INDEX OF TEXAS ARCHAEOLOGY

Open Access Gray Literature from the Lone Star State

Volume 1999

Article 2

1999

Exhumation and Analysis of Two Historic Burials from the Camposanto at Santa Rosa Hospital, San Antonio, Texas

Anthony S. Lyle
Center for Archaeological Research

Follow this and additional works at: <https://scholarworks.sfasu.edu/ita>

Part of the [American Material Culture Commons](#), [Archaeological Anthropology Commons](#), [Environmental Studies Commons](#), [Other American Studies Commons](#), [Other Arts and Humanities Commons](#), [Other History of Art, Architecture, and Archaeology Commons](#), and the [United States History Commons](#)

[Tell us](#) how this article helped you.

This Article is brought to you for free and open access by the Center for Regional Heritage Research at SFA ScholarWorks. It has been accepted for inclusion in Index of Texas Archaeology: Open Access Gray Literature from the Lone Star State by an authorized editor of SFA ScholarWorks. For more information, please contact cdsscholarworks@sfasu.edu.

Exhumation and Analysis of Two Historic Burials from the Camposanto at Santa Rosa Hospital, San Antonio, Texas

Creative Commons License

This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)

Exhumation and Analysis of Two Historic Burials from the Camposanto at Santa Rosa Hospital, San Antonio, Texas

Anthony Lyle

with contributions by D. Gentry Steele and Jeffrey R. Francis

**Robert J. Hard and C. Britt Bousman
Principal Investigators**

©copyright 1999
Center for Archaeological Research
The University of Texas at San Antonio
Archaeological Survey Report, No. 276

The following information is provided in accordance with the General Rules of Practice and Procedure, Chapter 41.11 (Investigative Reports), Texas Antiquities Committee:

1. Type of investigation: Salvage excavation of human remains
2. Project name: Santa Rosa Burials
3. County: Bexar
4. Principal investigators: Robert J. Hard and C. Britt Bousman
5. Name and location of sponsoring agency: Santa Rosa Hospital
6. Texas Antiquities Permit No.: None assigned. Private property
7. Published by the Center for Archaeological Research, The University of Texas at San Antonio, 6900 N. Loop 1604 W., San Antonio, Texas 78249-0658, 1999

A list of publications offered by the Center for Archaeological Research is available. Call (210) 458-4378; write to the Center for Archaeological Research, The University of Texas at San Antonio, 6900 N. Loop 1604 W., San Antonio, Texas 78249-0658; e-mail to car@lonestar.utsa.edu; or visit CAR's web site at <http://csbs3.utsa.edu/car>.

Abstract

Recent construction at Santa Rosa Hospital in downtown San Antonio resulted in the unexpected discovery of two sets of human skeletal remains. Archaeologists from the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) were contracted to exhume and analyze these remains and determine if they represented historic period burials. Excavation and identification of a “toe-pincher” style coffin and its associated hardware, the recovery of personal items associated with the first set of skeletal remains, and archival research aided in the determination that this set of remains was buried in the mid-1800s. The second set of remains were not found in association with any personal artifacts, but were also contained in a “toe-pincher” coffin constructed of comparable materials suggesting a similar interment date.

Contents

Abstract.....	i
Figures	iii
Acknowledgments	iv
Introduction	1
Historical Background of the Camposanto and Santa Rosa Hospital	1
Previous Archaeology	5
Methods: Excavation and Lab Procedures	5
Excavation Results	9
Osteological Analysis	15
Conclusions and Recommendations	19
References Cited	20
Appendix 1. Coffin Hardware	25
Appendix 2. Inventory of the skeletal elements represented in the Burial 1 and Burial 2 bone assemblage	27
Appendix 3. Measurements of the cranial and postcranial elements from Santa Rosa Burials 1 and 2	29

Figures

1. Current location of Santa Rosa Hospital and Milam Square	2
2. Location of Santa Rosa Hospital in 1892	3
3. City survey location of city cemetery and Catholic cemetery in 1848, showing Camposanto	3
4. Plan view of Burial 1	7
5. Plan view of Burial 2	8
6. Overview of Burial 1 coffin floor	9
7. Preserved coffin wood from floor of Burial 1	10
8. Postcranial segment of Burial 2	10
9. Skull of Burial 2 adjacent to sewer pipe	11
10. Wedding ring on left fourth phalange of Burial 1	11
11. Selected rosary beads from Burial 1	12
12. Pendant 1 from Burial 1	13
13. Pendant 2 from Burial 1	13

Acknowledgments

Many individuals deserve thanks for their support in this project. The interested and cooperative staff at Santa Rosa Hospital are too numerous to mention by name, but I would like to extend special thanks to several individuals. Darrell Nichols, Robert Van Allen, Ron Wright, and Stewart Tiller in construction and engineering were all especially helpful and cooperative. Christine Galvin and Sabrina Quiarte in the public relations department were also very professional and helpful in arrangements with the local media coverage. Thanks to Frank Arredondo, director of Radiology; Dr. Edward Mewborne, chief Radiologist; and Jennifer Culpepper, a very cooperative and busy technician in the Pediatric Radiology department, for their time and involvement in the analysis of several of the artifacts. I am grateful to Chapman Stout and Roger Huckabee, manager and Master Jeweler, respectively, of Medlar's Jewelry, for their time, expertise, and cooperation in cleaning and assessing some of the artifacts. I appreciate the help of Dr. Phil Dering, of the Center for Environmental and Archaeological Studies at Texas A&M University (TAMU), for the identification of a wood sample. I would like to extend special thanks to Dr. D. Gentry Steele, TAMU, for his expert assessment of the skeletal remains. I would also like to thank several individuals who have helped guide me to and through archival materials: Wayne Cox whose advice, references, and words are always appreciated; Jill Jackson, UTSA archives and special collections; Brother Edward Loch, Catholic Diocese archivist; Rusty Gámez, library assistant at the Daughters of the Republic of Texas Library; George Benevides, president of the Alamo Defenders Descendants Association; and John Ogden Leal, for his assistance with the burial records from San Fernando Church. Last but not least, I would like to thank my colleagues at CAR for bountiful advice and assistance: to Jeff Francis, who assisted with the skeletal analysis of the human remains; and especially Owen Ford, Chris Horrell, and Preston McWhorter for their diligent field work. The two excavations were conducted under difficult conditions (rain, heat, and cold), and under the watchful eyes of engineers, construction crews, hospital staff, and the media. It would not have been possible to have completed this project without the help of all of these individuals.

Introduction

Currently, Santa Rosa Hospital occupies a large block of downtown San Antonio bordered by Travis, Houston, San Saba Streets and Santa Rosa Avenue (Figure 1). During the last quarter of the nineteenth century, Santa Rosa Hospital and St. John's Orphan Asylum for Boys were located on the same city block (Figures 1 and 2). Construction of Santa Rosa Hospital and the St. John's Orphan Asylum for Boys was begun in 1874 by the Sisters of Charity of the Incarnate Word. Turn-of-the-century newspaper reports indicate that early in the construction phase a cemetery was uncovered on the property but that it was subsequently relocated (San Antonio Express (SAE), April 20, 1906). This relocation may have occurred in a very short amount of time, possibly within a day.

A city survey in 1848 shows the location of the city cemetery and Catholic cemetery, noting the location of the *Camposanto* (Figure 3). A Camposanto usually was a section of a Catholic cemetery that was reserved for members of the clergy and confirmed Catholic members. In accordance with customary practice, this Camposanto was separated from the general cemetery by a wall. In 1931, the city engineer's office noted that Santa Rosa Hospital was located on a Catholic cemetery. The city survey also shows the location of the Camposanto in the southeast section of the former Catholic cemetery, which was not in use at the time of the 1931 survey.

Two separate cemeteries are noted in the immediate area: the Catholic cemetery and the city cemetery. The city cemetery (located on the Milam Park section) was in use from about 1808 to 1880 (SAE May 4, 1972). According to San Fernando Cathedral Records, Catholics were buried in the Catholic cemetery between November 1, 1808, and December 26, 1865 (Leal 1975, 1976). After 1866 the cemetery ceased to be used by the Catholic church.

In the summer and fall of 1997, two sets of human remains were discovered during construction work at Santa Rosa Hospital in downtown San Antonio. The first set was encountered during the excavation of a trench for utility pipes in June. Portions of the right leg were recovered by members of the construction crew and shown to a surgeon at Santa Rosa Hospital

who first determined that the remains were of human origin. These human remains were then shown to San Antonio Police Department officers and subsequently to archaeologists from the Center for Archaeology Research (CAR). The historic nature of the find required that an archaeological investigation be conducted. Subsequently, this individual, designated as Burial 1, was exhumed by CAR archaeologists and analyzed by a physical anthropologist. Dr. Gentry Steele at Texas A&M University determined that this individual was a female in her mid to late twenties. The coffin and associated artifacts suggest a burial date sometime between 1840 and 1860. In November of 1997, construction of a drainage pipe required more excavation at Santa Rosa Hospital and during this work the construction crew encountered a second burial. Soon after its discovery, this second set of remains, designated as Burial 2, was exhumed, cleaned, and cataloged for analysis by CAR archaeologists. A description of the condition of both sets of remains and exhumation procedures are outlined in the following report. The report also discusses the results of the analysis of the associated artifacts, archival research, and conclusions dealing with life and death in San Antonio during this early time period.

Historical Background of the Camposanto and Santa Rosa Hospital

Since its construction, Santa Rosa Hospital has undergone many renovations and additions, including the work currently under progress to expand and upgrade the adult emergency room entrance. The following is a brief history of Santa Rosa Hospital, the San Antonio Catholic and city cemeteries, and events related to the early history and demography of San Antonio.

With the settlement of the villa in 1718, the Catholic presence was established on the banks of the San Antonio River. With this new life came death, and the need for sanctified burial grounds. From 1724 to 1749, the third (and present) location of Mission San Antonio de Valero (the Alamo) served as the burial grounds for both the mission Indians and the citizens of the presidio on the opposite side of the river. The archives reveal that 422 Indians and 26 Spaniards were interred during this period (Cox 1994:39).

Figure 1. Current location of Santa Rosa Hospital and Milam Square.

Figure 2. *Location of Santa Rosa Hospital in 1892.*

Figure 3. *City survey location of city cemetery and Catholic cemetery in 1848, showing Camposanto.*

With the arrival of the Canary Islanders, in 1731, the need arose for a new parish church. Juan Antonio Perez de Almazán laid out the site of this new church, to be named San Fernando, on the west side of Main Plaza. Construction of the new church began in 1738 (Gaines 1996:842), and families attended services at Valero while San Fernando was under construction. San Fernando Church was not completed until 1755 due to a shortage of funds and materials. However, records indicate that burials on the site began as early as 1749.

The location of the Camposanto at San Fernando was inside and immediately in front of the church, surrounded by a low stone wall (Fox et al. 1977:12). With the secularization of the mission, this area became the designated burial grounds for all Catholics of the villa. San Antonio Catholics were buried inside San Fernando church and its cemetery and Camposanto. According to translations of the San Fernando Church Burial Records (Leal 1976), people of various ethnic backgrounds were buried in the Camposanto. These records indicate that Spanish, Native American, Mexican, Irish, French, German, and others were interred in this cemetery. The records also indicate, in many instances, their names, date of birth, date of death and/or burial, who they were married to, their parents' names, country of origin, and cause of death.

By 1807, overcrowded conditions and shallow burials at the San Fernando Camposanto caused the parish priest to complain that "the stench and vermin made it impossible to conduct services" (Salcedo 1807). To deal with the problem, Nemesio Salcedo, provisional governor of Texas, selected an open area on the west side of San Pedro Creek for a new burial ground. A portion of this area was walled and sanctified and became the primary burial grounds for the Catholic community of San Antonio. The first reported burial in the new Camposanto was in 1808 (Leal 1976). The remaining area outside of the wall was utilized for the non-Catholic and unbaptized. This Camposanto is the subject of our investigation.

Floods, Disease, and War

Early one morning in July 1819, Governor Antonio Martinez reported to the viceroy, "suddenly without

the least chance of averting disaster, the torrent of water left its channel and spread over the town with a force beyond imagination; houses were washed from their foundations with the families inside; they were seen to revolve in whirlpools formed by the rushing waters; then lashed by the many heavy logs that the river brought down with fury and violence, said houses began to disappear, leaving only fragments afloat to indicate the disaster that overtook them" (Quirarte 1983:34). Hardly a house remained to the west of the river. The wooden houses were all washed away and the stone houses had their interior adobe walls demolished. It is difficult to determine the extent of the flood, but witnesses claimed the water reached a depth of nine feet in Main Plaza. Along with most of the villa, the records of San Fernando Church were badly damaged. Deaths from the flood led to more people being interred in the cemetery (Quirarte 1983).

In June 1834, a new threat appeared, an epidemic of the dreaded *cholera morbus* broke out in Goliad (La Bahía). The water-borne bacillus *vibrio comma* causes cholera, a severe epidemic disease causing profuse vomiting and purging. The method of transmission of the disease was not discovered until 1858, and the bacterial cause not identified until 1884. Prior to these discoveries, it was thought to arise from "miasma" or poisonous atmosphere thought to rise from swamps and putrid matter. The death toll in San Antonio is not fully recorded, but the town doctor Alejendo Vidal reported that he had treated eighty-three persons, and fourteen died from the disease (Nixon 1946:140).

In December 1835 and March 1836, San Antonio was the center of the War of Independence. With the fall of the Alamo, the Camposanto became the burial site of the fallen officers of Santa Anna's army, as well as the body of Gregorio Esparza, the only defender of the Alamo so interred (Matovina 1995:88, 123).

In the second week of April 1849, the dreaded cholera appeared in the city for the first time in fifteen years. For two weeks it was confined to the low, damp areas west of San Pedro Creek, among the shanties of this quarter, but on the 22nd it spread to the entire city. On "Black Sunday" twenty-one persons died (Green 1921:105). One-third of the population fled the city for the safety of the hills and ranchos. A cleric

reported “we met no one in the streets, save those who were carrying off the dead. Coffins were scarce, and the dead were in many instances strapped to dried ox-hides, and thus dragged along, all livid and purple, to their graves” (Nixon 1936:97). The plague struck all regardless of status; Mary Maverick’s daughter died on April 23, and General Worth perished on May 7. The cholera lasted six weeks and killed over 600 people (Nixon 1946).

On September 2, 1866, a new outbreak of cholera was reported near Mission Concepción and rapidly spread to other parts of the city. On September 24, the “sextion of the Catholic graveyard” was provided \$144.00 in emergency funds for burial of the victims (City Council Minutes, Vol. C: 553). The death toll was far less than that of 1849, yet 292 persons succumbed to the disease, including fourteen of the sisters of the Ursuline Order (Herff 1973:76).

The Establishment of Santa Rosa Hospital

In September 1850, a block of public lands near the “old powderhouse,” a Spanish structure at the edge of town on the extension of Commerce Street, was selected as the Protestant cemetery (City Council Minutes, Vol. B:111). The Protestant cemetery in today’s Milam Park later became known as the City Cemetery.

On December 3, 1869, the Sisters of Charity of the Incarnate Word admitted the first eight patients into St. Mary’s Infirmary, on the corner of West Commerce and Cameron Streets. This old two-story stone building (Nixon 1936:157) had originally been the rectory of San Fernando Church. Citizens from the city, as well as Bandera, Seguin, and New Braunfels, donated food and supplies to support the efforts of Mother Madeleine and Mother St. Pierce (Herff 1973:74). However, because of the large area it serviced, St. Mary’s Infirmary was quickly becoming too small.

By 1874, the Sisters of Charity had purchased a large tract on West Houston Street to build a new and larger infirmary to take the place of St. Mary’s. This tract was to become the site of the original Santa Rosa Infirmary that grew to become the present Santa Rosa Hospital, now the largest Catholic Hospital in the

United States (Furey 1974). On the Sanborn Insurance Map of 1892 (Figure 2), Santa Rosa Hospital was located north of Milam Square along the north side of the city block bordered by Zavalla St. (N), W. Houston (S), N. East St. (E), and N. San Saba (W). North East Street later became N. Santa Rosa Street (see city plan map, 1904).

Previous Archaeology

Previous archaeology in the immediate area is limited to two CAR projects conducted in 1995 (Tennis 1995a, 1995b). Both projects were associated with monitoring the renovation of Milam Park located across Houston Street from Santa Rosa Hospital (Figure 1). The monitoring efforts led to the discovery and investigation of two individuals buried there prior to its abandonment as a city cemetery. One set of remains was determined to be that of Ben Milam, a hero of the Texas War of Independence, who died on December 7, 1835, during the Battle of San Antonio de Bejar (Tennis 1995a).

Methods:

Excavation and Lab Procedures

During the summer and fall of 1997, construction activities at Santa Rosa Hospital uncovered the remains of two humans. Fieldwork consisted of the excavation, recording, and removal of the skeletal elements and associated artifacts. The field work was conducted by a crew consisting of a project archaeologist and two field archaeologists, with a third field archaeologist assisting on the second burial. All archaeologists were employed by CAR and had previous experience in excavating human remains.

Two 6-x-3-ft units were excavated to allow the recovery of the two individual sets of human remains. Each excavation unit was measured in feet and all excavation levels were recorded in inches. The standard measurements were used because of the presumed historical time period of the burial and cemetery and to allow the archaeological plan maps to be tied in to construction prints. Metric measurements were used for the technical drawings to allow for a higher degree of detail and accuracy.

Every possible attempt was made to pedestal the skeletal remains and leave them *in situ* for recording and consistent removal. Small trowels, various dental tools, and brushes were used during the excavation. All skeletal elements were placed in aluminum foil wrap or plastic bags for transportation to the lab. The packages were then labeled with the skeletal element and its anatomical position (i.e. left humerus, right femur, right rib, etc.).

In addition to photographs and drawings of both burials, video footage (hand-held camcorder) was taken on November 21, 1997, of the initial inspection of the backhoe trench, skeletal remains, and the artifacts associated with Burial 2. Later, video footage was also shot to document the excavation procedures and techniques used to exhumate this skeleton.

Unit 1

Unit 1 was oriented in a north-south direction centered on the backhoe trench that uncovered the first set of human remains (Figure 4). An arbitrary datum (Datum A) was established at the north end of the unit on a level surface apparently below the original ground surface. The exact level of the original ground surface could not be determined because of the large amount of previous construction disturbance and debris. This arbitrary datum was tied into known points on the hospital blueprints, and was recorded by a construction survey crew using a transit and plotted on a CAD map by hospital engineering personnel.

To facilitate the removal of overburden and construction debris near the unit, a backhoe was used to gently loosen the top layer of soil, which was approximately 14 inches in depth. This layer (Level 1) was removed by shovel and passed through a ¼-inch screen. Subsequent excavation levels were recorded in four-inch increments. Levels 2–4 were passed through a ¼-inch screen. Level 5, at the level of the burial, was divided into three lots. Lot 1 contained all soil outside of the coffin. Lot 2 contained all soil, bone, and artifacts inside the coffin, as well as the coffin and its associated hardware. The matrix from these two lots were screened through ¼ and 1/16-inch screen to aid in the complete recovery of small bones and fragments. Lot

3 contained a small pocket of bone which at first was considered to be the remains of a possible pre-term infant. Upon examination by the physical anthropologist this was determined to be the probable remains of an intrusive rodent nest.

Unit 2

Unit 2 was positioned over an east-west running backhoe trench that uncovered Burial 2 (Figure 5). The datum was set at the modern construction surface that was a layer of fill. Three levels were excavated. Level 1 (Lot 3) was excavated to a depth of 12 inches below the surface. It contained a few indeterminable bone fragments. Because of time restraints and threatening weather, and since no soil change or coffin outline was visible, Level 2 (Lot 4) was removed with a backhoe. The backhoe work was carefully monitored and the matrix was screened by hand. No skeletal material or coffin remains were recovered. Level 3 (Lot 5) was hand excavated. It included material from below the surface that had been previously removed by construction of the trench and the extension of Unit 2 south of the trench (Figure 5). It contained the majority of the *in situ* skeletal material, coffin, and associated hardware.

Due to the location of the construction backhoe dirt piles, two areas near, but not included in, Unit 2 were investigated. These areas were designated with distinct lot numbers. Lot 1 included the backdirt pile on the south side of the trench. It was approximately 1.5 meters wide and 1.0 meter high. It consisted of mottled orange and yellow clay loam mixed with black clay. This black clay is believed to be consistent with the matrix at the level of the original burial. This lot was hand troweled in order to recover any skeletal material or other cultural artifacts.

Lot 1 contained metal, glass, charcoal, and bone. Some animal bone, as well as human remains, were identified and treated separately. A large section of a glazed “bean pot,” green glass, whiteware, and other ceramics were also recovered. Broken sections of metal utility pipe and fired (vitrified) clay pipe were taken for possible datable samples of construction material assumed to post-date the burial episode.

Figure 4. *Plan view of Burial 1.*

Figure 5. Plan view of Burial 2.

The loose fill from inside the trench was designated as Lot 2. This was apparently the bucket-load of dirt the backhoe had just removed when the human remains were discovered. This pile of dirt was left inside the trench covering the area that was expected to contain the bulk of the burial. Therefore, Lot 2 was removed and screened for any human or cultural remains. Some bone fragments and other materials were recovered.

All skeletal remains from both burials were originally taken to CAR facilities for cleaning, preliminary identification, and cataloging. The cleaning consisted of careful removal of the clay matrix with a dental pick, and gentle washing with cold water and a soft toothbrush. The bone was allowed to dry on drying screens. Skeletal elements broken during the excavation of the backhoe trenches were glued together with Elmer's glue and dried in a sandbox. Elmer's glue was used because it is water-soluble and the physical anthropologist who was contracted for the analysis could remove the glue if necessary. Finally, individual skeletal elements were identified, wrapped in aluminum foil which was labeled by site name and project (i.e. "Santa Rosa" and "Santa Rosa II"), and placed in padded boxes for transportation to Dr. Gentry Steele's physical anthropology laboratory located at Texas A&M University.

Excavation Results

Burial 1

On June 19, 1997, CAR archaeologists were called to the construction site at Santa Rosa Hospital to inspect a backhoe trench containing the first set of human skeletal remains. The inspection revealed skeletal materials which consisted of a right femur and freshly broken right pelvis. Portions of the right tibia had been removed by the backhoe and were the first skeletal elements to be identified as human remains. The trench fill had been spread across the surface near the trench. This area was examined visually for any human remains or other historic artifacts by the research team.

The burial appeared to be approximately three feet below the surface. No coffin outline was visible in the profile of the construction trench. An attempt was made to trowel the profile and remove the backhoe scrape marks to search for a coffin outline or other indication of intentional burial. Because of difficulties in removing the hard dry clay without further damaging the skeletal and/or cultural material, this procedure was abandoned.

The outline of the coffin was first observed on the southeast side of the coffin toward the foot end. This outline

Figure 6. Overview of Burial 1 coffin floor.

Figure 7. Preserved coffin wood from floor of Burial 1.

consisted of a visible wood stain. It was also possible to uncover and leave *in situ* much of the rusted hardware, consisting of nails and tacks. The nails were evenly spaced along the upper rim of the coffin. The east (left from the supine skeleton) side of the coffin was moderately well preserved, while the west (or right side) was only preserved from the head end to above the pelvis region. The area from the right femur to the foot was missing having been removed by the backhoe that clipped the coffin and lower right leg and foot of the skeleton. However, a portion of the right tibia was recovered by the construction crew during the initial discovery of the burial and this portion was subsequently turned over to CAR archaeologists.

The lid of the coffin had collapsed at some point in the past due to the weight of the overlying soil. The lid was not visible except in some places where wood staining was observed on top of the bones, especially the lower legs, pelvis, and skull. This collapse resulted in the slight to moderate flattening of portions of the skeletal re-

mains. Assuming that the coffin had straight, single plank side walls, it appears that the sides of the coffin, especially the more preserved left side, had apparently pushed out on the bottom and in on the top. This made excavation and recording of the upper dimensions of the coffin difficult. However, once the skeletal material and associated artifacts were removed, the remaining floor of the coffin (Figure 6) was in relatively good condition. The condition of the floor allowed for accurate measurements of the coffin outline and the removal of a preserved sample of coffin wood for analysis to be obtained (Figure 7). This “toe pincher” style coffin had dimensions of approximately 5 ft. 10 in. long, and 8 in. high at the highest preserved section (on the east side next to the left leg).

Figure 8. Postcranial segment of Burial 2. Note backhoe teeth marks in foreground.

Figure 9. *Skull of Burial 2 adjacent to sewer pipe. Note postmortem damage to skull.*

Burial 2

The skeletal remains from Burial 2 were more fragmented than Burial 1. Burial 2 had been moderately to severely disturbed not only by the ongoing activities but also by prior construction associated with a sewer line. This line cut through the coffin and portions of the skeleton (Figures 5 and 8). These disturbances destroyed the top and middle portion of the coffin and removed major portions of both femora and tibiae.

Our excavations revealed an eight-inch diameter red clay sewer pipe running perpendicular through the coffin inscribed with *San Antonio Sewer Pipe Co. Texas*. To pursue the remainder of Burial 2, Unit 2 was extended north of the sewer pipe. This extension, measuring 20 in. (N-S) by 36 in. (E-W) was designated as provenience unit Lot 6. It began at a depth of 15 inches

(38 cm) below datum. Butchered animal bone and a square nail were recovered. Also, a small wood stain was observed within the top of this lot.

The pipe was placed in direct contact with the skull and other skeletal elements (Figure 9). However, the skull appears to have been only minimally damaged in the process. Long bones from the arms and legs were found below the pipe. The pipe itself was resting almost directly on the bones. Either at the time that the sewer pipe was installed, or before, the coffin and the skeletal elements had been disturbed. The bones of the lower arms and lower legs were found intermingled. The vertebrae were scattered throughout the coffin, and feet and hand bones were mixed and displaced. Two sections of the pelvis were found at different places in the coffin as well.

Analysis and Description of Associated Artifacts

A total of 453 artifacts were recovered during the excavation of the two burials, excluding coffin wood samples. The artifacts can be divided into three major categories: personal items (i.e., wedding ring, rosary beads, religious medals), coffin remains (wood, nails, tacks, decorated tacks), and miscellaneous items (metal objects, ceramics and glass fragments, and unidentifiable wooden objects). All of the coffin hardware recovered are listed in Appendix 1, by burial and provenience.

Figure 10. *Wedding ring on left fourth phalange of Burial 1.*

Burial 1

Wedding ring

A woman's wedding band with a gemstone setting was recovered on the individual's left, fourth phalange (or ring finger) (Figure 10). The ring was recovered with a break in the band, but still in one piece. The ring was photographed and removed for analysis. After removing the dirt mechanically, the ring was taken to a local jeweler who specializes in antique jewelry. With the aid and advice of the master jeweler, the ring was cleaned with a caustic soda solution to remove organic material, and an ultrasonic bath to further loosen and remove corrosion. A very small end of the broken band was tested with an acidic solution to determine if it contained gold. It tested positive as an alloy containing at least 10-karat gold. The band was examined through a microscope but no identifiable engraving or hallmark was observed. During the jeweler's preliminary examination the stone was judged to have the correct color, cleavage, and crystalline shape to be a possible "mine-cut diamond." Such stones date to the nineteenth century. However, after the cleaning and a more thorough microscopic examination, it was determined that the stone had too many small flaws, or divots, in its surface to be a diamond. The jewelers concluded that it was a

"zirconium," or a fake diamond. However, they agreed that stylistically the zirconium mimicked a "mine-cut" diamond dating it to the nineteenth century. The jeweler determined that the band was a size 8, somewhat larger than the modern average (6½) for a woman's wedding ring. However, the band was found broken and slightly overlapped, leaving the possibility that it was purposely sized to fit the owner. The stone was set in a stylized crucifix setting. Overall, the ring was crafted of fairly inexpensive materials (rolled gold alloy and zirconium) and could have belonged to someone of low to moderate economic standing. However, the possibility exists that the owner(s) bought a ring believed to have been of greater value at the time. This conclusion is partly based on the fact that the jeweler, with the aid of a modern microscope, could not at first tell if the diamond was real or not.

Rosary beads

A rosary was recovered consisting of two types of beads: clear glass and jet. The beads and a religious medal (Pendant 1) were found within the matrix resting on the inner pelvic region intermingled with the bones of the hands. Six jet and 38 glass beads were recovered. A set of 21 beads were recorded *in situ* and appeared to be in the order in which they were originally strung (Figure 11). The string was not preserved. The rosary beads appear to have been hand cut. According to Crummett and Freeman (1969:58), around 1853 women wore jet jewelry in the form of beads, bracelets, buttons, and other examples. Jet is a black anthracite coal and was still available as jewelry into the early 1900s. The black rosary beads found with Burial 1 appear to be of this type of material and tend to flake if scraped. The black color has inconsistent brown streaks indicating that it is not glass but anthracite coal.

Religious medals (Pendants 1 and 2)

Two religious medals, originally identified as pendants, were found in Lot 2. Pendant 1 (Figure 12) was in the pelvic region with the bones of the hands and the rosary beads. It was on the right side of the pelvis and could have been attached to the rosary. Pendant 2 (Figure 13) was found under the left scapula (shoulder) resting on a section of preserved coffin floor. Both

Figure 11. Selected rosary beads from Burial 1.

Figure 12. *Pendant 1 from Burial 1.*

pendants were recovered with broken or incomplete bails. The bail is the attachment loop of the pendant. No writing or image is visible on either face of the pendants due to heavy corrosion. Pendant 1 has greenish and light brown colored corrosion, while Pendant 2 has mostly grayish colored corrosion with some green and brown. It is possible that Pendant 1 had more copper alloy while Pendant 2 may contain some amount of silver. Both pendants were taken to the radiology lab at Santa Rosa Hospital for X-rays in an attempt to distinguish some type of image or inscription. None were visible and the chief radiologist determined that the alloy and subsequent corrosion were too dense for a detailed image.

Coffin remains

The remains of a wooden “toe-pincher” style coffin were recorded. Different sections of the coffin were found in various stages of preservation. The outline was first observed along the left (east) side of the burial. Portions of the top of the coffin, which had deteriorated the most, were removed with the surrounding soil during the clearing of the burial. The majority of the top and sides were visible only as stains. The outline of the stain, however, was helpful in determining the dimensions of the coffin (Figure 6). At least 34 pieces of unidentifiable rusty metal chunks were recovered as well as 75 tacks, 38 identifiable nails, and 15 nail tips (see appendix 1: Coffin Hard-

Figure 13. *Pendant 2 from Burial 1.*

ware). No other hardware, such as a faceplate, key-hole, or handles, was identified.

Nails

All identifiable nails appear to be machine-cut square nails. This and other observations indicate an interment date of about 1840 to 1890. The nails recovered with Burial 1 had fairly uniform sizes and shapes supporting the machine-cut variety interpretation. Inspection of the cross sections of all broken nails revealed that they had been made with the iron fibers parallel to the shank. Nelson (1968:7) states that this manufacture technique dates to about 1840. The use of this type of nail still persists, but they have not been common since before the turn of the century. Howard (n.d.:55) indicates that by about 1825 cut nails with machine heads became the all-purpose nails. The machine-cut nail was replaced in the United States by the wire nail beginning in 1879. By 1887, the price of wire nails was comparable to that of cut nails and began to quickly replace them (Fontana 1965). It is quite probable that the growing town of San Antonio would have had wire nails for general use before 1900.

Coffin wood

The best preserved section of the coffin was the floor, especially at the upper section from the area behind the skull to below the shoulder. A wood sample from

behind the left scapula (Figure 7) was submitted to Dr. Phil Dering at the Palynology Lab of Texas A&M University's Center for Environmental and Archaeological Studies. The wood contained a very abrupt transition from early to late wood and had abundant resin ducts (Dering, personal communication). These characteristics helped identify it as a species of hard pine (e.g., Yellow Pine). The wood planks for this coffin could have come from trees in southeastern United States forests. The closest historical source to San Antonio would have been from pine forests in east Texas.

Small wooden objects

Several broken pieces of wood with fragments of copper wire and a small rectangular plate measuring 5 mm x 10 mm were found under the mandible. The wooden fragments ranged in size from 10 mm to 25 mm. This object could have caused the blue-green staining on the mandible, sternum, and two cervical vertebrae. It is possible that these are the remains of a wooden crucifix or other object, worn around the individual's neck, although no other evidence for a necklace or string was found.

Metal objects

One copper straight pin was recovered near the manubrium (or chest region). It is about 5 mm long and was broken in two pieces. Another hooked copper object was found near the lower lumbar (or lower back region). This was probably a fastener of some type. No other evidence of clothing or shoes was found. These two copper fasteners were probably the remains of a shroud-like dress which the deceased would have been interred with (Fox, personal communication). This was a common practice in the mid-nineteenth century.

Ceramics

The surface inspection of backdirt from along the side and just above the coffin of Burial 1 resulted in the recovery of three ceramic sherds. These sherds were collected and analyzed by Anne Fox and included one lead glaze ware, dating to post 1750; one cut sponge decorated whiteware, dating to after 1860; and one hand-painted whiteware, dating to post-1835. The provenience of these ceramics and their associated dates

do not appear to refute the evidence for a mid-nineteenth century burial date, with subsequent fill above the interment.

Burial 2

Although the coffin in which the individual from Burial 2 was interred was partially preserved and contained some hardware, no associated jewelry, religious artifacts, or personal items were recovered. The post-interment disturbances noted earlier could account for the lack of associated artifacts. The fill from the area immediately around and above the coffin contained several artifacts although it is likely that they were not associated with the burial.

Coffin remains

The excavation of Burial 2 revealed the outlines of a "toe-pincher" style coffin. The two ends of the coffin were largely undisturbed by the recent construction activities, however, the previous disturbances noted and the passage of time had caused the wood to deteriorate to a great degree. Inspection of the characteristics of the preserved samples of the coffin wood in this burial confirmed it also was made of hard pine (*Pinus* sp.).

Nails

The coffin nails recovered from Burial 2 were of the same style of manufacture (machine-cut nails), and same general size range and state of preservation as those which were recovered from Burial 1. In addition to the nails, thirty-five copper-headed tacks were found associated with the burial. These tacks consist of a copper alloy head attached to an iron tack. The tacks were of similar length as those without copper heads, and were undoubtedly used for decorative purpose. It is very likely that they were more costly than the machine-cut nails, and may indicate a more expensive coffin used in Burial 2 than was used in Burial 1. Thirty-five copper-headed tacks, 87 iron tacks, 3 complete nails, 38 broken nails, and 30 miscellaneous iron fragments were recovered with Burial 2.

Ceramics, glass, and miscellaneous artifacts

Twenty-eight ceramics and 18 glass sherds were recovered from the backdirt (Lot 1) and loose fill of the backhoe trench (Lot 2). Lot 1 contained 17 tin-glazed “bean pot” ceramic sherds; 7 undecorated white, 1 hand-painted white, and 1 transfer whiteware. Lot 1 also contained 4 green glass, 1 green/black glass, 4 clear, 1 clear/blue, and 7 patinated “medicine bottle” glass sherds. Lot 2 contained 1 whiteware, 2 clear glass sherds, and 1 cut granite/marble fragment. Lot 6 contained 1 hand painted whiteware and 1 flake. The cut granite/marble fragment could represent the remains of a monument from the cemetery such as a head or foot stone, yet no direct association with the burial remains can be proven for any of these artifacts.

Osteological Analysis

D. Gentry Steele, Anthony Lyle, and
Jeffrey R. Francis

Two almost complete skeletons were recovered in coffins during construction at Santa Rosa Hospital. The first recovered skeleton, designated Santa Rosa Burial 1 (Figure 4), represented the remains of a young adult female, probably in her twenties. Her height was estimated to have been about 5 feet, 1½ inches tall during life, and she appeared to be predominantly of European descent based upon subjective criteria observed in the cranial elements and the teeth. While cause of death could not be determined, she appeared to have suffered during life from a chronic or traumatic injury to the lower back. Burial 1 female also suffered from an infection of unknown etiology, which affected the internal and external tables of the braincase. Additionally, two caries were present in the right and left upper third molars.

The remains of the second individual recovered from the construction area of Santa Rosa Hospital, designated Burial 2 (Figure 5), represented an adult male in his thirties to mid-forties. His height during life was estimated to have been approximately 5 feet 4 inches, and he appeared to have been of Mexican-American descent based upon the presence of features that are more commonly observed in these populations. Again,

while cause of death could not be determined, he appeared to have suffered from few pathological disorders that affected his skeleton. The most notable disorders included caries and alveolar resorption of the bone surrounding the margins of the teeth, and modest evidence of degenerative joint disease, muscle stress at points of muscle insertion, and compressive damage, possibly associated with activity, to inter-vertebral disks of the vertebrae.

In addition to these two well-represented individuals, two rib fragments recovered near Burial 1 were the sole bony remains representing a third individual of unknown age, sex, or biological affinity. These fragments were found near Burial 1.

A fourth individual conceivably could be represented by small bone fragments recovered from a pocket of bone located between Burial 1's femora. As this pocket of remains was being exposed, a rib fragment and one long bone were tentatively identified as the remains of a human fetus or infant. When the remains were transferred to the biological anthropology laboratory at Texas A&M, a preliminary analysis documented that the remains examined were too small to be remains of the Burial 1 female. In addition to these remains, however, 152 fragments of bone were recovered from a packet of dirt containing the remains of the possible human fetus or early infant. These fragments, ranging in length from 1.0 mm to 5.0 mm in any dimension, were sorted into six categories: 1) very thin cortical fragments or cranial materials which appeared to be most probably the cranial remains of some small mammal approximately the size of a rodent, although no diagnostic rodent teeth were recovered; 2) small fragments of cortical long bone which possibly could be small fragments from a human fetal skeleton; 3) one long bone shaft of a small animal, probably rodent, 4) nondescript fragments of cortical and cancellous bone, which could have been from the adult female, or a human neonate, or even possibly a small nonhuman mammal; 5) fragments of flat bone, most plausibly representing skull elements that appeared to be too large to fit the cranial elements tentatively considered rodent; and 6) unassignable bone bits.

Based on these remains, it could not be ruled out that at least some of the bone fragments recovered from

the area between the femora of Burial 1 were those of a fetus or early infant, but no unequivocally diagnostic human bone fragments were recovered. Within the 152 elements from the packet of matrix recovered was one long bone shaft of a small mammal, possibly rodent, and one temporal element which also was from a very small mammal, probably a rodent. These two elements represented a smaller animal than most of the cortical bone fragments. It appeared then, that at least two animals were represented in the soil matrix, a very small rodent, and bits of bone from a larger animal, possibly the Burial 1 adult female or a sub-adult human. The presence of the rodent remains raises the possibility that the small concentration of bone was assembled by a rodent, rather than representing the more complete remains of a fetus.

Presented below is a detailed description of the analysis of Burials 1 and 2. Appendix 2 is an inventory of the bones representing each skeleton. Most of the elements recorded are comminuted and incomplete. Appendix 3 presents the measurements taken on the recovered elements. The number of measurements taken was limited by the incompleteness of the elements.

Burial 1

Remains Recovered

Most of Burial 1 is represented, including the skull, thorax, pectoral and pelvic girdles, and limbs (Appendix 2). The cortical surfaces of the bone recovered exhibited a modest degree of erosion on the surface. The most apparent damage to the skeleton appeared to be the results of compaction of the coffin and the soils overlying the skeletons, breakage and loss of bones as they were inadvertently uncovered during the process of construction at Santa Rosa Hospital, and finally during the archaeological excavation and later analysis of the human remains. Because of these forces, most of the skeletal elements are comminuted and incomplete.

Sex

Burial 1 was estimated to be a female, based on the assessment of the innominate, skull, and long limb bones.

Age

The individual is a young adult, older than 18, probably in her twenties, and possibly in her early thirties. The minimum age is based upon the erupted state of the upper molars, and the complete fusion of all epiphyses. The evidence suggesting she is in her twenties to possibly early thirties is: 1) moderate wear on the first and second molars, 2) the minimal degree of fusion of the cranial elements, and 3) the lack of degenerative wear of the articular facets of the skeleton except in the lower lumbar region.

Height

The height of the Burial 1 female was estimated to have been 156.6 ± 3.72 cm. (5 feet 1 ½ inches $\pm$ 1 ½ inches) during life. This stature estimate was based on the maximum length of the left femur (41.5 cm), and the use of Trotter's stature formula (1970): $2.47 (41.5 \text{ cm.}) + 54.1 = 156.6 \pm 3.72$ cm.

Biological Affinity

The fragmented nature of the cranium and the incompleteness of the face precludes an accurate assessment of population affinity. However, several features indicate that the individual may have been predominantly of European descent. The upper incisors were not shoveled (a feature common in American Indians and relatively common in individuals who trace their ancestry to both American Indians and Europeans). The nasal aperture had a well-defined sill and appeared to be relatively narrow (features more commonly seen in western Eurasian populations). This assessment of biological affinity can only be considered a suggestion.

Pathological disorders

Three disorders were noted in the skeleton: a traumatic injury or a developmental disorder of the lower back and right sacroiliac articulation, an infection affecting the endocranial and ectocranial surfaces of the skull, and caries in the upper third molars. The disorder in the lower back region included an anomalous articulation of the right costal process of the last lumbar with the ilia in the region of the sacroiliac joint. Additionally, the individual had a sixth supernumerary lumbar; the cervical, thoracic, and sacral elements were the normal number of 7, 12, and 5, respectively. Schmorl's nodes were also noted on all intervertebral surfaces from the superior sacral facet through the intervertebral surfaces of Thoracic vertebra 12 and the inferior vertebral surface of Thoracic 11. While present, none of the Schmorl's nodes were particularly extensive in nature. The sum of these disorders of the lower back region indicate the individual probably had periodic, possibly chronic lower back pain, but the extent of the disorder does not indicate the individual was an invalid.

The regions of the skull with infective bone deposition included one patch on the external surface of the right parietal near lambda, along the interior surfaces of the temporals in patchy regions, and a large area of infective bone deposited on the inner surface of the frontal bone above the nasal and orbital regions. This infective bone was laid down beneath the periosteum and in a laminar fashion, suggesting that the infection had occurred episodically over a relatively long period of time. The smooth, consolidated surface of the infective areas observed indicates the infection was either in a restive phase or had healed at time of death. In addition to these infective areas, the nasal bones were completely fused along the internasal suture and found to have infective bone deposited on the exterior surface. While internal infections of tissues surrounding the brain can be dangerous, even life threatening, the infection in this individual does not appear to be directly associated with the cause of death.

While the upper and lower dentition appeared to be in remarkably good condition, with no marked malocclusions, and only moderate amounts of calculus present in the molar region, two caries were observed

on the right and left upper third molars. It should also be noted that the mandibular third molars were not erupted, and did not appear to be present as tooth buds in the mandible.

Idiosyncratic features of the skeleton

A metopic suture was still open on the frontal bone. While this feature would not be pathological, it could be indicative of a more widespread delay in the fusion of the sutures of the cranium. If so, this delay could result in an underestimation of age of the individual based upon cranial suture closure alone.

The shafts of the palm and finger bones subjectively appear to be robust relative to the length of the bones, and the shafts of the proximal phalanges of the fingers exhibit relatively marked muscle attachments. These observations, prompted by the observation made by the archeologist that the ring associated with the individual was a size 8, suggests the individual had relatively muscular hands. It should be noted, however, that none of the muscle markings observed in the bones of the arms or legs appeared to be marked in their robusticity.

Burial 2

Remains available for examination

Most of the Burial 2 skeleton is represented including a complete skull with mandible, and most of the postcranial elements (Appendix 2). Burial 2 is represented by a more complete skeleton; however, the remains are more fragmented due to postmortem damage than with Burial 1.

Sex

The individual was identified as a male based upon the conformation of the sciatic notch and auricular surface, the robustness of the supraorbital brows and the moderate to marked development of the nuchal line of the occipital, moderate size of the mastoids, and the general robustness of the long bones (femora head diameter = 45 mm.). The size of the calcaneus

was assessed using Discriminant Function 1 (Steele and Bramblett 1988). The Discriminant function score was 34.9 for the Santa Rosa 2 individual compared to a male mean of 33.5 for the study sample and a female mean of 30.42 for the study sample.

Age

The individual was considered to be a young adult (Steele and Bramblett 1988), older than 24 but younger than 50 years. This assessment was based upon the fusion of the basioccipital suture, the eruption of the third molars and the presence of wear on their occlusal surfaces, the marked obliteration of the cranial sutures (approximately 50 percent obliterated), moderate wear of the teeth, and a modest degree of degenerative changes of some of the synovial joints. The degree of obliteration of the cranial sutures and moderate wear of the teeth is suggestive of an individual in the latter part of the age range given, possibly indicating the individual to be in his thirties to mid-forties.

Height

His height was estimated to have been 162.9 cm. $\pm$ 3.52 cm. This assessment was determined from the length of the fibula and using Trotter's (1970) formula for Mexican males. In inches, the individual would be 5 ft. 4 in. tall plus or minus 1.5 inches.

Biological affinity

The individual appeared to have features more commonly seen in Caucasian and Native American populations. The features suggestive of Caucasian biological affinity were the slender face and the small, receding zygomatics. The feature suggestive of American Indian genetic influence was the appearance of slight shoveling of the central incisors (scored as grade 1 using Turner's dental casts). It should be emphasized, however, that this assessment is based on subjective criteria, and can be taken as a suggestion only.

Pathological disorders

In general, the skeletal elements appeared to be those of a reasonably healthy individual at time of death. Slight indications of degenerative joint disorders were

observed on the right mandibular condyle, the rim of one lumbar vertebra, roughening of the point of insertion of the Achilles tendon of the calcaneus and lip-ping of the coronoid process of both ulnae (more prominent on the left ulna). Schmorl's nodes were observed on the inferior surface of thoracic 12 vertebra and the superior and inferior surface of lumbar 1. Facially, the left nasal bone had been broken earlier in life, and the fracture was visible but healed.

Several disorders of the dentition and alveolar margin were noted. Extensive resorption of the alveolar margin of the maxillae and mandible was present and was associated with marked calculus deposits noted on the left lateral maxillary incisors, and on the premolars and molars. Caries were noted on the buccal surface of the left mandibular first molar and on the mesial aspect of both maxillary third molars. These third molars had been held in place by soft tissue at time of death, and the roots of the teeth were marked with extensive deposits of cementum. The second and third mandibular molars had been lost earlier in life and the alveoli were resorbed. The central maxillary incisors appeared to be noticeably worn and the incisive edges on the labial surface were chipped and cracked, suggestive that these teeth had been used to habitually grip or bite something. In spite of these noted disorders, the teeth had few caries, and the dental arcade was free of crowding or malocclusions.

Idiosyncratic features of the skeleton

Two features of the skeleton were noted. The size of the nasal aperture appeared large compared to the width of the face and the nasal roof of the nose was prominent. The mandible was noteworthy for the relatively pointed, but prominent mental eminence.

The other feature noted was on the femur and in the acetabulum of the pelvis. Present on the head of both femora was a broad expansion of the articular margin of the femur head onto the anterior/superior neck of the femur. The acetabulum was marked by an enlarged and roughened appearance of the bone at the point of attachment of the ligament that helps bind the femur to the hip joint. Both of these features suggest that the individual practiced frequent and extensive flexion and adduction of the leg during life.

Conclusions and Recommendations

The establishment of Camposantos by the Catholic church was a common practice by the later 1700s. These Camposantos were usually adjacent to mission churches and were established to hold the blessed deceased because the preferred burial locations inside of the churches were filled. Foster (1960:149) states that in 1787, canon law prohibited burials within the church, but the custom persisted after that date. The Camposanto was usually located in front of the church, however, because of variability in building placements some missions placed the Camposanto to the side of the church. At Mission San José, the Camposanto, which measured 220 square feet, was also the parade ground for the mission's soldiers (Cox 1994:39).

The Camposanto of particular interest in this study is referred to in a letter from Brigadier Nemesio Salcedo, the provisional governor of Texas, in 1807. This letter reports that a Camposanto was established to replace the burial grounds in front of San Fernando Church ("Nemesio Salcedo to Antonio Cordero, September 28, 1807," Bexar County Archives, reel 36, frames 956–957).

Burial practices in San Antonio were in a state of change due to several relevant cultural factors. These are important and play a role the historical archaeology of this time period. These changes, as seen in the archaeological record and documented through historical records, indicate cultural processes at work.

The skeleton from Burial 1 was oriented north-south with the head to the north. Although Burial 2 was disturbed, and possibly the result of a secondary burial, the coffin was oriented north-south and the cranium was located in the north end of the coffin with the "toe" end pointing to the south. Cox (1994) reports that during the 1968 excavations at San Xavier Mission in Milam County, eight of eleven burials were found oriented north-south with two facing east, and three of the eleven oriented east-west (see also Gilmore 1969). During this time period, directives regarding burial practices were changing and, therefore, it is dif-

ficult to assign meaning to burial orientation. Missions at Quiburi and Awatovi in Arizona and San Gregorio de Abo in New Mexico, however, had burials underneath the church floor oriented along the long axis of the building, with the head to the north. In contrast, Foster (1960) indicates that during the eighteenth century corpses were usually interred "in front of the church with the feet of the body directed toward the church, 'so that the corpse may look at the temporal focus' ...priests are buried in the opposite direction so that they face their parishioners" (Foster 1960:148).

The general health of the inhabitants of historic San Antonio cannot be assessed from the analysis of two individuals. However, archaeological assessment of the two burials at Santa Rosa Hospital shows some similarities to other historic burials in the area. For example, the coffin construction and condition of these two burials are very similar to each other and also are very similar to the Milam Park burials (Tennis 1995a, 1995b).

The two individuals exhumed from the Camposanto represent part of the population of early San Antonio's history. The careful analysis of their remains contributes to the story of this time period. The length of use of the Catholic cemetery and adjacent city cemetery and the discovery of two unexpected graves suggest that a number of individuals remain buried in undisturbed and possibly even disturbed sections of the hospital and its surrounding grounds. Due to the presence of two rib fragments representing a possible third individual buried in the vicinity of Burial 1, and the possibility of encountering more burials in the project area, we recommend that an archaeologist monitor any ground-disturbing activities, or that archaeological testing be conducted before future construction begins in the vicinity of the burials.

The human remains recovered from Santa Rosa Burials 1 and 2, and any future remains that may be exhumed by other construction activities in the area are to be returned to Santa Rosa Hospital for reburial, in accordance with guidelines provided by the Catholic Archdiocese of San Antonio.

References Cited

Cox, I. W.

- 1994 Burials at the Alamo. *A Historical Overview of Alamo Plaza and Camposanto*. Special Report, No. 20. Edited by Robert J. Hard. Center for Archaeological Research, University of Texas at San Antonio.

Crummett, P. S., and P. S. Freeman

- 1969 *Button Guide Book No. 1: Their Manufacture, Use as Costumes, and Collectible Types*. Century House, Watkins Glen, New York.

Foster, G. M.

- 1960 *Culture and Conquest: America's Spanish Heritage*. Wenner-Gren Foundation for Anthropological Research, New York.

Fontana, B. L.

- 1965 The Tail of A Nail: On the Ethnological Interpretation of Historic Artifacts. *The Florida Anthropologist* 18(3, Part 2):85-90.

Fox, D., D. Scurlock, and J. Clark Jr.

- 1977 *Archeological Investigation at San Fernando Cathedral: San Antonio Texas*. Office of State Archeologist, Special Report No. 22, Texas Historical Commission, Austin.

Furey, Francis

- 1974 *Archdiocese of San Antonio: 1874-1974*. Edited by Rev. Msgr. Alexander C. Wangler. Archbishop of San Antonio.

Gaines, A. G.

- 1996 San Fernando Cathedral. In *The New Handbook of Texas, Volume 5*, edited by R. Tyler, Texas State Historical Association, Austin.

Gilmore, K. K.

- 1969 *The San Xavier Missions: A Study of Historical Site Identification*. Archeological Program, Report 16. Texas State Building Commission, Austin.

Green, R. M. (editor)

- 1921 *Memoirs of Mary Maverick*. Alamo Printing Company, San Antonio.

Herff, Ferdinand Peter

- 1973 *The Doctors Herff: A Three-Generation Memoir*, Vol. 1, Book 1, edited by Laura Barber. Trinity University Press. San Antonio.

Howard, H.

- n.d. *How Old is This House?* Home Renovation Associates. Farrer, Straus and Giroux. New York.

Leal, J. O. (compiler)

- 1975 Camposanto: An Ancient Burial Ground of San Antonio, Texas, 1808–1860. San Fernando Cathedral Archives. Unpublished manuscript on file at The Daughters of the Republic of Texas Research Library at the Alamo, San Antonio, Texas.
- 1976 San Fernando Church Burials: 1761–1808. San Fernando Cathedral Archives. Unpublished manuscript on file at The Daughters of the Republic of Texas Research Library at the Alamo, San Antonio, Texas.

Matovina, T. M

- 1995 *The Alamo Remembered: Tejano Accounts and Perspectives*. University of Texas Press, Austin.

Nelson, L. H.

- 1968 Nail Chronology as an Aid to Dating Old Buildings. American Association for State and Local History Technical Leaflet 48, *History News* 24(11).

Nixon, P. I.

- 1936 *A Century of Medicine in San Antonio: The Story of Medicine in Bexar County, Texas*. Lancaster Press, Inc. Lancaster, Pennsylvania.
- 1946 *The Medical Story of Early Texas: 1528-1853*. Mollie Bennett Lupe Memorial Fund, San Antonio, Texas.

Quirarte, J.

- 1983 *Letters From Governor Antonio Martinez to the Viceroy Juan Ruiz de Apodaca*. Research Center for the Arts and Humanities, The University of Texas at San Antonio, San Antonio, Texas.

Steele, D. Gentry, and Claud A. Bramblett

- 1988 *Anatomy and Biology of the Human Skeleton*. Texas A&M University. College Station.

Tennis, C. L.

- 1995a *Exhumation of a Hero: Colonel Ben Milam: Milam Park Renovation, Phase I*. Archaeological Survey Report, No. 223, Center for Archaeological Research, University of Texas at San Antonio.
- 1995b *Excavation in a Historic Cemetery: Milam Park Renovation, Phase II*. Archaeological Survey Report, No. 227, Center for Archaeological Research, University of Texas at San Antonio.

Trotter, Mildred

- 1970 Estimation of stature from intact long limb bones. In *Personal Identification in Mass Disasters*, edited by T. Dale Stewart, pp.71-83. National Museum of Natural History. Washington, D.C.

Appendixes

Appendix 1: Coffin Hardware

Appendix 2: Inventory of the skeletal elements represented in the Burial 1 and Burial 2 bone assemblage

Appendix 3: Measurements of the cranial and postcranial elements from Santa Rosa Burials 1 and 2

Appendix 1. Coffin Hardware

	Provenience	Type	Number	Penny-weight (d)	Length (inches)	Notes
Burial 1	layer 5 lot 2	tacks	38			
		chunks	6			
		nails	1	7	2.25	
		nails	2	6	2	
		nails	2	8	2.5	
	layer 5 lot 2 foot end	tacks	13			
		nails	3	8	2.5	
		chunks	2			
	layer 5 lot 2 l. side coffin	nails	1	6	2	
	layer 5 lot 2 floor	nails	1	8	2.5	
		nails	2	6	2	
		nails	3			broken
		tips	3			
		chunks	1			
	layer 5 lot 2 inside coffin	tacks	4			
		nails	2	4	1.5	
		nails	2	8	2.5	
		nails	4			broken
		chunks	14			
	layer 5 lot 2 over pelvis	tacks	1			
		nails	2	8	2.5	
		chunks	2			
	layer 5 lot 2 head region	tacks	16			
		nails	2	8	2.5	
		chunks	6			
		tips	1			
	layer 6	tacks	3			
		nails	2	5	1.75	
	total tacks		75			
	total nails		38			
	total chunks		34			
	total tips		15			

Appendix 1. Continued

Burial 2	lot 1	wire nail	1		4	
		metal blade ?	1		4	
		wire nail	1	10	3	
		wire	1		3	
		cut nails	1			broken
		cut nail tip	3			
		chunks	8			
	lot 2	tacks	7			
		copper-head tacks	4			
	lot 4	nails	2			broken
	lot 5	medium tacks	30			
		small tacks	16			
		nails	24			broken
		tips	3			
		chunks	6			
		copper-head tacks	22			
	lot 5 coffin floor	tacks	2			
		nails	1	7		
		nails	1	8		
		nails	1	5		
		shafts	9			broken
		copper-head tacks	2			
	lot 6	nails	28			broken
		tacks	33			
		copper-head tacks	7			
		chunks	24			
		total tacks	87			
		total copper-head tacks	35			
		total nails	3			
		total nails broken	38			
		total chunks	30			

Appendix 2. Inventory of the skeletal elements represented in the Burial 1 and Burial 2 bone assemblage

Element	Santa Rosa Burial 1			Santa Rosa Burial 2			Comments
	One	Left	Right	One	Left	Right	
Cranium							
Frontal	1			1			
Parietal		1	1		1	1	
Occipital	1			1			
Temporal		1	1		1	1	
Zygomatic		1	1		1	1	
Maxilla		1	1		1	1	
Palatine		1	1		1	1	
Mandible	1			1			
Hvoid							
UID Cranial Fragments							
Teeth							
Upper Incisors		2	2		2	2	
Lower Incisors		2	2		2	2	
Upper Canines		1	1		1	1	
Lower Canines		1	1		1	1	
Upper Premolars		2	2		2	2	
Lower Premolars		2	2		2	2	
Upper molars		3	3		3	3	
Lower Molars		3	3		3	3	
UID Dental Fragments							
Post Cranium							
Sternum	1			1			
Scapula		1	1		1	1	
Clavicle		1	1		1	1	
Humerus		1	1			1	
Ulna		1			1	1	
Radius			1		1	1	
Carpals		7	8			2	
Metacarpals		5	5		5	5	
Proximal phalanges		5	5	5			Side indeterminate
Intermediate phalanges	8						
Distal phalanges	9						
Innominate		1	1		1	1	
Sacrum				1			
Coccvx				1			
Femur		1	1		1	1	
Patella						1	
Tibia		1	1		1	1	
Fibula						1	
Tarsals		6			4	3	
Metatarsals		5		1	3	4	
Phalanges	13			5			Side indeterminate

Appendix 2. Continued.

Element	Santa Rosa Burial 1			Santa Rosa Burial 2			Comments
	One	Left	Right	One	Left	Right	
Vertebrae							
C 1	1			1			
C 2	1			1			
C3 - 6	4			4			
C 7	1			1			
T1 - 9	9			9			
T 10	1			1			
T 11	1			1			
T 12	1			1			
L 1	1			1			
L 2	1			1			
L 3	1			1			
L 4	1			1			
L 5	1						
Ribs							
R 1			1		1	1	
R 2			1		1	1	
R3 - 10			8		8	8	
R 11			1		1	1	
R 12			1		1	1	
UID Vertebrae & Rib Fragments							

Appendix 3. Measurements of the cranial and postcranial elements from Santa Rosa Burials 1 and 2

Element	Santa Rosa Burial 1			Santa Rosa Burial 2		
	One	Left	Right	One	Left	Right
Cranium						
Maximum length				199		
Maximum breadth				143		
Ba-Br				139		
Bizygomatic				123		
interorbital breadth				21		
Orbital breadth				100		
Orbital height					23	23
Upper facial height				69		
Palate breadth	62			67		
Palate length	52			55		
Auricular height				127		
Au-Ga				104		
Au-Na basion				97		
Au-Alv				95		
Au-Ex. Oc. Prot.				110		
Mandible						
mandible body length	71			80		
Bicond. Breadth				60		
Bigonion	94			109		
body depth P4-M1		31	32		31	31
body thickness		12.5	13		13	13
Tibia						
maximum length		346				
anterior-posterior		25	25			
transverse		18	20			
circumference		78	72			
Fibula						
maximum length		323			351	350
anterior-posterior		10.5			13	15
transverse-mid		12			13.5	14.5
circumference-mid		42			45	49
Femur						
maximum length		415	412			
anterior-posterior		23	23.5			
transverse		24	24.5			
circumference		76	78			
anterior-posterior subtro.		22	20			
transverse subtro.		28	31			
vertical diameter of head						44.5
Ulna without stylus						
maximum length		240			264	262
anterior-posterior mid.		11			15	16
transverse mid.		12			18	17
circumference		42			52	52

Table 3. Continued.

Element	Santa Rosa Burial 1			Santa Rosa Burial 2		
	One	Left	Right	One	Left	Right
Radius						
maximum length			216			
anterior-posterior			10		13	12
transverse			14		17.5	17.5
circumference			41		51	50
Humerus						
anterior-posterior						19
transverse						23
circumference						71
vertical diameter of head						38