridged and lumpy in appearance; although in older adults the surface is usually smooth (Bass 1995:53). The median palatine suture was not obliterated, which is also unusual in an older adult (White and Folkens 2000: 84). Morphological traits, including presence of narrow dental arcade, nasal sill, retreating zygomatics, and no prognathism, indicate European descent (Rhine 1990:9-20).

Table 8.
Burial 6 Skeletal Inventory

Element	N	Wt (grams)	Notes
Cranium	1	355.0	incomplete
Mandible	1	28.5	incomplete; wt includes teeth
Teeth	4		*See Table 9*
Clavicle, Right	1	11.5	complete, eroded
Clavicle, Left	1	11.5	complete, eroded
Scapula, Right	3	35.0	fragmented, incomplete
Scapula, Left	4	40.5	fragmented, incomplete
Ribs, Right (unidentified)	>30	68.0	fragmented, incomplete
Ribs, Left (unidentified)	>40	54.5	fragmented, incomplete
Vertebra, Cervical:	23	44.0	fragmented, eroded
Vertebrae, Thoracic	>40	80.5	fragmented, eroded
Vertebrae, Lumbar	27	70.5	fragmented, eroded
Manubrium	7	7.5	fragmented
Innominate, Right	1	139.5	eroded
Innominate, Left	1	170.5	eroded
Sacrum	6	54.0	fragmented, incomplete
Humerus, Right	1	90.5	eroded
Humerus, Left	3	89.5	fragmented
Radius, Right	1	28.0	eroded; x-ray
Radius, Left	1	31.5	eroded; x-ray
Ulna, Right	5	38.0	fragmented; x-ray
Ulna, Left	1	37.5	eroded; x-ray
Carpal, Metacarpals & Phalanges, Right	26	40.0	missing 1 phalange
Carpal, Metacarpals & Phalanges, Left	25	36.5	incomplete, 1 fragmented
Femur, Right	1	246.0	incomplete, eroded; x-ray
Femur, Left	1	217.0	incomplete, eroded;x-ray
Patella, Right	1	8.0	edges eroded
Patella, Left	1	9.0	edges eroded
Tibia, Right	1	158.0	eroded; x-ray
Tibia, Left	1	166.5	eroded; x-ray
Fibula, Right	1	30.0	incomplete, eroded; x-ray
Fibula, Left	5	32.5	fragmented, incomplete; x-ray
Tarsal, Metatarsal & Phalanges Right	24	104.5	missing 2 intermediate phalanges
Tarsal, Metatarsal & Phalanges, Left	23	102.0	distal phalange

Using the Giles and Elliot equations (Giles and Elliot 1962), the cranial measurements indicate a male of African descent. Using ForDisc 3.0, the skull measurements also indicate a male of African descent. Given the unexpected results, an independent researcher was consulted, and those measurements provided the same results. It is unknown if these results reflect an anomaly in the metrics used, an anomaly in the skull, or racial mixing. Unfortunately, the skulls of the other family members were not in a condition to be measured and compared. Hogue and Alvey (2006:59) report similar anomalous results using ForDisc on a African American female.

Other non-metric variants noted include: pronounced vascular grooves on the left and right frontal bones; a supraorbital notch in the left orbit; and one supraorbital foramen above each orbit, all normal variants. There were pinpoint porosities on the frontal bone above the nasal bones, commonly seen in older adult males, and a button osteoma (1 cm diameter) on the left parietal, above the temporal line, a common, harmless occurrence (Mann and Hunt 1990: 21-26).

The mandible was in fair condition, with some portions missing. The right condyle process fragmented post-mortem; the left condyle process crumbled laterally post-mortem, but is otherwise flattened in appearance, very lipped and lumpy; the corresponding cranial fossa is eburnated and lipped indicating severe osteoarthritis. The right cranial fossa is lipped and pitted, but not eburnated, indicating moderate osteoarthritis (Mann and Hunt 1990: 60-62). No indicators of trauma to the mandible were noted, so it may be assumed that the osteoarthritis was caused not only by advanced age, but also by the long-term loss of the majority of the teeth that resulted in unusual chewing patterns.

Only three teeth remain in the maxilla. The upper right canine was worn down to a concave shape with full dentin exposure and loss of enamel on the mesial side. The upper right 2nd molar was worn flat across the entire occlusal surface with dentin exposed & enamel rim missing on one quadrant. It was stained brown on the distal side with caries on the buccal side. The upper left molar had complete dentin exposure with no enamel present. All other teeth were lost some years ante-mortem with total resorbtion of the bone. Only the lower left first incisor remained in the mandible. It was worn down to full dentin

Table 9.
Burial 6 Skull Measurements

Area	Abbreviation	Meas (mm) Left Side Unless Otherwise Indicated
Maximum Cranial Length	g-op	184.0
Maximum Cranial Breadth	eu-eu	131.0
Bizygomatic Diameter	zy-zy	123.0
Basion-Bregma Height	ba-b	136.0
Cranial Base Length	ba-n	97.0
Basion-Prosthion Length	ba-pr	NA
Maxillo-Alveolar Breadth	ecm-ecm	NA
Maxillo-Alveolar Length	pr-alv	NA
Biauricular Breadth	au-au	119.0
Upper Facial Height	n-pr	65.7
Minimum Frontal Breadth	ft-ft	101.0
Upper Facial Breadth	fmt-fmt	105.0
Nasal Height	n-ns	55.1
Nasal Breadth	al-al	29.0
Orbital Breadth	d-ec	43.8
Orbital Height		37.4
Biorbital Breadth	ec-ec	101.0
Interorbital Breadth	d-d	24.0
Frontal Chord	n-br	113.9
Parietal Chord	br-l	122.4
Occipital Chord	l-o	97.2
Foramen Magnum Length	ba-o	33.1
Foramen Magnum Breadth		33.2
Mastoid Length		32.8
Chin Height	id-gn	31.5
Height of Mandibular Body		24.1
Breadth of Mandibular Body		11.1
Bigonial Width	go-go	94.0
Bicondylar Breadth	cdl-cdl	NA
Minimum Ramus Breadth		26.8
Maximum Ramus Breadth		35.5
Maximum Ramus Height		70.3
Mandibular Length		86.5
Mandibular Angle (degrees)		120.0

exposure with only a small amount of rim remaining. All other teeth were lost some years ante-mortem with total resorbtion of the bone (Table 9). Given the length of time this individual retained only four teeth, the chewing pattern may have been unusual, possibly contributing to the osteoarthritis of the temporomandibular joint (Mann and Hunt 1990:61).

The vertebrae were in poor condition, fragmented, and eroded (Table 11). All bodies examined showed osteophytes, pitting and lipping; all articular facets were lipped, with about 25% osteophytic, and 9 with burnished faces, indicating osteoarthritis, which could have been the result of strenuous activity or advanced age (Mann and Hunt 1990: 82). The burnishing was most pronounced in the cervical vertebrae. The atlas and axis showed extreme lipping and osteophytes, which may have limited the movement of the head from side to side. Laminal spurs were noted in the lumbar vertebrae, a result of advanced age or strenuous activity (Mann & Hunt 1990: 87). Some articular facets were smaller than their counterparts on the same vertebra, possibly indicating spinal curvature; this curvature could also explain the distorted posture shown in the photograph. Ideally, the vertebrae would be aligned on a tray to deduce curvature, but the specimens were too fragile.

All ribs were fragmented, with no sternal ends surviving. All articular surfaces were lipped and osteophytic, indicative of advanced age or strenuous activity. The first ribs each had a pronounced scalene groove, the attachment point for the anterior scalene muscle, a muscle that serves to pull the neck to that same side (White and Folkens 2000: 164). The first ribs also had heavily ridged and osteophytic superior anterior portions, at the interaction point with the clavicle, indicating strenuous activity. The articular facet on the left first rib was smaller in comparison to the right, possibly indicating right handedness.

Table 10.
Burial 6 Tooth Wear (Smith and Scott systems for scoring surface wear)

Type	Position	Description	Score
Central Incisor	Lower Left	worn down at an angle to lingual; full dentin exposure; partial rim on labial side; stained brown lingual side	7
Canine	Upper Right	worn to a concave shape; full dentin exposure;enamel rim lost on mesial edge	7
2nd Molar	Upper Right	entire occlusal surface flat, dentin exposed & enamel rim missing on one quadrant; caries on buccal side; stained brown distal side	4,4,4,6

All other teeth lost ante-mortem, complete bone resorbtion

The sternum was heavily

Table 11.
Vertebrae from Burial 6

Element	Body, Superior Aspect	Body, Inferior Aspect	Articular Facet, Superior, Right	Articular Facet, Superior, Left	Articular Facet, Inferior, Right	Articular Facet, Inferior, Left	Spinous Process	Transverse Processes	Other
Cervical									
C-1	NA	NA	L, P	L, P	L, O	L, O	NA	missing	area around dens process hL, O
C-2	NA	hL, O, P	L, O	L, O	hL, O	L, small	missing	L missing	dens process hL, O, P
C-3	hL, O, P	hL, O, P	hL, O, P	L, O, P, small	L, O, P, small	L, O, P, B	missing	missing	
C-4	hL, O, P	hL, O, P	L, O, P, B	hL, hO, P, B	L, P, B	L, hO, B	missing	missing	
C-5	hL, O, P	hL, O, P	L, O, P, B	L, hO, P, B	L, O, P, B	L, O, P, B	missing	missing	
C-6	hL, O, P	hL, O, P	L, O, P, B	L, O, B	L, small	L, O, P, B	L, O, P	missing	
C-7	hL, O, P	missing	O, small	hL, O, P, B	L, P, small	L, hO, P, B	L, O, P	missing	
Thoracic									
T-1	L, O, P	L, O, P	small	L, O, B	small	L, O	P	missing	
T-2	L, O, P	L, O, P	L, O	L, O	L, O	L, O, P	eroded	missing	
T-3	L, O, P	L, O, P	L	L	L, O, P	hL, O, P	eroded	missing	
T-4	missing	missing	L, O, small	L, O, P	L, O, small	L, O, P	eroded	missing	
T-5	missing	missing	L, small	L, O, P	L, O, P	L	eroded	missing	
T-6	L, O, P	missing	L	L	L	L	missing	missing	
T-7	missing	missing	L	L	L	L, O, P	missing	missing	
T-8	L, O, P	missing	L, O	L, O	L	L	missing	missing	
T-9	L, O, P	L, O, P	L, O	L, O	L	L	missing	missing	
T-10	L, O, P	L, O, P	L, O	L, O, small	L, O	L	missing	missing	
T-11	L, O, P	L, O, P	L	L	L	L	missing	missing	
T-12	L, O, P	L, O, P	L	L	L	L	missing	missing	
Lumbar									
L-1	L, O, P	L, O, P	L	L	L	L	missing	missing	laminal spurs
L-2	L, O, P	L, O, P	L	L	L	L	missing	missing	laminal spurs
L-3	L, O, P	L, O, P	L, O, P	L, O, P	O, P	O, P	missing	missing	laminal spurs
L-4	L, O, P	L, O, P	O, P	O, P	O, P	O, P	missing	missing	posterior aspect of body O, P
L-5	L, O, P	L, O, P	L, O, P	L, O, P	L, O, P	L, O, P	missing	missing	posterior aspect of body O, P

Key:
L = lipped; hL = heavily lipped; O = osteoporotic; hO = heavily osteoporotic; P = pitted; hP = heavily pitted

fragmented, but the clavicular notch was identified, and was noted to be heavily lipped and osteophytic, likely due to strenuous activity or advanced age (White and Folkens 2000: 158).

The clavicles, although eroded on the lateral edges, evidenced marked musculature, especially on the right clavicle, in particular the attachment site of the trapezius muscle, and possibly indicating right handedness. The superior portion of the trapezius is used in the actions of shrugging, and of lifting or pushing items above the head (White and Folkens 2000: 1690). The sternal articulations of both clavicles were pitted, osteophytic, and lipped; the right clavicle was heavily lipped to the inferior, again possibly indicating right handedness. The fracture or loss of full mobility of the clavicle also results in the anteromedial collapse of the shoulder (White and Mann 2000: 167).

The scapulae were fragmented and eroded, but evidenced glenoid cavities that were lipped, pitted, and osteophytic. While advanced age is often a cause of this, these changes can also be caused by the repetitive work of hoeing gardens, lifting large weights, repairing fences, and house building (Capasso et al 1999: 67). The coracoid, acromion, and infraglenoid tubercle were lumpy and rugged in appearance on each scapula. These rugged points are all attachments for shoulder and arm muscles, and are indicative of increased musculature (Mann and Folkens 2000: 174 -175).

Table 12.
Bone Measurements

Measurement	R (mm)	L (mm)
Clavicle: Max. Length	150.0	150.0
Clavicle: Ant.-Post. Diameter @ Midshaft	10.9	9.2
Clavicle: Sup.-Inf. Diameter @ Midshaft	14.2	14.3
Scapula: Height	NA	NA
Scapula: Breadth	NA	NA
Humerus: Max. Length	337.0	NA
Humerus: Epicondylar Breadth	72.0	70.5
Humerus: Vertical Diameter of Head	51.3	NA
Humerus: Max. Diameter @ Midshaft	25.9	NA
Humerus: Min. Diameter @ Midshaft	19.7	NA
Radius: Max. Length	269.0	266.0
Radius: Ant.-Post. Diameter @ Midshaft	12.8	13.1
Radius: Med.-Lat Diameter @ Midshaft	17.5	16.8
Ulna: Max. Length	285.0	284.5
Ulna: Ant.-Post. Diameter	18.5	18.4
Ulna: Med.-Lat. Diameter	18.5	17.1
Ulna: Physiological Length	NA	265.0
Ulna: Min. Circumference	NA	38.0
Sacrum: Anterior Length	NA	NA
Sacrum: Ant.-Sup. Breadth	NA	NA
Sacrum: Max. Transverse Diameter of Base	NA	NA
Innominate: Height	221.0	220.0
Innominate: Iliac Breadth	NA	167.0
Innominate: Pubis Length	87.2	86.9
Innominate: Ischium Length	83.2	82.5
Femur: Maximum Length	491.0	496.0
Femur: Bicondylar Length	487.0	493.0
Femur: Epicondylar Breadth	NA	NA
Femur: Maximum Diameter of Femur Head	50.9	51.1
Femur: Ant.-Post. Subtrochantric Diameter	31.6	31.3
Femur: Med.-Lat. Subtrochanteric Diameter	34.1	35.4
Femur: Ant.-Post. Midshaft Diameter	30.8	34.2
Femur: Med.-Lat. Midshaft Diameter	32.0	28.9
Femur: Midshaft Circumference	9.9	10.0
Tibia: Length	412.0	414.0
Tibia: Max. Proximal Epiphyseal Breadth	NA	NA
Tibia: Max. Distal Epiphyseal Breadth	NA	NA
Tibia: Max. Diameter @ Nutrient Foramen	42.4	44.3
Tibia: Med.-Lat. Diameter @ Nutrient Foramen	25.8	27.7
Tibia: Circumference @ Nutrient Foramen	11.4	11.0
Fibula: Max. Length	NA	397.0
Fibula: Max Diameter @ Midshaft	NA	44.0
Calcaneus:Max. Length	87.0	86.0

The left and right innominate were largely intact, with some erosion and crumbling. Both exhibited a narrow sciatic notch, short pubis, and a flattened sacro-iliac articulation, indicating a male individual (Bass 1995: 213).

The acetabula showed osteophytes, pitting and lipping, indicating osteoarthritic changes common in older individuals (Mann and Hunt: 125). The articular surfaces were porous, pitted, and lipped indicating osteoarthritis frequently caused by repetitive impact and tensile stress (i.e.: riding a horse) (Capasso et. al. 1999: 99).

The pubic symphyses were rated as Suchey and Brooks Method Stage VI-2, with pitted, lipped, irregular faces. This indicates an age of 34-86 years (Brooks and Suchey 1990:235), consistent with Henry's known death age of 78. The iliac crests (abdominal muscles), anterior superior iliac spine (abdominal muscles), and ischial tuberosities (thigh muscles) were lumpy, and ridged, indicating increased musculature (White and Folkens 2000: 227).

The sacrum was fragmented and eroded. Of the portions remaining, the right articular surface was lipped; the promontory was lipped, pitted, and osteophytic; and the superior articular surfaces were lipped and pitted; all evidence of advanced age or strenuous activity (Mann and Hunt 1990:118).

The right humerus was complete, with some erosion. The deltoid tuberosity (deltoid muscle) is large and lumpy; the greater (pectoralis major muscle) and lesser (teres major muscle) tubercles were large and lumpy; the epicondyles were rugged, especially the lateral (radial collateral ligament), indicating increased musculature (White and Folkens 2000: 185). The lateral epicondyle and the head were also lipped, pitted, and osteophytic, evidence of advanced age or strenuous activity (Mann and Hunt 1990:151). The left humerus is fragmented and eroded, but shows the same markers as the right humerus.

The right radius is complete, with some erosion. The radial tuberosity (biceps brachii muscle), interosseus crest (flexor and extensor muscles of the wrist), dorsal tubercle (extensor muscles of the hand) and styloid process are large

and rugged, indicating increased musculature (White and Folkens 2000: 191). The ulnar notch, lower articular surface, and the head above the radial tuberosity are lipped, evidence of advanced age or strenuous activity (Mann and Hunt 1990:151). The left radius is complete, with some erosion. It shows the same markers as the right radius with the exception that the head above the radial tuberosity is more lipped, as well as pitted and very osteophytic.

The right ulna is fragmented, with erosion. The olecranon (triceps brachii muscle) and interosseus crest (flexor and extensor muscles of the wrist) are large and rugged, indicating increased musculature (White and Folkens 2000: 193). All articular surfaces of the proximal end are lipped, as is the head opposite the styloid process, evidence of advanced age or strenuous activity (Mann and Hunt 1990:151). The left ulna is complete with some erosion, evidencing a very pronounced interosseus crest. The radial notch, semi-lunar notch, and olecranon process are lipped, possibly indicating more use of the lower left arm, wrist, and hand.

The bones of the right and left hand were largely complete and in good condition. Of the right hand, only the 5th ray distal phalange was not recovered and the 4th ray distal phalange is eroded. The lunate of the right hand is moderately lipped. The 1st metacarpal is very rugged in comparison to the metacarpals of either hand, although all metacarpals evidence a rugged appearance with lipping and osteophytes at the proximal ends.

Of the left hand, the 1st ray distal phalange was not recovered; the 2nd, 3rd, and 4th ray distal phalanges are eroded, and the 1st metacarpal is fragmented. The 5th ray distal phalange is missing; the 5th ray intermediate phalange is small, and tapered, with no distal articular facet; possibly the individual was born without the distal phalange, or suffered an injury that removed that phalange. However, working without the tip of the little finger is not a serious disability, and probably not noted in family histories. Like the right hand, all metacarpals evidence a rugged appearance with lipping and osteophytes at the proximal ends. In contrast, however, the trapezium, scaphoid, hamate and trapezoid are rugged and lipped, indicating more strenuous or repetitive activity involving the left hand (White and Folkens 2000: 200).

The femora were largely complete, although both were eroded and missing the greater trochanter and edges of the epicondyles. Both evidenced: a pronounced, ridged lesser trochanter (major flexor muscles), a raised and pronounced gluteal tuberosity up to and including the lateral supracondylar ridge (gluteus maximus muscle) and a raised, ridged intertrochanteric crest (quadratus femoris muscle), which may have resulted from repeated horseback riding (Capasso et al 1999: 104). The left femur evidenced heavy lipping above the medial epicondyle, a thickened, osteophytic neck with pitting on the superior aspect of neck and a ridged, osteophytic lesser trochanter. The right femur had a burnished surface on the lateral condyle. Both femora also evidenced heavily lipped, pitted, and osteophytic lateral condyles and lipping above the patellar articular surface, and heavy lipping of the intercondylar fossa. These characteristics are related to a degenerative osteoarthritis often related to the stress of walking long distances (Capasso et al 1999: 117).

The right and left patella were complete with eroded edges. Both had a heavily grooved, osteophytic anterior with lipping around all facets. On the right patella, the lipping and osteophytes extended into a hook at the proximal superior portion and eburnation of the posterior. These are all characteristics of diffuse idiopathic skeletal hyperostosis, an arthritic condition common in elderly males (Mann and Hunt 1990: 200).

The right and left tibia are complete with erosion of the superior portion, edges, and fibular articular surface. Both evidence: a large, raised tibial tuberosity (quadriceps femoris muscle) and pronounced soleal line (tibia and plantar flexor muscles), indicating repetitive use of the muscles used in the process of walking (White and Folkens 2000: 245). The anterior surface of both tibia evidence small smooth sheets of bone deposition, characteristic of an active case of periostosis, an

Figure 63. Anterior view (left) and left lateral view (right) of Burial 6 cranium.

inflammatory result of infection, a bruising blow to the bone, or varicose veins (Mann and Hunt 1990: 183). Both also had a lipped interior of medial malleolus and lipping and osteophytes between the medial and lateral condyle, indicators of osteoarthritis that is common in the elderly (Mann and Hunt 1990: 183).

The right fibula was partially complete, missing the head, and was eroded. It has a pronounced lateral malleolus (plantar flexor muscles), indicating repetitive use of the muscles used in the process of walking (Capasso et al 1999: 117). The malleolar fossa is lipped and pitted, likely due to strenuous activity or advanced age (Mann and Hunt 1990:151). The left fibula is fragmented and eroded, but shows the same markers as the right fibula.

The bones of the right and left foot were largely complete and in good to fair condition. Of the right foot, only the 5th ray distal and 2nd and 3rd ray intermediate phalanges were not recovered. All other recovered bones were slightly to well eroded. The 1st ray distal and intermediate phalanges were rugged and osteophytic; all other phalanges were lipped. All metatarsals were rugged, especially at the proximal ends. Of the tarsal bones, the 1st cuneiform was lipped, the 2nd and 3rd cuneiform were lipped and pitted, and the talus had lateral lipping. The calcaneus is lipped and osteophytic, with the posterior ridged.

The bones of the left foot were also largely complete and in good to fair condition. Only the 5th ray distal and 2nd and 3rd ray intermediate phalanges were not recovered. All metatarsals were rugged, especially at the proximal ends. Of the tarsal bones, the 1st cuneiform was lipped, and the 2nd and 3rd cuneiform were lipped and pitted. In comparison, the right foot appears to be more

Table 13.
Stature Data for Burial 6

Location	Meas.	Estimated Ht.	Reduction for Age [-.06 (78-30) cm] or -2.88cm
Femur, Right	491mm	178 -179cm	175 - 176cm
Femur, Left	496mm	179 - 180cm	176 -177cm
Tibia, Right	412mm	182 - 183cm	179 - 180cm
Fibula, Right	414mm	182 - 183cm	179 - 180cm
Fibula, Left	397mm	178 - 179cm	175 - 176cm
Humerus, Right	337mm	174 - 175cm	171 - 172cm
Radius, Right	269mm	180 - 181cm	177 - 178cm
Radius, Left	266mm	179 - 180cm	176 - 177cm
Ulna, Right	285mm	179 - 180cm	176 - 177cm
Ulna, Left	284mm	179cm	176cm

rugged and heavily used, indicating a tendency to favor the left foot.

Ten of the long bones could be measured for maximum length. Using the Trotter and Glesser Maximum Stature Tables (Bass 1995: 28-29), the estimated stature for an American white male is calculated in Table 13. These calculations provided a maximum stature range of 171.0 – 180cm, or approximately 5'7" to 6.0".

Using ForDisc 3.0, data from the right femur, humerus, radius and ulna calculated a predicted stature of 5'9" – 6'2" (90% prediction interval using 19th century white male statistics). If we combine these results with those for African American males, given the ambiguous results of the cranial measurements previously discussed, we derive a predicted stature of 5'7" – 6'2". Both ranges are average to above average height for a male of this time period.

The skull measurements and innominates, respectively, indicated this was most likely a black male, although socially, familialy and through photographs, he was recognized as a white male. The skull, ribs, sternum, and innominate indicated advanced age. The innominate in particular indicated an age of 34 – 86 years. Osteoarthritis, due to strenuous activity or advanced age, was seen in the skull, innominates, clavicle, scapula, humera, radius, ulna, femur, tibia, fibula, feet, and hands. Movement of the head was probably limited by osteoarthritis in the upper neck. Wear patterns and articular facet size differences possibly indicate spinal curvature; this curvature could also explain the distorted posture shown in the photograph.

Stature estimates based on long bone measurements indicate a height of 5'7 – 6'2", average to above average height for a male of this time period.

While the right arm bones and clavicle are larger than the left, the left carpals were more vigorously used than the right. Given the loss of full mobility of the right clavicle, this may not be a sign of handedness as much as compensation later in life.

The clavicle, scapula, ribs, humera, radius, ulna, innominate, femur, tibia, fibula, and hands showed evidence of increased musculature. The innominate and femora indicated signs of horseback riding; the femora, tibia, and ulna indicated signs of walking long distances; and the humera and clavicle indicate stress from pushing and lifting with the arms. These signs would not be uncommon in a man who was a farmer, but also served as an enlisted man in the Confederate Army during the Civil War.

Figure 64. Anterior view of the mandible, Burial 6.

Figure 65. Burial 6. Upper left photo shows C-1 and C-2 vertebrae, superior view. Upper right photo shows thoracic vertebrae, posterior view. Middle left photo shows the right (top) and left (bottom) clavicles, anterior views. Middle right photo shows the right innominate, lateral view. Bottom photo shows the left innominate, lateral view.

Figure 66. Burial 6. Top photo shows the right humerus, anterior view. Below is the right humerus head, anterior view. Middle photo shows the left radius and ulna, lateral view. Bottom photo shows the left femur, anterior view.

Figure 67. Burial 6. Upper left photo shows the left carpal phalanges, anterior view. Upper right photo shows the right carpal phalanges, anterior view. Middle left photo, left patella, anterior view. Middle right photo, right patella, anterior view. Lower photo, tarsal phalanges, left, 1st ray, proximal and intermediate, superior view.

Burial 7 – Frances Wright Son

Burial 7 is that of Henry Rosenberry Son's second wife, Frances Wright. She was born in 1846 and died on March 30, 1918 of intestinal cancer. Figure 68 is a photograph of Frances Son. Since she is wearing a mourning dress, it must have been taken between her husband's death in 1908 and her own death in 1918. The photo shows Frances with sunken cheeks and a frail appearance. These may be outward signs of the advancing cancer, symptoms of which may have included loss of appetite, fatigue, and weight loss.

Figure 68. Photograph of Frances Wright Son taken in the last decade of her life (courtesy Brewer 2010).

The identification of her grave, like others in the Son Cemetery, was initially based on the presence of the initials "F.S." scratched into the concrete used to set a small granite marker at the foot of the grave.

Field Procedures

Initial work, as with most of the burials, consisted of mechanically removing the upper layer of soil after the granite marker had been moved. During this process flat field stones were encountered at the head (east end) and foot (west end) of the grave (Figure 69).

Mechanical stripping continued to a depth of 1.0' below grade, at which point the grave stain was clearly defined. Mechanical excavation continued to a depth of 2.3' below grade at which point subsurface clay was exposed and small fragments of wood were observed in the grave stain. In addition, evidence of voids or air

Figure 69. Fieldstone markers recovered from Burial 7. Top photos show the stone at the head of the grave; bottom photos show the stone at the foot of the grave.

Figure 70. Burial 7 during excavation. Upper photo shows the burial upon discovery of the stain. The middle photo shows the stain at the base of mechanical stripping with wood at the edges. The bottom photo shows exposure of the outer box.

pockets were also revealed, suggesting that the grave remains might be in good condition. As a result, mechanical excavation was halted and work continued using shovels within the grave stain. Large quantities of wood were almost immediately exposed during hand excavation, at a depth of 2.4' below grade.

The wood encountered during excavation consisted of a tongue and grove outer box with the top planks running the short dimension. These, as they decayed, collapsed inward, although as Figures 70 and 71 show, much of this wood was intact and well preserved. Excavation revealed that the grave was slightly longer than the outer box. The width of the grave, however, was very tight and it may have required some effort to get the outer box to slide down into the grave. The grave had an orientation of 100°, consistent with that of Henry Rosenberry Son about 2.5' to the north.

The soil matrix surrounding the interment consisted of a brownish-yellow (10YR 6/8) clay and sand. The burial excavation terminated on a stiff clay at a depth of 4' below grade. The soil within the burial was a yellowish brown (10YR 5/6) sand.

Outer Box

Frances Son's burial was not as elaborate as that of her husband a decade earlier. She did not receive a concrete vault, but rather was buried using an outer box. As mentioned above, this box was in exceptionally good condition, likely because it was constructed of tongue and groove pine (*Pinus* sp.). The boards were of random widths, but averaged about 7½" in width. The wood was ½" in thickness. Some still possessed a strong pine smell, suggesting that heart wood, or at least wood with considerable rosin was used – probably accounting for its excellent preservation.

Figure 71. Burial 7 outer box. Photo on the left shows the collapsed top and cross top design. Photo on the right shows the contents of the grave excavated and the sides and bottom of the outer box still in place.

This outer box had exterior measurements of 7' in length by 2' 3½" in width, and was 1' 9½" in depth. Running lengthwise down the center of the box was another plank for reinforcement. This particular style of outer box was common, being referred to in the trade as a "cross top."

Although voids were present, most of the box had been filled with soil filtering through the collapsed cover.

Sources such as Habenstein and Lamers (1955:302) contend that "up to about 1875 the ordinary unfinished outside, or 'rough,' box [in which the casket was shipped] was buried simply to get rid of it." This may be the case, although the claim seems anecdotal at best.

Regardless, outer boxes were rather common in casket catalogs of the early twentieth century. Pine was the least costly. For example, the National Casket Co. (1904:46) offered adult pine boxes for $3.00. In comparison, "fine hardwood boxes" ranged in price from $9.00 for chestnut to $50.00 for Spanish cedar. However, even the inexpensive pine boxes could be made more "fitting" by "papering" (adding a dark color paper to the exterior) or painting for 25¢. Metal corners added to the box would cost an additional $3.50. In 1918 the Atlantic Coffin and Casket Co. (1918:11) charged $4.00 for "Outside Pine Boxes" and staining the box was 50¢ extra. By the 1930s the cost had increased to $7.00 (Milwaukee Casket Co. 1932:9).

Perhaps because of the low mark-up on the boxes, some companies either didn't make them, or if they did, they didn't advertise their cost. For example, the St. Louis Coffin Co. (1904:48) only listed prices for their "Highly Polished" Chestnut and Cedar boxes, which cost $10.00 and $20.00 respectively. This catalog does, however, provide some sense of the markup undertakers added, since the suggested prices for these two boxes were $30.00 and $60.00 respectively. These reflect a 200% markup or a 66.67% gross profit margin.

As excavation progressed and the outer box was removed, three handles on each side were recovered. The end handles were each 9" from the ends of the box. The center handles were 3' 6" from the foot of the box.

The handles themselves were a style that was commonly associated with shipping and outer boxes. It is the Sargent & Co. (1920:890) No. 4166,

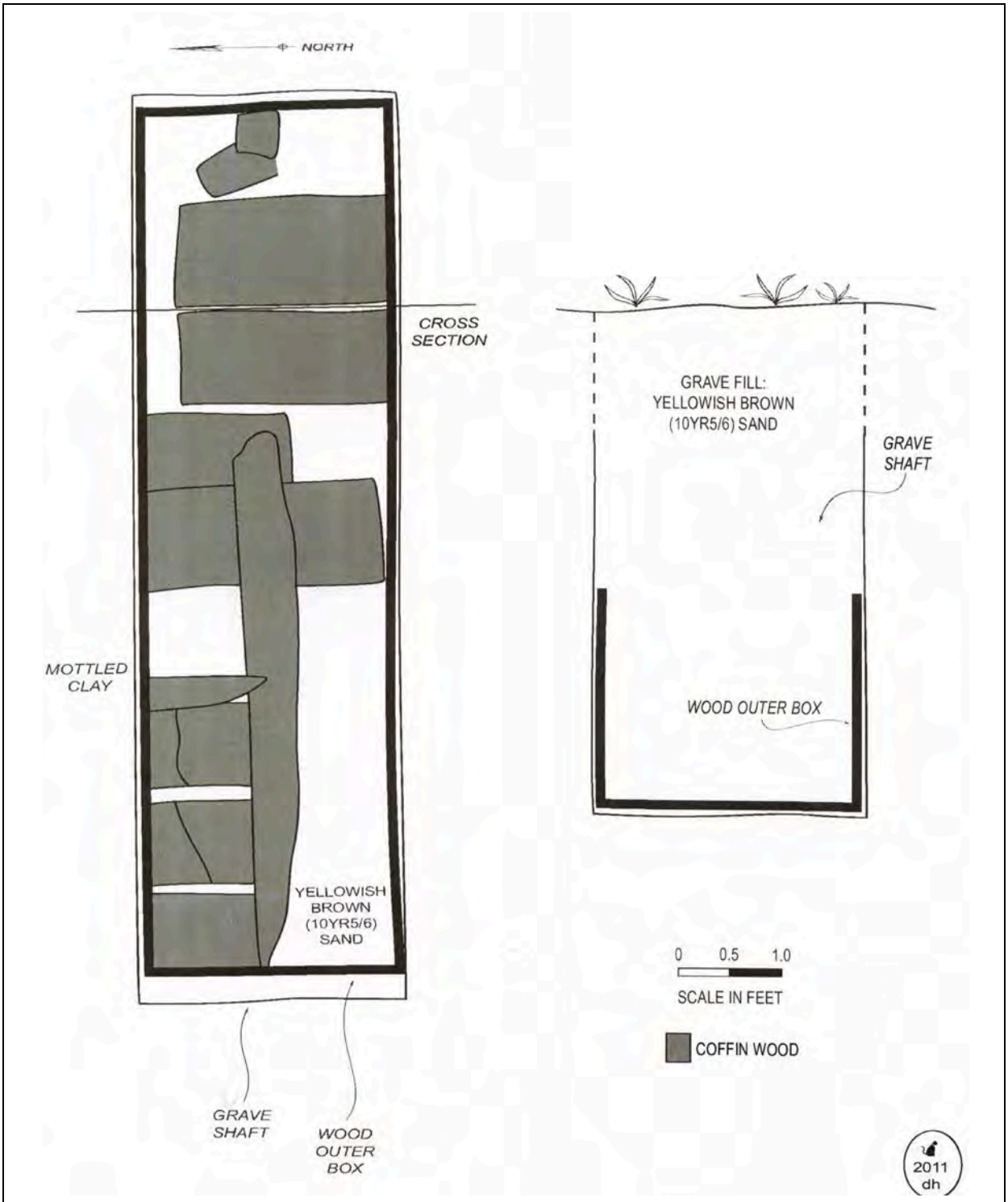


Figure 72. Drawing of Burial 7.

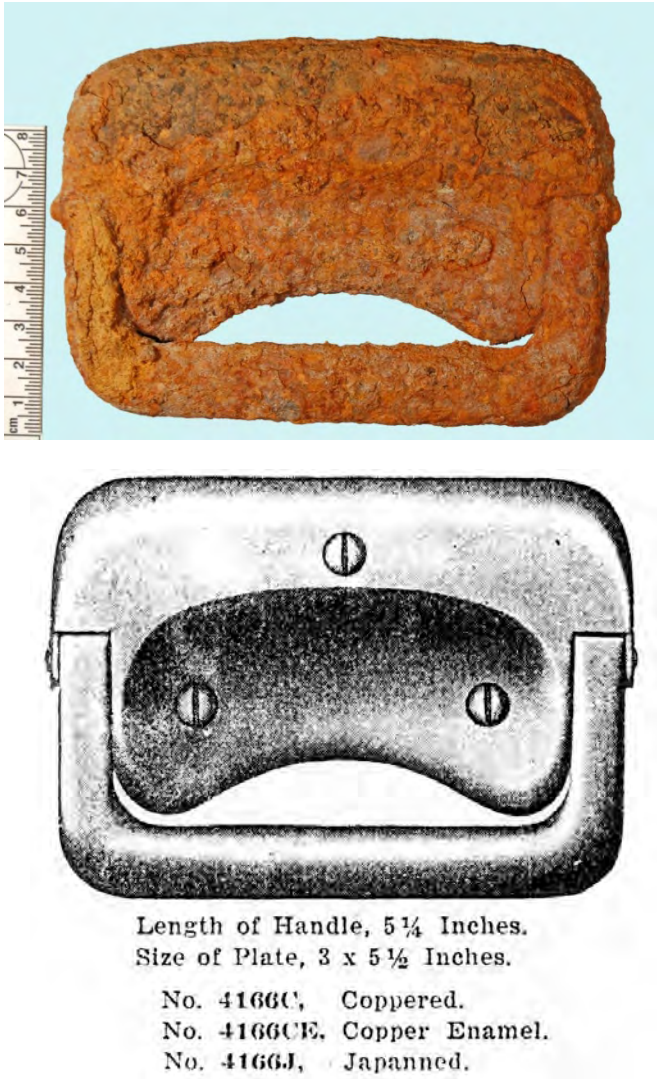


Figure 73. Box handle associated with the outer box of Burial 7. Below it is the Sargent & Co. cut showing the handle for sale.

identified as "Wrought Steel Outside Box Handles" and available as coppered, copper enamel, or Japanned. There was no evidence of the original finish.

Identical box handles are illustrated by the Des Moines Casket Co. (1922a:95) where they are given the catalog number 12 and identified as "coppered steel." The associated price list reveals that the handles cost $4.80 per dozen pair or .20¢ per handle wholesale (Des Moines Casket Co. 1922b:7).

Also associated with the outer box are five utilitarian "wire box screws." We assume that a sixth was present, but lost to deterioration. These would have been used to secure the outer box lid after the casket was lowered into the grave. They are a style that was nearly ubiquitous, being identified at least into the second half of the twentieth century (Sterling Casket Hardware Co. 1961:111).

Figure 74. Wire box screw. On the right is an example from the 1961 Sterling catalog.

A surprising small number of nails survived burial considering the presence of both a wooden outer box and a wood casket. Only six nails were recovered; these include five machine cut nails 2" in length (6d) and one wire nail 1¾" in length (5d). In addition, 16 wire nail fragments were also present.

Casket

We were unable to distinguish any intact components of the casket during excavation, although it was possible to identify wood fragments that were clearly not associated with the outer box and thus were assumed to be remnant casket fragments. These were all

identified as poplar (*Populus* sp.). This was a common wood in casket construction, especially in South Carolina where poplar furnished more wood "than the five others [commonly used] combined" (Wolfe 1913:28). In contrast, pine (particularly longleaf pine, *Pinus palustris*) was used for the outer boxes (Wolfe 1913:29). Poplar was used primarily for its cost, with casket manufacturers able to purchase it very cheaply. Other benefits included its ability to be easily worked and how readily it took stains.

Figure 75. Casket handles associated with Burial 7.

We were also able to determine that the casket was cloth covered, based on fragments preserved by casket hardware.

Casket Hardware

While little remained of the casket itself, hardware consisted of six short bar handles, a plate, two cap lifters, four casket rests, and multiple closure devices. We have previously explained that nails were very poorly preserved.

Remnant silvering is present on the lugs, arms, and tips. The handles were cloth covered wood.

Although the design, and handle construction, is similar to other Sargent models, these could not be matched to any of the catalogs in our collection and there is no number or patent information on the reverse of the lugs.

The casket plate, however, was readily identified to a Sargent & Co. (1920) catalog and on the reverse of the plate is molded "S & Co. 241" and "Patented Jan. 9, 1912." This plate is a heavy lead based metal, identified in the catalog as only "cast metal," and has been engraved, "Mother." Although we have no price for this specific plate, these items varied from 20¢ upwards to about 80¢ each. Their use spans a century and a huge variety were offered. Bryan observed that, "to inform your patrons that the price (on a high-grade casket) includes a solid silver plate stamps value on the entire outfit," suggesting that perhaps these plates were a mark of luxury.

Figure 76. Casket plate associated with Burial 7. On the right is the plate shown in the 1920 Sargent & Co. catalog.

Figure 77. Burial 7 Casket hardware. On the left is a cap lifter. On the right is a Japanned casket rest.

Two cap lifters were recovered. Their placement in the grave suggests that one was present on each end of a half couch casket. Unlike the cap lifter in her husband's grave, these are both matches to those in the Chattanooga Coffin & Casket Co. (1905:157) and Sargent & Co. (1920:871) catalogs.

Four Japanned casket rests were also recovered. As previously explained, these were placed in the four corners of the casket and served to raise it off the box or vault floor, allowing the straps used to lower the casket into the grave to be easily removed.

This casket rest is shown in several catalogs. The National Casket Co. (1904:89) notes that this "Japanned Casket Rest . . . supercede[s] cleats in bottom of box, also the old style rests which require screws 'extra'." They were priced at $1 per gross.

The last items recovered include a variety of closure devices. Six items or fragments were recovered that appear to represent what in the trade were called simply top fasteners. These were devices that were mounted on the edges of the top and base of the casket, allowing the lid to be entirely removed. According to one catalog a complete set would have consisted of four spring hooks, four head plates, four foot hooks, and four foot plates. In other words, four devices (one on each corner) would be found on both the upper and lower ends of the casket, allowing the two partial lids to be completely removed for the arrangement of the body.

One panel catch was also present, as well as a small collection of dowels and support clips. These are all devices that would have been used in the construction of a wood casket for reinforcement.

Figure 78. Top fastening devices. Top two photos are the two sides of a combined spring hook and head plate from Burial 7. The bottom row (L to R) shows a spring hook, head plate, foot hook, and foot plate (Weber-Knapp Co. n.d.).

Figure 79. Clothing items from Burial 7. On the left is the one white porcelain button. On the right is one of the three cloth covered metal snaps,

Clothing Remains

Clothing remains consist of only four buttons. One is a 9/16" (or 22 lines) white porcelain 4-hole button. As previously explained, archaeologists classify this as a South Type 23 button (South 1962) and they are also called Prosser buttons. It is likely that this was the only button on a cotton camisole.

Also present are three cloth covered metal snap buttons. These are about ½" (20 lines) in diameter and were likely associated with the mourning dress that Frances is seen wearing in Figure 68.

We believe that she was buried in her mourning dress because there are four pieces of jewelry associated with the burial, all traditional Victorian mourning pins.

The first item is a 2¼" bar pin consisting of five mounted pieces of black glass, also known as French jet. The clasp is missing as are all but two of the glass insets.

A second item is 1¼" double or entwined flower broach. The base metal is copper, but it was

Figure 80. Mourning jewelry found in Burial 7.

probably originally Japanned and was also mourning jewelry.

The remaining two items are identical and consist of thin metal bar pins 1¼" in length shaped something like a grain of rice. They, too, were likely Japanned.

At the height of the Victorian period the mourning period for widows was 2 to 2½ years. Yet Francis continued to mourn the loss of Henry a decade after his death.

Fabrics

Several pieces of fabric were recovered, all woven wool, 32 threads per inch; some fragments have nail holes, leading to the conclusion that this is likely coffin fabric. No stitching or seams were seen.

A cloth covered button was recovered, with remnants of woven cotton on the top face. The cotton is a simple weave, 32 threads per inch. This is a clothing button, probably from a skirt or dress.

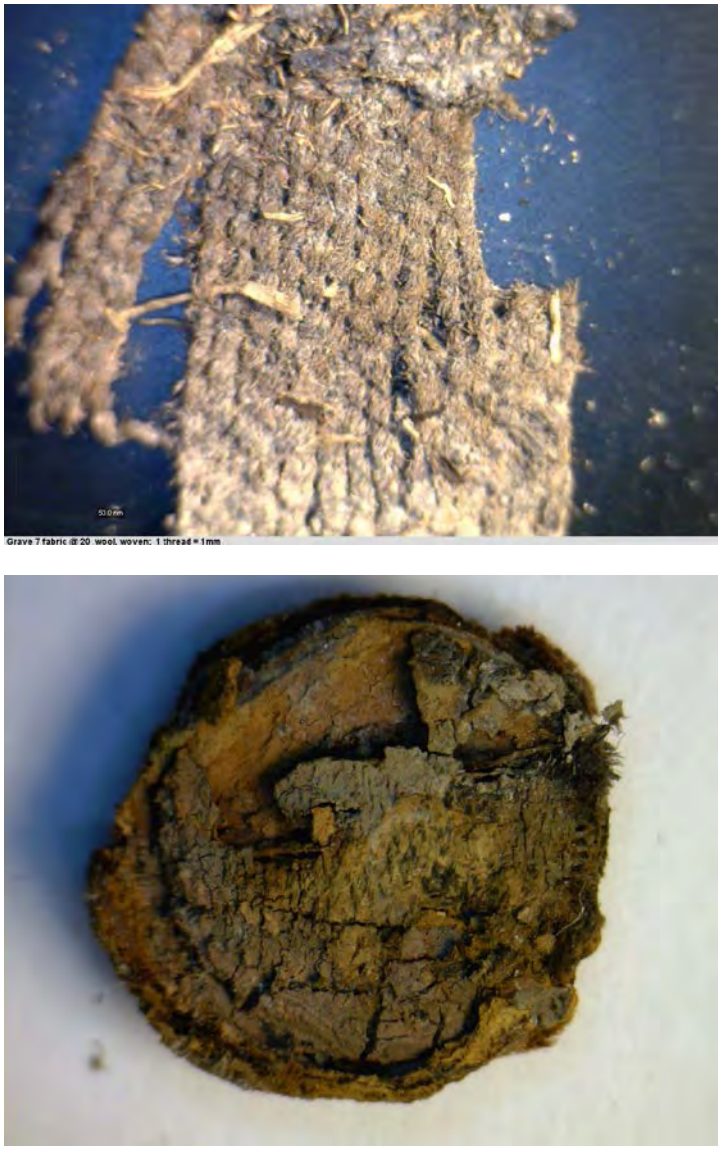


Figure 81. Fabric recovered from Burial 7. Upper photo is woven wool from the casket (20x). Lower photo shows the fabric on a button (30x).

Human Remains

The skeletal preservation in this interment was very poor, resulting in the recovery of 246.5g of highly fragmented, crumbling, and eroded bone, as well as one tooth (0.5g).

The single tooth was the crown of the lateral incisor, upper left. It was discolored brown and black, indicating a dead tooth; the brown or black coloring is the accumulation of blood and debris where the pulp had been (White and Folkens 2005: 328). This single tooth was worn only to a Stage 2, showing wear on the occlusal surface and a point of dentin exposure (Buikstra and Ubelaker 1994:52).

The skull (82.5g) had collapsed into over 65 fragments, and was too fragile to reconstruct. Four other bone fragments were identified: left clavicle, left humerus, left ulna and left tibia. None of these fragments measured longer than 100 mm, and did not provide any information on the individual. None of the other bone fragments could be identified.

The poor preservation of the remains is

probably due to the acidic soil and collapse of the burial vault.

Burial 8 – Corrie Son

Burial 8 is that of Anna Corrie Emma Son, the eighth child of Henry and his second wife, Frances Wright. Corrie, sometimes spelled Corry in census documents, was born in 1887 and died on March 22, 1927 in a Columbia hospital of acute nephritis with Vincent angina at the age of 40. As explained previously, acute nephritis is an inflammation of the kidney and it occurs most often after an infectious disease, in this case likely Vincent angina, which is also known as acute necrotizing ulcerative gingivitis. Unfortunately, we have not identified a photograph of Corrie and little is known of her life except that in her later years she worked as a "domestic."

Corrie Son's grave is based on the presence of the initials, "C.S.," scratched into the concrete used to set a small granite marker at the head of her grave.

Field Procedures

Initial work, as with most of the burials, consisted of mechanically removing the upper layer of soil after the granite marker had been moved. During this process, one flat field stone was encountered at the head (east end) and two different stones were found at the foot (west end) of the grave (Figure 82). These fieldstones had sunk between 0.5 and 0.8' below grade, probably collapsing into the grave as it also sunk.

Figure 82. Fieldstones associated with Burial 8. Top row shows the stone found at the head of the grave. The lower two rows show the two stones at the foot.

Also recovered from this grave was a metal funeral home marker (Figure 83) that had collapsed into the grave and become covered with soil. Unfortunately the paper card was no longer present. This was the only such marker identified in the cemetery and is a style known as "Norman . . . made with hinged receptacles for holding inscription cards which are protected by glass" (Beck 1940:G4).

Mechanical stripping continued to a

depth of 2.5' below grade, at which point the grave stain was clearly defined. The surrounding soil was a dark yellowish-tan (10YR 4/1) sandy clay, while the burial fill was clearly defined by brownish-yellow (10YR 6/8) sand. The burial pit measured 6.5' in length by 2.2' in width. There was no evidence of a vault or any protective covering. There was no evidence of even an outer box, but preservation was poor and it may be that an outer box was simply not recognized. We did not, however, identify any outer box handles and only a small quantity of nails were recovered.

Figure 83. Metal funeral home marker associated with Burial 8.

Casket

Casket remains were poorly preserved. Wood was visible along the sides of the excavation and these remains were collected and identified as pine (*Pinus* sp.).

Two distinct types of nails were identified. Six are machine cut with one that is 1½" (4d). Two nails appear to be finishing nails. Both are also 1½" (4d). In addition, there are 37 nail fragments, unidentifiable as to type or size.

Recovered in the skull area was a mass of excelsior or wood shavings. Excelsior is still used today for casket pads and one Material Safety Data Sheet reveals that today they are comprised of aspen enclosed in a light cotton gauze cover sealed with adhesive. Historically excelsior would be placed in the bottom of the casket, sometimes with an overlining of cotton, and then would be sealed with the fabric of choice. The recovery of this specimen at the head suggests that it may have been used in a pillow.

Based on the stain the casket measured 6.3' in length by 1.6' in width.

Casket Hardware

While little remained of the casket itself, hardware consisted of six short bar handles, a plate, and a closure device. We have previously explained that nails were very poorly preserved.

There were six single lug short bar handles of thin stamped metal. The square bars were metal covered wood with metal tips. All of the handles exhibited extensive corrosion and it was not possible to identify the handles in any of the available catalogs. Although it is not possible to identify the specific design, the quality of the metal suggests relatively inexpensive trimming.

A plate was also found during excavation, 3.2' from the head of the casket. This plate was also heavily corroded and it was not possible to determine the engraving.

An identical plate was identified as No. 2051 in the Electrolier Manufacturing Co. (1935:16) catalog. This plate, described as stamped steel, was stamped "At Rest" and the quality is comparable to the handles.

The single closing device is identical to that found associated with Burial 7, Frances Wright Son, buried in 1918 – about a decade earlier. It consists of a combined spring hook and head plate. Unlike Frances' burial, where a complete set was recovered, only this one specimen was recovered from Corrie's grave.

The overall poor condition of the casket hardware is explained not only by the relatively light weight stamped metals used, but also by the apparent absence of an outer box. All of the metal present in the grave exhibits extremely heavy corrosion.

Figure 84. Burial 8. Top photo shows the burial pit intruding into the clay subsoil. The lower photo shows the remains fully exposed.

Clothing and Personal Remains

The only clothing present in Burial 8 are two identical cloth covered metal buttons. These are about ½" (20 lines) in diameter and were associated with the dress in which Corrie was buried.

Also present in the grave was a small, clear glass container measuring 2½" in height and ⅞" in diameter. The bottle was made in a three-part cup mold with an embossed shield on one face of the bottle. On the base is a diamond monogram, indicating production by the Illinois Glass Company. This bottle is shown in their 1926 catalog as "Recessed Colognes" (http://www.sha.org/bottle/Typing/IGCo1926/page91.jpg).

Figure 85. Casket hardware from Burial 8. At the top is the casket handle used. Below is the casket plate and a cut of the plate from the Electrolier Manufacturing Company. At the bottom left is the top closure device. On the right is excelsior from the casket pillow or pad.

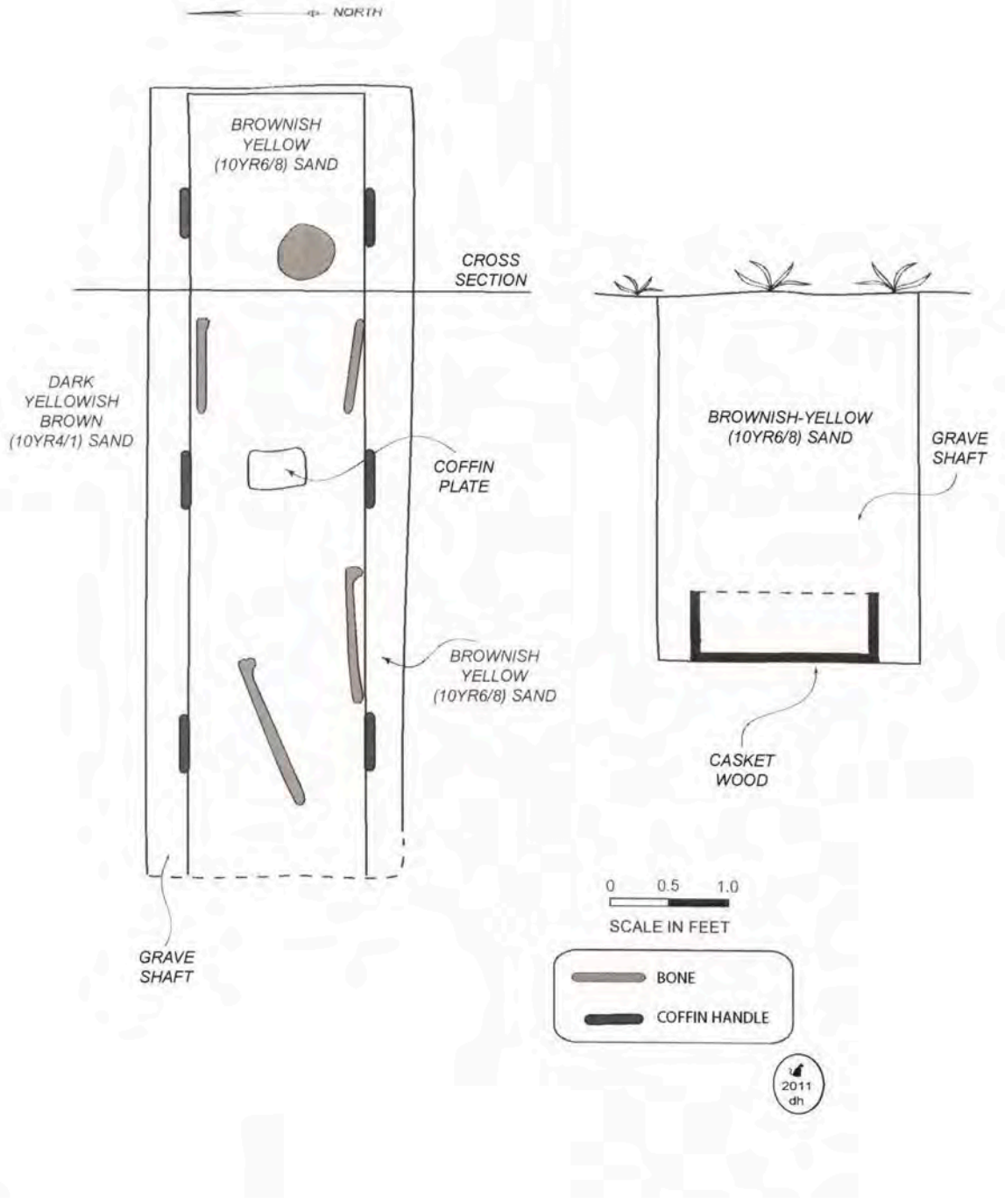


Figure 86. Drawing of Burial 8, plan and profile.

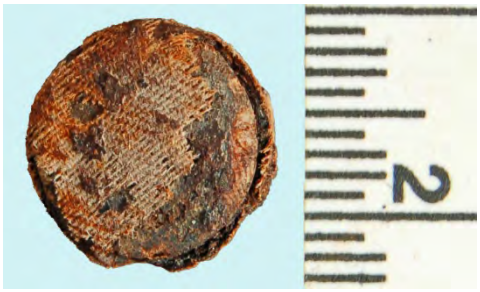


Figure 87. Clothing and personal items. The top photo is one of two cloth covered buttons in Burial 8. The lower photo is of a cologne bottle from the grave.

The presence of this bottle in the casket opens several possibilities. One is that it was simply a favorite scent that the family placed in the casket. An alternative is that the body was either not embalmed or was perhaps only minimally embalmed and the cologne was placed in the casket to help neutralize the odor of decomposition.

Fabrics

The only evidence of fabrics from this burial was found on a cloth covered snap. The fabric is a simple cotton weave, with 96 threads per inch. While stained from corrosion, the color appears to be white or off-white.

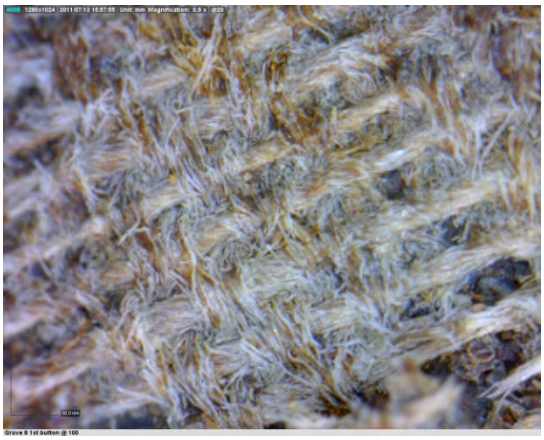


Figure 88. Cloth associated with dress snap in Burial 8 (200x).

Human Remains

The skeletal preservation in this interment was poor, resulting in the recovery of 1,264.5g of fragmented, crumbling, and eroded bone, as well as sixteen permanent teeth (9.5g).

The skull (111.5g) had collapsed into over 75 fragments and was too fragile to reconstruct. Sixteen teeth (9.5g) were recovered separately from the skull, only one with a root portion, and were most likely separated from the skull post-mortem (Table 14). There were four fragmented teeth, also likely broken post mortem. The ante-mortem condition of the teeth ranged from poor to very good. For example, the 1st molar, upper left, was in very good condition with no wear facets, calculus deposits, or caries, likely because there were no teeth surrounding it or below it in the mandible to wear against or collect debris. In contrast, the lateral incisor, lower left and lateral incisor, upper right had carious areas.

Wear on the teeth ranged from the above mentioned none to moderate to severe. Wear patterns on opposing teeth matched when placed together. A total of 16 teeth may have been lost ante-mortem. Seven of the recovered teeth had calculus deposits and six teeth had distinct brown patches, indicating the development of caries (Hillson 1996:268). All teeth were permanent and fully erupted, including the 3rd molar, indicating this was an individual of over 25 years

Table 14.
Burial 8 Skeletal Inventory

Element	N	Wt (grams)	Notes
Skull	>50	111.5	fragmented, badly eroded, crumbling
Teeth	16	9.5	*See Associated Table*
Clavicle, Left	3	5.0	fragmented, eroded, crumbling
Ribs (unidentified)	>40	37.0	highly fragmented
Vertebrae, Cervical	>20	19.5	highly fragmented
Vertebrae, Thoracic	>40	55.0	highly fragmented
Vertebrae, Lumbar	>30	19.5	highly fragmented
Innominate, Left	9	81.5	fragmented, eroded
Innominate, Right	>11	75.5	fragmented, eroded
Sacrum	1	6.0	heavily eroded, crumbling
Humerus, Right	3	58.5	fragmented, eroded
Humerus, Left	3	55.0	fragmented, eroded; x-ray
Radius, Right	3	14.0	eroded, incomplete
Radius, Left	4	7.0	fragmented, eroded
Ulna, Right	3	9.5	crumbling, eroded, incomplete
Ulna, Left	>10	8.5	fragmented, heavily eroded
Carpal, Metacarpals & Phalanges, Right	18	14.0	metacarpals & phalanges fragmented
Carpal, Metacarpals & Phalanges, Left	20	12.5	metacarpals & phalanges fragmented
Femur, Left	1	177.5	x-ray
Femur, Right	2	159.5	fragmented; x-ray
Patella, Left	1	4.0	surface & edges eroded
Patella, Right	1	3.5	surface & edges eroded
Tibia, Left	6	95.5	eroded, incomplete
Tibia, Right	1	94.0	ends eroded; x-ray
Fibula, Left	4	18.0	eroded, incomplete
Fibula, Right	4	17.5	eroded, incomplete
Tarsal, Metatarsal & Phalanges Right	14	47.0	metatarsals & phalanges fragmented
Tarsal, Metatarsal & Phalanges, Left	16	48.5	metatarsals & phalanges fragmented

of age. A dentist was available at one time, as there was one amalgam filling in the 2nd molar, lower right, and a gold crown on the central incisor, upper left. The gold cap is worn, indicating that it had been in place for a few years prior to death.

The majority of the bones in this burial were fragmented, eroded or incomplete, and in unstable condition, providing little information (Table 15). The innominate, although fragmented, did provide some information: the greater sciatic notch and ventral arc were wide, indicative of a female. The face of the pubic symphysis was fine grained and smooth, Stage IV-2 of the Suchey-Brooks system, indicating an age of 26 – 70 years (Brooks and Suchey 1990: 227-238).

The vertebrae were in very poor condition, crumbling and fractured. One lumbar vertebral body evidenced moderate osteoarthritic lipping, indicating strenuous labor (Mann and Hunt 1990: 82).

Several of the long-bones could be measured, but most were unremarkable in appearance. The right femur was the only exception. The neck was elongated and narrow, in contrast to the left femur, and the head diameter was 37.03mm, in contrast to 40.03mm of the left femur. Family history tells that this individual was kicked by a cow when she was about 12 years old and "never walked quite right" (Joel H. McGee, personal communication 2011). A blow to young, growing bone, even if it does not fracture the bone, can interrupt the normal growth permanently, resulting in a femur neck and head that are small and elongated (Talley Parrott, M.D., personal communication 2011).

Only five of the long-bones could be measured for maximum length. Using the Trotter and Glesser Maximum Stature Tables (Bass 1995: 28-29), the estimated stature is shown in Table 16 below. These calculations provided a range of 149.4 – 161.4 cm maximum stature, or approximately 4'8" to 5'2".

Using ForDisc 3.0, data from the left femur, humerus, and radius calculated a predicted stature of 4'9" – 5'3" (90% prediction interval using 19th century white female statistics).

As previously discussed, this burial is thought to be that of Corrie Son who died in 1927 at the age of 40 (Brewer 2010: 44). The innominate indicated this to be a female of 26 – 70 years of age and the distortion of the right femur corroborates the family history that she did not walk normally. The osteoarthritic vertebra, indicating strenuous activity, can be explained by her being described as a farm laborer in the 1910 and 1920 US census. At her death she was listed as a "domestic," another strenuous occupation. A height of between 4'8" and 5'3" would not be

Table 15.
Burial 8 Tooth Wear (Smith and Scott systems for scoring surface wear)

Type	Position	Description	Score
Maxilla:			
Central Incisor	Left	crown only; gold cap, with wear	3
Central Incisor	Right	crown only; fragment of occlusal & labial surface only	4
Lateral Incisor	Left	crown only; fragmented, lingual surface only; calculus on lingual surface	3
Lateral Incisor	Right	crown only; caries on missial interproximal side	3
Canine	Left	missing ante-mortem	NA
Canine	Right	missing ante-mortem	NA
1st Premolar	Left	missing ante-mortem	NA
1st Premolar	Right	crown only; calculus on lingual & labial surfaces; brown patches in enamel	3
2nd Premolar	Left	missing ante-mortem	NA
2nd Premolar	Right	crown only; calculus on lingual & labial surfaces; brown patches in enamel	4
1st Molar	Left	crown only; no wear facets	1
1st Molar	Right	crown only; no wear facets; calculus on labial surface	1
2nd Molar	Left	missing ante-mortem	NA
2nd Molar	Right	crown only; calculus on distal & lingual surfaces; brown patches in enamel	2
3rd Molar	Left	missing ante-mortem	NA
3rd Molar	Right	crown only; calculus on distal & lingual surfaces; brown patches in enamel	2
Mandible:			
Central incisor	Left	crown only; fragmented	4
Central incisor	Right	crown only; calculus on lingual surface	7
Lateral incisor	Left	crown only; caries on distal interproximal side	3
Lateral incisor	Right	crown only; fragment of occlusal & lingual surface only	3
Canine	Left	missing ante-mortem	NA
Canine	Right	missing ante-mortem	NA
1st Premolar	Left	missing ante-mortem	NA
1st Premolar	Right	partial root attachment; small amount of calculus; brown patches in enamel	7
2nd Premolar	Left	missing ante-mortem	NA
2nd Premolar	Right	missing ante-mortem	NA
1st Molar	Left	missing ante-mortem	NA
1st Molar	Right	missing ante-mortem	NA
2nd Molar	Left	missing ante-mortem	NA
2nd Molar	Right	crown only; 1 filling, center of occlusal surface; calculus on distal & lingual surfaces; brown patches in enamel	2
3rd Molar	Left	missing ante-mortem	NA
3rd Molar	Right	missing ante-mortem	NA

unusual for a woman in this time period.

Perhaps most notable was her dental health. Although she did have some dental work, she was missing half of her teeth, while those remaining evidenced serious wear, caries, and calculus. The gold cap on a front tooth would likely have been a distinctive feature of her face. It is also worth noting that a contributory cause of her death was likely an infection associated with her teeth – indicating that while she had access to dental care at some point, either treatment was not consistently available or not always followed.

Figure 89. Skeletal remains from Burial 8. Teeth include (upper left) upper 1st left incisor, labial view, with gold cap; (upper right) lower 1st left incisor, labial view; (lower left) upper 1st left molar, occlusal view, no wear facets; (lower right), upper 2nd right molar, occlusal view, showing wear facets. Right femur, anterior view showing the elongated neck and small head likely resulting from a childhood injury.

Table 16.
Stature Data for Burial 8

Location	Meas.	Estimated Ht.	Reduction for Age [-.06 (40-30)cm] or -0.60cm
Femur, Left	434.5 mm	161 – 162 cm	160.4 – 161.4 cm
Tibia, Right	335.0 mm	158 – 159 cm	157.4 – 158.4 cm
Humerus, Right	286.0 mm	154 cm	153.4 cm
Humerus, Left	276.0 mm	150 – 151 cm	149.4 – 150.4 cm
Radius, Left	210.0 mm	154 – 155 cm	153.4 – 154.4 cm

Burial 9 – Noah Currant Son

Burial 9 is that of Noah Currant Son, the seventh child of Henry and his second wife, Frances Wright. He was born on September 11, 1884 and died on November 4, 1947 at the age of 63 (Brewer 2010:44). Noah never married, was a farmer throughout his life, and was blind, perhaps as a result of cataracts later in life. We were unable to identify a death certificate for Noah Son, so nothing is known about the last years of his life.

Noah Son's grave is based on the presence of the initials, "N.S.," scratched into the concrete used to set a small granite marker at the head of his grave.

Field Procedures

Initial work, as with most of the burials, consisted of mechanically removing the upper layer of soil after the granite marker had been moved. Unlike the earlier graves in the cemetery, this one did not include any fieldstones, perhaps suggesting that by the late 1940s this method of marking graves was no longer popular in Lexington County.

Mechanical stripping first revealed the presence of a grave stain at 1.2' below grade. The stain consisted of darker soil. At a depth of 1.4' below grade the burial stain was further refined by the presence of soft mortar around the edges of the burial, although only a few fragments of mortar were identified within the burial pit.

This mortar, upon further mechanical excavation supplemented with shovel scrapping, was found to represent mortar or a very sandy Portland cement mix that had been added around the sides and top of an outer wooden box as a dry mix and allowed to set using ground moisture. This resulting "feature" is not a vault (it does not consist of a prefabricated container): it can perhaps be best described as a grave liner, although it is certainly distinct from lining such as lumber, brick, or slate.

At a depth of 2.6' below grade much of the top or covering was found, heavily fragmented, where it had collapsed in on the burial. The concrete covering was found to measure about 4.7' in length by 2.6' in width and was about 0.25 foot in thickness. These measurements reflect the approximate size of the outer box.

A very similar practice continues even today among Lexington County funeral homes. Today bags of dry mix concrete (e.g., Quikcrete®) are cut open and spread over the casket prior to backfilling the grave when no vault is used. Funeral directors explain that the practice will help locate the grave with a probe in the future; thus, it is thought of as a means of better marking a burial that has only a casket.

Of course with no integral reinforcement and an imperfect cure using only soil moisture, the concrete obtains little strength. As the underlying box decays, the weight of the soil and concrete result in the collapse of the overlying concrete into the burial chamber.

This collapse was easily observed in Burial 9, with the mortar material causing extensive damage to the skeletal remains. While there may be some benefit if the grave requires relocating within the first decade or so, beyond that the practice only creates heavy damage to the underlying remains.

Mechanical excavation ceased at a depth of about 2.6' below grade and the overlying mortar, soil, and other debris were removed by hand. The burial shaft remained distinct, consisting of yellowish-brown (10YR 5/6) sand in

Figure 90. Burial 9 during exposure. Top photo shows the grave as initially defined during mechanical stripping. The middle photo shows the grave as subsoil was encountered with the eastern mortar wall left in place. The bottom photo shows the exposure of the skeletal remains and casket hardware.

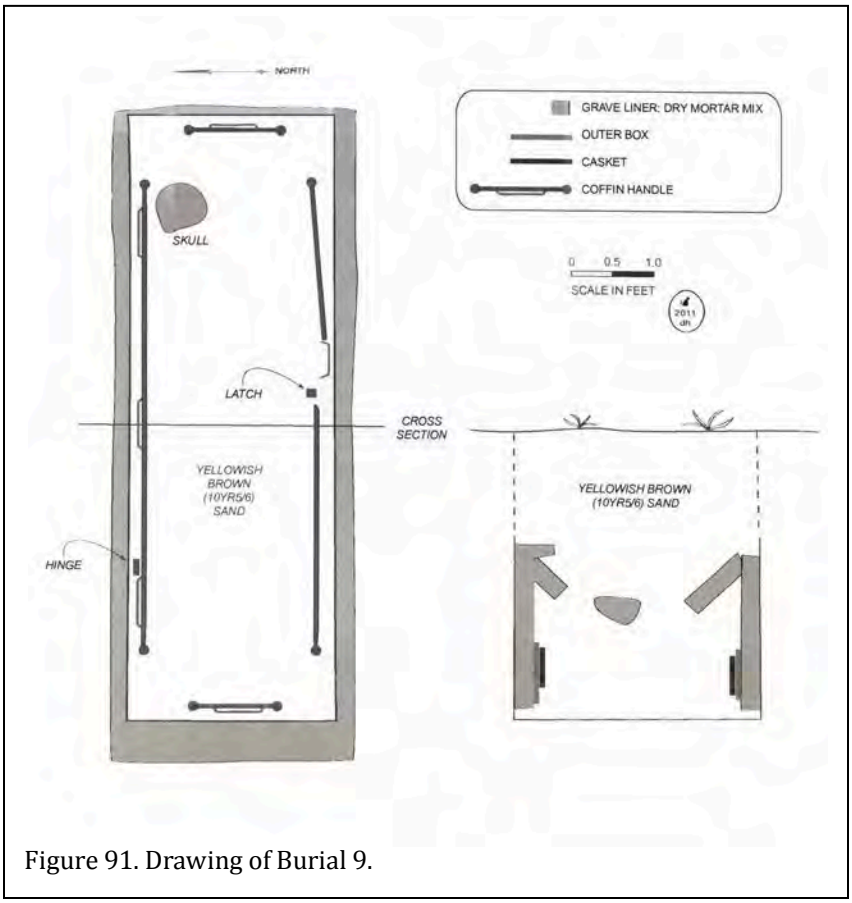


Figure 91. Drawing of Burial 9.

a matrix of yellowish-red (5YR 5/6), very pale brown (10YR 8/4), and brownish-yellow (10YR 6/8) sandy clay. The mortar mix around the outer box was clearly visible in the eastern wall of the grave shaft where it was left in place during the excavation. This revealed that some backfilling of the grave had taken place prior to the addition of the mortar mix – which went down the sides of the outer box only about 0.8 foot.

Mechanical stripping continued to a depth of 2.5' below grade at which point the grave stain was clearly defined. The surrounding soil was a dark yellowish-tan (10YR 4/1) sand, while the burial fill was clearly defined by brownish-yellow (10YR 6/8) sand. The burial pit measured 6.5' in length by 2.2' in width. There was no evidence of a vault or any protective covering. There was only slight evidence of an outer box, but preservation was poor and it may be that an outer box was simply not well recognized. We did not, however, identify any outer box handles and only a small quantity of nails were recovered.

Outer Box

The outer box was not well defined, but evidence was found in several areas, including the presence of wood between the casket handles and the mortar "vault." This outer box measured approximately 7.4' by 2.6' by 1.8'. Wood collected from the box is identified as pine (*Pinus* sp.).

There was no evidence of handles or other hardware, indicating a very plain box. These continued to be offered by casket companies well into the mid-twentieth century. For example Boyertown Burial Casket Co. (1940:104) priced a regular pine outer box at $7.00. The addition of handles and thumbscrews increased the wholesale cost to $12.50.

Many of Boyertown's caskets were sold "pine boxed," meaning that a shipping container was built into the price of the casket as necessary for freight. Such a box would be rough lumber with no finishing. The catalog specifies "pine box not returnable," since some in the industry allowed the boxes to be returned for a slight discount, whereupon the box would be reused.

Thus, it is possible that the box found in this grave represents a shipping container, rather than a specially purchased outer box. Unfortunately the condition of the remains are not adequate to allow a determination to be made.

Casket

Casket remains were poorly preserved. Wood was visible along the sides of the excavation in association with the hardware and these

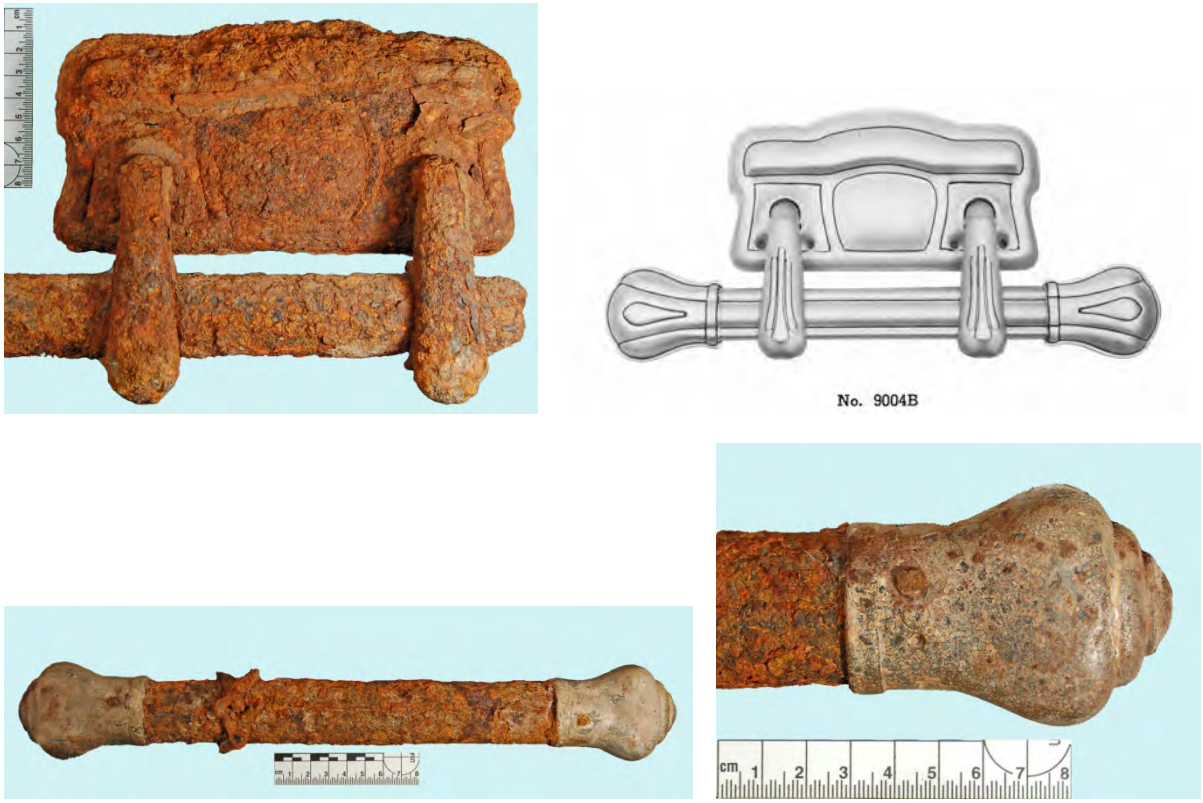


Figure 92. Casket handles from Burial 9. Top photo shows the lug and arms from a portion of the extension handle on the left. On the right is a similar handle from the McClelland Casket Hardware Co. catalog. The lower photos show the arm and tips from the swing handle at the head of the casket on the left and a close up of the tip on the right.

remains were collected and identified as pine (*Pinus* sp.). Additional wood was recovered from the base of the grave, although it could represent either the casket or outer box. Regardless, it too was identified as pine.

The use of pine suggests a cloth covered casket and this is supported by the recovery of fabric adhering to the back of the handle lugs. Cloth covered caskets remained very common well into the twentieth century. The Boyertown Burial Casket Co. (1940:12-16) catalog lists 33 different cloth covered styles (in addition there was one crepe covered casket, eight doeskin, and 21 plush covered styles). In contrast wood caskets that were not covered were of chestnut, oak, hazelwood, sycamore, cypress, salix, birch, walnut, or mahogany.

Based on identifiable wood remains, the casket had exterior dimensions of about 6.2’ by 2.0’.

Much of what we are able to determine about the casket comes as a result of the associated casket hardware, trimmings, and fabrics that are discussed below.

A large assemblage of nails were recovered from Burial 9, including 37 unidentifiable nails and 71 nail fragments. Identifiable remains include primarily wire nails in three different sizes: 16 nails 2¼” (7d), 46 nails 1¾” (5d), and 31 nails 1½” (4d). It seems likely that many of these nails were used in the construction of the outer box, rather than the casket.

Also present, and we believe more likely associated with the casket, were 34 finishing nails 2" (6d) in length and at least 3 finishing nails 1¾" (5d).

There were only three recognizable gimlet screws with flat heads, all 1" in length. It is likely that these were used to attach the casket handles. In addition, eight tacks were recovered; seven of these were ¼" and the one was ½". These would have been associated with the casket lining.

We recovered fragments of three corrugated fasteners. These are ribbed metal pieces with one sharpened end that are primarily for edge fastening stock. There are also eight metal plates whose function is currently unknown. Adhering wood suggests that they may have been some sort of connecting device, similar to corrugated fasteners.

Casket Hardware

The casket was minimally trimmed.

Figure 93. Casket hardware. Upper photo is a support. Middle left photo is a folding support. Middle right photo is a body catch for the top panel. Lower photo is screw ring (the screw can be seen on the right, through the tab).

Present were two extension bar handles (swing or stationary bars that go the full length of the side panels) with short bar handles on both ends of the casket. No other decorative hardware was present.

These handles are stamped metal and the bar consists of lock seam steel tubing. The tips are a heavy white metal, what is often referred to in the trade as cast antimonial lead. The addition of antimony to lead increases the hardness and strength.

Extension bar handles were rapidly introduced after about 1910 and by about 1950 dominated catalogs (Trinkley and Hacker 2007). Costs remained stable or actually declined as the new hardware was accepted and became dominate in the industry.

We were not able to match the handles precisely, although a similar handle was identified in a McClelland Casket Hardware Co. (1963:27) catalog. The lug and arms appear identical, but the tip does not match and the catalog does not illustrate a similar design. An earlier, ca. 1940, catalog from this manufacturer does, however, illustrate an identical tip.

Figure 94. Clothing items associated with Burial 9. Upper photo shows cuff button, lower photo shows a snap and two hole cat's eye button.

In addition to the decorative hardware, the excavation produced four body or panel catches suggesting the casket was a double couch model. Also recovered was a 10½" support and a 5" support, intended to hold open the casket lid for viewing.

There were five screw rings. These were likely intended to tie back different drapes in the casket. Unfortunately, we have not been able to identify them in the available catalogs, but we believe they are a relatively recent addition in casket manufacturing.

Clothing and Personal Remains

Clothing items were not common in Burial 9. Present are four plastic buttons, two snaps, two cuff buttons, and two grommets.

The plastic buttons are two hole "cat's eye" buttons ½" or 20 lines in diameter and light brown to beige in color. They likely represent shirt buttons.

At each wrist were a pair of stamped brass cuff buttons.

Although the “modern” cuff links with a "t-post" and a "flip hinge” become popular in the 1920s, many continued to rely on the older style of cuff buttons consisting of two buttonlike parts connected with a chain or shank.

The two snaps are brass and were stamped into leather. They consist of a T-stud and a socket. The socket is crimped in order to hold the stud and the outer face is slightly polished.

The grommets were likely associated with shoes. Only two survived burial.

With this information it appears that Noah was buried in a long sleeve shirt, and leather shoes. The function of the snaps is uncertain. Conspicuous in its absence is any evidence of pants, such as a zipper (well established by the early 1940s) or buttons (still common among the working class) for the fly, as well as possible suspender hardware. It is not unknown for individuals to be buried without pants. With a full couch casket the lower extremity would be covered with a blanket. A half couch casket would only expose the upper torso. Regardless, we have found no evidence of pants and there is compelling evidence that Noah was buried in shoes and socks.

Fabrics

Thirteen different fabric samples were recovered from the burial. Five of these are specifically associated with the casket itself. The remainder represent clothing items.

The casket handles were covered with a wool felt. This is a non-woven fabric formed from matted and compressed sheep’s wool. Although the color is now light brown, many black dyes fade, so it is difficult to determine the original color.

Three different yellow or gold cotton cords were identified. They have 32 loops per inch, although there are differences in their finished size. These likely represent fringe and/or tassels associated with the interior casket lining. Beacon Looms (c 1960) illustrate a variety of fringe, fringe lace, and tassels in their Casket Trimmings catalog.

The casket was lined with a cotton sateen having 240/80 threads per inch. Machine stitching, with 12 stitches per inch, was identified. Sateen refers to the weaving process that places most of the threads on the surface of the fabric, creating a sheen and softness.

Other fabrics in the burial are limited to threads, as most of the clothing rapidly decomposed. Loose threads in the foot area were identified as remnants of knit cotton socks in beige, blue, and black. The 1943-44 Fall and Winter Sears, Roebuck catalog advertised their “Pilgrim Slack Socks,” emphasizing their “bold patterns, clear colors.” Prices ranged from 14¢ to $1.15 a pair.

Other, non-knitted cotton threads were also found in both black and blue. These were likely used in other clothing items.

Other Remains

During excavation two dogwood (*Cornus florida*) seeds were recovered from the pelvic area. Dogwood flowers from March to April, the fruit ripens in September, and the seeds are dispersed in November (Schopmeyer 1974:337) – when the funeral occurred.

One explanation is that the seeds were deposited by animals tunneling through the soft earth; however, we found no other remains, such as nesting materials, and only the two seeds were recovered. An alternative is that a dogwood twig including several of the red berries was placed in or on the casket at burial. In the Christian religion the dogwood is a symbol of the crucifixion and its inclusion with the burial may have religious meaning.

Recovered from the overlying fill were two aqua glass fragments from a mason jar. It is likely that they are part of a jar that was associated with the grave for flowers but had become broken and dispersed.

Figure 95. Fabrics from Burial 9. Upper left is wool felt from the casket handles (50x). Upper right is one of several cotton cords (30x). Middle row shows the cotton sateen casket lining, front (left) and reverse (right) (30x). Bottom photos show blue and beige knitted cotton sock threads.

Figure 96. Canning jar fragment recovered from the fill of Burial 9.

Human Remains

The skeletal preservation of this burial was poor, with the majority of bone recovered fragmented and eroded. A total of 1,704.4g of bone was recovered (Table 17).

The skull was so badly fragmented that no measurements could be taken, except for the right styloid process, which was 43.6 mm in length. When the styloid process is larger than 4cm, the individual is suffering from Eagle Syndrome. This syndrome was first recognized in 1937, may be idiopathic or occur after a tonsillectomy or throat trauma, and is characterized by an elongated styloid bone, which can press against the carotid arteries, jugular vein, or facial/throat nerves. The individual may experience recurrent pain in the throat and face, including a long-term throat ache; feeling like an object is stuck in the throat; headache; pain when rotating the neck; or ear pain. Less than one percent of the population suffers from this syndrome. Until the widespread use of corticosteroid drugs, surgical removal of the styloid process was the only recourse for pain relief (Paraskevas et al 2009).

Pachonian pits were noted on the interior of the parietals, a common finding in older individuals (Mann and Hunt 1990: 42).

The mandible, maxilla, and teeth were in fair to poor condition. All teeth were permanent

Table 17.
Burial 9 Skeletal Inventory

Element	N	Wt (grams)	Notes
Skull	>30	364.5	
Teeth	19	90.5	See Table 18. Weight includes attached maxilla & mandible
Clavicle, Left	2	12.0	fragmented, incomplete
Ribs (unidentified)	>40	67.9	highly fragmented
Vertebrae, Cervical:			
Axis	1	8.0	fragmented, incomplete
Cervical	2	15.0	fragmented
Vertebrae, Unidentified	>40	120.0	fragmented
Innominate, Right	1	45.0	eroded
Innominate, Left	5	33.0	fragmented
Humerus, Right	7	51.5	fragmented, incomplete; x-ray
Humerus, Left	6	64.0	fragmented, incomplete; x-ray
Radius, Right	8	24.0	fragmented
Radius, Left	7	22.5	fragmented
Ulna, Right	2	35.5	x-ray
Ulna, Left	8	30.5	fragmented
Carpal, Metacarpals & Phalanges, Right	12	14.5	fragmented, incomplete
Carpal, Metacarpals & Phalanges, Left	4	9.0	fragmented, incomplete
Femur, Right	10	106.0	fragmented, incomplete
Femur, Left	12	143.0	fragmented, incomplete
Patella, Right			
Patella, Left			
Tibia, Right	8	56.5	fragmented, incomplete
Tibia, Left	6	72.5	fragmented, incomplete
Fibula, Right	2	21.0	fragmented, incomplete
Fibula, Left	7	20.0	fragmented, incomplete
Fragments (unidentified)		278.0	

Table 18.
Burial 9 Tooth Wear (Smith and Scott systems for scoring surface wear)

Type	Position	Description	Score
Maxilla:			
Central Incisor	Left	gold cap, worn	NA
Central Incisor	Right	1 filled caries, incisor edge, 1 caries opposite edge, multiple small dentin exposure on labial surface, tartar, brown stains	5
Lateral Incisor	Left	1 caries interdental incisor side, tartar, brown stains	5
Lateral Incisor	Right	missing ante-mortem	NA
Canine	Left	1 filled caries interdental premolar side, tartar, brown stains	5
Canine	Right	1 filled caries interdental premolar side, tartar, brown stains	7
1st Premolar	Left	missing ante-mortem	NA
1st Premolar	Right	1 caries lingual	5
2nd Premolar	Left	1 filled caries interdental molar side, tartar, brown stains	4
2nd Premolar	Right	tartar, brown stains	4
1st Molar	Left	1 filled caries surface/interdental premolar side, tartar, brown stains	3,4,5,5
1st Molar	Right	1 filled caries, surface/interdental premolar, tartar, brown stains	3,3,4,4
2nd Molar	Left	tartar, brown stains	2,2,4,4
2nd Molar	Right	tartar, brown stains	4,4,4,4
3rd Molar	Left	1 caries buccal side, tartar, brown stains	4,4,8,8
3rd Molar	Right	missing ante-mortem	
Mandible:			
Central incisor	Left	missing ante-mortem	NA
Central incisor	Right	missing ante-mortem	NA
Lateral incisor	Left	missing ante-mortem	NA
Lateral incisor	Right	small amount of enamel remaining	7
Canine	Left	root only	8
Canine	Right	1 caries lingual, 1 caries interdental to premolar, tartar, brown stains	4
1st Premolar	Left	1 caries interdental canine side, tartar, brown stains	5
1st Premolar	Right	1 caries interdental on each side, tartar, brown stains	4
2nd Premolar	Left	missing ante-mortem	NA
2nd Premolar	Right	missing ante-mortem	NA
1st Molar	Left	1 filled caries upper surface center to buccal edge, tartar, brown stains	4,4,4,4
1st Molar	Right	1 filled caries upper surface labial, tartar, brown stains	4,4,3,3
2nd Molar	Left	1 filled caries upper surface towards back, tartar, brown stains	5,5,4,4
2nd Molar	Right	1 filled caries upper surface labial, tartar, brown stains	4,4,3,3
3rd Molar	Left	missing ante-mortem	NA
3rd Molar	Right	missing ante-mortem	NA

and fully erupted, including the 3rd molar, indicating this was an individual of over 25 years of age. Overall, the teeth were stained brown, with tartar along the gum lines and built up on some of the teeth. A dentist was available at one time, as there were ten amalgam filled caries, as well as a gold cap on the upper first incisor. All teeth were worn from use. More detailed information is shown in Table 18.

The left first rib fragment was the only rib positively identified; it exhibited deep pitting, thin walls, and sharp projections, and was classified as Loth Phase 8 (Ubelaker1989: 89-90). This phase is typical of male adults aged 65 and older.

The left clavicle, although fragmented, showed pronounced attachment surfaces for the pectoralis and trapezius muscles on the superior aspect indicating increased musculature (White and Folkens 2000:169).

The vertebrae were in poor condition, all fragmented and eroded. All bodies examined showed osteophytes, pitting and lipping, indicating osteoarthritis, which could have been the result of strenuous activity or advanced age (Mann and Hunt 1990: 82). This feature was more pronounced in the lumbar fragments.

The right and left innominate were fractured and crumbling. Both exhibited a narrow sciatic notch, short pubis, and a flattened sacro-iliac articulation, indicating a male individual (Bass 1995: 213). The acetabula showed osteophytes, pitting and lipping, indicating osteoarthritic changes common in older individuals (Mann and Hunt: 125). The left pubic symphysis was rated as Suchey and Brooks Method Stage VI, with pitted, lipped, irregular faces. This indicates an age of 49 - 73 years (Brooks and Suchey 1990:235).

Neither humerus was complete, but both showed a high, marked deltoid tuberosity, the area of attachment for the deltoideus muscle, indicating strenuous activity (White and Folkens 2000: 184). This was more marked on the right humerus, possibly indicating right handedness.

The right radius was fragmented, but the radial tuberosity, insertion point of the biceps muscle, was large and marked, indicating strenuous activity (White and Folkens 2000: 188). The right ulna was fragmented and eroded, but the guiding ridge of olecronon was high and pitted, indicating osteoarthritis (Mann and Hunt 1990:155). The ulnar tuberosity and the pronator ridge, the attachment areas of the brachialis muscle and the pronator quadratus muscle, respectively, were high and pronounced, indicating increased musculature (White and Folkens 2000: 192-193).

Table 19.
Stature Data for Burial 9

Location	Meas.	Estimated Ht.	Reduction for Age [-.06 (63-30) cm] or -1.98cm
Femur, Left	470mm	173 – 174cm	171.0 – 172cm
Tibia, Left	340mm	164 – 165cm	162.0 – 163.0cm
Humerus, Left	340mm	175 – 176cm	173.0 – 174.0cm
Radius, Right	230mm	159cm	157.0cm
Ulna, Right	235mm	161cm	159.0cm

Of the 10 right and two left carpal phalanges recovered, all showed marked muscularity on the palmer, or anterior aspect, indicating increased gripping motions of the hands (Mann and Hunt 1990: 157).

The left femur was fragmented, however it was noted that the gluteal line, insertion area for the gluteus maximus muscle, was marked and raised, indicating increased musculature (White and Folkens 2000: 233).

Because of the condition of the bone, no measurements of long bones could be taken for stature estimates. Rough measurements were taken while the bone was in situ.

Using the Trotter and Glesser Maximum Stature Tables (Bass 1995: 27-28), the estimated stature is calculated in Table 19. These calculations provided a range of 157.0 – 174.0cm maximum stature, or approximately 5'1" – 5'8".

Using ForDisc 3.0, data from the left femur, humerus and tibia calculated a predicted stature of 5'4" – 5'9" (90% prediction interval using 19th century white male statistics) or 5'7" – 5'10" (90% prediction interval using 20th century white male statistics). Given that this individual's birth and childhood occurred in the latter part of the 19th century, we choose to accept the first stature estimate of 5'4" – 5'9".

Burial 9 is believed to be that of Noah Currant Son, who was born in 1884 and died in 1947 at the age of 63 years (Brewer 2010: 44). The mandible and innominates, respectively, indicated this was most likely a white male. The permanent dentition indicates an age of over 25 years. The rib identified indicated an age of over 65 years, while the left pubic symphysis indicated an age of 49 - 73 years. Pachonian pits in the skull indicate an older individual. Right handedness may be indicated by the comparatively more rugged aspects of the right humerus to the left humerus. Osteoarthritis, due to strenuous

Figure 97. Skeletal remains from Burial 9. Upper left photo is of the cranium, reconstructed, superior view. Upper right photo is the cranium, reconstructed, right lateral view. Middle photo is the right styloid process. Lower left photo is the mandible, superior view. Lower right photo is the maxilla, anterior view showing extensive tooth damage.

Figure 98. Skeletal remains from Burial 9. Upper left photo is the first rib, left sternal end with projections to the left. Upper right photo is the cervical axis vertebra, anterior view. Middle left photo is a lumbar vertebra, superior view. Middle right photo are left intermediate carpal phalanges, anterior view. Bottom photo is the right ulna, proximal end, lateral view.

activity or advanced age, was seen in the vertebrae, humera, ulna, and innominates. The clavicle, humera, radius, ulna, and hands showed evidence of increased musculature. Stature estimates based on in situ long bone measurements indicate a height of 5'4" to 5'9", short to average height for a male of this time period. This individual may have suffered from throat and neck pain, due to his elongated styloid process.

Burial 10 – Frances Viola Son

Burial 10 is thought to be that of Frances Viola Son, who was born May 12, 1892 and died May 28, 1976 at the age of 84 years (Brewer 2010: 87). She was the ninth and last child of Henry Rosenberry and Frances Wright Son. She lived much of her life with her sister, Corrie, and brother, Noah, in Saluda. Because of her relatively recent death we do not have a copy of her death certificate.

Figure 99. Photographs of Viola Son (adapted from Brewer 2010).

This burial was not removed or investigated by Chicora Foundation, as the coffin was inside an undamaged vault. The coffin and vault were removed by Barr-Price Funeral Home and reinterred prior to our investigations.

Burial 11 – Shelton Son

Burial 11 is that of Harris Thomas Shelton Fickling Son, typically called Shelton by his family and the fifth child of Henry Rosenberry and Frances Wright Son. Information concerning his birth appears clouded. Brewer (2010:47) indicates a birth date of April 27, 1880, although his death certificate (Lexington County 12048) indicates a birth of April 27, 1884. Since his brother Noah was born in 1884, it seems almost certain that the death certificate is in error and Shelton was 70 when he died on September 30, 1950. No photographs of Shelton have been identified.

Although working on a farm early in life, Shelton moved to Aiken and began working in the cotton mills by the time he was 38. When Shelton and his wife separated, he moved in with his brother, Noah. About two years after Noah's death in 1947, Shelton began living at the Lake Side Rest Home in Lexington County where he died in 1950 of myocarditis.

Shelton Son's grave is based on the presence of the initials, "S.S.," scratched into the concrete used to set a small granite marker at the head of his grave.

Field Procedures

Initial work, as with most of the burials, consisted of mechanically removing the upper layer of soil after the granite marker had been moved. As was the case with Burial 9, but unlike the earlier graves in the cemetery, Shelton's did not include any fieldstones. This further supports our belief that by the 1940s the practice of marking graves with fieldstones was no longer in vogue.

Perhaps because this grave was relatively recent, its stain was found only 0.8 foot below grade. The pit was well defined, consisting of a brown (10YR 4/3) sandy loam. It was further defined as the pit extended into the surrounding matrix of yellowish-red (5YR 5/6), very pale brown (10YR 8/4), and brownish-yellow (10YR 6/8) sandy clay subsoil. Mechanical removal stopped at 2.6' below grade and hand excavation continued beyond this point.

Mechanical excavation revealed that this burial also included what we have called a grave liner – a soft mortar mix that was found on the top and sides of the outer box. As previously discussed for Burial 9 (Noah Son), this liner is the result of the funeral home placing a mortar mix or Portland cement mix over the outer box prior to backfilling the grave. The mortar or cement absorbs ground moisture and gradually, but imperfectly, sets. It is reported that this helps to identify the grave in the future, although we have found that as the outer box and casket deteriorate the additional weight of the fragmented concrete causes damage to the remains below.

In the case of Shelton, the grave lining was found to measure about 2.7' in width and 7.6' in length. It varied in thickness from about 0.2 to 0.3' over most of the outer box. The only aggregate present was a fine sand, suggesting that the mix was essentially a mortar mix, not a concrete mix. The top had completely collapsed into the casket, while the sides were still relatively intact, extending down to within a foot of the casket base.

Outer Box

Below the grave liner we identified scattered remnants of an outer box. In spite of the relatively recent age of this burial, the box was very poorly preserved. Fragments were collected and identified as pine (*Pinus* sp.). This outer box measured 2.15' in width by 7.3' in length. The wood was identified as being ½" in thickness.

Figure 100. Burial 11 during exposure. Top photo shows the grave at the base of mechanical stripping. The grave liner is visible around the periphery as a white stain. The outer box is clearly visible in the upper center of the photo (south central). Remnants of the liner are also visible in the center of the grave. The lower photo shows the skeleton fully exposed. Casket handles are in situ and remains of the casket are visible in the lower left (northeast corner).

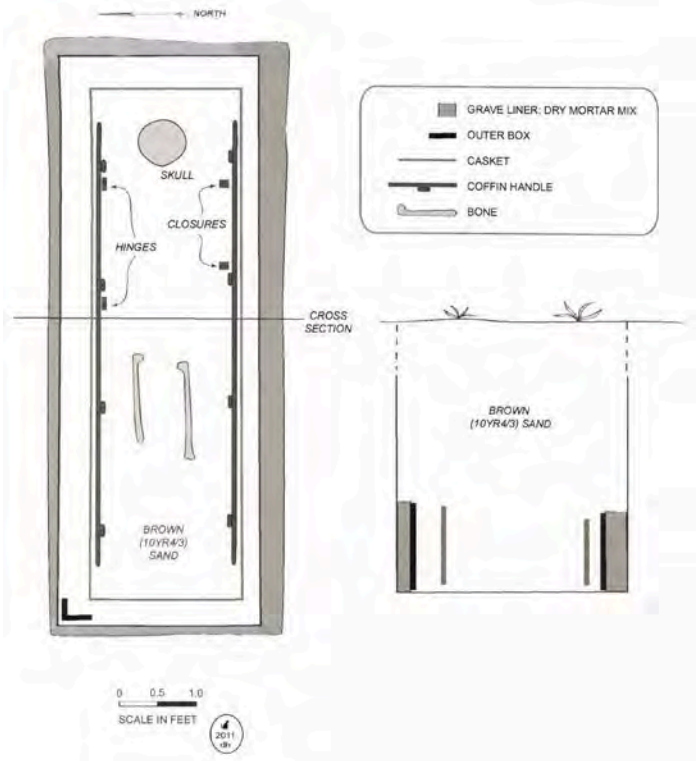


Figure 101. Drawing of Burial 11.

As in the case of Noah Son, there was no evidence of outer box handles, corner plates, or wire thumb screws. It was very plain and may simply have been a shipping container for the casket itself.

Casket

Casket remains were not much better preserved than those of the outer box, although distinct wood fragments were identified on all four sides of the grave, providing a measurement of 2.0' in width and 6.7' in length. The casket was of wood with straight sides and square corners – what in the trade was known as a vertical square (or vert. sq.).

Several fragments of wood clearly associated with the casket were collected and identified as pine (*Pinus* sp.). Although we presume the casket was cloth covered, we found no fabric to definitively demonstrate this or provide information on the nature of the covering.

As late as 1940 at least one major manufacturer, Boyertown, continued to offer doeskin & crepe, plush, and cloth covered caskets. Base prices were for Plymouth cloth. Embossed plush ran from $1.75 to $3.00 less, English crepe and doeskin was $4.00 less, and lambskin and Adelaide crepe were $5.00 less. Black cloth was $1.00 more, gray Oxford cloth was $2.00 more, colonial gray cloth was $4.00 more, and velour plush was $5.00 more. Other fabrics, such as gray and white broadcloth, had a $15 and $23.50 upcharge respectively.

By 1952 a Boyertown catalog of their most popular styles listed only three covered caskets; far more prevalent were hardwood finishes and steel examples. The three covered caskets listed were doeskin or moleskin covered and ranged in price from $45 to $60 wholesale. A catalog of their "Economy Line" from about the same time (Boyertown Burial Casket Co. c. 1950) included eight metal caskets, 16 hardwood caskets, and 15 covered caskets. By the middle of the twentieth century covered caskets were clearly no longer being heavily promoted by at least this casket manufacturer, but remained in the line of less expensive caskets. It is likely that in rural areas, such as Lexington, cloth covered caskets were still common.

Nails were the most abundant artifact found associated with either the casket or the outer box. All of the recovered specimens were wire nails. Seven were 1" (2d), 27 were 1½" (4d), 29 were 1¾" (5d), and four were 2½" (8d). Six of the 1¾" nails were clinched about ½", indicating that they may have functioned to strengthen the fastening of something about 1¼" in depth. Only 16 fragments were unidentifiable.

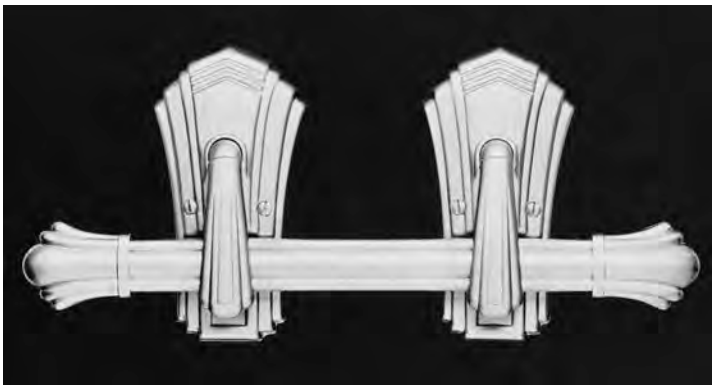
Also present were four 1" gimlet screws. These were likely associated with hardware attachments, although they may also have been

used to seal the outer box.

Two corrugated fasteners were recovered. Like several found in Burial 9, these are ribbed metal pieces with one sharpened end that are primarily for edge fastening stock. There is also one metal plate whose function is currently unknown; it is identical to examples also recovered from Burial 9. As with those examples, adhering wood suggests that the plate may have been some sort of connecting device, similar to corrugated fasteners.

Casket Hardware

As with the casket of Noah Son, Shelton's casket was only minimally trimmed. Exterior decoration consisted of extension bar handles on either side of the casket. Each handle had four lugs, each with a single arm. The handles and lugs



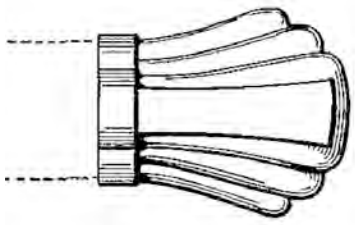


Figure 102. Casket extension handles. Upper photo shows a portion of the handle from Burial 11. Lower left photo shows Dickey-Grabler No. 1590. Lower right shows the tip on which Dickey-Grabler held Design Patent 99,715 (1936).

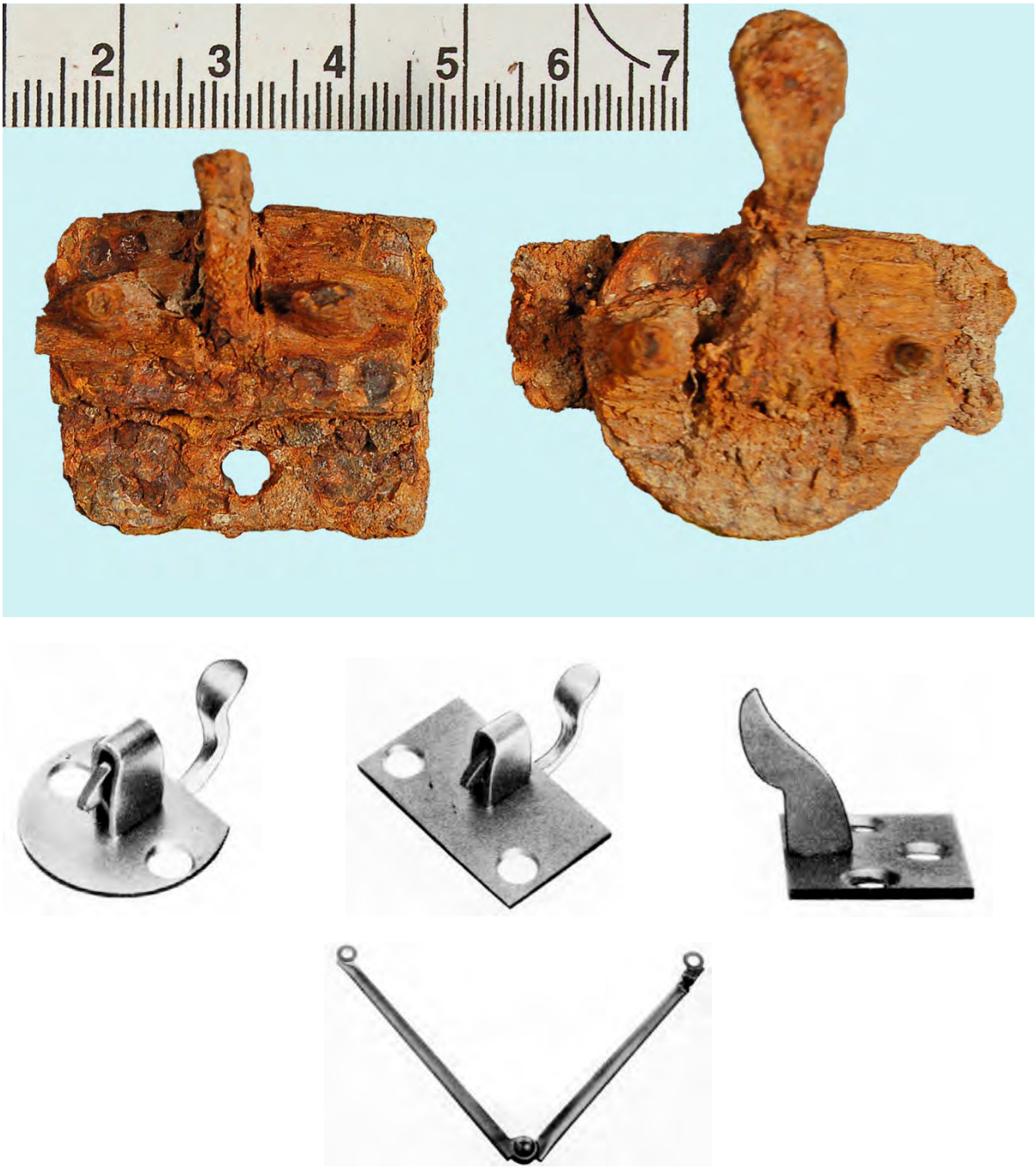


Figure 103. Catch and support hardware. Upper photo shows a separable hinge and escutcheon on the left and a body catch and escutcheon on the right. Bottom two rows are examples from Weber-Knapp (n.d.). On the middle row from the left, a body catch, panel catch, and separable hinge. On the lower row is a support similar to that found associated with Burial 11.

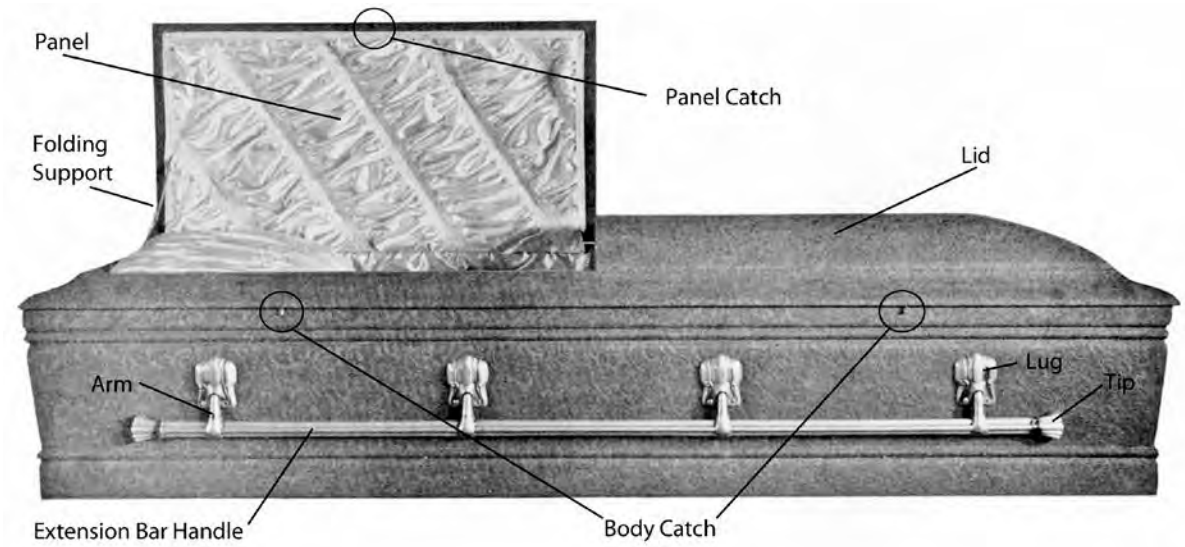


Figure 104. Parts of a cloth covered panel style casket with extension bar handles. The illustrated casket is the Boyertown 151-HP (for hinged panel), moleskin covered hardwood and rayon interior (Boyertown Burial Casket Co. 1952a:20).

were a thin stamped metal, while the tips were a heavy white metal.

While a perfect match was not identified, we did find a very similar lug and handle, Dickey-Grabler No. 1590 (Dickey-Grabler c 1945). The tips on the extension handles from Burial 11 are also very similar to tips on which Dickey-Grabler obtained Design Patent 99,715 in 1936, expiring in 1943. Thus, it seems likely that the handles on Shelton's casket were not from Dickey-Grabler, but were probably those of a competitor closely imitating a design for which there was no patent protection.

Two body catches, very similar to the Weber-Knapp C3150 series, with matching escutcheons were recovered. These would have been used to secure the lid of the casket and would have allowed the lid to be raised in order to arrange the body.

A single panel catch and matching escutcheon was present, similar to the Weber-Knapp C3160 series. This device would have been used to secure a panel that could be raised up allowing the upper torso to be viewed. This is distinct from a half couch where the lid itself is divided into two parts. The panel is simply a portion of the lid.

Also present were three separable hinges and escutcheons (similar to Weber-Knapp C361). These would have allowed the lid to be raised or lowered, but would also have allowed the lid to be completely removed.

There were also two supporting devices. One support is almost identical to the Weber-Knapp C734 and was likely used to support the viewing panel. The other device is a wound wire that is only partially preserved. Its function is less certain, although it was likely hidden by cloth or the interior lining of the casket.

We do not seem to have recovered whatever hinge device was used on the panel itself. The difficulty identifying the component parts of these late caskets reveals the need for additional research and, especially, more casket hardware and shell hardware from mid-century and later.

Clothing and Personal Remains

The clothing items associated with Burial 11 include eight buttons and three snaps, as well as a quantity of fabric, discussed below.

Figure 105. Clothing items. From left to right, pants button, boxer underwear snap, and shirt button.

Five of the buttons are black plastic 9/16" (approximately 38 lines) and were pants buttons. The remaining three buttons were white plastic, 7/16" (approximately 18 lines), and were associated with a shirt. The three snaps were ⅜" in diameter and were stamped into a white and blue fabric. These were likely associated with boxer style underwear.

Thus Shelton was dressed informally in trousers, a shirt, tie, and underwear. As discussed below, we know that he was also wearing socks, although we found no evidence of shoe leather, grommets, or other details. Nor was there any evidence of a belt.

Fabrics

Several fragments of fibers were found in this burial. The only piece that appears to be from the casket was a small bit of black cotton ribbon, about 2¼" wide. Only the weft threads remain. This may have been a ribbon associated with flowers placed with the burial.

On the neck and torso, several fabric fragments were recovered. This fabric was a beige or white woven cotton jacquard. A jacquard weave is woven on a specialty loom, allowing the warp yarns to be controlled individually, resulting in complicated patterns, usually floral or paisley in design. As the fabric is of one color, the luster contrasts in the weave illustrate the design. This jacquard appears to be a paisley, with 256 warp threads and 64 weft threads per inch.

The majority of these remnants were of the collar and right shirt pocket. The collar was machine stitched with a double seam 3/16" apart; the outer seam had 16 stitches per inch, while the inner seam had 32 stitches per inch. The collar had an interfacing made of a gum or plastic imbedded cotton. This interfacing prevented the collar from rolling or curling during wear, and did not require starching.

Just below the collar, behind the neck, was a shirt label: "Packard / COMBED YARN." This does not refer to a particular clothing company, but the Packard Motor Company. This particular flowing script began about 1915 and was used until the interlocked Studebaker-Packard symbols came into use about 1954. This may have been a promotional item or perhaps a shirt provided to salesmen. The shirt had one pocket, on the left breast, which measured 4" in height with a pointed bottom, as opposed to flat. Pointed pockets are generally used on dress shirts, while flat bottoms or rounded corners are used on work shirts. The shirt label was sliced in half, most likely by the undertaker. Shirts are commonly slit in the back to facilitate the dressing of the body prior to burial.

Interestingly, the tie was made of the same fabric as the shirt. It was machine stitched, with 10 stitches per inch, and not knotted in the traditional manner, but laid with a knotted appearance for the burial.

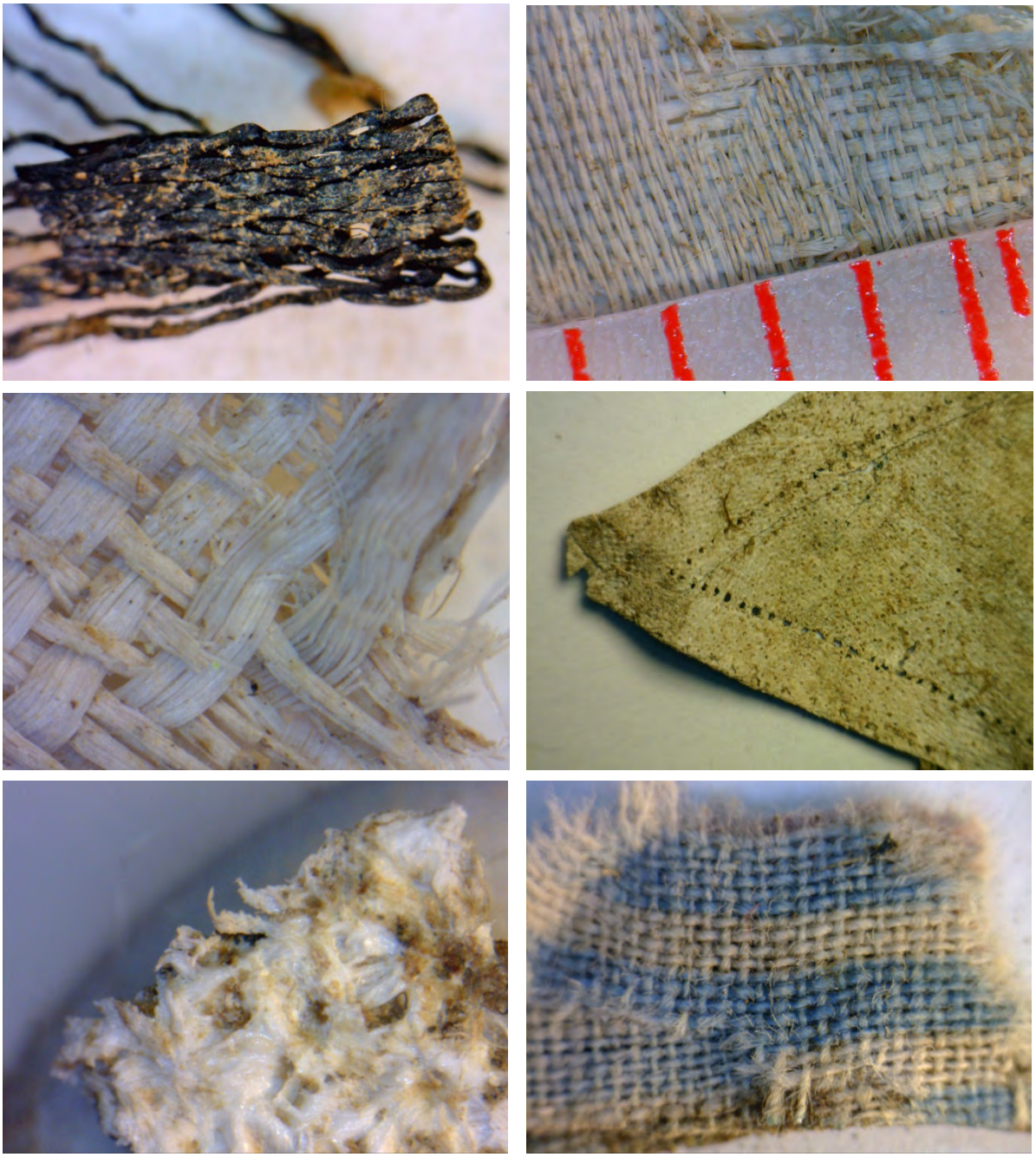


Figure 106. Fabrics recovered from Burial 11. The photo in the upper row, left shows the cotton weft threads of a black ribbon associated with the casket (75x). Upper right photo shows the woven cotton jacquard shirt fabric (the larger scale divisions are 1/16"). Middle row left photo is a close-up of the shirt fabric (230x). Middle row right photo is the collar interfacing (20x). Lower left photo shows the collar interfacing cotton threads impregnated with stiffening agent (230x). Lower right photo shows the blue and white stripped cotton underwear (50x). The spread of the blue dye indicates dying after weaving.

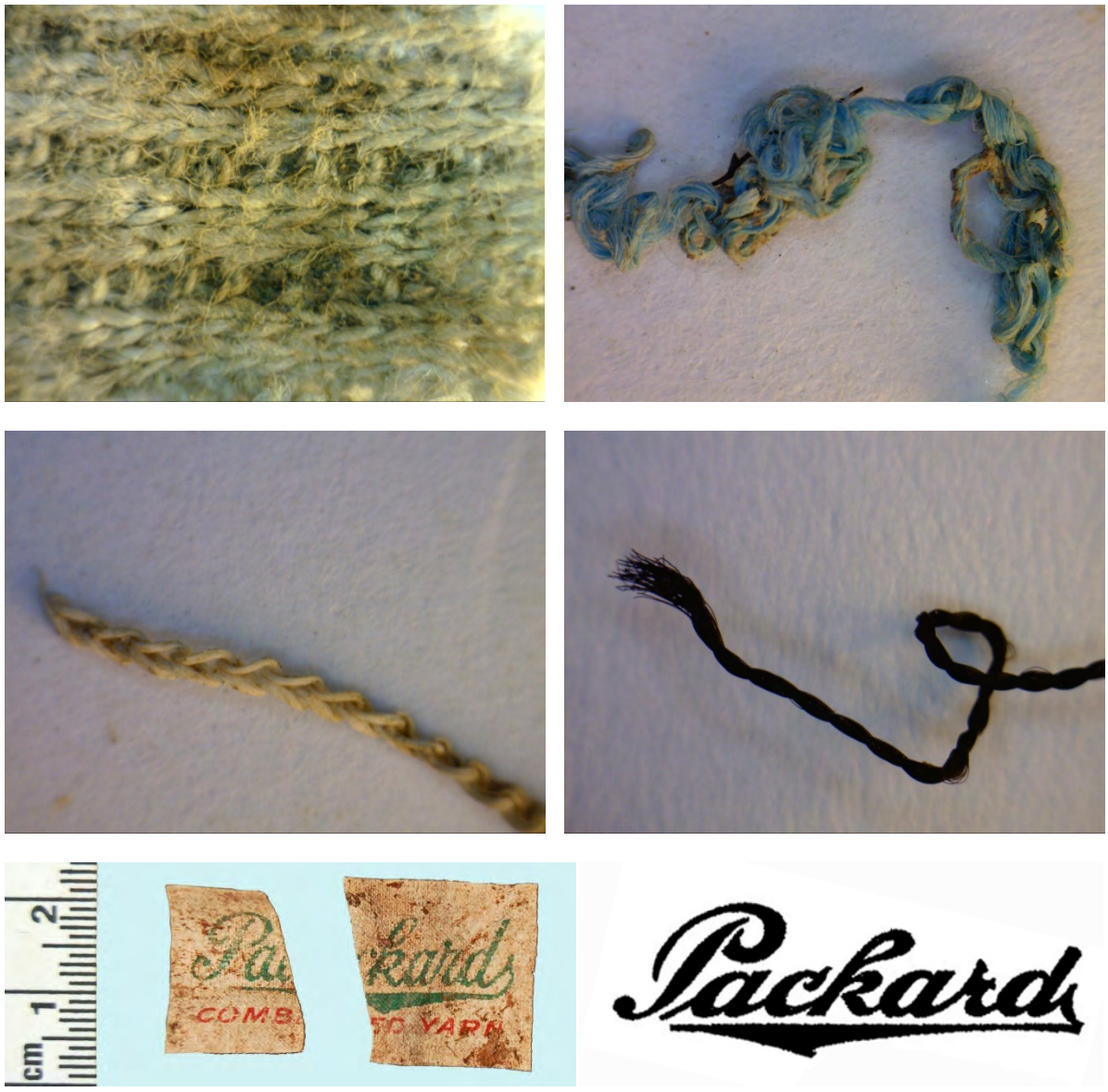


Figure 107. Fabrics recovered from Burial 11. The photo in the upper row, left shows the knit cotton waist band of the underwear (50x). Upper right photo shows blue knitted cotton thread from the socks (50x). Middle row left photo shows a gold knitted thread from the socks (50x). Middle row right photo shows a black sewing thread from the pants (50x). Bottom left photo shows the shirt label cut, revealing that the undertaker cut the back of the shirt to place it on the body. The label is a synthetic material. The lower right photo is the logo of the Packard Motor Company, identical to that of the shirt label from Burial 11.

At the pelvis area, three snaps were found with fabric still attached. The fabric is blue and white striped cotton, 80 threads per inch in either direction. The individual threads were not dyed prior to weaving, but the fabric dyed with 1/16" wide blue stripes after manufacture. The snaps are brass with a white enameled front and are machine applied, not sewn in. The stitching is by machine, 16 per inch. There was a bit of knit cotton, white, which may have been part of a waist band. These all appear to be the remnants of underwear with a knit waist and snapped fly.

At the feet, a few threads were recovered; all were cotton that had been knit, in gold and blue. These appear to be the remnants of knit socks.

Several fragments of black cotton thread were recovered, none from woven fabric. These are likely the remnants of trouser seams, the color matching the buttons identified at the fly.

Other Remains

The excavation produced two flesh colored celluloid eye caps.

Eye caps date to at least the turn of the century. In 1900 Carl Dolge submitted patent information for "certain new and useful Improvements in Eye-Caps and Lid-Closures," indicating that the devices were already in use by some undertakers. The patent application points out that "it is frequently the case that the eyelids of a deceased person will separate more or less at or after death" and the eye cap helped keep the lids closed, presenting a "better and more natural appearance" (US Patent 683,556).

By the 1920s the National Casket Co. (1923:318) offered muslin wax eye caps, celluloid eye caps, and adhesive eye caps. By the 1940s Royal Bond offered three different types of eye caps, including "Morgan's Flesh Tinted Eye Caps" that appear virtually identical to those present in this grave.

PERFECTION EYE CAPS

Needle pointed perforations in addition to the gummed surface holds the eyelids securely in place.

No. 3182

Per box (2 dozen)	$1.00
Per ½ gross	2.50
Per gross	4.50

EYE CAPS

Morgan's Flesh Tinted Eye Caps

Shaped to conform to the natural contour of the eye. Adhesive surface, when slightly moistened, clings securely to the eyelid.

No. 3163—Per box two dozen adults	$ 1.00
No. 3164—Per box two dozen assorted	1.00
No. 3165—One gross adults	4.50
No. 3166—One gross assorted	4.50

Oval Shape, Perforated

No. 3167—Per box two dozen adults	$ 1.00
No. 3168—Per box two dozen assorted	1.00
No. 3169—One gross adults	4.50
No. 3170—One gross assorted	4.50

Butler Eye Caps

A flesh colored celluloid eye cap with pebbled surface, readily conforming to the shape of any eye.

No. 3171—Per box two dozen adults	$ 1.00
No. 3172—Per box two dozen assorted	1.00
No. 3173—One gross adults	5.00
No. 3174—One gross assorted	5.00

Figure 108. Eye cap from Burial 11. The photo on the top is one of the eye caps from Burial 11. Below are those offered by Royal Bond (c 1940: 37).

Human Remains

The skeletal preservation of this burial was poor, with only four bones recovered intact, and those were eroded.

Table 20.
Burial 11 Skeletal Inventory

Element	N	Wt (grams)	Condition
Skull	>30	403.0	fragmented, incomplete
Teeth	-	-	complete denture set
Clavicle, Left	1	7.5	incomplete
Scapula, Right	6	29.5	fragmented
Scapula, Left	8	26.5	fragmented, incomplete
Ribs, Right (unidentified)	>40	78.0	fragmented
Ribs, Left (unidentified)	>30	33.0	fragmented
Sternum	6	6.5	fragmented
Vertebrae, Cervical:	>25	24.0	fragmented
Vertebrae, Thoracic	>40	108.5	fragmented
Vertebrae, Lumbar	>30	64.0	fragmented
Innominate, Right	8	111.5	fragmented, eroded
Innominate, Left	12	111.5	fragmented, eroded
Sacrum	10	61.5	fragmented
Humerus, Right	1	64.5	incomplete
Humerus, Left	1	75.5	eroded; x-ray
Radius, Right	1	26.0	eroded; x-ray
Radius, Left	10	24.5	fragmented, eroded
Ulna, Right	1	34.0	incomplete; x-ray
Ulna, Left	2	33.0	fragmented, eroded
Carpal, Metacarpals & Phalanges, Right	27	27.5	some fragmented
Carpal, Metacarpals & Phalanges, Left	22	30.0	eroded
Femur, Right	10	239.5	fragmented; x-ray
Femur, Left	11	252.0	fragmented; x-ray
Patella, Left	1	5.0	edges eroded
Tibia, Right	1	136.0	eroded; x-ray
Tibia, Left	5	148.5	fragmented, incomplete
Fibula, Right	3	32.5	fragmented, eroded; x-ray
Fibula, Left	6	25.0	fragmented, incomplete
Tarsal, Metatarsal & Phalanges Right	24	91.5	incomplete, some fragmented
Tarsal, Metatarsal & Phalanges, Left	23	89.0	incomplete, some fragmented
Fragments (unidentified)	-	82.5	

The skull was totally fragmented, and only the vault and mandible were reconstructed. The right mastoid process was large, the External Occipital Protuberance was a down-curved hook, and the chin was square in shape; these characteristics indicate that the individual was most likely male (Buikstra and Ubelaker 1994: 20). The sagital and lambdoidal sutures were almost completely obliterated, indicating an age at death of over 50 years (Buikstra and Ubelaker 1994: 36).

The mandibular condyles were smooth with slight lipping, another indicator of advanced age (Mann and Hunt 1990: 81), and slightly asymmetrical. The posterior of the occipital was slightly lumpy in appearance and the gonial angles of the mandible were rugged and ridged; these indicate increased musculature (White and Folkens 2000: 78, 104). The palatine process of the maxilla was ridged and lumpy in appearance; although in older adults the surface is usually smooth (Bass 1995:53). The median palatine suture was not obliterated, which is also unusual in an older adult (White and Folkens 2000: 84). The shape of the dental arcade was narrow, indicating European descent (Bass 1995: 88).

All teeth were lost some years ante-mortem, and the maxillary and the alveolar processes resorbed, except for the area of the 2nd molar, upper left, where the root was still in place. This individual was interred with his dentures in place. The dentures were a two piece set, one upper and one lower, constructed of pink plastic imbedded with white plastic teeth, and fit well onto the alveolar processes. The upper set had the numbers ”4/11/590” molded into the superior portion. There were wear facets on all the artificial teeth, indicating that the dentures were well used. Two teeth had broken off the denture, the lateral incisor, upper left, and canine, upper left. No evidence of them was recovered, but it cannot be determined if they were broken ante-, or post-mortem. There was no staining on the teeth, but the interior body of the upper set was heavily stained brown, often a result of smoking or drinking of coffee or tea.

The vertebrae were in poor condition, all but the axis (C-2) were fragmented and eroded. All bodies examined showed osteophytes and lipping,

indicating osteoarthritis, which could have been the result of strenuous activity or advanced age (Mann and Hunt 1990: 82).

The ribs were fragmented, but one right rib end was identified. It exhibited deep pitting, thin walls, and sharp projections, classifying it as Loth Phase 8 (Ubelaker1989: 89-90). This phase is typical of male adults aged 65 and older. The sternum also exhibited a ragged appearance at the costal notches, another indicator of advanced age (Ubelaker 1989: 86).

Only the distal half of the left clavicle was recovered; the oblique ridge (attachment for trapezoid ligament) and the posterior surface (attachment sites for trapezius and deltoideus muscles) were large, ridged, and rugged, indicating heavy musculature (White and Folkens 2000:168).

Both right and left scapulae were fragmented. Both exhibited a large, osteophytic coracoid process, and a lipped, osteophytic glenoid cavity. The left glenoid cavity was more heavily lipped, as well as distorted in shape. These are characteristics of osteoarthritic changes due to compressive force against the shoulder, usually by continuous pushing with the arms (i.e.: plowing, pushing of cart). In this individual, apparently there was more pushing done on the left side (Mann and Hunt 1990: 143; Capasso et.al 1999:59).

The right and left innominate were fractured and crumbling. Both exhibited a narrow sciatic notch, short pubis, and a flattened sacro-iliac articulation, indicating a male individual (Bass 1995: 213). The acetabula were lipped, indicating osteoarthritic changes common in older individuals (Mann and Hunt: 125). The pubic symphyses were rated as Suchey and Brooks Method Stage VI, with pitted, lipped, irregular faces. This indicates an age of 49 - 73 years (Brooks and Suchey 1990:235). The articular surfaces were porous, pitted, and lipped indicating osteoarthritis frequently caused by repetitive impact and tensile stress (i.e.: riding a horse) (Capasso et. al. 1999: 99). The ischial tuberosity, which anchors the extensor muscles of the thigh, was large, ridged, and pitted; the iliac crest, which anchors many abdominal muscles, was also large and rugged, indicating strong musculature (White and Folkens 2000: 222).

The sacrum, although heavily fragmented, was totally fused, except for the coccyx, which was not recovered. The superior body and auricular surfaces were heavily pitted, and lipped, as corresponding surfaces of the innominate were.

The left humerus was largely complete, with some crumbling and eroding. The greater and lesser tubercles were ridged, lumpy, and pitted; these areas are the location of the rotator cuff muscles, which allow medial and lateral rotation, thus indicating repeated use of the shoulders (White and Folkens 2000: 181-182). The head exhibited lipping, particularly on the anterior, indicative of osteoarthritis from advanced age or strenuous activity. The lateral and medial condyles, where the extensor and flexor muscles attach, were lipped, also indicative of advanced age or strenuous activity (Mann and Hunt 1990: 149). The deltoid tuberosity was high and marked; this is the area of attachment for the deltoideus muscle, also indicating strenuous activity (White and Folkens 2000: 184).

The left radius radial tuberosity, the insertion point of the biceps muscle, was large and marked, indicating strenuous activity (White and Folkens 2000: 188). There was lipping on the lower articular surface, indicating osteoarthritis of the wrist, due to activity or advanced age (Mann and Hunt 1990: 155). The left ulna, although fragmented, showed lipping on the olecronon process and radial articulation, also indicating osteoarthritis of the elbow due to activity or advanced age (Mann and Hunt 1990: 155).

Very little remained of the right humerus, but there was a high, marked deltoid tuberosity matching the right humerus. The medial epicondyle and olecronon fossi were lipped and osteophytic, indicating an osteoarthritic left elbow (White and Folkens 2000: 185).

The right radius had a large, marked radial tuberosity, larger in comparison to that on

Figure 109. Skeletal remains from Burial 11. Upper left photo, cranium, reconstructed, superior view. Upper right photo, cranium, reconstructed, right lateral view. Middle left photo, maxilla and mandible, with dentures in place. Middle right photo, mandible (superior view) and portion of maxilla (dorsal view). Bottom left photo, dentures, lower and upper, lingual view. Bottom right photo, upper dentures showing the identification number on the reverse.

Figure 110. Skeletal remains from Burial 11. Upper left photo, axis, anterior view. Upper right photo, lumbar vertebra, body, superior view. Middle left photo, rib, right, sternal end, anterior view. Middle right photo, clavicle, left, sternal end, anterior view. Lower left photo, scapula, left, lateral view. Lower right photo, innominate, right, lateral view.

Figure 111. Skeletal remains from Burial 11. Upper left photo, innominate, right, auricular surface, medial view. Upper middle photo, carpal phalanges and metacarpal, right, 2nd ray, anterior view. Upper right photo, carpal phalanges, right, 3rd ray, anterior view. Middle photo is the left humerus, anterior view. Bottom photo is the right radius, anterior view.

Figure 112. Skeletal remains from Burial 11. From the top, right ulna, posterior view; right femur, anterior view; right femur, posterior view; right tibia, posterior view; right fibula, posterior view.

the left radius, indicating not just strenuous activity, but possibly handedness as well. The right ulna also had a more pronounced ulnar tuberosity than that on the left ulna (White and Folkens 2000: 188). There was marked lipping at the head and at the lower articular process, indicating osteoarthritis of the elbow and wrist, due to activity or advanced age (Mann and Hunt 1990: 155).

The right and left metacarpals were robust, with lipping on the articular surfaces, especially the trapezium and triquetral. The lipping was more pronounced in the right metacarpals, again indicating not just osteoarthritis due to strenuous activity, but possibly handedness as well (Mann and Hunt 1990: 157). The carpals of both right and left hands were very robust with marked musculature. The proximal phalange of both right and left thumb showed arthritic lipping, again due to activity or advanced age (Mann and Hunt 1990: 157).

Figure 113. 1st and 2nd left metatarsals, superior view, showing old, poorly healed damage.

The left and right femora were large and rugged. Each had a lipped head as well as an osteophytic obturator externus groove, indicating osteoarthritis due to advanced age or activity (Mann and Hunt 1990: 158). The tibial articular surface was missing post-mortem from the right femur, but on the left femur showed the lipping of osteoarthritis. Each femur had a high, ridged greater and lesser trochanter (insertion site for gluteus minimus & gluteus medius, and major flexor muscles of the thigh), gluteal tuberosity (gluteus maximus), and linea aspera (vastus & adductor muscles), all indications of increased musculature (White and Folkens 2000:233).

Only the left patella was recovered; it was lipped, with a raised medial articular facet. The superior anterior portion was lumpy and osteophytic, indicating mild to moderate osteoarthritis (Mann and Hunt 1990: 198).

The right tibia had a pronounced popliteal line indicating increased musculature (White and Folkens 2000: 245), as well as a lipped medial malleolus with a roughened lumpy inferior fibular articular surface, again indicating osteoarthritis (Mann and Hunt 1990: 194). The right fibula had a very high, ridged interosseus crest indicating increased musculature (White and Folkens 2000: 249), with lipping on the malleolar articular surface, which articulates with the lateral surface of talus, indicating an arthritic ankle area (White and Folkens 2005: 325). The left tibia and fibula were fragmented and provided no useful information.

The bones of the feet were large and rugged. The right talus had rimmed facets, matching the lipping on the right tibia; lipping was also found on the first cuneiform and the first proximal phalange. These are all indicators of osteoarthritis. The lateral and medial processes of the right and left calcaneus were lumpy with osteophytes, indicative of heel spurs, a result of stress on the foot. Heel spurs are common in the general population, but occur more often after the age of 50 (Mann and Hunt 1990: 206). On the left foot, the second metatarsal had suffered a compete fracture, which healed poorly, to the point that the edge of the broken bone impacted

Table 21.
Stature Data for Burial 11

Location	Meas.	Estimated Ht.	Reduction for Age [-.06 (72-30) cm] or -2.52cm
Femur, Left	451mm	168 – 169cm	165.5 – 166.5cm
Tibia, Right	372mm	172 – 173cm	169.5 – 170.5cm
Fibula, Right	357mm	167 – 168cm	164.5 – 165.5
Humerus, Left	312mm	166 – 167cm	163.5 – 164.5cm
Radius, Left	244mm	171 – 172cm	168.5 – 170.5cm
Radius, Right	243mm	171cm	168.5cm
Ulna, Left	261mm	170 – 171cm	167.5 – 168.5cm

the first metatarsal, stimulating a bony spur. This episode was totally healed, indicating an occurrence at least 10 years ante-mortem. As there were no bone spurs on the left calcaneus, it can be suggested that this break resulted in increased stress on the right foot.

Only seven of the long-bones could be measured for maximum length. Using the Trotter and Glesser Maximum Stature Tables (Bass 1995: 28-29), the estimated stature is calculated in Table 21. These calculations provided a range of 163.5–170.5cm maximum stature, or approximately 5'4" – 5'7", with an average of 5'5".

Using ForDisc 3.0, data from the left femur, humerus, radius and ulna calculated a predicted stature of 5'4" – 5'9" (90% prediction interval using 19th century white male statistics) or 5'7" – 5'10" (90% prediction interval using 20th century white male statistics). Given that this individual's birth and childhood occurred in the latter part of the 19th century, we choose to accept the first stature estimate of 5'4" – 5'9".

Burial 11 is believed to be that of Shelton Son, who was born on April 27, 1880 and died at the age of 70 (Brewer 2010: 47). The skull and innominates, respectively, indicate this was most likely a white male. The clavicle, innominate, scapula, humera, radius, ulna, femur, tibia, fibula, and hands showed evidence of increased musculature. The innominate indicated signs of horseback riding, while the humera and clavicle indicated stress from pushing and lifting with the arms. The skull, ribs, and innominate indicated advanced age. Osteoarthritis, due to strenuous activity or advanced age, was seen in the humera, innominates, scapula, radius, ulna, femur, tibia, fibula, and hands. Size difference in hands indicates this person may have been right handed.

An injury many years ante-mortem, a broken left foot bone, did not heal properly and likely caused a limp, increasing stress on the right foot.

Stature estimates based on long bone measurements indicate a height of 5'4" to 5'9", short to average height for a male of this time period.

Shelton Son was described by his great nephew as "a little man [who] smoked non-stop" (Joel McGee, personal communication 2011). A predicted maximum stature of 5'4" – 5'9" might indicate a small, or short man, and in fact, although no teeth were extant, a full set of dentures were stained brown, quite possibly from smoking.

Conclusions

The purpose of a concluding section is not to merely summarize the report, but rather to emphasize what the report means and perhaps most importantly, the inferences that the authors want readers to draw from the report.

In the case of the Son Family Cemetery, our conclusions must be written for both family members and the general public, as well as professional colleagues – just as the report itself was. This does not mean, however, that we need two conclusions. The interest of one group frequently overlaps the other. Thus, while professionals may be interested in the evolution of mortuary practices found at the Son Cemetery, we believe that family members will also be intrigued at how the burial practices of their family evolved and how these changes likely represent larger social changes. And while family members may not find our tables of skeletal measures particularly useful, we believe that they will find the results of those measurements interesting since they help reveal forgotten details about their family's ancestors.

Of course, not all of our conclusions will be of equal interest to all people, but with a variety of details presented, readers can pick and choose those areas of interest. We suggest, however, that no section be dismissed outright. For example, lay readers may wonder if the first section, on methodology, has any real applicability to their lives; we argue that it does since it addresses how South Carolina has mandated that burials be removed – and how this report stands in stark contrast to the vast majority of burial removal reports for the state. We hope that lay readers will find the information both revealing and also more than a little frightening. We hope that it may even spur some into working to make legislative changes so reports such as this become the standard, rather than a rarity.

Methodological Issues

The Law

South Carolina is at a particular disadvantage when it comes to bioanthropology since our state law is frozen in the early twentieth century, requiring only that disinterments be overseen by a funeral director (S.C. Code of Laws, Section 27-43-10, et seq.).

What this means is the use of backhoes and shovels by unskilled labor, pulling up of only large, easily recognizable bones, maybe the collection of a few pieces of casket hardware, and the immediate reburial of whatever is found with no inventory, analysis, or report. Figure 114 shows typical excavation techniques, methods, and conditions in South Carolina ranging from 1941 through 2001.

The current law makes a mockery of the Latin phrase, *mortui vivos docent*: let the dead teach the living. The loss of knowledge is incalculable and horrifying.

While states like North Carolina and Florida have moved on to recognize that burials older than 50 years can best be examined and – if necessary – removed by bioanthropologists, South Carolina is one of the few southeastern states that remains intransigently committed to a 1940s era law.

What South Carolina needs desperately is a law that requires all burials reasonably thought to be older than 50 years or buried without benefit of an intact vault to be removed by bioanthropologists, with a provision that the remains will be available for non-destructive analysis for a period of 60 days prior to reburial.

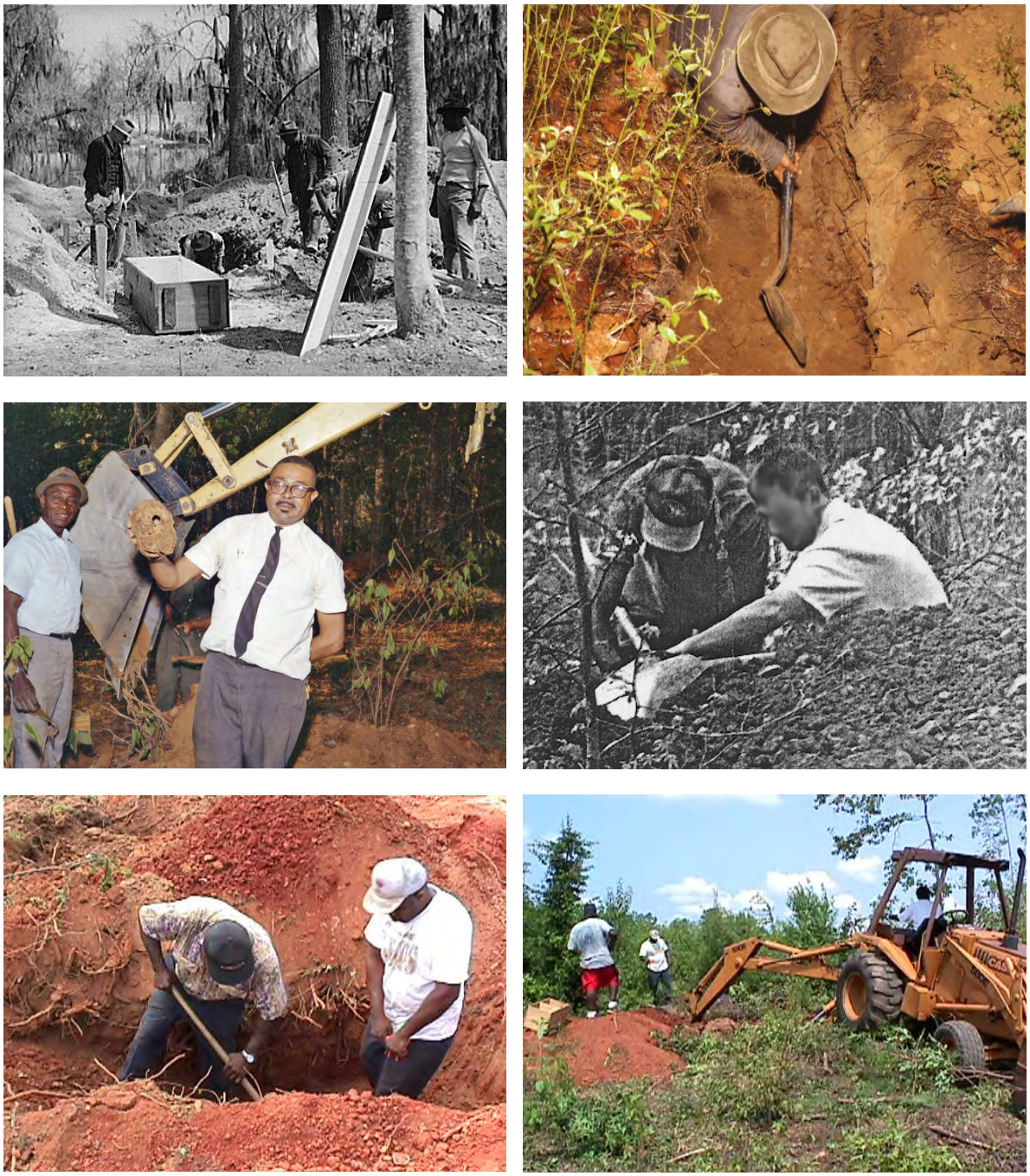


Figure 114. Examples of burial removals by unskilled individuals in South Carolina, showing no changes in techniques over 60 years. Upper row left, burial removal from Santee Cooper in 1941. Upper row right, removal of burials from Kershaw County in 1968. Middle row, left, exhibiting remains from Kershaw County in 1968. Middle row, right, removal of burials from Richland County, 1980s. Bottom row, removal of burials from Richland County, 2001.

This can be accompanied by a provision that a licensed funeral director also be present since certainly these individuals have extensive experience and training in helping families deal with grief and we recognize that disinterment can be traumatic for family members. Likewise, funeral directors will be responsible for the placement of the remains in new caskets afterwards, as well as the eventual reinterment of the remains.

Disinterment/Reinterment Permits

Although neither disinterment nor reinterment permits are specifically identified under the South Carolina Code of Laws, they are briefly mentioned in the South Carolina Code of Regulations, Chapter 61-19, Section 16. The Department of Health and Environmental Control (DHEC) agency regulation requires a disinterment permit to be applied for by a licensed funeral home, specifying that, "The disinterment permit shall be authorization for disinterment, transportation, and reinterment." One copy of the form is retained by the funeral home, another is given to the person in charge at the cemetery of reinterment, and one copy is sent back to Vital Records.

A lay person looking at this law would likely assume that at least one goal is to keep track of where the body came from and eventually went, thinking that such is the information that would be of critical importance to future generations seeking to find their ancestors. While this is a reasonable assumption, it could not be more incorrect.

DHEC does not maintain these disinterment/reinterment permits. Calling that agency seeking information on a cemetery or burials removed from one location and reinterred elsewhere will produce no information whatsoever, except layer upon layer of bureaucratic excuses.

Simply put, DHEC is totally incapable of helping families identify where loved ones were moved. There is no requirement that the forms be filed, retained, indexed, or made publically available. There is no requirement that the individual, funeral home, or agency initiating removal document the original cemetery or burial site's location. There is no requirement that the reinterment site be in any fashion permanently documented. We have found multiple situations where one abandoned cemetery was simply "removed" to another abandoned cemetery – bodies cavalierly being shuffled around like refuse.

Such problems could be minimized by requiring those disinterring and reinterring to file a simple form with the Register of Deeds in the county or counties involved. The form for the disinterment/reinterment of a single burial might need to only specify the cemetery, its physical location, and plot or lot number. When multiple burials are involved, such as the removal of an entire cemetery, the problem could be addressed by using a registered land surveyor to document the position, arrangement, and location of the burials at their original location and their location upon reburial. The documents could be indexed by the name of the cemeteries and the names of the individuals involved. If no names are known, they could be indexed by simply "Doe, John and Jane," at least allowing individuals to examine the documents and ascertain if any are likely relatives.

Bioanthropology in South Carolina

When we began our research we examined a large number of reports. First, we attempted to identify previous reports from South Carolina studies, hoping that our burial removals would provide good comparative information, allowing us to compare and contrast the Son Cemetery to other burial grounds in South Carolina.

What we found is that no one really knew what cemeteries had been removed, which ones had reports, or where those reports might be found. We discovered that the focus on complying with the National Historic Preservation Act, far from promoting sound bioanthropological research, had actually served to diminish

professional standards and turn the science into the handmaiden of low bidders whose goal is to quickly remove burials and move on to new projects. Reports are simplistic, provide few data and even less analysis. Very few use Buikstra and Ubelaker's (1994) *Standards for Data Collection from Human Skeleton Remains* to ensure consistency.

What this means is that an exceptional data base is being frittered away. Rather than slowly accumulating data that allows each successive research effort to become more productive and more informative, studies have sunk to what can only be described as the lowest common denominator. What is minimally necessary to achieve acceptance by the state SHPO is what is being done – and this speaks poorly of the profession and its practioners.

So what is to be done?

First, reports must be publically accessible. Those conducting bioanthropological studies must ensure that their reports are routinely provided to institutions with the staff and framework to care for the reports. Typically this means libraries, such as the South Carolina State Library and the South Caroliniana Library. Regulatory agencies do not have the ability or mission to ensure that research is made available and are not suitable substitutes for publically accessible libraries.

Second, there must be a commitment to ensuring that as much information as possible is collected. This means working with families and project sponsors to ensure an understanding of why the study is important, what it hopes to accomplish, and what this entails by way of analysis and publication. If destructive analyses can make a significant contribution to the public's understanding, then family or the project sponsor must be approached to permit and fund such work. It means taking the time to collect meaningful data and presenting it in a consistent fashion. Fortunately, scholars such as Buikstra and Ubelaker provide the framework to ensure this can be accomplished – researchers must simply take the time to use the framework provided.

Third, researchers must understand that analysis involves more than any one aspect of the data assemblage. We see too many reports where the researcher's expertise is painfully evident by what is not examined and reported: reports that focus on archaeology to the exclusion of the bones; reports that barely mention casket hardware; reports that fail to explore the wealth of data present in preserved fabrics.

While no researcher can be an expert in all fields and while no organization can amass comparative collections and catalogs on all topics, there should be nothing that precludes using consultants to fill gaps in expertise.

And fourth, we must stop making assumptions based on too little research. For example, we have often heard professionals state that Piedmont burials are unlikely to provide useful research, explaining that the acidic soil destroys all remains very quickly.

Certainly this study documents that burials beyond 100 years provided very small quantities of bone. In such cases metric analysis (the measurement of the bones) was generally impossible and non-metric analysis (physical examination) was exceedingly difficult. However, the burial pit remains distinct and this provides information on the burial morphology. Wood remains are often well preserved and this can provide information on coffin design, as well as the presence of a grave arch or lining. Coffin hardware and trimmings will likely be preserved and these can provide significant economic and social history. Thus, assumptions regarding the usefulness of bioanthropological study are often poorly conceived and serve only to constrain our ability to learn.

In addition, bioanthropological studies must be alert to a wide variety of data sources, including the wood from which the casket is made, the textiles that are used in and on the casket, and the fabrics that form the clothing of the deceased. We found no examples of burial recoveries where the researchers provided detailed information and photographs of the fabrics recovered.

The Current Study

We are exceedingly fortunate that the Son family, represented by Mr. Joel McGee, and Lexington County, represented by Deputy County Administrator Joe Mergo, were able to agree not only on the removal, but a removal that utilized bioanthropological techniques. This agreement allowed the County to move forward with its plans, the Son family to be assured that the removal would be done in a respectful manner, and public to benefit from the entire process.

Lexington County was supportive each step of the way, going beyond the bare minimum to ensure that the project was embraced by the family – and made far easier on us.

We hope that in some small way the process was also made smoother by how we handled the project. We explained why the information was important, what we hoped would be learned, and how the process would work. We did not assume the family's approval, but worked with them each step of the way, asking their permission for the work to be undertaken. Thus, we did not view the analysis as a right, but rather a privilege.

Ultimately the family determined that in addition to the removal, they wished for any artifacts that might be of use to the public be curated by the S.C. State Museum. This decision allowed the museum to retain representative examples of hardware and other artifacts that would otherwise have been reburied. While our report and photographs would have been available, the presence of actual artifacts allows a far greater range of interpretative possibilities.

Thus, we view this study as a model project; a win-win for all involved. The County is able to advance an important project for the economic benefit of its citizens; the Son family is able to rest assured that their ancestors are safe and appropriately reburied; and the public has the benefit of a bioanthropological study of a small family cemetery that might otherwise have been lost. This win-win was achieved without the necessity of legal action, regulatory involvement, or extensive bickering. It was achieved because all of the parties sought to maximize the benefits to everyone involved.

Burial Morphology

The Son Cemetery was used for over 100 years, from the burial of Leah and several of her children in the 1860s through Frances's burial in 1976. Throughout that period, the Son family seems to have been fairly typical of the rural farming folk of central South Carolina. While the cemetery provides a very small sample, the changes that are documented in burials are of considerable interest. Table 22 briefly summaries some of the details concerning these 10 burials.

Marking of Burials

All of the early burials prior to Noah Son (d. 1947) were marked using flat slab fieldstones, typically at the head and foot. These stones appear to have consistently disappeared into the grave as it sank and new stones were erected. This practice continued as late as Corrie Son (d. 1927), even though she also received a temporary funeral home marker.

By the 1940s, however, the practice was discontinued. It may have been around this time that the burials were marked with small granite stones. While none were engraved, initials were scratched into the wet concrete in which the stones were set. With only one exception these stones were nearly exactly placed, suggesting exceptional continuity of care and awareness on the part of surviving Son family members.

Depth of Burial

Burials in popular accounts are typically described as being dug 6' deep (see, for example, Crissman 1994:62). This seems to have been true, at least in some cases. One study from Stafford County, Virginia (ECS Mid-Atlantic 2006) found a mean depth of 5.2 feet. The authors examined burials from several Virginia, West Virginia, and Tennessee cemeteries and found that adult burials ranged from about 5 to 6' in depth, while sub-adults ranged from about 3 to 6' in depth, largely supporting the common perception. They

Table 22.
Burial Details from Son Cemetery

		Grave					Coffin/Casket Protection				
Burial	Death Date	Depth of Grave (in feet)	Grave Arch	Depth to Arch	Rectangular Grave	Marking	Outer Box	Grave Lining	Cast In-Place Concrete Vault	Commercial Vault	Dry Mortar Burial Lining
Burial 4 - Louisea Annis Son	1862	4.5	x	2.9		fieldstone		x			
Burial 3 - Novieann Josephine Son	1863	3.9	x	2.7		fieldstone					
Burial 5 - Leanna Kirkland Son	1868	4.9			x	fieldstone					
Burial 1 - Mary Buzzard Wright	ca. 1870	4.5	x	3.0		fieldstone					
Burial 2 - Rosa Ella Son	1883	Not Found									
Burial 6 - Henry Rosenberry Son	1908	3.6			x	fieldstone			x		
Burial 7 - Frances Wright Son	1918	4.0			x	fieldstone	x				
Burial 8 - Corrie Son	1927	3.1			x	fieldstone					
Burial 9 - Noah Currant Son	1947	3.5			x		x				x
Burial 11 - Shelton Fickling Son	1950	3.5			x		x				x
Burial 10 - Frances Viola Son	1976									x	

		Coffin/Casket							Textiles		
Burial	Death Date	Hexagonal Coffin	Rectangular Coffin	Rectangular Casket	No Handles	Outer Box Handles	Short Bar	Extension Bar	Coffin/ Casket	Clothing	Dress
Burial 4 - Louisea Annis Son	1862	x			x						gown?
Burial 3 - Novieann Josephine Son	1863		x		x						gown?
Burial 5 - Leanna Kirkland Son	1868		x		x						uncertain
Burial 1 - Mary Buzzard Wright	ca. 1870	x			x						shroud?
Burial 2 - Rosa Ella Son	1883	Not Found									
Burial 6 - Henry Rosenberry Son	1908			x			6		x	x	suit
Burial 7 - Frances Wright Son	1918			x		6	6		x	x	dress
Burial 8 - Corrie Son	1927			x			6			x	uncertain
Burial 9 - Noah Currant Son	1947			x				2+2	x	x	casual
Burial 11 - Shelton Fickling Son	1950			x				2	x	x	casual
Burial 10 - Frances Viola Son	1976										

suggest that there is not only a "proportional relationship between adult and subadult grave depths," but also that "similar patterns may be expected at other rural cemeteries in the region" (ECS Mid-Atlantic 2006:80).

The situation is far different at the Son Cemetery where very dense clay is consistently found at depths of 3.5' and not surprisingly the average grave shaft was only 3.9' (with a range from 3.1 to 4.9'). Graves typically were terminated shortly after the clay was encountered. Regardless of the reason, the depth of burials at the Son Cemetery is appreciably less than reported from the mid-Atlantic. In addition, the two infant burials are actually deeper than those of the adults (an average of 4.2' below the surface, compared to an average of 3.9').

Whether this represents a regional difference, an idiosyncratic difference, or perhaps a difference based on soils is unknown, but it does suggest that it may be too soon to be thinking of broad generalities.

Grave Form

At the Son Cemetery there are two basic grave forms. Of the four identified nineteenth century burials, three made use of grave arches. By the twentieth century grave arches were no longer in use and all of the graves were simple vertical shafts.

There is, however, one rectangular shaft grave without a protective arch at Son Cemetery, dating as early as 1868. Thus, it is not clear under what circumstances an arch would, or would not, be used.

This seems to be consistent with findings elsewhere in the southeast. Hogue and Alvey, for example, suggest that prior to about 1890 "the inclusion of a coffin chamber at the bottom of

[a]rectangular pit was common practice," while after 1890 "grave shafts were constructed primarily as rectangular pits lacking a coffin chamber" (Hogue and Alvey 2006:52). They note similar findings from Georgia, North Carolina, and Arkansas, with only one post-1890 occurrence.

There seems to be growing, and compelling, evidence that the use of the grave arch (or burial chamber) was abandoned with the introduction of the twentieth century. It is not so clear, however, when rectangular grave shafts would be used in lieu of an arch, so additional research is needed.

The abandonment of the arch seems to occur about the same time that outer boxes and vaults became popular – although grave linings that served similar functions occurred in the nineteenth century.

Davidson suggests that "commercially manufactured coffins and caskets were commonly shipped great distances by train in sturdily constructed wooden crates" by the late nineteenth century (Davidson 2004:240). Nevertheless, even he falls back on the claim by Habenstein and Lamers (1955:305) that outside boxes became commercially available as early as the 1870s or 1880s.

Our research reveals no catalogs where outside boxes are specifically mentioned prior to the twentieth century. By then, national companies such as St. Louis Coffin Co. (1904:48) and National Casket Co. (1904:45-46) were both advertising a range of outside boxes, but were silent regarding the boxes used for shipping. In contrast, the Peerman Burial Co. (1900:1) explained that, "each coffin or casket is enclosed in a neat pine box" with chestnut, oak, and cedar available for upcharges of $10 to $30. Just two decades later, however, the Atlantic Coffin & Casket Co. acknowledged that unused outer boxes were beginning to overwhelm some dealers,

> So often it is the case that our customers by using vaults instead of outside boxes, accumulate an oversupply of such discarded boxes. The best way out is to order of us the above numbers in flat-tops, from No. 40 to No. 20, inclusive, crated two to the bundle only (Atlantic Coffin & Casket Co. 1923:7).

What none of the publications we have examined deal with is either the use of home-made vaults or the use of dry mix to create burial linings. We presume that these are both local activities and their history may vary dramatically depending on location. We have found, however, that the concrete grave lining seems to be rather common in the Lexington County area. Its use elsewhere should be sought by archaeologists.

A commercial concrete vault not appearing in the Son Cemetery until the mid-1970s seems late and may perhaps be a result of the family's inability to afford vaults in the 1940s and 1950s. Or it may also represent inherent conservativism by this rural farming community.

Transition from Coffin to Casket

The Son Cemetery also allows us to see the transition from the use of hexagonal coffins during the last half of the nineteenth century to the use of rectangular caskets at least by the first decade of the twentieth century.

This transition seems slow, at least based on Davidson who believes the shift "by the late 1860s and early 1870s was well on its way in the eastern United States" (Davidson 1999:154). This may be over-reaching. For example, one catalog from 1875 illustrates an even number of new caskets and clearly old style coffins (Cincinnati Coffin Co. 1875). The Peerman Burial Co. catalogue of 1900 is dominated by new casket forms, but about a quarter of the styles are the old coffins (Peerman Burial Co. 1900). The national companies admittedly illustrated far fewer coffins. For example, St. Louis Coffin Co. (1904) illustrates 129 caskets and only eight coffins.

We are inclined to suggest that the

transition from coffin to casket occurred more quickly in larger, metropolitan areas – perhaps as early as the 1870s as claimed by Davidson – but more slowly in the deep south and mid-west – with the transition perhaps not occurring until about 1900.

Certainly the Son family seems to have been very conservative, retaining hexagonal coffin forms until the burial of Henry Rosenberry Son in 1908. Of course, we also must acknowledge that two of the early burials – in the 1860s – occurred in rectangular containers. Whether these reflect the new fashion or simply the poverty of the Civil War is difficult to determine.

The woods used were almost exclusively pine. Only one "exotic" wood – poplar – was found in Frances' burial. However, poplar was a very common wood in casket construction since it was easy to work and readily available. The abundance of pine suggests local manufacture.

One of the caskets (that of Corrie Son) also produced a small mass of excelsior, used in casket mattresses and pillows.

None of the Son family coffins, however, exhibited any form of decoration. They were very plain burial containers without handles, plates, or even thumbscrews.

Trimmings do not appear until the turn of the century. Short bar handles were used until the late 1920s, with extension bar handles being found in the 1940s.

We attribute the late introduction of hardware to the rural location, as well as the poverty that resulted from the Civil War. Readers will recall that the family lost what property had not been already sold off in 1875. More elaborate burial displays may not have been possible until the turn of the century.

While both short bar and extension handles were available in the 1920s, the family chose the more traditional short bar style. The use of extension handles was well established by the 1950s and the family followed this prevailing trend (Trinkley and Hacker 2007). It seems likely that during the twentieth century the forms and styles used were determined more by availability than by family choice. We speculate that by the second half of the twentieth century local funeral homes were following broad trends in casket and hardware styles.

All of the caskets identified appear to be cloth covered. These were a traditional style, but also tended to be less expensive.

Embalming

The first evidence of embalming recovered is associated with the burial of Henry Rosenberry Son in 1908 and consists of very high levels of arsenic. This chemical, banned by the U.S. Government only a few years later, was well preserved because the remains were sealed in a substantial concrete vault. The volatility of the subsequent embalming fluids (methanol and formaldehyde) made their identification at Son Cemetery impossible. However, the presence of eye caps associated with the burial of Shelton Son are the only other evidence of embalming recovered. The absence of trocar buttons likely indicates that local embalmers continued to sew up incisions well into the late twentieth century.

Our work with the McCormick Funeral Home records (Trinkley and Hacker 2004:9) reveals that embalming was slow to be adopted by Euro-Americans in the Columbia (Richland County) area. Between 1906 and 1915 just under 40% of the families chose to have loved ones embalmed. This seems to reflect the cultural conservativism of South Carolina and we suspect the proportion of those embalmed dropped outside of Columbia or Charleston.

Summary

Unfortunately we have no appropriate comparative data from South Carolina, so it is impossible to draw any broad conclusions from the Son data. The data, however, suggests that researchers should be cautious about broad interpretations or expectations. For example, none of the burials met the expectation of being buried at a depth of 6'. Burial style seems to have been

initially affected by the effects of the Civil War as well perhaps by the rural location. By the twentieth century, burial decisions were perhaps more predicated on local availability, although there may have been a continuing cultural conservativism.

Fabrics and Textiles

While it is a truism that South Carolina climate (hot and wet) and soils (acidic) do not promote the preservation of many archaeological materials, we found surprising preservation at the Son cemetery. This emphasizes that archaeologists should be cautious in ruling out preservation based on past anecdotal evidence.

All of the twentieth century burials produced textile remains and four of the five produced abundant remains from both the casket and clothing.

We note that researchers outside of South Carolina often take great care to document fabric remains (see, for example, Kuttruff 2000, 2003). In contrast, South Carolina researchers more often than not dismiss fabrics and textiles (for example, "unidentifiable clothing matter" in Shuler and Poplin 2005:50). Greater attention to the archaeological record would not only provide a far richer and more interesting account, but it would also begin the accumulation of data to help other researchers.

We were surprised that the burial environment allowed the preservation of even non-synthetic yarns, such as cotton. In addition, colors were often adequately preserved to allow conclusions on the nature of the original fabric. Some textiles could even be matched to similar items offered for sale in period catalogs.

We found that Henry and Frances Son were both likely buried in clothing they were photographed wearing. In the case of Noah and Shelton, we found they were buried in relatively casual clothing. Corrie Son, buried in 1927, is the only individual for who we have no good evidence. The presence of a single snap was the only clothing item recovered.

Less definitive evidence was available for those individuals buried prior to the twentieth century and often our conclusions are drawn more from the absence of data than anything else. For example, the two infants, Louisea and Novieann, contained no clothing items in their coffins, so we believe they were buried in gowns – typical clothing for children of the period under the age of three. In the case of Mary Buzzard Wright, we suggest that the absence of clothing items may indicate the use of a shroud – the only shrouded burial identified in the cemetery.

Skeletal Remains

The examined skeletal remains in Son's Cemetery ranged from those of infants to elderly adults. Burials took place from 1862 to 1950. The preservation of skeletal material was very poor for the four burials prior to 1900, regardless of age at death. The best preservation of material was from the 1908 burial of Henry Rosenberry Son, due to the intact concrete vault surrounding his remains.

Four burials, dating from 1908, 1927, 1947 and 1950, provided enough skeletal material to estimate height, note bone injuries, dental work, and tooth loss. The family appears to have been short in stature, with considerable dental problems, but remarkably little bone injury, considering their farming and, in Henry Son's case, Civil War activity.

The only injuries noted were the stunted growth of the right femur head of Corrie Son, due to an accident in childhood, and the badly healed broken left metatarsal of Shelton Son; both injuries resulted in a limp. Neither injuries indicate that a physician was consulted, which is not unusual for a farming community of this time period.

While the family in general suffered rather severe dental problems, only three members, Corrie, Noah, and Shelton, appeared to have visited a dentist for fillings, gold teeth, and in Shelton's case, a complete set of dentures. As these siblings died in 1927, 1947 and 1950 respectively, it may be that a dentist was more readily available

Table 23.
Skeletal Remains from Son Cemetery

Burial	Name	Death Date	Age at Death	Cause of Death	Preservation of Skeletal Material	Estimated Height	Injury	Osteoarthritis	Increased Musculature	Tooth Loss	Dental Work
4	Louisea Annis Son	1862	23 months	unknown	very poor						
3	Novieann Josephine Son	1863	9 months	unknown	very poor						
5	Leanna Kirkland Son	1868	28 years	childbirth	very poor					extensive	
1	Mary Buzzard Wright	1870	unknown	unknown	very poor						
2	Rosa Ella Son	1883	12 months	unknown	NOT FOUND						
6	Henry Rosenberry Son	1908	77 years	injury	good	5'7" - 6'0"		extensive	extensive	extensive	
7	Frances Wright Son	1918	71 years	cancer	poor					extensive	
8	Corrie Emma Son	1927	39 years	infection	poor	4'8" - 5'3"	femur head	marked	marked	50% loss	fillings, gold tooth
9	Noah Currant Son	1947	63 years	unknown	fair	5'1" - 5'9"		extensive	extensive	25% loss	fillings, gold tooth
11	Shelton Fickling Son	1950	66 years	myocarditis	poor	5'4" - 5'9"	broken metatarsal	extensive	extensive	total	dentures
10	Frances Viola Son	1976	84 years	unknown	NOT EXAMINED						

than in 1908 or 1918, for Henry and Frances.

While a statewide dental association formed in 1870 (Moore 1870:374), it wasn't until 1967 that the first class enrolled in South Carolina's School of Dental Medicine at the Medical University of South Carolina. Nevertheless, Charles (1982) mentions several dentists from the Lexington and Batesburg area, including F.B. Able and P.H. Shealey.

These four burials also provided enough skeletal material to note osteoarthritis and evidence of increased musculature. Even Corrie, dying at the age of 39 years, had an osteoarthritic vertebra, indicating strenuous activity, which can be explained by her being described as a farm laborer in both the 1910 and 1920 census, when she would have been 23 and 33 years old.

All of the men, Henry, Noah and Shelton, suffered from osteoarthritis, due to either advanced age, strenuous activity, or a combination of both. They also had increased musculature, probably due to their farm work, cotton factory work, or Civil War activities.

A demographic profile of the population was not prepared. Not only is the number of individuals recovered far below the suggested size of 100 (Ubelaker 1989), but we know that Son family members were buried in more than one cemetery (although we are not sure how that decision was made).

While in most respects (sociologically and morphologically) Henry Rosenberry Son is distinctly Euro-American, skull measurements (whether using ForDisc 3.0 or the Giles and Elliot equations) identify a male of African descent. Anomalous results have been reported by other researchers. Such results may be the result of miscegenation or errors in the metric data. Regardless, they demonstrate the need to be cautious when assigning ancestry to skeletal remains.

The WPA interviews of the late 1930s reveal considerable sickness among Depression era farmers and mill workers. Problems reported in the interviews include a hernia, TB, the loss of an eye to cataracts and glaucoma, and a stroke from high blood pressure. One individual reported teeth problems so bad that he had been in misery for a year, "old teeth was just ruinin' me with poison" (Beardsley 1987:202-203).

Health data for South Carolina farmers are difficult to find. As late as 1947 the Public Health Service reported that the,

> picture of health levels in the South must be crudely drawn. Data are available on such ultimate phenomena as death, the contraction of acute communicable diseases, or rejection from military service. . . for the myriad conditions, organic and functional, causing day-to-day discomfort, disability, or reduction of maximum vitality

> among the people of the South, data are sparse and the extent of the burden may only be guessed (Brown 1979:172).

In spite of endemic conditions such as hookworm, pellagra, and malaria, the permanent dentition failed to reveal linear enamel hypoplasia and radiographs of tibiae show no indication of pathological or nutritional stress (i.e., Harris lines). This suggests that in spite of less than ideal economic conditions, the Son family did not suffer significant malnutrition.

Clearly studies such as this for the Son Cemetery, while providing only a small sample, are critical in helping us understand the stresses and diseases that affected South Carolina's rural populations. It is only through more such studies that we will begin to better understand the lives of residents of rural Lexington County in the early twentieth century.

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Appendix 1. Stages of Tooth Wear Key

Tooth	Stage	Description
Incisor/Canine	1	Unworn to polished or small facets (no dentin exposure)
	2	Point of hairline of dentin exposure
	3	Dentin line of distinct thickness
	4	Moderate dentin exposure no longer resembling a line; large dentin area with enamel rim complete
	5	Large dentin area with enamel rim complete
	6	Large dentin area with enamel rim lost on one side or very thin enamel only
	7	Enamel rim lost on two sides or small remnants of enamel remain
	8	Complete loss of crown, no enamel remaining; crown surface takes on shape of roots
Premolar	1	Unworn to polished or small facets (no dentin exposure)
	2	Moderate cusp removal (blunting)
	3	Full cusp removal and/or moderate dentin patches
	4	At least one large dentin exposure on one cusp
	5	Two large dentin areas (may be slight coalescence)
	6	Dentinal areas coalesced, enamel rim still complete
	7	Full dentin exposure, loss of rim on at least one side
	8	Severe loss of crown height; crown surface takes on shape of roots
Molar	0	No information available
	1	Wear facets invisible or very small
	2	Wear facets very large, but large cusps still present and surface features (crenalations, noncarious pits) very evident
	3	Any cusp in the quadrant areas is rounded rather than being clearly defined as in 2; the cusp is becoming obliterated, but is not yet worn flat
	4	Quadrant area is worn flat, but there is no dentine exposure other than a possible pinprick sized dot
	5	Quadrant is flat, with dentin exposure one-fourth of quadrant or less
	6	Dentine exposure is greater: more than one-fourth of quadrant area is involved, but there is much enamel present
	7	Enamel is found on only two sides of the quadrant
	8	Enamel on only one side, but the enamel is thick to medium on this side
	9	Enamel on only one side, but the enamel is very thin
	10	No enamel on any part of the quadrant, dentin exposure complete

Appendix 2. Radiographs of Skeletal Elements

The analysis was supplemented with the radiometric documentation of long bones since such information can be useful for age determination, Harris line formation, pathology evaluation, and osteoporosis assessment. Bones were placed directly on the x-ray film and the cone was at 40 inches. All radiographs used the anterior-posterior orientation and exposure was typically 300MA, 50kV, 1/30 second. The white bar in the photos measures 1 cm.

Burial 11, left femur and Burial 6, left femur; both distal ends, posterior views

Burial 11, left femur and Burial 6, left femur; both proximal ends, posterior views

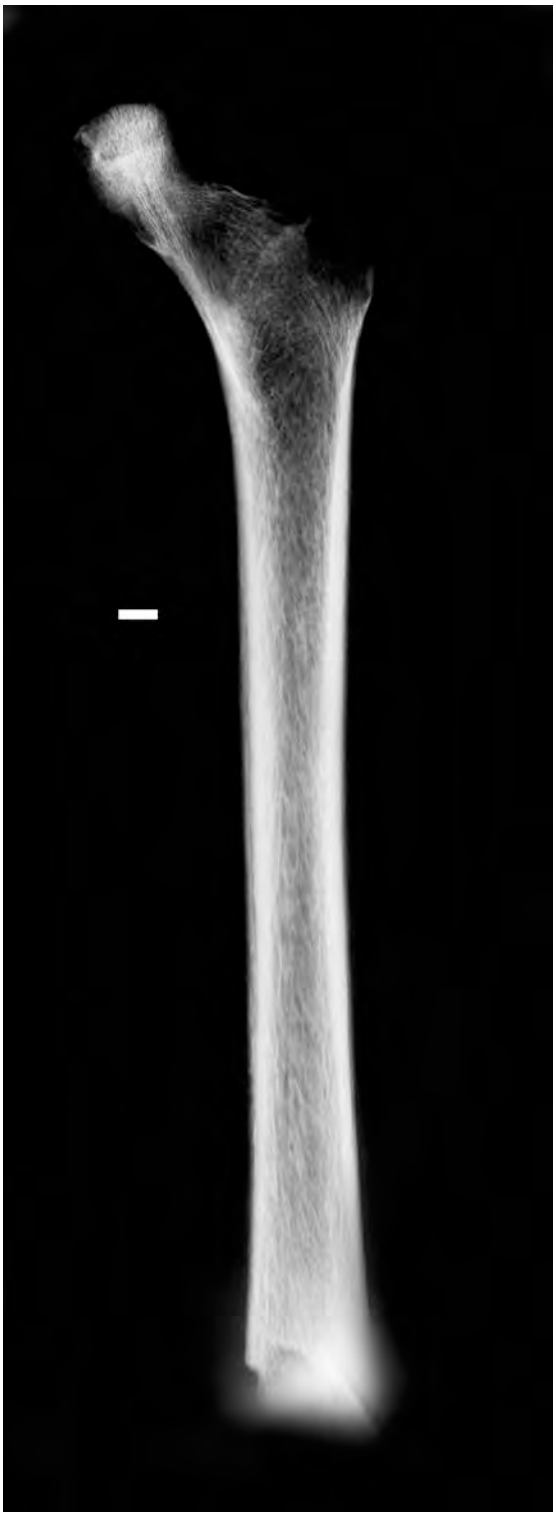
Burial 11, right femur and Burial 6, right femur; both distal ends, posterior views

Burial 11, right femur and Burial 6, right femur; both proximal ends, posterior views

Burial 6, left tibia, anterior view

Burial 6, right tibia, posterior view

Burial 8, R femur, proximal end, posterior view



Burial 11, right tibia and Burial 6, left tibia; both distal ends, posterior views

Burial 11, right tibia and Burial 6, left tibia; both proximal ends, posterior views

Burial 11, right tibia with distal end at top of page, posterior view and Burial 8, right tibia with proximal end at top of page, posterior view

Burial 11, right fibula, proximal end, posterior view; Burial 6, right fibula, proximal end, anterior view; Burial 6, left fibula, distal end, posterior view

Burial 11, right fibula, distal end, posterior view; Burial 6, right fibula, distal end, posterior view; Burial 6, left fibula, distal end, anterior view

Burial 9, left humerus, distal end, posterior view; Burial 11, left humerus, distal end at top of page, posterior view; Burial 8, left humerus, proximal end, posterior view and distal end, posterior view

Burial 6, left radius, proximal end at top of page, posterior view; Burial 6, right radius, proximal end at top of page, anterior view; Burial 6, left ulna, proximal end at top of page, medial view; Burial 6, right ulna, proximal end at top of page, lateral view; Burial 11, right ulna, proximal end at top of page, medial view; Burial 11, right radius, proximal end at top of page, anterior view; Burial 9, right ulna, proximal end at top of page, medial view

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ISBN 978-1-58317-076-2

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