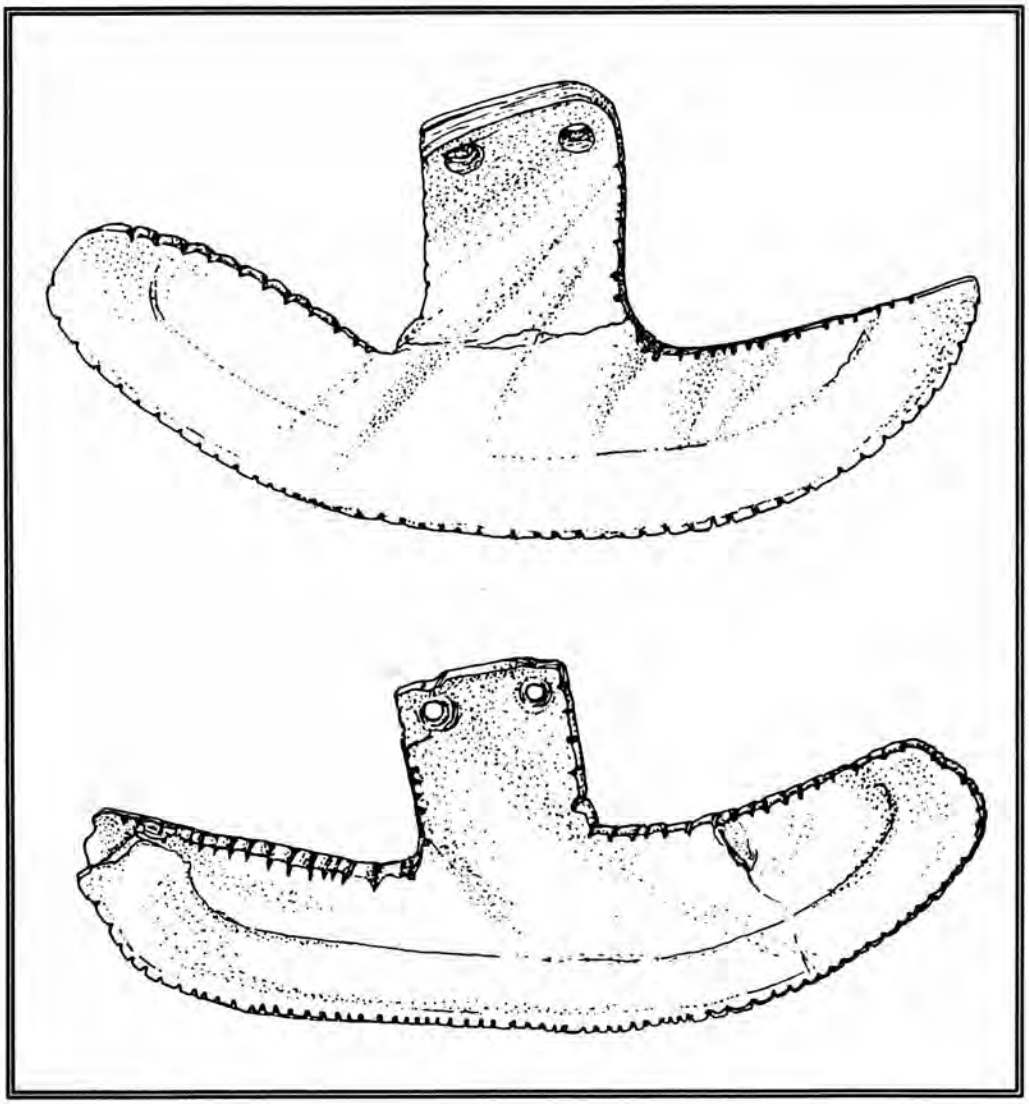
LA TIERRA



JOURNAL OF THE
SOUTHERN TEXAS
ARCHAEOLOGICAL
ASSOCIATION

VOLUME 24, No. 3
JULY, 1997

LA TIERRA

QUARTERLY JOURNAL OF THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

Volume 24, No. 3
July, 1997

W. R. (Van) and Shirley Van der Veer
Editors (Pro Tem)

About the Cover: T-shaped perforated and serrated mussel shell pendant. See report by Kim Cox. Drawings by Richard McReynolds are found on pages 34 and 48.

Manuscripts for the Journal should be sent to: Shirley Van der Veer, Editor *pro tem*, *La Tierra*, 123 E. Crestline, San Antonio, Texas, 78201. Past issues of the Journal and Special Publications available by requesting an order form from STAA (Jim Mitchell), P. O. Box 791032, San Antonio, Texas 78279. Dr. T. R. Hester may be contacted at the Texas Archeological Research Laboratory, Pickle Research Center, Building 5, 10100 Burnet Rd, Austin, Texas, 78712-1100.

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All articles in *La Tierra* are now summarized in *Abstracts in Anthropology* published by the Baywood Publishing Company.

La Tierra is now printed on acid-free paper.

Library of Congress Catalog No. 76-649774.

All contributions to this Non-Profit organization are tax deductible.

Printed by LEBCO GRAPHICS INC., Boerne, Texas

A LIFETIME OF MEMORIES

Dr. Donald Lewis

How does one write about a person she has known for a lifetime? That lifetime is 55 years, and seldom a dull moment. Don Lewis was a brilliant scientist, an interesting husband and friend, and a sensitive father to two great kids. Every day we laid new ground for the "battle of the wits" and most days I was outwitted!

From the day Don "retired" (and I use that word loosely) from Shell Development Company he anticipated every day with his students and class preparations. Those retirement activities enjoyed by most retirees, such as travel and hobbies, had to be considered as a sentence for Don. When it was convenient between semesters we would enjoy a cruise or cross-country drive.

Don loved to read and collect books of all scientific categories. You will soon find that vast collection in the UTSA Library. Not only did he read everything that he could get his hands on in the fields of chemistry, but he enjoyed letting his imagination run rampant as he designed instruments for measuring and identifying archaeological mysteries of stains, minerals and rock types. Through mass spectrometry and thermoluminescence dating he was credited with making the archaeologist's work somewhat simpler.

Suffice it to say that Don will be missed by all who knew him, especially his family.

Evelyn Lewis

*LIFETIME ARCHAEOLOGICAL CONTRIBUTION AWARD**

1997

For Exceptional Meritorious Service To The Science of Archaeology and to the Southern Texas Archaeological Association

FRANCES MESKILL

Frances Meskill has been an enthusiastic and staunch advocate for both the science of archaeology and the objectives and goals of the Southern Texas Archaeological Association. She served as Educational Chairman for a number of years (1985-1989) during which time she initiated a very successful and highly acclaimed teacher's workshop including both a laboratory orientation and field activities. She was Vice-chairman in 1989, and served as Chairman of the organization in 1990, years of significant development in the history of the association. Frances is also an active member of the Texas Archeological Society, and served as its treasurer. She was the Lab Director for the 1990 TAS Field School in Utopia, which was co-hosted by the STAA and was one of the most successful TAS field activities to date. She was also Lab Director for several field seasons with Texas A&M at the Nan Ranch in New Mexico and worked in Belize and Chiapas, Mexico.

Recently, Frances directed field work at the Witte Museum for the Texas Archeological Research Laboratory, and insured that STAA volunteers participated in various phases of this project. Frances has also contributed to many other research projects including lithic analysis, ceramic analysis, and Mayan artistic analysis. Her artistic and graphic expertise was utilized in several archaeological reports, the most recent being the Loma Sandia report. In all she does, Frances is highly professional and encourages the best in others. Frances always takes a positive approach that invariably results in significant progress for the archaeology of southern Texas, the state, and the country as a whole. STAA is proud to recognize her long-term, sustained accomplishments and dedication.

*Presented to Frances a few weeks before her death.

NOTES ON SOUTH TEXAS ARCHAEOLOGY: 1997-3

Personal Perspectives on Artifact Collecting: Examples from Texas and Northeastern Mexico

Thomas R. Hester

INTRODUCTION

One of the many debates in archaeology today involves the nature of artifact-collecting. Who should be able to collect? What are the differences among people called "collectors," "amateurs" and "avocationals?" When is it ethical (or unethical) to record the collections of the collectors? What do we do with surface collections or other archaeological remains that come out of other countries, either non-permitted or from an era before treaties prohibiting such export were put in place? Do we ignore unique sets of data from one side of an international reservoir, where neither government is protecting the archaeology? I have chosen to focus the comments in this paper on some of these issues involving "collecting" and the role of professional and avocational archaeologists in dealing with collections.[1]

COLLECTING

In order to understand the past, archaeologists must "collect"—whether it is artifacts, photographs of artifacts (if a project has a "no collection" policy), faunal remains, shells, ecological and geological data, or any other of a variety of kinds of information. This sort of "collecting" is done for scientific purposes and with careful attention to **context**. Professional archaeologists are not the only persons who collect in this fashion. Across South Texas, and beyond, are a host of **avocational** archaeologists, who have collected, documented, recorded, published, and placed artifacts and records in long-term curation facilities. They are important contributors to the study of archaeology and the pages of *La Tierra* have been filled for more than two decades by the results of their work.

There have always been other types of "collectors" —the casual "arrowhead hunter" who surface collects on weekends, the deer hunter who picks up points when he/she is not in their hunting stand, relic-collectors who fill cigar boxes and create imaginative designs in frames on their walls, and those who dig, unscientifically, into sites (and here there is also a wide range, from the curious to the commercial). And, there is also the collector/dealer group who like to buy, sell and/or trade, and who frequent the artifact-shows held in Austin, Waco, Belton, Boerne, Lampasas and other locales.

We are all acquainted with these types of collectors, and both professionals and avocationals often work with them to document their collections and hopefully, to get them to record and report their finds, and to maybe even make the transition to the avocational approach. We are also familiar with the common complaints of many collectors—"the professionals hide all their artifacts and no one ever gets to see them;" "if anyone knows about my collection, it will get confiscated by the State Archeologist;" "archaeologists hate collectors and won't share their information with us," and "the archaeologists are trying to take away our rights to hunt arrowheads." The list goes on.

Collectors in Texas

Now there has emerged a collector movement that emphasizes digging and collecting for "primo" artifacts (you know—big bifaces; fancy points; corner tangs), it emphasizes the monetary value of points ("I sold that point for $1000 and later heard it resold for $2500"), it has its own jargon (Pedernales points become "Perds"), it criticizes professional archaeologists as being "anti-collector"—and seeks to convince collectors that the "government" is plotting to take away his/her rights to collect—even on private property. Many of these concepts are now promoted by the Texas Amateur Archeological Association (TAAA), headquartered in San Angelo, Texas. The main vehicle for the TAAA is the *Texas Cache*, a slickly-packaged and widely distributed magazine focussing on anti-archaeologist sentiment, with em-

phasis on photos of spectacular artifacts, as well as their commercial value. The TAAA has sponsored artifact shows that include buying and selling of artifacts. And it has begun to host excavations and to advertise in some newspapers, offering substantial monies to landowners who will go along with their plans. These "excavations" are done under the guise of "amateur" archaeology, replete with recording forms of various sorts (where do these end up?), and digging in 6-foot squares. Photographs published in the *San Antonio Express-News* and in the *Texas Cache* itself, show that digging within the squares proceeds in, shall we say, a decidedly "unscientific" manner. All of this is perfectly legal, of course, but many feel that such activities contribute to the accelerating commercialization of artifact-collecting in Texas.[2]

Now, you have to understand that the TAAA is doing all of this only because no one else really cares about artifacts and archaeology, that the government is out to get them, and the professional archaeologist hates all collectors and won't work with any of them. Pardon my sarcasm, but I started out as an artifact-collector when I was seven, cleaned up my act some by my early teens, and crossed over from the **Dark Side** before I left high school. In close to 30 years as a professional archaeologist, I have personally worked with many collectors of all types. For the most part, my work with collectors has been very rewarding, both for me and for them. A considerable number became avocationals, some eased up on their collecting and there were some backsliders who took advantage of the interaction. I've not counted the number of publications that I have coauthored with collectors; I can't count how many talks I have given around the State to local groups; and I sure can't count the number of times collectors have walked unannounced into my office to show me their plunder. But the main point here is that I am but one Texas archaeologist, and I know of many who have followed almost exactly the same pattern over the years. And, I know of dozens of avocational archaeologists who have worked long and hard for decades, interacting with collectors, recording their collections, and interacting with them in a mutual quest to learn more about the cultural heritage of Texas.

It might be comforting to blame all of these problems regarding collecting and commercialism on the TAAA. But, with apologies to Pogo, "the enemy is us." Professional and avocational archaeologists simply have to get better at reaching the public. We have to give more, and better, public talks, and we (and here I refer to STAA, TAS and other avocational/professional groups) must develop outreach programs to show the public relevant artifacts, publications, and to cultivate their interest. It's been done very effectively in Uvalde, Utopia, Jourdanton, Somerset and other places. Some of the collectors have a point (no pun intended)—we don't show the public what we find, we generally don't write for public audiences, and we don't get out and interact with the public enough. We have talked among ourselves in countless, unending meetings and we have depended on underfunded and understaffed state agencies to carry out the task. Texas Archaeology Awareness Month is a great help, but is simply not enough. Education is crucial in the long run, but it doesn't address the current crisis. In the end, it is up to each of us.

Collecting in Other Countries

American archaeologists have long collected in other countries. Indeed, much that is archaeology today got its start from exploring mysterious cultures that interested the American public—Egypt, the Maya, and the classical civilizations of the Mediterranean. Well into this century, Americans could collect in other countries, with permits (or without), and haul off vast amounts of cultural material for museums in the United States. Most countries, however, soon established their own antiquities codes, requiring permits to collect and excavate, and retaining the artifacts in their own countries (though often permitting special studies of collections in American labs). Readers of this journal are familiar with many of the professional members of STAA who work in Belize, Guatemala and Mexico; we do this work with permits given by the host countries. They **require** research designs, evidence of sufficient funding, proof that you have a good staff, and many other obligations that the archaeologist must fulfill or else lose the privilege of working there. Of course, collecting and looting goes on in all these countries and a number of books and magazine articles have been written about smuggling, stelae cut in half with chain saws, looters' trenches cutting deeply into pyramids, etc. It's much like the problem in Texas, though on a

much larger (and more lucrative) scale. A recent issue of the journal *Arqueología Mexicana* (No. 21, 1996) devoted an entire issue to the problem of looting in Mexico—and also dealt with the nature of collections held by private individuals in a nation in which (like Guatemala and Belize) all surface and subsurface antiquities are the property of the government. Despite treaties and laws of all kinds, the looting and smuggling goes on. In Belize, there are few government archaeologists and there are many artifacts, especially stone tools, that get smuggled out and go into the collectors' market. There are dealers in Central and South Texas that handle such stuff— eccentrics, celts, stemmed blade points, and the like. One antique shop in Round Rock has Belize artifacts on sale. Archaeologists in all of these countries, as well as the United States, are highly frustrated by the continued looting and smuggling; only rarely is anyone caught and even less frequently are they convicted. Many archaeologists working with Mesoamerican cultural remains will refuse to examine, much less to publish, any looted materials. Others will sometimes publish unique specimens in order to get them on record, in the hope that dissemination of such information will help to advance broader research goals.

In Texas, we have a situation in which artifact collectors have gone into Mexico for decades to surface-collect projectile points and other artifacts. This has gone on since the last century; even the great Texas author J. Frank Dobie dug into a small rockshelter in northern Coahuila in the 1930s and gave the collection to the Texas Memorial Museum. Many collections along the Texas-Mexico border have artifacts that came from Tamaulipas, Nuevo León, Coahuila, and beyond. Here I am not talking about the export of Precolumbian antiquities from the early civilizations of Mexico. This has also gone on, and continues to do so, on a higher, commercial level. And, I am not talking about the current situation in which flyers are being distributed in northeastern Mexico, encouraging Mexican citizens to collect points and bring them into Texas (which they are doing) to sell them to an artifact dealer at Falcon Reservoir. Rather, I am referring to "arrowhead hunters" searching the eroded sites of northeastern Mexico, or, commonly, buying points from local people in Mexico. This sort of collecting and importation became illegal in 1971, when the U.S.-Mexico Treaty of Cooperation (of 1970) went into effect regarding cultural remains. But, that treaty is vague (as is the UNESCO convention on artifact-importation ratified by the U.S. Senate in 1983) and focusses on Precolumbian pottery and the artifacts of the high civilizations of Mexico. To my knowledge, U.S. Customs officials have not enforced the treaty when it involved "arrowheads." Some collectors have even declared them to Customs, and in other cases, the Customs officials ask collectors returning from Mexico if they can see "what ya'll found today."

Additionally, the Mexican government, through INAH (Instituto Nacional de Antropología e Historia) has long required that archaeological work in Mexico by foreigners be done under a **permit**. Regulations are very stringent and artifacts cannot be taken out of Mexico except under very special circumstances. Collectors of any sort, and avocational archaeologists, cannot get such permits. Even if you have the permission of the Mexican landowner, the artifacts technically belong to the government of that country.

What are we to do, then, as professionals and avocationals when we examine artifacts taken out of Mexico without permit? We are not law enforcement officials and we are not ordained to sit in ethical and moral judgement of the persons who have collected the artifacts. Many times, the collector has long since ceased the practice of collecting in Mexico, though still has the artifacts in his/her collection. Over the years, Texas archaeologists interested in northeastern Mexico have often studied and published collections that were obtained by persons operating without permits. I have done this (e.g., Hester 1971), as have a number of professional and avocational contributors to this and other journals, in order to salvage information and put the materials on record, since so little is known about the archaeology of northeastern Mexico.

Should we as professional and avocational archaeologists continue to occasionally analyze and publish artifacts collected in northeastern Mexico, or to publish photographs of rock art sites found there?[3] The INAH Archaeological Council is reported to consider publication of the artifacts as unethical, and there is some controversy over the recording of rock art (albeit this has been done without artifact-collecting or removal of materials from Mexico). It is certainly incumbent on us to strongly discourage non-permitted collecting and hope that the appropriate governmental

agencies of both governments do a better job of regulating it. We must remind our members and the collector community that such non-permitted activity is indeed **illegal**. But, as we know, most of the folks doing the collecting in Mexico are **not** members of any Texas avocational/professional archaeological society, and thus they will continue to collect, unimpressed by our concerns and unimpeded by ethics, treaties, or Customs, in either country.

While we must continue to discourage such collecting, it seems to me that we are presently stuck in a "gray" area. On the one hand, professional and avocational archaeologists have always believed that it is our scientific responsibility to document, publish, and thus preserve, archaeological materials. We can also argue, if we wish, that such publication benefits both American and Mexican archaeologists, especially in making the Mexican archaeological community aware of what is being collected and taken out of their country. We could also argue that without this knowledge, nothing will change on either side of the border in terms of controlling the situation. INAH has no way of recovering these materials from arrowhead-collectors once they have left the country, but we can document the materials as best we can and provide copies to INAH in a continuing collaborative and cooperative spirit.

On the other hand, we must be very cautious that in our efforts to meet traditional scientific goals, we are not reporting privately-collected materials headed for the commercial market and whose monetary value might be enhanced through publication—or that we somehow convey a measure of "prestige" to persons who are actively making such non-permitted collections. The STAA and other organizations can certainly develop publication policy that addresses these issues.

Finally, the US-Mexican Treaty, UNESCO, and the presence of government agencies on both sides of the border, have all failed when it comes to protecting the cultural resources along the Rio Grande. Rockshelters on the Coahuila side of Amistad have been heavily looted, many by U.S. government employees, and this tide has been turned largely through the hard work of Joe Labadie and his colleagues at the National Park Service in Del Rio. As detailed in earlier papers (Hester 1995, 1996), **no treaties or governmental bodies stopped the looting on either the Texas or Tamaulipas sides of Falcon Reservoir** during the extremely low lake levels of the last several years. Collectors and commercial interests have heavily exploited the Tamaulipan side. Mexican fishermen and other Tamaulipan citizens have also made money by collecting and selling artifacts to American relic-dealers. What we know about the archaeology of Falcon Reservoir has come from efforts in recent years by a few professional and avocational archaeologists who have worked together to document sites and collections on the American side (e.g., Pertulla et al. 1996), and avocationals who have documented collections and materials from looted sites that came from the Tamaulipan side. Several papers on such rescue archaeology have been published in *La Tierra* and in the *Bulletin of the Texas Archeological Society*. These have reported sites and materials that were never found, recorded, or even suspected, in earlier American and Mexican fieldwork at Falcon in the early 1950s. Our understanding of the ancient peoples along the River has been greatly enhanced. For example, the paper by Boyd et al. (1997) on the Southern Island cemetery within the Falcon Lake reservoir (and on the Tamaulipan side) used data salvaged from looters and materials exposed by erosion (and subject to commercial collecting) to provide extensive detail on the nature of the cemetery, human osteology, and material culture. It adds a new dimension to the study of mortuary patterns on the lower Rio Grande. It **could** have been totally **lost** to archaeologists on both sides of that river.

No professional or avocational archaeologist with whom I am acquainted wants to anger our archaeological colleagues in Mexico. Further, we definitely do not want to be portrayed as condoning the non-permitted collection of artifacts in northeastern Mexico. But, those of us concerned with the intertwined, 11,000-year prehistory of the Texas-Mexico borderlands must individually weigh the ethics issue (and its impact on us personally) versus the terrible loss to archaeological interpretation in the borderlands that would result from ignoring—not analyzing or publishing—non-permitted artifacts or collections. I hope that this issue will lead to a greater discussion among archaeologists on both sides of the border about ways to enhance the study of this poorly-known region.

NOTES

[1] These are personal observations, and are in no way intended to represent the views of the Southern Texas Archaeological Association or the Texas Archeological Research Laboratory, The University of Texas at Austin.

[2] A South Texas landowner on whose property one of my graduate students has worked (and who kept his name out of publications) was recently offered $15,000 for a group of lithics from his property by a San Antonio collector/dealer. He declined this offer (and at least one other inquiry from an Austin collector/dealer), but it is representative of the lengths to which collector/dealers will go in the present commercial climate.

[3] Among those professional and avocational researchers who have published well-intentioned papers on collections of non-permitted northeastern Mexico artifacts, visits to rock art sites, or observations on ancient and Colonial technologies include myself, C. K. Chandler, Don Kumpe, Joe Labadie, James Boyd, Rose Treviño, Solveig Turpin, Steve Carpenter, Harry Shafer, William Foerster and others. The goals of these papers were to add heretofore unknown or undocumented information to the regional archaeological record. Numerous publications and reports have come out of the Gateway Project in Coahuila, all of which was done under INAH permit in the mid to late 1970s. A comprehensive bibliography of Coahuila archaeology has recently been completed by archaeologist Leticia Gonzales Arratia of INAH in Torreon, Coahuila and will be published soon.

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PLEASE NOTE:

Other more comprehensive Memorials have been published about both Frances Meskill and Dr. Don Lewis—in the *STAA Quarterly Newsletter*, August 1997, and in the *Friends of the Texas Archeological Research Laboratory Journal*, August 1997.

A LATE PREHISTORIC BURIAL FROM 41ZP85, OLD ZAPATA, ZAPATA COUNTY, TEXAS

James Bryan Boyd

ABSTRACT

A burial discovered within the confines of the historic site of Old Zapata, in Zapata County, Texas, is reported. Artifacts found with the burial indicate that it dates from the Late Prehistoric period. These artifacts include thirteen Caracara arrow points and one marine shell pendant. Little information is available regarding the discovery and excavation of the burial, but the recovered artifacts are described. A brief description and history of the old town of Zapata is also presented.

THE SITE

The burial was discovered within the former city limits of the abandoned town of (Old) Zapata, in west-central Zapata County, Texas (see Figure 1). This is within the conservation pool of Falcon Reservoir, and is submerged when the lake is full. The pool elevation of Falcon Reservoir when it is full is 301.2 feet above mean sea level (m.s.l.; IBWC 1975), but this level fluctuates considerably depending upon water demands in the Lower Rio Grande Valley of Texas and Tamaulipas, Mexico. When the elevation of the lake is low, which happens quite often and sometimes for sustained periods of time, the ruins of the old town are exposed. Evidence of prehistoric occupation of the same area is also evident. The burial being reported is further evidence of the utilization of this site during prehistoric times.

The site of old Zapata (41ZP85) is located approximately five kilometers southwest of the present site of Zapata, Texas. This location corresponds to the vega zone as described by Nunley (1989:39-40). Old Zapata is located on a flat terrace of the Rio Grande known as the Zapata terrace (Evans 1961: 39). This terrace is believed to date from the late Quaternary age, and rests on a Tertiary bedrock base (ibid.:39). The Rio Grande, now submerged in the reservoir, originally ran just west of the site.

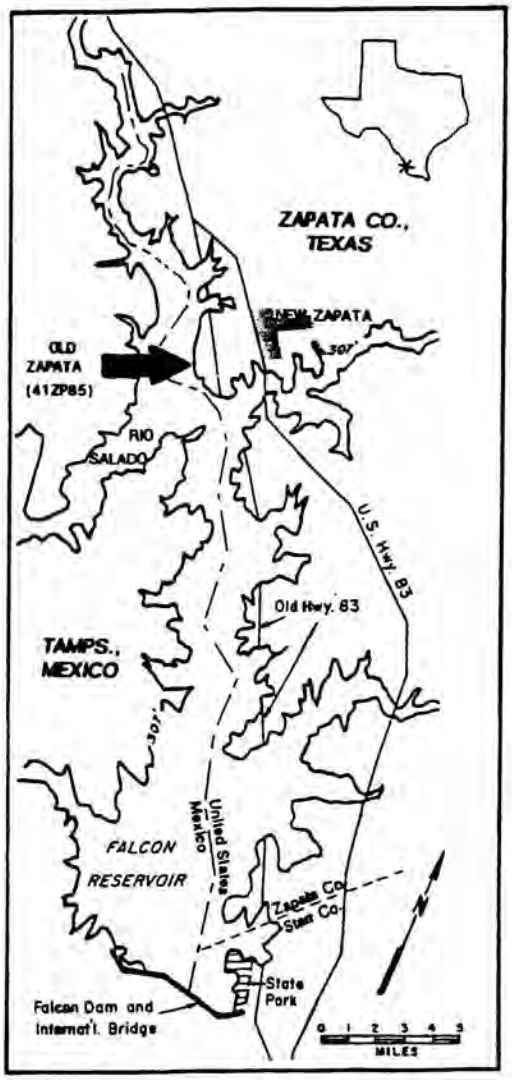

Figure 1. Map of Falcon Reservoir, showing the location of Old Zapata (41ZP85). Note the location of (New) Zapata. Also note the location of the Rio Salado. Inset shows location of area in the state.

The site of old Zapata was established on land originally granted by General José de Escandón in 1770 (Freeman and Sánchez García (1994:90). However, it was not until 1839 when a man named Henry Redmond filed a claim for a parcel of land which soon became known as "Habitación de Redmond." Later the site was known only as "Habitación" (English translation; "the inhabited place"). In 1858 the town's name was changed to Bellville, named after Governor Bell, who signed the bill recognizing the county in which the town was located (Byfield 1966: 4). On March 18, 1875, the citizens of the town renamed it "Carrizo," after the Carrizo Indians who inhabited the area (ibid.:4). In 1898 the site was moved to slightly higher ground after a flood, and it was permanently named "Zapata" (ibid.:4). The town remained in this location until it was flooded by the waters of the newly built Falcon Reservoir in 1954 (ibid.:5). The new townsite of Zapata was subsequently established a short distance to the northeast, where it thrives today.

THE BURIAL

The burial being reported was discovered by a resident of Zapata, Texas during a low water episode at the lake in the summer of 1994. The burial was discovered in a portion of old Zapata between where Highway 496 runs into the lake just west of (new) Zapata, Texas and an area known locally as Hayne's Point (41ZP8; Cynthia Scott, personal communication 1995)

The elevation of Falcon Reservoir at the time was approximately 280-285 feet above m.s.l., or about 15-20 feet below the conservation elevation. The location of the burial corresponds to an outlying area of old Zapata, in the southwestern quadrant.

The site was visited shortly after the discovery date by Cynthia Scott, of Zapata, Texas. She reports (personal communication 1995) that the skeletal remains had been discarded by looters on the surface of the site, and that they were mostly complete and appeared to be those of an adult. Mrs. Scott advised that all or most of the long bones were intact, but that the skull was crushed. She reportedly reburied the remains in the site.

THE ARTIFACTS

Numerous artifacts were recovered from the burial, including 13 Caracara arrow points, some complete and some broken, as well as a single marine shell pendant (Erick Kruger, personal communication 1994). Where possible, the recovered artifacts are described in detail below.

The Caracara arrow points.

Altogether, 13 arrow points, all conforming to the Caracara type described by Saunders and Hester (1993:22-31) were salvaged with the burial. Eight of the specimens were complete, and five were broken (Erick Kruger, personal communication 1994). The complete specimens were subsequently sold to a private artifact collector, and are not currently available for study. Some of these specimens were well over 2 inches in length, and all exhibited the same stylistic traits (ibid.). The broken specimens were subsequently placed in another private collection, and are currently available for study. In November 1996 the artifacts were loaned to the author for a detailed analysis, resulting in this report.

The five fragmented Caracara points consist of four proximal fragments and one distal fragment (see Figure 2). The proximal fragments all exhibit slightly concave bases and straight blade edges. The stem area between the basal notches varies in width from 8.44 mm to 10.06 mm (see Table 1). On the distal fragment this measurement is 8.62 mm. The maximum basal width of the proximal fragments varies from 14.91 mm to 16.76 mm. The maximum width of the distal fragment is 13.90 mm. The maximum thickness of the specimens, including both proximal and distal fragment(s), varies from 2.78 mm to 3.96 mm.

Specimen 2A is made from a light brownish-pink chert. The distal portion of the specimen is broken. The blade edges are finely serrated on both sides. This specimen has the slightest basal concavity of the four proximal Caracara fragments recovered.

Specimen 2B is made from a light brown chert. The distal portion of the specimen is broken. The blade edges are not serrated. This is the only specimen which does not exhibit serrations. The basal concavity is slightly greater than that of specimen 2A.

Specimen 2C is made from a banded pinkish-brown, reddish, and tan-colored chert. The distal portion of the specimen is broken. The blade edges are finely serrated. This specimen exhibits the most extreme basal concavity of the four proximal fragments.

Table 1. Specifications of Recovered Caracara Arrow Points*

Specimen No.	Length	Max. Width	Max. Thickness	Notch Depth
2A	34.54 mm	14.91 mm	3.96 mm	3.19/3.21 mm
2B	34.03 mm	15.62 mm	3.87 mm	2.88/2.90 mm
2C	32.78 mm	16.76 mm	3.41 mm	2.81/3.68 mm
2D	16.73 mm	15.66 mm	3.61 mm	2.34/ na mm
2E	34.08 mm	13.90 mm	2.78 mm	na

Specimen No.	Shaft Width	Base Thickness
2A	8.44 mm	3.78/4.09 mm
2B	9.95 mm	4.18/4.49 mm
2C	9.96 mm	4.97/5.31 mm
2D	10.06 mm	3.74/na mm
2E	8.62 mm	na

* all measurements made with Mitutoyo CD-6" BS digimatic caliper

NOTE: Specimen numbers correspond to Figure 2 and text. Length is for the surviving portion of the specimen (all are fragmentary). Maximum width for specimens 2A-2C was measured at the proximal end. Maximum width for specimens 2D and 2E was measured at the proximal end of the blade area. Notch depth is shown for both notches of each specimen where applicable. The shaft width was determined by measuring the width of the specimen between the notches. Base thickness was determined by measuring the width of each "foot" below the corresponding notch, where applicable.

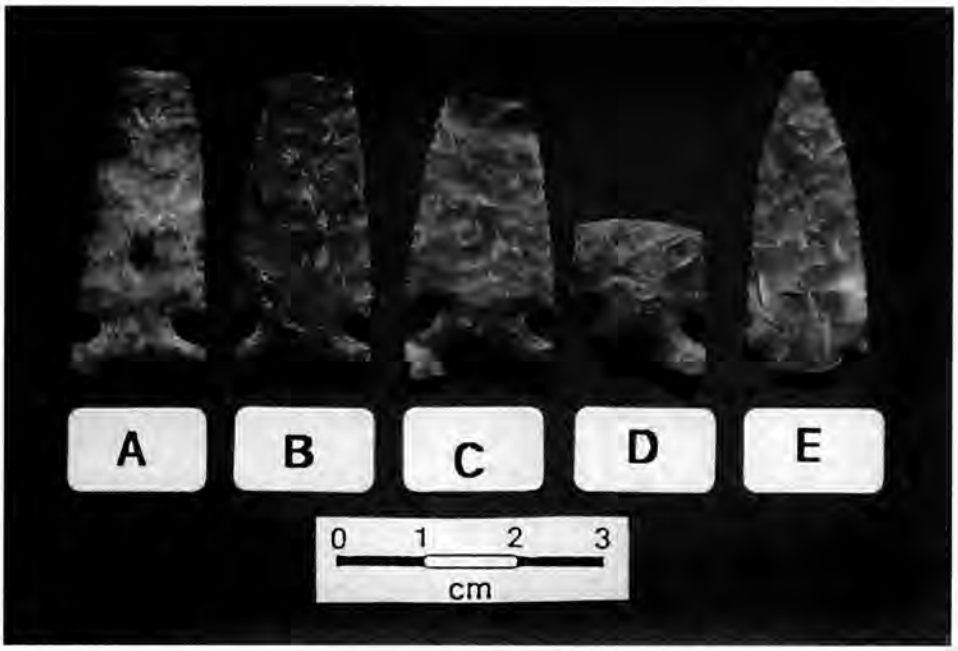

Figure 2. Five of thirteen Caracara arrow points recovered from the burial. Specimens A-E are referred to in text. Photograph by the author.

Specimen 2D is made from a light brown-colored chert. A large portion of the distal end of the specimen is broken away, and one of the basal "feet" is missing as well. The blade edges are finely serrated, and a considerable basal concavity is evident. The proximal end damage to this specimen, i.e., the broken "foot," is similar to the damage to a Caracara point which was found deeply imbedded in the second lumbar vertebra of a burial discovered by the author at a nearby site in 1995 (Boyd n.d. a). This imbedded Caracara point appears to be the cause of death of that individual (Wilson n.d.).

Specimen 2E is the distal portion of a Caracara arrow point. Only the extreme end of the distal portion is broken, otherwise the entire blade is intact. The proximal end is missing. The specimen is made from a light brown or tan colored chert. The blade edges, which are very slightly convex, are finely serrated.

Discussion

All five Caracara arrow points described in this report exhibit similar style and workmanship. Kruger reports (personal communication 1994) that the complete specimens recovered from the burial also exhibited similar characteristics. Whether the points were placed with the interment as mortuary offerings or were instruments of the individual's death is unknown. Several of the arrow points were noted in the rib cage area of the skeletal remains (ibid.).

Caracara arrow points associated with burials in the Falcon Reservoir have been previously reported (Boyd n.d. a, n.d. b, n.d. c). In at least one instance, as just mentioned, the projectile point appears to have been the causative agent in the individual's death. The Caracara arrow point is the most commonly found style in sites in the Falcon Reservoir (Boyd n.d. d). It has been dated to the Late Prehistoric period. Dating of the type has been possible through radiocarbon dating of skeletal material where Caracara points were definitively associated, e.g., Southern Island Burial #3 Boyd n.d. a), where an uncalibrated date of 840±70 years B.P. (Before Present) has been effected. A burial salvaged by the author in 1984 in a Zapata County Falcon Reservoir site (41ZP7), which had associated Caracara points, yielded an uncalibrated radiocarbon (Accelerator Mass Spectrometer) date of 620±70 years B.P. (Boyd n.d. b.; Dr. Thomas R. Hester, personal communication 1996).

Figure 3. Macro-photograph of *Oliva sayana* shell pendant recovered from the burial (interior view). Photo by the author.

Marine shell pendant.

A single ornamental artifact was salvaged from the burial. It is made from marine shell, specifically from the whorl of an *Oliva sayana* shell (Mike Krzywonski, personal communication 1996). Figure 3 illustrates the pendant. The artifact has one biconically drilled hole near one end. The overall shape of the pendant is oval. One of the long edges of the specimen has been considerably ground, while the opposite side exhibits a moderately sharp edge, resulting from the original cutting of the specimen from the whorl of the *Oliva* shell. The pendant is 39.36 mm in length, and has a maximum width of 17.87 mm. The thickness of the specimen varies from 2.61 mm near the hole end, to about 1.25 mm near the opposite end. The hole is slightly elongated, measuring 3.43 mm in width and 3.95 mm in length.

Discussion

Ornamental artifacts fashioned from *Oliva sayana* have been previously reported from a juvenile burial salvaged from another Falcon Reservoir site on the Mexican side of the river in 1995 (Boyd n.d. c). *Oliva sayana* ornaments as grave goods have also been reported in the Rio Grande Valley of South Texas (Collins, Hester, and Weir 1969:143-144; Hester and Ruecking 1969:149-150; Hester and Rodgers 1971:368-369; notes on file at TARL for site 41HG173). Ornaments made from *Oliva sayana* as stray finds in sites in the Falcon Reservoir area occur infrequently, whereas ornaments from conch are far more common (Boyd n.d. e).

CONCLUSIONS

The reporting of this burial is important in regards to the associated Caracara arrow points. Although their presence as either grave goods or the causative agent in the individual's death cannot be determined, Caracara points have been reported as associated with other burials in the Falcon Reservoir. Unfortunately, all of the specimens which were recovered are not available for study, so only a limited analysis can be effected. However, information from this burial should aid in a future comprehensive assessment of the burial practices and mortuary inclusions of burials in general in the Falcon Reservoir area. The inclusion of the marine shell pendant appears to suggest that trade existed between the peoples of the coastal areas and those in the inland areas of Texas and northeastern Mexico.

The presence of the burial within the confines of old Zapata is both interesting and important. The importance of the juxtaposition of the burial in the old town site is that it demonstrates that certain areas within the reservoir district were favored areas for human occupation and activity over extended periods of time; therefore favorable conditions must have existed which contributed to this sustained usage for a subsequently lengthy period. The presence of the nearby Rio Grande was certainly a major contributing factor to the attractiveness of this site, both in historic and prehistoric times. Furthermore, this site area is almost directly opposite from the point where the mouth of the Rio Salado, originating in Mexico,

empties into the Rio Grande. This junction of rivers was probably of unprecedented importance to the aboriginal population. It may have been revered for reasons other than those which are of a practical nature.

Although it is very unfortunate that little information regarding the actual burial is available, and the skeletal remains were not salvaged, information gleaned from the artifacts which are now available for study will contribute to the steadily increasing amount of data being gathered from burials salvaged and recorded in the Falcon Reservoir area.

ACKNOWLEDGMENTS

The author wishes to thank Dr. Thomas R. Hester, Director of the Texas Archeological Research Laboratory, The University of Texas at Austin (TARL), for information he provided regarding a burial excavated in the Rio Grande Valley of Texas in 1995. Dr. Hester, along with Dr. Darrell Creel (TARL) was instrumental in initiating the process of procuring radiocarbon dates from two Falcon Reservoir burials, where Caracara arrow points were directly associated, from the University of California's Lawrence Livermore National Laboratory. Information provided by Cynthia Scott, of Zapata, Texas was useful in the preparation of this report. The Falcon reservoir map used in Figure 1 was graciously supplied by Christopher Lintz and the staff of TRC Mariah Associates, Inc. of Austin.

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THE OSO DUNE SITE (41NU37): A LATE ARCHAIC CEMETERY ON THE CENTRAL TEXAS COAST

Kim A. Cox and Susan D. deFrance

ABSTRACT

This article presents a description of artifacts that were recovered from various surface collections and excavations conducted at the large Late Archaic cemetery at the Oso Dune Site (41NU37). The cultural material is associated with an increase in mortuary activity during the Late Archaic along the central Texas coast. Several of the artifacts recovered from the site have not been identified previously in central coast Late Archaic cemeteries. These artifacts are described and we present some tentative interpretations of their significance.

SITE DESCRIPTION

The Oso Dune Site (41NU37), frequently referred to as the Botanical Gardens Burial Site, is located on the western edge of a severely eroding clay dune along Oso Creek (Figure 1). The site is approximately two kilometers (km) south of the Staples St. (FM 2444) bridge which crosses Oso Creek. The clay dune is the highest point of land in the immediate vicinity and is now partially covered on its uneroded western side by various grasses and thornbrush. From the crest of the dune, the land slopes gently to the Oso, approximately 200 meters(m) to the east. The entire site encompasses approximately eight acres (3.23 hectares) and extends almost to the King Ranch fence line to the south (see Mercado-Allinger 1985).

The site consists of two prehistoric components: a Late Archaic cemetery and a Late Prehistoric occupation. The Late Archaic cemetery extends along the eroded slope of the dune. Scattered approximately 150 m (north-south) are abundant human remains, along with occasional dense patches of land snail (*Rabdotus* sp.) and scattered marine shells. The Late Prehistoric component is intact along the western uneroded portion of the dune. These deposits consist of approximately 60 cm of dark brown silty soil. Excavations have not been conducted in this area to determine the nature of the Late Prehistoric component. This article concerns the Late Archaic cemetery.

HISTORY OF AREA AND SITE

Along the Callo del Oso and Oso Creek, are two large Archaic burial sites, 41NU2 and 41NU37, as well as numerous smaller ones (see Headrick 1993; Hester 1980). The first systematic survey of sites and the earliest recording of burials in this area was conducted in the 1920s by George C. Martin (1930). Prior to Martin's work, the entire Oso had been surface-collected for many years by various parties (Martin 1930; Alex Cox, personal communication). Artifacts from those early collections are now housed at the Corpus Christi Museum of Science and History, the Witte Museum in San Antonio and the Texas Archeological Research Laboratory in Austin.

Subsequent to investigations in the 1930s, 41NU37 has been the subject of monitoring by professional archaeologists and continued small-scale collecting by amateurs and looters. The earliest known visit to the site was by W. Armstrong Price and Sam Fitzpatrick in 1947 who first reported human bones eroding from the long clay dune (Mercado-Allinger 1985). Bill Stanton dug and collected human remains and other cultural material from the site in the 1960s. Tom Hester and Jim Corbin visited the site in the fall of 1968 and reported that the site had suffered intensive looting activity (ibid.). In 1973, Patience Patterson and Mary Margaret Ford, with the U.S. Army Corps of Engineers, Galveston District, collected bone, burned clay, potsherds and chipped stone, and recorded the activity of looters (Patterson and Ford 1974).

Archaeologist Robert A. Ricklis visited 41NU37 in 1981 (personal communication). He noted dense concentrations of human bones scattered across virtually the entire site, and he also observed evidence of looting and removed a skull that was in imminent danger of eroding from the side of a gully. In 1984, the site was visited by Patricia Mercado-Allinger, who successfully nominated it for inclusion in the National Register of Historic Places. She was also the first person to note several of the unique artifacts that characterize the site. Mercado-Allinger (1985) com-

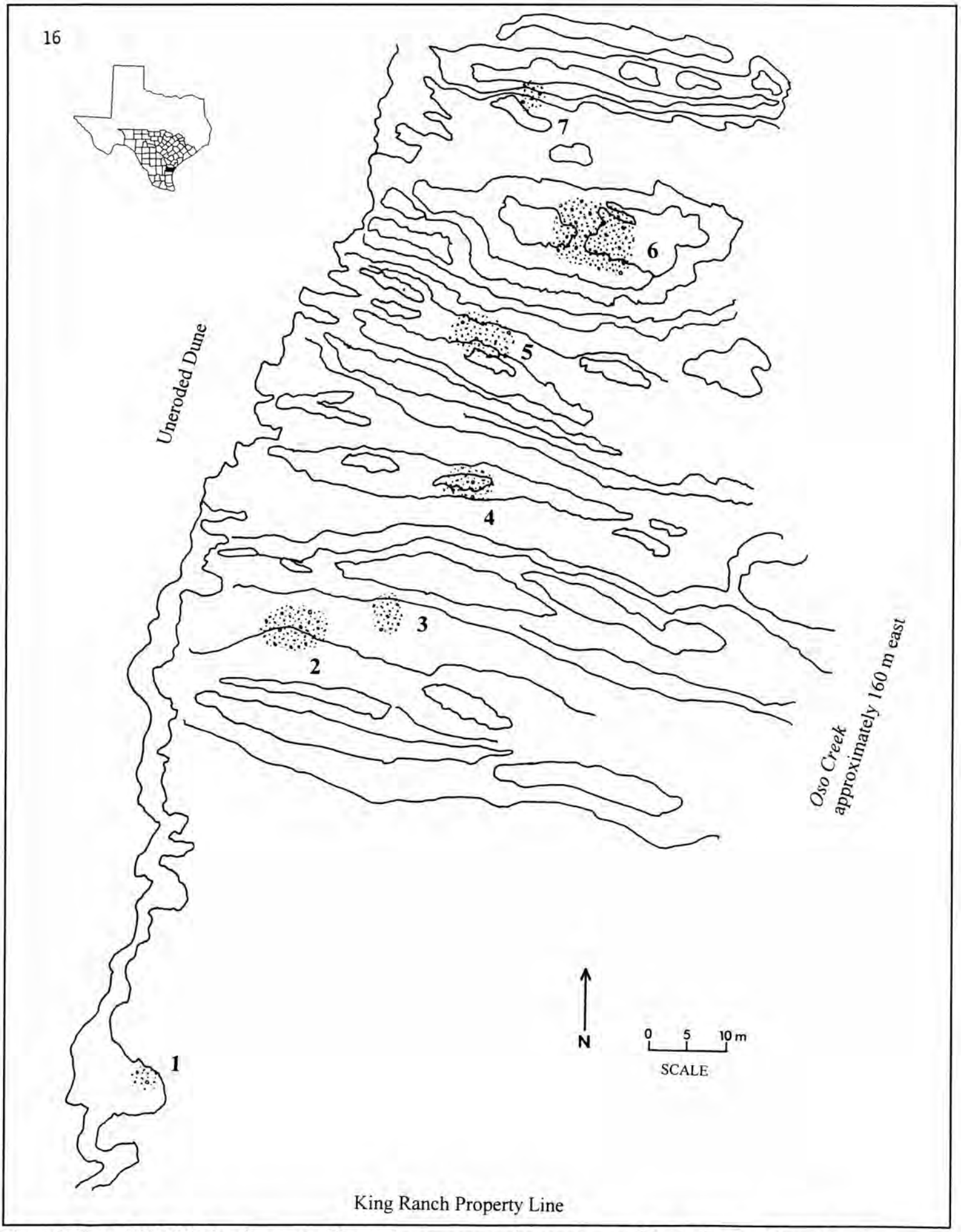

Figure 1. Map of 41NU37 showing areas of human bone concentration. Inset map of Texas showing Nueces County.

mented that although other burials along Oso Creek produced few grave goods, several ornaments had been found at 41NU37, including "a serrated shell pendant" and "tubular bird-bone beads." When the senior author first visited the site in 1987, he noted the presence of numerous holes dug by looters. Human bones were scattered across the site, having eroded from the clay dune and having been tossed aside by diggers. Although unauthorized digging ceased not long thereafter, it has started again on a smaller scale, perhaps as the site has become more accessible in recent years.

In 1986, 110 acres that included 41NU37 were donated to the Corpus Christi Botanical Gardens, and, at their request the site was visited by Herman Smith, who at that time was staff archaeologist with the Corpus Christi Museum of Science and History. In 1989 Smith, with the help of volunteer labor, undertook an excavation to remove all human remains eroding from the site. A controversy later arose concerning Smith's excavation and salvage techniques and all work at the site came to a halt in June of 1989. In a walkover of the site in November of 1996, the authors noted the presence of numerous individuals eroding from seven separate locations over approximately 150 m. (Mercado-Allinger had noted twelve concentrations in 1984). Since all surface scatters of human bone were removed from the site by Smith in 1989, it is believed all of the individuals now scattered across the surface of this site are the result of recent erosion. None of the burials that were covered and protected at the time excavation ceased in 1989 could be identified, nor were any of the artifacts associated with these burials evident.

Prior to terminating excavations at this site, Smith submitted human bone from the central burial pit for radiocarbon dating. This unadjusted date, B.P. 2720 ± 70 (Tx-6087), places a central part of the burial site near the beginning of the Late Archaic for the central Texas coast (see Cox 1996; Ricklis 1995).

FUTURE PLANS FOR 41NU37

A victory for archaeological preservation has been won through the efforts of the Archaeological Conservancy. The Conservancy obtained the site through negotiations with the Corpus Christi Botanical Garden and other parties. The Conservancy implemented a stabilization program at the site in April 1997. Jim Walker, regional director with the Conservancy, completed a combination of experimental methods to stop surface erosion at the site. These included the construction of a silt fence along the intact western edge of the dune and the construction of several silt dams along the areas of greatest erosion. The areas with the greatest exposure of human remains were covered with a geotextile fabric upon which clean fill was placed. The growth of vegetation on this surface will further stabilize the site. These procedures will be monitored for approximately one year to identify the most successful method at reducing erosion. Additional stabilization methods may be used depending on the success of these procedures. The future role of the Botanical Garden will be to maintain native vegetation on the site and to deter looting of the archaeological deposits. It is anticipated that these efforts will stabilize this unique archaeological site and prevent the erosion of more burials.

THE 1989 EXCAVATIONS

Several of the artifacts from 41NU37 analyzed for this report are from the 1989 excavations. Three principal locations were examined in 1989 (Areas 3, 5 and 6 on Figure 1). This summary of excavations and skeletal associations is based on field drawings, photographs, and notes on the excavations. The skeletal material was reinterred by Herman Smith following the excavation controversy; therefore, the human remains were not available for subsequent analysis.

Area 3

Area 3 on Figure 1 produced three complete skeletons and various incomplete remains. The first of the complete skeletons (see Figure 2), identified by Smith as an adult female, had scattered roundish beads of an unknown variety (see description below) around the upper body, and a resinous substance had been placed in the individual's mouth. A projectile point (Figure 3c) was found in the thoracic cavity. It was not possible to determine if this projectile was placed with the burial or may have been the cause of death. The head of the individual had been placed on four adjacent pieces of tabular sandstone that contained red ocher stains and residue.

A second skeleton from this area was identified by

Figure 2. Female burial from Area 3 with sandstone slabs *in situ* behind cranium.

Smith as a female who was approximately eight months pregnant. She was also ornamented with the same type of beads found with the other female burial. This burial had been partially outlined in tabular sandstone. This individual was never completely excavated and was covered with dark plastic and reburied before the site was abandoned in 1989. The location containing this skeleton is now eroded completely and neither traces of the plastic nor the artifacts are visible.

In the very near vicinity of this partially exposed skeleton, although not obviously associated with the burial, were discovered two flat pieces of asphalt pressed together (Figure 4). When opened, they revealed a woven basket impression which included twine that was made from very small fibers.

Area 5

The main burial pit (Area 5 on Figure 1) was a large concentration of bone. Removal of surface debris and the excavation of exposed bones revealed the twelve individuals indicated on Figure 5 (see page 21). All individuals, and perhaps several others who had eroded from this location, had been placed in the same burial pit, probably at the same time based on the spacing of the individuals. The single radiocarbon date from 41NU37 was obtained on human bone from this group. Two projectile points, thousands of small beads similar to those in Area 3, freshwater mussel shell and marine shell ornaments were associated with a mature adult male in this burial cluster. This individual had a young adolescent placed between his arms and two infants next to his legs. In addition two of the skulls from this group apparently had small dark stones and resin placed in or near their mouths, while another individual held a dark stone in its hand. Dr. Smith identified all of these individuals as adolescent or young adult males. The adult female in this burial group also had a juvenile individual placed between her legs, had a hand partially over an infant, and had two other infants at her feet, one of which had a dense matrix of beads surrounding its body. Beneath this female's right arm and body was found a large dark stain approximately 50 cm in width and two meters in length. The origin of the presumably organic substance that resulted in the stain was not determined.

Area 6

The last major concentration of human remains (Area 6 on Figure 1) produced five partial skeletons and one cremation burial. Human remains from this area were dense and heavily eroded. All remains were found at or very near the surface. Other than scattered

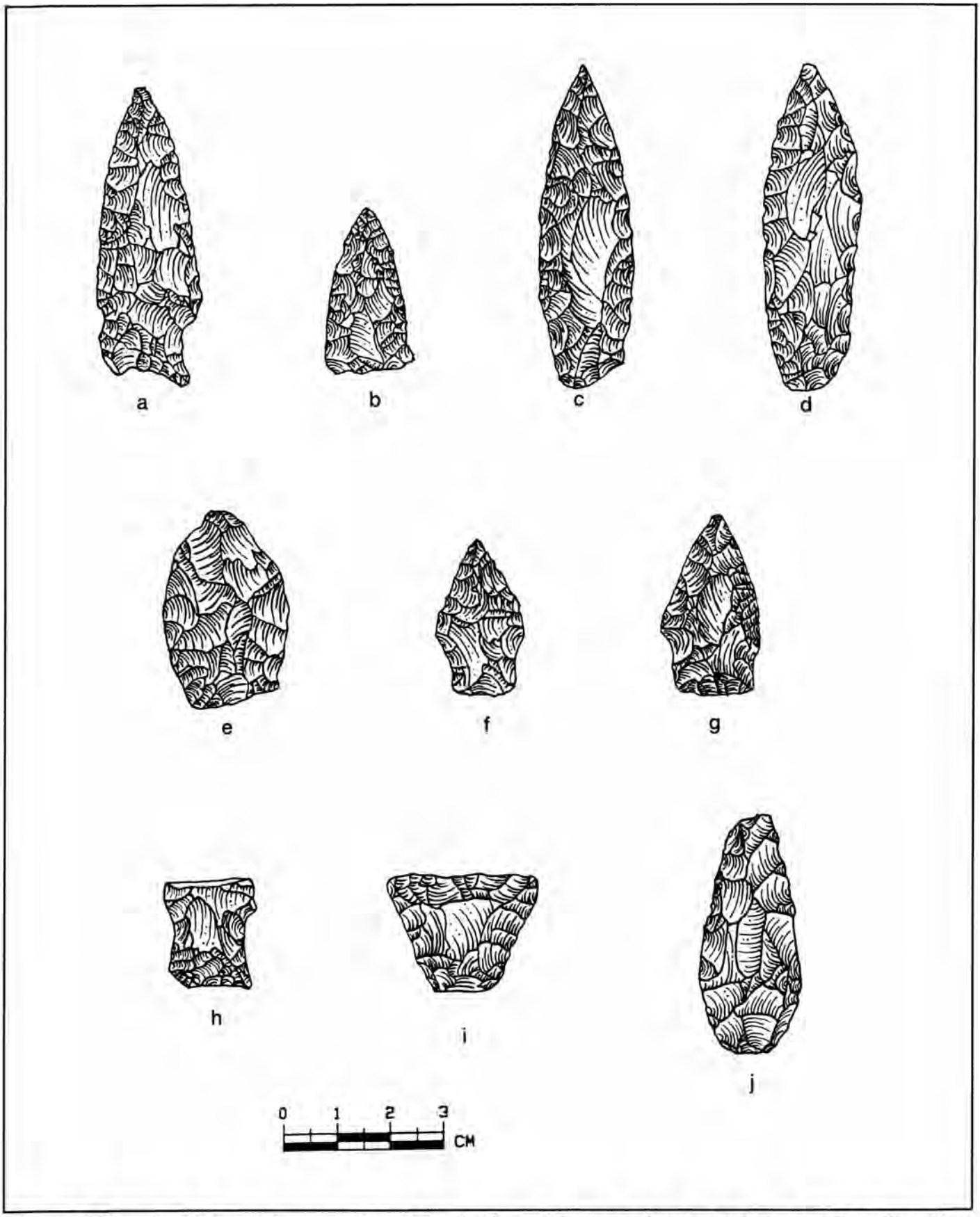

Figure 3. Lithics from the burial areas and surface collections: a, Zephyr point; b, distal blade; c, Kent-like point; d, untyped lanceolate point; e-g, untyped points; h, stem fragment; i, Olmos biface; j, Catan-like point.

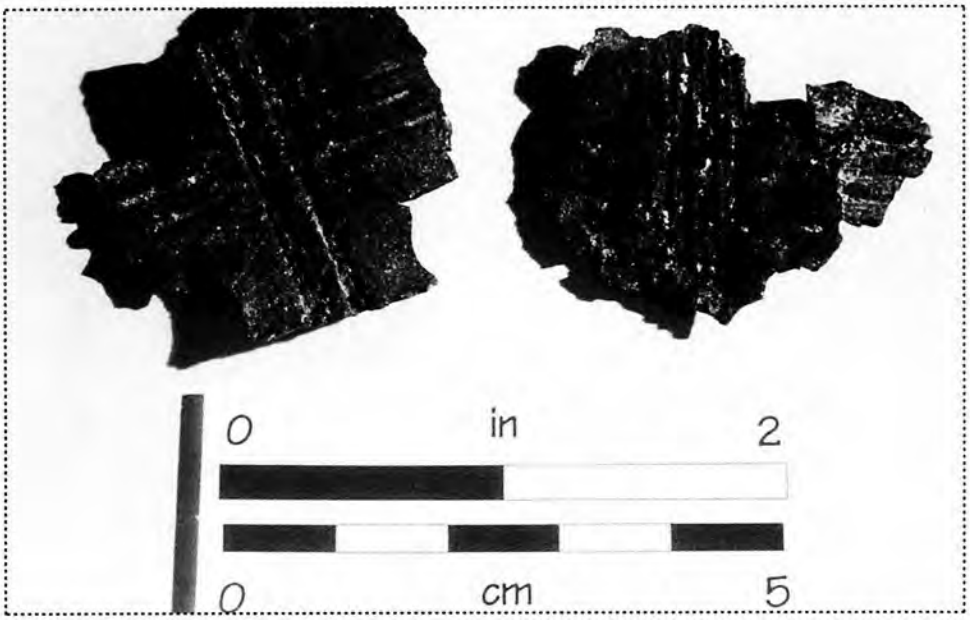

Figure 4. Basket-impressed asphalt nodules.

Figure 6. Bone artifacts from burial areas. Left, beveled deer radius with red ocher stains; Right, unidentified perforated mammal shaft fragment.

shells and a single painted deer bone artifact (see Figure 6, left), no artifacts were found associated with these burials.

ARTIFACTS

The artifacts from the 1989 excavations and from various surface collections are curated at the Corpus Christi Museum of Science and History. All surface-collected and excavated cultural items fall into six general identifiable categories: stone, ceramics, shell, bone, resin and asphalt. The following describes these artifact types.

Stone

Projectile points from 41NU37 are of several

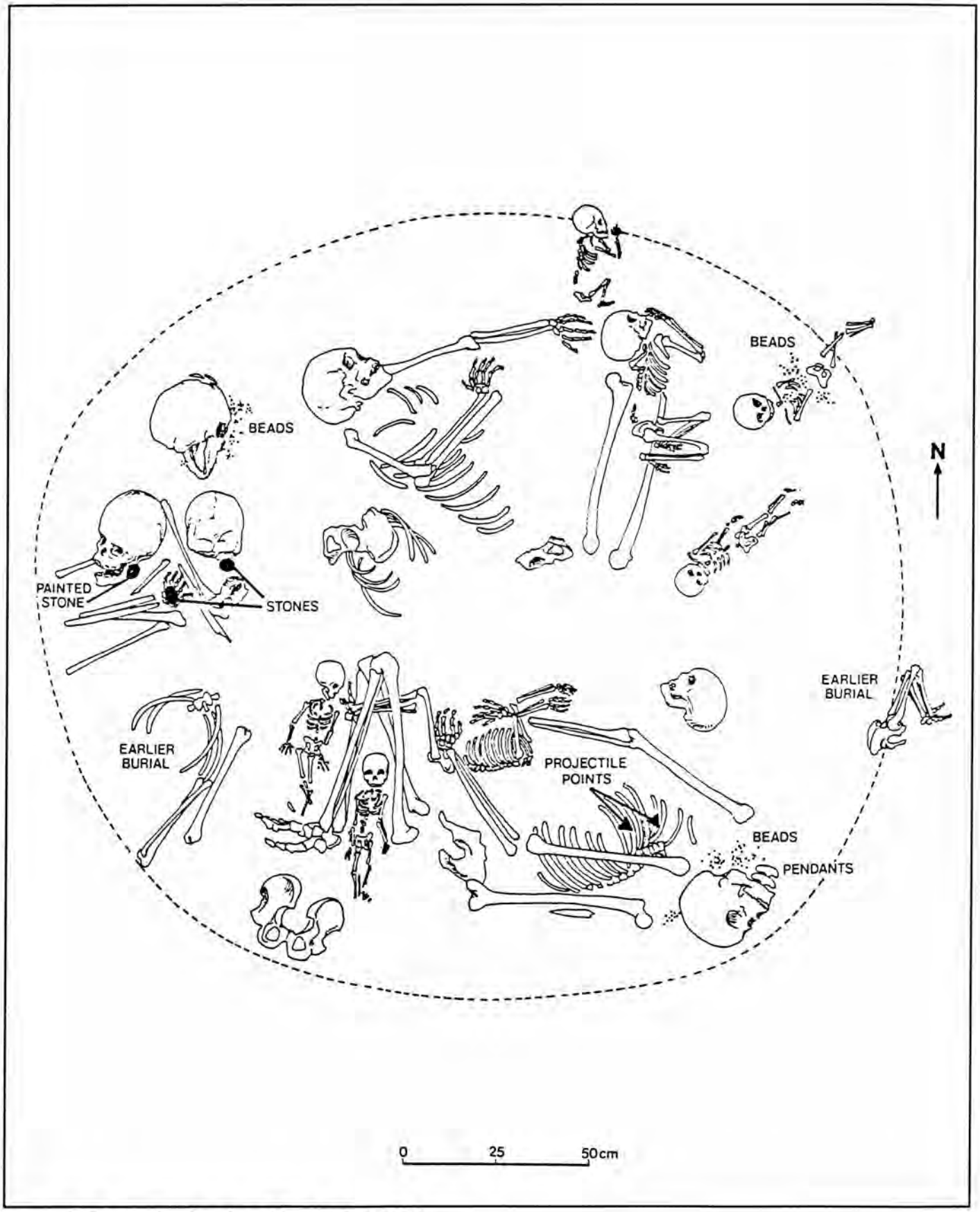

Figure 5. Composite drawing of burials in Area 5.

types. The single diagnostic point from the 1989 Area 5 excavation (Figure 3a) is a Late Archaic Zephyr point (see Cox 1996; Davis 1991). A distal fragment (Figure 3b) from the same area exhibits similar blade shape but is not diagnostic. The former was found in the thoracic cavity of an adult male while the latter was found embedded in his scapula. Both had traces of asphalt on their proximal ends.

An apparently contemporaneous point (judging from the other artifacts) was found in the 1989 Area 3 excavation (see Figure 3c). This point has a similar blade morphology but has a Kent-like base (see Cox 1996; Turner and Hester 1993). It is similar to a heavily patinated surface-collected point from the site area (Figure 3d). Three small untyped projectile points (Figures 3e, f, g) and a basal fragment (Figure 3h) appear in the surface-collected materials housed at the Corpus Christi Museum of Science and History. All of these points lack patination, indicating that they may also relate to the Late Archaic time period (see Cox 1996). Other lithics surface-collected by Ricklis (personal communication) include a distinctively Late Archaic artifact, an Olmos biface [see Turner and Hester 1993] (Figure 3i), and an alternately beveled Catán point (Figure 3j). The biface was not in association with the burial contexts while the point was found in association with bones from a looter-disturbed burial.

Relating to the Late Prehistoric occupation along the western edge of the site, a Perdiz arrow point was found on the surface by Patterson and Ford (1974), and a Perdiz point, two Fresno points and a small drill were reported by Ricklis (1996).

Other stone artifacts include the small smooth dark stones placed in or near the mouths of two of the young adult individuals, and in the hand of a juvenile individual, from Area 5 of the 1989 excavation (see Figure 5). One of the stones with the adult skulls had a small band of asphalt around it that was not touching the stone indicating that some organic material that was adhered to the stone had since deteriorated.

Four adjacent tabular pieces of sandstone stained with red ocher were also found in 1989 in Area 3 placed under the skull of one of the adult females (Figure 2). Several other sandstone pieces were found outlining the burial pit of another unexcavated adult female from Area 3. A recent walkover of the site revealed a piece of tabular siliceous rock in Area 3 in close proximity to an intact skeleton and another tabular piece of sandstone from Area 5 in an eroding area.

Ceramics

Potsherds were reported by Hester and Corbin in 1968 and by Bill Stanton in the 1960s (Mercado-Allinger 1985). In addition, the 1973 Corps of Engineers survey found small pottery fragments from the western portion of the site that also produced the arrow points (Patterson and Ford 1974). Test pits from 1989 in the uneroded areas of the site to the west also produced numerous potsherds, and Ricklis (1996) documents 107 sherds that he surface-collected from 41NU37.

In surface examinations of the site over the past several years, the senior author has seen small fragments of pottery widely scattered across its entire length. Most of these were from along the western eroding bluff. None has ever been observed in association with the burials. All potsherds are of the sandy paste variety commonly associated with the Rockport (Karankawa) phase of the Late Prehistoric (Ricklis 1996).

Shell

Both freshwater and marine shell artifacts are present in the mortuary artifacts. A variety of perforated and serrated mussel shell artifacts were found in association with the burials. The most artistic of these were a set of nine nested T-shaped pendants (see Figures 7 and 8) found across the neck of the adult male in Area 5. Each pendant has two perforations on the narrow T-shaped "neck" of the artifact. This corresponds to the dorsal surface of the clam. Along the edges of the pendants are a series of small serrations. All of the pendants with the exception of the outer or first pendant are serrated. The "neck" of the outer or first pendant is also unique in that it has greater curvature than the other pendants to accommodate covering the additional eight pendants. Whatever cordage or material that was used to tie together the pendants has since deteriorated. We are unaware of any similar such artifacts in association with a Late Archaic burial along the central Texas coast.

In producing the pendants, the hinges of the clams were removed, therefore, it was not possible to identify the genus and species of the clams. The external cortex of the valves is generally smooth and was not removed when the artifacts were made. All are freshwater mussel shells, family Unionidae. The mussel shells are all large, shallow types of either an elliptical or rhomboidal form (see Howells et al. 1996). Numerous other perforated and serrated fragments of

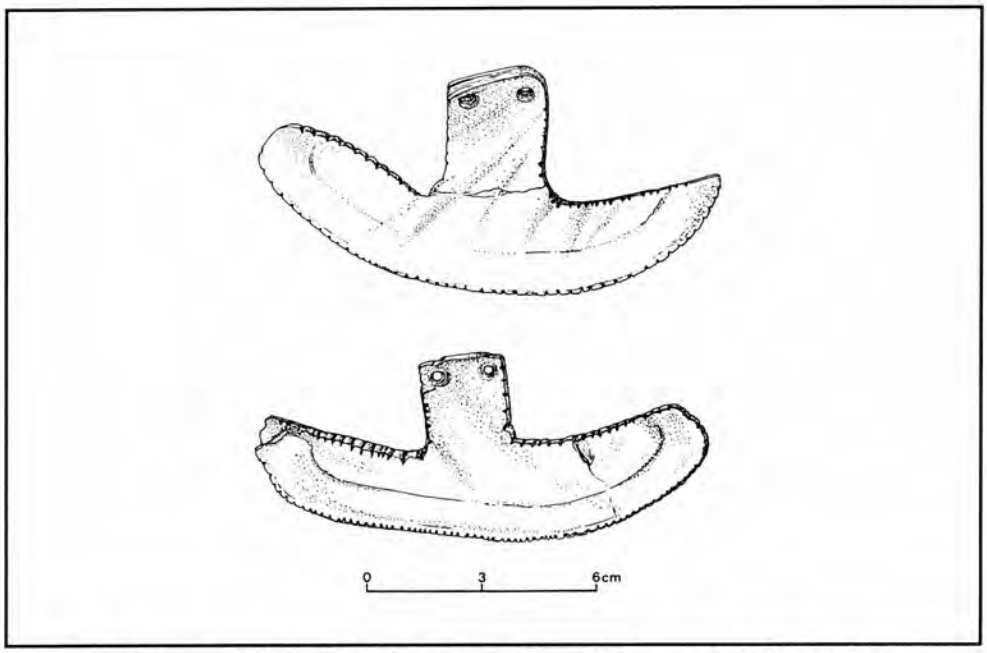

Figure 7. Typical T-shaped perforated and serrated mussel shell pendant.

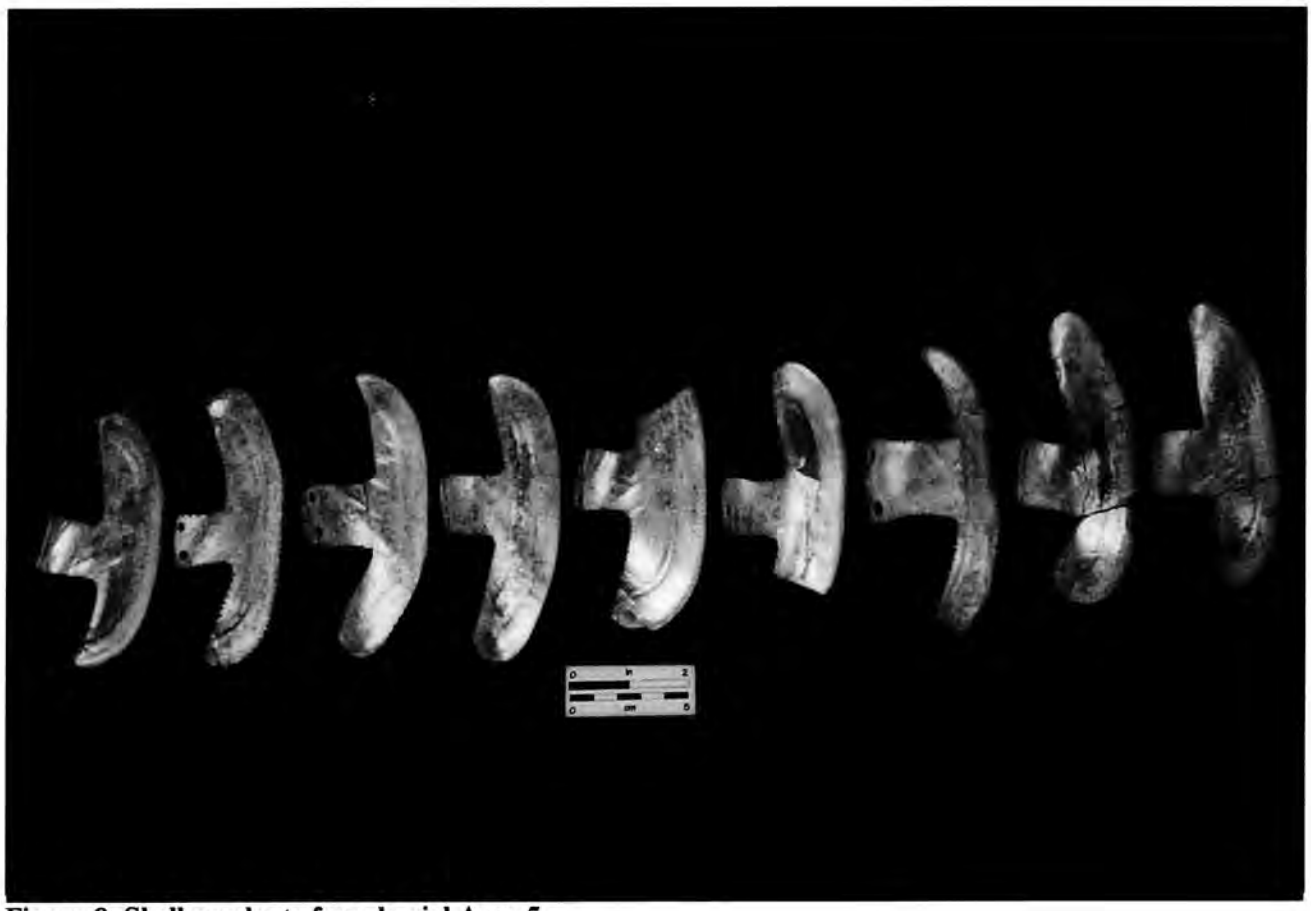

Figure 8. Shell pendants from burial Area 5.

mussel shell have been found on the surface of the site (see Figure 9).

The adult female burial containing the beads from Area 3 had two associated ponderous ark (*Noetia ponderosa*) shells. These both contained nodules of asphaltum. These arks are common in shallow and sandy marine habitats (Abbott 1974: 425).

The only other marine shells found at the site were fragments of the marine bivalve Sunray Venus (*Macrocallista nimbosa*). Various hinge and valve fragments were found east of the female burial in Area 3 that contained numerous grave goods. The Sunray Venus shells are not modified.

Bone

Worked bone included with the grave goods consists of white-tailed deer (*Odocoileus virginianus*) elements and unidentifiable mammal bone. Two deer ulna tools were recovered (Figure 10). Both of these are pointed at the distal end. One has three small notches near the distal end. These artifacts exhibit a small amount of polish on their tips. Presumably, these were awls rather than lithic reduction tools. Also surface-collected from Area 6 was a midsection of a deer radius shaft (Figure 6, left). The artifact is 4.2 cm long with a beveled cut edge at the proximal end and a cut and slightly polished distal end. Residue of red ocher covers the artifact. Another bone artifact is a perforated and polished large mammal shaft fragment (Figure 6, right). Only 3 cm of the element is preserved; therefore, the total length of the object could not be determined. Also found was a small fragment (1.5 x .7 cm) of a calcined mammal long bone shaft with a very fine cross-hatched design. The design was scored with a dark material such as ash or some type of pigment to highlight the design. This was found in the main burial pit in Area 5, most likely associated with the adult female.

Resin

Very small nodules of an unidentified resin were found with several of the burials. Resin was also found inside the mouth cavity of the female in Area 3. Robert Ricklis (personal communication) also reports recovering fragments of resin from within the mouth cavity of a skull that was eroding from the midden in 1984. It is believed that the resin is a natural organic material. It is not known from what geographic area the resin originated. Shortly after the nodules were recovered in a burial context and preliminary lab analysis was being conducted, the senior author and Herman Smith, the PI for the excavations in 1989, burned a small nodule in the lab, producing white smoke and a very pungent odor.

Asphaltum

Flattened basket-impressed portions of asphaltum (see Figure 4) were found in loose association with scattered disarticulated bone within one of the excavation pits in Area 3. These two fragments broke apart after being excavated. Between the two surfaces were impressions of both large fibers and several strands of a finely woven cordage that had disintegrated. We were unable to determine from the impressions the material from which the basketry was made.

Nodules of asphaltum were also within the two ponderous ark shells described above that were in association with one of the female burials from Area 3, and a band of asphaltum was around one of the smooth pebbles from Area 5.

Beads - Material Unidentified

Beads (Figure 11) were first discovered around the male individual in Area 5 who was found with the T-shaped shell pendants. The beads above the body were in very poor condition while the ones beneath the body were well preserved. As many as 10,000 beads may have been associated with this one individual. As shown in Figure 12, linear patterns, and perhaps also cross-hatching patterns, were observed in the soil around this individual's neck and upper body. The same was observed with all other individuals containing beads, with the exception of the small child from Area 5 who had the beads completely surrounding its body in a tightly woven pattern.

These are very small roundish beads with ground end surfaces (see Figure 11). They apparently are calcium carbonate, reacting to a mild HCL acid solution. Under magnification they have a patterned dimpled surface and an irregular longitudinal "seam." We have been unable to identify the material from which the beads were made. However, we have eliminated several types of material as bead source candidates.

It was initially thought at the time of excavation that the beads were hackberry (*Celtis* sp.) seeds. Hackberry seeds are calcium carbonate and can survive in archaeological contexts without being

Figure 9. Perforated and serrated mussel shell pendants.

Figure 10, Deer ulna perforators from Burial Area 5.

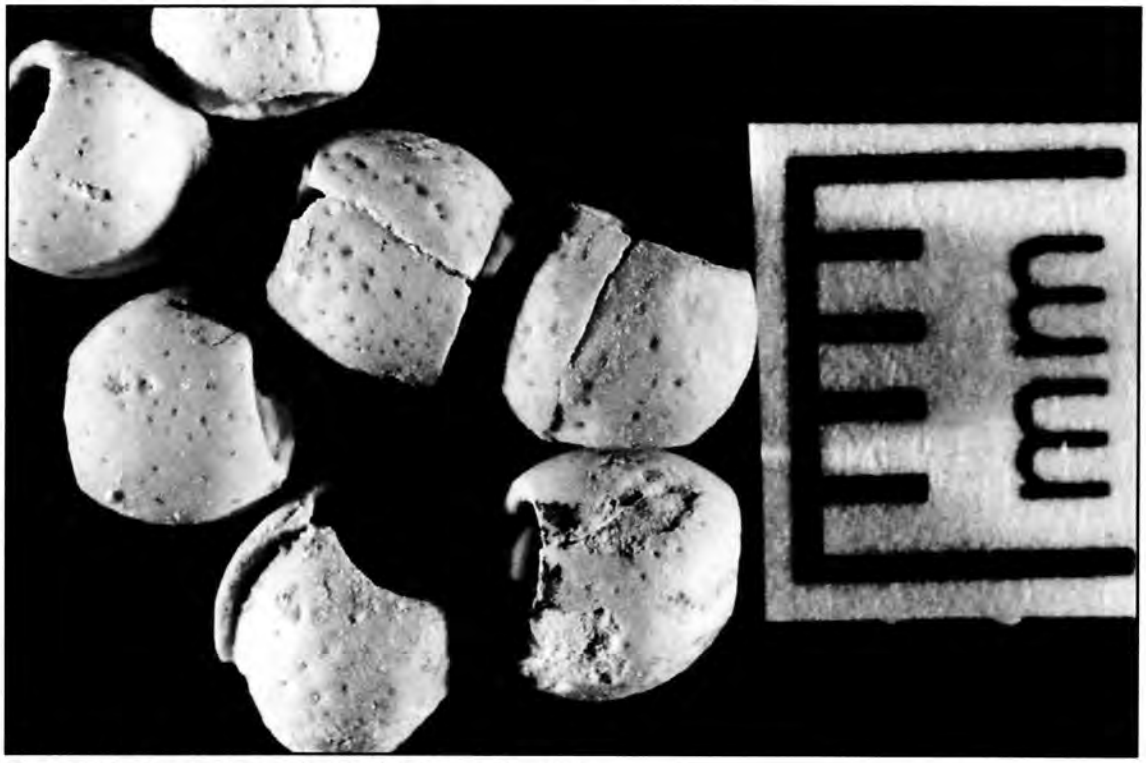

Figure 11. Beads found in Burial Areas 3 and 5.

Figure 12. Beads *in situ* beneath male individual in Area 5.

carbonized (Donna Ruhl, personal communication). However, when the beads were examined by Ruhl, archaeobotanist at the Florida Museum of Natural History (FLMNH), and Steve Manchester, Collections Manager of Paleobotany at the FLMNH, it was determined that they were not seeds. They lack a hilum and other identifiable characteristics of seeds.

Another plant native to South Texas, Puccoon (*Lithospermum* sp.), produces hard, bony nutlets. Lithosperm seed beads were reported as burial goods at the Geobel site (41AU1), a Late Archaic site with several burials containing exotic grave goods (see Duke and Fleming citation in Hall 1995a:53). Specimens of *Lithospermum* housed in the herbarium collection at the Corpus Christi Museum of Science and History were examined by the junior author. It was determined the specimens from the Oso Dune site are not Lithosperm nutlets.

Another possibility is that the beads are molluscan since they are calcium carbonate. However, two malacologists, Jane Deisler-Seno, Curator of Natural History at the Corpus Christi Museum of Science and History, and Kurt Auffenburg, Malacology Collections Manager at the FLMNH, agreed that the specimens are not molluscan.

The objects represent a material that apparently has not been previously identified on South Texas archaeological sites. We are open to suggestions from other researchers if they recognize these objects or have seen similar type beads.

Interestingly, these beads have only been found in the 1989 excavation, although they were documented in association with five individuals, and the total number of beads numbered into the thousands. The observation that no beads have been identified from surface examinations of the site probably relates to their small size and fragility rather than to their abundance.

DISCUSSION

A radiocarbon date of 2720 ± 70 was obtained on human bone from the adult male in Area 5; however, it was unadjusted for ^{13}C ratio. When the 130-year average of the adjustments on human bone radiocarbon dates from 41GV66 (Ricklis 1994), another Texas coast burial site, is added to this date and dendrochronologically calibrated (after Stuiver and Reimer 1993), the date falls within the one sigma range of 3066-2860 B.P. (2948 B.P.). This dates to the onset of the Late Archaic intensive use of estuarine resources along the central Texas coast (Ricklis 1995). Although only one radiocarbon date is available, the temporal placement of the site is generally consistent with the material remains.

The significance of the cemetery lies in the abundance and variety of burial goods found at a site dating to such an early age. At least seven burial traits, some of which appear to be unique, are apparently related to the early Late Archaic component of this site. These traits include: (1) placing small smooth dark stones (or items incorporating the stones) in or near the mouths and in the hands of individuals; (2) placing resin in the mouths of individuals; (3) placing serrated T-shaped freshwater mussel pendants with the burials; (4) placing thousands of beads of an unknown variety with the burials; (5) placing tabular sandstone blocks under the heads of individuals; (6) clearly outlining burials with tabular sandstone blocks; and (7) placing shells filled with asphaltum in the burials.

Other organic traces of burial goods include the large stain under the arm of the adult female from Area 5, the basket impressions including small fibers imprinted in the two asphalt nodules from Area 3, and whatever was held in place by the asphalt band around one of the small smooth stones from the excavation in Area 5.

In addition to the burial treatment and unique artifacts from 41NU37, the mortuary complex provides insights into Late Archaic cultural developments along the Texas coastal plain. In this section we address the relationship between mortuary behavior and territoriality and conflict during the Texas Late Archaic. We also consider the possible origins of the unique features that characterize 41NU37 and other cemeteries.

Grant Hall, in his discussion of the Loma Sandia burial site, attributes the Late Archaic custom of using large cemeteries, and furnishing the burials with durable grave goods, as evidence of a group's control of large food resources (Hall 1995b:634). Story (1985) suggests that the areas in association with cemeteries had to contain "highly aggregated resources" because people were becoming increasingly confined by territorial limits (also see Brown 1985). If increased territoriality was a factor, the two large burial sites on the Callo del Oso dating from the

beginning of the Late Archaic (41NU2 and 41NU37) may be additional evidence of an increasing exploitable estuarine biomass that supported not only the repopulation of the coast but also denser human populations. Recent settlement pattern studies further support this conclusion (Cox 1996).

The evidence of conflict during the Late Archaic may also be a result of tensions brought on by increasing population pressures and competition for resources. Hall (1981, 1995) and Story (1985) found evidence of exotic weaponry at the Ernest Witte site that they argue represents aggression by non-local individuals. The evidence of hostility at 41NU37 is indicated by the presumably lethal injuries suffered by the principal male burial in Area 5. Other possible indications of conflict present at the site are: 1) the individuals in Area 5 all apparently died at approximately the same time and 2) one female individual from Area 3 had a dart point in the vicinity of her thoracic cavity although no damage to bone was evident. Although the Zephyr point (Figure 3a) associated with the death of the main male in Area 5 is from the early Late Archaic time period on the coast (Cox 1996), it is a point type that has not been previously identified from the coastal plain. Although it is difficult to make generalizations from one lithic artifact, this point may represent an object associated with a population outside of the coastal plain. If the deaths of these individuals were the result of conflict, it may have been from conflict with culturally distinct bands outside the coastal plain rather than internal aggression.

According to both Hall (1995b:646) and Story (1985:55) the importance of increasing human population densities on the Texas coast during the early part of the Late Archaic may be related to the existence of the so-called "Gilmore Corridor" (see Krieger 1948). This corridor is the hypothesized route of ideological interchange between Mesoamerica and the southeastern United States. If the route existed, it had to traverse areas with population densities great enough to facilitate the exchange of information. The problem with the proposed existence of the corridor has always been the lack of evidence along the hypothesized route. However, according to Hall (1995b:646-647), the evidence of some type of interregional ideological exchange is found in the similar grave furnishings from this time period "that traverse virtually the entirety of the Texas Coastal Plain."

Many of the items found with the burials at 41NU37 are also common to other Late Archaic burials along the Texas Coastal Plain. Similar bone implements have been reported from Ernest Witte (Hall 1981) and Loma Sandia (Taylor and Highley 1995). Sandstone blocks also have their counterpart at Ernest Witte and Loma Sandia, as well as the Morhiss site (41VT1), the Patterson site (41DM28), the Speys site (41DM1), and various other sites in Dimmit and Val Verde Counties (Taylor 1995).

At the inland Goebel site (41AU1) in Austin County, west of Houston, as many as 36 burials were excavated in the late 1950s along Mill Creek, a tributary to the Brazos River (see various Duke, Fleming, and Fleming and Fleming citations in Hall 1995a:52-53). This site produced a two-hole marine shell gorget, lithosperm seed beads, bone artifacts decorated with incised geometric designs, red ocher and blocks of sandstone generally around the skulls of every individual (ibid.). Also, the various late Middle Archaic and early Late Archaic dart points (Pedernales, Kent, Castroville, Marshall, Lange, Palmillas and Bulverde) found at the Goebel site (ibid.) place it roughly contemporaneously with the burials at 41NU37.

Some of the objects of adornment accompanying the individuals in the Oso Dune Site may also have counterparts. Valves of a freshwater mussel were cut into T-shaped pendants and serrated around their edges. Fragments of these had been surface-collected in 1981 and 1984, were found in the 1989 excavation, and are today widely scattered in Areas 3 and 6. Although only found in association with one individual in the 1989 excavation, this artifact type seems to be ubiquitous across the site and supports the contention that most of the burials are contemporaneous. Freshwater mussel shells have been reported from other burials from the Gulf Coast of Texas (e.g., Hall 1981; Martin 1991; Smith 1994). In addition, an incised mussel shell from northern Tamaulipas, Mexico reported by Boyd and Wilson (1996: Figure 3) is very similar to those from 41NU37.

The possible connections to unidentified cultural influences from some region of Mexico are found in the items (e.g., stones and resin) that were placed in or near the mouths of some individuals. This is not a custom that has been previously reported in Texas. Simplistic diffusion models for the origin of this trait

fail to elucidate how or why this trait was adopted; however, one first step in demonstrating connections with other geographic and cultural areas is by identifying the occurrence of a trait in different geographic areas. Although there is a significant geographic hiatus, the burial custom of placing stones and resin in the mouths of interred individuals occurs in the Valley of Oaxaca, Mexico (Flannery et al. 1981). This burial custom dates back to at least early San José Mogote (3100-2750 B.P.) and it apparently was practiced into the historic period (Diego de Landa 1975). Obviously, we are not proposing that there was either a direct influence or a diffusion of ideas from Oaxaca. However, considering that the only other evidence of placing stones in the mouths of individuals for this time period comes from Mexico, there is at least a tentative inference that 41NU37 approaches the northern boundary of some as of yet ill-defined Late Archaic cultural influence from that direction. Additional excavation of cemeteries from South Texas and Tamaulipas may provide evidence of cultural connections with geographic regions further south.

Many other items from 41NU37 are either rare or unique, such as the small smooth beads found with five of the burials in 1989. Despite thousands being found in association with several individuals, no one has yet reported seeing them eroding from the surface at 41NU37, and no one has ever reported them from another burial site in this state. Adding to their intrigue, the material from which they are made is yet to be determined. Considering the total number of the beads and the fact that each one had to be abraded by hand and then meticulously woven into a pattern, there is no doubt they represent an enormous investment of time and effort.

Another unique item, the single asphaltum basket impression (Figure 4) from Area 3 of the 1989 excavation, reveals twine comprised of very small fibers. Other asphalt impressions from 41AS3 (Campbell 1952) and 41SP120 (Ricklis 1993) show weaving imprints of much larger material, perhaps grass or agave. And the contemporaneous basket imprints on burned clay nodules from 41NU46, on the east side of Oso Creek from 41NU37, are also much larger (Smith n.d.). Since it is a singular item that has only been found in one location and is not clearly associated with a burial, it is quite possible that its discovery was purely fortuitous.

Another characteristic that makes the burials at 41NU37 intriguing is that examples of unique items have not appeared in sites in close proximity. 41NU2, the extensive burial site on the opposite side of the Callo del Oso near its outlet to Corpus Christi Bay (see Hester 1980), is approximately 12 km from the Oso Dune site. A recent excavation at 41NU2 produced an adjusted radiocarbon date on wood charcoal associated with a human burial of 2786 B.P. (one sigma range of 2856-2762 B.P.) (Ricklis 1997). If this date reflects the general time period of the 41NU2 cemetery, the human burials at 41NU2 are approximately contemporaneous with the Late Archaic burials at 41NU37. However, none of the unique artifacts at 41NU37 were reported from the 36 burials unearthed in the 1933 University of Texas excavations at 41NU2 (see Jackson n.d.), nor have similar artifacts been found in any subsequent surface collections. These dissimilarities suggest that while the two cemeteries may be temporally similar, they may represent two distinct cultural groups. Alternatively, the population interred at 41NU37 may be members of the same cultural group as elsewhere on the central Texas coast, but for reasons unclear at this time their mortuary treatment was more lavish. Future research should be directed at elucidating why differentiation in mortuary patterns existed during this time period on the Texas coast.

In addition, 41NU37 was probably used as a burial site by the Late Archaic people occupying the north and east side of the Oso. Radiocarbon dates from the Late Archaic occupation at 41NU46, a site on the north side of the Oso, have one sigma ranges of 2985-2845 B.P. (Tx-5300), 3204-2875 B.P. (Tx-5302) and 3337-2469 B.P. (Tx-5301) (see Ricklis 1993). All of these dates intersect the adjusted date from 41NU37, making it probable that the large cemetery is related to that occupation site. However, none of the unique items found at 41NU37 were found in the 1986 excavation of 41NU46.

An interesting observation that Ricklis (1997) makes concerning 41NU2 is that even though there are occupations along the Oso cemeteries dating to the early Late Archaic (3100-2700 B.P.), as indicated by the large cemeteries, there are no nearby large occupation sites that correspond to this time period. When compared to major contemporaneous sites such as 41CL3 (Mustang Lake on San Antonio Bay), 41SP120 (Ingleside Cove on the north shore of

Corpus Christi Bay), 41AS3 (Kent-Crane on Copano Bay) or the White's Point archaeological area on upper Nueces Bay, occupation sites along the Oso represent minimal numbers of people. However, these large occupation sites do not have any obvious large burial sites associated with them. The appearance of numerous disarticulated and partial skeletons in addition to primary burials at 41NU2 and 41NU37 (see Jackson n.d.; Smith n.d.), raises the possibility that the Oso was being used as a burial ground by people living elsewhere along the coast or bays.

CONCLUSION

This article discusses the artifact collection generated primarily from the 1989 excavations at the Oso Dune site, 41NU37. We realize that our interpretations are limited by imperfect field recollections, an inability to reexamine the human skeletal remains, and only one radiocarbon date. Despite these shortcomings, our interpretation of the assemblage expands our knowledge of south coastal mortuary practices.

The Oso Dune site is integral to the development of a cultural/chronological framework for the Texas coastal plain and South Texas. The cultural influences that manifested themselves at that site and where they originated are very difficult to determine with the available evidence. However, its affiliations may elucidate cultural connections between northern Mexico and Texas. Any cultural connections to areas further east remain speculation. However, it is interesting that 41NU37 is positioned in an area across which cultural influences would have to have moved between northern Mexico and the southeastern United States, if in fact that widely speculated phenomenon actually occurred. The Oso Dune Site may hold far greater importance than simply the local uniqueness of its burials.

Although its spatial importance may await the future excavations of related sites, 41NU37 provides unique insights into the social and ritual organization of Late Archaic society. If, as suggested by Binford (1971), mortuary rituals reveal much of a culture's community status and social interaction, then 41NU37 holds insights that no other cemetery in the immediate area has yet provided. It is to the great credit of the Archaeological Conservancy that this site is now receiving the care and protection that it so desperately needs.

ACKNOWLEDGMENTS

The authors wish to thank several individuals and organizations that contributed to the completion of this article. We appreciate the efforts of the Corpus Christi Botanical Garden and the Archaeological Conservancy to protect the site. Jim Walker, Regional Director of the Archaeological Conservancy, provided information on the stabilization plans for the site. The Corpus Christi Museum of Science and History supported the analysis of the artifacts. Robert Ricklis and Ed Mokry donated surface collections to the Corpus Christi museum. Herman Smith conducted the excavations in 1989. The artifacts were photographed by Ron Randolph, Corpus Christi Museum of Science and History and Pat Payne, University of Florida. Beth Ellis, Department of Texas Parks and Wildlife produced the lithic artifact illustrations. The following individuals helped identify some of the artifacts or the material from which they were made: Donna Ruhl, Steve Manchester, Jane Deisler-Seno, and Kurt Auffenburg. Robert Ricklis read and commented on a draft version of this article. We assume responsibility for any errors or omissions.

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News Brief

DOES THE FLAVOR LAST....

A small piece of used chewing gum, 6500 years old, was found in a bog at Bokeberg, Sweden. Similar ancient chewing gum has been discovered at sites all over Northern Europe. Analysis of tar from several sites by Elizabeth Aveling at the University of Bradford points to a source: birch-bark. Birch-bark tar was used for many other purposes at the time, including glue and waterproofing. Otzi, the alpine "Ice Man" found in 1991, had his axe stuck together with it.

From the size of the tooth marks, the gum was mostly chewed by children and teenagers. "Although the taste cannot be described as pleasant," Aveling writes of gum made in the lab, "neither is it entirely unpleasant - and who knows what appealed to the mesolithic palate?" It doesn't appear to be narcotic. Did it help remove loose milk teeth or to fight plaque? Was it a pacifier, a disinfectant for sore throats, or was it just chewed to disgust adults? Some ingenuity and effort was needed to make the stuff (in the lab) so how the mesolithic cultures made it is a mystery.

As for the most obvious question - does your chewing gum lose its flavor underground over the millennia? - sadly no one has been allowed to taste the ancient gum to find out.

Nature Magazine
(Taken from *The Profile*, Houston Archeological Society Newsletter, March, 1997)

A CLOVIS POINT FROM HARRIS COUNTY, SOUTHEAST TEXAS

C. K. Chandler and Dwain Rogers

ABSTRACT

A single complete Clovis fluted point is documented and illustrated. It is from a sandpit near Lake Houston in Harris County, southeast Texas.

ARTIFACT DESCRIPTION

This fluted Clovis point is made of very good quality light brown Edwards chert that grades to a dark tan in the proximal area. It has been heat treated and has a glossy finish and waxy feel that appears to be common with chert artifacts that are recovered from deep sand pits.

The specimen is 87.4 mm in length, 25 mm maximum width at 50 mm above the base and 8.2 mm maximum thickness at 37 mm above the base. The base is 20.3 mm wide with a basal concavity of 1.5 mm. It weighs 23.4 grams. Lateral edges are ground 35 and 41 mm and the base is ground. Lateral edge grinding is unusually heavy.

Both faces are fluted. The obverse flute is 28 mm long and 11 mm wide. It is made up of a long narrow flute scar with a second flute scar overlapping the first one 17 mm then splintering off to the right nearly full length of the first flute scar. Two short vertical thinning flakes were then added to further reduce the basal thickness. The reverse flute is 32 mm long by 12 mm wide with two short vertical thinning flakes 14 mm long and 13 mm wide further reducing the basal thickness. There are two broad lateral thinning flakes above the flute scars on this face. Flaking on the reverse face is short, parallel with lengths varying from 5 to 7 mm. Flaking on the obverse is near parallel with most flakes expanding at the medial ridge.

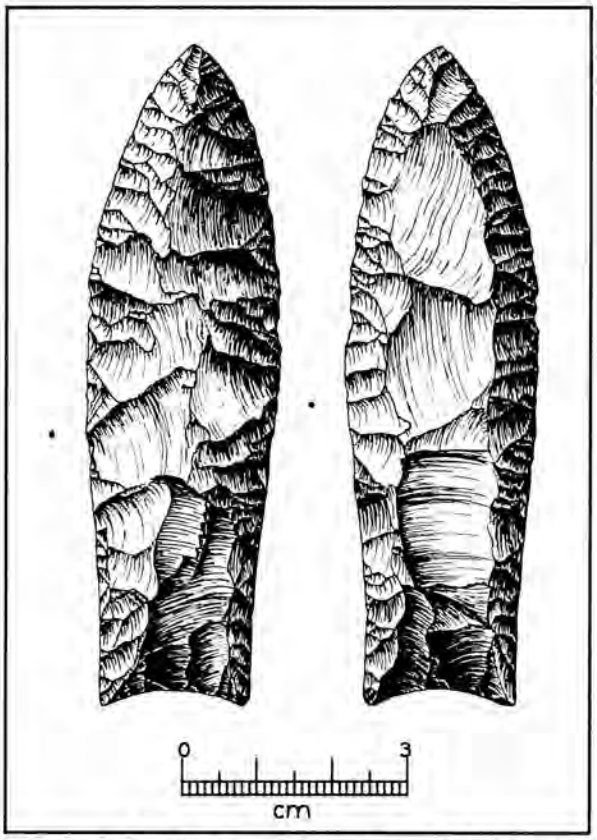

Figure 1. A, A'. A complete Fluted Clovis point from Harris County in Southeast Texas.

DISCUSSION

Results of the first Texas Clovis Fluted Point Survey (Meltzer 1987) produced data on 205 Clovis points from 95 of the 254 counties in Texas. Only two were reported from Harris County. A more recent report (Meltzer and Bever 1995) added 201 Clovis for a statewide total of 406. That is a near 100 percent increase. Four of these were reported as additions for Harris County bringing the total for

Harris County to six. Additional Clovis were reported for adjoining counties (Chandler and Rogers 1995).

The one Clovis point reported here is from a deep sand pit near Lake Houston in Harris County. It has been reported to Meltzer for his Clovis fluted point survey but not in time to be included in his 1995 report. Three other complete Clovis from deep sand pit excavations have recently become known and are awaiting publication (this issue of *La Tierra*). One is from Bexar County and two from Wilson County.

ACKNOWLEDGMENT

This Clovis point is illustrated by Richard McReynolds and we extend to him our sincere appreciation.

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News Brief

MORE NINEVEH FRAGMENTS FOR SALE

Nine more fragments from reliefs at the Sennacherib Palace Site Museum at Nineveh in northern Iraq have surfaced on the antiquities market, further evidence that many panels recounting the Assyrian king Sennacherib's 701 B.C. siege of Jerusalem have been vandalized. Columbia University art historian John Malcolm Russell says he was first shown photographs of three fragments from the palace late in 1995 by a European museum seeking to check the provenance of the reliefs in advance of purchase. Russell, who photographed many of the slabs in situ between 1989 and 1990, was again contacted this past fall, this time by a lawyer representing a prospective purchaser of ten Assyrian reliefs. Russell identified nine of the ten as a fragment from the palace of Sargon II at Khorsabad, which was being stored at Nineveh in 1990. Working with photographs supplied by the lawyer, Russell noticed that many of the fragments had been squared off to give the impression that they were complete compositions. A full account with photographs and a site plan is available on *Archaeology*'s web site at http://www.archaeology.org/online/. S.P.M.H.

Archaeology Magazine
[March/April, 1997]

A WACO SINKER FROM KERR COUNTY, TEXAS

Bryant Saner, Jr.

ABSTRACT

Waco Sinkers are infrequently reported outside of the Central Texas area. They have never been documented in the literature as being found in Kerr County to this author's knowledge. This report is to document and discuss the find of a Waco Sinker in Kerr County, Texas.

INTRODUCTION

The Waco Sinker is an unusual small to medium-sized stone most often made of quartz, quartzite or sandstone (Davis 1995). Its main characteristic is a worked notch in both ends of the artifact. Infrequently these artifacts have a groove around the longitudinal circumference. They are found in various shapes and levels of workmanship. Their distribution is concentrated in Central Texas, especially around the Waco area. They are, on occasions, reported from other areas of the state (Turner and Hester 1993).

This type of artifact is first described in a 1935 article published by H. G. Moore in the *Bulletin of the Central Texas Archeological Society* (Moore 1935). The first effort to consolidate and name this group of grooved stone artifacts recovered mainly in the Central Texas area was done in a report by Frank H. Watt in 1938, also in the *Central Texas Archeologist.* In this report he types them according to their general shape, assigning them a number from one to twelve. Four methods are used to manufacture the artifacts and he assigns a letter to each of these methods. These are: a) unworked, except for the notches; b) flaked or chipped; c) ground or pecked; and d), one face worked and one face unworked. Geographic distribution, comparisons to other regions of the United States, age, materials and use of the artifact are discussed in the report (Watt 1938).

Waco Sinkers are occasionally reported from outside the Central Texas area. In 1974 two surface finds were reported from South Texas, one made of local sandstone was found in Frio County, and the other was recovered in southwestern Dimmit County (Hester and Funnell 1974). In 1978 several more were reported. One from the Johnston-Heller site (41VT15) is described as being made from a yellowish, ochre-like stone. A specimen from southwestern Victoria County is said to be manufactured from purple quartzite. This report also mentions a Waco Sinker manufactured from a gray, porous igneous stone recovered in Willacy County in 1938. Also a description is given of the Dimmit County artifact mentioned by Hester and Funnell (1974) as being made of a highly polished unidentified gray-black, grainy stone (Hester, Schmiedlin and Birmingham 1978). A Waco Sinker is also reported from Atascosa County made of a hard sandstone concretion of iron oxide (McReynolds 1981). A specimen from western McMullen County is mentioned in a report of sandstone artifacts from the Brom Cooper collection. It is described as a grey cobble with pinkish hues in some spots that has a groove encircling three sides, while the fourth side is broken off. The missing portion of the cobble may have a continuation of the groove (Jones 1981).

THE ARTIFACT

The artifact described in this report was recovered in western Kerr County, Texas. Viewed from the top it has an elongated ovoid shape, while the side shows a slightly convex top and bottom with rounded ends. The end view reveals an ovoid shape with a groove in the mid-portion creating upper and lower hemispheres. There is a shallow, concave groove around the circumference of the longitudinal axis. The groove, along with a portion of the upper hemisphere, is pecked. The artifact is manufactured from a yellow-gold hard sandstone. The maximum length is 45 mm, maximum width is 41 mm, while the maximum thickness is 31 mm. The groove has a maximum width of 11 mm and a maximum depth of 2 mm. It weighs 71 grams and displaces 41 cc of water.

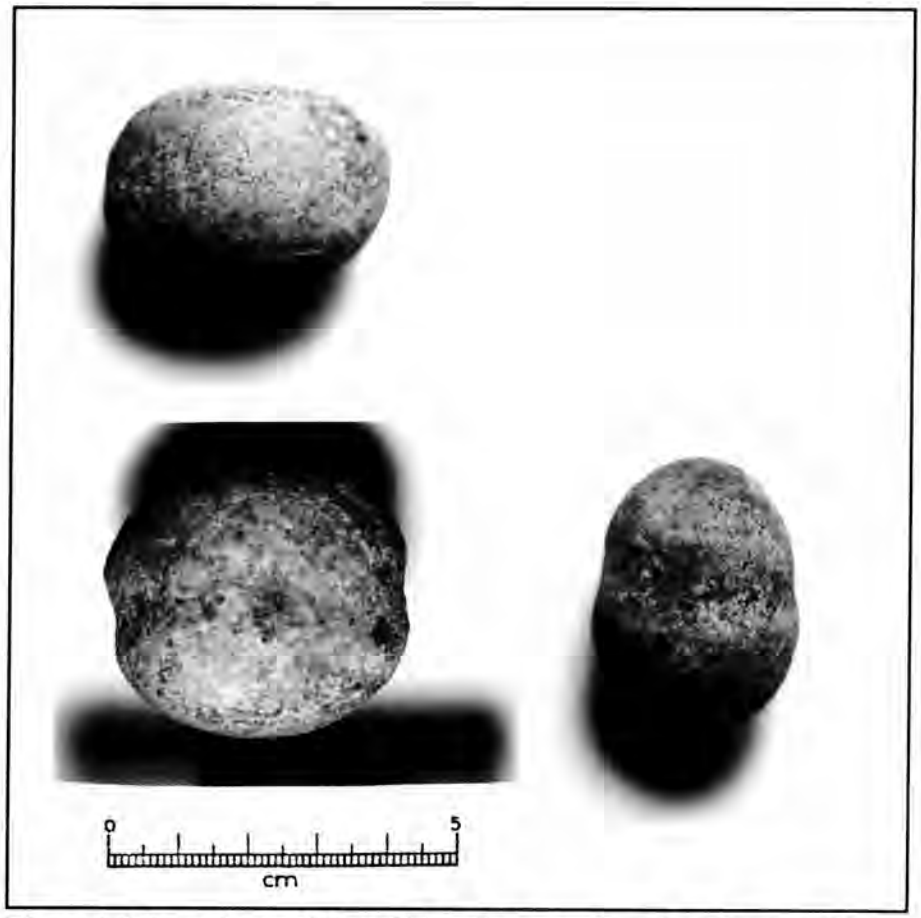

Figure 1. Three views of Waco Sinker from western Kerr County, Texas. Top, top view; left, side view, right, end view.

DISCUSSION

This artifact is a type 11d according to the Watt classification system. The characteristics of this class are: it is grooved around the entire longitudinal axis and is partially pecked on one of the faces. However, it is unusual for the partially worked face to be pecked; they are commonly flaked. The specimen is manufactured from hard sandstone, which is one of the two common materials used to manufacture them. The other material commonly used is hematite. The type 11 artifact is found throughout Texas and is more commonly reported from the outlying areas than from Central Texas. This classification system does not consider the type 11 to be a true Waco Sinker due to the fact that the notches on the end are not very prominent and none of the other types have a groove around their entire circumference. This type of Waco Sinker is best suited to be used as a bola. A bola consists of a length of some kind of cordage with a stone secured to each end. It is swung over the head of the user and thrown at animals or people in an attempt to entangle the legs, thereby preventing escape. Other uses suggested for these are as sinkers for fishing line or nets and weights for other kinds of tools (Watt 1938).

The age of this Waco Sinker is not known. Diagnostic artifacts found at the same site where this artifact was recovered are from the Early, Middle and Late Archaic time periods. Turner and Hester (1993) and Davis (1995) report this same time period for Waco Sinkers described in their respective publications. In Watts'(1938) report he illustrates "older points" found in "sinker camps" or sites where Waco Sinkers were recovered. All of these appear to be dart points from all stages of the Archaic time period.

It is very important to continue to document Waco Sinkers recovered throughout Texas. They are unique and not often reported in the literature. More documentation will help remove some of the mystery and provide a better understanding of this unusual stone artifact.

ACKNOWLEDGMENTS

Thank you to Florence Bergan for the loan of this artifact. Also thanks to C. K. Chandler for his assistance and suggestions concerning this report.

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SCOTTSBLUFF POINTS FROM SOUTH TEXAS AND NORTHEASTERN MEXICO

James Bryan Boyd

ABSTRACT

Three previously unreported Scottsbluff points, two from Zapata County in South Texas and one from the state of Tamaulipas in northeastern Mexico, are documented in this report. All three specimens were collected from sites adjacent to Falcon Reservoir, where the Scottsbluff type has not been previously reported.

INTRODUCTION

The three Scottsbluff points being discussed were recovered by three different individuals in the conservation pool area of Falcon Reservoir over a period of several years. The specimens were all surface finds, and were salvaged in occupation sites adjacent to tributary arroyos which intersect the Rio Grande in the area of the reservoir (see Figure 1). The reservoir was formed following the completion of Falcon Dam in December 1952. The sites where the specimens were found are normally submerged in the reservoir, but became exposed when the level of the lake drops as a result of water being released through the dam for downstream use.

Two of the Scottsbluff points were found in sites along the shoreline in Zapata County, Texas. Both specimens were collected in occupation sites which lie on the northern edge of tributary arroyos, and both are fragmentary (see Figure 2B, and 2C).

The third specimen was found at a shoreline site on the Mexican side of the reservoir, and is a complete specimen (see Figure 2A). This site has yielded a significant number of projectile points from the Early Archaic as well as the Paleo period (Boyd n.d.; Cynthia Scott, personal communication 1995).

All three Scottsbluff points were recovered during times when the level of Falcon Reservoir was down by a substantial margin, in eroded occupation sites which had been washed considerably by wave action. Occupation sites within the reservoir zone tend to be severely deflated by this wave action, and artifacts spanning a great period of time are frequently found lying next to one another on a common surface.

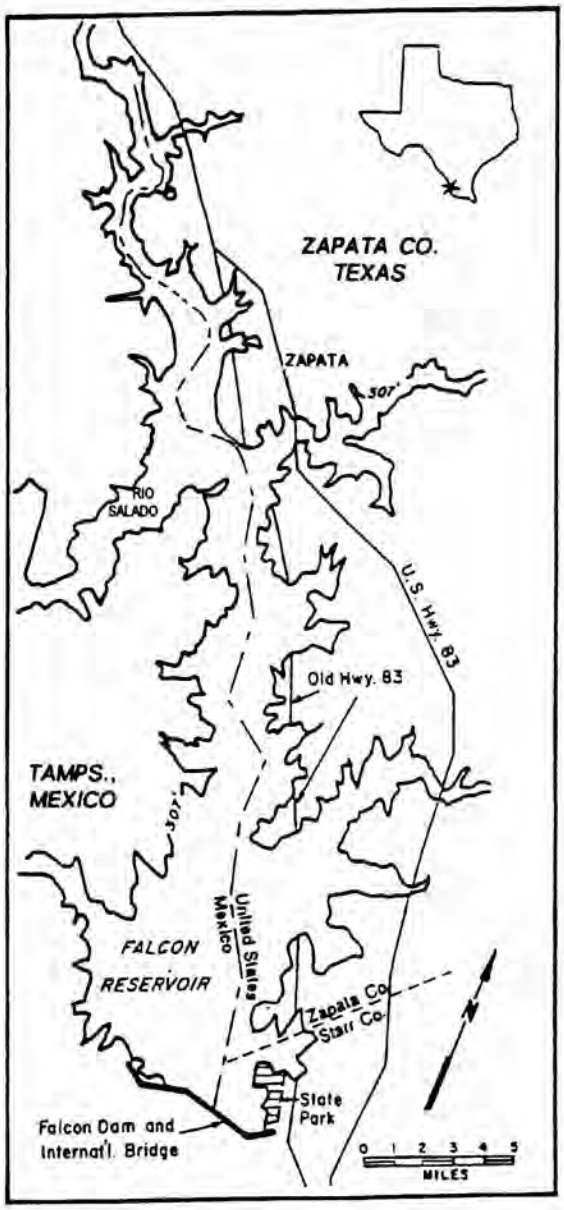

Figure 1. Map of Falcon Reservoir area where the Scottsbluff points were recovered. Inset shows location of area in the state.

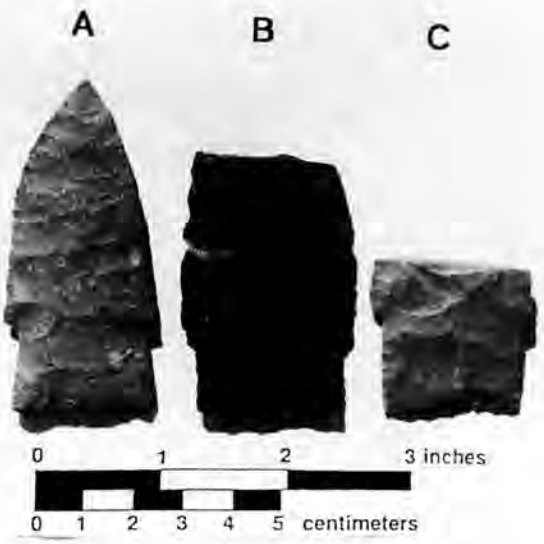

Figure 2. Scottsbluff specimens. Specimen A is from Tamaulipas, Mexico. Specimens B and C are from Zapata County, Texas. Photograph by the author.

Scottsbluff points have been infrequently reported in South Texas. Three Scottsbluff points were reported from the La Perdida site in Starr County (Weir 1956:72 [Plate 10, N-P]). These specimens were found along with an appreciable number of other Paleo period projectile points including Angostura, Clovis, Meserve, and Plainview (ibid.: 59). Some of the projectile points described and illustrated by Weir as Plainview actually more closely resemble Golondrina points, a type which was later established. Another Scottsbluff point was recovered in a deep gully at the Sheldon site in Hidalgo County in 1976 (Shiner 1983: 311). The point was found during a survey of the site which was conducted by Pan American University of Edinburg, Texas. Thirteen Scottsbluff points have been reported from Atascosa, Frio, and McMullen Counties in South Texas (Chandler and Hindes 1993), but few, if any, other specimens have been reported in the extreme southern portion of the state.

THE ARTIFACTS

Figure 2A. This is a complete specimen made from a light brown chert with an orange tint. The distal portion is markedly reddish in color. This gives the point the appearance of having been heat treated, but in fact this difference in color is the natural color of the chert (Dr. Michael Collins, TARL, personal communication 1995). The specimen exhibits parallel flaking, with finer retouched edges. It measures 67.95 mm in length, and is widest at the shoulders where it measures 30.20 mm in width. The base expands slightly, and at the proximal end it is 28.58 mm wide. The stem edges have been lightly ground, but no grinding is evident on the basal edge. The specimen is remarkably thin, measuring only 6.16 mm thick near the central portion of the blade. The overall shape of the blade is notable for the fact that one lateral edge is markedly convex, while the opposite edge is comparatively straight. The source of the material used is the Rio Grande gravels (Dr. Michael Collins, TARL, personal communication 1995).

The specimen was found in February 1990 by a known avocational archaeologist in a very large, eroded occupation site located near the confluence of the Rio Grande and the Rio Salado. The site is in Tamaulipas, Mexico, just west-southwest of Zapata, Texas. The specimen was recovered on a gravel bench located just outside the main habitation portion of the site (notes on file with the author).

Figure 2B. This proximal fragment has only a very small portion of the blade remaining. It is made from a tan colored chert. Parallel flaking is evident on the remaining portion of the blade, and the edges are finely retouched. The surviving portion of the specimen measures 32.06 mm in length and it is widest at the shoulders where it measures 33.77 mm wide. The stem edges as well as the base have been lightly ground. Thickness is 6.19 mm. The stem edges are parallel and it appears that the blade edges would have also been parallel. The base exhibits a slight concavity of 1.5 mm. The specimen is made of Edwards Plateau chert (Dr. Michael Collins, TARL, personal communication 1995).

The point was found in July 1990 by Cynthia Scott, of Zapata, Texas, in an intermediate-sized, eroded occupation site located at the northern edge of a small tributary arroyo in Zapata County (personal communication 1990). This site is a few kilometers west-southwest of Zapata, Texas. The site was originally recorded in June 1950 by Jack T. Hughes, under the auspices of the Smithsonian Institution River Basin Survey (site form for 41ZP8 on file at TARL).

Figure 2C. This is a proximal fragment of a Scottsbluff with approximately two-thirds of the blade remaining intact. It is made from a very dark

gray or black glossy chert with some brown banding. Excellent parallel flaking is evident, and the edges have been retouched. The surviving portion measures 53.88 mm in length and is widest just above the shoulders where it measures 35.08 mm in width. The stem edges as well as the base have been moderately ground. Thickness is 7.18 mm near the center of the blade. The stem edges are parallel, as are the lateral edges of the blade. The basal edge is also straight. The chert used was derived from the Rio Grande gravels (Dr. Michael Collins, TARL, personal communication 1995).

The specimen was found sometime in 1983 or 1984 by the late George Doffing, formerly of Alamo, Texas, in a large and eroded occupation site located along the northern edge of the Arroyo León in Zapata County, approximately 10 kilometers south of Zapata, Texas (George Doffing, personal communication 1987). This site is presently unrecorded with the Records Division at the Texas Archeological Research Laboratory (TARL), The University of Texas at Austin (Carolyn Spock, personal communication 1995).

SUMMARY

Very few Scottsbluff points have been previously reported from South Texas. The two specimens from Zapata County documented in this report are the first to be reported from there. A review of the literature has failed to reveal any reported Scottsbluff specimens from the state of Tamaulipas, Mexico, where a third specimen documented in this report was found. These three specimens substantially increase the southerly range of the known distribution of Scottsbluff points in South Texas and northeastern Mexico.

ACKNOWLEDGMENTS

The author wishes to thank Dr. Michael B. Collins, (TARL), The University of Texas at Austin, for his invaluable assistance in his examination of the Scottsbluff points described in this report. Without his expertise and careful attention to detail, this report would have been virtually impossible. Thanks are also extended to Dr. Thomas R. Hester, Director of TARL, who also provided valuable assistance in the preparation of this report, as well as reference materials. Also thanks to Cynthia Scott, the late George Doffing, and Mike Krzywonski for making the artifacts available for study. The Falcon Reservoir map was graciously provided by Christopher Lintz and the staff of Mariah Associates, Inc. of Austin.

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ERRATA, *La Tierra*, Vol. 24, No. 2. Table of Contents listed C. K. Chandler and Don Kumpe as authors of the article on "Quartzite Cobbles Altered From Use." Kumpe was also listed in Authors. Chandler and Kumpe are frequent coauthors, but not in this case. Our apologies.

MUSSEL SHELLS WITH SCRAPER: STILL LIFE FROM 41CX198, UNIVERSITY LANDS, CROCKETT COUNTY

Solveig A. Turpin

ABSTRACT

A cache of freshwater mussel shells, found on an open campsite on a tributary to the Pecos River in Crockett County, consists of six relatively large Cyrtonaias tampicoensis right valves. Although they obviously came from six different animals, the shells were paired, standing on end, their hinges eroding from a pocket of silt. The central pair enclosed a large chert unifacial side scraper. Mussel shell caches have been found in burial contexts in the Lower Pecos region and South Texas but none report this particular arrangement or the accompanying scraper.

INTRODUCTION

In May, 1997, University Lands field man Tommy Gray noticed an unusual assortment of mussel shells eroding from a shallow gully in a large open camp site on Cedar Canyon, a tributary to the Pecos River in Crockett County (Figure 1). The main components of 41CX198 are a large burned rock midden fringed by dozens of hearths and an extensive scatter of lithic artifacts and debris. The site was recorded during the survey of the All American pipeline route in 1986 and subsequently subjected to limited testing within the pipeline right-of-way. Although no temporally diagnostic artifacts were found and no radiocarbon dates obtained, the site was nominated to the National Register of Historic Places as a good example of a Late Archaic camp site. However, several steeply beveled end scrapers and an arrow point fragment found near one of the hearths during this site visit assign at least one occupation of 41CX198 to the Late Prehistoric period.

When found, the shells were paired, parallel and aligned perpendicular to the ground surface with the hinges exposed. Two of the pairs were empty, the third and largest set enclosed a large chert uniface side scraper (Figure 2). This specimen is made of locally available lustrous grey chert and measures 81.1 mm long, 45.9 mm wide, and 11 mm thick (Figure 3). Patches of cortex remain on the dorsal surface. The flake was broken, possibly to create a better handhold opposite the working edge, prior to its final shaping into a tool. Numerous step fractures along the working edge testify to use of this tool on resistant materials but it is unlikely that shell was one of them. A Fairland dart point, a late to transitional Archaic type (Turner and Hester 1993), lay on the surface slightly upslope and within 20 cm of the shells but this proximity could be fortuitous.

Although when found they were paired, all six shells are right valves of relatively large specimens of *Cyrtonaias tampicoensis*, commonly called the Tampico pearly mussel (Howells et al. 1996:48-50). This species is native to the Rio Grande drainage system, among others, and has been reported in the Pecos River north and south of Crockett County. Its preferred habitat is mud, mud and sand, mud and gravel, or cobble and rock. Shells have been commercially harvested for their lustrous nacre and pearls and typically range from 110 to 120 mm in adult length (Howells et al. 1996:49).

The Crockett County shells range from 88.3 to 106.6 mm long and 56 to 63.3 mm wide. They are intact except for recent flaking of the exterior surface and two chips in the rim of one of the specimens enveloping the scraper. The margins of the broken edge are still jagged suggesting that these breaks are also relatively recent. One of the shells has a small rectangular drill hole, formed by two overlapping punctures, on the anterior slope of the umbo. It is difficult to determine if this hole was made by natural or cultural processes (Howells 1997).

COMPARATIVE MATERIALS

Concentrations of mussel shell found in archaeological sites are often interpreted as the residue of food processing or stores of raw material for the manufacture of tools and ornaments, the latter often preserved as grave goods. However, the specialized context and the deliberate arrangement of the component shells indicate that some caches served less mundane purposes as well. With the exception of Skyline Shelter (see below), all of the following examples are relatively far from permanent water

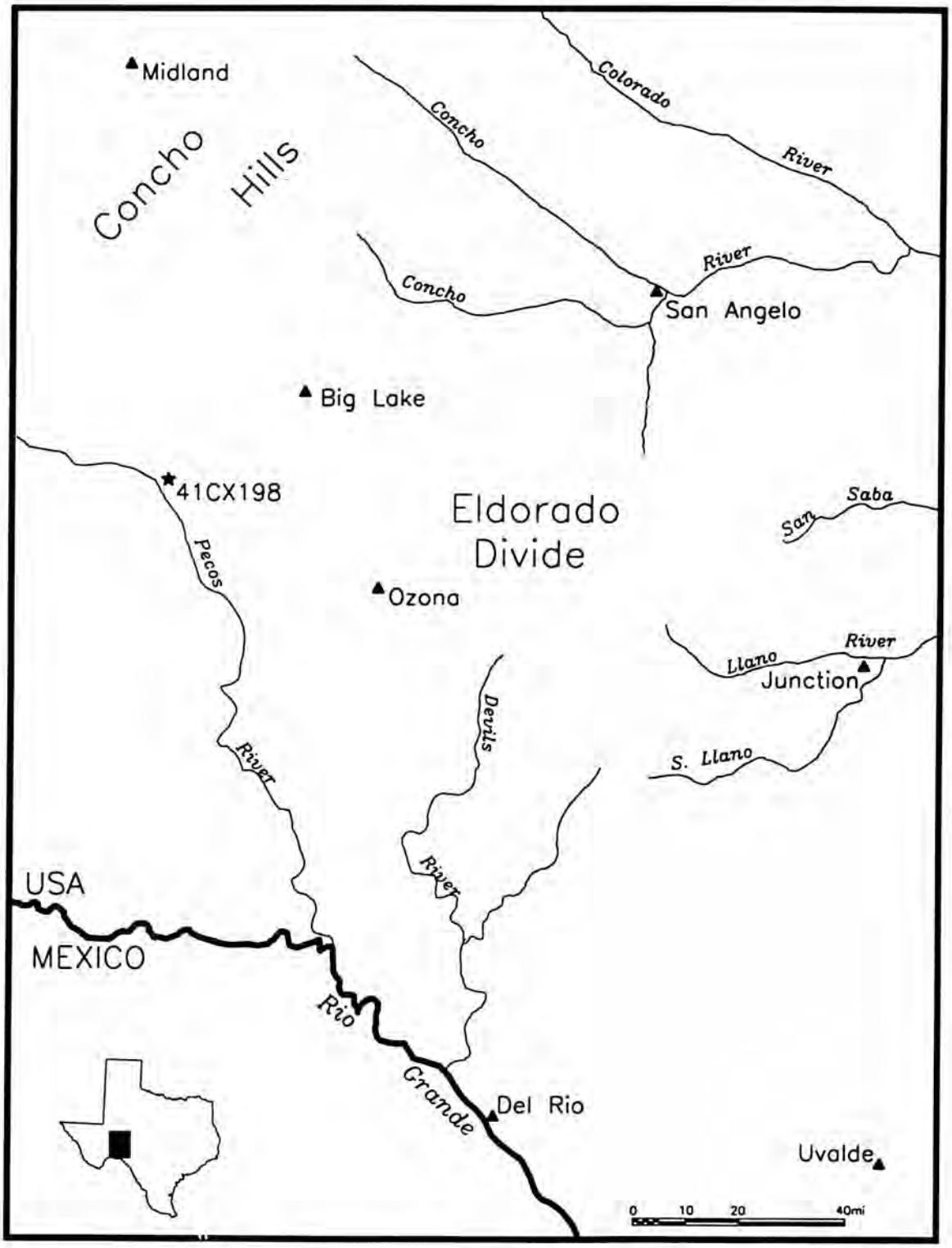

Figure 1. General Location Map of site 41CX198.

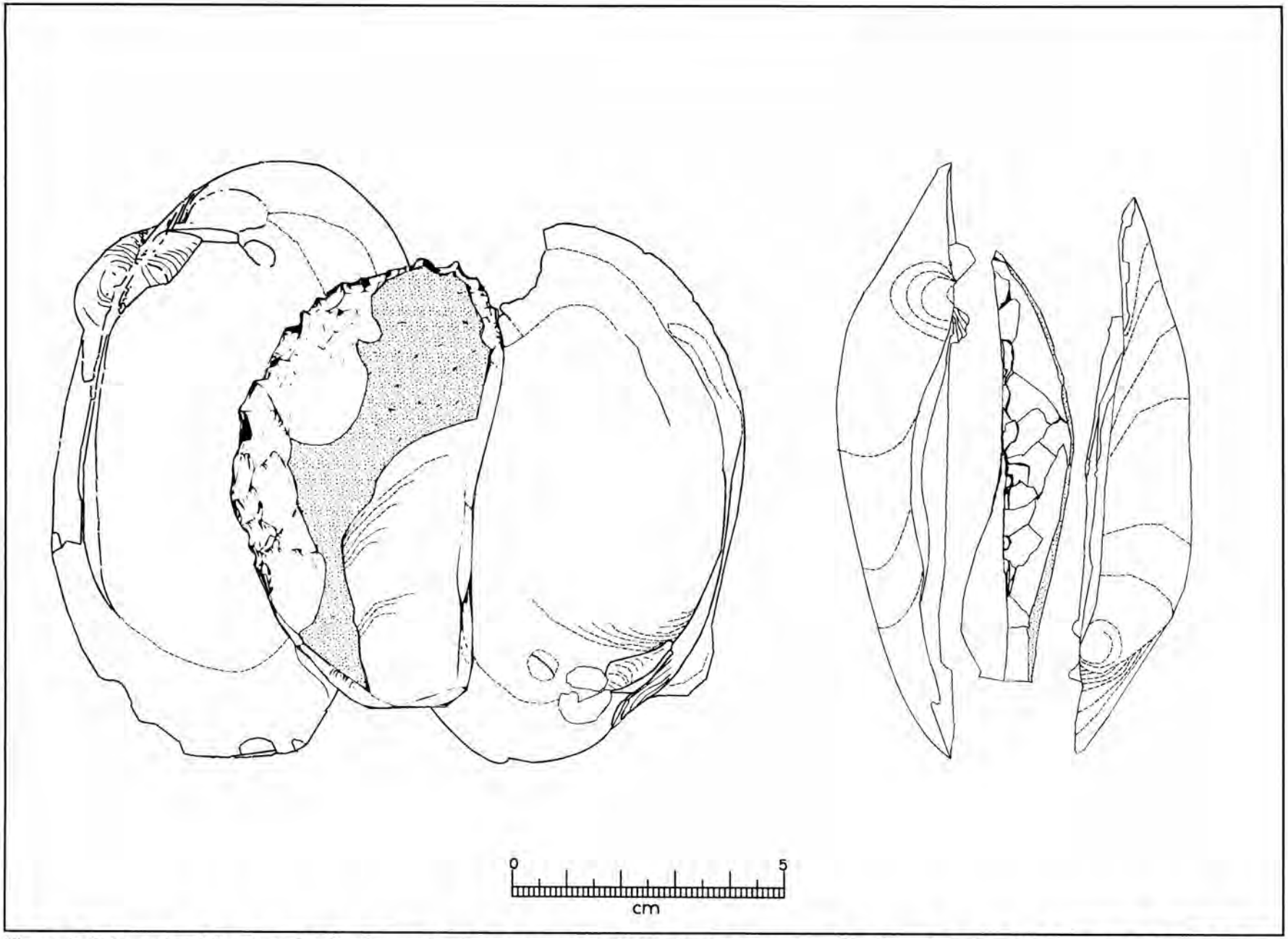

Figure 2. Schematic of the central pair of mussel valves that contained the chert side scraper. The largest shell is 106.6 mm long. Drawn by Pam Headrick.

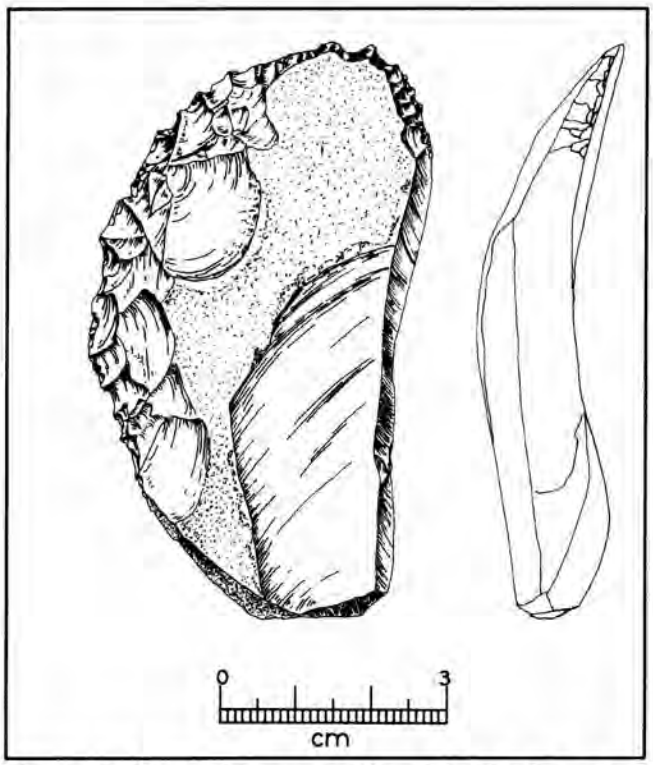

Figure 3. Chert side scraper found inside the paired mussel shells. Drawn by Pam Headrick.

capable of sustaining mussel colonies. These distances imply that the shells were not transported as food but for their intrinsic value as ornaments and icons.

Neck (1988) analyzed a nested set of five *C. tampicoensis* shells that were recovered by relic hunters in the grave of an 8-12-year-old child in 41TE307, a rockshelter in Terrell County. Another large shell found on the surface near the burial pit during our 1996 excavations may have been the sixth specimen in this cache (Turpin n.d.). Although three of the valves are from the right side and three from the left, none of them form a complete pair. Neck (1988) considered these specimens, which ranged in size from 102.1 to 127.5 mm long and 60.75 to 75 mm wide, to be unusually large. The 41CX198 shells are only slightly smaller, averaging 97.9 mm long and 60.5 mm wide with their upper range overlapping the lower limits of the Terrell County specimens. Given the distance from the source, Neck concluded that the primary attraction of these shells was not their food value but rather their adaptability for other uses, either as tools or ornaments.

A nested set of four *C. tampicoensis* right valves was overlooked by relic hunters who had disturbed a grave placed against the rear wall in Skyline Shelter, 41VV930, on the Devils River in Val Verde County (Turpin 1992:12). A stack of 10 to 15 unidentified mussel shells accompanied one burial at Loma Sandia, a large cemetery site in Live Oak County (Dreiss, in Taylor and Highley 1995:540). Three of the eight mussel shells in Bering Sinkhole, an Archaic cemetery in Kerr County, share the same provenience, suggesting they were part of a grave offering (Bement 1991:105). Fate Bell Shelter, in Seminole Canyon State Historical Park, produced a cluster of *C. tampicoensis* shells with holes drilled near their umbos, leading Pearce and Jackson (1933: 14) to propose that they were originally strung and used as rattles. All of these contexts suggest that mussel shells were a curated item with connotations that went beyond caloric or material expediency.

It is quite possible that the mussel shell cache at 41CX198 was originally a grave offering. The shells were protruding from a silty pocket of soil much finer in consistency than the surrounding gravelly loam. No excavation was undertaken but it is unlikely that bone or other perishables would have survived in this open environment. Regardless of their original context, the shells demonstrate the selective collection of large specimens and their retention for use as ornaments, tools, or currency. On a less pragmatic level, shells exemplify the duality of birth and death, the inanimate shell housing the germ of life, so their role in local mortuary practices is not without logic.

ACKNOWLEDGMENTS

Archaeological survey on University Lands in Crockett County was authorized by Antiquities Permit 1414 and sponsored by the West Texas Operations under the direction of Steve Hartmann. Tommy Gray, University Lands, deserves credit for his sharp eyes and his ability to recognize the importance of this unusual assortment of shells and artifact. Robert Howells, of the Heart of the Hills Research Station, kindly confirmed the identification of these shells as well as corresponding with me about the possibility of human modification. Pam Headrick drew the schematic representation of the central shells and scraper. Carole Medlar drafted the location map.

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CLOVIS POINTS FROM BEXAR AND WILSON COUNTIES, SOUTH TEXAS

C. K. Chandler

ABSTRACT

Four Clovis points from Bexar and Wilson Counties are documented and illustrated. Three are from Wilson County and one is from Bexar County.

INTRODUCTION

Meltzer's survey of Clovis fluted points for all of Texas (1987) recorded 205 Clovis from 95 of the 254 counties in Texas. Fifty-one of these 95 counties recorded only one Clovis. Rarely did any one county have as many as three Clovis. At the time of this survey there were no Clovis reported from Wilson County and only two from Bexar County (Henderson 1980).

A recent update (Meltzer and Bever 1995) has added one Clovis each to Bexar and Wilson Counties. The total documented Clovis points for Texas is now 406–nearly twice as many as recorded in the 1987 count. This count will continue to grow as previously unrecorded Clovis are published or reported in the Texas Fluted Point Survey. The four Clovis in this report are not included in Meltzer and Bever's 1995 survey.

The one reported Clovis from Wilson County (Kelly 1988) is suggested to be the largest Clovis recorded in Texas. This Clovis point from Wilson County is called the Nockenut Clovis Point by Kelly. It has a flared base as does Specimen 3, C in this report. Clovis points with flared bases are not common in Texas; however, some of this type are known from the McFaddin Beach collections on the upper Texas coast. There are over 70 Clovis points on record from McFaddin Beach (Turner and Tanner 1994) some in excess of 120 mm in length. One of the Clovis points from Wilson County (Specimen B in this report) is 122.3 mm in length (4 7/16"). The Nockenut point is 164 mm long (6 3/8").

THE ARTIFACTS

Figure 1, A, A' illustrates a complete Clovis point from a deep sandpit near Sutherland Springs in Wilson County. This sandpit has yielded a large number of Paleo-Indian artifacts over a period of several years that includes at least two Clovis points.

This specimen is made of yellowish brown (Munsell 10YR 5/3-5/4) good quality chert that contains many light-colored inclusions. Flaking is mostly horizontal parallel and irregular with fine edge retouch on both faces all along one edge and toward only one face on the other edge. There is a vertical crack beginning at one basal corner and extending 36 mm up one face. This crack does not extend through the thickness of the artifact and it appears evident it was in place during the manufacture of the Clovis point. In the shaping and thinning process several flakes terminated at this crack, including the central fluting flake on this face.

Dimensions of this specimen are: 62.2. mm in length, 28.6 mm maximum width at 23 mm above the basal corners and 9.3 mm thick at 33 mm above the base. It weighs 18 grams. Base width is 24 mm and basal concavity is 2 mm. Edges are heavily ground 25 and 26 mm and the base is ground. The obverse flute is 20 mm long, 10 mm wide and there is one vertical thinning flake adjoining the flute scar that is 15 mm long and 5 mm wide. This shallow flake scar appears to have been larger and present when the flute was removed.

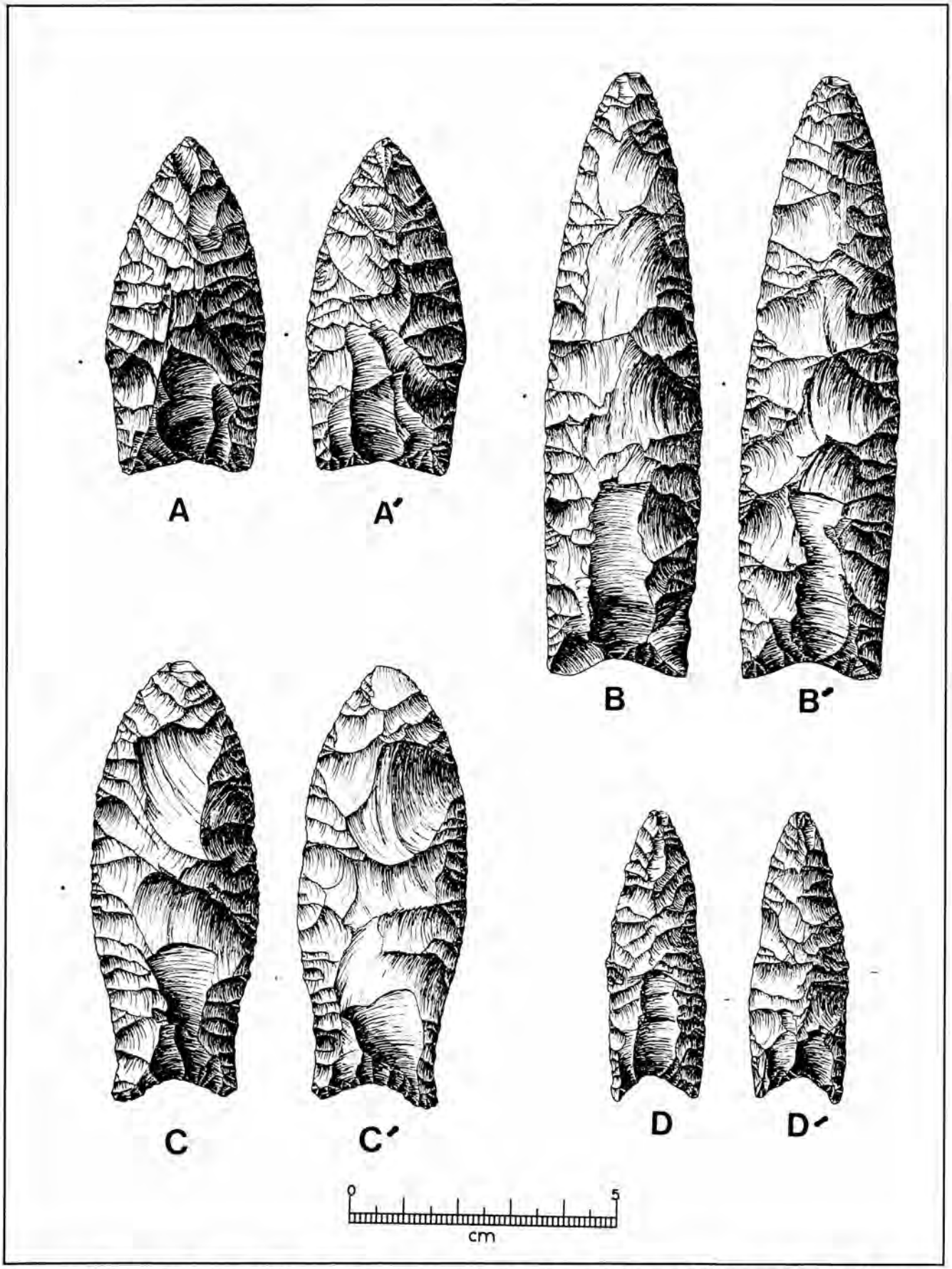

Figure 1. Clovis points from Wilson and Bexar Counties. Specimens A, B, and C, Wilson County. Specimen D, Bexar County.

The reverse flute is composed of three vertical thinning flakes with the center one the last discharged. This specimen is without patina.

Figure 1, B, B' illustrates a complete Clovis point from a deep sandpit near Sutherland Springs in Wilson County. It was found by Robert Flores in a truckload of sand from this sandpit. This sandpit has yielded a large number and great variety of Paleo points in recent years but they have not been available for documentation or examination. This specimen is made of a dark brownish red, near translucent material that has a vitreous appearance and a waxy feel (it may not be chert). When examined by a geologist he stated it was not a material he had ever seen in Texas and could not suggest a source. Several archaeologists, both professional and avocational have viewed and examined it. None have been able to identify the material. It is not Manning fused glass (K. Brown, personal communication 1996).

Dimensions are: 122.3 mm long, 28.2 mm maximum width at 48 mm above the base and is 8.6 mm thick at 41 mm above the base. Base width is 24.6 mm and basal concavity is 3 mm. Edges are ground 39 and 41 mm and the base is ground. The basal corners are broken toward the obverse face only and this removed 15 mm of the ground lateral edge on that side which reduced the base width perhaps as much as one mm. These breaks are most unusual in that they did not break off the basal corners.

It was first thought these chipped corners were from damage in the screen; however Dr. Hester at the Texas Archeological Research Laboratory (TARL) said he had seen this kind of damage before and considered it to be deliberately done for some unknown reason.

There is a single flute on each face. The obverse flute is 31 mm long and 11 mm wide. Flaking on this face is broad parallel with fine edge retouch. The reverse flute is 32 mm long and 11 mm wide. Flaking on this face is also parallel but the flakes are smaller due to some large lateral thinning flakes. There is fine edge retouch from this face and light crushing of the distal tip. It is without patina. Weight is 33.6 grams.

Figure 1, C, C' illustrates a complete Clovis point from south of Poteet in Wilson County. It is a surface find from a sandy field. It is made of pale brown (Munsell 10YR 6/3) good quality chert with small dotted inclusions. There are two large lateral thinning flakes on each face. Flaking is confined to the outer edges due to the large lateral thinning flakes occupying nearly all of the central area of both faces. One side is thicker than the other. The flaking on this face is horizontal parallel with fine edge trimming to the opposite face. Fine edge retouch was applied to only one edge on the opposite face. All surfaces of this specimen exhibit polish. Flake arrises and blade edges are rounded and polished. This specimen appears to have seen extensive use.

Dimensions are: 81.2 mm in length, 31.4 mm maximum width at 35 mm above the base and 8.0 mm thick at 45 mm above the base. The base flares slightly and has a basal width of 23.3 mm. The basal concavity is 3.8 mm. It weighs 21.4 grams. The lateral edges are lightly ground 28 and 30 mm and the base is lightly ground. The grinding of the edges and base is determined by magnification only. It is without patina.

There is only one flute discharged from each face. The obverse flute is 22 mm long and has a maximum width of 12 mm at the top end where it extends well on to the large lateral thinning flake. There are two thinning flakes adjacent to the flute scar. Combined they are 11 mm wide and 11 mm long. The reverse flute is thin and short. It is 13 mm long and 11 mm wide. This side of the base is finely retouched full width.

Figure 1, D, D' illustrates a small Clovis point from south Bexar County, Texas. It is from a deep sandpit where a large number of Paleo-Indian projectile points have been recovered. This is the only Clovis known from this site. Other Paleo artifacts from this site include Barber, Plainview, Scottsbluff, Agate Basin and Angostura.

This Clovis point is made of uniformly dark brown chert of excellent quality that has a glossy finish and waxy feel indicative of having been heat treated. While no inclusions are evident under initial observation, microscopic examination (18X) reveals the parent material contains a profusion of tiny white specks. Munsell color is 5YR 3/2, dark reddish brown. It is without patina.

Dimensions are 54 mm in length, 18.4 mm in width at 18 mm above the basal corners with a maximum thickness of 6.2 mm at 25 mm above the base. Base width is 16.6 mm with a basal concavity of 4 mm. Weight is 6.69 grams.

Edges are ground 20 and 22 mm and base is

ground. Distal edges have been reworked, apparently to restore a distal tip that was broken by an impact fracture.

The obverse face has a single flute that is 20 mm long and 8 mm wide. The reverse face has two short thin flute scars that are 10 mm long each. One is 5 mm wide and one is 7 mm wide. Flaking is irregular with some horizontal parallel.

DISCUSSION

Presently there are seven Clovis points known and documented in Bexar County. Only three of these are reported by Meltzer and Bever (1995). The three Clovis points from Olmos Basin reported by Chandler (1994) are not included in Meltzer and Bever's 1995 count. The one Clovis in this report brings the known and documented total to seven Clovis for Bexar County.

Only one Clovis is presently reported for Wilson County (Kelly 1988; Meltzer and Bever 1995). The three Clovis from Wilson County reported here increase the count to four.

All counties bordering Bexar County—Atascosa, Bandera, Comal, Kendall, Medina and Wilson—except Guadalupe County have from one to eight documented Clovis points.

Most documented Clovis points are isolated finds without other associated early Paleo materials. Two sites in south central Texas, 41BX52, the Pavo Real site in northwest San Antonio (Henderson and Goode 1991), and 41UV2, the Kincaid Rock Shelter site in eastern Uvalde County, had both Clovis and Folsom points (Collins 1990). The one Clovis from Bexar County in this report came from a deep sandpit that had yielded a number of Paleo age projectile points and tools. These artifacts cannot be identified as associated with the one Clovis from this site.

ACKNOWLEDGMENTS

These four Clovis points belong to Robert Galvan, Robert Flores and Joe Guillory. They were drawn by Richard McReynolds. I extend my sincere appreciation to them all.

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INFORMATION FOR CONTRIBUTORS

La Tierra publishes original papers and selected reprints of articles involving the historic and prehistoric archaeology of southern Texas and adjacent regions. Original manuscripts are preferred. Articles involving archaeological techniques, methods, and theories are also considered.

The main objective of this quarterly journal is to provide a way for STAA members and others interested in the archaeology of southern Texas to share the information they have with others. We encourage your full participation through submission of your information for publication; we are particularly interested in receiving manuscripts from those in the less well-known counties of our region, to document even surface finds and old collections. Only through such total member participation can we, as a group, build up a comprehensive picture of the archaeology of our area!

Articles may be submitted in any form, although double-spaced typed copy is naturally preferred. However, we will review and work with material in any form to encourage those not comfortable with typewritten or other formal methods; WE ARE MORE CONCERNED THAT YOU SUBMIT YOUR IDEAS AND DOCUMENT YOUR MATERIALS THAN WE ARE WITH THE FORM OF MATERIALS WITH WHICH WE HAVE TO WORK. If you can supply a 5 1/4" or 3 ½" disk, IBM or compatible, in ASCII form (if not in Word Perfect), it will be very helpful.

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Thanks to all of you for the fine reports coming in. Keep them coming!

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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 quarterly journal, newsletters, and special publications to meet the needs of the membership; To assist those desiring to learn proper archaeological field and laboratory techniques; and To develop a library for members' use of all the published material dealing with southern Texas.

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