

# LA TIERRA



**Salvage Excavation at the Coleman  
Cemetery Site, 41BX568**

**Volume 32  
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**Journal of the  
Southern Texas  
Archaeological  
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# The Southern Texas Archaeological Association

The Southern Texas Archaeological Association brings together persons interested in the prehistory of south-central and southern Texas. The organization has several major objectives: To further communication among avocational and professional archaeologists working in the region; To develop a coordinated program of site survey and site documentation; To preserve the archaeological record of the region through a concerted effort to reach all persons interested in the prehistory of the region; To initiate problem-oriented research activities which will help us to better understand the prehistoric inhabitants of this area; To conduct emergency surveys or salvage archaeology where it is necessary because of imminent site destruction; To publish a journal (*La Tierra*), newsletters, and special publications to meet the needs of the membership; and to assist those desiring to learn proper archaeological field and laboratory techniques for southern Texas.

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About the cover: View of excavations at the Coleman Site

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*Daniel R. Potter, Robert B. Pickering, and Charles E. Mear*

## ACKNOWLEDGMENTS

The authors wish to thank the Hidden Valley Campground landowners, Jack and Joyce Coleman, and their staff at the park, notably Mike and Audrey Fulgham, and Mr. Doug Goins. The Colemans were especially patient, enthusiastic and helpful in all regards during this project, and their assistance is gratefully acknowledged here.

In the course of 17 working days, a volunteer crew excavated 16 recognized interments, two features, and roughly 250 cubic meters of overburden and archaeological deposits. 27 volunteers worked at the site, contributing over 1,000 person/hours to the project. The fieldwork was organized and directed by Texas Historical Commission staffers Dan Potter and Mike Davis.

## PROJECT MEMBERS:

Robert Anderson	Julie Beever	Sandra Billingsley
Roy Craig	Mike Davis	Rachel Feit
Norman Flaigg	Karen Fulghum	Mike Fulghum
Glen Fry	John Geiselbrecht	Lynn Highley
Kay Hindes	Don Keyes	Richard Kinz
Gene Mear	Wilson McKinney	Francis Meskill
Lenora Metting	Tom Miller	Ed Mokry
Nola Montgomery	Reeda Peel	Dan Potter
Larry Riemenschneider	Candy Smith	Ray Smith
Sue Turner		

In addition, several colleagues provided valuable input during the project, including Glen Goode, Elton Prewitt, Mike Collins, Britt Bousman and Steve Black. Kay Hindes shared her knowledge of the Deadman's Tank Site in Atascosa County and Tim Perttula provided useful information from his recent summary of south and central Texas mortuary archeology (Perttula 2001). Ed Mokry freely shared comparative information from several coastal cemetery sites. We thank Richard McReynolds, who illustrated the arrow point recovered near Burial 9, the sole artifact found in association with the Coleman Cemetery.

We also thank the Southern Texas Archaeological Association and the Texas Archeological Society for two grants that funded the two radiocarbon assays published in this report.

## GLOSSARY OF CODES AND ABBREVIATIONS USED IN THIS REPORT

APT—Arrow Point  
CHR—Charcoal Mottle Or Piece  
DJD—Degenerative Joint Disease  
FCC—Fire Cracked Chert  
FCR—Fire Cracked Rock (Other Than Chert)  
FLK—Flint Flake, Chip Or Other Debitage Item  
SLB—Slabs  
STAA—Southern Texas Archaeological Association  
TDS—Total Data Station  
THC—Texas Historical Commission

# CHAPTER 1

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## Introduction

*Daniel R. Potter*

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### DISCOVERY OF THE COLEMAN CEMETERY

In 1995, the Southern Texas Archaeological Association (STAA) held their annual picnic and BBQ at Hidden Valley Campground in southern Bexar County. During the event Luke Hamilton, a young STAA member in attendance, wandered into one of the inactive quarry sandpits present in the area. While walking through the quarry, Luke encountered bones laying at the base of a sandpit wall. He alerted other STAA members about the discovery, and subsequent inspection suggested that the bones were human. STAA members also saw additional bones extruding from the sandpit wall about five meters directly above Luke's original find. These perched remains appeared to be what remained of a single interment that had been exposed by quarrying activity and subsequent erosion. Three large flat slabs of rock, stacked one upon the other, could also be seen overlying these in-situ remains and teetering on the edge of the pit.

STAA member Lynn Highley and others called the Texas Historical Commission (THC) for assistance during the following week, initiating a series of conversations between THC, the landowner and STAA. We learned that the landowner, Mr. Jack Coleman, had contracted to have the entire site area quarried out, graded, and the resulting area used to expand the park. It would therefore not be possible to preserve the interment in place. As initial indications suggested that there was only a single individual represented by the remains observed, we reasoned that the burial might be carefully removed from harm's way over the course of two days. This resulted

in an agreement to salvage what we could of the in-situ interment plus any dislodged remains at the base of the pit.

Salvage activities began on October 14, 1995. Very quickly, and as is often the case with even limited excavations, we found that the site was more complex than it first looked. Initial work at the site indeed revealed a partial human interment at the top of the sandpit wall, and confirmed that there were numerous dislodged human bones at the base of the quarry wall. We also learned that hand excavation was very difficult due to the compacted nature of site sediments, and that machine excavation would be necessary. Finally, machine excavation quickly exposed additional interments, showing that our original burial was a member of a cemetery group of unknown size.

We did not have the needed materials or crew to handle multiple interments on October 14th, and therefore we halted excavation and covered all remains for protection, anticipating a more intensive period of fieldwork at the site. Even had the area not been slated for further quarry excavation, the cemetery was doomed by its proximity to the deep, vertical quarry wall, which would not remain stable over time. Given this new understanding of the site, a more extensive two-week salvage excavation began on November 7 and ran through November 21. This work resulted in the removal of seven interments (Burials 1 through 7), including the partial burial originally encountered. The work also excavated two significant features, numbered 5 and 7, which occupied an ephemeral archaeological surface overlying, but possibly associated with, the cemetery.



Following removal of these interments, excavators tested both below and around the known interments in an attempt to detect any additional portions of the cemetery. When no further bones were encountered, the salvage project was closed and excavation ceased. The site was revisited on December 21, prior to the resumption of mechanized quarry work in the site area, but again no further remains were noted.

In January of the following year, continuing bulldozer work in the site area hit a second cluster of burials, about six meters south of the first group and at roughly the same depth below surface. Following a hurried call from the landowners, a second phase of urgent salvage work occurred on January 17 and 18, 1996. During this two-day period another nine recognized burials, numbered 8 through 16, were removed. A number of dislodged remains, which could not be given a precise in-situ location or burial number, were also encountered. These interments had been partially crushed, mixed and/or pushed some distance by the bulldozer. We were thus left with some in-situ (but disturbed and damaged) burials, as well as scattered remains that could not be assigned to any certain provenience below the site level. Unfortunately, bulldozer operations could not be halted (due to contractual obligations) during this second work period. The presence of active heavy machinery made salvage both more difficult and more hurried. Our small team and the bulldozer worked at very close quarters during these two days. In addition to excavating and removing the disturbed burials, we also followed and monitored the bulldozer as it worked, in case additional remains were hit. By the end of this second salvage period, all visible remains had again been collected and either assigned to a specific burial number and location or placed in a general category of unprovenienced bone from the site.

THC staff were called to the site again on February 17, to investigate an additional report of possible human remains. This visit revealed no additional remains or materials of archeological significance. The final working trip to Hidden Valley occurred on September 29, 1997, when Charles E. (Gene) Mear and Dan Potter visited the site. During this visit Mear made an assessment of Hidden Valley geomorphology, which is included in this report.

### **The Site and Its Setting**

Hidden Valley is well named. Approaching from the north over a dirt road, one sees expansive flat cultivated fields and scattered suburban development. Neither the Medina River nor Medio Creek are evident. Then, as the dirt road drops abruptly into a narrow valley, the surroundings shift from dusty, sun-baked fields to dense stands of pecan and oak, deep shade, and the sound of running water. Continuing through the valley towards the river, the valley opens up and flattens a bit, and Medio Creek has a fairly level run to the Medina (Figure 1).

The private park presents a beautiful natural setting, but one that has been heavily modified, especially closer to the Medina River. According to the current owners, Jack and Joyce Coleman, a solitary hill, perhaps 60 feet in height, was once located at the mouth of the valley near the Medina's edge. This hill was completely excavated away for gravel and sand, with excavation continuing below grade. Based on Mr. Coleman's description and its location entirely within the Medina floodplain, this feature may have been a meander core, created by the Medina River and Medio Creek. The resulting below-grade quarry pits have filled with water and form permanent ponds. The creek runs through or around these as it flows to the Medina. Most recently, quarry excavation focused on the western margin of Medio valley where it opens to the Medina. These excavations were producing sand and gravel fill for sale and also improved space for campground facilities and activities. It was these latest modifications that exposed the prehistoric cemetery.

### **BACKGROUND: OTHER REGIONAL PREHISTORIC MORTUARY SITES**

In spite of decades of archaeological research, including occasional summaries such as Perttula (2001), Reinhard, Olive and Steele (1989) and Bement (1994), prehistoric mortuary traditions in south-central Texas have remained poorly known. Much of this is simply due to the small number of mortuary sites investigated and published. In his recent overview, Perttula (2001:34) defines the area "along and south of the Edwards Plateau, including



Figure 1. 7.5 minute map and aerial photo views of lower Medio Creek, showing location of 41BX568, the Coleman Cemetery Site.

the blackland prairie” as enclosing a distinguishable mortuary region. Citing the Loeve-Fox Site in Williamson County (Prewitt 1981) and 41BX1 in the Olmos Basin of Bexar County (Lukowski 1988) among others, Pertulla points to a group of shared mortuary traits that are seen in area sites, including flexed interments, rock slab grave coverings or markers, a dearth of mortuary artifacts during the Austin Phase, bioarchaeological indicators of generally good population health, and occasional evidence of violent death (embedded projectile points). We agree that ancient mortuary patterns in the escarpment/prairie region do appear distinguishable from neighboring areas, although we probably do not agree on all the particulars listed by Pertulla.

In this section, we will briefly review selected sites with mortuary significance in the region most relevant to the Coleman Site—the escarpment/prairie area between Bexar and Williamson Counties (Figure 2). However we also mention the archaeological tradition (Phillips and Willey 1953:627-628) of utilizing karst features as mortuary locales in the adjacent southern Edwards Plateau, and we describe a single mortuary site in Atascosa County, 41AT9,

Deadman’s Tank. In our opinion Deadman’s Tank appears more similar to the large cemeteries of the southern coastal plain (such as Loma Sandia, Live Oak County) than it is to the smaller cemeteries along the escarpment. We have included a description of the site here because it is located in an adjacent county, and we also felt it important to publish the available information from that site, largely salvaged thanks to Ms. Kay Hinder.

#### MORTUARY SITES ALONG AND NEAR THE ESCARPMENT

Regional mortuary activities typically—but not exclusively—occur in association with habitation sites. Frequently these occur as single burials (or even individual bones or bone fragments) found within occupation sites across the region. While we do not classify these as cemeteries, single burials and/or isolated human bones or teeth do represent a relatively common occurrence in the archaeological record of the region and in most cases these have to be considered as part of the regional mortuary program.

One Late Archaic burial described by Vereen (1993) at an unrecorded site on Cibolo Creek illustrates this type of isolated mortuary occurrence. The Cibolo is a major stream that breaches the escarpment north of San Antonio and forms much of the northern boundary of Bexar County. Based on Vereen's description, the Cibolo Creek burial was encountered in an intrusive pit which had penetrated through a minor sheet midden containing Pedernales, Kent and Gary projectile points (Vereen 1993:32). The interment was in a flexed position with head to the north and face turned to the west. The interment was completely covered by large limestone rocks. Specific size and shape of these capping rocks is not offered. A conch-whorl pendant with double-line punctate decoration was observed under the mandible and was the only associated artifact.

Weir describes a very similar pattern at the Greenhaw site in Hays County, in a very similar setting. Onion Creek is a major Colorado tributary that breaches the escarpment southwest of Austin. The site is transitional between the Edwards Plateau to the west and the blackland prairie to the east, and is comprised of a series of nine burned rock middens and associated occupation on high ground overlooking the Onion Creek floodplain. In two of these middens, intrusive burials had been excavated through midden matrix. Burial 1, located in Weir's "Midden C", was in primary context, flexed, and oriented with head to the east. Burial 2 was in secondary context and therefore had no articulation and no orientation. Neither burial was associated with diagnostic artifacts, but both were completely covered with large limestone cobbles. In the first case (Burial 1), the cobbles are described as boulders, while Burial 2 was capped by "large flat rocks, averaging about 20 cm. in diameter" (Weir 1979:13). In this latter case, a fire had been laid over the capping rocks, fracturing them thoroughly. In hindsight, and given the setting, it is

unclear whether the slabs covering Burial 2 were intentionally placed as a cap, or whether they were perhaps part of a central oven feature associated with food processing. It should also be noted that while the capping slabs were so thoroughly burned that they disintegrated with handling, no evidence of burning was observed on the secondary interment underneath them.

Examples of true cemeteries exist at Loeve-Fox (41WM230; Prewitt 1974) in Williamson County, Pat Parker (41TV88; Greer and Benfer 1975) in Travis County, the poorly-known Landa Park burial features in New Braunfels (41CM25), Comal County (Bailey and Bousman 1989; Potter 1989), Deadman's Tank (41AT9) in Atascosa County, the Olmos Dam Site (41BX1), located in central Bexar County (Lukowski 1988). With the exception of Deadman's Tank, each of these sites occur on streams at or near the Balcones Escarpment. In all cases, mortuary activity appears to have been limited to fairly compact areas within or adjacent to occupied ground.



Figure 2. The Coleman Site and comparable nearby cemeteries.

### Sinkholes

Cemeteries can also occur as specialized sites without occupational components. Sinkhole cemeteries such as 41KR241 (Bering Sinkhole: Bement 1994) and 41KM140 (Baker 2001) provide good examples of this site type. It has long been known that sinkholes sometimes functioned as cemeteries in prehistoric times, with burials occurring in both primary and secondary contexts. The frequency of sinkhole cemeteries, however, may perhaps be underestimated. In a recent survey of karst features located at Camp Bullis (northern Bexar and southern Comal Counties), Kibler reports a significant frequency of sinkholes with human remains (over 10%; Kibler 2001). Given the relatively common occurrence of karst features across the Edwards Plateau, the implication is that a very large number of such sites may exist in the uplands of south central Texas. Kibler suggests that some non-articulated human remains in sinkholes may be attributed to natural secondary deposition. In this scenario bone is carried via natural mechanisms into sinkholes from exposed upland catchment surfaces above them (Kibler 2001:19). We are highly skeptical of this explanation even in the case of isolated, secondary, and/or disarticulated remains found in caves or sinkholes, and prefer view all human remains in sinkholes as intentionally deposited there (Bement 1994:117-118). Generally speaking, Kibler's valuable study suggests that we need to attach greater archeological significance to karst features.

### PREHISTORIC CEMETERIES OF THE EDWARDS ESCARPMENT/ BLACKLAND PRAIRIE ZONE

Perhaps the most relevant comparisons to the Coleman Site are a small number of prehistoric cemeteries occurring near the juncture of the Balcones Escarpment and the Blackland Prairie between Bexar and Williamson Counties. Commonalities among these sites involve their setting in well-watered 'bottom' areas, sometimes associated with springs but always with significant streams. These streams either breach the escarpment from the west or rise at the escarpment and cut across the blackland prairie to the south and east. Such settings may have

supported relatively higher, or more consistent, population densities due to dependable water sources, access to a diverse range of plant and animal foods, and abundant fuel (the latter resource being one that is easily overlooked). Archaeologically, these factors seem to be reflected today by high site densities and perhaps a relatively high frequency of multiple-component sites, some stratified and some not.

### The Olmos Dam Site (41BX1)

41BX1, the Olmos Dam Site, is a Late Archaic cemetery located on Olmos Creek about 20 kilometers above its confluence with the San Antonio River, approximately 15 miles north of the Coleman Cemetery Site. Like the Coleman site, 41BX1 was discovered inadvertently through earthmoving activities by heavy machinery (Lukowski 1988). Olmos Creek is a relatively small drainage in central San Antonio, flanked by larger creek systems—Leon to the west and Salado to the east. Olmos Creek, being smaller and more centrally located within San Antonio, has been more completely developed, and was developed earlier. With the increased runoff associated with development, Olmos Creek has experienced numerous severe floods as San Antonio has grown, leading to the construction of Olmos Dam in 1925 as a flood-control structure. Renovation of the dam in 1979 led to the discovery of the cemetery component at 41BX1 at that time (Lukowski 1988).

To date, 13 interments have been encountered at Olmos Dam. It is likely that additional portions of the cemetery still exist at the site. The cemetery dates to the Late Archaic period, based on associated artifacts. Included with the deceased at Olmos Dam were deer antler racks, as many as 21 sets of them covering one interment. Deer crania fragments were also present. Cut and fashioned fresh-water mussel shell items, marine shell artifacts made from lightning whelk, possibly horse conch as well, bone beads, a metate, a bone awl, and ochre pebbles or staining were among the associated remains or offerings at Olmos. Olmos interments were generally in flexed positions, on either left or right side. Burials tended to be oriented with head to the east, similar to a number of Coleman burial placements. Lukowski

(1988:20) points out that none of the interments at Olmos were multiple or intersecting burials. This is also the case at the Coleman Site, when considering those burials that could be observed and excavated carefully. The pattern of non-intersecting burials/burial pits is important. It may indicate that burials were marked and could be avoided, or that the period of mortuary use was sufficiently brief that earlier individual graves could be either seen or remembered accurately.

Today 41BX1 falls between the affluent San Antonio communities of Alamo Heights to the northeast and Olmos Park to the southwest. It's likely that the area was an upscale neighborhood in prehistoric times as well, for it was located within what was once a rich "pecan-bottom" with numerous springs. The site's ecotonal location also allowed easy access to a variety of important upland resources to the north as well as riverine and prairie resources to the south.

Unlike the Coleman site, which overlooks bottomland from its perch on a higher landform, the prehistoric cemetery at Olmos Dam was positioned within the bottom itself. Today the area is known as the Olmos Basin. The deep, tight clay soils that Lukowski (1988:4) describes as impassibly muddy when wet and deeply cracked when parched suggest that frequent, low-energy flooding may have been typical of the basin for much of its occupational history.

In contrast with the Coleman site, intensive prehistoric occupation is typical of Olmos Dam and the larger basin. While occupational evidence at Coleman was sparse (at least in the immediate area of the cemetery), a number of occupational components, one of them a well-defined buried burned rock midden, characterize 41BX1. Close by, numerous archeological sites occur in the basin, spanning a tremendous range of time. Earliest Olmos Basin occupations date to the Paleoindian period as seen in several local collections (Lukowski 1988), while the latest were historic-era seasonal encampments made by Native Americans while traveling the "Peyote Trail" to northern Mexico. This latter practice occurred well into the 20th century and was observed and documented by C.D. Orchard in an unpublished paper given at an early annual meeting of the Texas Archeological Society. Thus the span of Native

American occupation in Olmos Basin, while not continuous, is certainly one of the longest sequences to be found anywhere in the state.

### **Pat Parker Site (41TV88)**

The Pat Parker site lies seven miles to the east of the Balcones escarpment in Travis County, well into the blackland prairie zone (Greer and Benfer 1975). The site occurs on a terrace projecting NE into the modern floodplain of the Harris Branch of Gilleland Creek. The terrace surface was described as being approximately 10 feet above the channel.

Burials were found in a compact 10 X 10 foot area within an occupation zone measuring approximately 60 X 30 feet, based on surficial artifact scatter. The site was interpreted as a midden and contained lithic debris, faunal remains, and other cultural residues. Nine burials, enclosing 10 individuals, were recognized during field excavations. Unfortunately, individual burial pits could not be detected in the tight, dark, homogenous soils typical of the blackland prairie. Subsequent analysis of mortuary remains from the site revealed an additional seven to ten individuals were present within the cemetery sample, but had not been recognized in the field. This was likely due to disturbance or disarticulation of these remains during the period of mortuary use of the site. Most burials at Pat Parker were found in a flexed position, on left side, and facing east. Few clearly associated artifacts were encountered with any of the Pat Parker burials. However, several Scallorn arrow points and Darl dart points were reported near the interments, and the authors describe the cemetery as dating to the Austin Phase. A single marine shell pendant was associated with Burial 2, and a cache of antler fragments was reported in the vicinity of burials 1, 3 and 4.

A lack of associated grave artifacts distinguishes Pat Parker (and some other Austin Phase cemeteries) from Archaic cemeteries in Central Texas such as the Olmos Dam site, 41BX1. The few Austin Phase cemeteries currently known typically lack the larger grave-good inventories seen at some Archaic sites. An explanation for this distinction has yet to be found.

### Deadman's Tank Site (41AT9)

The Deadman's Tank site is located near the town of Christine, Atascosa County, immediately south of Bexar County. Although the site has been known for over 80 years, only sketchy information is available regarding Deadman's Tank. It is described here in some detail because it is one of the closest known cemeteries to the Coleman Site, but also because so little has been published about Deadman's Tank. In addition, the site serves as a graphic illustration of long-standing difficulties in preserving unmarked cemeteries in Texas, due to lack of clear jurisdiction and inadequate resources available to both concerned landowners and state and local government entities (for more information on this topic, see *Texas Forum on Civil Liberties and Civil Rights 1998, Vol. 4 No. 1*).

Deadman's Tank appears to have been a compact Late Archaic cemetery, and like 41BX1 was associated with occupational deposits. The site was first discovered in 1926 when Mr. Dick Wiley, landowner, began excavating land to create a watering tank for livestock. During this work Mr. Wiley encountered a large number of human interments. Estimates suggest at least 50 individuals were involved, and Mr. Wiley himself gave a number of 62. It is likely that this estimate was based on the number of crania encountered, as Mr. Wiley reported (at a later time) reburying crania on his property beneath a soil dam or berm.

It appears that newspaper accounts near the time of discovery speculated that the site represented a Spanish fort (or presidio), a mission, or a smelter associated with a Spanish silver production (this erroneous speculation was apparently based the occurrence of numerous fire-cracked rocks at the site). These accounts may have been responsible for unwanted trespassing and further damage to the site.

One early visitor to the site was the local school superintendent, Mr. L.L. McDonald. A letter from McDonald, dated December 7, 1926, found its way to Prof. J.E. Pearce at the University of Texas. McDonald described the majority of the interments as being fully articulated but very delicate, readily crumbling when handled. They were found 2 or 3 feet below the surface, and nearly all had been positioned on their sides. McDonald noted that teeth

were well preserved and showed that all ages were represented within the burial group. McDonald also noted that deer antlers ("horns") and skulls were found in the cemetery. Most burials appeared to be located within or close to a log or pole enclosure, which McDonald took to be the remains of an ancient lodge or other structure. Local reporting suggested these were remnants of a "log fortress" (see site notes on file at the Texas Archeological Research Laboratory [TARL] and the Texas Historical Commission-Archeology Division). He closed by volunteering to supply charcoal that had been collected at the site, as well as requesting that "If you can give any light on it [the site], we shall appreciate it."

In a response dated Dec. 18, 1926, Pearce responded that he would not be able to visit the site, but deplored the needless destruction and suggested that he would like to receive any artifacts from the site, and that burial remains might perhaps be accepted by Ales Hrdlicka at the National Museum in Washington D.C.

The following year another request for assistance came from Christine, this time from a Mr. E.M. Johnson, who had been referred to Pearce by the Witte Museum in San Antonio. Johnson informed Pearce of additional human remains coming from the site and additional destruction due to "treasure seekers". Johnson closed by writing "Colonel Crimmins [then of the Witte Museum] advised me to write you regarding the last find, and perhaps you could and would take some immediate action. Trusting that a scientific search will be made and property protected if found. . ."

In October 1932 another letter was written to UT by a Mr. W. Hollyfield of San Antonio, describing the site and noting its historical and scientific importance. This letter was answered promptly by A.T. Jackson, who added the information to Archeology Lab files and pledged to visit the site when next in the vicinity. It appears Jackson was unable to get to the site, as he filed no further information regarding it.

Nearly 30 years later, Mr. Walter Vickers wrote to Prof. Tom Campbell at the University of Texas about the site. Vickers was a member of the Junior Historian Society in Jourdanon, and had new information of additional human remains and artifacts that had been unearthed at the site during the previous

year. Vickers asked if the remains might not be dated using the radiocarbon technique, and offered to pay for an assay if payment was needed. Vickers also inquired about what might be known about the origin and history of the people buried at the site.

A prompt reply was sent to Vickers by E. Mott Davis, then director of research in anthropology. Dr. Davis noted the high cost of C14 assays and the general difficulties of using bone for dating purposes, and referred Mr. Vickers to the Witte Museum in San Antonio.

Finally, in 1968, fully 42 years after first being reported, professional archeologists arrived at the site. Included in the visiting party were Curtis Tunnell (who had just filled the new State Archeologist position), Mardith and Roy Schuetz, Jim Sutton (who had some familiarity with the site and local area), and Anne Fox, who was than Schuetz's assistant at the Witte. The group saw no human remains aside from a few pieces of human skeletal material that had been kept by Mr. Wiley. Mardith Schuetz's notes (copy filed at THC and TARL) observe that the bones appeared to be mineralized. Apparently, no in-situ evidence remained of the cemetery, but the group did determine that portions of a midden deposit still existed on the property, extending below the plowzone.

The latest recorded information about the site resulted from two visits by Kay Hines in 1988. Her notes, filed at TARL, provide our best picture of the site's structure. At the time of her observations, the site had passed to a new landowner, who believed the cemetery was associated with a Spanish Colonial silver mine and smelting operation. Local legends of ancient treasure, first raised at the time of the original discovery in 1926, still held sway. These have likely not ceased up to the current day, and are at least partly responsible for the destruction of the site.

By the time of Hines' visit, backhoe excavation by the new owner had increased the depth and width of the tank, so that more than 5 vertical meters of sediment were visible in the tank wall and in backhoe trenches. At the bottom of this exposure was an unusual greenish sediment, which perhaps represents a gleyed slackwater deposit. It was this sediment that the landowner suspected to be silver-bearing. Two meters above this (and three meters below surface) a cultural zone was seen in profile.

Another two meters up (about one meter below surface) was a second cultural component, containing bone, shell, lithics, sandstone and burned clay lumps. It is possible that this represents the component associated with the Archaic cemetery. A third component was seen ca. 30 centimeters below the surface. Hines also saw cultural materials lying on the surface and in displaced fill both north and south of the excavated tank. She noted Tortugas and Ensor-like projectile points that had been collected at the site, but it is impossible to know if these were specifically associated with the cemetery component at Deadman's Tank.

Hines also discovered a recorded interview with Mr. Wiley that had been taped sometime in the 1960s. From that interview, she learned that at least some of the burials were tightly flexed on their sides, and that some had also been covered with deer-antler racks and/or deer crania. It is interesting to note that Mr. Wiley specifically saw these racks placed over human crania, which contrasts with the pattern at 41BX1. At the latter site, antler racks were very notable occurrences and were specifically placed over the torsos but never over crania (Lukowski 1988).

Chronology of cemetery use at Deadman's Tank is also difficult to gauge. Hines believes that the cemetery may date from Late Archaic to Late Prehistoric times, based on artifacts collected from the area over the years. Cultural affiliations are thus unclear, and the duration of mortuary activities at the site are equally vague. These critical data may never be known without controlled excavation at the site. In this regard, Hines believes that portions of 41AT9, including the mortuary component(s), are still intact there (Kay Hines, personal communication with the author, 10/1/02).

In spite of the obvious importance of Deadman's Tank, so little is known about the site that it is impossible to provide a balanced comparison between it and other cemeteries. Similarly, no biological information was obtained in spite of the large size of the cemetery, and only anecdotal evidence survives regarding burial placement and orientation. Considered in this light, the site provides one of the more discouraging cases in the long and difficult struggle to deal effectively with cemetery preservation.

### **The Loeve-Fox Site (41WM230)**

About 130 miles north of the Coleman site, 41WM230 is located in eastern Williamson County. The site lies east of the Balcones Escarpment on the San Gabriel River where it cuts across the Blackland Prairie. The site was excavated by Elton Prewitt and colleagues in the early 1970s (Prewitt 1974; 1982). The site occupies a T-1 landform in mesic gallery forest, notably pecan. Loeve-Fox was used repeatedly as an encampment, and during one of these occupations (early in the Late Prehistoric period), it was used as both a settlement and a cemetery. The site offers a direct comparison to the present study as it evidences a roughly contemporary Late Prehistoric I central Texas cemetery, of roughly similar size (MNI=27; Prewitt 1982:311) in a similar regional and physiographic setting.

Prewitt interprets the mortuary area of Loeve-Fox (designated as Feature 1) as a "sharply delimited" cemetery, roughly circular in plan and over 10' (3 meters plus) in diameter. In this respect it shows remarkably similar organization to the Pat Parker site, described above. Plentiful evidence for contemporary occupation was also present at the site. The cemetery is thought to date somewhere between 700 and 1200 B.P. (800 to 1300 A.D.). Notable trends within the cemetery group include a tendency for tight clustering of interments within a compact area, flexed to tightly-flexed interments, a lack of overprinting and intrusion, a paucity of artifacts, and a high incidence of traumatic death.

Most interments at Loeve-Fox were in a supine position, but had some orientation to either right or left sides. Two burials were in prone position. Burial orientations were predominantly southerly or southeasterly.

### ***Evidence for Violent Death at the Loeve-Fox Cemetery***

The excavated remains from Loeve-Fox frequently exhibited evidence of violence. Over 20 percent of the group had Scallorn arrow points either imbedded within bone or within the body cavity. This is the highest frequency of violent death known to the authors for a prehistoric cemetery of similar size or larger in Texas, of any age. Evidence for violence may also be seen in six bone fractures observed in the cemetery

sample, all of them occurring in the hands or arms. Of course, fractures are caused by many factors besides interpersonal violence, and it would not be reasonable to simply equate the two. However, two factors suggest that at least some of these fractures were caused by violence. In the Loeve-Fox case, arm or hand fractures occur 6 times, on five individuals in the sample (one person, Individual 19, had suffered two fractures). Typical defensive "parry fractures" occur in the shaft of the radius or ulna, and indeed two (one third) of the six fractures in this group were on radii. Of the five people exhibiting fracture trauma, three also had embedded Scallorn arrow points. The sample is very small and patterns within it should be treated with caution, but the substantial overlap between lower arm or hand fractures and embedded arrow points is suggestive.

### **Mortuary Components at Landa Park (41CM25, 41CM205)**

Landa Park in New Braunfels, Comal County, is an area rich in archeological sites. The natural setting here is in many ways similar to the Olmos Basin. In this case, the site lies adjacent to the Comal River in central New Braunfels. The actual number of prehistoric cemeteries documented in the Landa Park locale is unclear. Bailey and Bousman (1989) provide a useful summary of work done since 1929 in and around the park with regard to cemeteries. Their review found that eight interments had been encountered near the entrance to the park in 1929; 19 more had been excavated along Fredericksburg Road south of Howard Street in 1936 (Woolsey 1936), and an additional but unknown number of interments may have been encountered near the intersection of Fredericksburg Road and Bell Street as early as the 1930s (Bailey and Bousman 1989:12).

The first encounter, in 1929, involved a local avocational archaeologist named Albert Nowotny. No artifacts are described in association with these interments. The 1936 work occurred at 41CM25, and involved A.M. Woolsey of the University of Texas and George Woodbury of Harvard. Here, 19 flexed interments, some with associated artifacts, were encountered. Artifacts included conch shell beads, a



flint biface, a possible Archaic dart point, and a mussel shell. A local collector informed Woolsey that a boatstone and a marine shell gorget were also found associated with human remains from the site (Bailey and Bousman 1989:12). Taken together, the information suggests that this cluster of burials may represent a Late Archaic period cemetery.

The additional human remains reported in the area of Fredericksburg Road at Bell Street are very poorly known, and indeed may represent a confused or inaccurate account, or may simply be referring to the work done by Woolsey described above. Bailey and Bousman do not mention any diagnostic artifacts in association with human remains in this area, which were observed by local informants in the 1930's and perhaps later. We also have no clear idea of how many interments may have been here, although a local informant recalls seeing "hundreds of bones" in the area (Bailey and Bousman 1989). A range of Archaic and late prehistoric artifacts were collected in the vicinity, but apparently not in direct association with any of the interments. Data on burial position are not available.

One important question is whether the various burial encounters on record represent parts of a single cemetery, or perhaps several small separate ones. This question hinges on accurate placement of the early reported finds. The location of the 1936 excavations appears to be clear (Bailey and Bousman 1989:13; Potter 1989:2), but a precise plotting of the other two reported clusters may not be possible. Still, after reviewing the available information it seems quite possible that the three reports refer to three separate burial clusters. In terms of recorded archaeological sites, it appears that two interment groups (the 1929 and 1936 burial clusters) may now be contained within 41CM25, a State Archeological Landmark (SAL). The third reported cluster—the one encountered in the vicinity of Fredericksburg Road and Bell Street— would now be within the bounds of 41CM205, also a SAL. The relationship between the reported interments and nearby occupational components is unclear. One reason for this uncertainty is due to the fact that the area in and around Landa Park is packed with sites, many of them in excellent states of preservation. Which of these poorly known sites are contemporary with the cemeteries?

Another complicating factor involves the uncertain boundaries of most or all of these sites. Site limits in this area continue to change through time (Arnn 1997; Potter 1989; Wooldridge 1987) as small CRM projects have responded to developments in piecemeal fashion. Clearly, the archeological site pattern in and around Landa Park area (including the mortuary situation) would benefit from reanalysis and synthesis. This would not only benefit our understanding of the archeology there, but would hopefully provide better baseline data for municipal planners and developers in this rapidly growing and dynamic area.

To summarize, it is possible that over 30 interments have been encountered along Fredericksburg Road between the Landa Park entrance and Bell Street. While it seems most likely that more than one cemetery is or was present here, our evidence is limited. We can say that burial format included the flexed type, and that artifacts associated with the dead included both marine shell and lithic artifacts. Given our present state of knowledge, we cannot confidently place these interments chronologically, but at least some and possibly all of them are Archaic in age. Late Prehistoric artifacts are also known from the general area however, and therefore the presence of Austin Phase or other Late Prehistoric interments is certainly possible.

## DISCUSSION

Reviewing the mortuary "snapshots" presented here, we propose two types of prehistoric cemeteries within the central Texas region during the Archaic and Late Prehistoric periods. One of these is found on the Edwards Plateau and occurs in karst features. Given recent research at Camp Bullis in northern Bexar/southern Comal Counties, mortuary remains in caves and sinkholes may show a surprisingly high frequency in central Texas (Kibler 2001). These cemeteries are usually not associated with occupations (they are special-function sites) and we speculate that deposition of the dead in these places relates to prevailing beliefs regarding the function and identity of caves and sinkholes within Native American belief systems.

A second type of cemetery appears to be represented as mortuary features—or well-defined zones

of mortuary activity—that occur within or adjacent to contemporary settlements. Typically, these cemeteries are located within well-watered bottoms or valleys, presumably rich in critical resources. In addition to their economic “richness”, these valleys may also have provided corridors of movement across three distinct zones—the Blackland Prairie, Balcones Escarpment/Canyonlands, and the Edwards Plateau uplands. These characteristics could have had implications for the every-day lives of people who occupied such zones, including group mobility (reduced?), population density (higher?), territorial size (smaller?), and inter-group competition (more?), to name a few. Accordingly, cemetery placement may well have played a role, or made a statement, regarding land tenure or territoriality in the ancient Texas landscape.

Unlike the large cemeteries of the coastal or southern plains, some of which enclose some hundreds of individuals, central Texas cemeteries tend to be smaller. Escarpment/Blackland Prairie cemeteries enclosing 20 to 30 individuals appear to be at the large

end of the scale. Only rarely encountered by archeologists, the actual frequency of prehistoric unmarked cemeteries in the archeological record is unknown. Consideration of the murky archaeological situations at 41CM25 and 205, the much clearer ones at Loeve-Fox, Pat Parker (and the Coleman cemetery to be described here), suggests that the concept and definition of cemeteries themselves might well benefit from a reconsideration. We suggest that these mortuary zones might be better viewed as archaeological features—or specialized activity areas if preferred—than as archeological sites in their own right.

The relative health of these prehistoric populations is also unclear, as revealed by the small samples currently available. Also uncertain is the nature, frequency, and intensity of violent death and conflict. We suggest that the issue of violent death (as shown by such things as defensive forearm fractures and embedded dart or arrow points) and ancient patterns of population health need to be made a priority for future central Texas archaeological research.



## CHAPTER 2

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# Geomorphic Context and Quaternary Stratigraphy at the Coleman Site

*Charles E. Mear*

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### INTRODUCTION

In September 1997, the writer visited the Coleman site in order to assess its geomorphic setting. By that time, extensive mechanical grading of the Coleman site landform had been completed, removing many sediment exposures and making assessment more difficult. Still, I was able to make useful observations during this one-day visit, including a comparison of the geomorphic setting at Hidden Valley with that of the Richard Beene site (41BX831) which had been extensively studied as part of the Applewhite Reservoir Project (Thoms and Mandel 1992).

In the immediate vicinity of the Coleman site, at least four different stream terrace deposits are recognizable (Figure 3). Lowermost are two modern floodplain deposits along the Medina River. Above these is the Coleman terrace deposit that contained the Coleman site. This deposit abuts a higher terrace deposit to the west, which is tentatively considered to be partly equivalent to the Applewhite terrace deposit at the Richard Beene site (Thoms and Mandel 1992: Figure 3).

While the topography of the Coleman deposit has been extensively modified by road building, quarrying and subsequent extensive grading by large power equipment, sections of the upper 4 meters were exposed in places.

On September 29, 1997 I conducted a geological examination of the Coleman site area, located between the Medina River and Medio Creek near their confluence. The Coleman site area is upstream (west) of the Richard Beene site (41BX831), an important

late Paleoindian to late Prehistoric site in the Applewhite terrace deposit of the Medina River (Thoms 1992). Prior to my investigation the Coleman site had been removed by sand quarry operations.

### STRATIGRAPHY

The highest terrace surface in the mapped area is located west of the Coleman site (Figure 3). It is about 16 meters above the low-water level of the Medina, and eight meters above the surface of the deposit that contained the Coleman site. Lowest exposure available for observation in this highest deposit is a vertical cut, located on the north bank of the Medina just west of several picnic tables.

The eastward-facing cut is about two meters high, and the section consists of buff fine-grained sand. Moderate peds are present throughout the exposure, which has a Bkt horizon in the upper 1.3 meters and a Bt horizon in the lower 0.7 meters. The Bkt horizon contains disseminated clay and scattered hard nodules of pedogenic calcium carbonate about ten cm thick, and these are present throughout the Bkt unit. All of the calcium carbonate appears to be pedogenic in origin and it is in place. No significant exposures of the overlying terrace material are present, even along the shallow ruts of a pasture road that ascends the deposit to the west from the vertical cut. No clues as to the stratigraphy are revealed beneath a mantle of loose sand and silt.

The surface of the Coleman site terrace deposit is a maximum of about 8 meters above the Medina River and about 8 meters below the uppermost

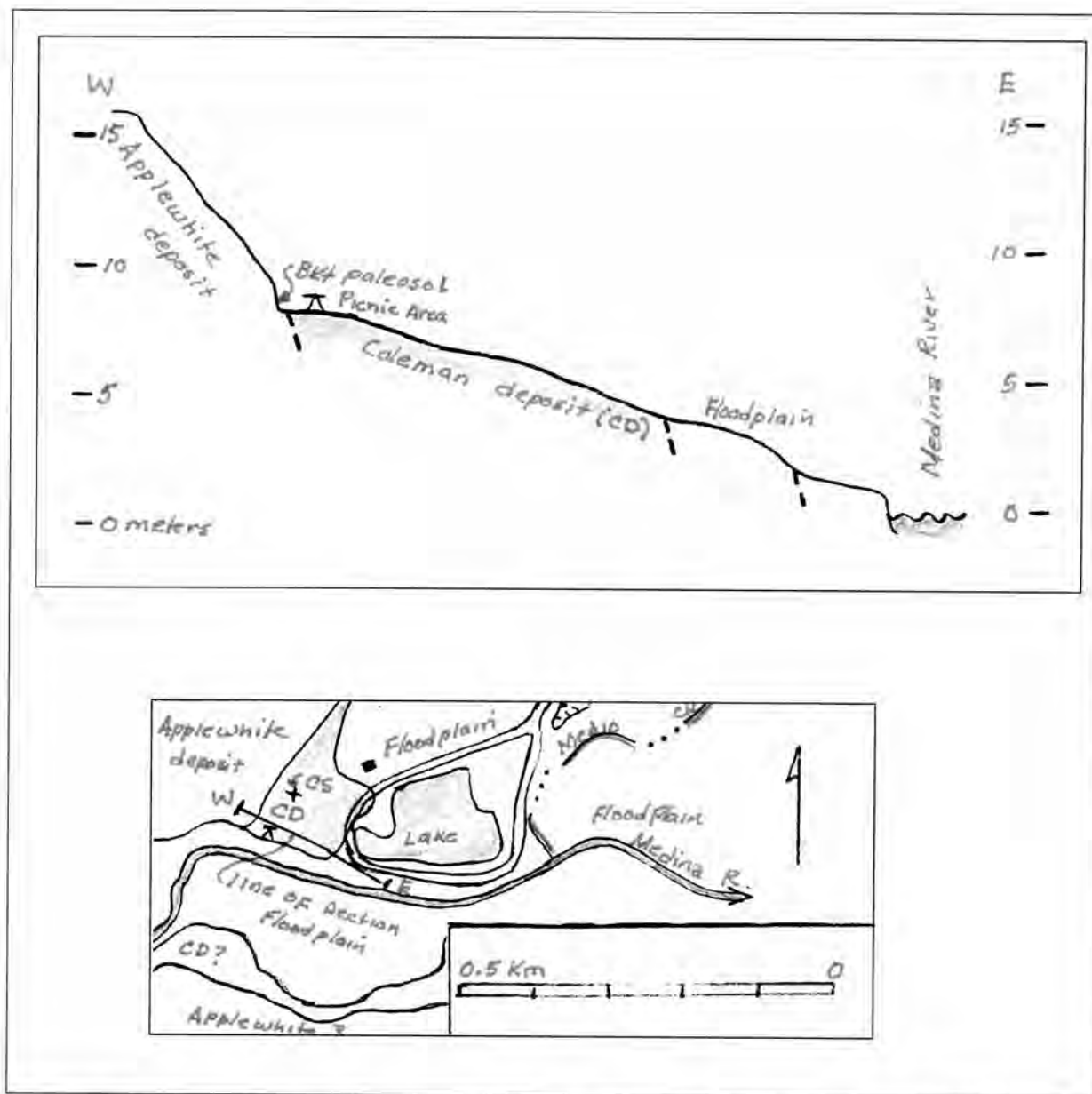


Figure 3. West to East schematic section of terrace deposits of Medina River and Medio Creek south of the Coleman site (41BX568). View to the north showing the relationship of the deposits. Elevations above low-water level by hand-leveling. No horizontal scale in Figure 3a above. Index map shows line of schematic section and Quaternary outcrops near Coleman site. CS is Coleman Site. CD is Coleman deposit. Map from Macdona and Terrell Wells 7.5 min. Series (USGS). Sketch maps by Charles E. Mear.

measured level of the higher deposit described above. About 4 meters of the upper Coleman deposit are exposed in a quarry wall located about 12 meters west of the former Coleman site. In general, the sediments range upward from fine-grained quartzose sand at the base of the quarry wall to very-fine-grained quartzose sand at the base of the quarry wall to very-fine-grain sand and argillaceous silt in the

upper meter. The quartzose sand contains some clay, primarily of primary deposition. Little or no pedogenic clay enrichment is evident, and no secondary calcium carbonate enrichment was noted.

The modern floodplain deposits of the Medina River and Medio Creek are present topographically below the Coleman site deposit. The floodplain deposits have been extensively mined for sand and

gravel east of the Coleman site, and contain several quarry lakes. The floodplain deposits are in 2 benches, about 1 meter and 3.5 meters above the Medina River. The Medio floodplain deposits near the Coleman site were not examined and not measured.

### **Age and Correlations of Terrace Deposits**

#### ***Coleman Terrace Deposit***

Dan Potter reported to the author (letter, December 18, 1997) that the Coleman archaeological site contained 2 hearths in the upper part of the Coleman terrace deposit, slightly above human burials. The hearths were dated (two-sigma level, calibrated) at AD 1248-1396 and AD 1227-1407, respectively. Based on these data it is concluded that fluvial deposition ceased by about 700 years ago.

Based on the miniscule amount of soil development in the deposit, its position as the first terrace above the modern floodplain, and on the dates from the hearths contained in it, it is concluded that the deposit is late Holocene in age. It is correlated with the Q1 deposit of the upper Sabinal River valley, which may range in age from about 4500 to 1000 yr B.P. (Mear 1990). It is also correlated with the West Range deposit of Cowhouse Creek in the Lampasas Cut Plain, which ranges from 4200 to 600 yr B.P. (Nordt 1992).

The Coleman site deposit probably is equivalent to the sediments in the upper 3.5 meters of the Applewhite terrace deposit at the Richard Beene site, which contain the Leon Creek paleosol, overlie the

Medina paleosol, and range in age from about 4135 B.P. to Late Prehistoric (Thoms 1992: Figure 3).

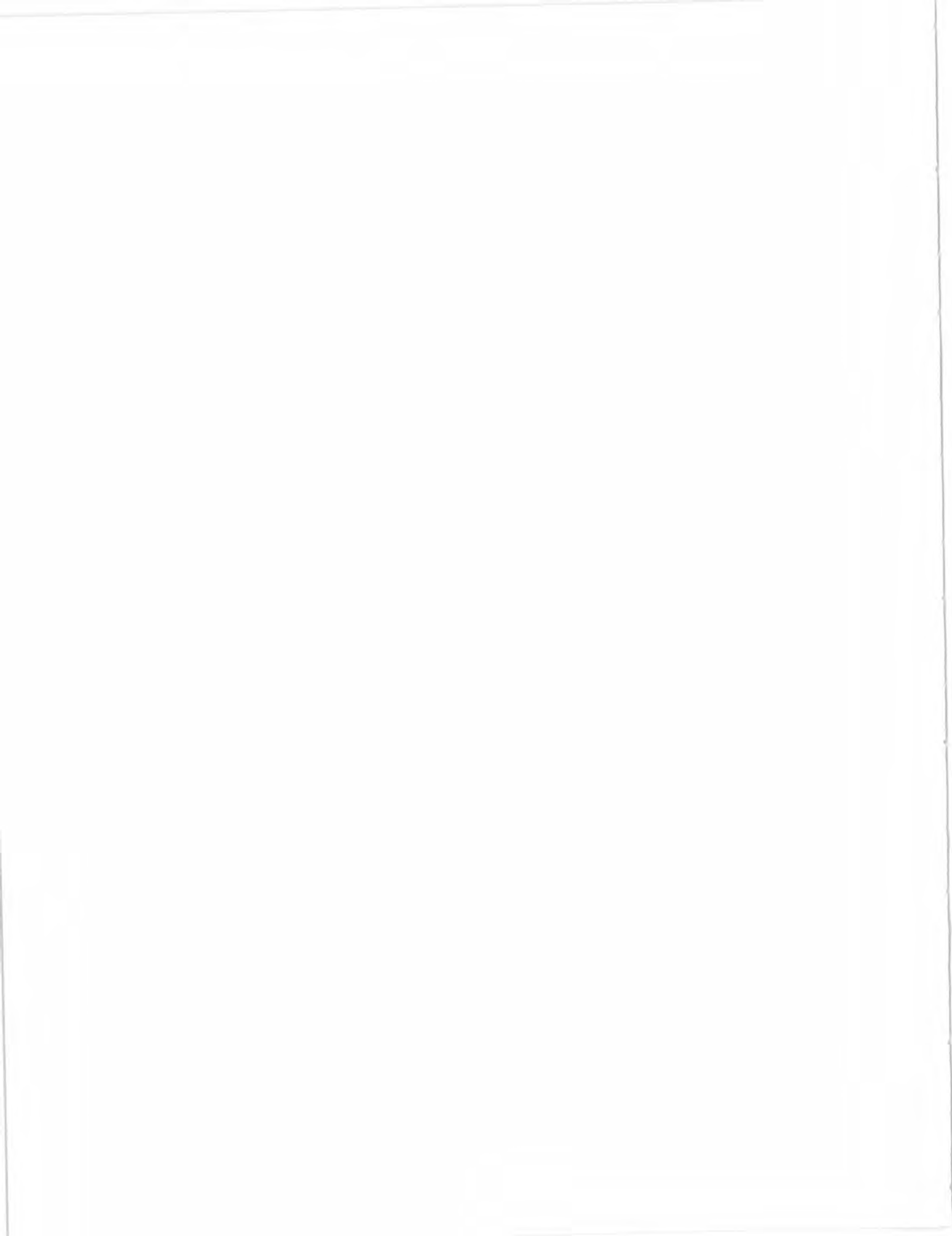
The Coleman site archaeological material was in sediment that is equivalent to the Late Prehistoric upper Payaya soil at the surface of the Applewhite deposit at 41BX859 on the Medina (Thoms and Olive 1997), and to the upper meter of Late Prehistoric surface sediment of the Applewhite terrace deposit at the Richard Beene site.

#### ***Applewhite Terrace Deposit Equivalent***

No data are available that would allow positive dating of the upper terrace deposit west of the Coleman site. The Bkt horizon in it is a mature calcic soil horizon that appears to be late Pleistocene or early Holocene in age. It may be the equivalent of either the Somerset or Perez paleosol at the Richard Beene site. The overlying sediments probably are equivalent to part or all of the sediments that overlie the Somerset at the Richard Beene site; but it is postulated that they may range in age from at least early Holocene to late middle Holocene (4500 yr B.P.).

#### ***Conclusion***

Based on the areal distribution of the terrace deposits, and their apparent ages, it is concluded that the probable Applewhite sediment at the Coleman site were deposited by the Medina River prior to about 4500 B.P., and the Coleman terrace sediments possibly by Medio Creek from about 4200 B.P. to about 700 years ago.



## CHAPTER 3

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# Salvage Excavations at the Coleman Site

*Daniel R. Potter*

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### METHODS AND RESULTS

Prior to describing the bioarchaeology of the interments found at the Coleman site (to be taken up in the next chapter), we will describe how the site was excavated during two very distinct excavation phases. We will also offer observations about site structure. Over 250 cubic meters of fill were moved during 17 days of excavation at the Coleman site. Excavation of the Coleman site utilized both controlled and uncontrolled excavation, depending on the needs of the moment. Most of excavated volume was comprised of overlying deposits removed by backhoe, thanks to the efforts of Mike Fulghum.

#### Grid and Vertical Controls

Vertical control at the site was in meters above mean sea level (amsl). Richard Kinz brought absolute elevation from a benchmark on Somerset Rd., roughly 400 feet north of the intersection of Fischer and Somerset. Elevation of that bench was 189.676. A primary site datum, Datum 1, was established on the concrete floor of the pavilion (a roofed campground facility) immediately below the site. Datum 1 coordinates were N1000/E1000/Z167.972. A deeply incised "X" was placed in the concrete floor marking this datum. The site grid was oriented using magnetic north as defined by TDS compass. The Sokkia TDS compass is not as accurate as can be found on a standard optical transit, and thus there may be some small divergence between grid north and magnetic north. Should a measurement error exist, it would be less than one degree. All secondary datums, grid

points and vertical measurements at the site were recorded relative to the primary datum. A Sokkia Set 5E total data station (TDS) was used extensively to record artifact and bone locations, as well as establishing horizontal grid locations when necessary. Raw TDS data remain on file at the Texas Historical Commission's Archeology Division.

#### Phase I Salvage Excavation

Most of the Coleman site was not excavated using a conventional Unit/Level approach. Relying on the TDS to plot any materials of interest, and dependent on the backhoe to remove tons of overburden, we did not establish units of standard size or excavate these in typical arbitrary levels. Instead, four units were placed judgmentally over the course of the project with the intent of quickly (mechanically) removing overburden and allowing adequate room for hand excavation of burials and features as they were encountered or suspected. All burial and feature fill was either screened through 1/4 inch mesh or collected for flotation. Remaining sediment from areas not associated with specific features or burials were spot-checked, meaning that occasional buckets of fill were screened when cultural remains seemed a possibility. The only exceptions to this general rule were two one-meter test units, and a portion of the archeological surface encountered between Features 5 and 7 at elevation 172.55 feet. The "172.55 surface", detected due to the presence of burned materials from two contemporary hearth features, was troweled and/or shovel-scraped with greater care and passed through 1/4 inch hardware cloth.



Four units were established for overburden removal and excavation of Group 1 burials. The first of these was "Backhoe Scrape 1," which focused on removal of Burial 1. This unit was originally about two meters N-S by three meters E-W. During excavation on October 14, 1995, this unit encountered 3 additional interments and two sandstone slabs, one of them clearly placed above Burial 3. As work progressed, extensions to the north and south of "Backhoe Scrape 1" were excavated, using mechanical and hand techniques. These extensions, reacting to the presence or likely presence of additional interments, were logistically defined and of irregular shape. Two units expanded excavation to the south (called Central Balk East, Central Balk West) and a third unit opened new excavation to the north (Central Balk North). Considered together, these removals created a central excavation block of irregular shape covering an area of approximately four by seven meters (Figure 4). Seven intact interments (the Group 1 burials) were removed from this central excavation area. Also recorded here were the two features mentioned above, as well as portions of an associated archaeological surface at elevation 172.55.

In addition to the salvage units comprising the main block described above, two control units were set to the east of the main block. Unlike the backhoe excavations described above, both control units were one-meter squares, set on grid, and hand-excavated in 10 cm arbitrary levels. All sediments from these units were screened through 1/4 inch hardware cloth. The units were intended to provide a controlled top-to-bottom view of site sediments and artifact densities, as well as testing for the limits of the Coleman cemetery. The units were designated N972/E955 and N958/E951, based on SW corner grid locus. Because these units were located further from the sun-baked and compressed edges of the quarry pit, their sediments were much more easily worked. Neither unit encountered intact features or burials, and neither encountered the archeological surface defined in the main excavation block at elevation 172.55. Artifact recovery was extremely limited, with a combined total of 25 items. Detailed recovery information for the two tests is provided in Tables 1 and 2.

Figure 5 graphically presents artifacts by 10 cm level within the two test units. While the units had

slightly different starting elevations, levels 2 and below are at identical absolute elevations. Recovery was extremely light—only one unit-level had more than three items (N958/E951: Lev. 3). All other levels recovered between 0 and 3 items. In addition to very low density, all artifacts from the two units were extremely small. All flakes and chips were interior or tertiary items (i.e. lacking any sign of cortex), and all were incomplete. The largest of them weighed less than a gram. Thermally modified materials were also very small, including such items as tiny potlid fractures and very small pieces of fire cracked rock (FCR—the largest of these, by far, was less than 5 cm in diameter and weighed less than 30 grams) or fire cracked chert (FCC). Given the potential for smaller items to be carried further from their primary contexts than larger ones (through natural factors including erosion, graviturbation, etc.), the recovered items may be indicating secondary context, and this is in fact our assessment. Still, given our limited excavations, we cannot rule out the possibility that one or more very low-density buried components may have been present at the site.

### **Context and Archaeological Structure**

Figure 6 depicts site structure as revealed by TDS shots on all human remains as well as Features 5 and 7. Burial Group 1 is seen positioned between North 962 and N 966, and vertically between elevations 171.60 and 172.20. Assessing the interments themselves, a clear trend of increasing depth from south to north is apparent. Burial 5, the southernmost Group 1 interment, was resting at approximately 172.05 elevation, while Burial 6, the northernmost individual, was resting at elevation 171.70. This may mean that burial pits for Group 1 were excavated from a surface with a similar slope to the north. However, origin points for burial pits were not discerned in the field in spite of our efforts to do so, and our current best guess is that the Group 1 burials originated at the 172.55 surface.

### **Archaeological Surface at 172.55**

Overlying Group 1 were two hearths, Features 5 and 7. These appear to be the remains of open fires in

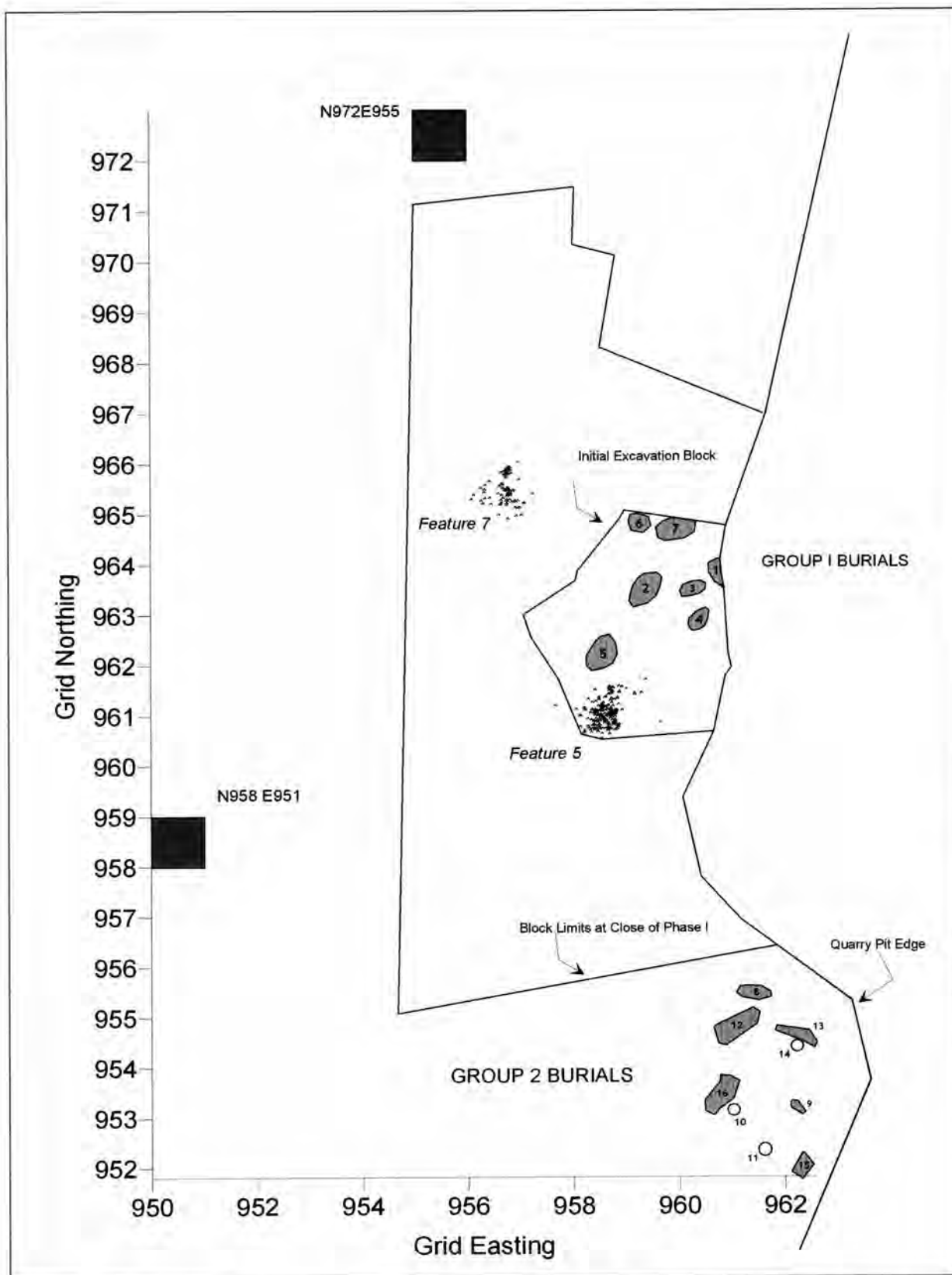


Figure 4. Excavations conducted during two phases of work at the Coleman Cemetery. Shown are Burial Groups 1 and 2, excavation blocks, two one-meter test units, and overlying Features 5 and 7.

Table 1. Artifacts by level, N958/E951.

LEVEL	VERTICAL LIMITS	FLK	CHP	FCR	FCC	MUS	TOTAL ITEMS	OTHER/COMMENT
1	173.65-173.40	-	-	-	-	-	-	.22 BULLET, SHOTGUN SHELL CASING
2	173.40-173.30	-	-	-	-	-	-	
3	173.317-173.20	1	2	2	1	3	9	FLK IS BURIN REMOVAL FROM BIFACE
4	173.20-173.10	-	-	1	1	-	2	
5	173.10-173.00	-	-	-	-	-	-	
6	173.00-172.90	-	1	-	-	-	1	POTLID
7	172.90-172.80	-	-	-	-	-	-	
8	172.80-172.70	-	-	-	-	-	-	
9	172.70-172.60	-	-	-	-	-	-	
10	172.60-172.50	-	-	-	-	-	-	
11	172.50-172.40	-	-	-	-	1	1	FRAGMENTED-INC. UMBO
12	172.40-172.30	-	2	-	-	1	3	
<b>TOTAL</b>		<b>1</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>16</b>	

Table 2. Artifacts by level, N972/E955.

LEVEL	VERTICAL LIMITS	FLK	CHP	FCR	FCC	MUS	TOTAL ITEMS	OTHER/COMMENT
1	173.57-173.40	-	-	-	-	2	2	
2	173.40-173.30	-	-	-	-	-	-	
3	173.30-173.20	-	-	-	-	-	-	
4	173.20-173.10	-	-	-	-	-	-	
5	173.10-173.00	-	-	-	-	-	-	
6	173.00-172.90	-	1	-	-	-	1	
7	172.90-172.80	-	-	-	-	-	-	
8	172.80-172.70	1	-	-	-	-	1	PROXIMAL FRAG.
9	172.70-172.60	-	-	-	-	-	-	
10	172.60-172.50	-	-	-	-	-	-	
11	172.50-172.40	-	-	-	-	-	-	
12	172.40-172.30	1	-	-	-	-	1	TERTIARY, COMPLETE
13	172.30-172.20	-	2	-	-	-	2	ONE HEAVILY ROLLED
14	172.20-172.10	1	-	-	1	-	2	
15	172.10-172.00	-	-	-	-	-	-	
16	172.00-171.90	-	-	-	-	-	-	
<b>TOTAL</b>		<b>3</b>	<b>3</b>	<b>-</b>	<b>1</b>	<b>2</b>	<b>9</b>	

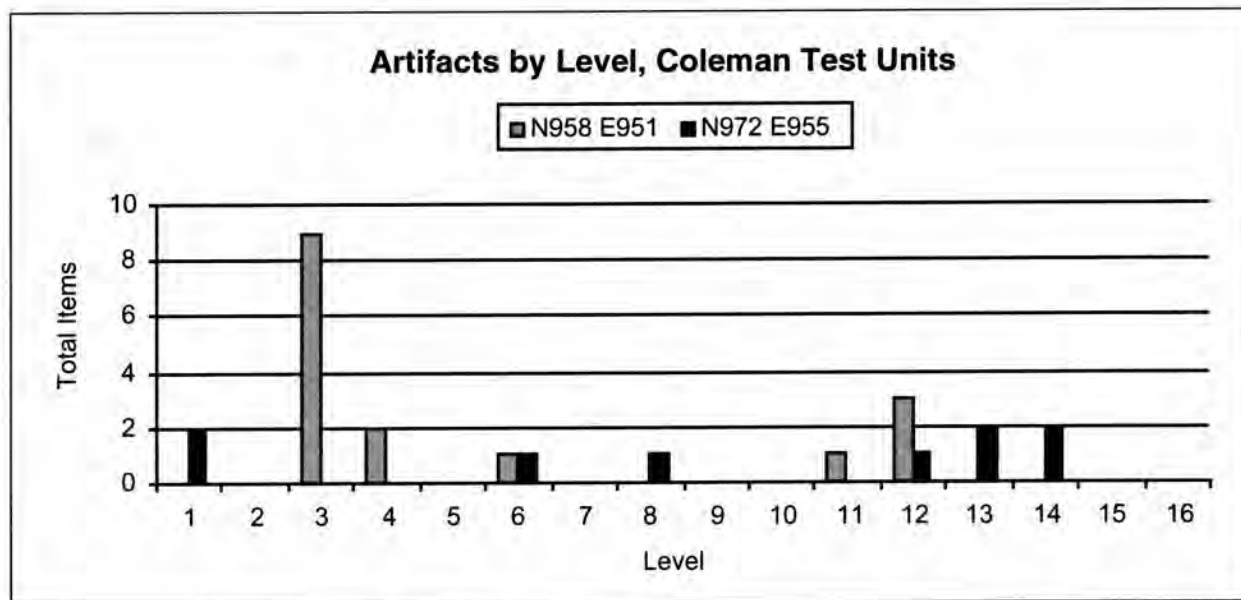


Figure 5. Histogram of vertical distribution of artifacts from two test units.

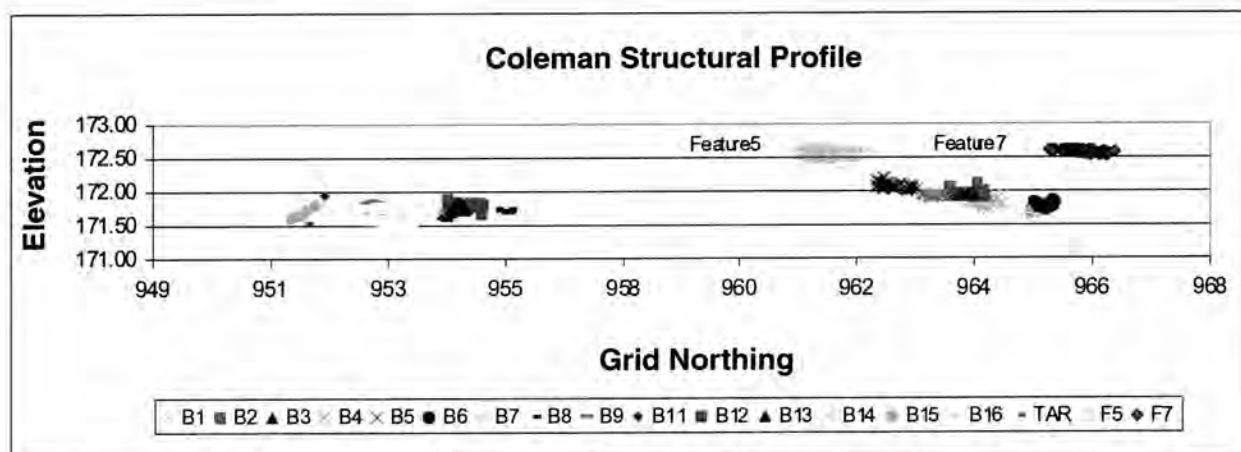


Figure 6. Composite structural profile of Coleman site remains as revealed by TDS shots on skeletal remains and FCC (Fire Cracked Chert). Vertical scale is greatly exaggerated to show sloping trends in Group 1 and 2 burials.

which fire itself is the primary engine producing heat and light. Lewis Binford (personal communication; 1996) refers to these as “white-ash” fires, as there is sufficient oxygen present to fully (or nearly so) reduce fuel to ash.

Constructed primarily of fire-cracked chert (FCC), Features 5 and 7 were fairly compact flat-bottomed clusters of angular heat-fractured cobbles. Both features had experienced robust thermal spalling, resulting in a definable surface around the hearths, marked by the presence of spalled chert fragments, minute mottles of charcoal and oxidized sediment,

small freshwater mussel shell fragments, and very rarely, pieces of debitage. Considered together (Figs. 5, 7), these materials defined a subtle but clear surface roughly conforming to an elevation of 172.55.

It was initially hoped that the surface might produce additional charcoal samples and/or diagnostic artifacts. The surface failed to do so, however. Each hearth did produce sufficient quantities of charcoal for assay, and these provide a clear age-range for the surface, and perhaps the Group 1 burials below it as well. Charcoal was recovered as small mottles located between and immediately underneath clasts in



Figure 7. Phase I excavation at the Coleman site, view is south towards the Medina River (not visible). Quarry pit is visible at left and in background. Pedestal in center of block shows extent of defined archeological surface at elevation 172.55 meters, with Features 5 and 7 removed. Group 1 burials may have originated from this surface, which is firmly dated between A.D. 1225 and 1408. White plastic buckets in background mark approximate location of Group 2 burials, which were missed by Phase I excavation.

both features (Figure 8). When these were processed (Beta Analytic) they were found to be archeologically contemporary, with only 10 years separation in conventional radiocarbon age. The smaller Feature 5 sample required an AMS date, producing an assay of 700 bp +/-50 (Beta-107873), while Feature 7 produced sufficient sample for a conventional assay (Beta-107874) of 690 bp +/-70. The assays produced calibrated two-sigma ranges of A.D. 1245-1329 and A.D. 1225-1408 respectively (Table 3).

Perhaps the simplest structural interpretation at present is to assign the origin of all Group 1 interments to this surface, as it is the only surface we were able to detect either in the field or by analyzing our vertical plot data. This interpretation will remain guarded unless or until radiocarbon assays can be conducted directly on bone from the burials themselves. In terms of absolute elevation, the deepest

Group 1 interment was Burial 7, with human remains resting just above 171.60. Burial 5, highest in absolute elevation, was lying at ca. 172.05. If the 172.55 surface was the point of origin for Group 1, associated burial pits would have ranged from approximately 90 to 50 cm deep. While this may seem deep for prehistoric interments, it can be assumed that the sandy deposit at the Coleman Site was fairly easy to work by prehistoric peoples. It should also be noted that there is a true dearth of data regarding the depths to which prehistoric burial pits were dug. To answer this question, the origin point for burial pits must be known, as well as the pit bottoms. Unfortunately, such information is not available within the region. When seeking regional comparative data on burial pits, we were not able to find a single case where the depth of any central Texas prehistoric burial pit was clearly observed and recorded.

### Phase II Excavations

In January 1996, two months after the close of Phase I salvage excavations, we were called back to the site in response to new developments. Upon our arrival, a new cluster of disturbed burials, centered roughly 10 meters south of Group 1, were already visible at the surface, with greater or lesser degrees of disruption caused by bulldozing. A gap of roughly six meters separated Groups 1 and 2 (Figure 4). Over the course of two days, 9 additional interments were recognized (burials 8 through 16) representing 12 individuals. The discrepancy between field recognition and true minimum number of individuals (MNI) is likely due to the disturbed nature of Group 2 burials and the necessarily hurried manner in which they were excavated. During this phase, no excavation units were defined and only very limited spot-screening of sediments was attempted. Instead, exposed interments were quickly cleared by hand excavation, and all in situ remains were plotted using the TDS. When articulated remains were found, measured sketch maps were made as time allowed, as well as photo documentation. All visible remains were collected from the site and assigned a burial number, or placed into the "general collection" category when remains were clearly out of context and could not be associated with other remains. Unlike Phase I, Phase II placed archeologists in a purely reactive mode at the site, quickly



Figure 8. Feature 5 was one of two flat-bottomed clusters of heavily burned fire cracked chert associated with the archeological surface at 172.55. Thermal spalls and other ejecta from these features were used to define the surface. Small fragments of charcoal were collected from between and under larger clasts within both features.

identifying and removing machine-exposed interments and disarticulated remains.

### Group 2 Burial Context

We suggest that the burials of Group 2 are contemporary or nearly contemporary with those of Group 1. However, given the condition of this portion of the site when we arrived for Phase II salvage, it must be admitted that this judgment is speculative. For example, if the 172.55 surface overlaying Group 1 was also present above Group 2, it had already been removed by bulldozer. In terms of absolute elevation, the Group 2 burials agreed well with the lower burials of Group 1. Plotted bones within Group

Table 3. Radiometric assays on charcoal from Features 5 and 7.

Sample Context	Lab-Number	Measured C14 Age bp	C13/C12 Ratio	Conventional C14 Age bp	Cal 2-sigma Range AD
Feature 5	Beta-107873	700 +/- 50	-25.2	700 +/- 50	1245-1329
Feature 7	Beta-107874	700 +/- 70	-25.2	690 +/- 70	1225-1408

2 ranged from 171.55 to a bit over 171.90 in elevation. Given that the two groups were relatively close together on a fairly level landform, their similar vertical position lends support to contemporaneity. Finally, the recovery of a broken arrow point from Group 2 (Burial 9) of either the Scallorn or Edwards type does fit (albeit not a comfortable one) with the C14 assays of Features 5 and 7, which in turn may have been marking the surface of origin for Group 1 burials. The only method of clearly answering the question of the stratigraphic/temporal relationship between Groups 1 and 2 would be multiple radiocarbon assays on both groups, an approach beyond our current resources.

### SUMMARY

At present, the keystone in our understanding of the way the Coleman Site is organized is ironically not the two burial groups at all, but rather the very thin archeological surface overlying Group 1 at elevation 172.55. Producing two well-preserved hearth features, two radiocarbon assays separated by only 10 years, and a meager scatter of artifacts and ecofacts, this surface offers the best-defined archeological point of departure available. Group 1 burials

occur below this surface, and may or may not have originated from it—however we think they probably did. The evidence is tentative at best, as none of the burial pit origins could be traced in the field. However, a large sandstone slab, 33 cm in maximum diameter and located on the 172.55 surface, was positioned over Burial 4 but some .30 cm above it. If these slabs were indeed individual burial markers, then this large manuport supplies evidence for linkage between Group 1 burials and the two hearths above them.

Group 2 is unfortunately in “stratigraphic limbo” due to the bulldozing and site destruction that occurred in this specific area. However, we speculate that Group 2 and Group 1 are roughly contemporary. The vertical positions of the two burial groups overlap partially, they follow a similar pattern of burial positioning (placed on side, tightly to loosely flexed) and both groups show an absence of mortuary furniture (discounting the fragmentary arrow point in possible association with Burial 9). Importantly, the speculated relationships between Groups 1 and 2, and between both groups and the dated hearths above them can certainly be investigated further and probably solved through further radiometric assays involving both groups.

## CHAPTER 4

# Description, Context, and Osteology of the Coleman Burials

*Robert B. Pickering and Daniel R. Potter*

We have noted that archaeological context data and osteological analysis are frequently reported separately in archaeological reports. In an attempt to integrate this information, this chapter combines field observations recorded by archaeologists with results of osteological analysis in the laboratory. Each interment is described first in terms of its archeological context, including orientation, position, associations, and other data. In addition to the excavation map, a single grid location is provided for each interment using a single TDS coordinate, collected from a specific bone within that burial. Where possible, coordinates are supplied on centrally positioned elements such as the innominate, but in the case of incomplete interments other elements were used. Biological data for that individual is then provided, including age, stature, gender, observed pathologies or traumatic injuries, etc.

In several cases, interments thought to be single individuals in the field actually contained more than one person. This was more common among the highly disturbed interments of Group 2, where burial identification was difficult. In these cases, different individuals within the same burial number are distinguished by a following letter. For example, Burial 13 in Group 2 actually represents 3 individuals, and these are labeled 13A, B, and C in this chapter. In each of these cases, the individual recognized in the field will have the appropriate archeological context data supplied, but these data have been left blank for

those individuals who were only detected as a result of physical analysis.

### GROUP 1, BURIAL 1

Burial 1 was first encountered extending from the borrow pit profile. This was the initial interment encountered, and was partially visible as it extended from the sand pit profile. Due to mechanical excavation and/or later weathering and slumping of the exposed pit wall, Burial 1 was an incomplete interment. Richard Kinz and Candy Smith exposed and took notes on this interment. Missing were the cranium, cervical and thoracic vertebrae, clavicles and a number of ribs. Portions of the feet, lower and upper legs, and innominates were present. A few flakes of chert and charcoal mottling was observed in the thoracic area.

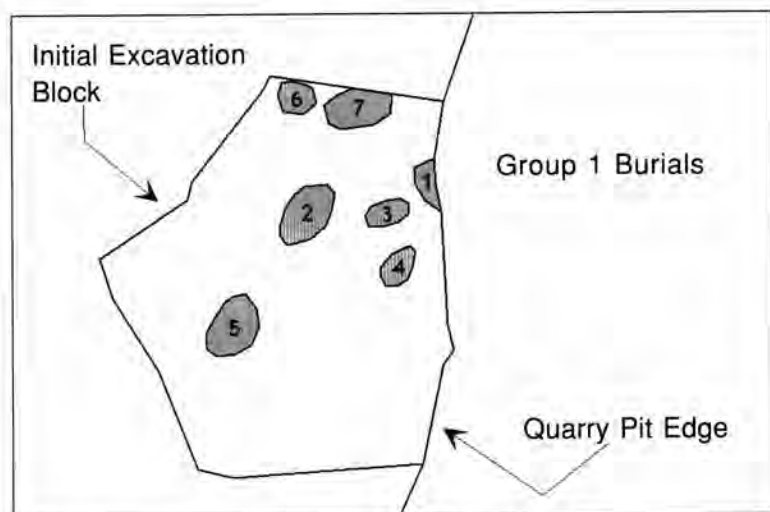


Figure 9. Distribution of burials in Group 1. Grid North is to top.



<b>Context</b>	Group 1, Burial 1
Position	Flexed, Right
Orientation	15 Degrees E
Pit Information	None observed
(Other Individuals)	None Observed
(Artifacts/Manuports/Charcoal)	Charcoal flecking
Slabs Present?	Yes, 3 stacked slabs over upper leg area
Grid Locus	Left Pelvis N963.84, E 960.58, Z 171.78
 <b>Biological Characteristics</b>	
Completeness	Remains include thoracic and lumbar spine, a few ribs and fragments of arm and leg long bones, and some bones of the feet
Sex	Male—determination based on characteristics of the pelvis, specifically the form of the greater sciatic notch and preauricular sulcus. Although long bones are very fragmentary, they are robust
Age	45–55 years—Todd phase 9/10 of pubic symphysis morphology
Stature	Not available; long bones present were fragmentary
Anomalies	None observed
Pathology	Degenerative joint disease of lower spine. Slight compression of the sixth lumbar vertebra. Comment: While degenerative changes in the spine are not uncommon at this person's age, the compression indicates heavy physical stress, probably related to lifting or carrying.
Dental Condition	No teeth present

Enough of the burial was present to estimate burial position, which was flexed and lying on the right side. The body had been oriented roughly 15 degrees east of north. The state of preservation

within the burial assemblage varied from poor to good. It is likely that fragments of this individual were present among those collected at the base of the cliff.

## GROUP 1, BURIAL 2

Burial 2, excavated by Tom Miller and recorded by Ed Mokry, was the interment of an adult male. Tightly flexed on its left side, the body had been placed with an orientation of 37 degrees east of north (Figure 10).

The head had been placed upon the upper left arm, which extended past the folded knees of this individual. The cranium was oriented with its frontal area down and occipital towards the surface. It seems most likely that the original position of the head was on its left side and supported by the humerus, but that the cranium had slightly slumped and rotated after deposition, to its current position. As with other interments at Coleman, minor disturbance had

occurred to the carpals so that they were found together but not in correct anatomical position. We speculate that disturbance through bioturbation is the most likely candidate for this and other forms of mild disturbance. Cranial and postcranial remains were in relatively good condition, but articular ends were eroded or in some cases non-existent. Small stream-rolled gravel was observed scattered throughout the pit fill in and around the interment. The pit outline became evident just slightly above the interment itself, and extended from the south profile of the excavation. While a small area of the pit was not visible to us, its outline was broadly oval in shape. There were no material associations with this interment, but charcoal mottling was observed in the area of the left knee.

<b>Context</b>	Burial 2
Position	Flexed, Left
Orientation	37 Degrees E
Pit Information	Oval
(Other Individuals)	None Observed
(Artifacts/Manuports/Charcoal)	Charcoal Mottling
Slabs Present?	Possible. 20X15 cm slab fragment observed ca. 30 cm above burial area.
Grid Locus	Left Pelvis N963.34 E959.16, Z 171.92
<b>Biological Characteristics</b>	
Completeness	Essentially complete but fragmentary
Sex	Male? The majority of morphological characteristics on the skull and pelvis indicate maleness, but the skeleton is not robust and there is a pre-auricular sulcus. Head of humerus is relatively large and above the section points of Dwight and Dittrick.
Age	35+ Todd phase 9/10 Complete fusion of major endo- and ecto cranial sutures
Stature	5'6" to 5'9" Based on length of the humerus and the stature estimate formula for Mexican males (Bass 1987)

<b>Biological Characteristics</b>	Burial 2
Anomalies	None Observed
Pathology	Degenerative joint disease in the neck and lower spine. Changes include extensive lipping and deformation of the vertebral bodies. Dens portion of 2nd cervical vertebra also presents osteophytic development. Degenerative change on the first left metatarsal is limited primarily to the inferior distal surface. Caries and apical abscess, upper right 1st molar.
Dental Condition	No tooth rotation or malocclusion. Severe occlusal wear, heavy faceting resulting in exposure of dentin on virtually all teeth that are present. The apical abscess may have resulted from the severe occlusal wear.

**GROUP 1, BURIAL 3**

A young child was found in burial No. 3, excavated and recorded by Karen Fulghum and Don Keyes. The child had been placed on its left side in a tightly flexed position, and was oriented 85 degrees east of north. The child had been placed so that its back was straight or nearly so, but the legs

and arms tightly flexed to the body. A possible hammerstone was found above the lower ribcage area. Given the location of the stone its identity as a grave offering is questionable, but possible. The pit outline was visible in Burial 3 as a flattened oval with a slightly darker infill than surrounding soil. Charcoal mottling was also found scattered within the pit fill.

<b>Context</b>	Burial 3
Position	Flexed, left side
Orientation	85 degrees east
Pit Information	Present, oval in shape
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	Hammerstone, charcoal flecking scattered in pit fill
Slabs Present?	Possible. Large sandstone slab was removed from fill ca. 20 cm above this interment.
Grid Locus	Left pelvis N963.51 E960.10 Z171.93
<b>Biological Characteristics</b>	
Completeness	All portions of the skeleton are represented but most individual bones are fragmentary or incomplete.

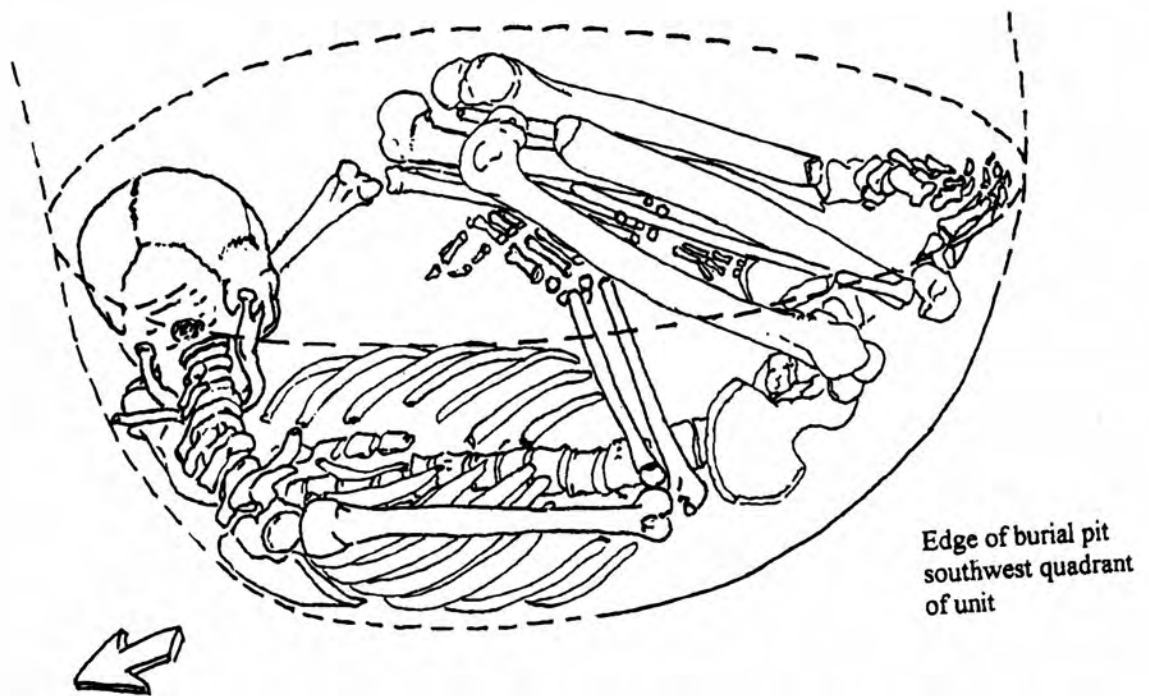


Figure 10. Photograph and field sketch of Burial 2, probable adult male. The interment shows the tight flexing and eastern orientation typical of Coleman site interments (arrow and trowel indicate north). Field sketch by Ed Mokry.

<b>Biological Characteristics</b>	Burial 3
Sex	Indeterminate for this age category.
Age	6 to 7 years Based primarily on dental morphology (Thomas & Goldman 1960) and diaphyseal lengths (Bass 1987: Figure 144).
Stature	not calculated
Anomalies	Indeterminate
Pathology	Severe periostitis on the right radius, where as much as 4 mm. of periosteal swelling was measured. Periostitis on left and right ulnae, left and right tibiae and fibulae. None seen on the skull.
Dental Condition	Severe occlusal wear and exposure of dentin on the deciduous molars.

**GROUP 1, BURIAL 4**

Burial 4 was a child interment excavated by Candy Smith, Reeda Peel and Dan Potter, and recorded by Candy Smith. The child had been placed on its left side, with an orientation of approximately 62 degrees east of north. Both arms had been positioned so that the upper arms paralleled the body,

and lower arms flexed back toward the cranium (Figure 13). Both hands were placed in front of the child's face. A burial pit was visible and took the form of a pointed oval, with the narrower pointed end of the oval to the south. The broader northern end of the oval encompassed the anterior portion of the body. Unlike other pit fills, excavators at Burial 4 did not observe charcoal flecking.

<b>Context</b>	Burial 4
Position	Flexed, left side
Orientation	62 degrees east
Pit Information	oval
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None
Slabs Present?	None
Grid Locus	Left pelvis N962.83 E960.22 Z171.95
<b>Biological Characteristics</b>	
Completeness	All portions of the skeleton are represented but most individual bones are fragmentary or incomplete.



Figure 11. Group 1 Burials 2, 3 and 4 in excavation, numbered from bottom to top in this view. Burial fill was discerned once excavation had penetrated to deeper, lighter-colored sediments. At this elevation, pit fill was recognized as a darker, finer-grained sediment that could be distinguished from surrounding sediment. The cobble visible within Burial 3 fill was not modified and does not appear to be a grave offering.

Figure 12. The youth encountered in Burial 4 experienced episodes of stress sufficient to arrest growth several times. These episodes were likely associated with seasonal lack of sufficient nutrition. Three Harris lines with consistent 4 mm spacing can be seen near the proximal end of the tibia, with the proximal diaphyseal surface (also spaced at 4 mm) suggesting that the child died during this same lean seasonal period.

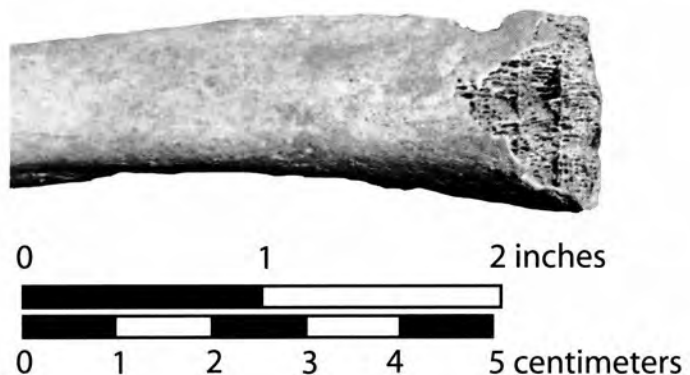




Figure 13. Burials 2, 3 and 4 (numbered from bottom to top) showed generally easterly orientation and tight flexing within compact burial pits.

<b>Biological Characteristics</b>	Burial 4
Sex	Indeterminate
Age	6 to 7 years
Stature	not calculated
Anomalies	not observed
Pathology	Three Harris lines equidistantly spaced at @ 4mm at the proximal tibia. The proximal diaphyseal surface is also @ 4 mm from the previous Harris line (Figure 12).
Dental Condition	Upper right central incisor is unerupted. While the dentin appears to be well formed, only the proximal half of the tooth's enamel is formed. Severe occlusal wear with teeth worn flat and dentin exposure on all teeth present.

**GROUP 1, BURIAL 5**

Burial 5, was an adult, placed in a tightly flexed position within a broad, sub-circular pit. The individual was lying on its right side, with hands to the face and legs tightly curled. Posterior to the thoracic vertebrae the individual had been placed with an orientation of 305 degrees east. However, the

anterior half of the individual had an orientation of 180 degrees, or due south. A general orientation for the body is assessed as 195 degrees east. The face was placed due east.

A small concentration of hackberry seeds and *Succinea* snail shells were observed just anterior of the innominate area. These are thought to be post-burial in age, likely deposited by bioturbation.

<b>Context</b>	Burial 5
Position	Flexed, right side
Orientation	195 degrees east
Pit Information	Sub-circular
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	Possible: one slab .3 m above and .3 m west of burial
Grid Locus	Pelvis N962.52 E958.58 Z172.06
<b>Biological Characteristics</b>	
Completeness	All portions of the body are present although some bones are fragmentary or incomplete.
Sex	Major morphological characteristics of the skull and pelvis indicate maleness.
Age	45+ years, Todd phase 9/10
Stature	5'8" to 5'10 1/2" Based on femur length and the appropriate formula for Mexican males.
Anomalies	None observed
Pathology	Periostitis on the distal half of the left tibia severe degenerative joint disease at right patella, left wrist and cervical, thoracic and lumbar sections of the spine. The medial epiphyses of both clavicles mushroomed and enlarged.
Trauma	The second lumbar presents @40% compression of the upper portion of the body. This kind of trauma can result from severe physical stress such as repetitive lifting/ carrying of heavy loads (Figure 14).
Dental Condition	Extremely severe occlusal wear with angular faceting which exposes dentin and pulp cavities. In some cases, entire crown is worn away and wear is eroding the roots.



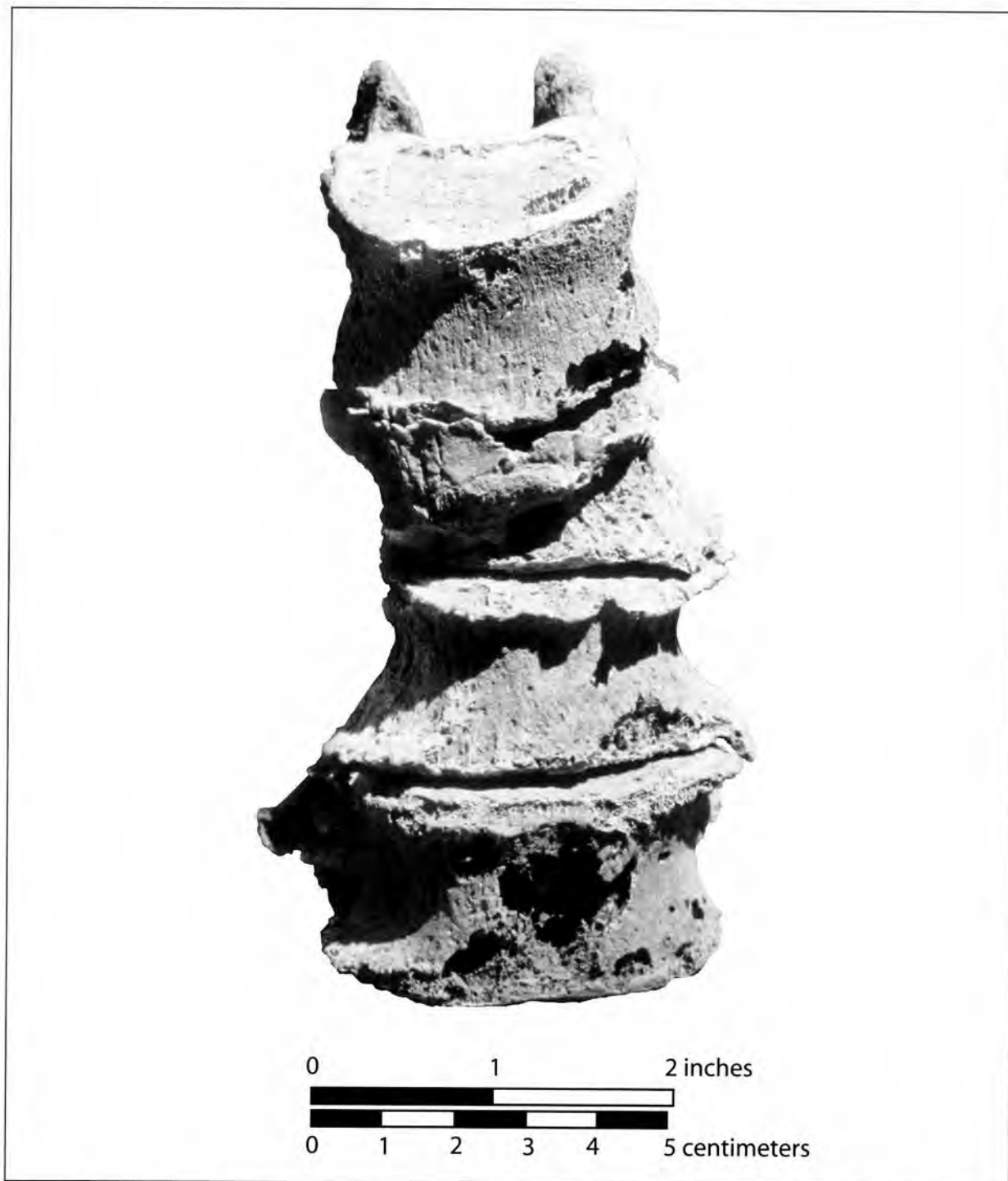


Figure 14. Lumbar vertebrae of the mature male encountered in Burial 5. The second lumbar presents a 40% compression of the upper portion of the body. This kind of trauma can result from repetitive physical stress such as heavy lifting or carrying.

**GROUP 1, BURIAL 6**

Burial 6 was a small child, and had been placed in a tightly flexed position on its right side. Defined by spraying and trowel scraping the surface prior to encountering bone, the burial pit had been defined previous to encountering the individual, as a small oval intrusion, 58 cm. by 38 cm. and oriented 98 degrees East of North. Pit fill was slightly grayer, as has been the case with other interments at this level. This interment was excavated by Reeda Peel and

Candy Smith. Excavation revealed that burial orientation was about the same as that of the pit, or 98 degrees east. The head had slumped vertically and to the north after burial, so that the bregma was almost straight up, and the foramen magnum almost straight down. Cervical vertebrae 1 through 5 had separated as well, and were found draped across the right scapula and clavicle. Both arms (the uppermost left and lowermost left) had been tucked under the individual so that both hands appeared to be under the right Innominate. The face was turned NNE.

<b>Context</b>	Burial 6
Position	Flexed, right side
Orientation	98 degrees east
Pit Information	Oval
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	Left Pelvis N964.83 E959.11 Z171.74
<b>Biological Characteristics</b>	
Completeness	Most portions represented, but remains are very fragmentary and many bones are incomplete.
Sex	Indeterminate for this young age category.
Age	6 to 7 years, based on dental formation and eruption.
Stature	Unknown
Anomalies	None observed
Pathology	Enamel hypoplasia
Dental Condition	Enamel hypoplasia on both upper central incisors (Figure 15). Severe dental wear with faceting and exposure of dentin on deciduous canine and both molars.

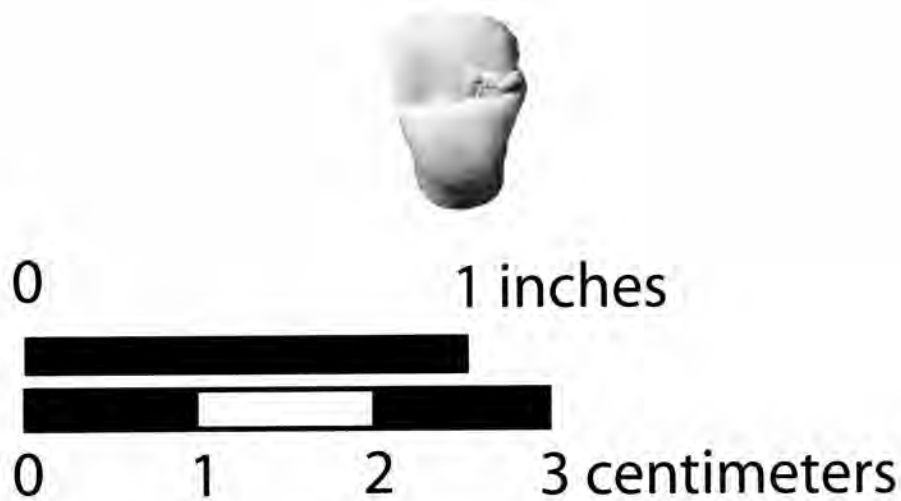


Figure 15. Enamel hypoplasia, evidence of arrested dental growth, was observed on both upper central incisors of the youth encountered in Burial 6.

#### GROUP 1, BURIAL 7

Burial 7 was excavated and recorded by Richard Kinz. The interment was that of an adult, placed in a flexed position on its right side. The interment had been placed in a broad, oval pit. Pit fill was slightly grayer in color than surrounding fill, and had been identified above the burial in the vicinity of 172.20 elevation. Orientation was recorded as 85 degrees east, which is true for the majority of the vertebral column, but the burial sketch map suggests an orientation of 65 degrees East is more descriptive of body in general. Legs were tightly flexed at the knee, while the arms were flexed at the elbow so that both hands were likely resting over the eyes and forehead. As with all interments at the site, there were no unambiguous artifacts associated. However, an isolated bone was encountered south of the burial but within the burial pit. This item was in very poor condition and could not be successfully recovered intact. However, it appeared to be deteriorated antler. If antler, it

is possible that this item may have been an artifact left with the interment, or may have been a portion of an antler rack covering the burial, similar to those seen at 41BX1 (Lukowski 1988) and at Deadman's Tank site (n.d. Kay Hines, notes on file at TARL).

Removal of the interment revealed a number of charcoal concentrations, sometimes in linear segments suggesting burned roots or small branches. As these lay immediately below the burial but within the pit area, it is possible that these represent mortuary activities (burning) associated with burial 7 but prior to the placement of the body. An alternative view of this observed pattern is that it represents postdepositional root burns, without cultural meaning.

Burials at the Coleman cemetery were numbered with a single sequence for the site, but were encountered in two spatially separate groupings. The second group (Group 2—Figure 17) was encountered by earth-moving equipment and required a second phase of work at the site.

<b>Context</b>	Burial 7
Position	Flexed, right side
Orientation	85 Degrees E
Pit Information	Broad oval
(Other Individuals)	
(Artifacts/Manuports/Charcoal)	Probable antler
Slabs Present?	None
Grid Locus	5th lumbar vertebra N964.50 E959.88 Z171.63
<b>Biological Characteristics</b>	
Completeness	All portions of the body are represented but bones are fragmentary and incomplete.
Sex	Female. All major morphological features of skull and pelvis are female. Postcranial skeleton is very gracile. Short bony spicules and irregular morphology at the pubic symphysis suggest that this woman survived at least one full-term pregnancy.
Age	20 to 35 years of age Basi-occipital suture is fused. Long bone epiphyses fused. Major endo and ecto-cranial sutures are open. Juncture between the first and second sacral vertebrae are fusing.
Stature	4'9" to 5' 0"
Anomalies	None observed
Trauma	Possible healed fracture of distal shaft of right ulna. Possible healed fracture at midshaft of left fibula.
Pathology	Severe degenerative joint disease and flattening of vertebrae in the lower cervical spine. Degenerative porosity and lipping (related to joint disease) on all sections of the spine but not as severe as cervical spine. Massive resorption of left maxilla with loss of most teeth in the upper left quadrant (Figure 16). Very likely, this was the result of severe wear, leading to an apical abscess. The abscess triggered a massive infection that destroyed the maxilla. This trauma may be associated with a systemic infection that, directly or indirectly, could have resulted in death. Periostitis on left tibia.
Dental Condition	Caries on lower right third molar. Severe occlusal wear and dentin exposure on remaining teeth.

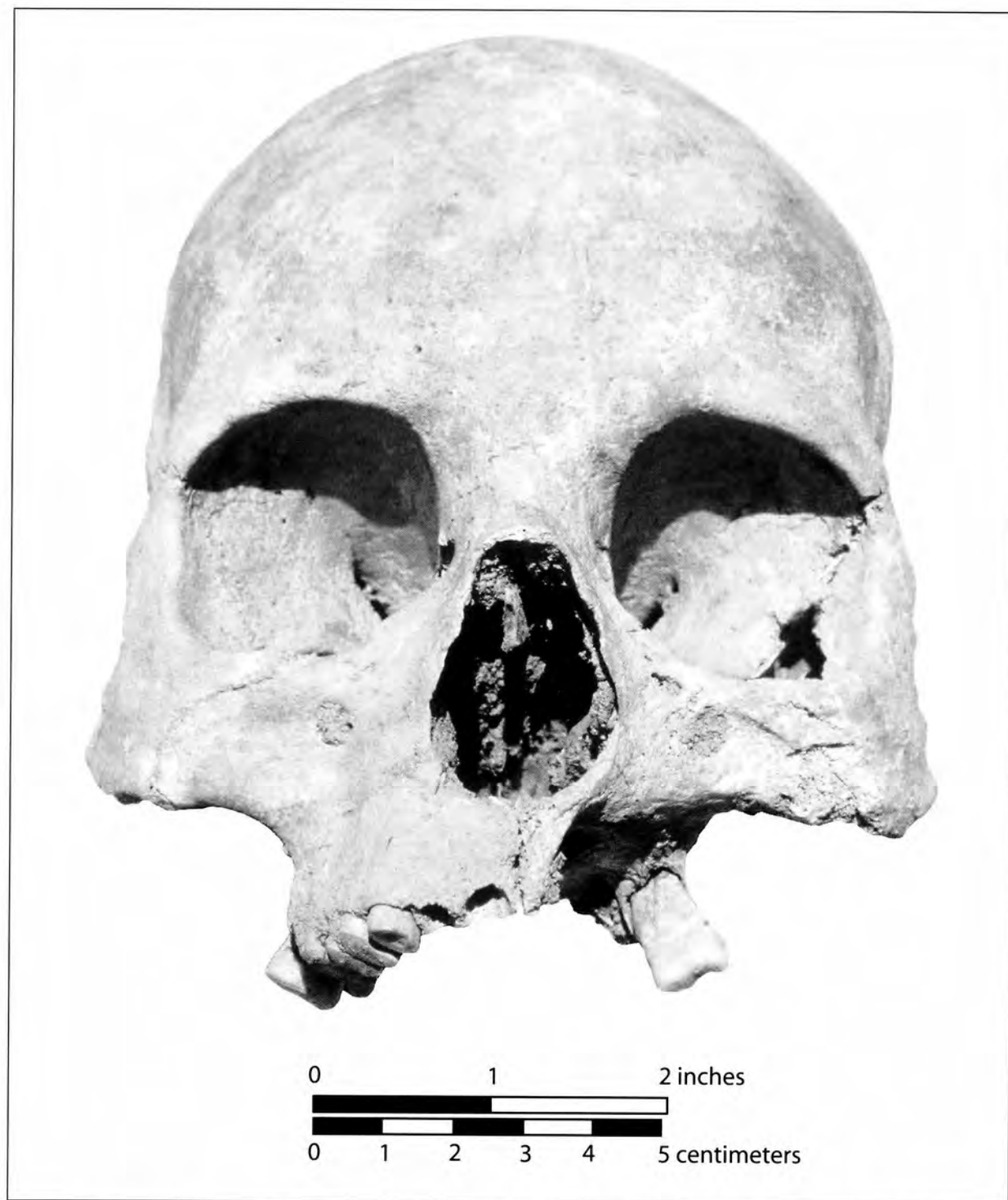


Figure 16. The woman encountered in Burial 7 experienced massive resorption of her left maxilla with loss of most teeth in the upper left quadrant. Very likely, this was the result of severe wear, leading to an apical abscess. The abscess triggered a massive infection that destroyed the maxilla. This trauma may be associated with a systemic infection that, directly or indirectly, could have resulted in death.

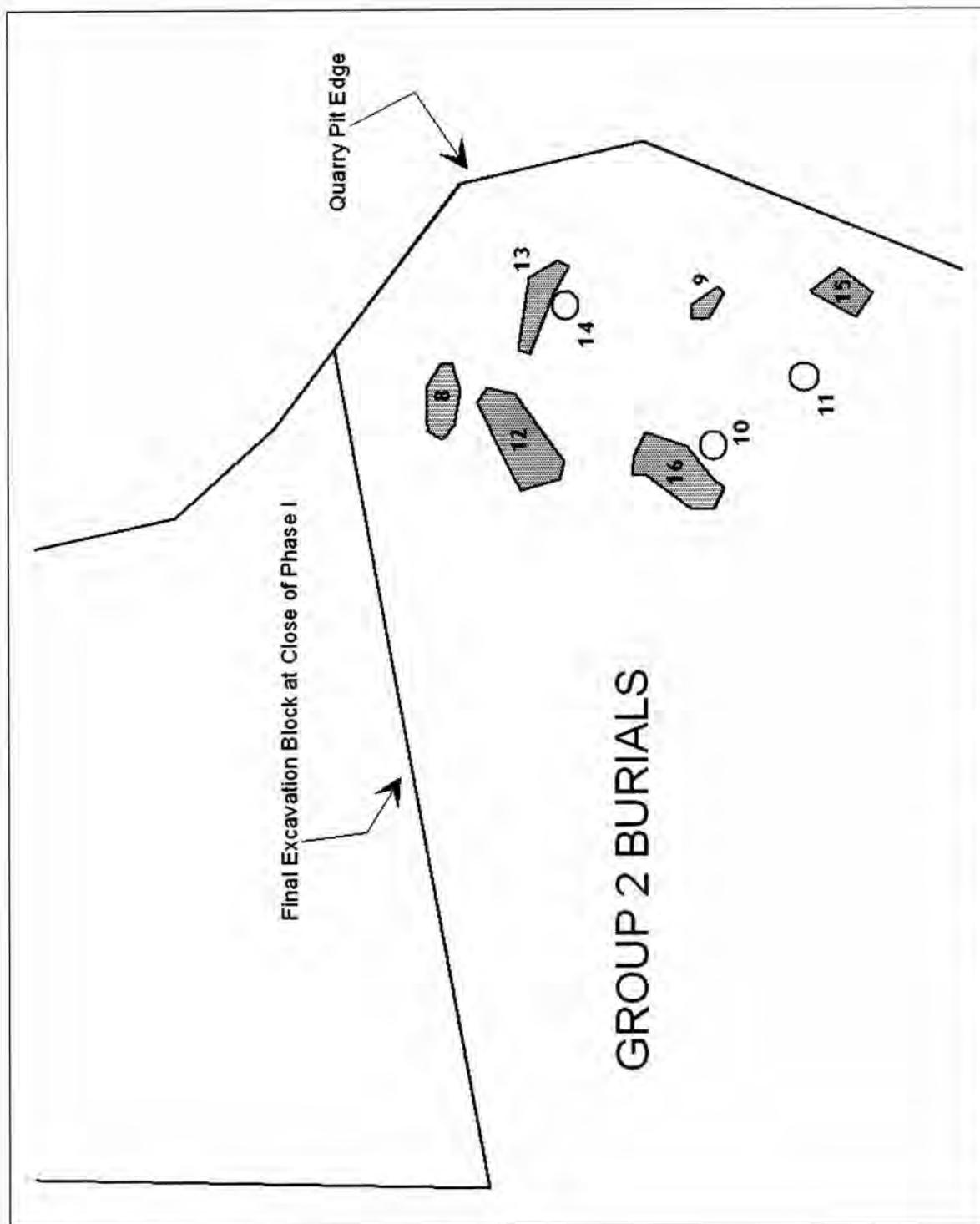


Figure 17. Distribution of burials in Group 2. Open circles signify highly disturbed remains where precise provenience had been destroyed.

**GROUP 2, BURIAL 8**

Burial 8 was encountered at elevation 171.72. The individual had been placed in a semi-flexed position on its right side. Both arms were folded so that the elbows were away from the body but both hands were brought in to the face. Orientation was measured at 280 degrees east, with the

face to the south. No associated artifacts were observed, but a few chert flakes and rounded stream pebbles were observed in the area. No pit outline could be detected due to mechanical disturbance, but charcoal mottling was present. This burial was excavated in part by Jack Coleman and Audrey Fulgham. Norman Flaigg recorded observations on the burial.

<b>Context</b>	Burial 8
Position	Flexed, right side
Orientation	280 degrees east
Pit Information	N/A
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	Charcoal flecking
Slabs Present?	None observed
Grid Locus	Right Pelvis N955.58 E961.51 Z171.72
<b>Biological Characteristics</b>	
Completeness	All body portions are represented but most bones are fragmented and incomplete.
Sex	Indeterminate in this age group.
Age	4 to 5 years of age. Dens of second cervical vertebra fused. Development and eruption of teeth is the major age indicator.
Stature	Not calculated
Anomalies	None observed
Pathology	None observed
Dental Condition	Severe occlusal wear and dentin exposure on all deciduous single rooted teeth and first molars. Dark areas indicate insipient caries and possible hypoplasia on crown of upper central incisor.

**GROUP 2, BURIAL 9**

Burial 9 was a very incomplete interment, due to bulldozer disturbance. Only limited bones of the shoulder area remained, including portions of humeri, clavicle, scapula, radius, ulna, and ribs. Ed Mokry and Mike Davis excavated and recorded, and a sketch map was done by Dan Potter of the in situ portions. We speculated during excavation that the individual may have been placed on its left side, with an orientation to the northeast. However, due to the partial nature of the remains, orientation remains speculative. A fragmented arrow point (Scallorn or Edwards type: Figure 18) was recovered in the immediate area of the interment in disturbed fill. Association cannot be confirmed. Breakage exhibited on the point is consistent with impact fracture. While speculative, it is possible that this artifact, the only one found in possible association with Coleman Site interments, was originally imbedded within Burial 9.

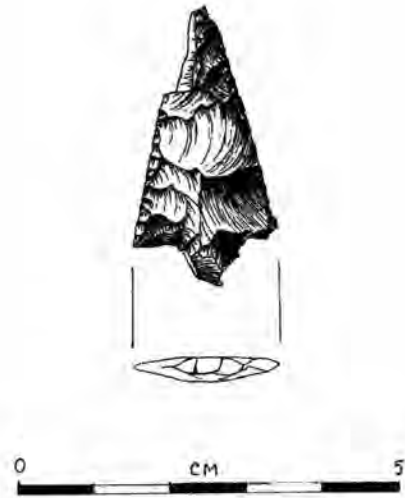


Figure 18. Incomplete arrowpoint found near Burial 9, one of the bulldozer-disturbed Group 2 burials. Breakage pattern is typical impact fracturing. The point is either of Edwards or Scallorn type. Drawn by Richard McReynolds.

<b>Context</b>	Burial 9
Position	Possibly left side
Orientation	Unknown
Pit Information	N/A
(Other Individuals)	Group 2
(Artifacts/Manuports/Charcoal)	Possible association with Scallorn arrowpoint @ N953.38, E962.17, Elevation 171.77
Slabs Present?	None observed
Grid Locus	Left scapula N 953.13 E962.22 Z171.83
<b>Biological Characteristics</b>	
Completeness	The skeleton is represented by portions of the thorax, arm bones, and six teeth. The skull and legs are not present.
Sex	Male. Based on maximum diameter of humeral head (Dwight 1909, from Bass:1987:150).
Age	20 to 24 years of age Based on fusion phase of epiphyseal plates on the lumbar vertebrae and partial fusion of head of humerus.



<b>Biological Characteristics</b>	Burial 9
Stature	not calculated
Anomalies	None observed
Pathology	None observed
Dental Condition	Six isolated teeth are present

**GROUP 2, BURIAL 10**

Burial 10 was largely destroyed by bulldozing activity. The interment consisted of fragmentary remains of a very young child. Remains were observed in a 20X20 cm area. Context was ambiguous. Con-

textual data, including burial placement and orientation could not be determined. Ed Mokry, who excavated and recorded this interment, felt that these remains might well have been moved from their primary location. Charcoal mottling was noted in the tan sand around the disturbed interment.

<b>Context</b>	Burial 10
Position	N/A
Orientation	N/A
Pit Information	N/A
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	N/A
Slabs Present?	N/A
Grid Locus	Vicinity shot (Not a specific bone) N953.14 E961.02 Z171.88
<b>Biological Characteristics</b>	
Completeness	The body is represented by vertebrae, ribs and bones of lower arms.
Sex	indeterminate at this age and condition
Age	neonate based on long bone lengths
Stature	not calculated
Anomalies	None observed
Pathology	None observed
Dental Condition	no teeth present

**GROUP 2, BURIAL 11**

Burial 11 consisted of an isolated bone that appeared to be in primary context but could not be associated with any other identified interments.

Excavators could not determine whether the bone was a remnant of a nearly destroyed burial, or perhaps had been redeposited within the cemetery in ancient times due to intrusive mortuary activity.

<b>Context</b>	Burial 11
Position	N/A
Orientation	N/A
Pit Information	N/A
(Other Individuals)	
(Artifacts/Manuports/Charcoal)	N/A
Slabs Present?	N/A
Grid Locus	Femur N952.37 E961.61 Z171.94
<b>Biological Characteristics</b>	
Completeness	Individual is represented by only a few small shaft fragments of a femur.
Sex	Undetermined
Age	Adult
Stature	Undetermined
Anomalies	None observed
Pathology	None observed
Dental Condition	Teeth not present

**GROUP 2, BURIAL 12**

Burial 12 consisted of an adult female placed in a loosely flexed position on her left side, and a pre-natal or neo-natal infant. Two unfused cervical vertebrae and powdery bone fragments in the hip area revealed the presence of the infant. The adult had been placed with the trunk fairly straight, while the

upper and lower limbs were fairly tightly flexed to the body. The feet were tucked close to the hip area, while the hands were placed in front of the face, typical of the cemetery as a whole. The general body orientation was 76 degrees East of North. No pit outlines could be determined in this disturbed context, and no artifacts or other materials were observed in association with the burial.

<b>Context</b>	Burial 12
Position	Flexed, left side
Orientation	76 degrees east
Pit Information	N/A
(Other Individuals)	
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	Pelvis N954.89 E960.90 Z171.84
<b>Biological Characteristics</b>	
Completeness	The individual is represented by a fragmentary skull, fragmentary cervical and thoracic spine, long bones and bones of the hands. Many bones are incomplete.
Sex	Female? Cranial morphology is gracile.
Age	13 to 16 years. Stages of epiphyseal fusion for the long bones of the arms are the primary age indicators.
Stature	Undetermined
Anomalies	None observed
Pathology	None observed
Dental Condition	The teeth are worn and faceted, dentin exposure is just beginning to occur.

## GROUP 2, BURIAL 13

At the time of excavation, Burial 13 was thought to represent a single, badly disturbed interment representing a single individual. The burial was excavated in sediment almost completely displaced by bulldozing. Later, bioarchaeological analysis revealed that bones collected as Burial 13 actually represented three different individuals. The contextual information collected in the field pertain to Burial 13b. Context data for burials 13a and 13c were not observed in the field and are now lost. In the osteobiographical information below, these are designated as 13a, b, and c. While multiple individuals in a single interment is a possibility that cannot be excluded, it is more likely that the multiple individuals discovered by Pickering is the result of bulldozer disturbance. The burial was first observed as a tightly flexed, largely articulated interment, lying on its left side. Portions of turtle carapace were observed resting against the shaft of the right femur, near its proximal end.

The bulldozer had dislodged the burial as a boulder-sized ped of somewhat cemented sand. Orientation of the disturbed interment was defined as northwest, in the vicinity of 340 degrees East of North. With the

removal of most of these initial remains, lower leg and foot bones with a different orientation were observed. Unlike the overlying remains, these were clearly in situ, and, we thought, revealed the true orientation of the perceived single interment. The more accurate orientation for the burial was in a general southeasterly direction. It thus appeared to us that the bulldozer had rotated the burial about 180 degrees, but had not moved it otherwise. In this case, articulation was made possible by the tendency of site sediments to be quite compact and cemented in places. In this way, partial to nearly complete interments could be moved but remain articulated because of the slightly cemented sediments. In another portion of the site, a similar dislodged ped was found to contain the articulated remains of a young child. In that case, the ped had been completely removed from its original position and dragged or pushed to a different area of the site.

No pit outline or associated artifacts were observed with the interment, but this is not surprising given the level of disturbance.

A concentration of separate cranial fragments were observed immediately south of and just below Burial 13. As this was considered likely to be a separate individual, these fragments were designated burial 14.

<b>Burial 13A</b>	
<b>Context</b>	Burial 13A
Position	None observed
Orientation	None observed
Pit Information	None observed
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	None observed
<b>Biological Characteristics</b>	
Completeness	Only a few fragmentary bones present.
Sex	Undetermined

**Burial 13A, continued**

**Biological Characteristics**

Age	5 to 7 years of age
Stature	No long bones present
Anomalies	None observed
Pathology	None observed
Dental Condition	No teeth present

**Burial 13b**

**Context**

Context	Burial 13b
Position	Flexed, left
Orientation	SW
Pit Information	None observed
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	Humerus N954.53 E962.32 Z171.64

**Biological Characteristics**

Completeness	Fragmentary long bones, including humeri, tibia (diaphyses and epiphyses).
Sex	Undetermined
Age	12 to 15 years, based on epiphyseal fusion at head of humerus and both proximal and distal ends of the tibia.
Stature	Bones too incomplete to calculate stature.
Anomalies	None observed
Pathology	None observed
Dental Condition	No teeth present

**Burial 13C**

**Context**

Context	Burial 13C
Position	None observed
Orientation	None observed

<b>Context</b>	Burial 13C
Pit Information	None observed
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	None observed
<b>Biological Characteristics</b>	
Completeness	Represented primarily by pelvis fragments.
Sex	Female? Based on morphological characteristics of the pelvis.
Age	Adult based on size and epiphyseal fusion of the innominate.
Stature	No long bones present
Anomalies	None observed
Pathology	None observed
Dental Condition	No teeth present

#### GROUP 2, BURIAL 14

Burial 14 was initially recognized as the incomplete cranial remains of a very young child (14b, below), but other remains were also included from the immediate area (14a, below). Elsewhere on the

site, a large cemented ped had been encountered, encompassing the postcranial remains of a child. It may be that these separate finds represented the same individual, but this cannot be confirmed, nor can the relationship between burials 13 and 14 be clarified given the disturbed conditions.

<b>Context</b>	Burial 14
Position	None observed
Orientation	None observed
Pit Information	None observed
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	None observed

**Biological Characteristics**

Completeness	Very incomplete, represented by a right patella, and right femur.
Sex	No diagnostic elements present.
Age	Adult size and morphology indicated adulthood.
Stature	Femur is too incomplete to use as a basis for stature estimation.
Anomalies	None observed
Pathology	None observed
Dental Condition	No teeth present

**Burial 14B**

<b>Context</b>	Burial 14B
Position	None observed
Orientation	None observed
Pit Information	None observed
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	Cranium N954.43 E962.23 Z171.68

**Biological Characteristics**

Completeness	Represented only by skull fragments.
Sex	Indeterminate for this age
Age	Fetus/neonate, based on size, thinness and morphology of the skull fragments.
Stature	None observed
Anomalies	None observed
Pathology	None observed
Dental Condition	No teeth present

**GROUP 2, BURIAL 15**

Burial 15 was badly disturbed and fragmentary. The individual appeared to be an adult, and was comprised of a rib mass, a proximal femur fragment, and other complete and fragmentary bones. None of

these were in articulation, and many remains had been removed by the bulldozer. A single piece of fire fractured chert was also present in the fill around the bones. No burial pit was defined with these remains, and no other artifacts were noted aside from the single piece of firecracked chert.

<b>Context</b>	Burial 15
Position	None observed
Orientation	None observed
Pit Information	None observed
(Other Individuals)	
(Artifacts/Manuports/Charcoal)	1 firecracked rock, likely incidental
Slabs Present?	None observed
Grid Locus	Left femur N951.90 E962.18 Z171.65
<b>Biological Characteristics</b>	
Completeness	Skeleton represented by parts of the innominate, portions of the thoracic and lumbar spine, and leg bones.
Sex	Female? Based on the morphology of the pelvis.
Age	Young adult-Epiphyses of the long bones of the leg fused, but no degenerative changes.
Stature	Long bones are too incomplete to use in stature estimates.
Anomalies	None observed
Pathology	None observed
Dental Condition	No teeth present.

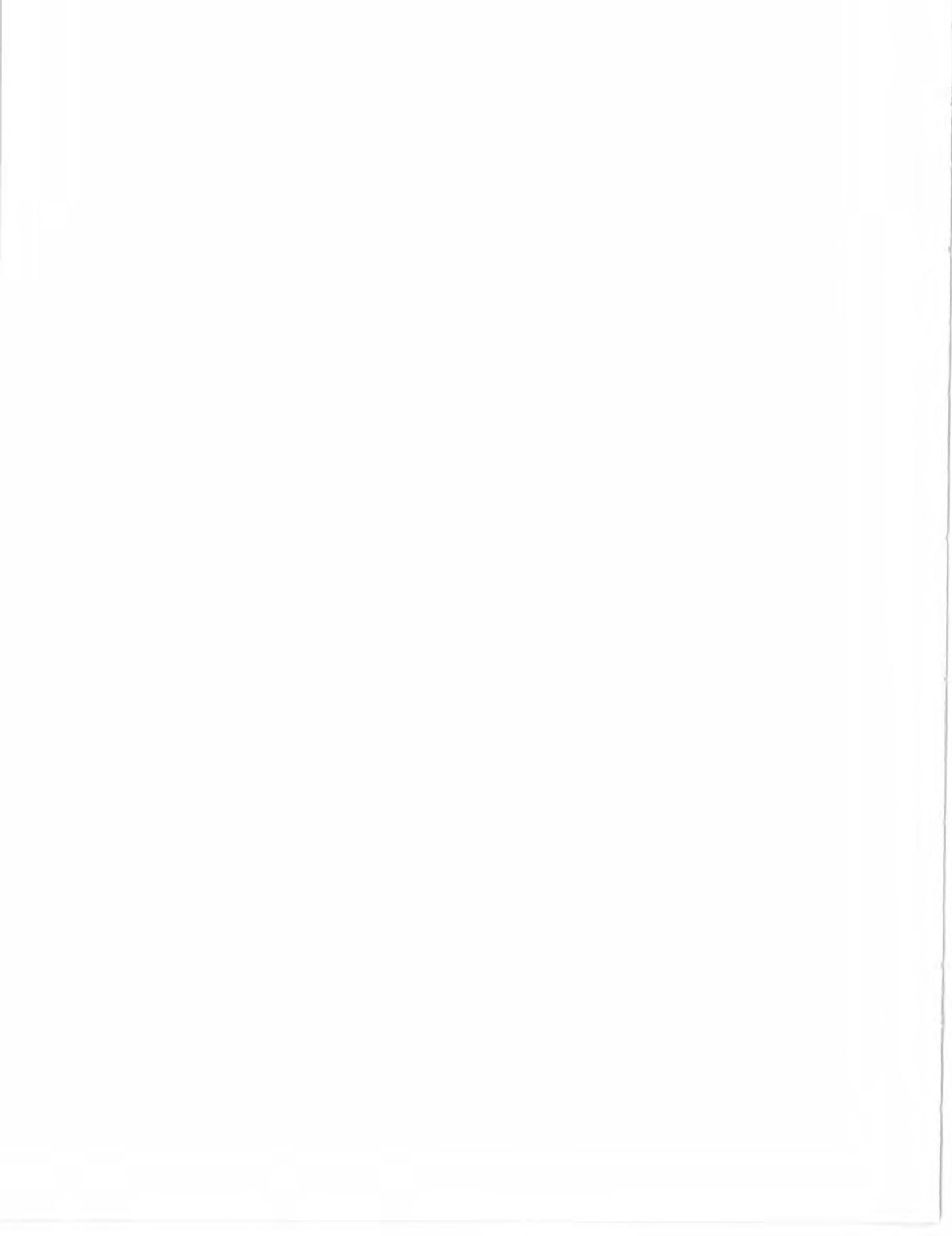


Burial 16 was a tightly flexed adult, resting on its right side. Body orientation was 208 degrees east of north. As was typical for this cemetery, the arms had been bent at the elbow so that the hands could rest on, or just in front of, the face. The vertebral column was slightly arched, and legs were tightly folded at the knee. A piece of firecracked chert was located near the

juncture of the left humerus and left scapula, but no other artifacts were observed. As with all interments encountered during the second phase at the site, bulldozer disturbance had obscured pit fill and pit outline. Bioarcheological assessment revealed that the remains of two individuals were present and collected. Field notes make no mention of a second individual

<b>Burial 16a</b>	
<b>Context</b>	Burial 16
Position	Flexed, right side
Orientation	208 Degrees E
Pit Information	None observed
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	One piece firecracked chert in left shoulder area, likely incidental.
Slabs Present?	None observed
Grid Locus	Rt. Pelvis N953.71 E960.79 Z171.63
<b>Biological Characteristics</b>	
Completeness	All portions of the skeleton are represented.
Sex	Male? Morphological characteristics of the pelvis and skull both indicate maleness.
Age	18 to 25. The partial fusion of some long bone epiphyses and lack of fusion of others indicate this age range.
Stature	44.2 cm femur although not complete.
Anomalies	None observed
Pathology	Slight periostitis on shin of right tibia. Degenerative joint disease on left patella.
Dental Condition	Most teeth are present. Upper and lower incisors are post mortem losses, present faceted wear with points or lines of dentin exposure.

<b>Burial 16b</b>	
<b>Context</b>	Burial 16B
Position	None observed
Orientation	None observed
Pit Information	None observed
(Other Individuals)	None observed
(Artifacts/Manuports/Charcoal)	None observed
Slabs Present?	None observed
Grid Locus	None observed
<b>Biological Characteristics</b>	
Completeness	Lower arms, lower legs are missing.
Sex	Male. The morphology of the pelvis and skull indicate maleness.
Age	15 to 17-Long bone epiphyses that are present are in the process of fusing.
Stature	Femur length 44.7 cm. Humerus length 32.0 cm.
Anomalies	None Observed
Pathology	Osteophytic development at the sacro-iliac joint.
Dental Condition	All teeth that are present, show occlusal wear that has exposed the dentin in points or lines. The deciduous upper right canine has been retained.



## CHAPTER 5

### Summarizing the Coleman Site

*Robert B. Pickering and Daniel R. Potter*

The Coleman site was a small cemetery, presumably composed of two clusters, or groups, of burials placed on a high sandy terrace overlooking the confluence of Medio Creek and the Medina River in southern Bexar County. Bioarchaeological analysis has determined that the cemetery, or at least those portions of it that were available for study, contained a minimum of 21 individuals. The people interred at Coleman were placed in flexed form, on either their left or right sides, in shallow, scooped-out graves. Two radiocarbon assays from the site and a single broken Scallorn or Edwards type arrow point found near a disturbed burial suggest that the Coleman cemetery may date to the Austin Phase.

Some of the Coleman burials were covered with one or more flat limestone slabs, a trait which has been documented at other sites in central Texas as noted in previous chapters. The presence of covering slabs and their meaning remains a subject for speculation. Were they grave markers, placed at ancient ground-level to signal the location of an existing grave so that later interments could be placed so as not to intrude on existing ones? This explanation cannot be ruled out at Coleman. Because none of the burials with slabs were intruded upon by later burials, it may indeed be that these slabs functioned as visible markers of existing interments. However, it should be noted that excavators identified only one archeological surface at Coleman. This surface, located at elevation 172.55 and described in Chapter 3, was occupied by two hearth features (Features 5 and 7) but did not exhibit any slabs. If this surface was indeed the origin point from which burial pits were dug, the slab

coverings we observed would not have been visible on them, ruling out the marker function.

It is also possible that the slabs performed some function other than grave-marking. They may have served as protection against scavengers, or it may be that stone covering slabs were a kind of cultural metaphor for the sinkhole or cave context—a context directly associated with mortuary activity for most of the prehistoric period. At this point, we simply do not have enough clear evidence to favor any particular definition of what slabs over an ancient burial actually means. To gain traction on this question, careful excavation of a mortuary site with clearly defined ancient surfaces is needed. To date, we know of no cemetery site in central Texas where excavators have been able to clearly identify an archeological surface from which mortuary pits have originated. Should slabs or other markers be located above burials on such a surface, the argument for grave markers would be strengthened.

The Coleman cemetery also showed a lack of associated grave offerings. This pattern also has been noted at other regional cemeteries, particularly those dating to the Late Prehistoric Austin Phase. If this pattern continues to hold, the contrast between Austin Phase cemeteries and those of Late or Middle Archaic age will continue to grow. Just a few miles north of Coleman in central Bexar County, 41BX1 at Olmos Dam revealed a relatively elaborate burial program. The Late Archaic cemetery at Landa Park in Comal County, described previously, did too. Many other Archaic cemeteries in the general area have also shown a tendency to furnish the dead with a range of artifact types. If this perceived contrast between Late

Prehistoric and Archaic mortuary "investment" is real, what factors may have caused the apparent breakdown of the long-established Archaic mortuary pattern?

The cemetery also fits the emerging pattern of Austin Phase mortuary sites in terms of mortuary program, and to a lesser extent, perhaps in the frequency of certain traumas such as "parry fractures". It may be that these defensive traumas are particularly common in mortuary samples of this period, and may in turn be signaling that the early part of the Late Prehistoric might have experienced a rise in interpersonal violence, for as-yet unknown reasons. The estimated age of the Coleman cemetery could be further refined by additional C14 assays directly dating one or preferably several of the skeletons.

The primary achievement of the Coleman salvage excavation has been the recovery and curation of a small, historically important cemetery population which would otherwise have been completely destroyed. Salvage is not a preferred archaeological strategy or tactic. In fact it is not a strategy at all, but simply a reaction to circumstances beyond our control. Salvage excavation allows neither the planning nor excavation time needed to effectively understand and document archeological sites. Still, in cases like Coleman, archeological salvage becomes a necessary evil, or put another way, the least bad of several bad alternatives. Because of the concern of a private landowner, the willing hands of a number of dedicated archaeologists, and the material and financial support of the Texas Historical Commission, the Southern Texas Archaeological Association, and the Texas Archeological Society, something of the pattern of interments here were determined, and a number of human remains saved and interpreted.

It is certain that the existing skeletal material do not represent all of the remains that had been interred. An unknown portion of the cemetery at Coleman was clearly lost in previous quarrying and grading activities. These remains are lost to this or any future study. How many more remains were buried on the ridge above Medio Creek? How many were carted off in truckloads of fill for construction projects in the area? The question cannot be answered. Even among the interments we were able to recover, many were incomplete and damaged as a result of earth moving activity and hurried excavation, result-

ing in incomplete data for most of the recovered skeletons. One of the few certainties about the Coleman cemetery is that it is now completely gone.

### **BIOARCHAEOLOGICAL SUMMARY**

It is important to remember that the Coleman site burials do not constitute a population. Instead, they represent an aggregate or a sample that was produced by a living population. However, it is an important sample. Few skeletons from this time period have been excavated under controlled conditions and fewer still have been examined by a physical anthropologist. The group does not approximate the demographic characteristics expected of a population. The demographics of this small sample primarily include the very young, the old, and those suffering from trauma. Healthy adolescents and young adults are conspicuously absent.

Studying mortuary sites also entails a special responsibility. Human remains are the subjects of study. Regardless of the amount of time that has passed since these people lived, and whether or not their lineage can be traced directly to living peoples, they deserve respect. Our goal during excavation and examination of these remains was to save them and the culture they represent, and provision for their storage will allow repatriation as appropriate under federal law. We did our best to remain consistent with practices that are standard for examination of remains resulting from archaeological or forensic investigations.

In this final chapter our goal is to summarize the results of investigation of the Coleman site and the remains found there. Table 4 presents a rough demographic distribution of the human remains from the site. Specific age estimates can be found in Chapter 4. The age/sex categories have been reduced in number to show a clearer pattern.

### **PATHOLOGY**

Pathology among those buried at the Coleman site is common in incidence but not very diverse in type. In fact, virtually all of the pathologies appear to be related to poor nutrition and/or severe physical

**Table 4. Age/Sex distribution of the Coleman mortuary sample.**

	Male	Male?	Female	Female?	Indeterminate
Neonate					14B, 18
Infant					
Child (5-12)					3, 4, 6, 8, 13A
Adolescent (12-20)	16B			12	13B
Young adult (20-25)	9	16A		15	
Middle adult (25-35)			7		
Old adult (35+)	1, 5	2			
Adult		17		13C	11, 14A

stress. The nutrition related pathologies begin in the mouth and the story is not a healthy one. Virtually all individuals, regardless of age, for which the dentitions could be observed, exhibited severe occlusal attrition and resultant pathologic complications. Excessive wear appears to affect both children and adults. Juveniles exhibited severe wear with dentin exposure on the deciduous teeth and adults exhibited severe wear on the permanent teeth. Perhaps the most telling example comes from Burial 12. Her age is estimated to be between 13-16 years and already, occlusal wear has eroded the enamel and begun to expose the dentin of her teeth. For the children of six to seven years of age, severe occlusal wear caused faceting of the chewing surfaces and exposure of the dentin of deciduous teeth. If the dentin was exposed at this early age, the implication is that three to five year old children were subsisting on a roughly processed diet. The occurrence of heavy abrasive wear on very young teeth may be indicating a hunter-gatherer population under stress.

Although dental wear and associated pathology are relatively common in the sample, it is important to note that in many ways, the dentitions were healthy. Malocclusion is non-existent in this sample. Only two examples of caries were found. One example of hypoplasia in a juvenile (Burial 6) was observed (see Figure 15, Chapter 4).

The teeth of the adult portion of the sample present a similar and generally more debilitating picture. By the age of 30-35, severe dentin erosion

occurred. Among the older individuals, in this case those over 40 years of age, heavy tooth wear results in the complete wearing away of the enamel and dentin of the teeth, exposure of the pulp cavity, and idiosyncratic deterioration such as occlusal wear on tooth roots, angular chewing facets and abscess development. The most severe case from the site, and in fact, one of the most severe cases that Pickering has ever seen in any archaeological series, is Burial 7 (Figure 16, Chapter 4). Dental disease led to an infection that destroyed most of this woman's left maxilla and portions of adjacent bones. In life, she probably endured excruciating pain, draining abscesses and the destruction of part of her face. This severity of infection, directly or indirectly, probably caused her premature death.

Pathology found on the post-cranial skeletons was limited primarily to periosteal infections, sometimes localized on the shin, other times more general. Periostitis can have a range of causes from open wounds to nutritional stress. Very likely the infections presented by the Coleman Site skeletons are related to poor nutrition and poor diet. In addition to periosteal remodeling, the juvenile portion of the sample presents Harris lines, or lines of arrested growth that indicate episodes of inadequate nutrition. These episodes repeatedly stressed some children in the Coleman sample, but did not kill them.

The second category of post-cranial pathology is comprised of degenerative joint disease (djd) of the spine. Like other degenerative diseases, djd of the

**Table 5. Dental pathology and attrition.**

<b>Burial</b>	<b>Level of wear</b>	<b>Pathology</b>
<b>2</b>	Faceting and dentin exposure	Caries, 1 apical abscess
<b>3</b>	Severe, dentin exposed on deciduous molars	
<b>4</b>	Severe, dentin exposed on all teeth present	Irregularity of enamel formation
<b>5</b>	Severe, angular faceting, exposed root chambers	
<b>6</b>	Severe, dentin exposure on canines and molars	Hypoplasia on central incisors
<b>7</b>	Severe, dentin exposure, multiple antemortem losses	1 caries, abscesses, resorption of maxillary bone
<b>8</b>	Severe, dentin exposure on most teeth	Insipient caries and possible hypoplasia on an upper central incisor
<b>12</b>	Heavy, dentin exposure beginning	
<b>16A</b>	Heavy enamel wear, points of dentin exposure	
<b>16B</b>	Heavy enamel wear, points of dentin exposure	

\*Dentitions for the following burials were not present: 1, 9, 11, 13A, 13B, 13C, 14A, 14B, 15, 17, 18.

spine has a cumulative effect, meaning that as one gets older, severity of the degeneration increases. If the physical stresses that cause degenerative changes become habitual in early life, then deterioration and change can be significant and severe by early adulthood. The pattern of spinal degenerative change appears to fit this kind of model. All adults, whether categorized as young, middle or old adults, present some degenerative changes, the most common being raised lipping on the centrum or body of the vertebra. In older individuals, lipping is accompanied by syndesmophyte formation (ossification of ligaments that connect adjacent vertebrae), porous deterioration on the articular surfaces, and a flattening of the vertebral body from top to bottom. In the most severe cases of which there are two at Coleman site, lumbar vertebrae have suffered compression frac-

tures (Figure 14) with boney remodeling developing to support the vertebral body. In both of these cases, the individuals survived the episode that caused the compression. If they had not, no remodeling could have occurred.

Preservation of the Coleman site sample was fair, but unfortunately, even for long bones that were present, the articular surfaces were almost always damaged or missing completely. For this reason, a true assessment of degenerative joint change was not possible. For joint surfaces that were available for examination, the extent and severity of degenerative change varied with age and sex. Without doubt, the region of the body most affected by djd, for both men and women, was the spine. For men, the lumbar region is most affected. For women, the cervical and upper sections of the spine were most affected.

**Table 6. Post-cranial pathology.**

Burial	Body segment	Type	Severity	Trauma
1	Lower spine	DJD	—	—
1	6 <sup>th</sup> lumbar vertebra	compression	slight	—
2	Cervical, lumbar	DJD	Extensive lipping, body deformation	Right scapula/ healed fracture
2	1 <sup>st</sup> left metatarsal	DJD	Minor	—
3	Lower arms & legs	Periostitis	Severe, up to 4 mm. Thickness	—
4	Proximal tibia	Harris lines	4 episodes	—
5	Distal left tibia	Periostitis	—	Compressed 2 <sup>nd</sup> . Lumbar vertebra
5	Cervical, thoracic & lumbar spine, left wrist, right patella	DJD	—	Compressed 2 <sup>nd</sup> . Lumbar vertebra
5	Medial epiphyses of both clavicles	Inflammation and enlargement	—	Compressed 2 <sup>nd</sup> . Lumbar vertebra
7	Cervical spine	DJD w/ compression	Severe	Distal right ulna and midshaft of left fibula —possible healed fractures
7	Thoracic & lumbar spine	DJD	—	Distal right ulna and midshaft of left fibula —possible healed fractures
7	Left tibia	Periostitis	—	Distal right ulna and midshaft of left fibula —possible healed fractures
7	Left maxilla	Infection w/ massive resorption of boneytissue	Severe	Distal right ulna and midshaft of left fibula —possible healed fractures
16A	Right tibia	Periostitis	—	—
16A	Left patella	DJD	—	—
16B	Sacro-iliac joints	DJD/osteophytic development	—	—

\*DJJD = Degenerative Joint Disease (as discussed in text)



Beyond the description of individual pathologies, a pattern of disease and stress emerges.

### BIOARCHAEOLOGICAL DISCUSSION

From this small and incomplete sample of human remains, a picture of life emerges. The picture however, is not a pleasant one. Starting with the evidence of the teeth, it would appear that the diet was rough and nutritionally poor. It caused considerable wear and erosion of chewing surfaces throughout life. The deciduous teeth of children evidence high amounts and rates of occlusal wear and so too, adolescents present occlusal wear and dentin exposure. By the 30's, adults are no longer chewing on their enamel or dentin but in many cases, the tops of the roots themselves become the chewing surfaces. This wear leads to exposure of the pulp cavity and infection of the teeth and the underlying tissues.

Harris lines (Figure 12, Chapter 4) found on the infant skeletons add an additional piece of evidence to the picture of nutritional stress. The presence of these lines indicates an event of severe nutritional stress. The regular spacing of such lines indicate episodic stress often associated with late winter/ early spring time periods when animals hunted for food are at their worst condition and plant food is very limited.

The emergent picture is one of continuous nutritional hardship punctuated by even more severe dietary stress leading to death in some cases. The condition of the spines of the adults and even some of the late adolescents indicates considerable physical stress, possibly from carrying burdens. However, the sample is not large enough for any significant patterns to emerge.

An examination of skeletal trauma is suggestive of hard physical life and possibly some interpersonal violence. However, so many of the skeletons are incomplete that no firm conclusions can be drawn. The fractured scapula on Burial 2 (Figure 19), an adult male, may have resulted from a fall. However, with no evident trauma to underlying ribs, a blow from behind appears more likely. Similarly, the probable healed fracture on the distal right ulna of Burial 7 (adult female) is often described as a "parry fracture". When being attacked, it is common to put

one or both arms in front of the face for protection. The distal portion of the forearm receives the blow, sometimes fracturing. This woman may also have suffered a fracture of the fibula. Both fractures have healed indicating that she survived the event that caused the broken bones.

Examining data from other sites within the region reveal some similarities in terms of nutritional stress and hardship. At the Loeve-Fox site (41WM230) in Williamson County, TX, Butler (1974) reports high incidences of dental wear and related disease. She notes a high percentage of cases in which occlusal wear is advanced for the age of the individual compared to populations living in circumstances more lush than today. She also notes high percentages of periostial infection.

Analysis of human remains from a Late Prehistoric site, Blue Bayou (41VT94) shows a contrasting picture. The number of skeletons was considerably larger, although preservation was a problem. The authors (Huebner and Comuzzie 1992) note fairly minimal trauma and pathology among the individuals. The occlusal wear on dentitions is not as severe or premature as is presented in the Coleman site series.

The Crestmont Site (41WH39) also offers a valuable comparison. Vernon's (1989) analysis reveals high incidences of pathology and high rates of occlusal wear. She notes a higher percentage of infectious disease but given the incomplete nature of the Coleman material, the sample may present artificially low incidences.

From a bioarchaeological perspective, the people interred at Coleman appear to have lived under chronic nutritional hardship from an early age. We have also noted that, when compared to a number of Archaic period burial populations, sites like Coleman and Loeve-Fox show an almost total lack of grave furniture. A single shell ornament was included among 25 individuals at Loeve-Fox, while none of the individuals at Coleman possessed associated artifacts. At Loeve-Fox, there is clear evidence of fighting and homicide as evidenced by the presence of projectile points in and among the human remains. Evidence at Coleman is not nearly as clear, but is suggested. Whether this violence is individually oriented as opposed to group warfare is difficult to determine. In either case, the presence of such

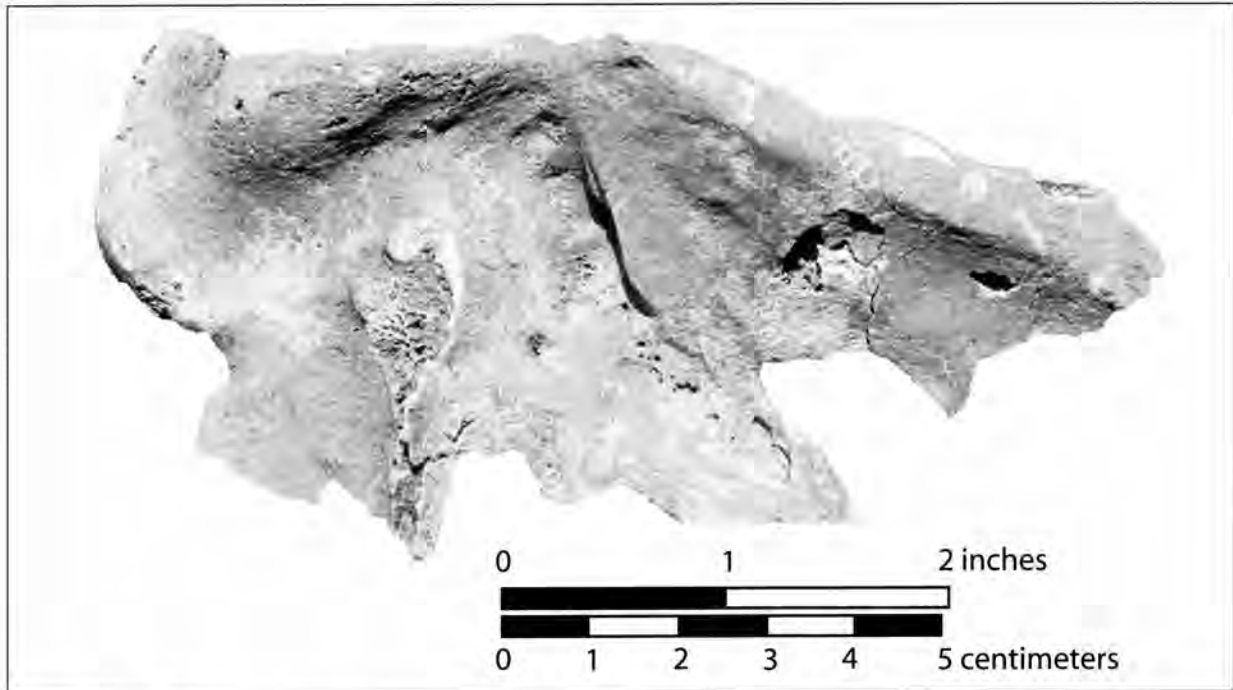


Figure 19. The male encountered in Burial 2 exhibited a healed fracture of one scapula. It's possible that this trauma may be the result of a fall, but more likely resulted from an intentional blow from behind, as there was no apparent damage to underlying ribs.

evidence indicates stress in the social environment. At Coleman Site, no direct evidence of projectile points penetrating human bone was found, although we suspect such violence in one instance where an arrow point with impact fractures was recovered near a disturbed interment (Burial 9, Group 2). Two other probable cases of physical assault also suggest violence and may be consistent with interpretations at the Loeve-Fox site.

In sum, biological analysis of the small sample at the Coleman cemetery has offered us a limited glimpse of an ancient south-central population along the Medina River. We must remember that cemetery samples are biased and can give skewed perspectives of the living population that created them. However the scene presented by the available evidence includes a measure hunger, hardship, disease, and pain were experienced by some members of a larger group. The archaeology of the site shows that the degree of material and energy investment from the living to these dead was limited, in that mortuary artifacts were not present, nor were personal adornments of any kind, nor were such features as antler coverings,

a notable occurrence at both Deadman's Tank and Olmos Basin.

We also note that the Austin Phase was a period of technological change, as it ushered in the initial usage of the bow and arrow in Central and South Texas. While some authors may view speculation in archeology as dangerous, we feel there is a responsibility to characterize what a given site may contribute to a larger understanding of a human culture at a given place and time. In this case, we have to do the best we can with the data we have available to us. In this vein, the Coleman site affords a glimpse into a period in which several generations were experiencing nutritional stress, possible violence, and degenerative disease. In this, it appears there may be some contrast with earlier mortuary sites, where these kinds of problems do not appear to be so pronounced or frequent.

We also see a lack of energy investment in the Coleman mortuary program. This appears to be typical for cemeteries dating early in the Late Prehistoric period, and contrasts markedly with nearby Archaic period cemeteries. While we do not yet have enough

data points to confidently state that the Austin Phase represents a period of increased stress and possibly increased social violence, some findings appear to

suggest this possibility. The question is a valid one for researchers going forward.

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