

HUMAN BURIALS

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Human remains were discovered during testing and data recovery work conducted as part of the Rio Nuevo Archaeology project. An Agreement on Treatment and Disposition of Burial Discoveries had been prepared to facilitate compliance with A.R.S. §41-844. It was expected that remains dating from the Early Agricultural period to the Historic era might be found. Tribes claiming affinity with the Hohokam and Archaic cultural traditions in the project area included the Gila River Indian Community, the Ak-Chin Indian Community, the Salt River Pima-Mari-copa Indian Community, the Hopi Tribe, and the Tohono O'odham. The Tohono O'odham Nation was the lead claimant, and as such, represented the other groups when remains were found. Los Descendientes del Presidio de Tucson represented the early Hispanic settlers in Tucson, the Pascua Yaqui Tribe represented Yaqui burials, and the San Carlos Apache Tribe represented the Apache. The discovery plan established the steps to be followed when remains were found.

A total of 25 inhumations, 6 cremations, and 7 partial skeletal remains were discovered during the Rio Nuevo project (Table 18.1). These ranged in date from the Early Agricultural period to the Protohistoric period. An additional 13 Spanish period burials previously discovered at the San Agustín Mission and Tucson Presidio were also examined.

Burials were generally excavated by bioarchaeologists from the Arizona State Museum (ASM) who performed in-field, nondestructive analysis. Similarly, burial-associated artifacts were analyzed in the field by experts. Following analysis, all human remains and associated burial goods were repatriated to the Tohono O'odham Nation. The Historic era burials at the San Agustín Mission were left in place, and the City of Tucson's plan is to recreate the old cemetery wall and re-consecrate the area as a cemetery.

Descriptions of each burial are presented in this chapter, in addition to an osteological analysis and identification of the likely time period of the burial. These descriptions were prepared by osteologist John McClelland and archaeologist Thomas Klimas. Table 18.2 summarizes the portions of skeletal elements within burial features.

Previous excavations in the late 1940s through the early 1970s, at both the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM), resulted in the recovery of numerous burials, currently curated at ASM. Robert Dayhoff analyzed

these remains and prepared brief summaries of his findings for this report.

SAN AGUSTÍN MISSION LOCUS, THE CLEARWATER SITE, AZ BB:13:6 (ASM)

Feature 24B

Feature 24B was a very fragmentary adult inhumation found in a backhoe trench beneath Mission Lane on the eastern side of the mission. Most of the skeleton had been removed by trenching, and the backdirt was screened to recover human remains.

The individual lay within a burned, bell-shaped pit. The pit was 1 m long, 50 cm wide, and 22 cm deep. It was filled with moderately compact, dark brown, sandy-silty clay. The edges of the pit were highly oxidized, and the pit was clearly reused as a grave after an earlier use as a roasting pit or some other type of pit where burning took place.

The head was toward the east and the feet to the west. Based on the position of the left leg, the body was semi-flexed, lying on its right side with the left hand near the left knee.

The sex of the individual could not be determined. The age at death was estimated to be 25+ years, based on the wear of one tooth and the fusion of the proximal epiphysis of a carpal phalanx.

No associated artifacts were present with this burial. The burial contained no diagnostic artifacts. The flexed position and stratigraphic context indicate that it dates to the Early Agricultural period.

Feature 35

Feature 35 was a very fragmentary inhumation that had been mostly removed by a City of Tucson waterline trench. The burial pit had survived in a 25-cm-long by 16-cm-wide area. It was filled with brown clayey silt with a small amount of charcoal.

The only in situ elements were of the left foot, which lay at the northern side of the burial pit. It was not possible to determine the sex of the individual, nor the age at death. No artifacts were found with the burial, but the poor preservation of the bone and the lack of Historic era artifacts suggests the burial dates to the Prehistoric era.

Table 18.1. List of human remains found during the Rio Nuevo project, the Clearwater site, AZ BB:13:6 (ASM).

Locus/Feature	Type of Burial	Era/Period
Mission		
24B	Inhumation	Early Agricultural
35	Inhumation	Prehistoric
36	Inhumation	Early Ceramic or Hohokam
38	Inhumation	Early Ceramic or Hohokam
39	Cremation	Hohokam
90	Cremation	Hohokam
159	Inhumation	Early Agricultural
160	Partial inhumation	Prehistoric?
190	Inhumation	Early Agricultural
Mission Gardens		
3002	Cremation	Hohokam
3019	Inhumation	Hohokam
3025	Inhumation	Prehistoric
3041	Cremation	Hohokam
3045	Inhumation	Prehistoric
3048	Inhumation	Early Agricultural
3057	Inhumation	Hohokam
3071	Cremation	Hohokam
3080	Inhumation	Hohokam
3097	Inhumation	Protohistoric
3101	Cremation	Hohokam
3343	Bone cluster	Unknown
3345	Inhumation	Early Agricultural
3346	Inhumation	Early Agricultural
3347	Inhumation	Hohokam
Congress Street		
144	Bone cluster	Unknown
573	Inhumation	Early Agricultural
574	Inhumation	Prehistoric
591	Bone cluster	Prehistoric
603	Inhumation	Early Agricultural
604	Bone cluster	Early Agricultural
605	Inhumation	Early Agricultural
618	Inhumation	Prehistoric
Brickyard		
3267	Inhumation	Early Agricultural
3268	Inhumation	Early Agricultural
9357	Isolated bones	Early Agricultural
9357	Isolated bones	Early Agricultural
3330	Inhumation	Hohokam
3357	Inhumation	Early Agricultural

Feature 36

Feature 36 was an adult female inhumation discovered in the wall of a City of Tucson waterline trench. The skeleton was complete from the pelvis upward. It lay within an oval pit; the pit was 84 cm long, 50 cm wide, and 35 cm deep. It was filled with light brown silt with chunks of clay.

The individual lay on her right side, with the head at the southeastern end of the pit. The right arm was extended along the side of the body. The left upper arm was extended along the chest, and this arm was bent at the elbow so that the forearm lay across the pelvis and the hand would have been above the right ilium.

A broad sciatic notch and gracile arm bones indicate this was a female. Heavy tooth wear and the presence of bony growths on the lumbar vertebrae indicate the woman was between 30 and 40 years old when she died. She had two molars with caries, including one molar with total crown destruction.

One large plain ware sherd was found under the ribs of the individual. The presence of a sherd in the pit fill indicates the burial dates to either the Early Ceramic period or a Hohokam period.

Feature 38

Feature 38 was a child inhumation placed along the northwestern side of a pit. The burial was found beneath the surface of Mission Lane, but it was complete and in excellent condition. The pit was roughly oval and was 65 cm long, 30 cm wide, and 15 cm deep. The fill was moderately compact brown clay.

The child lay on its right side, with the head at the northern end of the pit and its pelvis at the southern side. The right arm was drawn up so that the right hand lay beneath the skull. The left arm was bent at a 90° angle, crossing over the lower chest with the left hand next to the right elbow. The legs were flexed, with the left leg over the right leg and the knees pointing northwest. The feet were at the southern end of the pit adjacent to the pelvis.

Sex cannot be reliably determined for juveniles. Dental development indicates the child was between 6 and 10 years old at death. The degree of fusion of long bones and extremities is consistent with this age. The only visible pathology was a faint linear enamel hypoplasia on a mandibular canine. This indicates the child had experienced growth stoppage from either disease or nutritional stress. The head was not deformed from a cradleboard.

No associated grave goods were recovered; however, fire-cracked rocks, prehistoric ceramics, and flaked stone were found in the fill.

Table 18.2. Position of skeletal elements for Rio Nuevo inhumations, the Clearwater site, AZ BB:13:6 (ASM).

Feature	Side	Head	Face	Arms	Hands	Legs	Knees	Feet
24B	Right	E	?	?	L, l knee	Flexed	N	SW
35	?	?	?	?	?	?	?	N
36	Right	S	W	R, extended; l, bent	L, r pelvis	?	?	?
38	Right	N	SW	R, tightly bent; l, bent at 90° angle	R, below head; l, r elbow	Flexed	NW	S
159	Back	S	?	R, bent	?	Tightly flexed	SE	NW
190	Back or left	N	NE	R, bent; l, ?	R, hand over chest	Flexed	SE	NW
573	Back	SW	?	Sides	?	Flexed, r side	SW	NE
603	Back	SE	W	Flexed	Near skull	Flexed	SE	NW
604	?	?	?	?	?	?	?	?
605	Back	SE	W	Bent at elbow	Over lower chest	Flexed, r side	SE	NW
3019	Left	N?	?	?	?	Semi-flexed	R = E, l = SW	W
3025	?	S	NW	?	?	Tightly flexed?	?	?
3045	?	N?	?	?	?	Flexed	N	S
3048	Back	NW	?	?	?	Tightly flexed	NW	SE
3057	Left	NW	N	Likely bent at elbow	Near skull	?	?	?
3080	Left	S	N-NW	R, flexed; l, extended	R, face; l, legs	Flexed	S	N
3097	Back	S	N-NW	Extended	Over pelvis	Flexed	E	W
3267	?	?	?	?	?	?	?	?
3268	?	?	?	?	?	?	?	?
3330	Left	N	E	R, flexed; l, extended	R, under skull; l, legs	Flexed, l side	E	S
3343	?	?	?	?	?	?	?	?
3345	Left	S	W	Bent at elbow	Near ankles	Tightly flexed	SW	?
3346	Left	E	S	?	?	Flexed?	?	?
3347	?	?	?	?	?	?	?	?
3357	Right	S	E	R, bent at elbow; l, extended	R, on abdomen; l, feet?	Flexed, r side	E	N

Note: ? = Unknown.

The burial dates to the Prehistoric era, based on the presence of fire-cracked rocks, prehistoric plain ware ceramics, and the position of the body. It dates to either the Early Ceramic or Hohokam periods.

Feature 39

Feature 39 was a secondary cremation found in the area beneath Mission Lane. The upper portions of the pit had been destroyed by use of the road. The surviving portion of the cremation consisted of a 25-cm-diameter cluster of sherds and cremated bone

in a pit area measuring 47 cm long, 42 cm wide, and 6 cm deep. The fill consisted of light brown fine silt.

A very small amount of human bone, consisting of 10 fragments, were found. None could be identified.

Fragments of at least four highly fragmented ceramic vessels were present. The cremation dates to a Hohokam period.

Feature 90

Feature 90 was a secondary cremation located beneath the surface of Mission Lane. The cremation

was contained within a circular pit with straight sides and a flat base. The pit was approximately 64 cm in diameter and 32 cm deep. The pit was filled with tan sand at the top and an ashy gray sand at its base. Small pieces of cremated human bone were scattered throughout the fill. None of the bone was identifiable to specific skeletal elements.

Ceramics and flaked stone were found in the pit fill, but none appear to be directly associated with the remains. The cremation dates to a Hohokam period.

Feature 159

Feature 159 was an adult male inhumation found in a pit inside a pithouse, Feature 97. The burial was in an oval-shaped pit measuring 1.1 m long, 82 cm wide, and 24 cm deep. The pit was filled with compacted, granular, brown clayey silt. Flecks of daub and clay were present in the fill.

The individual lay on his back with the head toward the south and the pelvis to the west. The upper right arm was probably extended along the chest, and the forearm was bent and underneath the right femur. The left upper arm was extended along the left side. The legs were tightly flexed, with the knees brought up to the chest. The right femur was disarticulated and lay out of position north of the other leg bones. Many bones were either missing or decomposed, including the cranium, suggesting the burial had been disturbed by rodents and perhaps by human activity.

The individual was determined to be male, based on the general robusticity of the bone and the diameter of the femoral head. The moderate amount of tooth wear and the presence of degenerative joint disease on a navicular suggest that the individual was between 30 years old and 40 years old when he died. This individual had lost his left third mandibular molar before death. There was also extensive alveolar bone loss that can be attributed to periodontal disease.

No associated grave goods were found with the burial, although flaked stone was present in the fill. This burial probably dates to the Cienega phase of the Early Agricultural period.

Feature 160

Feature 160 was a disarticulated left leg found in the fill of a Hohokam canal. No burial pit could be delineated. The area in which bone was documented was 1.04 m long, 64 cm wide, and 32 cm deep. The matrix surrounding the bones was a loosely compact, brown, silty sand.

The femur, tibia, and fibula were in poor condition and were not in anatomical position, although they all sloped downward at the same angle. A fragment from a distal ulna was also found. The sex of this individual could not be determined; age at death was estimated to be older than 15 years, based on the size of the bone.

A large mano was found adjacent to the bones and may represent a grave good. A fragment of Mexican majolica was also found near the bones, as were prehistoric sherds and animal bones. The majolica may have been introduced by rodent burrowing.

The date of the burial could not be determined, given the presence of Prehistoric and Historic era artifacts, although it is likely prehistoric.

Feature 190

Feature 190 was an inhumation of a young adult found in an area with Early Agricultural period and Historic era features. The burial lay at the base of a large circular pit that was 96 cm long, 92 cm wide, and 35 cm deep. The pit was filled with brown silty sand that contrasted sharply with the surrounding soil.

Although poorly preserved, most of the surviving skeleton was in correct anatomical position. The individual lay on his back or left side, semi-flexed, with the skull at the northern end of the pit and the pelvic area at the southwestern side. The right humerus was probably extended along the chest and was bent so that the hand would have originally been over the chest. The left forearm was disarticulated. The legs were flexed with the right leg over the left leg. The knees pointed to the southeast, and the feet were originally positioned toward the northwest.

The sex of the individual could not be positively determined. Although the gonial angle of the mandible and the width of the ascending ramus appeared to be male, the cranium and long bones were gracile. The teeth were lightly worn and the third molars erupted, suggesting an age at death between 18 and 22 years.

A large, broken ground stone mortar lay over the foot area and lower left leg. Animal bone was also found in the fill of the pit.

The burial dates to the Cienega phase of the Early Agricultural period.

Isolated Human Bone

A small quantity of cremated human bone was discovered in four excavation units adjacent to a historic-era well. Most of the pieces were unidentifiable, and age and sex could not be determined.

MISSION GARDENS LOCUS, THE CLEARWATER SITE, AZ BB:13:6 (ASM)

Feature 3002

Feature 3002 was a primary cremation located when a backhoe trench cut through the edge of the pit. The circular, bell-shaped pit was approximately 160 cm in diameter at the top and roughly the same size at the base, although the base was offset about 16 cm to the west; it was 96 cm deep. The walls of the pit were heavily burned, and the upper 20 cm of the pit contained a brown clayey-silt. The next 45 cm consisted of a very compact, grayish-tan sandy silt that contained a larger amount of charcoal. The next 10 cm was a white ash layer with abundant pieces of large charcoal and human bone. Four large rocks were present in this layer. The base of the pit contained brown, sandy silt with little bone and less charcoal.

Most of the skeleton had been distributed across the base of the pit by stirring during the cremation process. One arm lay in situ, indicating the head of the cremated individual was once in the southeastern corner of the pit. The arm was bent at the elbow, with the hand area close to the shoulder.

Approximately 1,405 gm of bone were recovered from the cremation, with most portions of the skeleton represented. The largest piece was 5 cm long, with most about 3 cm in diameter. About 75 percent of the bone was a smoky gray color, with the remaining 25 percent calcined white. Cranial fragments were more calcined than the postcranial skeleton.

The robust nature of the bone and the rugose nuchal crest suggest the individual was a male. Age at death was estimated to be 35+, based on the degree of dental wear. Slight marginal lipping of the articular surface of the proximal tibia was present, further supporting an assessment of the age as an older adult.

A large number of artifacts was present in the pit fill. A shell bracelet fragment and a partial female figurine may have been associated with the cremation. Three worked sherds, a core, a cobble with a flake struck from it, a scraper, flaked stone, and ceramics were collected, although probably not all were directly associated with the burial.

The feature dates to a Hohokam period.

Feature 3019

Feature 3019 was an adult inhumation found during backhoe trenching in the southeastern corner of the garden area. Most of the burial was removed by historic-era plowing. No burial pit could be delineated, but the bones were present in an area measuring 43 cm long by 40 cm wide. The bone lay within a 16-cm-deep zone of consolidated light grayish-brown silt.

Although missing, the head would have been located to the north. The legs and right forearm were the only in situ elements. The elements reveal that the individual was lying on the left side with the legs semi-flexed. The right knee pointed to the east and the left knee to the southeast. The feet would have been at the western side of the grave.

Sex could not be determined. The bones were from an individual aged between 18 and 45 years old at death. No pathologies were visible.

No associated grave goods were present, although ceramics, flaked stone, and ground stone fragments were present in the fill surrounding the bone. The burial is probably prehistoric. The presence of prehistoric ceramics in the fill around the burial suggests it dates to a Hohokam period.

Feature 3025

Feature 3025 was an adult inhumation located in a backhoe trench adjacent to the eastern garden wall. Most of the burial was inadvertently removed by the backhoe bucket, with only the upper portion of the skull and an isolated long bone fragment in place.

The individual had been placed in a pit that was 20 cm wide (the length of the pit could not be determined), with the bone found in a 7-cm-deep area. The in situ bone indicated the individual was probably buried in the flexed position with the head on the left side, facing northwest. Screening of the trench backdirt resulted in the recovery of long bone, cranial, and dental remains. The burial was relatively close to the modern ground surface. No pit outline could be discerned, and the proximity of the garden wall may indicate the burial had been disturbed during its construction. No associated grave goods were found with this individual.

The sex of this individual could not be determined. The teeth indicated the person was aged between 35 to 50 years at the time of death. Visible pathologies consisted of a small antemortem chip on one of the lateral maxillary incisors and small pits on the labial (outer) surface of the mandibular canines. The pits are a developmental defect of the enamel and are probably a result of an episode of nutritional stress or disease when the person was a child, with growth interrupted as a result.

The burial is thought to be prehistoric.

Feature 3041

Feature 3041 was a secondary cremation discovered in the side wall of a backhoe trench located between the Mission Gardens and the mission on the southern side of Mission Lane. The pit was circular,

with vertical walls and a flat base. It was 1 m long, at least 89 cm wide, and 35 cm deep. The pit was filled with grayish-tan clayey silt with a moderate amount of charcoal flecking. The base of the pit was burned red; however, this appears to have been a result of the first use of the pit, perhaps as a cooking pit, rather than use as a primary cremation. Two concentrations of human bone were found. On the northern side of the pit was a cluster of cranial fragments, and on the southern side was a concentration of pelvic fragments. The rest of the bone was distributed throughout the fill.

Approximately 139 gm of cremated bone was present in the pit. The largest piece was 7 cm long, with most pieces about 2 cm in diameter. All were calcined white and were heavily warped, some with curved cracks, indicative of prolonged exposure to high heat.

Identifiable fragments included cranial fragments, pieces of mandible, several teeth, a radius or ulna shaft, and femur and humerus shaft fragments. Some of the cranial fragments appear to belong to a child aged between 1 and 4 years at death, while the remaining bone appears to come from an adult. The thin margin of a fragment of an eye orbit may indicate the adult was a female.

Prehistoric ceramics and flaked stone were scattered throughout the fill of the pit but were probably not associated with the burial. The presence of Hohokam ceramics indicates this was a Hohokam cremation.

Feature 3045

Feature 3045 was an adult inhumation located in the backhoe trench cut between the Mission Gardens and the mission, along the southern side of Mission Lane. The backhoe removed the upper half of the skeleton, with the pelvis and legs left in place. The backdirt was screened to recover elements removed by the backhoe.

The burial had been placed along the western wall of a large bell-shaped pit that was 70 cm long and 40 cm wide, with the burial lying in a 32-cm-deep portion of the pit. The individual had been positioned in the pit on the right side, with the legs flexed, so that the knees faced north and the feet were positioned at the southern side of the pit. The head would have been on the northern side of the pit.

The sex of the individual could not be determined. Age at death was estimated to be between 25 and 45 years, based on the thickness of the cortical bone of the femur shaft and on the visible tooth wear. No grave goods were associated with the burial, although flaked stone and animal bone were present in the general fill.

The burial is prehistoric in age. The top of the pit originated in the clayey silt immediately below the plowzone, perhaps indicating it dates to a Hohokam period.

Feature 3048

Feature 3048 was an adult female inhumation discovered in the backhoe trench cut between the Mission Gardens and the mission, along the southern side of Mission Lane. The backhoe removed the skeleton from the mid-chest upward. Screening of the backdirt resulted in the recovery of numerous cranial fragments, teeth, and pieces of the arm bones.

The burial had been placed in the bottom of a circular-to-oval pit with slightly sloping side walls and a flat base. The pit was at least 85 cm long, 35 cm wide, and 32 cm deep. It was filled with a compact, grayish-brown silty clay.

The individual had been positioned on her back, with the legs tightly flexed. The head would have been on the northwestern side of the pit. The right upper arm was extended along the chest. The left arm and the right forearm were not in place. The knees pointed to the northwest, and the feet were at the southeastern side of the pit.

The individual was determined to be female, based on a broad sciatic notch, gracile cranial traits, and a small femoral head. Age at death was determined to be between 25 and 40 years. A faint linear enamel hypoplasia was present on one of the mandibular canines. This line developed as a result of a mild growth stoppage while the tooth was forming. This interruption could be a result of disease or a nutritional deficiency. Several teeth had small chips or fractures that indicate either a diet that included hard items or the use of teeth in manufacturing activities.

A dozen pieces of fire-cracked rocks were present in the fill of the pit. No other artifacts were recovered. Based upon the depth of the burial, it probably dates to the Early Agricultural period.

Feature 3057

Feature 3057 was an inhumation discovered in a backhoe trench. Much of the skeleton was removed during mechanical excavation. Bone removed from the backdirt was consistent with the age of the remains of the individual found in situ in the trench wall. The skull and bones of the hand were excavated from the northern face of the trench by hand.

Due to disturbance by the backhoe, pit shape and size could not be determined. Fill around the remains was a uniform, fine clayey silt, grayish-brown in

color. Most of the skull was in situ and found on its side facing north. Fragments of the hands were also recovered from the trench face and suggested that the arms had been flexed at the elbows. The individual was estimated to have been between the ages of 16 and 20 years old at time of death. Age assessment was based on the fusion status of long bone epiphyses and eruption status of the third molars. The fragmentary nature of the postcranial skeleton did not allow for a determination of sex.

Sherds of prehistoric pottery were recovered from the in situ fill. Several dozen pieces of flaked stone and a shell were recovered from loose fill in the bottom of the trench, but it was uncertain if they had originated from the fill of the inhumation. The presence of Hohokam ceramics in the fill indicated that this inhumation dates to a Hohokam period.

Feature 3071

Feature 3071 was a secondary cremation found 70 cm north of Feature 3002. The feature was excavated from the trench face, revealing that the cremation had been deposited in a circular pit with vertical walls and a flat base. The pit was 74 cm in diameter and was 58 cm deep. The upper 45 cm of fill contained very compact, brown silty clay with many charcoal pieces. The lower fill was a less compact, lighter brown silty clay loam that contained a large amount of charcoal.

Approximately 153 gm of bone were recovered, distributed randomly throughout the pit fill. The largest piece was about 5 cm long, with the majority of the bone approximately 1.3 cm in diameter. The bone ranged in color from white to gray. Little bone could be identified to element. Several cranial fragments, several teeth, and two distal phalanges were present. The bone appears to come from a juvenile and may represent two different children, one aged 2 to 5 years at death and one aged 10 to 15 years.

Fire-cracked rocks, Hohokam ceramics, a worked sherd, and flaked stone were present in the fill of the pit. The cremation dates to a Hohokam period.

Feature 3080

Feature 3080 was a child inhumation located during the excavation of a possible pithouse. The child had been buried in an oval pit, and the skeleton was relatively well preserved. The pit was 60 cm long, 38 cm wide, and 15 cm deep. It was filled with a compact, grayish-brown clayey silt.

The child's head was at the southern side of the pit with the face toward the northwest. The child lay on the left side. The right arm lay across the chest,

bent at a 60° angle so that the right forearm was along the front of the face. The left arm was extended along the side of the chest with the hand in the leg area. The pelvis was originally at the southern end of the pit with the legs flexed so that the knees pointed north and the right leg lay over the left leg. The feet were positioned at the northern side of the pit.

Sex could not be determined. Examination of the teeth suggests the child was between 5.0 and 6.5 years old at death. The long bones indicated that the individual was between 2.5 to 4.5 years old at death. This discrepancy is not uncommon and may suggest that either the aging formulas are inappropriate for this population or the child was small for its age. A small amount of dental calculus was present on a mandibular incisor, indicating the diet of the child included at least a moderate amount of carbohydrates. The back of the child's skull was noticeably flattened, revealing that the child had spent some time on a cradleboard.

No associated artifacts were present, although pieces of prehistoric pottery were discovered in the pit fill. The recovery of Hohokam ceramics from the pit fill indicates the child was probably buried during a Hohokam period.

Feature 3097

Feature 3097 was an adult female inhumation located during excavation of a pithouse, Feature 3038. The pit containing the burial intruded into the house, which dates to the Agua Caliente phase of the Early Ceramic period. The oval pit had relatively straight walls and a flat base. It was 80 cm long, 50 cm wide, and 40 cm deep.

The skeleton lay with the head to the south, resting partly on the base and partly on the right side. The upper body was extended to the north and appeared to lie on the back. The right arm was fully extended, with the radius crossing over the ulna with its posterior surface up. This indicates the right hand would have rested palm side down. The left lower arm was semi-flexed, with the hand placed between the ilia.

Both legs were flexed to the right side with the left leg lying on top of the right. Unlike the rest of the skeleton, the legs did not lie horizontal. The knees were about 20 cm higher than the hips. The legs were probably pressed up against the northern wall of the pit and were retained in this position during decomposition.

The individual was determined to be a female based on a broad sciatic notch on the right ilium and gracile cranial traits. Extreme tooth wear and antemortem loss of most of the mandibular molars suggested the individual was over 40 years old at death.

Estimated long bone lengths suggest the woman was only about 150 cm tall.

A number of pathologies were discovered. Most of the front teeth had been worn so heavily that no enamel remained. These teeth were essentially root stubs that had been rounded smooth on their occlusal surfaces and sloped downward into the mouth. The alveolar bone of the maxilla and mandible had receded, exposing the roots of the teeth. The left third molar had enlarged roots, which is a common consequence of reduced contact between the tooth root and the alveolar bone.

Two of the mandibular premolars had caries located between the teeth at the junction between the enamel and root. A small chip was also present on one of the lower premolars. A groove was noted on the distal root surface of the right second premolar, probably produced when the tooth was used during the manufacture of an item or when the woman probed her tooth to alleviate discomfort. Examination of the skull revealed two healed depressed cranial fractures on the superior surface of the right parietal. One of these injuries caused the inner surface of the bone to bend inward a few millimeters. The fractures would have occurred when something struck the woman's head. Based on their position, it is unlikely the fractures would have occurred as a result of a fall. Slight thinning of the cortical bone of a radius shaft may indicate the beginning stages of osteoporosis.

One large piece of flaked stone was found in the lower chest area of the skeleton and may represent an associated artifact, although this is uncertain. Other pieces of flaked stone, ceramics, daub, and several chunks of red ochre were found in the pit fill. This inhumation probably dates to the Agua Caliente phase of the Early Ceramic period.

Feature 3101

Feature 3101 was a secondary cremation discovered in Trench 317. The cremation had originally been placed inside a jar, which was completely removed by the backhoe. The impression of the jar was visible in the wall of the trench between 33 cm and 43 cm below the original ground surface. Screening of backdirt resulted in the recovery of jar fragments, a shell pendant, and about four pieces of calcined human bone. The cremation dates to a Hohokam period.

Feature 3343

Feature 3343 was an extremely fragmentary, disturbed inhumation of unknown age found in the wall of a backhoe trench.

Feature 3345

Feature 3345 was an adult inhumation discovered in the southern face of a backhoe trench. The individual had been interred in an oval-shaped pit that measured 1.00 m in length, 0.50 m in width, and 0.29 m in depth. Fill of the pit was grayish-brown, fine clayey silt.

The individual had been laid on the left side, in a tightly flexed position. The skull was pointed toward the south, with the face on its left side, looking to the west. The knees were pulled up tightly to the torso, and the arms were at the individual's side with the forearms pointed toward the ankles. The hands and feet had been disturbed by mechanical trenching. Cranial suture closure and tooth wear suggested the individual was between the ages of 30 and 40 years at the time of death. The skeleton displayed no good sex indicators, so the sex of the individual was undetermined.

Some slight disarticulation of the remains was attributed to rodent disturbance. One piece of flaked stone was discovered in the fill. The lack of ceramics in the fill suggest this burial dates to the Early Agricultural period.

Feature 3346

Feature 3346 was an adult male inhumation discovered in the northern wall of a backhoe trench. The individual was interred in an oval pit with steep sides that measured 0.70 m in length, 0.45 m in width, and 0.60 m in depth. The pit had been capped with a large rectangular stone and a few other smaller stones. Fill of the pit was silty sand mixed with some clay and caliche. The clay and caliche were mostly confined to the upper centimeters of fill. The fill was compacted and grayish-brown in color.

Preservation of the skeleton was poor, and the legs and pelvis of the individual appeared to have been removed by the backhoe. The skull was located at the eastern end of the pit and appeared to lie on the left anterior aspect. Some rodent disturbance was visible in the fill and in the pit margins around the skull, and this disturbance may have changed the position of the skull. Fragmentary remains of the vertebral column and a few of the ribs were in situ and indicated that the body had been placed on its left side. The shafts of both humeri, radii, and ulnae—all also found in situ—seemed to support this conclusion. The size of the burial pit and the location of a tibia shaft fragment suggested that the legs had been tightly flexed, although this could not be confirmed.

The status of cranial sutures and the level of tooth wear suggested that the individual was between the ages of 35 and 50 years at time of death. Cranial traits and mandible morphology suggested that the individual was a male. The robustness of the humerus shafts further support this determination.

The upper portion of the burial pit, with higher clay content, also contained a few pieces of fire-cracked rock. Some six small ceramic sherds were also present in this fill. Due to the rodent disturbance noted in the burial pit, the sherds were thought to be intrusive to the inhumation. The lower fill of the pit containing the remains of the individual also contained some charcoal flecking. Two pieces of flaked stone were found in this lower portion of fill.

The ceramics discovered in this fill were probably brought in through rodent turbation. Their confinement to the small area of upper pit fill that had been disturbed seemed to support this conclusion. The burial probably dates to the Early Agricultural period.

Feature 3347

Feature 3347 was an inhumation exposed during backhoe trenching. The remains were extremely fragmentary, and the presence of several metal pipes suggested the burial had been previously disturbed by modern activity at the site. Due to this disturbance, a burial pit could not be located. It could not be determined if this was a primary or a secondary inhumation. A few skeletal fragments were recovered from the backdirt and were thought to have originated from this feature.

The remains recovered from the trench consisted of a few cranial fragments and one carpal phalanx. A long bone fragment was also collected from the backfill. The age of the individual could only be determined as between 15 and 50 years. Sex could not be determined.

Half of a ceramic bowl was found in close association with the remains and was thought to have been associated with this inhumation. This inhumation likely dates to a Hohokam period.

Isolated Human Bone

Several fragments of cremated bone not associated with features were found during the project. One fragment came from the plowzone of Trench 300 and is either a tibia or a femur shaft fragment from an adult. Two small long bone shaft fragments were also found in Feature 3001.

CONGRESS STREET LOCUS, THE CLEARWATER SITE, AZ BB:13:6 (ASM)

Feature 144

Feature 144 was a cluster of probable human bone found inside a prehistoric canal, AZ BB:13:481 (ASM). No pit was identified for the remains. One human tooth fragment and 18 probable human bone fragments were recovered. The largest piece was 4.4 cm long, with most between 1-2 cm in length. Four of the pieces appear to have come from an ilium, a possible temporal bone, two probable radius shafts, three fragments of radius or ulna shaft, and several pieces of cortical bone from either a humerus or a femur. A tooth crown fragment, probably from a mandibular premolar, was only slightly worn, indicating an age of less than 35 years at death. The sex of the individual could not be determined, and there were no visible pathologies in the poorly preserved remains. These remains probably date to the Prehistoric era or the Protohistoric period.

Feature 573

Feature 573 was a subadult-to-young adult inhumation discovered in an area where soil was being mechanically stripped. The burial was placed in a pit 95 cm long, 60 cm wide, and 12 cm deep. The fill was a dark gray-brown silty clay. Several pieces of charcoal were present.

The body had been placed in the pit in a flexed position with the head to the southwest and the pelvis to the north. The arms were probably extended along the side, and the leg bones were flexed and lay on the right sides. The knees pointed southwest, and the feet would have been at the northeastern side of the pit.

Sex could not be determined. There was little to no wear on the third molars and moderate wear on the first molars. Age at death is estimated to be between 15 and 25 years.

Three pieces of fire-cracked rock and a piece of flaked stone were found in the pit. The burial dates to the Early Agricultural period.

Feature 574

Feature 574 was an infant inhumation found in a mechanically stripped area. The skeletal elements were poorly preserved, with primarily cranial fragments recovered. No body positioning could be determined, and no pit outline was found. Based on dental development, the infant was determined to

be six months old at death, plus or minus three months.

Six small shell beads were found in close proximity to the skull. The burial is prehistoric and dates to either the Early Agricultural or Hohokam occupation of the site.

Feature 591

Feature 591 was a cluster of adult human bones found within a prehistoric canal. The bones lay within a 30-cm by 5-cm area in a hard brown clayey loam. A set of long bones lay stacked together, with at least four present, as well as one cranial fragment. The remains were likely redeposited in the canal. The sex of this individual could not be determined. One distal tibia was fused, and a recovered premolar was heavily worn, indicating the individual was at least 30 years old at death. The bones were determined to be prehistoric, based on their position inside an irrigation canal from that timeframe.

Feature 603

Feature 603 was a young adult female inhumation discovered during stripping of a portion of the site. The burial was positioned on its back with the head to the southeast and the feet to the northwest. The skull lay on its base with the chin pointing to the west. The upper arms were extended along the chest, and the lower arms were sharply bent so that the hands were near the skull. The legs were tightly flexed and drawn up so that the knees were over the chest and pointing to the southeast, a short distance away from the hands.

The individual was determined to be female, based on characteristics of the pelvis, including the pubic symphysis and the subpubic angle. Cranial traits were a mixture of typically female and male traits. Those suggesting a female identity included a smooth glabella and gracile nuchal crest. More masculine traits were robust mastoid processes and intermediate supraorbital ridges. The overall impression of the remains was of a female.

Age at death was determined to be between 22 and 25 years old. The third molars were erupted, indicating an age of at least 15. Dental wear was light to moderate, suggesting the individual was a young adult, younger than 35 years old. The iliac crest was fully fused, which occurs about 18 years of age. All of the annular epiphyses of the vertebrae were fused, but a remnant line was visible in some cases. Full fusion of the annular epiphyses does not typically happen until age 25. The medial epiphysis of the right

clavicle was present but unfused. In females, this fuses at age 23 or younger.

A few dental pathologies were noted. A diffuse hypoplastic pitted area was noted on the outer surface of the right mandibular canine. A matching defect was not present on the left mandibular canine. This hypoplasia was likely the result of a brief episode of interrupted growth during tooth formation when the individual was a child. Calculus was present on two mandibular incisors, indicative of a diet rich in carbohydrates. No dental caries or abscesses were present. The left third mandibular molar was impacted against the back of the second molar. The cusp patterns of all third molars were irregular. Also noted was a region on the back of the parietal bones near the lambdoidal suture that exhibited remodeled fine porosity. The healed lesions probably indicate some type of scalp inflammation, perhaps from an infection of the area.

A large trough-shaped metate lay upside down above the skeleton. A small stone bowl was placed immediately next to the right heel. Two shell discs were next to the bowl. A fragment of vesicular basalt was next to the left side of the skull. Nineteen small shell beads were found around the left wrist and hand. Much of the skeleton was stained with hematite or red ochre, especially around the feet, thoracic region, and the portions of the legs over the thoracic region. More red ochre was present under the stone bowl, in the chest region, and around the right hand. A piece of red ochre was found over the right hand next to the right ear.

The burial dates to the Early Agricultural period.

Feature 604

Feature 604 was a very fragmentary, disturbed inhumation found in the wall of a backhoe trench. Based on its stratigraphic context, it probably dates to the Early Agricultural period.

Feature 605

Feature 605 was a juvenile inhumation found in the base of a backhoe trench. The pit was filled with a compact, dark brown clay with occasional pieces of charcoal.

The child had been placed in the pit tightly flexed, on its back, with its head to the southeast. The face was pointing west, although the skull appears to have slumped down, and this may not be the original orientation. The upper arms were extended along the chest, with the right forearm bent so that the hand lay in the lower chest area and the left arm bent so

that the left hand was close to the top of the right pelvis. The legs were tightly flexed and drawn up over the forearms with the knees pointing to the southeast and the feet to the northwest. The legs were lying on their right sides.

Sex cannot be reliably determined for juveniles. The dentition of the individual indicated it was probably between 11 to 12 years old at death. This is supported by the degree of fusion for most of the skeleton, except the greater trochanter of the left femur, which appeared to be fused. This would indicate a slightly older age at death. However, examination of the acetabulum indicated it was unfused. Fusion of the acetabulum typically occurs between the ages of 13 and 14 years. Long bone lengths suggested an age range of between 7.5 and 10.5 years at death. The smaller long bone lengths may indicate this child underwent nutritional stress or disease and was smaller as a result.

No dental pathologies were present. The only postcranial defect was the cortical bone of the tibiae, which was abnormally porous. This may be a result of nutritional deficiency or a metabolic disorder.

Thirty-five shell beads from a necklace were found around the skull and neck vertebrae. Each bead was shaped to look like an animal claw and had a perforation near the base. Most of the beads were found in clusters near the right neck and shoulder area. A few beads were scattered about, including three inside the mouth. Ochre staining was visible on the leg bones and near the metatarsals. The depth of the burial, the lack of ceramic artifacts, and the flexed position of the burial indicate it dates to the Early Agricultural period.

Feature 618

Feature 618 was a juvenile inhumation discovered during mechanical stripping. The burial was discovered in a pit that was at least 55 cm long, 40 cm wide, and 10 cm deep. The remains were poorly preserved, and only three ribs and several unidentifiable long bone fragments were present in situ. No artifacts were found with the remains, which are thought to date to the Prehistoric era.

Isolated Bone

Fragments from a left femur and a possible humerus were found in the area near Features 603, 605, and 618. The fragments are from an adult of undetermined sex. A vertebral centrum fragment and a probable tarsal fragment were also found in the same

area. These later two elements may have originated in Feature 603.

BRICKYARD LOCUS, THE CLEARWATER SITE, AZ BB:13:6 (ASM)

Feature 3267

Feature 3267 was a child inhumation discovered during excavation of a Cienega phase pit structure (Feature 9357). The burial pit was intrusive to the pit structure. Its edges were indistinct, but it measured at least 50 cm long, 10 cm wide, and 8 cm deep. The remains were poorly preserved and consisted of the skull and the lower portions of both arms. Dental and long bone development suggested the individual was a child, 3 to 4 years of age. Sex could not be determined. The burial dates to the Cienega phase of the Early Agricultural period.

The partial remains of another individual, Feature 3268, were also found intrusive to this pit structure, about 1 m south of this inhumation.

Feature 3268

Feature 3268 was an adult inhumation intrusive to the fill of pit structure Feature 9357. Pit edges for this burial could not be determined, as it was excavated into the fill of the house. Based on the position of the remains, the pit measured at least 50 cm long, 30 cm wide, and 14 mm deep. The skeletal elements recovered included the skull, a single vertebra, and an unidentifiable long bone fragment. Dental and long bone development suggested the individual was 20-50 years at the time of death. The remains were too fragmentary to determine the sex of the individual. The remains date to the Cienega phase of the Early Agricultural period.

This individual was interred just south of the remains of a child, Feature 3267, which were also intrusive to the pit structure, Feature 9357.

Isolated Bone from Feature 9357

Some additional fragmentary remains were discovered in this pit structure (Features 3267 and 3268), including fragments of the long bone of an adult individual and the premolar of a juvenile. The long bone was too fragmentary to determine if it came from the same individual as the one interred in Feature 3268. The juvenile premolar came from a child of 5 to 6 years of age, suggesting it represented a different individual than the one interred in Feature 3267.

Feature 3330

Feature 3330 was an adult male inhumation discovered during mechanical stripping. The individual had been interred in a pit that was originally used as a roasting pit. The pit was oval in shape and measured 87 cm long, 54 cm wide, and 11 cm deep.

The original pit had been excavated into the fill of a Hohokam canal, Feature 149, BB:13:481. Fill of the pit was clayey silt that contained charcoal, ash, and fire-cracked rock both above and below the burial. This suggested the roasting pit was excavated after use, the individual was interred, and the fill was redeposited to cover the individual.

The individual was placed in the pit in a flexed, semi-supine position. The legs were lying slightly off to the left side of the torso. The right arm was extended along the side of the body, while the left arm was bent at the elbow with the left hand under the head. The skull was in the northern end of the pit, with the face turned to the left, resting on the left hand.

Dental development and wear, as well as the stage of cranial suture closure, suggested the individual was between 35 and 45 years of age at the time of death. The sex of the individual was determined to be male, based on cranial characteristics and a large femoral head diameter.

Two perforated shell disks that measured approximately 2.6 cm in diameter were found around the mouth area of the individual. Fill of the pit also contained some fire-cracked rock and lithic debitage. The presence of the pit in the fill of a Hohokam period canal suggests the burial dates to a Hohokam period or the Protohistoric period.

Feature 3357

Feature 3357 was an adult inhumation discovered while excavating a backhoe trench below the floor of a pit structure, Feature 3327. The skeleton was recognized immediately, and very little disturbance was caused by the backhoe. The individual appeared to have been interred in a pit below the floor of the pit structure. The clayey silt fill of the pit was very similar to the surrounding soil matrix, and margins of the pit could not be determined. The pit measured at least 1 m in length, 75 cm in width, and 21 cm in depth.

The individual was interred in a tightly flexed position, turned slightly to the right. The head was oriented to the south, with the face looking toward the east. The left arm was extended parallel to the body, while the right arm was bent at the elbow. The right hand was resting over the abdomen, with the

palm facing down. Preservation of the skeleton was poor, and most of the bones of the torso had decomposed.

Dental development and wear, joint wear, osteophytosis of a lumbar vertebra, and the fusion status of the cranial sutures all suggested the individual was between 35 and 50 years of age at the time of death. Characteristics of the cranium were consistent with those of a male individual. A narrow sciatic notch and a large femoral head also seemed to indicate the interred individual was male.

Fill of the burial pit contained many small pieces of burned daub and abundant charcoal flecking. Some small fragments of fire-cracked rock were also present. Artifacts recovered from the pit consisted of a Cienega-style projectile point and a few small burned clay objects. The location of the burial below a Cienega pit structure, as well as a lack of ceramics in the fill, suggested the burial dates to the Cienega phase of the Early Agricultural period.

THE PEOPLE FROM THE SAN AGUSTÍN MISSION CEMETERIES

Researchers sometimes use skeletal and dental remains as tools for understanding the past. Each set of skeletal remains possesses a single unique history reflecting the individual's life and many of the events that occurred during that person's lifetime. Often, indicators of disease, traumatic injury, and most dental problems suffered by a specific individual can be found in the skeletal and dental remains of the deceased.

Excavations conducted by ASM in the 1950s resulted in the recovery of many burials from the mission cemeteries just before portions of the site were destroyed by clay mining and the creation of a landfill. Remains of 53 individuals from the Mission locus were recently studied to better understand the lives of the people who once lived and died at the mission between 1771 and 1821.

Examination of the skeletal and dental remains from the Mission locus revealed the people buried there were burdened by poor dental health. Dental caries (cavities) and abscess rates among the native population were nearly double that seen among their presidio neighbors. Females sometimes exhibit caries frequency patterns as much as three times that observed among their male counterparts. Ethnohistoric sources suggest such patterns of carious lesion occurrence may have been attributable to diet and resource procurement patterns practiced by the mission people. Among the Pima, women gathered wild food, ground corn, collected wood, and made baskets and pottery. Among men's specialties, deer

hunting was the most common, and they also made tools and dressed hides, and the older men wove cotton cloth. After the introduction of cattle, men hunted deer less and took over care of the livestock. Men also planted, tended the fields, and gathered the cultivated crops.

The risk of dental cavities increases if sugar is consumed between meals and it increases further if the sugar is eaten in a sticky form. Pimas consumed mesquite pods, the sugary mesquite sap, and produced a kind of syrup from fruits of the saguaro, prickly pear, and organ pipe cactus. These traditional foods would be highly cariogenic, and the female easy access to them provides a possible explanation for the difference in caries rates between mission males and females. Pregnancy and lactation following birth can also place females at increased risk for dental caries. The dietary insufficiency tied with pregnancy and lactation, working in concert with cultural traditions such as food gathering and preparation practices, probably caused mission females to have the highest rates of dental cavities and abscess among the groups studied.

At age 25, there appears to be little discernable difference in tooth loss patterns between mission males and females. However, by age 40, the mission females appear to have lost an average of 10 teeth per individual. In contrast, the average mission male's tooth loss was only 4 per individual by age 40. Among both sexes, the most common teeth to lose were the molars, followed by the premolars. Front or anterior dentition was often retained well into old age, and one person, an elderly female, was the only mission individual examined who had lost all her teeth (edentulous).

Mission females were also noted, more often than not, to exhibit equal evidence of arthritis in the arms and shoulders of both sides of the body. In males, arthritis was more commonly found to be heaviest on only one side. As with the frequency of dental problems, this can likely be explained by cultural practices. In the 1850s, international boundary surveyor John Bartlett commented on the intense amount of labor extended by Pima women while preparing flour with the two-handed metate and mano. He further observed no such exertion among Pima males. The bilateral occurrence of arthritis observed primarily among females probably reflects a behavior peculiar to Pima women, and the use of the metate and mano appears to be the most likely explanation.

The frequency of healed traumatic injuries such as cranial depression fractures and long bone fractures suggests interpersonal violence and or occupational injuries were common among the mission people. For example, of the 53 individuals examined

during this study, three (all males) were found to have had healed cranial depression fractures. Further, an earlier study mentions one individual (sex not given) with a stone projectile point within the body cavity, suggesting death by arrow wound (Dobyns 1954).

European mission authorities disliked native people's urge to move about following and gathering wild food resources. They failed to realize that the native people's mobile customs were a functional adjustment to the harsh environment in which they lived. These long-established lifestyles caused fluctuating village populations during the year and undoubtedly served as a control on the rate that garbage and excrement accumulated in and around village areas. Forced sedentism could increase the chances of contacting communicable diseases and parasites and would certainly affect illness and mortality rates. European-introduced epidemic diseases killed more indigenous victims than Europeans and significantly contributed to the loss of Native American populations throughout the Americas. There is little doubt that eighteenth century Tucson provided a difficult environment in which to live. Native Americans were forced to adjust to a new lifestyle imposed by mission authorities and challenged with surviving new diseases to which they had developed no inborn immunity.

THE PEOPLE OF THE TUCSON PRESIDIO CEMETERY, AZ BB:13:13 (ASM) (1775-1856)

Examination of the skeletal and dental remains of 88 individuals from the Tucson Presidio cemetery (1775-1856) excavated between 1968 and 1970 reveals a people whose dental health was probably similar to that of other Euro-American communities on the North American continent from that time period. Cavities, dental abscess, and tooth loss were not uncommon. Unfortunately, a preservation bias in the dental arcades of presidio individuals makes it difficult to obtain an accurate cross-cultural comparison of antemortem tooth loss events between the cemetery populations of the presidio and mission. However, presidio inhabitants appeared to suffer fewer dental-related problems than did the mission people across the river. As discussed in the "Mission Cemeteries" section, this was probably the result of native cultural traditions not tied to the physical environment or due to an innate biological weakness among the native people.

Evidence from the presidio cemetery indicates a community whose children were racked with disease and who appeared to have suffered marked nutritional difficulties during their lifetime. The large

number of children's skeletons from the presidio cemetery attests to a high mortality rate among the children of presidial-era Tucson.

It would appear from the burials examined that presidio newborns had about a 50/50 chance of surviving the first 18 months of life. If they survived the first 5-6 years of life, it seems that presidio children had a good chance of living to adulthood. In fact, 81 percent of all presidio juvenile deaths occurred between birth and 5-6 years of age.

Although of a lesser degree, the patterns of disease and nutritional deficiencies observed in the children are also present in presidio adults. In most instances, the condition observed in the adults is generally not active, suggesting these adults were exposed to, but survived, the same disease or nutritional episodes as those that appeared to have taken the lives of so many of the community's children.

Higher rates of disease or nutritionally driven stress are seen in the remains of Tucson's Presidio community than was present among the native people living in the San Agustín Mission community located on the opposite bank of the Santa Cruz River. There is a simple answer to this apparent paradox. It takes relatively long-term survival with potentially life-threatening episodes of disease or nutritional stress to leave a skeletal or dental signature on the remains. The native people more often succumbed early to the process, especially to such European-introduced diseases as smallpox and measles.

Native people had no inborn immunity to the diseases that had plagued Europeans for generations.

Daily activities must have included maintenance of existing structures and new construction projects, as well as tending of fields and care of large and small domestic animals. Such activities would result in the occasional broken bone or skull fracture. It is unlikely however, that such activities alone would provide an environment in which over 20 percent of the population would exhibit evidence of traumatic injury, as was the case not only at the presidio community, but at the mission community as well.

There has been adequate documentation confirming warfare between the Apache, the Mission Native Americans, and the Spanish. The presence of male individuals from both cemeteries with stone-tipped arrow wounds in the chest, as well as a rather high incidence of cranial depression fractures, is indicative of interpersonal violence. Additionally, a presidio male exhibiting a healed parry fracture to his lower left arm (a probable defensive wound) provides additional evidence suggesting interpersonal violence was not unusual in Spanish period Tucson.

There is ample evidence to indicate that residents of both the mission and presidio communities faced high likelihoods of trauma and disease. The evidence provided by each community's cemetery suggests that, whether the individual was a native or of European descent, at best, life was difficult in Spanish and Mexican period Tucson.

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