

# LA TIERRA



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**JOURNAL OF THE  
SOUTHERN TEXAS  
ARCHAEOLOGICAL  
ASSOCIATION**

THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

The Southern Texas Archaeological Association brings together persons interested in the prehistory of south-central and southern Texas. The organization has several major objectives: To further communication among amateur 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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Jimmy L. Mitchell  
Editor

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Manuscripts for the journal should be sent to: Editor, La Tierra, Jim Mitchell, 926 Toepperwein Road, Converse, Texas 78109. Copies of past issues of the journal are available from the Editor, also. To order Special Publications, order from the office, 123 East Crestline, San Antonio, Texas 78201.

For membership information, contact the Membership Chairman: Liz Smith, 1607 West Huisache, San Antonio, Texas 78201.

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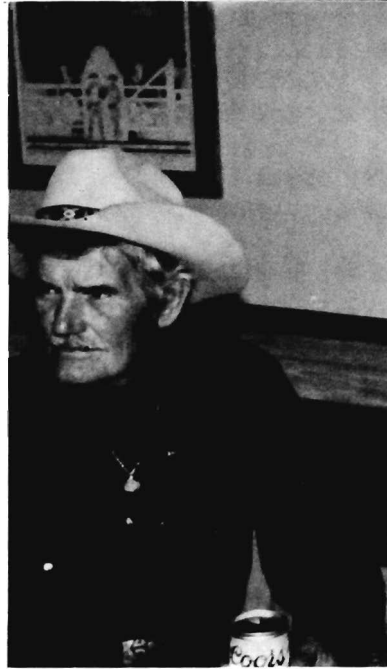
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## THE ROBERT F. HEIZER MEMORIAL AWARD

For 1984



Cecil Peel

In recognition of his outstanding contributions to the archaeology of Southern Texas, the 1984 Robert F. Heizer Award was presented to Mr. Cecil Peel of Route 1, Boerne, Texas. Cecil Peel has, almost singlehandedly, conducted an extensive excavation of a Kendall County rockshelter, which holds great promise for improving our understanding of the archaeology of this area of the Guadalupe River drainage. This work included recovery of a number of charcoal specimens, which are being prepared for submission for radiocarbon dating. A report of Cecil's rockshelter excavation is now in preparation for publication later this year. Cecil and Dortha have also encouraged a systematic survey of Kendall County, using their ranch as a base of operations, and they have repeatedly hosted the annual STAA BBQ. Cecil also works with the UTSA Center for Archaeological Research and has been involved in many of the major fieldwork projects of recent years, including the recent survey of the Applewhite Reservoir area along the Medina River, and excavations at the new Fairmount Hotel site. This is in addition to STAA work at the Dan Baker Site and continuing efforts in his Kendall County area. In all he does, Cecil Peel is a very dedicated, methodical worker, and his efforts over the last year represent a major contribution to our understanding of the archaeology of southern Texas.

## EDITORIAL

## A NEW YEAR AND A NEW VOLUME

As we begin Volume 12, there are a few changes which you may notice. For one, Dr. Tom Hester has consented to author a short note on South Texas Archaeology for each issue in the future. This will give him a good vehicle to communicate some things which are happening, and will keep all of us more up to date.

A second change has to do with printing style. We will no longer use italics for projectile point names and other languages; rather, these will be shown in a boldface (or emphasized) type. This change will permit us to generate La Tierra from computer files rather than retyping every manuscript several times. In the future this should save time and hold down our production costs.

You may also note the lateness of this issue; hopefully, this is not a permanent change. I must explain that among other things, I retired from the US Air Force on 1 January and started a new job, with McDonnell Douglas Astronautics Company, as a research scientist on January 2nd. Such career transitions take some time and concentration. My apologies for the delay in publication; please be patient and eventually we will get caught up.

The Editor

## NOTES ON SOUTH TEXAS ARCHAEOLOGY: 85-1

Thomas R. Hester

With this volume of *La Tierra*, I am beginning (through the kindness of its editor) a series of short papers that will appear in each issue of the journal. Some will deal with specific issues or events, others with new interpretations of southern Texas prehistory, descriptive notes on special artifacts, updates on recent projects in prehistoric and historic archaeology, etc. There is so much activity in terms of archaeological research going on in South Texas that it is hard to keep up with the latest discoveries. At the Center for Archaeological Research at the University of Texas at San Antonio, we are often told of new sites and artifacts, some of which are unique, while others fit into the broader framework of the region's prehistory. Thus, I have a number of things in mind that I hope will be of interest. I would be grateful, though, for any suggestions for materials that you might like to see covered through these periodic Notes.

Update on LaVillita & the Fairmount - One event that involved many STAA members this past winter was the historic excavation in the La Villita area in downtown San Antonio. The fieldwork uncovered a wealth of 1830s-1850s domestic refuse from this early phase of historic San Antonio, and this trash (= artifacts) had been dumped into a linear depression. This trench seems likely to have been part of an earthwork, perhaps a fortification or artillery battery linked to Santa Anna's Army during the 1836 Battle of the Alamo. Distinctive military gear representing the Mexican forces recovered from the site included a howitzer shell, cannon balls, parts of "Brown Bess" muskets (which were standard issue in the Mexican Army), bayonets, etc. Archaeologists, including faculty and students from UTSA, STAA members, and TAS members, put in more than 1300 hours to excavate and document this remarkable find. There were some serious deadlines, as the lot in which the excavations took place was soon to be the new location of the old Fairmount Hotel. With the cooperation of the developers and hard work of everyone involved, the fieldwork was accomplished in time. I would like to especially note the role of Joe Labadie, a UTSA graduate student and staff archaeologist, who carefully watched the progress of bulldozers working at the lot on that Saturday morning (February 19th--most of the rest of us were at the STAA meeting at the Southwest Research Institute). Once he spotted cultural material, the bulldozers were halted, and soon after that, archaeological research was initiated. Joe directed the project throughout, but he also had a lot of help (both in the field and in the lab) from Ken Brown, Anne Fox, Sam Nesmith, Shirley Van der Veer, Lynn Highley, David Hafernik, and others. They have already compiled an impressive preliminary report on the findings at La Villita, to be published later this summer by the Center for Archaeological Research.

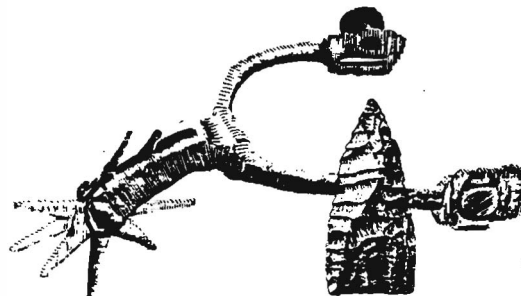
Bad News From the Hill Country - Word regarding the looting of sites for commercial purposes in Medina and Bandera Counties has been filtering in from that area. These depredations are not just the "potholes" of relic collectors; rather, I've been told that front-end loaders are being used to fill dump trucks, which haul away the materials to be screened elsewhere. Apparently, the people behind these "mining" activities have taken out leases on ranches in the area. Since they are getting big money for the sale of artifacts, it seems now that some local collectors in the region have also been getting into the act. There have been similar stories--including artifact auctions--in Central Texas, north of Austin. If you have any knowledge of such activities, please contact the Texas Archeological Society (c/o UTSA-CAR, San Antonio, TX 78285). This destruction is appalling, yet it is impossible to stop since no state or federal laws are involved on private land. It will

take "peer pressure" from concerned avocational archaeologists to slow, and hopefully stop, this trend. I do not think that "all is lost," as I have also talked recently to several relic collectors who have stopped their digging activities, as a result of better public awareness of archaeology, fostered through recent books, meetings of archaeological societies, and other public education efforts.

And the Good News - Also from Bandera and Medina counties. A land development in the area contains several sites which piqued the interest of the marketing manager and other employees. They did a little digging, but later got a copy of Digging into South Texas Prehistory from the Bandera Library. Upon reading my sermons therein, they ceased their digging, and invited us up to take a look at the sites. Their cooperation has now progressed to the point that the UTSA Summer Archaeological Field Course will be held on their property in June. We will be able to fully survey the 500-acre development, and to document other sites, in addition to the five sites they have identified. We plan major excavations at one burned rock midden (where houses will later go in) and testing of the other sites on the property. Thus, the cooperation of these developers and their staff will allow archaeologists to get a tremendous amount of information that would have otherwise been lost as roads and houses are constructed over the next year or two.

Current Work in Progress - I know that many STAA members are working hard to document and preserve sites every day. Harry Crouse and Paul Able have recently recorded other threatened sites in Bexar County. Each of us needs to make a special effort these days to communicate with relic collectors, developers, and the general public in order to record as many prehistoric and historic sites as possible. (Contact Paul Ward, STAA Discovery & Documentation committee, or the CAR). The Archeology Division of the Texas Department of Highways and Public Transportation is currently testing two South Texas sites. One is in Wilson County, where a couple of burials have been found. The other is in Karnes County, where archaeologist Glenn Goode has exposed materials from a Spanish Colonial occupation along Cibolo Creek. UTSA archaeologists are also at work, under Anne Fox's direction, at the Las Tiendas project in downtown San Antonio. Additionally, A. J. Taylor is supervising the excavation of an old, filled-in well next to Mission San Jose.

Coming in Future Issues - South Texas biface caches; "Handaxes": views from Central Texas, the European Paleolithic and Tierra del Fuego; new data on Late Prehistoric pipes in South Texas,...



## THE BEN BICKHAM COLLECTION FROM NORTH PADRE ISLAND, TEXAS

Rita R. Gunter

## ABSTRACT

A number of small shell-working drills and a variety of arrow points in the Ben Bickham collection were studied. A Folsom point which has been reworked to the size of an arrow point was also recorded. These materials were recovered from several areas on the northern half of Padre Island in the Coastal Bend area of southern Texas. The artifacts reflect some type of interaction with Late Prehistoric groups in the Rio Grande Delta area as well as those in the interior areas of central and south central Texas.

## INTRODUCTION

Ben Bickham of Corpus Christi, Texas, surface collected throughout South Texas for a good many years, accumulating an extensive collection of prehistoric Indian artifacts. He, and his brothers, Arthur and Joe, were actively involved in the initial excavation of the Odem Site (41 SP 1) in San Patricio County, Texas.

During the 1950's, Ben Bickham collected 287 complete arrow points, a number of very thin, minutely-worked chert drills, and one reworked Folsom dart point from Padre Island. These artifacts were surface collected from the northern and central areas of the island (see Figure 1). Most of these areas are now included in the Padre Island National Seashore (under National Park Service regulations, surface collecting of artifacts is now illegal in the area).

Besides the numerous projectile points, Bickham's Padre Island materials included pottery sherds, utilized sandstone fragments, a heavily mineralized pleistocene mammal tooth, a fragmentary bison horn, various lithic tools, preforms, and projectile point fragments. On many of the pottery fragments, asphaltum had been used for decoration as well as interior coating.

The arrow points were sorted into established types following the criteria presented by Suhm and Jelks (1962), Hester (1980), and Turner and Hester (1985). Descriptions of the arrow point types follow in alphabetical order. Point drawings included with the descriptions are actual size and are of specimens selected to show typical characteristics of that particular type. The largest and the smallest point from each type were selected to obtain maximum and minimum measurements. All dimensions are reported in millimeters except for weights, which are in grams. All drawings are by the author. The drills are shown larger than actual size to better illustrate features of the specimens; outlines and cross sections of the drills (shown to the right of the illustrations) are actual size.

## DRILLS - 27 specimens

Some of the most interesting artifacts in the collection were minutely-flaked drills (see Figures 2 - 4). Most specimens were either distal or proximal fragments, but six drills were complete. Three of the drill fragments show a widely flaring proximal end which contracts to a narrow bit (Figure 2 A), while five of the drills are flared at the midsection (Figures 2 B and 3 A), forming a somewhat lozenge shape. One unfinished drill is a good example of how the long, thin drills were manufactured; this specimen (Figure 4 B) appears to be an elongated chert blade or splinter which is triangular in cross section with a bulbous proximal end. Only the dorsal side has been flaked, leaving the ventral side smooth and unworked. The specimen is 20.1mm long, 4.5mm wide at the bulbous end, 2.3mm wide at the distal tip, and 2.4mm thick.





Figure 1. The Lower Texas Coast showing the relationship of Padre Island to adjacent Counties. Shaded areas on Padre Island are those localities where the Bickham Collection specimens were found. The very small islands just south of Corpus Christi Bay are those studied by Campbell (1956).

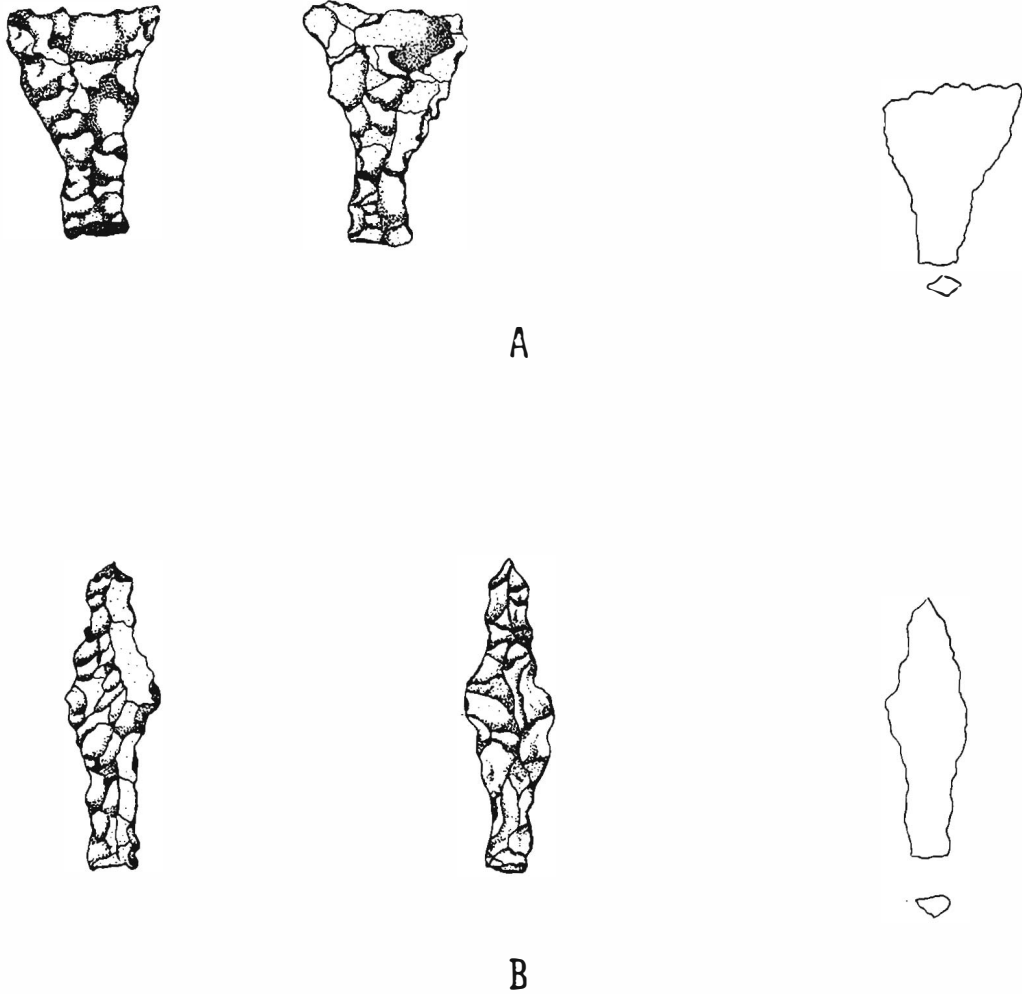


Figure 2. Two fragmentary drills found on Padre Island, from the Ben Bickham Collection. Note the variance in the location of maximum width and in cross sections.



A



B



C

Figure 3. Three additional specimens of shell-working drills from the Bickham Collection from Padre Island. These specimens are more typical of drills identified in other areas of the Texas Coast.

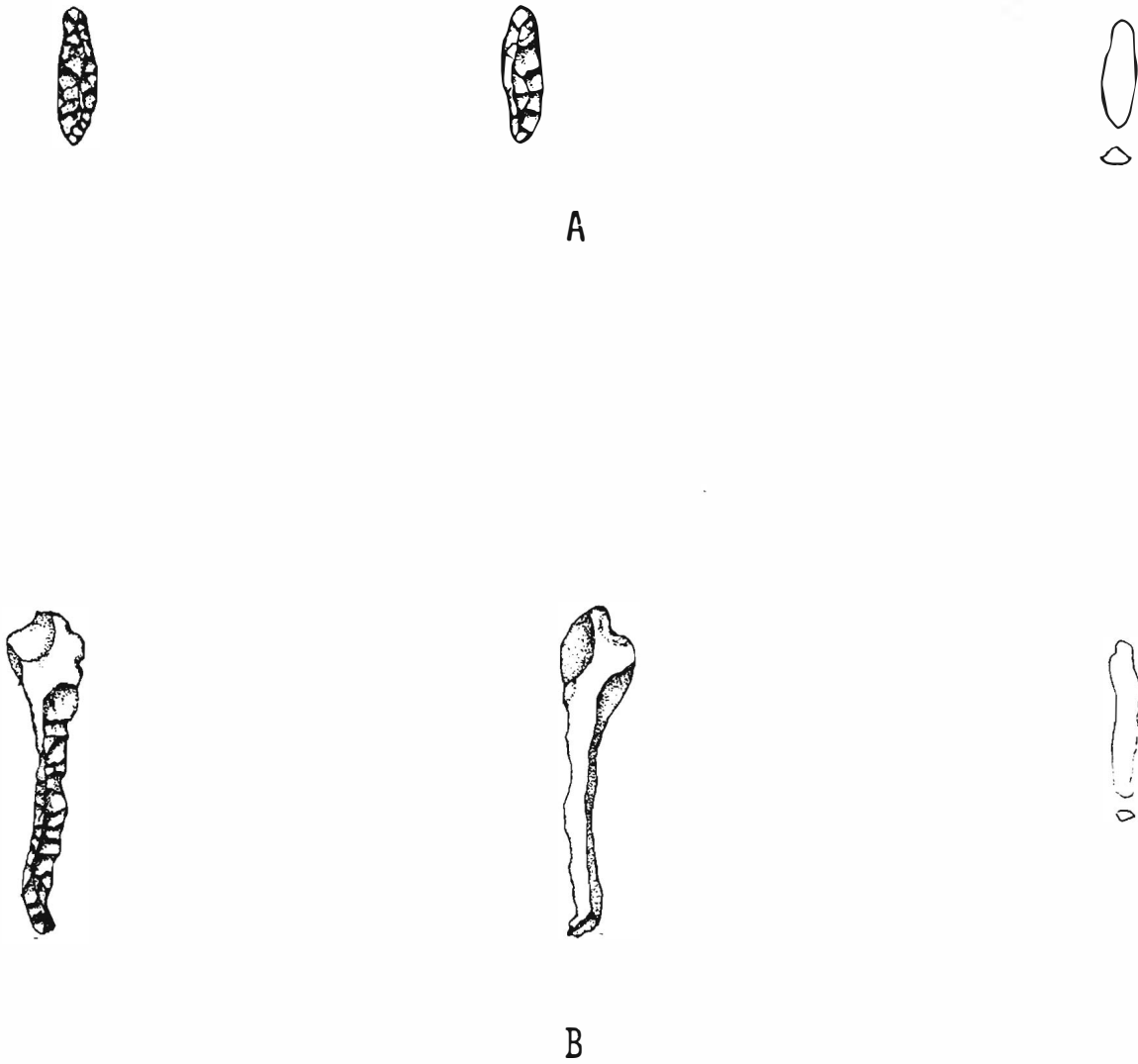


Figure 4. Two additional drills from Padre Island. These two specimens suggest conservation of lithic materials; Above - very small fragment which has been utilized; Below - a reworked flake.

Two complete bi-pointed drills (cf. Figure 4 A) are similar to the drills noted by Campbell (1956) on islands in the Laguna Madre (see Figure 1). One was also reported from the Harris County Boys' School; Aten et al. (1976) indicated that such tools were used to drill holes in shell beads. Measurements of the two bi-pointed drills in the Bickham collection are as follow: Length - 14.3mm (both); Width - 4.3mm minimum to 4.4mm maximum; Thickness - 2.5mm minimum to 3.1mm maximum.

The majority of the drills in the collection are rod-like and are quite similar in size and shape to modern drill bits. Complete specimens measure 19.9mm to 21.2mm in length; 2.6mm to 4.8mm in width; and 2.4mm to 3.3mm in thickness. The specimens are finely flaked to create either a triangular or rhomboidal cross section.

Similar drills were found in a "tool kit" associated with a female burial at the Caplen Site in Galveston County, Texas (Campbell 1957). In his report on this site, Campbell stated that such drills were probably used in manufacturing conch columella beads. Prewitt (1974) also mentions similar "pin-like" drills being found in Cameron County, Texas, near the mouth of the Rio Grande River. Thus, such drills appear to have been used along much of the Texas coast.

#### BULBAR STEMMED Arrow points - 2 specimens

The two specimens in some ways resemble the Perdiz type, having triangular blades and corner notching. The stems, however, expand from the neck created by the corner notches to a bulbous base. The larger specimen has convex edges and is worked on both faces. The other specimen has straight edges with smaller corner notches and barbs. This specimen has just enough flaking on one side to shape the stem and barbs and put an edge on the blade and tip. Otherwise, this side of the point displays the smooth face of the original flake. The opposite side is well worked over its entire surface. Hester (1980) states these Bulbar Stemmed points may be a "regional variant" of the Perdiz, but Corbin (1974) believes they are a separate type. Turner and Hester (1985:166) note that such points occur in historic contexts at a site in Wharton County (41WH19).

	Maximum	Minimum
Length	33.8	23.6
Width	23.5	15.3
Thickness	3.6	2.6
Shoulder Width	7.6	4.3
Neck Width	6.3	4.8
Stem Length	8.5	6.3
Weight (gms)	1.6	.6



#### CAMERON - 8 specimens

These arrow points are quite small, triangular shaped, and most are nearly equilateral sided. The sides are straight with thinning flakes on the base; typically, both faces are worked. There is only one mm size differentiation in all seven of the smaller specimens, making them virtually identical. Turner and Hester (1985:167) report that Cameron points are found in the Rio Grande Delta and up the coast to the Corpus Christi Bay area. Hester (1980:105) states, "Exact dating within the Late Prehistoric is not known. The type persisted into Historic times, as some specimens are made of glass."

	Maximum	Minimum
Length	18.4	12.6
Width	14.8	10.4
Thickness	3.8	3.1
Weight	.7	.4



## CAMERON-like Points - 4 specimens

These points, like the Cameron, are very small, triangular shaped points. Their bases, however, are shorter than the sides thus keeping these specimens from having the equilateral appearance of the Cameron. Edges are slightly convex. These specimens are worked primarily on one side with only minimal flaking on the reverse, and only along one edge.

	Maximum	Minimum
Length	15.9	13.7
Width	12.0	10.5
Thickness	3.4	3.1
Weight	.6	.4



## EDWARDS - 3 specimens

Blades of Edwards arrow points are triangular with straight edges; deep corner notches create straight to angled shoulders. The stems are basally notched, creating narrow, barb-like, downward slanting projections (see Sollberger 1978:14). Edwards are similar to Scallorn points in some ways but Edwards is an earlier type, dating A.D. 960 - 1040 in Uvalde and Bexar Counties (Turner and Hester 1985:173). The primary distribution of the Edwards is along the Balcones Escarpment in south central Texas, although occasional specimens are found in adjacent areas such as Atascosa and Live Oak Counties (Mitchell 1978:34-36). The presence of two Edwards arrow points on Padre Island infers some type of cultural contact with south central Texas, during the early Late Prehistoric.

	Maximum	Minimum
Length	29.4	25.1
Width	15.8	14.4
Thickness	5.1	4.1
Shoulder Width	4.5	4.0
Neck Width	6.0	8.4
Base Width	13.1	10.8
Weight	1.8	1.3



## FRESNO - 104 specimens

These triangular points have slightly convex or straight edges. Twenty-seven of the complete specimens have slight to deeply denticulated edges. Bases are usually straight or concave. There are several in this collection, however, with slightly convex bases. Some specimens are well worked on both faces. Others are finely flaked on one side but show only slight modification to the smooth place of fracture on the reverse. Corbin (1974) indicates the Fresno as a major type of arrow point along the Texas Coastal Bend during the Late Prehistoric era.

	Maximum	Minimum
Length	30.8	18.5
Width	18.0	10.0
Thickness	4.1	3.6
Weight	1.7	.6



## MC GLOIN - 4 specimens

The McGloin arrow points in this collection are triangular in outline with straight to slightly convex, sometimes serrated, blade edges. Their bases contain a pronounced, distinct V-shaped concavity. Hester (1980:106) reports that McGloin points are found in the Corpus Christi Bay area of southern Texas. Corbin (1974) indicates they are a minor type which appear late in the Late Prehistoric sequence on the lower Texas Coast.

	Maximum	Minimum
Length	22.2	15.6
Width	13.9	11.0
Thickness	3.5	2.0
Weight	.7	.3



## PERDIZ - 144 specimens

The Perdiz point is predominant in the Bickham Padre Island collection. In addition to the 144 complete specimens, there are several hundred fragments that are identifiable as Perdiz points, which are not included. Perdiz points have triangular blades, generally with straight to convex edges. Stems are contracting or straight. Ninety-three of the specimens in this collection have contracting stems and fifty-one have straight stems. Some points show minimal alteration or flaking to the smooth face on one side but are well worked on the opposite face. Others are finely flaked on both surfaces. Examination of the points indicated extensive reworking on some specimens.

	Maximum	Minimum
Length	40.1	19.8
Width	17.6	8.9
Thickness	5.2	2.4
Stem Length	13.3	6.0
Neck Width	8.2	4.0
Weight	1.3	.3



## SCALLORN - 16 specimens

The Scallorn points in this collection have triangular blades, most with straight, finely worked edges. Three, however, have slightly convex edges. Stem bases are wide, with straight bases on most specimens. A few bases are either convex or concave.

	Maximum	Minimum
Length	45.3	18.6
Width	20.5	15.5
Thickness	5.3	3.8
Shoulder Width	4.2	3.1
Neck Width	11.2	6.3
Stem Length	7.2	7.0
Stem Width	13.9	10.8
Weight	3.8	.8



## STARR - 6 specimens

Starr points are triangular in shape with straight or concave edges. Bases range from slight to deeply concave. Starr points and McGloin points share similar characteristics. Hester (1980:107) reports that Starr points are found in the lower Rio Grande Valley on both sides of the river, and up the coast to the Baffin Bay area; the type is found in the Brownsville Complex.

	Maximum	Minimum
Length	27.7	17.4
Width	18.6	14.8
Thickness	3.2	3.0
Weight	1.0	.7

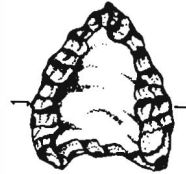


## REWORKED FOLSOM - 1 specimen

One small point appears to be a reworked Folsom projectile point. It is made of a white quartz-like material and is heavily patinated with a streaked, chalky appearance. The point evidences reworking, starting 11mm from the base and continuing to the tip. The original fluting is still obvious on both surfaces and the basal nipple (a distinguishing characteristic of the type) is still discernable. The present size and weight of this specimen fall well within the range of most types of arrow points.

## Measurements

Length	22.4
Width	17.2
Thickness	3.6
Weight	1.9



## DISCUSSION

The Folsom point is obviously reworked and is clearly out of context on Padre Island. Current thinking about the barrier islands suggests that they formed about four thousand years ago, well after the end of the Paleo-Indian period. Given the scarcity of lithic raw materials on the coast itself, it is likely that this artifact was recovered and reworked by an aboriginal. Its present size and shape approximate some of the small, triangular Late Prehistoric arrow points.

The earliest arrow points in this Padre Island assemblage include the Scallorn and Edwards types. Generally, the Scallorn points are correlated with the Austin Focus (A.D. 650 - 1350) of the Central Texas Aspect (Prewitt 1976) and the Edwards points are associated with the Turtle Creek Phase dating approximately A.D. 860 - 1130 (Mitchell 1978). The presence of the Edwards points in this Padre Island collection extends the known distribution of the type into the lower reaches of the Nueces River Valley and the central Texas coast. Corbin (1974:47; Figure 10, p. 43) further adds the Fresno point as a major type in this early period. The presence of both the Scallorn and Fresno may also relate to the introduction of ceramics into this area at an early time (Ibid.). This co-occurrence of early arrow points and sandy paste ceramics corresponds to findings at the Anaqua site (41JK7) in Jackson County, further up the central coast (Story 1968:67).

An intermediate assemblage, represented by a distinctive asphaltum-coated ceramic, along with Perdiz and Starr arrow points, is also demonstrated. Fresno points also continue as a major type. Other items which help segregate this middle period are the presence of certain shell artifacts and a shell reduction technology typical of the Brownsville Complex. While no absolute dates can be assigned to this period, it is suspected that a relative time range may extend from ca. A.D. 1350 to about 1600.



Cameron, Bulbar Stemmed and McGloin arrow points emerge as late developments; the latter two may be regional variants and presently lack absolute dating. Corbin (1974:47) estimates that the Bulbar Stemmed points developed "sometime after A.D. 1400 (probably 1500 - 1600)" and that contact with European goods occurred at about the same time. Bulbar Stemmed points have been recovered with historic materials in Wharton County near the central Texas coast. Cameron arrow points are associated with the Brownsville Focus and some specimens made of glass clearly are from the Historic period.

Thus, the diverse artifacts from the Bickham Padre Island collection indicate occupations, or at least influences, by three cultural entities. Nomadic bands, whose survival depended on hunting and gathering, apparently roamed the area widely during the Late Prehistoric Period. It is not clear whether the artifacts characteristic of south central Texas (Edwards) came to Padre Island by trade or represent actual visits by inland people. Later in time, during the middle span of the Late Prehistoric era, Perdiz points clearly predominate. These points suggest a very strong relationship with Central Texas and yet the asphaltum-decorated pottery sherds and Fresno points are more typical of the central Texas coast (the Rockport Complex).

It is interesting to note that along with the Rockport Complex material typical of the central coast, Bickham also found artifacts characteristic of the Brownsville Complex which are normally found along the lower Texas coast and in the Rio Grande delta. These Brownsville Complex artifacts are Starr, Fresno, and Cameron points, plus the tiny flake drills suggesting a shell-working industry. The intermingling of the artifacts from the contemporary Central Texas, Rockport and Brownsville complexes may indicate a widespread movement of Late Prehistoric bands during their search for subsistence. Perhaps cultural interaction and trade contacts were established between the various nomadic groups. North Padre Island is an excellent site for such interaction (Scurlock, et al. 1974) because of its focal location (Nueces River, Bay, Laguna, and open gulf environments).

Campbell (1956) reports that artifacts from both the Brownsville and Rockport Complexes were also found on two islands, Indian Island and Webb Island, located in the Laguna Madre just south of Corpus Christi Bay (see Figure 1). These islands are just across the Laguna Madre from one of the areas from which Bickham collected. Prior to the dredging of the Intercoastal Canal, it was possible to wade through the shallow waters from the mainland to Padre Island. Very possibly, the same bands utilized the natural resources of Indian, Webb, and Padre Islands as well as numerous other unnamed islets and exposed reefs in the area.

A combination of Brownsville and Rockport Complex artifacts was also reported by Highley from sites near Alazan Bay, in Kleberg County (Highley 1980). This area is located across the Laguna Madre from another of the areas searched by Bickham. The occurrence of similar artifacts found in the same general area of Laguna Madre would seem to indicate the utilization of resources from both the mainland and Padre Island. Movement from the mainland to the island may have been seasonal, to exploit periodically available resources. Perhaps with future systematic excavations and study of the coastal areas, archaeologists will be able to develop more information on the seasonal movements of the aboriginal inhabitants in their constant search for subsistence. Until such information becomes available, we must depend on information derived from private collections and similar sources; such data are a valuable contribution to the archaeology of the Texas Coastal Bend area.

## CONCLUSIONS

This report serves as a documentation of Late Prehistoric artifacts found by Ben Bickham from the northern half of Padre Island. His collection contains a variety of arrow point types which correspond to a number of Late Prehistoric cultural complexes found over a relatively wide geographic area of central, south, and coastal Texas. They further reflect a temporal range from about A.D. 650 to the Historic Period (circa A.D. 1600 - 1700).

The assemblage described in this report contains artifact types common to both the Late Prehistoric Rockport Complex of the central Texas coast and the Brownsville Complex of the Rio Grande delta. The intermingling of artifact types indicates a major influence from the south was impacting the local cultural patterns. Perhaps this intermingling indicates cultural interaction and possibly trade contacts were established between the various nomadic groups of both the central and south Texas coast.

#### ACKNOWLEDGEMENTS

My thanks to Pat Bickham, son of the original collector, who generously gave me access to this extensive collection. I also want to thank my good friend, Ed Mokry, for the support he has always given my archaeological efforts. His suggestions are appreciated; his critiques welcomed.

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COASTAL BEND ARCHEOLOGICAL SOCIETY

The CBAS was reactivated in late 1983 and has developed into an extremely active group. Several CBAS members hosted and participated in the two Texas Coastal Palavers (September, 1984, and February, 1985) to assist the State Archeologist, Bob Mallouf, in developing a regional plan.

A library and comparative collection are also under development, working with the Corpus Christi Museum, where CBAS member Herman Smith is now staff archeologist.

Ongoing projects for 1985 include test excavations at the Banquete site, excavations of a 1554 Spanish shipwreck, and testing on the Oso Creek.

The group meets monthly, and publishes a newsletter and occasional papers.

For membership information, contact

LeAnne Weaver  
Rt. 1, Box 354  
Ingleside, Texas 78362  
(512) 776-2361

## GUADALUPE TOOLS: WERE THEY USED FOR DEFLESHING HIDES?

J. B. Sollberger &amp; William B. Carroll

## ABSTRACT

An attempt is made to reach beyond typological names to find the functional use for the Guadalupe tool. It is proposed that this tool form may have been an early Texas invention for defleshing hides.

## FOREWORD

*"...It seems hard to deny that the central creative activity in archeology, like all scholarship, lies in induction; in outstripping the narrow base of available facts to suggest new and essentially speculative unities." (R. C. Adams)*

Tools are the stepping stones we follow in reconstructing the prehistoric activities and products of man. Speculative unities lead to formal typologies where we can pull from our files specific tools that possessed a number of attributes in common. It is now time to realize that just naming types is a dead-end pursuit that may often obscure the ultimate goal of determining tool function. Today, experimental archaeology, replication studies, and use-wear analysis are more relevant but even these activities still require a certain amount of speculation. It is on that assumption that we proceed.

## HIDE FLESHING TOOLS

Preserving hides from rot for later tanning (particularly in warm weather) requires that they be degreased by removing any meat, oils, or fat that remain on the hide. Such oils are trapped in-between the hide and an inner-side membrane. Tools that are used to prepare the hides before tanning are commonly called "fleshing tools."

Wedel (1970:36-45) discusses and illustrates hide fleshing adzes used by historic Plains Indian groups. His emphasis is on hafting elements made from horn. Steinbring (1966:575-581) provides details for both manufacture and use of fleshing tools made from moose bone. He makes it clear that a different type of tool was employed for dehairing hides. It is also clear that fleshing tools may be pushed, pulled, or chopped onto the hide. Several styles of fleshing tools are illustrated in Figure 1; typically such implements were made of bone, horn, or wood.

Ethnographic reports outline certain working parameters that we must observe when looking for evolved tool types. Some have long handles; some have wrist-thongs to reduce wrist fatigue. Fleshing tools have a working blade angle to the hide of more than 30 degrees so that the hand will clear the hide, as illustrated in Figure 2 (2A, angle L-1).

## HOW MANY TOOLS, AND HOW USED?

To understand the process of hide defleshing, let us take a closer look at the hide. On the left side of Figure 2A, the numerals 1 - 3 represent three layers of a fresh hide; Line 1 is a thin membrane of tissue on the inner side of a skin; 2 is a space between the membrane and the hide where fatty oils are trapped; and 3 is the thicker component, the hide itself. On green hides, a common scraper will not take off the membrane to expose the oils which must be removed. Such tissue must be slit or cut along parallel lines or patches before it can be removed. On small, thin hides, too deep slitting by a knife blade might cut through the hide; thus a slitting

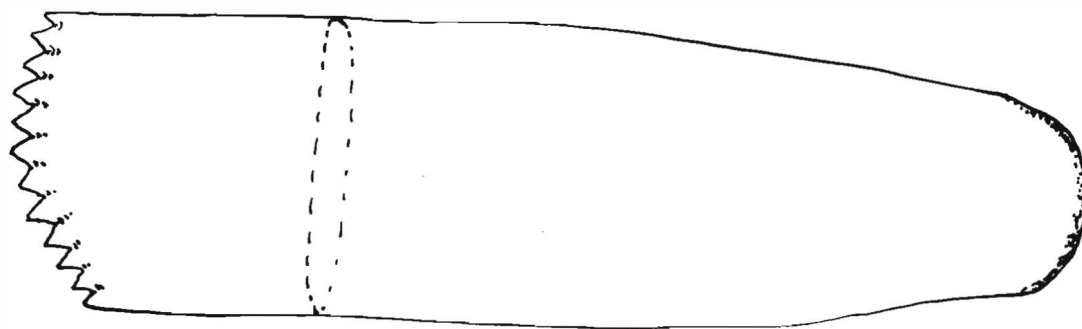
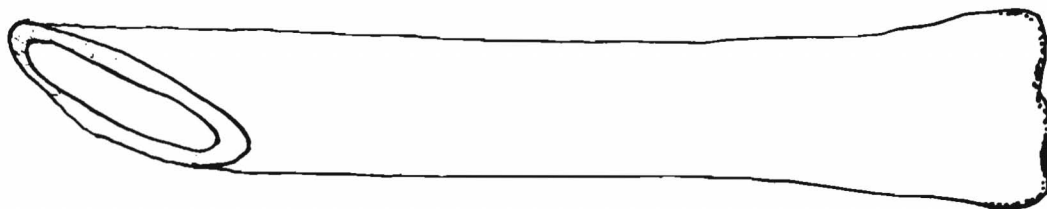
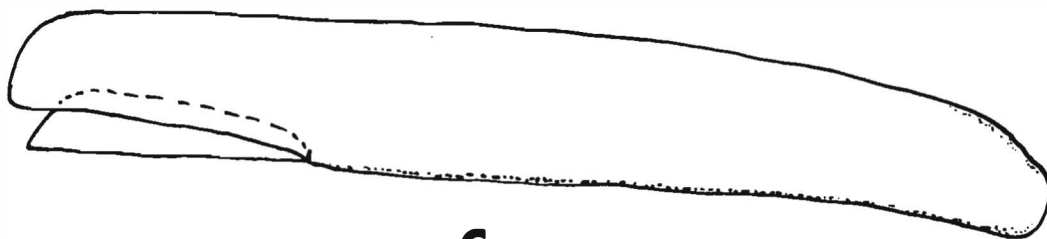
**A****B****C**

Figure 1. Hide defleshing tools from ethnographic descriptions. A, Thin, comb-like bone tool; B, Leg bone cut on an angle with grooves serving as teeth; C, May be of wood, bone, horn, or ivory, with a scooped out section to receive a stone (or, in historic times, a metal) insert.

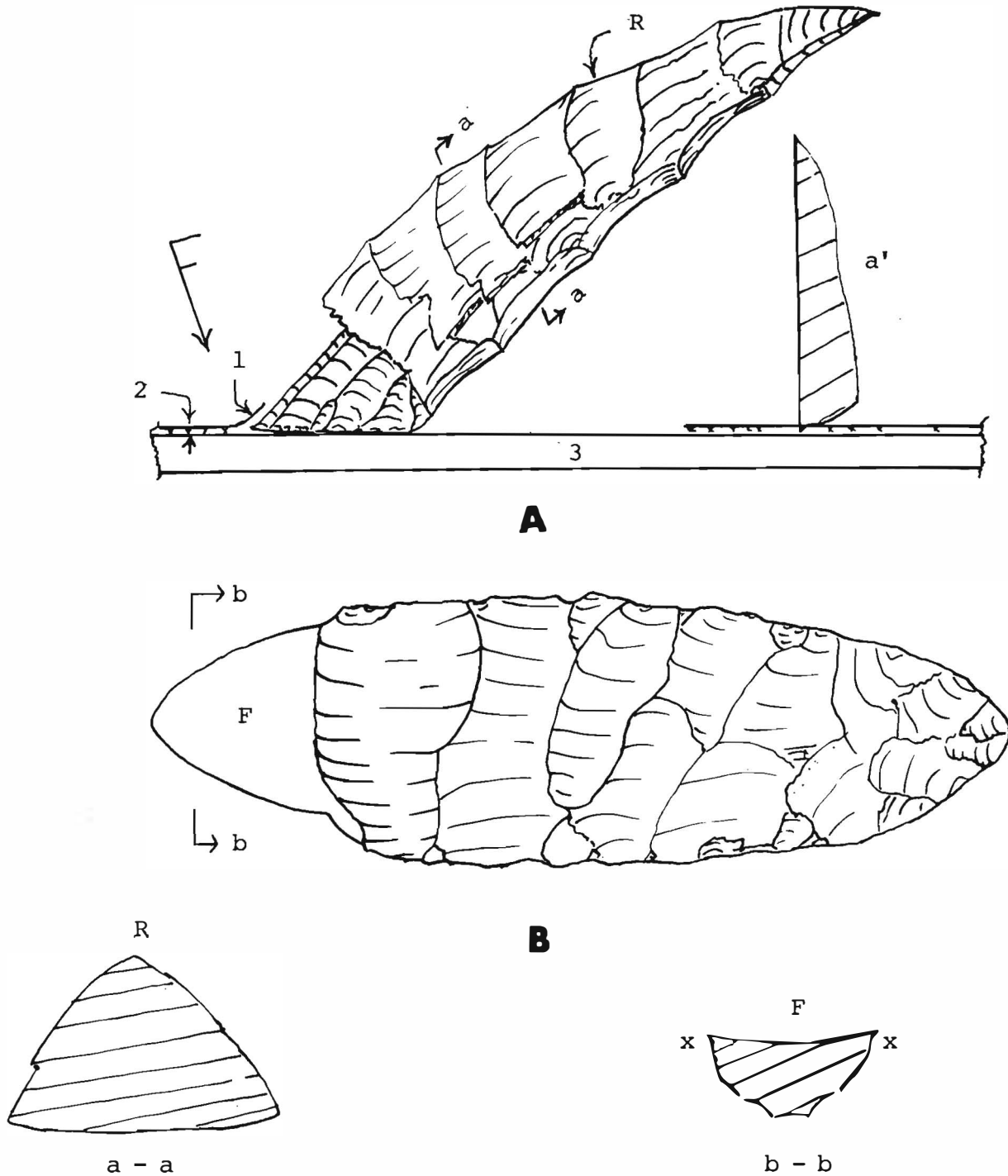


Figure 2. The Classic Guadalupe Tool. A, Side view illustrating use of the Guadalupe tool inserted to free the membrane: 1 is the membrane being lifted; 2 is the oily layer; 3 is the hide being worked; Section a-a (shown below B) illustrates the triangular cross section typical of Guadalupe tools; R orients the ridge. The force arrow F shows the flaking force direction that forms the sole plate surface F which serves as the flaking platform to shape and sharpen the bit. B, Bottom view. F is the sole plate; Section b-b (shown below B) is a cross section through the bit. a' illustrates a common scraper using the nose-end as a depth gauge to prevent cutting thin hides while slitting the membrane.

tool needs a built-in depth gauge so that only the membrane is cut. In Paleo-Indian times, the sharp pointed spur on scraper corners may well have been used. The common (world-wide) convex-nosed scraper has a built-in depth gauge which would protect thin hides (Figure 2 - a') when they are used as a knife. The negative cavities left by the forming flakes make a straight, sharp cutting edge.

#### GUADALUPE TOOLS

The Guadalupe tool (See Figure 2 A) also has the membrane-slitting and -cutting depth control when either lateral edge of its nose-form are used like the typical scraper shown in Figure 2 - a'. The Guadalupe tool has the advantage of not requiring a haft because the haft is integral to the bit. Regardless of hide thickness or size, the Guadalupe tool would make a fine membrane cutter-slitter.

The specimen illustrated in Figure 2 A and B is one of a number of Guadalupe tools which were recovered prior to World War II from Landa Park in New Braunfels, Comal County, Texas. They were exposed by plowing and were found when a golf course was being developed. With the Guadalupe tools were two thick, rounded unifaces (4 by 1 inches).

Generally, Guadalupe tools are found along the Balcones fault line and south from there along major river drainages; thus, it appears to be a specific South Texas tool form (Highley 1984; Street 1984). Curiously, we know of none from the high plateau (Edwards Plateau) nor any beyond about 40 miles west of Uvalde, Texas. Many Guadalupe tools have been dug from below and in the lower levels of rock middens. Hester dates the Guadalupe tool to at least Pre-Archaic times (Hester 1980:114). At Berclair Terrace, Sellards (1940) describes gouges associated with Early Man points that are probably Guadalupe or Atwater. The Guadalupe tool may have been used primarily as a membrane-lifting tool. After the membrane had been slit at necessary intervals, the nose of the Guadalupe tool was inserted in a slit and pushed under the membrane.

The flat sole plate of the Guadalupe tool holds the hide down while its upper surface raises portions of the membrane. However, this process only loosens and raises a portion of the membrane at one time; complete removal remains a difficult job.

#### DISCUSSION

Once patches of the membrane were cut and partially freed, scapers (used in their normal scraping attitude) could be used to remove the remaining tissue. However, the notched or comb-toothed bone fleshers (shown in Figure 1) were probably more efficient. Such bone tools are very ancient and may date back to as much as 27,000 years ago. By comparing such bone tools (Figure 1 B) with stone implements (Figure 2 A), we can see common attributes which suggest a common use. It is quite obvious that both have a sole plate to be placed against the hide. Both have a sharp nose end to lift and free the membrane. Both have similar working angles that clear the operator's hand above the hide. Thus, the bone hide deflesher and the Guadalupe tool probably had the same function.

Bone and stone defleshers differ in the manner of resharpening (and therein we may account for the South Texas invention). Bone requires meticulous whittling or grinding to create a sharp edge which typically on bone would quickly become dull, thus necessitating frequent maintenance. Stone, on the other hand, can be quickly resharpened for a keener, longer-lasting edge.

Assume now that the membrane has been removed. The fatty oils still remain. In warm weather, the hide is very subject to spoiling so that these oils must be removed. Neither the toothy bone deflesher or the Guadalupe tool will do that job. Such tools and other gouges or scrapers would just smear the oils around. A quantity of good, dry wood ash is required to absorb the oil. Rub the ash in and let it work while we find a gouge or scraper to use in removing the oil and ash.

Whatever gouge your group was accustomed to would serve this purpose; some have convex bits, some straight ones, and others have concave bits. If your people did not use the gouge, reach for the common flint scraper. These various tool forms are relevant to your manner of holding the hide for its de-oiling. The hide might be pegged to the ground, stretched in a frame, or draped over a flat or rounded surface such as a tree limb section. Use the gouge or scraper form that conforms to the support or lack of support provided under the hide. After the ash has absorbed a load of oil, gouge or scrape it off and add fresh dry ash to the hide to repeat the process.

Such a procedure would certainly have dulled the gouge bits and they certainly were resharpened. Some were used and resharpened to the extent that gouges with face planes (the lower flat face of some) had striations worn in them. We have observed gouge specimens that have been resharpened to 90-degree cutting edges, some which have concavities in the length of the cutting edge, and some with edge rounding. Some specimens are so dull that they could not possibly be used to cut wood or to dig with. Such evidence strongly suggests their use to rub out oil-laden ash from hides draped over a firm, founded surface. Thus, resharpening did not completely erase the previous use-wear, and obviously edge-wear was allowed to accumulate beyond what would have been allowed for cutting or scraping purposes other than hide de-oiling.

With a hide de-membrated and de-oiled as outlined above, you have a processed rawhide with the hair left on. It can be saved for tanning at some future opportunity, without fear of spoilage.

#### CONCLUSIONS

Based on the common attributes that Guadalupe tools have with bone defleshers of historic Indian groups, a similar use is inferred for the Guadalupe tool. Both the bone and stone artifacts probably functioned as tools to cut and lift inner membranes during hide processing prior to tanning. Wear on other gouges and scrapers is consistent with their use in the final removal of oil-soaked wood ash. While this report is largely speculative, it is based on careful observation of shapes and wear patterns on a sizeable number of Guadalupe tools and other lithic artifacts.

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## BASIC QUADRANGLE SHEET USAGE

Thomas M. Dolezal

## ABSTRACT

This paper presents an analysis of basic information available on quadrangle maps. Through map interpolation, preliminary examination of quadrangle maps will frequently indicate likely areas of site location, available resources and may help to interpret site conditions. Quadrangle maps should be used to plot site locations to aid in the recording of a site and for future reference. During a site survey, a quadrangle map should be used to determine the relative location of sites and topographic features pertaining to the area.

## INTRODUCTION

A quadrangle map is a four-sided figure bounded by parallels of latitude and meridians of longitude, and represents physical features (natural, artificial, or both) of a part of the earth's surface by the use of signs and symbols. The topographic map is the most commonly published and used quadrangle map. Another type, available in selected areas, is the orthophotomaps which depict terrain and other map features by color-enhanced photographic images.

The State of Texas is captured in over 4,000 quadrangle maps of the 7.5 minute and the 15 minute series. Quadrangle maps of the 7.5 minute series denote 7.5 minutes of latitude and longitude and are published at a scale of 1:24,000 (meaning 1" to 24,000") or 1" on the map represents 24,000" (or 2,000') on the ground. The 7.5 minute series quadrangle map covers an area of approximately 7.6 miles East and West by 8.6 miles North and South in the South Texas area (size differs by area). The 7.5 minute series is most commonly used and is preferred because of its scale and the detail it shows. Quadrangle maps of the 15 minute series denote 15 minutes of latitude and longitude and are published at a scale of 1:62,500 (meaning 1" to 62,500") or 1" on the map represents 62,500" (or 5,208.3", nearly 1 mile) on the ground. They cover an area of approximately 17.2 miles East and West by 15.2 miles North and South in the South Texas area.

## DESCRIPTION OF COLOR USAGE

Black indicates man-made or cultural features such as roads, buildings, names, boundaries, etc.

Blue indicates water or hydrographic features such as lakes, rivers, creeks, canals, swamps, etc.

Green indicates woodland or vegetation cover features such as timber brush, vineyards, orchards, etc.

Red indicates important roads or highways and selected fencelines.

Red Tint indicates urban areas where only landmark buildings are shown such as areas within city limits.

Purple indicates revision of features by aerial photographs since the original map was made (however, such changes have not been field checked).

Brown indicates relief features showing variations in elevation of the ground surface by use of contour lines, spot elevations, etc.

White indicates clear areas such as pastures, areas of little or no brush, cultivated land, etc.

#### CONTOUR LINES

Contour lines show elevation and land shapes and are imaginary lines connecting points on the earth's surface that have the same elevation. They are based on elevations above or below sea level datum. Index contour lines are contour lines shown heavier than others and most have elevation figures shown on them. The contour interval is the difference in elevation of adjacent contour lines. A small contour interval is typically used for flat areas and a large contour interval is used for mountainous terrain. In the Example Map (Figure 1), a contour interval of ten feet is used in order to adequately display the marked elevation of the hill at the left of the illustration.

Lines of various widths and styles (solid, dashed, dotted or combinations thereof) are used to represent linear features such as fencelines, pipelines, telephone lines, roads, railroad tracks, etc. Some structures or individual features are represented by a system of symbols. Lines and symbols cannot represent all map information completely. These are often supplemented by the names of objects and places printed adjacent to them. Such letters and numbers are necessary to map reading but are kept at a minimum so there is not interference with other details.

#### INFORMATION SHOWN ON MAP MARGINS

Map Identification: The upper right-hand corner shows the quadrangle name, state, county (if not shown on the face of the map), series (example: 7.5 minute series) and the type (example: Topographical).

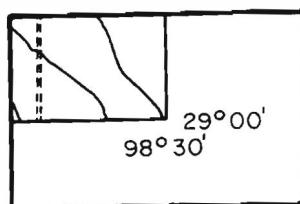
Adjoining Quadrangle Names: The names of the adjoining quadrangle sheets are given on the sides and corners of the map. If the adjoining sheet is of the same scale, the name only is given; if not of the same scale, the name and scale are both given.

The Lower Margin: This area shows several types of information of value. North arrows are shown representing true North (★) and magnetic North (MN). Bar scales are shown in miles, feet and kilometers. The contour interval of the map is also illustrated. The quadrangle location is shown with respect to the state boundaries. The road classification shown on the map is given. The quadrangle name and the year of the data is also noted. If the map was photorevised, the year of revision will be included.

#### COORDINATES

Three types of coordinates are given and are used to locate a point or area.

Geographic Coordinates: The meridian lines give degrees of longitude which increase in value from the South to North. The parallel lines give degrees of latitude which increase in value from East to West. Tick marks are given every 00 degrees 02 minutes 30 seconds (shown as:  $00^{\circ} 02' 30''$ ). Index latitude and longitude coordinate values are given at the corners of the map. An example of index longitude and latitude shown on a map would be denoted as:



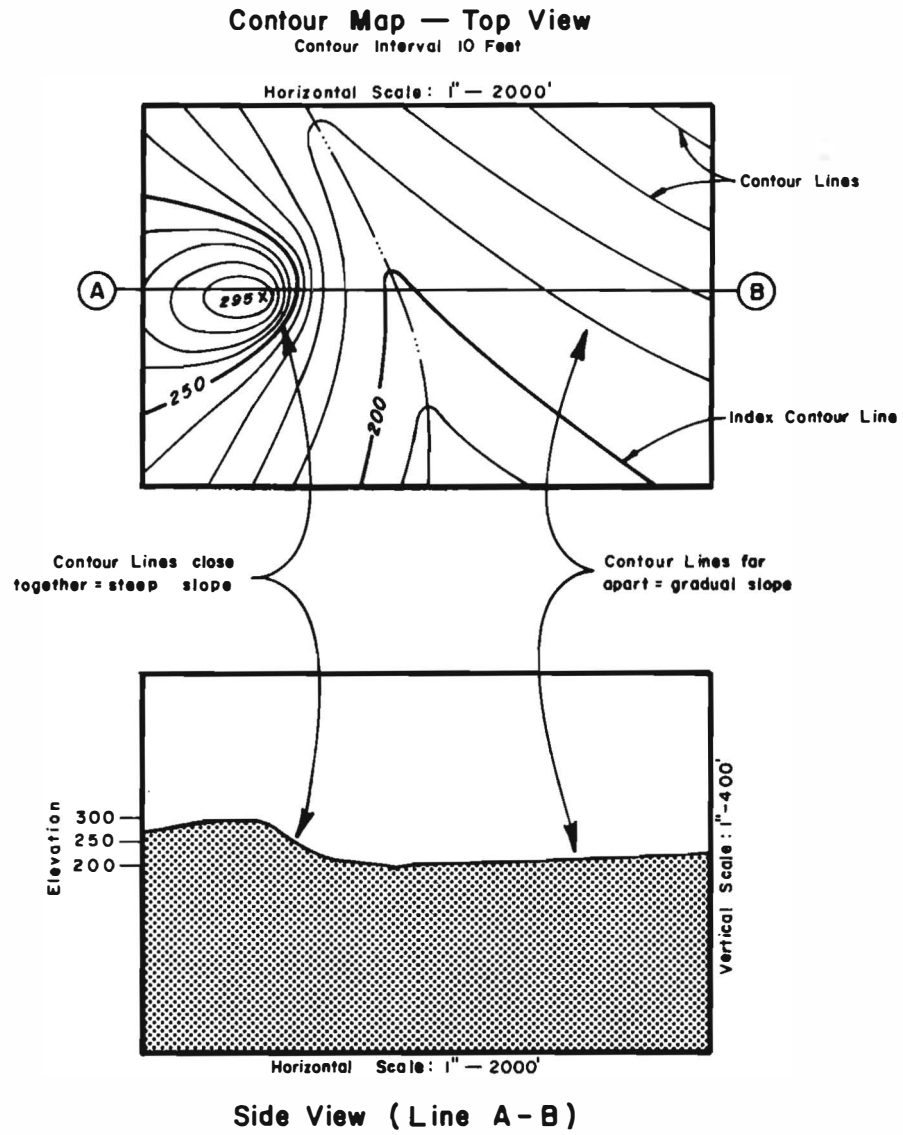
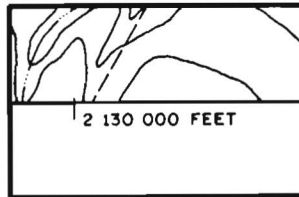
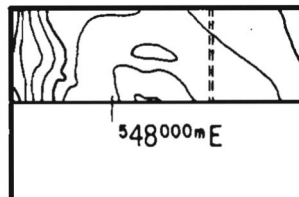


Figure 1. Contour Map Example. Contour indicators in the Top View are shown graphically in the Side View.

State Plane Coordinates: The State of Texas is divided into five zones with the zone designation (or designations, if more than one zone) given in the Southwest corner of the quadrangle sheet in the credit legend. Index coordinates are given in the Southwest and Northeast corner of the quadrangle sheet. The X-coordinates and Y-coordinates are given in feet and are increasing in value from South to North and from West to East. Tick marks are given every 10,000 feet. An example of index State Plane Coordinates would be denoted as:



UTM (Universal Transversal Mercator) Grid Coordinates: The UTM coordinates (Northing and Easting) are given in meters and are increasing in value from South to North and from West to East. The zone designation is given in the credit legend at the lower left corner of 7.5 minute quad maps. Index coordinates are given in the Northwest and Southeast corners of the quadrangle sheet. Tick marks are given every 1,000 meters. An example of index UTM Grid Easting Coordinate would be denoted as:



Only a portion of the information found on a quadrangle sheet is explained in this paper but it is enough to give the reader a basic understanding of quadrangle maps and the information found thereon. With experience and a working knowledge of a quadrangle map, one is able to become skilled in map interpolation and aware of the many uses that can be made of such detailed maps. They are particularly valuable to the archaeologist in locating and documenting the more than 25,000 known sites in this state.

A folder describing topographic map symbols and an Index Map of Quadrangle Maps available for the State of Texas with a price list may be ordered from:

U. S. Geological Federal Center  
Box 25286 Denver Federal Center  
Denver, Colorado 80225

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A NEW SHORT FORM FOR SITE REPORTING  
FROM THE TEXAS HISTORICAL COMMISSION

A new form has been developed by the staff of the Office of the State Archeologist, Texas Historical Commission, for use in the initial recording of archaeological and historical sites in the state. This Short Form provides a quick summary of the information required for issuance of a Trinomial Site Number, and for entry into the THC computerized site file.

Not all of the information will be available or appropriate for every site. Fill in as much data as you can but do send them in. It is much better to have an incomplete form than to have a site unreported and possibly destroyed. If additional information is needed, the agency registering the site will come back to you with the necessary questions, and sometimes with help.

For example, note that Universal Transversal Mercator (UTM) grid coordinates are desired (meters Northing and Easting), although Latitude and Longitude location can be given if the UTM cannot be determined. Please refer to the Dolezal article elsewhere in this issue for assistance in reading UTM index coordinates or USGS quadrangle maps. It is extremely helpful to all concerned if you can include a xerox of a part of the relevant quad map with your site report, if such maps are available to you. Also see the Dolezal article for information on ordering an index of quad maps of Texas from the USGS center in Denver. Many Texas quad maps are available locally in some cities (see the Yellow Pages...). Don't worry if you do not have such maps; in many cases, one of the agencies will send you a copy of the area you are reporting so that you can indicate the location accurately for them.

Site report forms may be sent directly to the Office of the State Archaeologist, THC, Box 12276, Austin 78711, to the Texas Archeological Research Laboratory (TARL), or to STAA or TAS in care of the Center for Archaeological Research, UTSA. These agencies and organizations will coordinate with one another in determining an appropriate trinomial site number for your site, and any of them will work closely with you to protect your information and the site. Remember also, if your site is on state or federal land, an archaeological permit is required for any work at the site.

Both sides of the form are reproduced here for you to copy and use. If you want an additional supply of these forms, write to the OSA at the address given above.

\* Site Assessment \*

THC # \_\_\_\_\_

Trinomial Site # \_\_\_\_\_

Other Designations (Names, Temporary #'s) \_\_\_\_\_

County \_\_\_\_\_

USGS Map Series, Name, & # (as 7.5' Indian Mesa, 3002-443) \_\_\_\_\_

Recorder(s) Name(s) and Affiliation(s) \_\_\_\_\_

Recorder Visited  Other Source   
Project Name, #, & Sponsor or Funding Source (if appropriate) \_\_\_\_\_

UTM at Marked Site Center/Nucleus: Z 13 14 15  
Easting \_ \_ \_ \_ \_ Northing \_ \_ \_ \_ \_  
UTM Range, if needed \_\_\_\_\_

Latitude/Longitude (if UTM cannot be determined)  
Lat \_ ° \_ ' \_ " N Long \_ ° \_ ' \_ " W

Elevation in Feet at Marked Site Center/Nucleus  
\_\_\_\_\_ Elev. Range \_\_\_\_\_

Date of Form \_\_\_\_\_ Date(s) of Survey or Assessment \_\_\_\_\_

Description of Site Location (use either or both):

Owner & Address \_\_\_\_\_

a. Triangulations from USGS Map Points to Marked Center/Nucleus of Site (use numbered boundary markers, benchmarks, spillways, etc., as landmarks; note direction from site--NNW, etc.); or  
b. On-the-Ground Distances & Directions to Site (begin at major intersection or unambiguous point & pick relatively permanent map &/or field landmarks)

Leasee or Foreman \_\_\_\_\_

Informant(s) & Address(es) \_\_\_\_\_

Previous Investigators/Observers (who, what, when, why) \_\_\_\_\_

References & Additional Sources of Information \_\_\_\_\_

Type of Site and Cultural Features (e.g., fort, lithic scatter, rockshelter, hearth, etc.) \_\_\_\_\_

Environmental/Topographic Setting of Site (include vegetation in site area and its density, pertinent landforms, SCS soil data, visible landmarks, nearest named water, etc.) \_\_\_\_\_

Time Periods of Occupation (e.g., Republic of Texas, Early Archaic, Late Prehistoric; may be multiple) \_\_\_\_\_

Artifactual Materials Present (both reported and observed as well as collected; kinds of materials, distribution across site, relationship to features, etc.) \_\_\_\_\_

Observed or Estimated Site Size (length x width, including orientation (e.g., NE-SW); systems other than metric may be used where appropriate for historic documentation) \_\_\_\_\_

Depth &/or Thickness of Cultural Deposit \_\_\_\_\_

THC # \_\_\_\_\_

Trinomial Site # \_\_\_\_\_

Work Done by Present Assessor(s) and Method(s):  
 Observe/Record  Date(s) \_\_\_\_\_  
 Surface Inspect/Collect  Date(s) \_\_\_\_\_  
 Instrument Mapping  Date(s) \_\_\_\_\_  
 Testing  Date(s) \_\_\_\_\_  
 Method (e.g., hand: shovel tests; machine: test units) & Amount \_\_\_\_\_  
 \_\_\_\_\_  
 Excavation  Date(s) \_\_\_\_\_  
 Method & Extent \_\_\_\_\_  
 \_\_\_\_\_

Records Taken: Sketches of Site   
 Artifact Sketches  Daily Journal   
 Photographs & Photo Logs: Slides  Prints   
 Field Catalog  Lab Inventory   
 Testing/Unit/Square Noles   
 Mapping Information (instrument)

Condition of Site \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Discussion and Recommendations \_\_\_\_\_  
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Kinds of Materials Collected (including special samples; e.g., radiocarbon, plant) \_\_\_\_\_  
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Collection Techniques (e.g., controlled, arbitrary, select; describe) \_\_\_\_\_  
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Temporary Housing (location of materials during field work &/or analysis) \_\_\_\_\_  
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Permanent Housing (selected repository where materials are to be permanently curated) \_\_\_\_\_  
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Sketch features, artifacts, etc., below. Please attach a photocopy of the topographic map showing site location; also attach a sketch map of the site and its environs. The sketch map should include a North arrow and scale; note if map was not made on site or is not to scale. It should be an on-site map at the largest scale possible and should include site and topographic features, extent of site area and any concentrations encountered, areas tested, and modern features (fencelines, houses, roads, etc.). If adapted from topographic map, so indicate. [Form Date 11/64]

\*Instructions: Fill in all categories where possible; be specific in distinguishing between "none" and "none observed" or "unknown". Where categories are followed by a "  ", simply "X" a "yes" response, enter " ? " if unsure, or leave blank for a "no" response. Enter measurements in metric unless directed otherwise. Calculate UTM/Lat-Long coordinates in box if familiar with the system. Use common abbreviations; be sure the responses are legible and will photocopy. Use attachment pages as necessary.\*

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WHAT'S IN A NAME? - AN EXAMINATION OF INDIAN GROUPS  
ALONG THE CENTRAL AND SOUTHERN TEXAS COAST

Malcom L. Johnson

ABSTRACT

Recorded names of some of the protohistoric and early historic Indian groups located along the central and southern Texas coast may be compound Spanish words which contain heretofore unanalyzed information about the habits, culture, or physical characteristics of the people they represent.

INTRODUCTION

At the onset, let me make it clear that I am no authority on language. Recently, however, while doing research for another paper, I became intrigued with the idea that some of the names of the Indian groups which were recorded early in the history of Texas, primarily by the Spanish, may contain information about these people or their customs.

It was while reading Campbell's interpretation of the route of Cabeza de Vaca through southern Texas that the question of Indian ethnic group names and their meaning came up. Some scholars have always assumed that the names of southern Texas and northern Mexico aboriginal groups given by Cabeza de Vaca were actually Indian words. In their recent work, however, Campbell and Campbell (1981) point out that two of the groups' names were actually Spanish words. These were the ANEGADOS, which means flooded or overflowed, and the LOS DE LOS HIGOS, which translates as "Those of the Figs," or "The Fig People." Campbell and Campbell also point out that one of the early contact groups, the OREJON, had a name which perhaps characterize them as having "Large Ears." Another group with a Spanish name which I know about is the MANOS DE PERROS, which translates literally as the "Hands of Dogs" or "Dog Hands."

It seemed reasonable to think that perhaps other group names were also Spanish words which might give some further information about the groups or their cultures. This information may not have been obvious since Cabeza de Vaca's form of Spanish is now somewhat archaic. The English language has undergone drastic change over time and words have taken on meanings which are entirely different from the original. The Spanish language, particularly in Texas and Mexico, has also undergone considerable change. Thus, some Spanish words are now obsolete and are not recognized by modern Spanish-speaking people.

This line of thinking led me to attempt some interpretations of group names given by Cabeza de Vaca who had early contact with the South Texas Indian groups. Most of the names examined in this study were taken from Campbell and Campbell's report. I have analyzed them to see if any bits of information can be recovered which might correspond to any of their interpretations (and in my opinion, some of them do).

METHOD

Any Spanish words associated with groups mentioned by Cabeza de Vaca would be names that he had given them since the chance of the language of any of the original coastal inhabitants resembling the Spanish language is extremely remote. His names, then, are the best set to work with since they were recorded early, and presumably reflect his own perceptions of the groups.

I used Spanish-English dictionaries (Velázquez de la Cadena 1943, Castillo and Bond 1948, Anonymous 1973), considering only a few letters of the name at a time, to see if the names could be broken down into meaningful Spanish words. This was a trial and error method looking at various segments of the names and reviewing the older (archaic) meanings given for identical or closely related words.



## RESULTS

In my opinion, most of the group names recorded by Cabeza de Vaca appear to be made up of short Spanish words, and probably are not actual Indian words at all. It appears that he may have taken one or more Spanish words and created a kind of compound descriptive nickname to help him recall the order in which he encountered the various groups, or something about the group. This would have been a very natural kind of word association process. If my guess is correct, then these "descriptive nicknames" may provide some additional insight as to the locations or cultures of the various groups Cabeza de Vaca encountered.

Possible interpretations of these names are given below. These findings are purely speculative; they are presented here with the hope that they will inspire someone with a better grasp of archaic Spanish to delve into the possibility of obtaining new information by this type of analysis. A map of the area is also included as Figure 1, and the location of each group as given by Campbell and Campbell (1981) is included in the text.

INDIAN GROUPS NAMED BY CABEZA DE VACA  
Names and Possible Interpretations and Locations

ACUBADAOS: A similar Spanish word, Acubado, means "resembling or belonging to a pail or bucket." This may infer they had wooden containers, or baskets, similar to Spanish buckets. Or it might infer that they made wide-mouthed pottery containers. Some Rockport ware and Leon Plain wide-mouthed vessels are known from coastal corridor archaeological sites (Suhm and Jelks 1962; Calhoun 1964). The ACUBADAOS probably lived in southern Bee County along the Aransas and Mission rivers (Campbell and Campbell 1981:24).

ANEGADOS: Anegado means "flooded" or "overflowed" in Spanish. The obsolete nautical use of the word means a "water-logged ship." The ANEGADOS traded for weapons and clothing that the CAMOLES had taken from occupants of the Tellez and Penalosa barge. Some of the ANEGADOS had seen the wrecked barge, and told Cabeza de Vaca about it (Campbell and Campbell 1981:28). Hence the name? The group is thought to have lived in southern Nueces County (Ibid).

ARBADAOS: No interpretation. The group was probably located near present Hebbronville in northwestern Jim Hogg County.

ATAYOS: a - to, in, at, or for; ta - take care, beware, stay, I recollect; yo - exclamation of contempt, or a substantive ending used to denote people (Dr. James Larkins, personal communication 1985). May translate as to remember with contempt, or "People to beware of." The ATAYOS were at war with the SUSOLAS (Campbell and Campbell 1981:30), and may have been losing. They may have not been a very brave people or may have been considered the villains. Cabeza de Vaca's knowledge of this group was indirect, through the SUSOLAS who asked for his help; thus, his perceptions of the ATAYOS may reflect the SUSOLAS' attitudes toward the ATAYOS. The group was probably residing in inland Refugio County and perhaps into southern Bee County along the Mission River.

AVAVARES: a - to, in, at, according to, on, by, for; va - he, she, or it goes; vare - A similar Spanish word, vareo, is defined as the act of beating down fruit from trees. Cabeza de Vaca mentions that the AVAVARES were eating the seeds from a tree, possibly the Texas Ebony or Pecan. Thus, the name may relate to the manner in which they harvested the seeds, perhaps by beating them off the trees. Texas Ebony and Pecan trees grow along the lower Nueces River and around Nueces and Corpus Christi Bays. The AVAVARES probably lived in inland San Patricio County near the lower Nueces River but may have ranged west into Live Oak County during the summer.

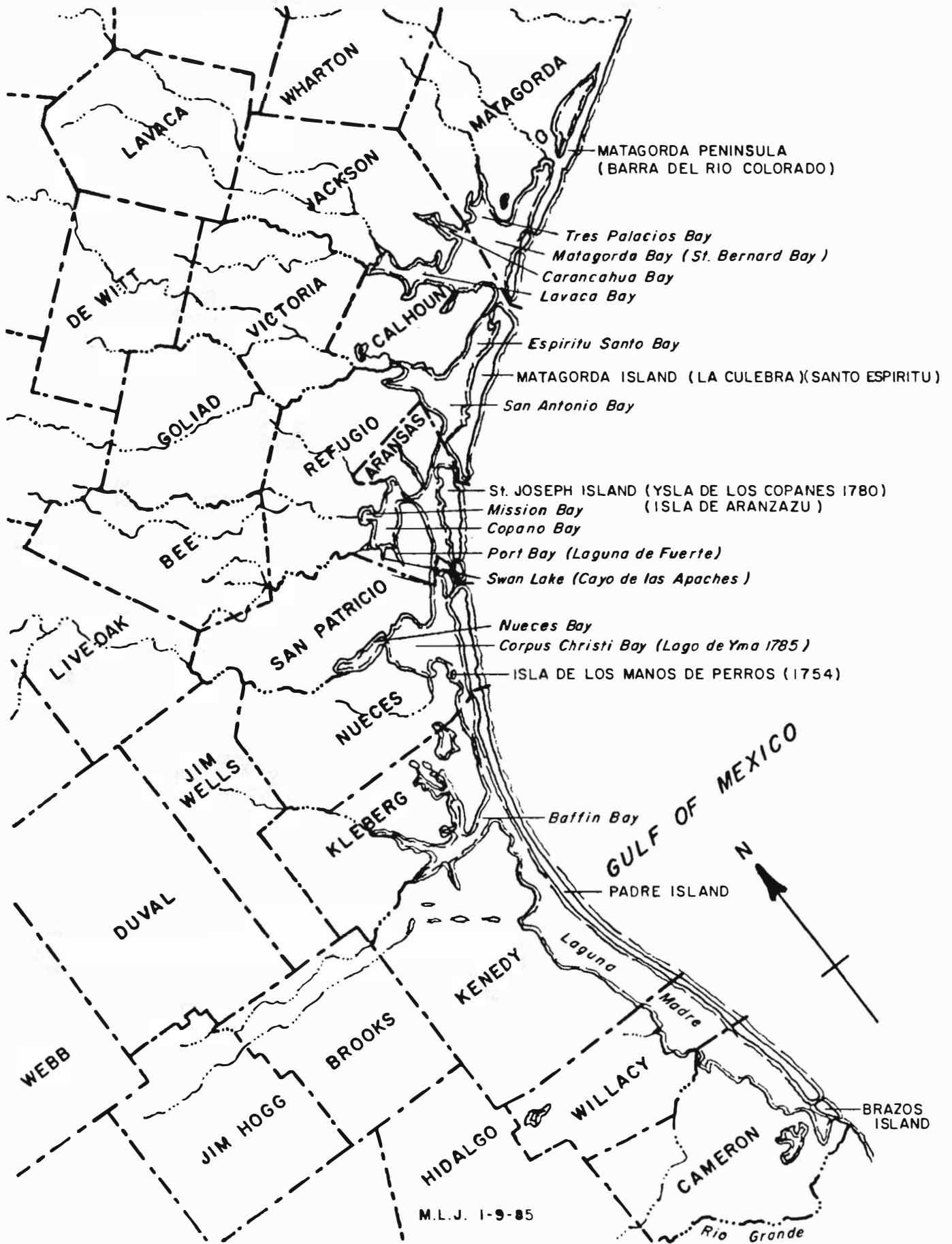


Figure 1. The Counties and Bays of the Central and Southern Texas Coast.

CAMOLES: ca - an obsolete Spanish word meaning because, for, or the same as; mole - word for vast size or quantity, massiveness. This name may indicate they were a large group or were people of large size. If it refers to their large size, then they may have been a group of KARANKAWA. Reportedly, they killed the Spanish survivors of the Tellez and Penalosa barge that was wrecked in 1528. Campbell and Campbell place the group around both sides of Corpus Christi Bay.

CAPOQUES: The plural of Capoc, Spanish for the Kapok, or silk cotton tree (Larkins, private communication 1985). Cabeza de Vaca may have associated the Capoc with the numerous Cottonwood trees which grow in southeastern Texas. The group lived east of the Guadalupe River. Corbin equates the CAPOQUES (or CAOQUE) of Cabeza de Vaca with historic COCO (COCOAS, COKES) whose homeland lay between the Colorado and the Brazos; they lived for a time in the San Xavier Missions and later at Mission Rosario in Goliad County (see Corbin 1974:49-52).

CHORRUCO: A similar Spanish word, chorrera, means a spout or place where liquids drop, a mark left by water, an ornament appended to crosses or badges of military orders, or the frill of a shirt. Another similar word, chorro, means water or liquid issuing from a spout or other narrow passage, a strong and coarse sound emitted from the mouth, or a hole made in the ground for playing with nuts. Thus, the name may indicate the group camped by a large spring or at the mouth of a river or bay, or that they wore some particular ornament. Alternatively, they may have made some kind of distinctive noise or played a game (or crushed seeds and nuts) in a hole. The group resided east of the Guadalupe river.

COAYOS: coa - an obsolete Spanish word meaning Glue or a kind of Hoe. yos - an exclamation of surprise or contempt, or a substantive ending used to denote people. Could be translated as "the Glue People" or the name may suggest the COAYOS were strangers to most of the groups Cabeza de Vaca lived with. Perhaps they were traders in adhesives (asphaltum collected from the beach) or used hoes in some type of limited gardening.

COMOS: A Spanish word, como, means how, in what manner, like, or in the same manner. This name may imply that the COMOS were the same as other groups that Cabeza de Vaca says were closely associated (the AVAVARES, MALIACONES CUTACHICHES, and SUSOLAS). The COMOS lived inland, west of the Guadalupe River.

CUCHENDADOS: A similar Spanish word, cuchar, means a tax or duty on grain, or an ancient corn measure. dado is an obsolete Spanish word for donation or gift; the past participle of dar, to give. Cabeza de Vaca states that the CUCHENDADOS regarded the Spaniards with such awe that they gave them food even though the Indians themselves had nothing to eat. Thus the name might be loosely translated as "food givers" or "tribute payers." The group probably lived in southwestern Jim Hogg County, some 20-25 miles north of the Rio Grande River.

CUTALCHICH: cu is an ancient Spanish word for Mexican temples. tal means such, equal or similar. chiche is a sauce composed of fish and eels. Thus, the name seems to translate something like "Temple of Fishes." Since no temples are known in the region, this may infer the use of a large hut for ceremonial purposes, or some kind of wooden altar. The CUTALCHICH gave the Spaniards large flint knives which were cherished objects. Such knives were probably for ceremonial use (several very large flint knives which were found in Aransas County are now in the Witte Museum in San Antonio). An alternative translation might be "Temples like the CHICHES"; the CHICHES may have been a group in Mexico that Cabeza de Vaca was aware of. The CHICHES may relate to one of the hunting and gathering groups of northern Mexico now known as the CHICHIMEC.

DOGUENES: do, obsolete V; Donde is where, in what place, or to what place. A similar Spanish word, Quien, means who, which, or one or the other. Thus, the name may indicate that the group were wanderers of unknown origin. Cabeza de Vaca encountered them somewhere east of the Guadalupe River.

GUAYCONES: A similar Spanish word, Quay, means a stretch of paved bank or a solid, artificial landing place beside navigable water. co - with; nes - none. This may translate as, "with no landing" or "docking with none." From Campbell's location of this group, they may equate with the historic COPANES (Aransas and Calhoun Counties around Copano Bay).

HAN: No interpretation. The group lived east of the Guadalupe River.

LOS DE LOS HIGOS: Literally, "Those of the Figs" or the Fig People. Campbell and Campbell locate the group as well south of Corpus Christi Bay, including portions of Padre Island. They also indicate friendly relationships (trade?) between such shoreline groups and adjacent inland groups.

MALIACONES: mal means evil or illness; acones may relate to similar Spanish words, Aconito, Aconite which mean Wolfsbane, a drug made of dried roots of the Monkshood. The name may imply they were drunk or sick from using some sort of drug. Since Cabeza de Vaca implies that the CUTALCHICHES had some sort of ceremonial activity and that they were associated with the MALIACONES, we might infer a ceremonial use of drugs. The MALIACONES lived inland from the QUITOLES somewhere along the lower Nueces River; members of the group traveled southwest with Cabeza de Vaca into the present Jim Wells and Duval Counties area.

MARIAMES: A similar Spanish word, Marea, means tide, seashore, or tidal area. mes is Spanish for month, courses, act of moving from one point to another, or the path traversed. Thus, the name seems to indicate they were seashore travelers or that they traveled back and forth to the seashore. Campbell and Campbell note that the MARIAMES spent approximately nine months of the year along the lower Guadalupe River in an area that probably includes at least parts of Calhoun, Refugio, and Victoria Counties, and that they moved every two to three days. Significantly, they traveled to the prickly pear collecting area by way of a bay, probably Copano Bay, where they killed deer by driving them into the water.

MENDICA: mendiga is a similar word meaning he, she, or it, begs (Larkins, personal communication). This name may imply that they were less well off than other nearby groups, that they were begging, or were poor traders. They were located somewhere east of the Guadalupe River.

QUEVENES: que is Spanish for that or who. For the second syllable, a similar Spanish word, venera refers to the Mediterranean scallop shell. The name may imply a people who had an unusual use of shells, such as smoothing the inside of their pottery; or they may have worn scallop shells or jingle shells as ornaments. Cabeza de Vaca indirectly indicates these people were of fairly large size, so they may have been a group of KARANKAWA. The KARANKAWA were noted for being larger than most South Texas groups (Gatschet 1891). They lived east of the Guadalupe River.

QUITOLES: quito is a Spanish word meaning "free from obligation" or referring to a dyewood yielding black (from the Napo region of South America). les means them. This name could translate as "Carefree People" or Black-painted People. They may have had black tattoos or the name may imply their skin was darker than other nearby groups. There are indications that some KARANKAWA groups used wood ashes for tattooing, and some of the coastal groups have been described as a very carefree people.

Campbell and Campbell locate the group between Copano and Corpus Christi Bays in southern Aransas and eastern San Patricio Counties; the group also lived on St. Joseph and Mustang Islands.

SUSOLAS: suso is an obsolete Spanish word for "above." las is the pronoun for them. Thus, this name seems to translate as "above them." This could mean that the SUSOLAS were above or North of the AVAVARES when seen by Cabeza de Vaca in 1534-1535, or it might indicate the SUSOLAS had a somewhat higher culture. The SUSOLAS were at war with the ATAYOS and may have been better warriors; hence may have been said to be "above" them. This finding would fit well with the ATAYOS having seemed to be spoken of with contempt. Cabeza de Vaca first encountered the SUSOLAS while he was living with the MARIAMES on the lower Guadalupe River but they were also in the prickly pear gathering area during the summer.

YGUAZES: Similar to Spanish words iguaces and iguana, meaning lizard. Also similar to iguala which means equal, level, or stipend. The letters Y and I were used interchangeably. The name may indicate that the group was similar or equal to the MARIAMES or the GUAYCONES, who were their neighbors. Or perhaps that they were living in a flat, level place. It could also infer they were eating lizards or hunting alligators. Herman Smith reports the coastal KARANKAWA were known to use alligator oil as an insect repellent and suggests they traded it up the coast (Smith 1982:40). Campbell and Campbell believe the YGUAZES occupied much of the area which is now Refugio County.

#### DISCUSSION

It would appear that many of the names used by Cabeza de Vaca to refer to South Texas coastal corridor and inland groups, are composed of one or more Spanish words. The finding of so many Spanish compound words in this list seems to me to indicate that the group names Cabeza de Vaca recorded were probably made up by him as he wrote his report. This may have been done as a convenient way for him to remember and place the various groups he had encountered in their correct sequence. Thus, we may be seeing in his list not so much Indian group names as verbal descriptors of distinctive group characteristics.

His use of idiosyncratic, descriptive nicknames for the various Indian groups as a way to reconstruct his experiences in Texas may also explain why the report of Oviedo does not give the names of the groups they encountered. Any two observers would have noticed different things about any given group and would have probably come up with different nicknames for the various groups. The Oviedo report was based on the Joint Report of Cabeza de Vaca and his associates for the Audiencia de Espanola (Ibid:4); the absence of group names in this Joint Report may suggest there was no consensus on formal names.

This trend of assigning descriptive nicknames by Spanish explorers contacting the various South Texas Indian groups probably continued into later historic times. This may help to explain the diversity of sounds and names used to refer to the same groups. It may also account for the lack of overlap between Cabeza de Vaca's list of Indian Groups and those names used in the Spanish Mission period two centuries later.

#### ACKNOWLEDGEMENTS

I would like to thank Dr. James E. Larkins of Universal City, Texas, a retired professor of Romance Languages at Wright State University, who reviewed an early draft of this report and made a number of helpful suggestions. The final translations, however, as well as the speculations, are my own.

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CONSTITUTION AND BY-LAWS  
OF  
THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION  
(as amended April 19, 1980)

Article I

The name of this "Association" shall be:  
"The Southern Texas Archaeological Association."

Article II

- (a) The purpose of this Association shall be to bring together persons with an active interest in the archaeology and prehistoric heritage of Southern Texas in an atmosphere conducive to the exchange of information and ideas;
- (b) To promote scientific archaeological investigation and documentation;
- (c) To preserve the archaeological materials and records of the region;
- (d) and to interpret and publish data attendant thereto.

Article III

- (a) Membership shall be extended to all persons who are in agreement with the purposes of the Association and by payment of the prescribed annual dues.
- (b) All members shall agree to abide by the following statement of ethics:

"I pledge that I will not intentionally violate the terms and conditions of any Texas Antiquities Statutes, as same now exist, or shall be hereafter amended or enacted, or engage in the practice of buying or selling artifacts for commercial purposes or engage in the willful destruction or distortion of archaeological data or disregard proper archaeological field techniques."

- (c) Meetings shall be held four times per year at a location designated by the Board of Directors, and the Board of Directors will be empowered to call special meetings when necessary.

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The government of the Association shall be vested in a Board of Directors consisting of the following officers: Chairman, Vice-Chairman, Secretary, Treasurer, Newsletter Editor and Program Chairman; and the Immediate Past Chairman as well as additional Board members consisting of the chairmen of appointed committees in existence at the time of any regular or special meeting.

A Nominating Committee shall be appointed by the Chairman not less than thirty days prior to the annual business meeting.

Article V

The officers shall be elected by popular vote annually and will serve for one year. The first meeting of the calendar year will be the annual business meeting, at which time officers will be elected and take office. In the event any of the Directors cannot serve after elected, the Board will appoint a member to serve the remaining term of office.

Article VI

This Constitution and By-Laws may be amended by a majority vote of the members present at any business meeting, provided the membership has been notified at least thirty days prior to the meeting of intention to amend and the nature of the proposed amendment.

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Article I

Memberships will be as follows:

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Dues are payable any time, but if not paid before January 1 of the following year, will be considered delinquent. Delinquent members will not be permitted to participate in Association activities.

Article II

Officers must be members in good standing.

Article III

- (a) Expenses of the Association will be delineated in an annual budget which will be approved by the Board.
- (b) The Chairman shall not authorize any non-budgeted expenditure in excess of \$50.00 without approval of the Board.

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The Chairman will appoint committees at such time that committees are deemed necessary. All committees appointed by the Chairman shall cease to exist upon the expiration of that Chairman's term of office unless specifically requested to continue their organization and purpose by the Chairman Elect.

Article V

Special awards may be determined by the Board.



## AUTHORS

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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 the form of materials with which we have to work.

Figure 1 of any manuscript should normally be a county or regional map to show the location of your sites. If you choose not to disclose the specific location of the site, show at least the county with its major river or creek drainages. A small Texas map showing the location of the county in Texas will be added, to provide our readers who are not familiar with the area some idea of the general location. Other figures can be line drawings or photographs; line drawings are preferred if they are good quality since every photograph used costs an extra \$50 for a metal plate and set-up charges. If you need assistance with illustrations, please let us know--there are several STAA members who have volunteered to help with illustrations. For examples of good maps and artifact illustrations, see the McReynolds article in Vol. 9, No. 4, or the C. K. Chandler article in Vol. 9, No. 3.

All figures should contain an appropriate caption and, where necessary, identification of each specimen (a, b, ... or 1, 2, ...) to aid referencing individual specimens in the text. The suggested procedure is to photocopy your original drawing and write in captions and identification letters on the photocopy. This saves the original for our use in final preparation of camera-ready copy.

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