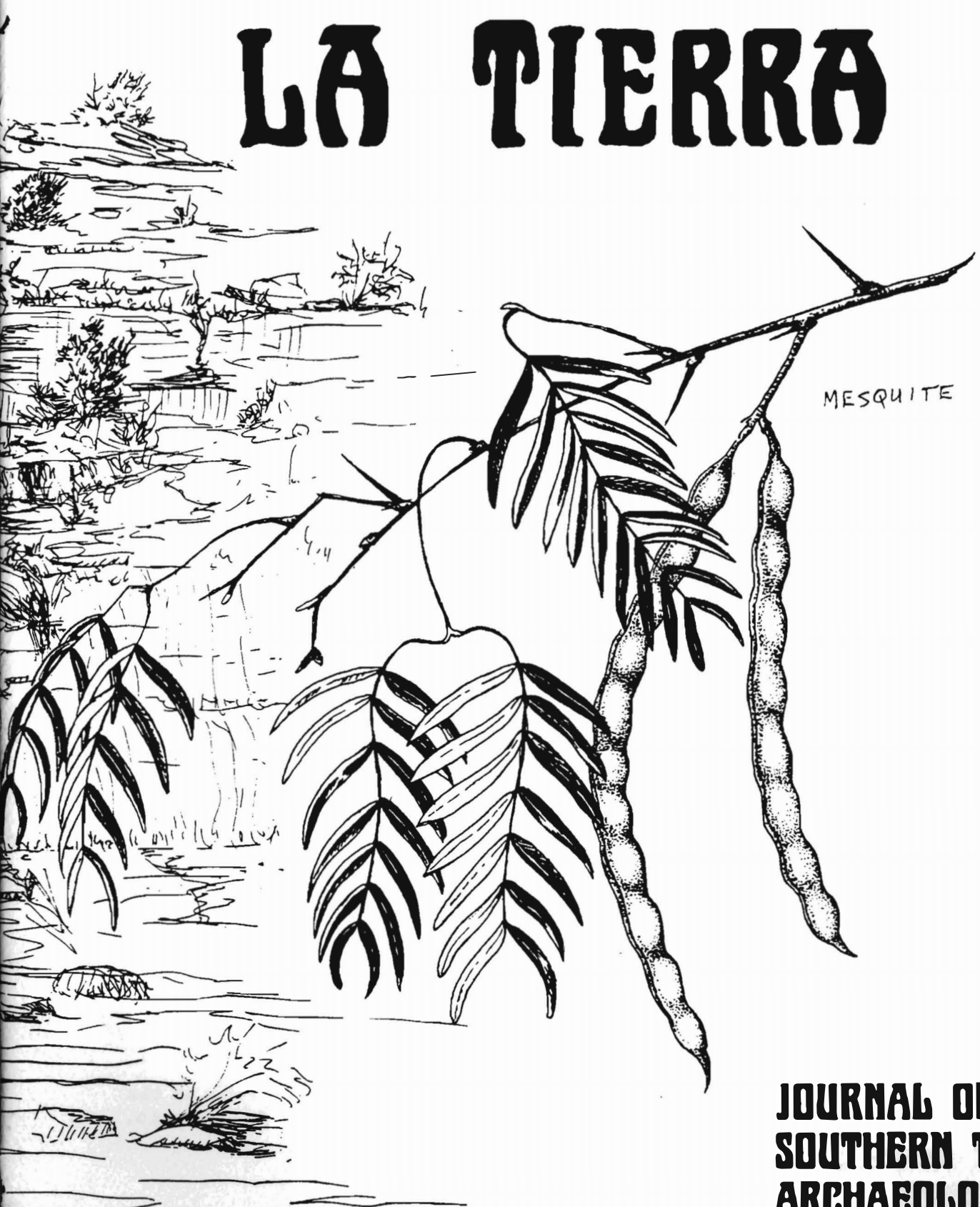


# LA TIERRA



MESQUITE

**JOURNAL OF THE  
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ASSOCIATION**

LA TIERRA

Quarterly Journal of the Southern Texas Archaeological Association

Volume 14, Number 3  
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Jimmy L. Mitchell  
Editor

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Cover Illustration: An impressionistic view of relic Pinyon Pines and Mesquite in the vicinity of Kinney County, Texas. Cover drawing by Richard McReynolds. (Pinyon adapted from: Robert A. **Vines, Trees, Shrubs, and Woody Vines**, University of Texas Press, Austin, 1960).

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## EDITORIAL

### TYOLOGY AND CULTURAL INFERENCE AT THE FULLER SHELTER

The report by Leland Bement featured in this issue is an important contribution to the archaeology of southern Texas; there have been very few sites from Kinney County which have been reported in the regional or state literature. Thus, we are happy to see his report submitted to this journal, and have chosen to make it our feature article for this issue.

Having said that, I want to take the unusual step of disagreeing with what Bement concludes in terms of cultural inference. He suggests that Kinney County should be considered "the eastern extension of the Lower Pecos River region, at least during Late Archaic and Late Prehistoric times." This conclusion is based in part on tooth loss (diet) and burial patterns and partially on projectile point type classifications. We do not yet have enough burial data for South and Southcentral Texas for valid comparisons on diet and burial patterns, and Richard McReynolds (**La Tierra** staff artist) and I question Bement's type classifications at Fuller Shelter.

In this Figure 3, Bement classifies a - d as Perdiz arrow points and e as a Toyah point. Based on a close examination of this drawings (we have not examined the specimens), Richard and I believe Figure 3 e and possibly 3 c to be fragments of Edwards arrow points, and suspect that Figure 3 d is a Sabinal arrow point. Such arrow point classifications would imply cultural affiliations with resident Southcentral Texas Groups as opposed to being an eastern extension of Lower Pecos River cultural groups, and dating in the early Late Prehistoric.

We suggest an independent, third party examination of these Fuller Shelter projectile points.

The Editor

## NOTES ON SOUTH TEXAS ARCHAEOLOGY: 1987-3

## Paleo-Indian Artifacts from Chaparrosa Ranch, Southern Texas

Thomas R. Hester

Following up on my comments in **Notes on South Texas Archaeology: 1987-1**, this brief paper will discuss Paleo-Indian artifacts collected from the Chaparrosa Ranch in Zavala County, southern Texas. I have carried out research at the ranch since 1970. In 1974 and 1975, field schools from The University of Texas at San Antonio were conducted there. The investigations included site survey (more than 160 prehistoric and historic sites have been documented), test excavation, and major excavations at two sites, 41 ZV 83 (Montgomery 1978) and 41 ZV 10 (Hester 1978). A number of detailed manuscripts on the research have been prepared and await editing and publication; a series of summary reports were assembled and published in 1978 (Hester 1978).

In addition to the systematic field work carried out at Chaparrosa Ranch, I have also had the opportunity to record several collections that have come from the ranch. In these collections, a number of Paleo-Indian projectile points have been recognized. Previously published have been a Clovis and a Folsom (Hester 1978:Figure 3 a, b) and points resembling Angostura and Scottsbluff were also noted (ibid.: Figure 3,c, p. 12). The largest number of Paleo-Indian artifacts come from the McDonough Collection, originally documented by me in 1974 and more recently examined by C. K. Chandler. A fortunate aspect of the latest review of this collection was the preparation of illustrations of these Paleo-Indian specimens by Richard McReynolds (Figure 1). Another likely Paleo-Indian specimen, identified as "marginal" Plainview by T. C. Kelly's classification system comes from the Fillinger collection, recorded in 1984.

However, the artifacts shown in Figure 1 are the focus of my comments here. As usual, McReynolds' illustrations save the archaeologist a lot of words in terms of describing the artifacts. Thus, I will add below, in Table 1, various measurements and other notes that will hopefully be of value in comparative studies.

Most of the illustrated artifacts come from north of Highway 57, along both sides of Chaparrosa Creek. This is an area of intensive occupation and a number of sites have been documented. Sheet erosion and deep gullies have exposed artifacts from all time periods in southern Texas, from the Paleo-Indian artifacts illustrated here up to an aboriginal gunflint, also in the McDonough Collection. Interestingly, this collection also includes Early Archaic specimens, especially Bell and Andice and Early Triangular. The Middle Archaic is represented by Langtry and Tortugas, the Late Archaic by Marcos and Montell, and the Transitional Archaic by Desmuke, Ensor and Frio. From my own surveys at these same sites, I have collected arrow points and ceramics (on file, Center for Archaeological Research). Test excavations have been conducted in the vicinity, but with very limited results.

The McDonough collection represents the largest sample of Paleo-Indian artifacts from a known locale within the ranch. It suggests that Chaparrosa Creek has changed little in terms of its major channel since the early Holocene -- at least in this part of its drainage. As one moves south on this creek, and on its parallel tributary, Turkey Creek to the east, the drainage pattern is dendritic, and the contemporary channels are of more recent date (apparently no earlier than Middle Archaic times, with most of the occupations dating to the Late Archaic, Transitional Archaic, and Late Prehistoric). Our surveys on the Turkey Creek drainage indicated some interesting patterns in terms of the temporal shifts in the channel of the creek through time. Indeed, among the

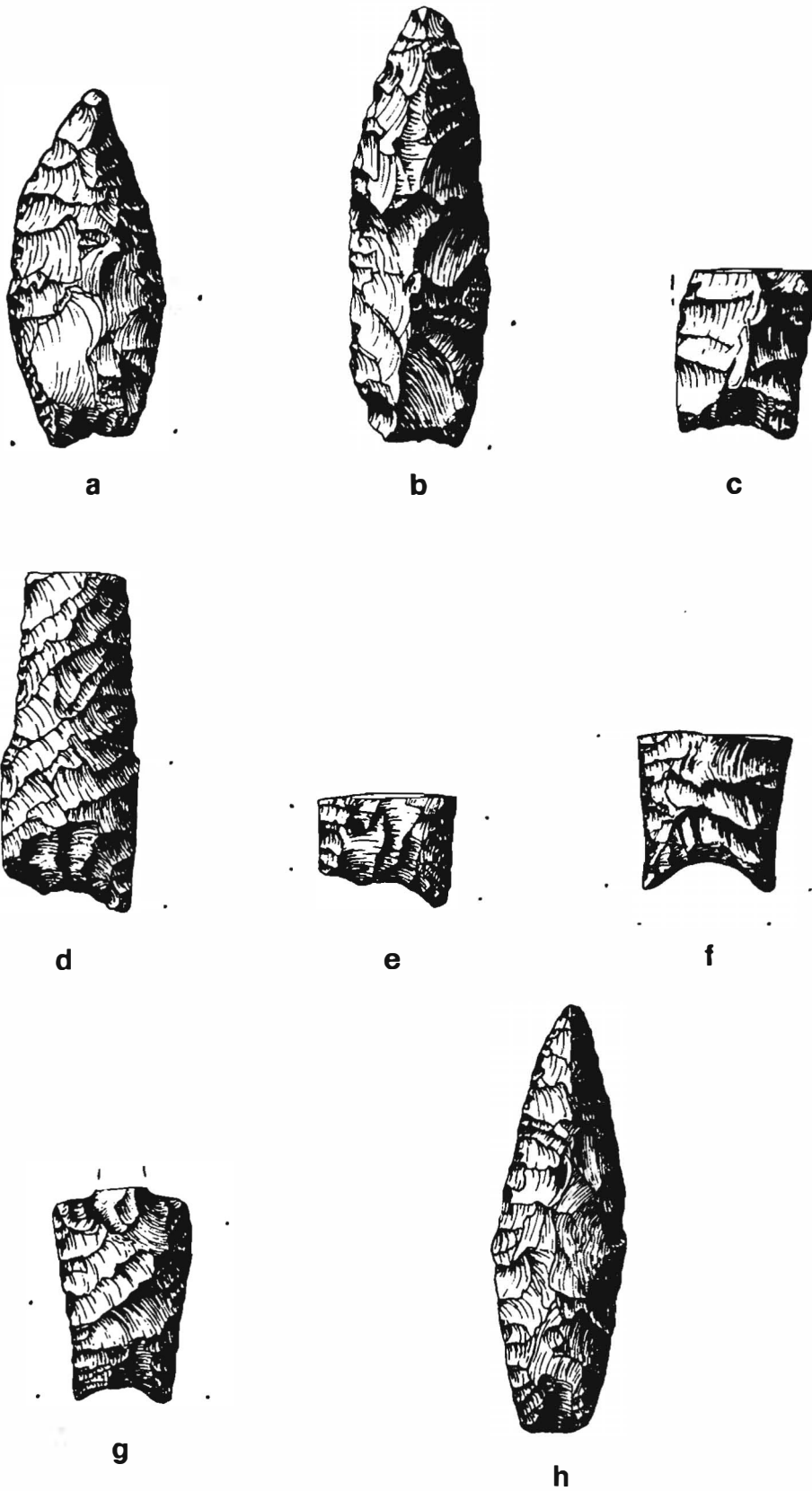


Figure 1. Paleo-Indian Artifacts from Chaparrosa Ranch, Zavala County, Texas. All specimens are from the McDonough Collection. Drawings by Richard McReynolds. Dots indicate extent of lateral edge dulling. All artifacts are shown at actual size.

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Table 1. Paleo-Indian Points in the McDonough Collection, Chaparrosa Ranch

| <u>Fig.</u> | <u>Type</u>  | <u>L (mm)</u> | <u>W</u> | <u>Th</u> | <u>Material</u>                        | <u>Comments</u>                           |
|-------------|--------------|---------------|----------|-----------|----------------------------------------|-------------------------------------------|
| 1, a        | Angostura    | 50            | 23       | 7.5       | pink/tan chert                         | heat-treated?                             |
| 1, b        | Plainview    | (64)          | 21       | 9         | tan grainy chert                       | reworked distal edges                     |
| 1, c        | Plainview    | (24)          | 20       | 6         | grainy brown chert                     | lightly dulled edges                      |
| 1, d        | Plainview    | (50)          | 20       | 7         | gray white chert                       | reworked distal                           |
| 1, e        | Golondrina?* | (16)          | 20       | 4         | gray mottled chert                     | 1 edge beveled;<br>see footnote           |
| 1, f        | Golondrina   | (22)          | 22       | 4         | glossy gray-brown<br>translucent chert | alternately trimmed<br>lateral edges      |
| 1, g        | Plainview**  | ■             | 20       | 5         | gray-brown trans-<br>lucent chert      | reworked into drill;<br>see Hester (1968) |
| 1, h        | Angostura    | 63            | 20       | 7         | gray chert                             | edges not dulled                          |

\*My 1974 drawing of this specimen shows complete, flared basal corners ("ears") which must have been broken in handling since then; likely Golondrina.

\*\*My 1974 drawing shows the lateral edges to be less constricted toward the base; my notes describe it as "Plainview-like."

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few Paleo-Indian points collected by the 1974-1975 survey teams were two Golondrina points from the eastern upland margins of the Turkey Creek valley. Also at sites in this vicinity were Gower and "early Corner-Notched" points of the Early Archaic, suggesting that the main channel of Turkey Creek was some distance to the east of the modern stream (cf. Hester 1978:44).

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EPHEMERAL SITE MORPHOLOGY: FULLER SHELTER (41 KY 27),  
KINNEY COUNTY, TEXAS

Leland C. Bement

ABSTRACT

Cultural and skeletal remains of Late Archaic and Late Prehistoric age were excavated from a small rockshelter, 41 KY 27, overlooking an intermittent stream in Kinney County, Texas. Analysis of this material revealed that site use is attributable to way station occupation and the disposal of the dead. The distribution of culturally produced materials reflected that lithic reduction, tool manufacture, and hafting activities were performed in the central area of the shelter, in front of a hearth built against the back wall. A red and black pictograph of three anthropomorphic figures could not be securely associated with the interments or habitation of the shelter. Dental attributes of a mandible of one of the deceased and the inclusion of a deer antler with a burial suggest cultural ties with the Lower Pecos River Region to the west.

INTRODUCTION

In November, 1985, a hunter climbed the short, steep trail to a small rockshelter overlooking the floodplain of Flat Rock Creek, Kinney County, Texas. From this vantage point, the hunter could survey the broad floodplain for deer movements. His vigilance was interrupted, however, when the dusty floor underfoot gave way, dropping him shin deep into the deposits. With nothing stirring in the floodplain below, the hunter began pushing the dirt away from the bottom of the collapsed hole. Bones -- human bones -- emerged from the bottom of the hole. The bones were collected and taken to the ranch house. Shortly thereafter, the owner of the ranch contacted the University of Texas at Austin and invited archaeologists from the Texas Archeological Survey to the ranch to examine the site and skeletal remains. In late November, Dr. Solveig A. Turpin and Leland C. Bement traveled to the Navajo Ranch in central Kinney County to meet with Mr. Garner Fuller and evaluate the find.

SITE DESCRIPTION

The site - 41 KY 27 -- is a small rockshelter 6.5 meters wide, 3.5 meters deep and 2.7 meters tall. It is situated in the left (east) canyon wall of Flat Rock Creek at an elevation of approximately 15 meters above the broad floodplain (Figure 1). A large displaced roof spall partially blocks the entrance to the shelter. The walls of the shelter are soft, crumbly limestone with only a few patches of indurated surface remaining. On one of these patches located near the floor at the upstream end of the cave is a small pictograph composed of three red and black anthropomorphs (Figure 2). The floor of the shelter inclines toward the rear wall. At the downstream (south) end, exposed limestone forms a bench covered with a small woodpile of branches -- fuel for the fires of recent visitors. The ceiling above the bench is smoke-blackened from recent fires.

In front of the shelter, a sparsely vegetated rubble slope descends sharply to the floodplain. A light scatter of lithic debitage comprised the only cultural material on this slope. No well-developed talus cone marks the rockshelter as a habitation site.

The skeletal material was removed from what appeared to be a one-meter-square hole in the middle of the shelter. At least two individuals are represented, based on the duplication of cranial vault fragments and left radii.

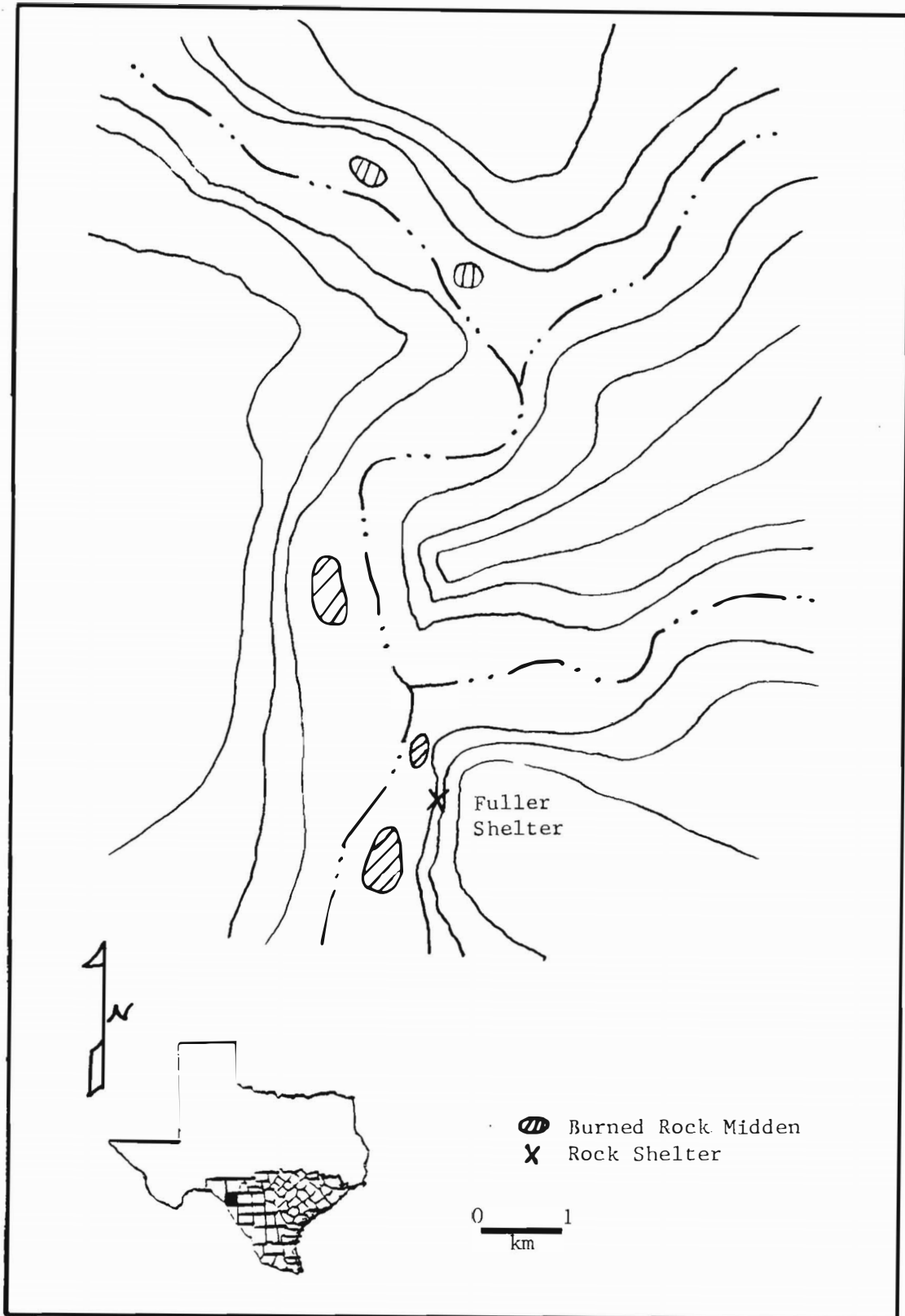


Figure 1. The location of Fuller Shelter and neighboring sites. Inset is map of Texas showing location of Kinney County (darkened area).



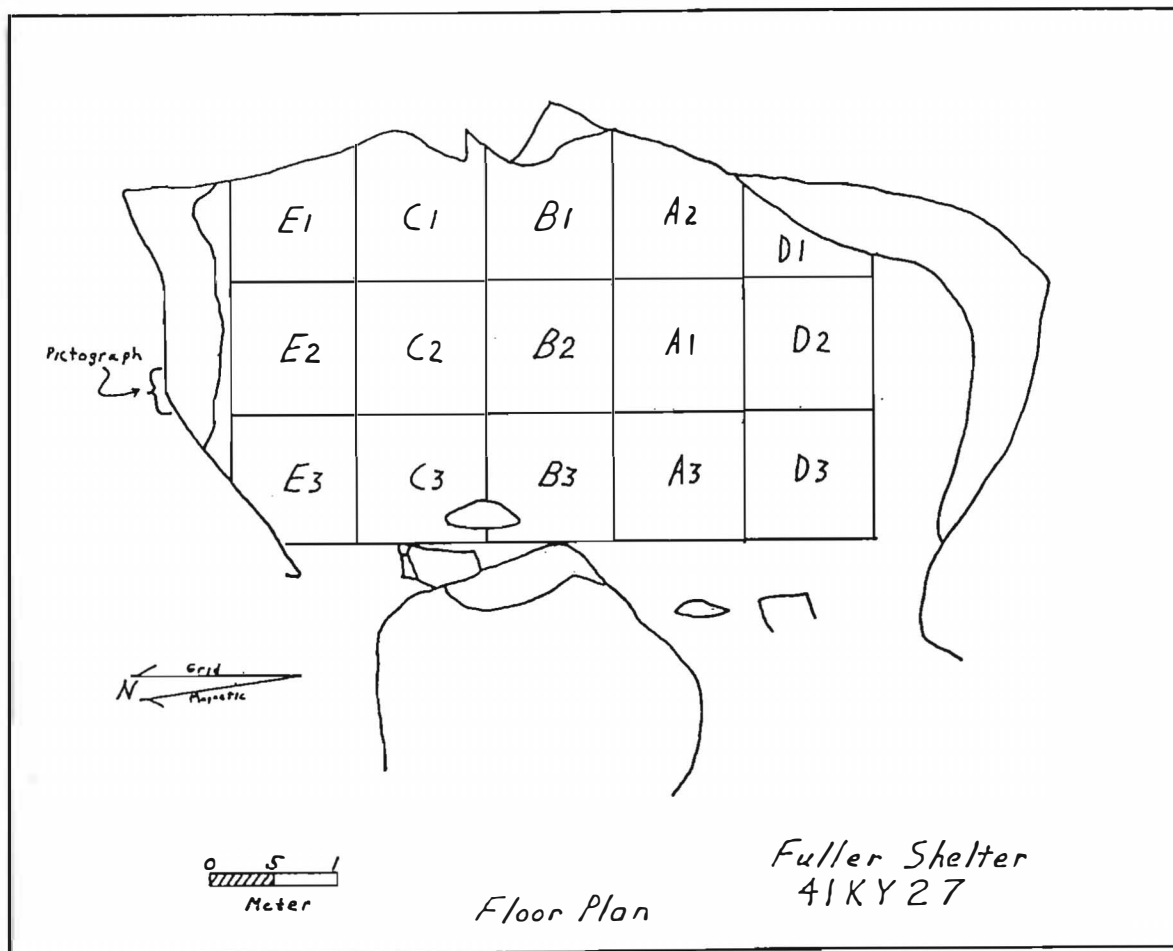


Figure 2. The floor plan of Fuller Shelter showing the excavation grid system.

The majority of the bones belonged to a young adult male (Jackson 1986 worksheet). The second individual appears to have been an adult female. No stone artifacts were recovered by the hunter, although a fragment of a deer skull containing the base of an antler was associated with the burial.

At the request of Mr. Fuller, a volunteer crew composed of himself, Dr. Solveig Turpin, Dr. Arthur Bement, Wayne Bartholomew, and Leland Bement assembled on May 29, 1986 to conduct a salvage excavation of the remaining deposits in the rockshelter. This excavation was conducted at the request of Mr. Fuller to mitigate the effects of continued destruction of the shelter deposits by relic seekers. It was hoped that the remaining skeletal elements of the two individuals and the context of the interments could be recovered. The fieldwork was conducted from May 29 through May 31, 1986.

## ENVIRONMENTAL BACKGROUND

Kinney County contains the southern edge of the uplifted Edwards Plateau and the northern fringes of the South Texas Plains (Gould 1975). These two physiographic zones are divided by the Balcones Escarpment -- a fault zone. The Edwards Plateau is composed of lower Cretaceous age limestones while the South Texas Plain is underlain by the upper Cretaceous formations often covered by Uvalde gravels of Pliocene/Pleistocene times (Barnes 1977). Chert nodules contained in the limestone of the Edwards Plateau provided local lithic material for the prehistoric inhabitants of that region, while the highly varied lithic cobbles of the Uvalde Gravels were readily available on the South Texas Plain.

The two physiographic zones also differ in the biotic communities each supports. The Edwards Plateau is part of the Balconian Biotic Province, a transition zone between the xeric Chihuahuan Province to the west and the more mesic Austroriparian Biotic Province to the east (Blair 1950). Plant and animal communities from both the Chihuahuan and Austroriparian provinces interdigitate in the Balconian Province. Vegetation is characterized as a Juniper-Oak-Mesquite savanna (Arbingast et al. 1973).

The South Texas Plain supports the various plant and animal species of the Tamaulipan Biotic Province (Blair 1950). Vegetation in this province has been characterized as a Mesquite-Chaparral savanna (Arbingast et al. 1973), composed of thorny brushlands.

Primary game resources utilized by prehistoric man on both the Edwards Plateau and South Texas Plain include deer, an occasional bison (Dillehay 1974), and antelope. Plant resources were more varied between the physiographic zones with oak the primary resource on the Plateau (Creel 1978) and prickly pear on the Plain.

Fuller Shelter is located on the left (east) bank of Flat Rock Creek, an intermittent tributary of the East Fork of Sycamore Creek. It is contained by the Edwards Plateau, although the floodplain of the East Sycamore Creek and Flat Rock Creek allow intrusions of South Texas Plain's biota. Flora near the rockshelter is dominated by juniper and pinyon pine. The pinyon pines of Kinney County are one of the few relic stands recorded along the southern reaches of the Edwards Plateau (Gould 1969).

The general climate of Kinney County today is semiarid characterized by hot summers and moderate winters. Rainfall provided nearly all the surface water with occasional snowfall supplying the rest (Newman et al. 1967:56). An average of 22 inches of rainfall per year falls primarily in the warm months with the highest precipitation concentrated in May and June. January records the lowest monthly daytime temperature of 39°F and high of 63°F. The annual high is reached during July and August when temperatures in excess of 100° are common. The average annual humidity is 60 percent with little variation from month to month.

## ARCHAEOLOGICAL BACKGROUND

As noted in the environmental background section, each biotic province supported diverse resources utilized by prehistoric groups. Cultural manifestations related to the differential resource exploitations have been employed in dividing the state into Cultural Zones. That part of Kinney County north of the Balcones Escarpment is included in the Central Texas Cultural Zone (Brown et al. 1982) and mirrors the extent of the Balconian Biotic Province and, to a large degree, the distribution of large Archaic-age burned rock middens. The South Texas Cultural Zone lies south of the Balcones Escarpment and corresponds to the Tamaulipan Biotic Province, and is characterized by a lack of the large burned rock middens other than those in the proximity of the fault zone (Lukowski 1987a). A third cultural zone, the Lower Pecos River Region, is occasion-

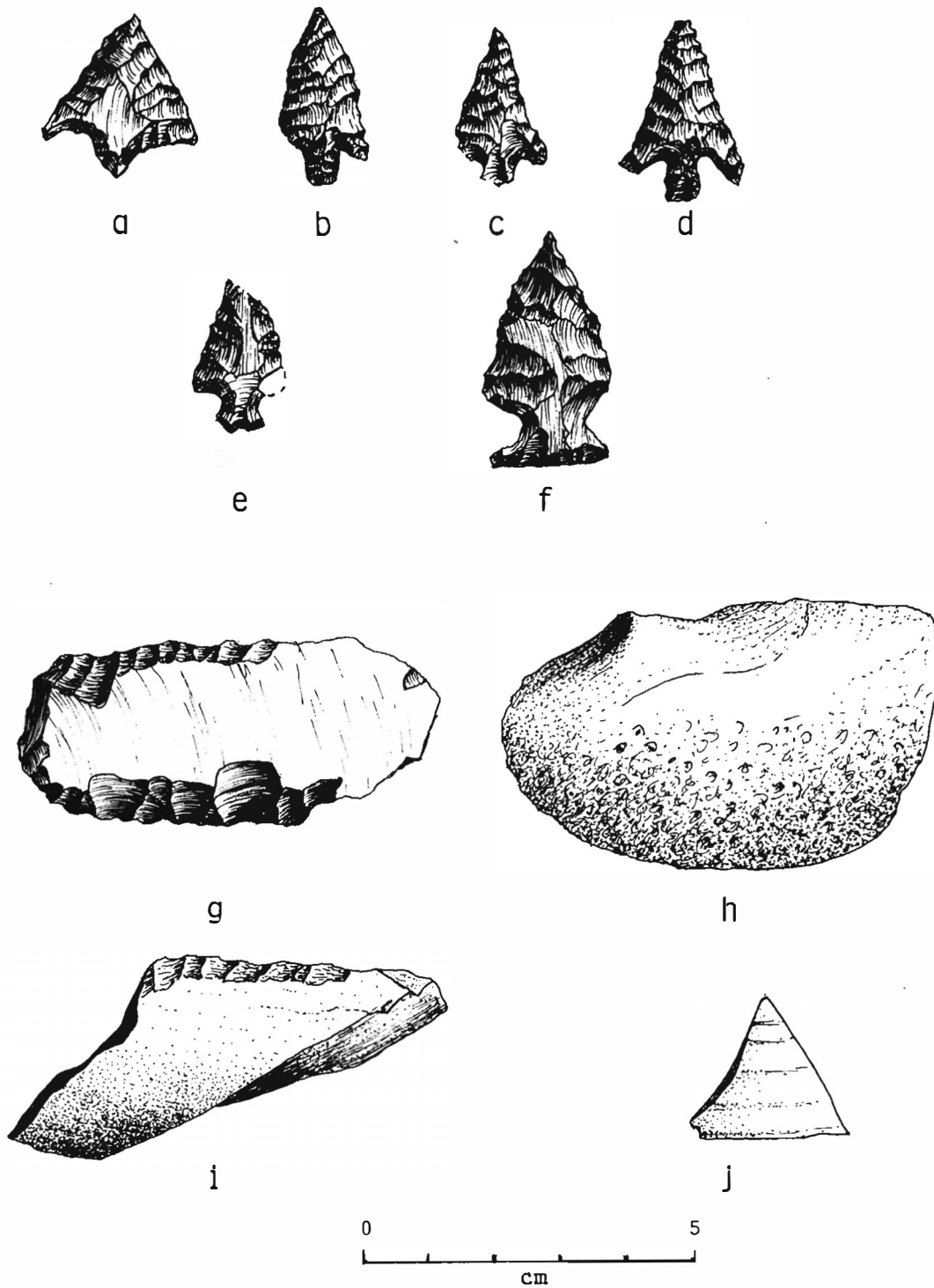


Figure 3. Perdiz arrow points, a - d; Toyah arrow point, e; Ensor dart point, f; biface, g; hammerstone/abrader, h; bone scraper, i; and shaped shell, j.

ally extended to include Kinney County on the basis of similarities in artifact morphologies and rock art styles.

The archaeological resources of Kinney County have received little intensive or extensive attention by professional archaeologists. In fact, there have been only 34 historic and prehistoric sites recorded in the entire county compared to the 892 sites recorded in Val Verde County to the west and 128 sites in Uvalde County to the east. Cultural history in Kinney County should follow the major trends described for neighboring areas with artifactual types showing influences from each of the three bordering Cultural Zones: Central Texas, South Texas, and the Lower Pecos River Region.

The cultural history of Kinney County begins with the big game hunters of the Paleo-Indian Period (12,000-8,000 years ago), followed by the more diversified hunting and foraging adaptations of the Archaic Period (8,000-1,300 years ago). The adoption of the bow and arrow marks the beginning of the Late Prehistoric Period (1,300-400 years ago), and, finally, the coming of the Europeans initiates the Historic Period 400 years ago. Specific attributes and subdivisions of these periods have been presented in full detail in other publications (see Suhm, Kreiger and Jelks 1954; Prewitt 1981; Hester 1980; Turpin and Bement 1986), and will not be repeated here except as they apply to the materials from Fuller Shelter.

#### METHODS AND TECHNIQUES

A one-meter increment grid oriented perpendicular to the back wall of the shelter was imposed on the shelter surface. Each east-west line was assigned a letter designator and each one-meter square within that line a numeric identifier (Figure 2). A permanent vertical datum was established by driving a spike into the rear wall of the shelter approximately 20 centimeters above the surface of the deposits. Additional pins were set from this point to aid in the taking of vertical measurements in the far reaches of the shelter. The excavations progressed by one square meter units dug in 10-centimeter levels using trowels and shovel shaving. All fill was dry screened through 1/4-inch mesh hardware cloth and bagged in the field. The dry, powdery matrix passed easily through the screen. Small bone fragments and minute flakes were easily retrieved with little abrasion from screening pressure.

#### RESULTS OF THE EXCAVATION

Artifactual materials recovered by the excavation included 7 arrow points, 1 dart point, 1 biface, 10 utilized flakes, 1 hammerstone/abrader, 2 cores, 142 flakes, 667 grams of burned rock, 1 split bison bone scraper, 1 shaped mussel shell fragment and 1 fragment of matting. In addition to the artifactual materials, various skeletal elements attributable to the two human interments were recovered. The skeletal remains of rodent and bird inhabitants of the shelter were also identified.

#### ARTIFACT DESCRIPTIONS

Arrow Points: A total of seven complete or fragmented arrow points were recovered during excavation of the shelter. Four of these (Figure 3 a-d) have straight to contracting stems and barbs that range from slight to pronounced. These specimens are similar to those included in the lower range of the Perdiz arrow point type which is diagnostic of the Late Prehistoric age Toyah Phase in Central Texas (Prewitt 1981) and the Flecha Phase in the Lower Pecos Region (Dibble ms; Turpin and Bement 1986).

A fifth arrow point has square shoulders, an expanding stem and bifurcated base (Figure 3 e). This specimen is similar to those defined as the Toyah

type, a component of the Toyah Phase of Central Texas (Prewitt 1981) and the Flecha Phase in the Lower Pecos Region (Turpin and Bement 1986).

The final two arrow point specimens are broken tips that cannot be attributed to a specific type.

Dart Point: A single dart point, recovered from under the edge of the boulder at the mouth of the shelter, is a side-notched form known as an Ensor (Figure 3 f). The blade of the projectile has convex lateral edges; the shoulders are square; and the base is straight. This point type is diagnostic of the Late Archaic Driftwood Phase in Central Texas (Prewitt 1981) and the Blue Hills Phase in the Lower Pecos Region (Turpin and Bement 1986).

Biface: A single biface was produced from a large flake of translucent brown chert (Figure 3 g). The striking platform and hinged termination of the flake-blank form the opposing ends of the biface. Both lateral edges have been bifacially worked to form straight to convex edges. Two pressure flakes removed from this tool were recovered during the excavation. The remnant edges on these flakes do not show evidence of use, suggesting that they were removed as part of the original tool manufacturing sequence. This specimen is 8 cm long, 3 cm wide and .8 cm thick.

Hammerstone/Abrader: A fragment of a quartzite mano has been battered on one surface and smoothed along its edges (Figure 3 h). The battering probably resulted from the tool's use as a hammerstone in lithic tool production. The smoothing along its edges may have resulted from abrading, possibly in platform preparation tied to reduction sequences.

Utilized Flakes: Ten utilized flakes, made on large secondary and tertiary flakes, represent the most numerous tool class from the shelter deposits. These expediency tools average 4.2 cm long, 3.2 cm wide and 0.9 cm thick. The morphology of the use-edge is dominated by convex unifacial edges on five specimens, followed by concave unifacial edges on four and straight unifacial edges on one.

Cores: Two chert cobbles have flakes removed from their surfaces. Both cores exhibit prepared, broad, single-faceted platforms from which unidirectional flakes have been struck. One core, 5.5 cm long, 5.4 cm wide and 3.0 cm thick is of a mottled chert (Type 2 below), a common lithic type found in the shelter deposits. The second core is 7.1 cm long, 5.5 cm wide and 2.8 cm thick. It consists of a grey chert (Type 5 below), also common in the debitage recovered during excavation.

Debitage: A total of 142 flakes and chips were divided into the broad categories of primary, secondary and tertiary flakes. Primary flakes are defined by the presence of cortex on the striking platform and 100 percent of the dorsal surface. Secondary flakes contain some cortex on the dorsal surface and/or on the platform. Tertiary flakes are devoid of cortex. Chips include those chert fragments that lack striking platforms and are thus the distal end of broken flakes. Debitage counts for this sample include 3 primary, 46 secondary, and 70 tertiary flakes and 23 chips. Eighty-three percent of the secondary and tertiary flakes have single-faceted striking platforms indicative of Late Prehistoric lithic technologies along the southern Edwards Plateau (Lukowski 1987a).

Bone Scraper: A fragment of Bison or cow long bone 6.8 cm long, 3.2 cm wide, and 1.0 cm thick has been unifacially flaked along a straight lateral edge (Figure 3 i). The bone fragment is a splinter with the curved fracture pattern characteristic of a helical break. The intentional flaking of the 4.2 cm long

use-edge has been smoothed from use. The lack of smoothing or dulling on the other three fracture edges signifies that natural post-depositional processes did not smooth the flaked edge.

Matting: A small piece of matting 4 cm by 3 cm was recovered from the disturbed pit containing the young adult male interment. The mat or bag is composed of a thin, narrow (4 strands to the centimeter), bark-like material that is yet to be identified. The design of the matting is produced by the one-over/two-under weaving technique.

Shaped Shell: A single piece of freshwater mussel shell was recovered during the excavation. The fragment is triangular with 2.3 cm long sides (Figure 3 j). Two edges have been smoothed, the striations from a coarse abrader still apparent. This modified shell artifact, like the fragment of matting, was removed from the disturbed unit containing the young adult male skeleton.

Pictographs: The remnants of a pictograph panel are located low on the north wall of the shelter (Figure 2). Three red and black figures remain on a patch of indurated limestone. Other figures and the missing portions of these three have been removed by the natural breakdown of the shelter walls into a fine dolomitic dust. The remaining figures (Figure 4) appear to be anthropomorphs consisting of red and black torsos with black arms and legs. Each figure

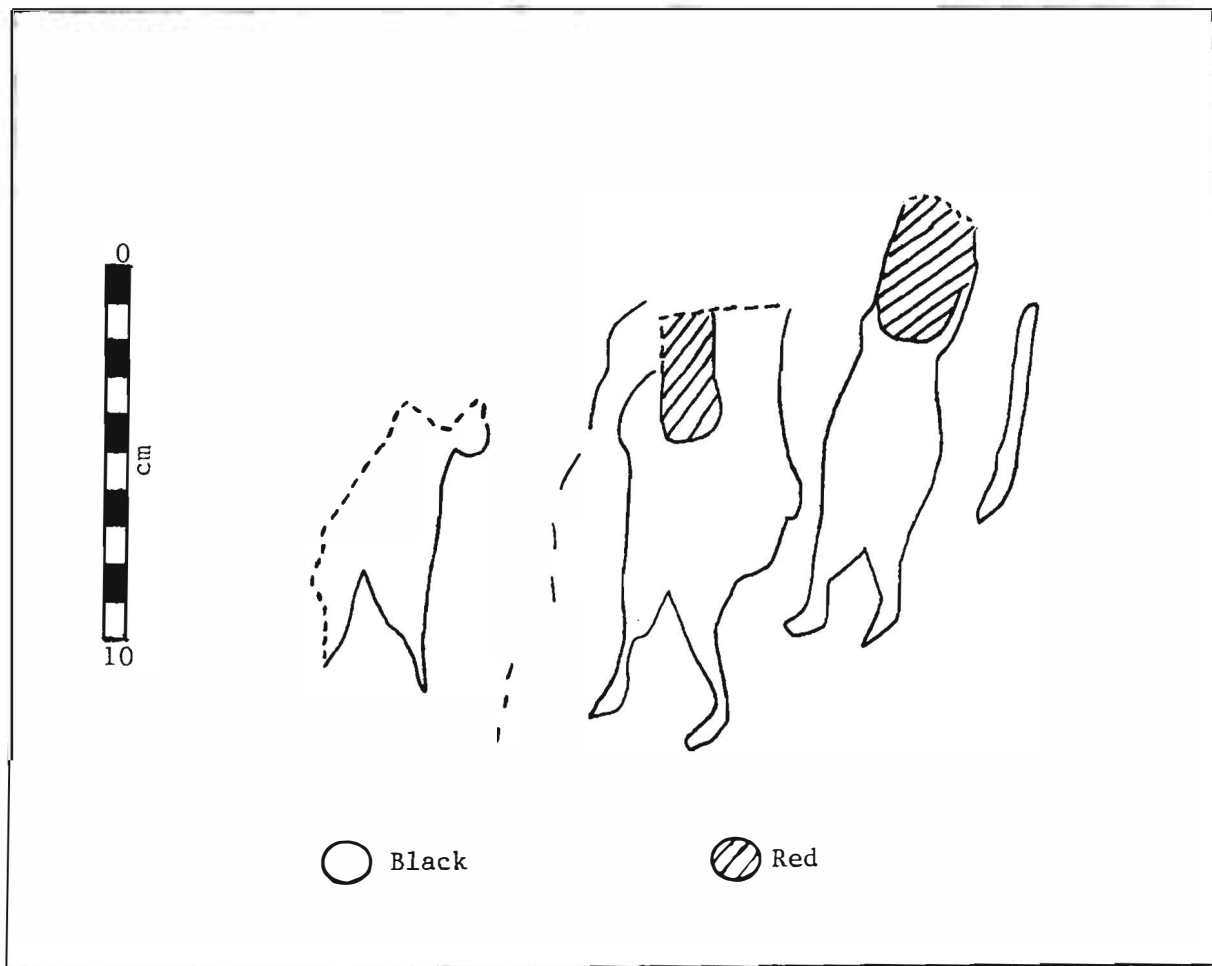


Figure 4. The red and black anthropomorphic pictograph on the upstream wall of Fuller Shelter.

appears to be holding a staff. In addition to the anthropomorphic characters, several red lines were drawn on the cliff face at the mouth of the shelter. The design of the motifs does not conform to any of the defined pictograph styles found in the Lower Pecos River Region to the west. An enclave of pictograph sites have been plotted but not documented to the north and east of Fuller Shelter along the Nueces River (Jackson 1938). Perhaps the Fuller Shelter pictographs have affinities with this area.

#### TAPHONOMIC RELATIONSHIP BETWEEN DEPOSITS AND MATERIALS

Important to the reconstruction of the intra-site patterning of artifacts, features, and interments is the quantification of the possible post-abandonment movement of artifactual and skeletal materials through the processes of bioturbation, erosion and/or incidental disturbance by subsequent utilization of the shelter by man. The unconsolidated powdery matrix in which all materials were buried originated from the bedrock (limestone) walls and ceiling of the shelter. Natural decomposition of the soft gypsonitic (dolomitic) limestone was due to the successive processes of capillary saltation forming an indurated crust and then the flaking of this crust by cryoclastic or alternating hydration-dehydration pressures. Although some eolian (windblown) deposits are undoubtedly mixed with the residual limestone powder, no indication of this process or other intrusive forces such as colluviation or alluviation could be identified.

Deposition from the single factor of surface exfoliation should, if all other factors were removed, result in the even buildup of deposits following the contours of the floor of the shelter with more rapid accumulation near the walls (Figure 5). The ratio of exfoliation surface to floor surface for most

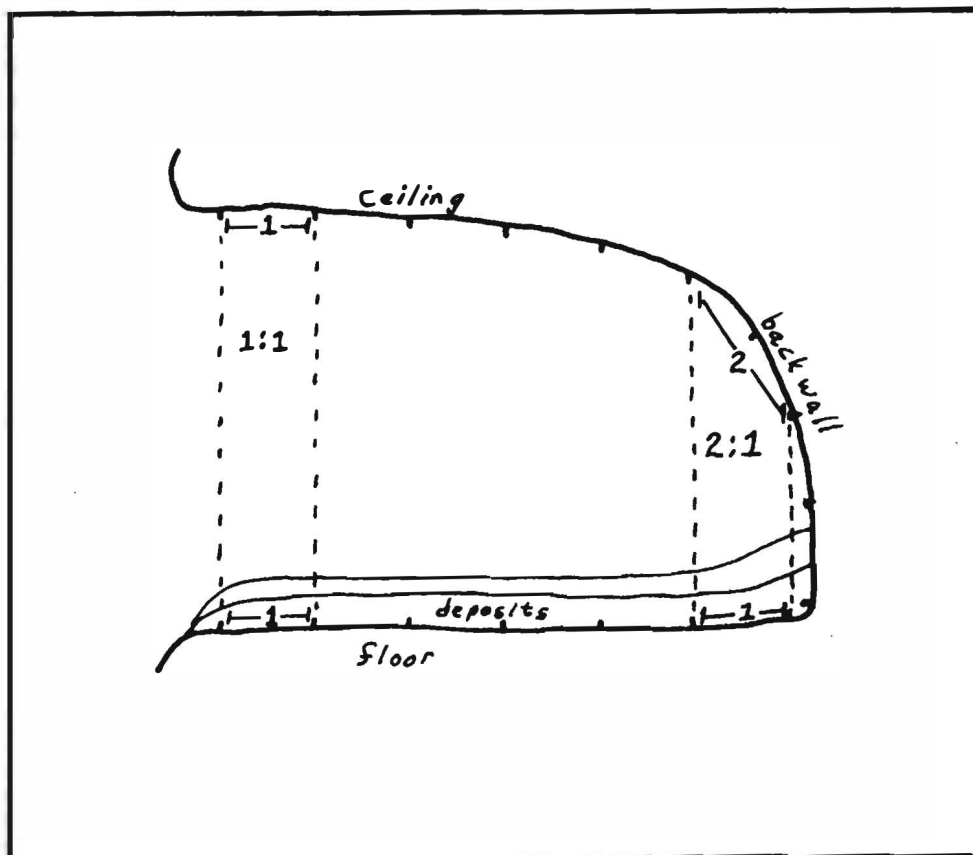


Figure 5. A Stylized cross section of Fuller Shelter depicting the configuration of the deposition of exfoliating bedrock.

of the shelter area would be approximately 1:1. However, near the walls, the curvature of the ceiling and walls increases the potential exfoliation surface area while the floor area remains constant. In this instance, the ceiling and wall area can be two to three times larger than the corresponding floor area (Figure 5). The increased exfoliation surface to floor surface ratio results in the accumulation of more sediments near the walls of the shelter than in the center, causing the floor to incline toward the back and sides of the cave.

Since an open rockshelter is not a single depositional system, the factors of wind, differential moisture penetration of the limestone, and irregularities in the shelter floor affect the pattern of deposition to some degree. Wind and gravitational forces would serve to minimize the vertical discrepancy between the wall and central floor areas by transporting materials from the higher elevations to the comparatively level surface of the floor.

The implication of this depositional process in determining the possible association of materials in the shelter deposits is the correlation of central shelter levels with peripheral deposits. Since the rockshelter was excavated in arbitrary 10-centimeter levels, it is easily deduced from the foregoing discussion that 10 centimeters of fill from the center of the shelter is equivalent to approximately 15 centimeters of fill against the wall. Thus, artifacts in Level 1 in the center of the shelter correspond to those in Level 1 and the upper half of Level 2 in areas near the wall. This situation, then, correlates the high frequency of materials seen in Level 2 in Units B2, B3, A3, D2, D3, C2, and C3 with those in Level 3 of B1, C1 and D1 along the walls of the shelter.

Assuming the depositional reconstruction is correct, then what, if any, post depositional factors have affected the archaeological record? To answer this question, three potential avenues of investigation were undertaken. The first was the distribution of human skeletal elements. Second was the identification and distribution of non-cultural faunal remains. The third line of investigation consisted of the identification and distribution of lithic material types and flake fits contained in the deposits.

#### Distribution of Human Skeletal Elements

A minimum number of two individuals were represented in the skeletal remains collected by the hunter. Included was the near-complete skeleton of a young adult male and the cranial elements and a radius shaft of an adult female. All of these materials were removed from what has been designated Unit A1 in the central portion of the shelter (Figure 2). Subsequent excavation of the shelter deposits recovered human skeletal remains from nearly all units and most levels. Most of the material outside Unit A1 belonged to the adult female, with some elements of the young adult male recovered from surrounding units. The distribution of the young adult male skeleton is undoubtedly attributable to the hunter's probing. The widely spread elements of the adult female, however, resulted from other disturbance factors. The magnitude of this disturbance is perhaps best illustrated by the distribution of skull fragments that were later pieced together. One of four fragments of cranial vault was uncovered from Unit A1; B1 Level 1; C2 Level 2; and D2 Level 1 (Figure 2). Differential coloration of the fragments indicate that they were separated in the distant past and not as a result of recent digging activity.

The differential distribution of the two individuals suggests that they were not interred together. The adult female was buried first and at some later time the young adult male was interred. His grave intruded into that of the female, providing a possible explanation for the disturbance and distribution of her skeletal remains. Unfortunately, neither burial pit could be identified in the deposits.



### Non-Cultural Faunal Remains

In addition to human skeletal materials and bone intentionally collected and modified by human agents, Fuller Shelter contained the skeletal remains of many animal inhabitants and visitors. Included in the list of non-human contributors is an unidentified raptor evidenced by a single talon; the remains of at least four hispid cotton rats (***Sigmodon hispidus***); two black-tailed jackrabbits (***Lepus californicus***); one cottontail rabbit (***Sylvilagus sp.***); one bat; an indeterminate number of snakes; one rock squirrel (***Spermophilus variegatus***); and one javelina (***Dicotyles tajacu***).

The rock squirrel, javelina and possibly the bat and snakes were probably full-time occupants of the rockshelter. The unidentified raptor probably frequented the cave to consume its prey plucked from the grassy floodplain below. The jackrabbit, cottontail, and cotton rat are grassland occupants (Schmidly 1977:20-21), and were probably introduced into the shelter deposits by the bird of prey.

Two nests, one containing a recent paper grocery sack fragment, and the large tunnels which collapsed under the hunter's weight, may be attributable to the rock squirrel. Caches of acorns, persimmon pits and ironwood seeds were uncovered throughout the rockshelter deposits indicating that burrowing animals have altered most of the deposits in the cave.

### Distribution of Lithic Material Types

Seventy percent (n=114 of 163), of the lithic materials recovered from Fuller Shelter have been divided into seven chert material types. Each lithic type was defined on the basic characteristics of the chert including color, banding, and texture. Because of the small sample size, each material type probably represents the reduction of a single cobble or a small number of cobbles from the same material outcrop. The remaining 30 percent represent specimens that could not be categorized because of the small size of the flake, alteration by burning, or the unique material. Included in the unclassified specimens are four arrow points, one dart point and the hammerstone/abradar.

Material Type 1: The material is a coarse grained purple chert. This category contains twelve specimens including three utilized flakes and one arrow point.

Material Type 2: The material is a fine grained, tan chert with brown mottles. This category contains sixteen flakes, two utilized flakes, and one core. A distal fragment of a flake from Unit A3 Level 2 fits a proximal fragment from Unit B2 Level 2.

Material Type 3: The material is a fine grained, caramel colored chert. This category contains 52 specimens including one arrow point and two utilized flakes. The distal fragment of a flake from Unit B1 Level 1 fits a proximal fragment from Unit D1 Level 1. In addition, two sequence flakes -- flakes struck one right after another resulting in a piggyback fit -- were recovered in Units A3 Level 2 and B1 Level 3.

Material Type 4: The material is a fine grained, grey chert with thin, pin-stripe banding. This category contains eleven specimens including five utilized flakes.

Material Type 5: The material is a grey, medium grained chert. This category contains five flakes and one core.

Material Type 6: The material is a fine grained, grey chert with wide, dark grey banding. This category consists of seven flakes.

Material Type 7: The material is a fine grained, chocolate brown chert. This category consists of four flakes and one arrow point.

The distribution of specimens in each material type is the same as the distribution of all seven material types, producing a cluster of specimens in the central and downstream areas of the shelter in Level 2 (Figure 6). Evidence for the integrity of the distribution pattern is provided by the areal displacement of broken flake fits. The flake fit identified in the Type 2 materials indicates a limited horizontal movement of less than one meter and no vertical shifts. One of the fits found in the Type 3 specimens identifies both a horizontal and vertical shift in the two halves of a flake. The sequence flake fit also of Type 3 material was distributed horizontally for a distance of three meters but correlate vertically due to the various rates of deposition described above. The two pressure flakes that fit on the biface also maintain a vertical constancy while a horizontal displacement of over two meters is defined. From these examples, it appears that the shelter deposits have undergone some horizontal and vertical displacement although major movement of materials is not indicated.

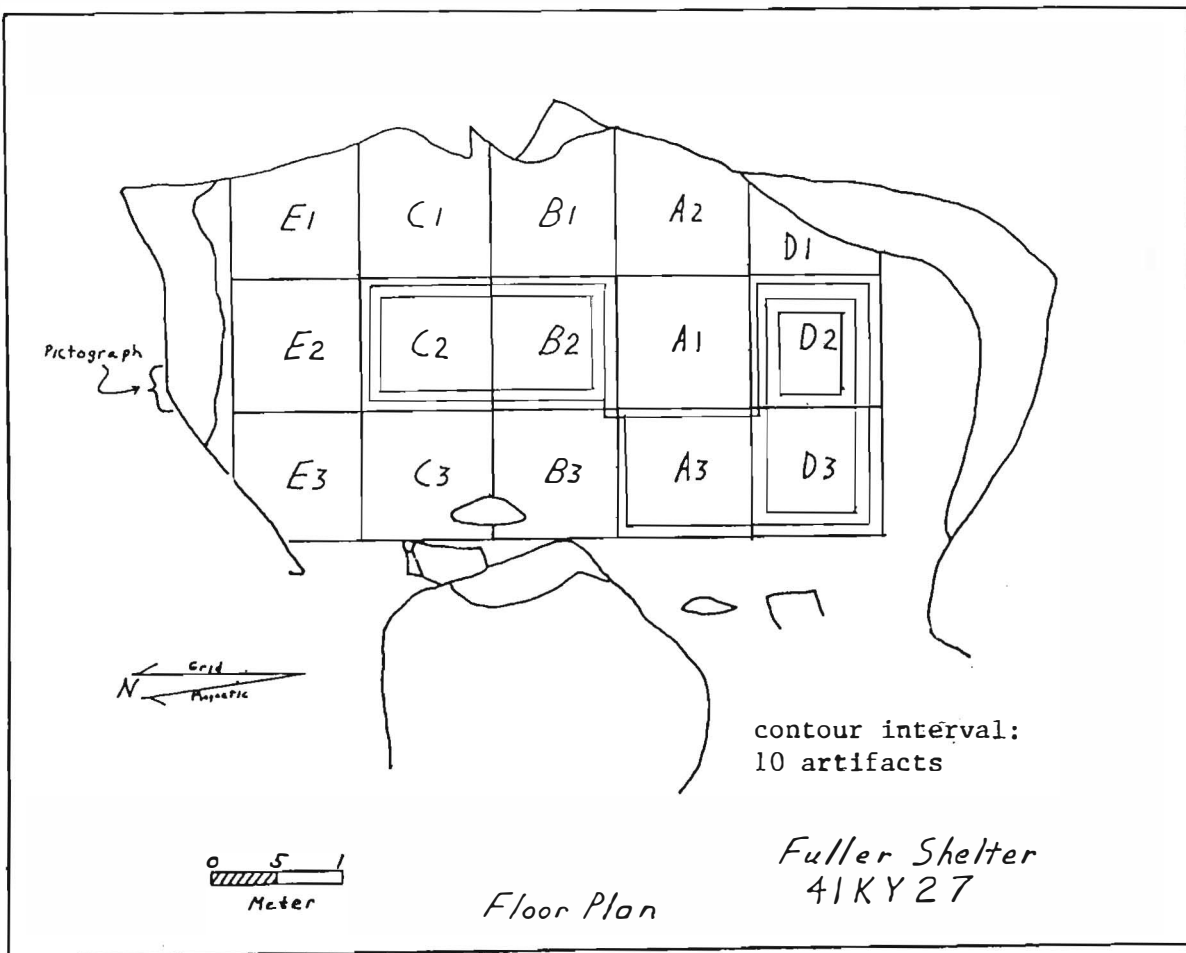


Figure 6. The distribution of all lithic artifacts in the seven material categories. Note the gap in Units C1 and B1.

By imposing the distribution of burned rock over the distribution of artifacts a pattern of intrasite layout is defined (Figure 7). The burned rock reflects two areas of intense utilization of fire: along the back wall, and at the downstream end. The downstream burned rock can be attributed to fires built in recent times. The stack of branches and the presence of partially burned sticks support this inference. The cluster of burned rock along the back wall fits nicely into the gap defined by the distribution of tools, flakes, and cores (Figure 6). Thus, the occupation of Fuller Shelter was grossly patterned around a hearth located against the back wall of the shelter.

At least one task performed around this hearth has been identified by continuing the analysis of tools by material type.

By sorting the lithic artifacts according to material characteristics, the correlation of tools, flaking debris, and cores becomes readily apparent. This correlation indicates that all the utilized flakes were either intentionally struck for immediate use by the shelter inhabitants or were selected from the available scatter left from previous tasks or occupations. Along this same line, the association of arrow points and debitage of the same lithic type provides evidence that these specimens were made in the shelter. Although a direct connection between the arrow point manufacturing, flake utilization, and presence of projectile points of material types not represented by other artifact/task classes suggests that the renovation of hunting gear was a primary task performed by the inhabitants of the shelter.

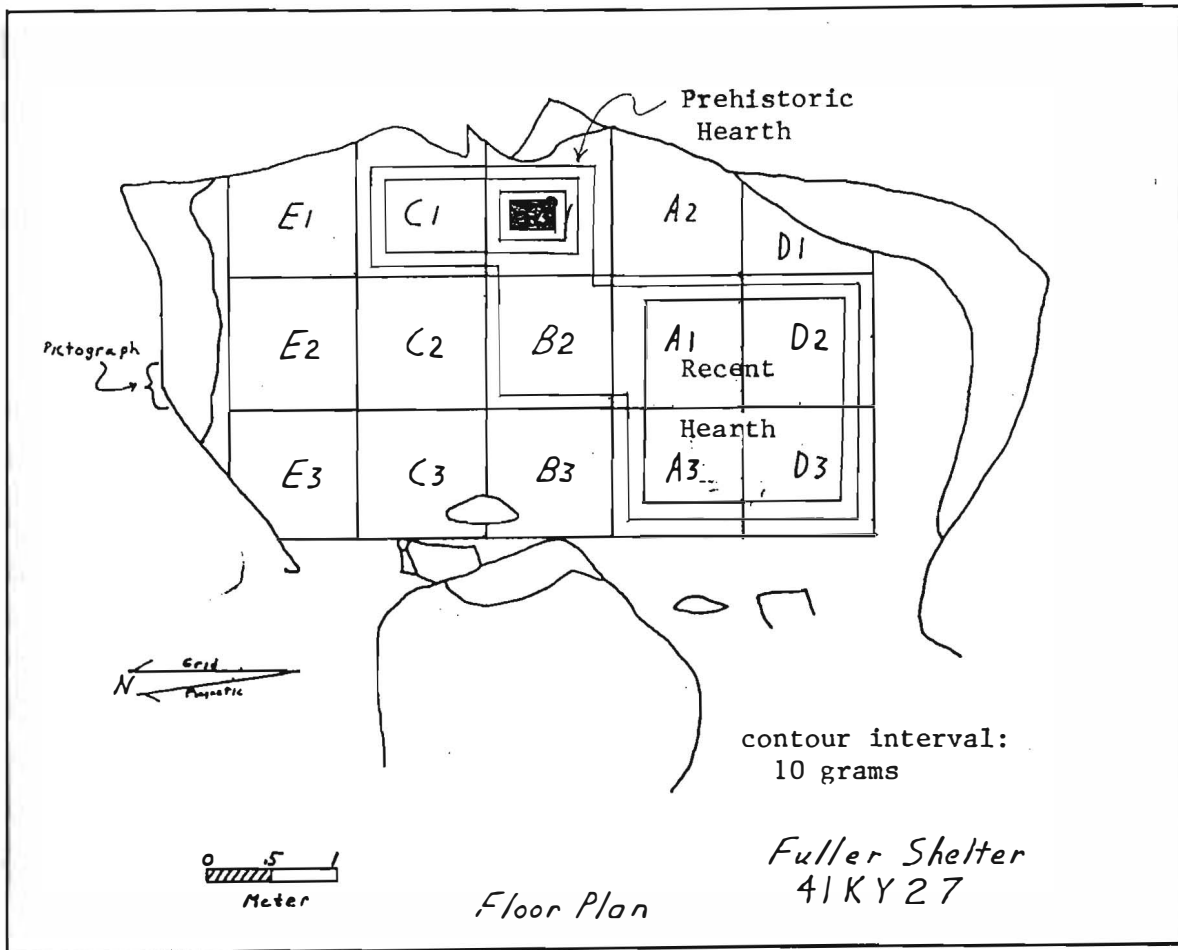


Figure 7. The distribution of burned rock in Fuller Shelter.

## REGIONAL SIGNIFICANCE

Quantitatively, the artifactual materials recovered from Fuller Shelter were meager. However, when viewed from a cultural system or societal perspective, the site's contents gain significance in regional site typologies, burial customs and population movements. Of the 29 prehistoric sites recorded in Kinney County, 18 are burned rock middens, seven are rockshelters, three are open campsites and one is an isolated burial. The preponderance of burned rock middens reflects the ease with which these sites can be identified and their occurrence in areas affected by modern land use activities, such as ranch houses, stock pens and roadways. Rockshelters, on the other hand, are often situated where ranchers do not venture. The soft limestone characteristic of this area is not conducive to the development of large rockshelters, more common to the west along the river systems of the Pecos, Devils and Rio Grande. While rockshelters in many parts of the Balcones Escarpment were utilized as frequent habitation sites by prehistoric man (Pearce and Jackson 1933; Campbell 1957; Jelks 1962), the short term use of small shelters is very rarely documented. Fuller Shelter provides the opportunity to quantify the variety and nature of materials left from the ephemeral use of the shelter by individuals or small prehistoric groups.

In Binford's (1980) Logistically Oriented Settlement Model, different site use can be quantified by the kinds of artifacts and features contained in the site. Binford's site typology includes residential base camps, field camps, locations and caches. The residential base camp was the hub of existence and is characterized by materials reflecting all possible tasks performed by the group. Tools and features represent a wide range of functional and morphological classes. Field camps reflect occupations by a portion of the inhabitants of the residential base on a specific procurement task. These sites contain the artifactual remains and features needed for the procurement and initial processing of the targeted resource(s) in addition to those associated with tasks required to maintain the small group. Locations were the specific task sites where resources were procured, and caches represent the stockpiling of procured resources prior to transport of the materials to the field camps and ultimately to the residential base. In addition to these site types are the archaeologically less-easily identified sites, reflecting ephemeral tasks such as information exchange stations and opportunistic localities.

In an attempt to distinguish between the site types based on materials contained in the archaeological record, Binford (1979) divided the artifact and feature assemblages into field "gear" categories. These include personal gear, site furniture, and situational gear (Binford 1979:261).

Personal gear includes those items specifically chosen in anticipation of forthcoming conditions or activities. Such gear would be manufactured prior to leaving the residential base camp on a resource exploitation trip. These tools are usually curated items that will be maintained during the trip and brought back to the base camp upon completion of the task.

Site furniture includes relatively permanent features as hearthstones, hearths, and any tools routinely used at a site but that are not considered personal gear because of size or function. Manos and metates would be considered site furniture.

Situational gear includes those tools "gathered, produced or drafted into use for purposes of carrying out a specific activity" (Binford 1979:264). Such gear emerges as a response to a condition or situation not meriting consideration when personal gear was selected prior to the field trip (Binford 1979:266).

When viewed from the perspective of the organization of gear, the Fuller Shelter occupational materials fall primarily into the situational gear category. The single hammerstone/abrader is a fragment of a mano probably scavenged from the burned rock midden site in the floodplain west of the shelter.

The bison bone scraper is made on a splinter of long bone, and can be included with the ten utilized flakes under the classification of expediency tools. At least two of the six arrow points were manufactured within the shelter and the single biface was either manufactured or at least resharpened in the shelter. The only definite prehistoric site furniture is the hearth located near the rear wall in Unit B1. Even the hearth, however, lacks the characteristics of a permanent feature (i.e., hearthstones or prepared pit). A large limestone block with narrow, incised lines is probably the result of lithic reduction processes rather than the establishment of permanent site gear.

The arrow points not made within the shelter are the only possible personal gear contained in the habitation debris. That these points could have been replaced by fresh projectiles suggests that they were spent, undesirable, or no longer considered worth keeping.

The manufacture of arrow points and the possible conditioning of shafts produced the utilized flakes. The bone scraping tool probably resulted from the embedded activity performed by the inhabitants as they waited for a storm to abate or passed the time at a way station on a trip to a planned destination. In Binford's scheme, then, Fuller Shelter represents an ephemeral or opportunistic locale cluttered with situational gear.

Fuller Shelter's relationship to other prehistoric sites in the Flat Rock Creek valley further strengthens its classification as an ephemeral site. Five sites have been identified on terraces of Flat Rock Creek in the vicinity of Fuller Shelter (Figure 1). All five are burned rock middens. Numerous rockshelters of comparable size and setting to Fuller Shelter were visited by members of the excavation crew but none showed any evidence of prehistoric use. Burned rock middens appear to be the dominant site type in this area -- a pattern identified along the Balcones Escarpment in Uvalde County to the east (Lukowski 1987a). Unfortunately, a dearth of time-diagnostic artifact types on the middens along Flat Rock Creek prohibited their possible correlation with the habitation of Fuller Shelter.

The burned rock middens investigated by Lukowski in Uvalde County are interpreted as base camps (Lukowski 1987a). He postulated that a major task conducted on these sites was the processing of acorns. If acorns were a mainstay of the prehistoric population at any particular time of the year, then the presence of burned rock middens along a small drainway such as Flat Rock Creek may reflect embedded subsistence practices carried out at a field camp during the collection of a targeted resource such as pinyon nuts. Fuller Shelter may have provided an opportune haven for the inhabitants of a midden site during inclement weather.

In addition to the information gleaned from the scant habitation materials, Fuller Shelter provided limited data concerning the burial practices of prehistoric groups in the area. The use of small rockshelters, alcoves and crevices as individual burial sites is well documented in the Lower Pecos River Region, immediately west of Kinney County (Turpin, Henneberg and Riskind 1986; Turpin and Bement 1986). That this custom is found in Kinney County is not surprising since rockshelters provide an opportune disposal locale, replete with loose deposits for easy digging and burial. Grave furnishings associated with the Lower Pecos River Region during Late Archaic and Late Prehistoric times include matting similar to that recovered in the vicinity of the male burial in Fuller Shelter.

The inclusion of the deer skull and antler fragment with the interment has been identified at only one other site in this region -- 41 KY 26 -- in Kinney County. At this site, an isolated burial contained the remains of an adult accompanied by a set of white-tailed deer antlers. The inclusion of antlers as grave furnishings of Late Archaic and Late Prehistoric age burials has been documented in other Texas cultural areas (see Hall 1981; Lukowski 1987b).

The presence of the deer antlers in the two Kinney County sites may be related to broad socioeconomic practices reflected in grave furnishings among

prehistoric groups in North and South America. An example of a deer antler rite is taken from reports on the protohistoric Indians of Northern Mexico. As recounted in the **Documentos para la Historia de México** for the years 1598 and 1607, deer heads "often with the antlers attached" were kept in memory of the hunter who had killed the animal (Griffen 1969:131). Pieces of the deer skull or other skeletal elements were thrown into a fire during a ceremony in the belief that the deceased hunter would communicate his hunting skill and prowess to the living group. A similar account describes a rite where the deer heads of the deceased were burned so that "the memory of the deceased would remain buried" (Alegre and Javier II 1956:108). Another example of the significance of deer skulls and antlers is derived from the Pecos River Style rock art where one of the common motifs is shaman figures wearing deer antler headdresses (Kirkland and Newcomb 1967).

A third significant finding related to this excavation also stems from the human skeletal remains. The complete mandible attributed to the female skeleton contains only the incisors; all other teeth were lost during the lifetime of the individual (Figure 8). In fact, the cheek teeth were lost so early in life that the alveolae were completely resorbed, reducing the horizontal ramus height by 50 percent. This pattern of tooth loss and resorption is common in the Lower Pecos River Region of Val Verde County from Early Archaic through Late Prehistoric times, 8,000 - 400 years ago (Turpin, Henneberg and Riskind 1986). In fact, this condition is so common that it is almost a regional marker for this area. The pathology is attributed to a high incidence of caries derived from a high carbohydrate/sugar diet of desert succulents (Marks, Rose and Buie 1986). The jaw from Fuller Shelter and three out of six other burials from sites in Kinney County define the easternmost occurrence of this trait and, as such, suggest that Kinney County, currently considered part of the Central Texas cultural region (Brown et al. 1982), may have been the eastern extension of the Lower Pecos River Region, at least during Late Archaic and Late Prehistoric times.

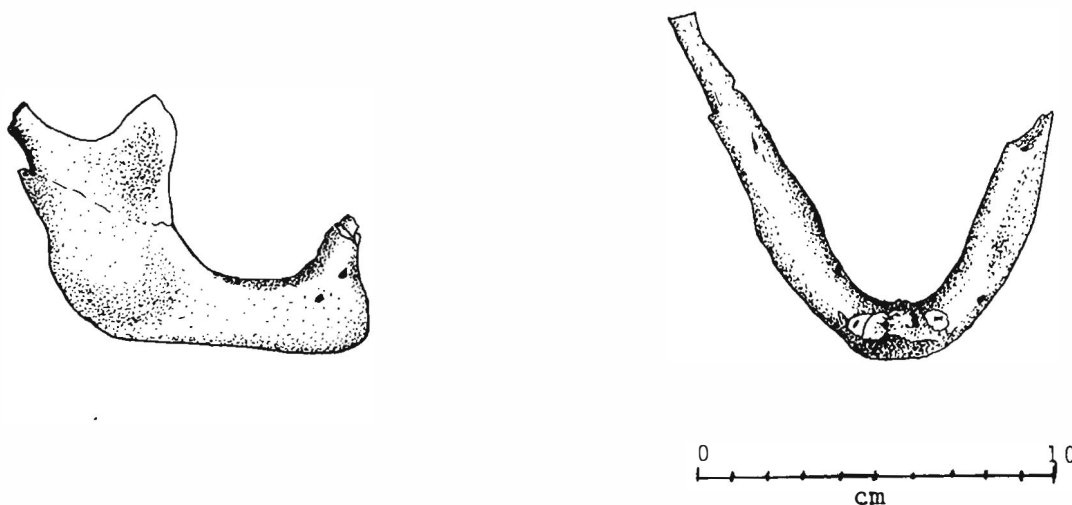


Figure 8. The side and plan view of the mandible attributed to the adult female skeleton. Note the completeness of the resorption of the molar alveolae.

## CONCLUSION

Fuller Shelter is a small rockshelter overlooking a burned rock midden studded floodplain. The shelter was originally used as a grave site for a single adult female. Subsequent inhabitants of the Flat Rock Creek valley utilized the site as a short-term -- possibly overnight -- way station or shelter during Late Archaic times as indicated by the Ensor dart point. Before the site sheltered its last inhabitants, a second burial -- that of a young adult male adorned with deer antler, worked shell and matting -- was placed in its powdery deposits. The major use of the shelter as a refuge from the weather or for overnight stays occurred during the Late Prehistoric. The manufacture and hafting of Perdiz and Toyah arrow points identifies at least one task performed at the site. A pictograph attests to the intangible side of prehistoric cultures and serves to remind the archaeologist of the numerous socio-cultural processes that can not be reconstructed from the artifactual material.

## ACKNOWLEDGEMENTS

The excavation of Fuller Shelter depended on the dedication of professional archaeologists Solveig Turpin and Wayne Bartholomew and the willingness to learn of Arthur Bement, Garner Fuller and his ranch workers. Initial skeletal analysis was conducted by Barbara Jackson. Special thanks go to the owners and workers of the Navajo Ranch for allowing us the opportunity to learn about the prehistoric inhabitants of Kinney County, Texas.

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## AN INCISED AND GROOVED LIMESTONE COBBLE FROM EDWARDS COUNTY

Kenneth M. Brown and Rochelle J. Leneave

## SITE

An unusual stone artifact was found by Mr. Joe McFatter while raking and burning leaves in his yard about 100 feet west of his house several years ago. The location, in Edwards County just west of the Nueces River (Figure 1) is recorded as 41 ED 108 in the files of the Texas Archeological Research Lab. Mr. McFatter brought the artifact to the laboratory at the Center for Archaeological Research, UTSA, where it was photographed and measured; we have not yet visited the site.

## DESCRIPTION

The specimen is an incised and grooved limestone cobble similar to others known from the region, and is 14.2 cm long with a maximum width near one end of 6.8 cm. It has a broad transverse groove 3.5 cm long, 1.5 cm wide, and 9 mm deep near its midpoint. Like most of the other specimens we have seen, it has a somewhat rounded triangular cross section, and the 6 more or less parallel incised lines run along the long axis of the cobble along the dorsal ridge, stopping at one edge of the transverse groove (Figure 2). The longest line is about 4.5 cm long. The dorsal ridge is noticeably polished, especially in the areas between the incised lines. Much less well developed polish is also present on the base of the cobble. The specimen is broken transversely and the two fragments were found separately two or three years apart, but obviously fit together very well.

## COMMENTS

Black and McGraw (1985:175-180) provide the most recent summary and distributional synopsis (see their Figure 38, based on a literature survey by Betty Markey) for this class of artifact. We can make several observations about these artifacts, based not only on the Edwards County specimen but also on others from southwest Texas we have seen:

- 1) streamworn limestone cobbles are preferred;
- 2) cobbles that are triangular in section seem to be preferred;
- 3) modifications usually occur on the dorsal ridge -- the uppermost surface when the cobble is lying in its natural position of repose;
- 4) most specimens show some evidence of heating, in the form of discoloration, smudging, oxidation (in limestones with high iron oxide content), or thermal fracturing (the specimen reported here was burned in a leaf pile but may have already been thermally fractured before it was raked up);
- 5) incised lines are parallel to each other and to the long axis of the cobble;
- 6) use wear in the form of polish is frequently associated with the incised lines;
- 7) an ancillary broad transverse groove may be present, as in the case of specimens 2 and 5 reported by Hill, House, and Hester (1972:Figs. 2B, 3A), or absent as in the Panther Springs Creek specimens (Black and McGraw 1985:Fig. 37) or similar specimens from McKinney and Webb Counties (Beasley 1980).

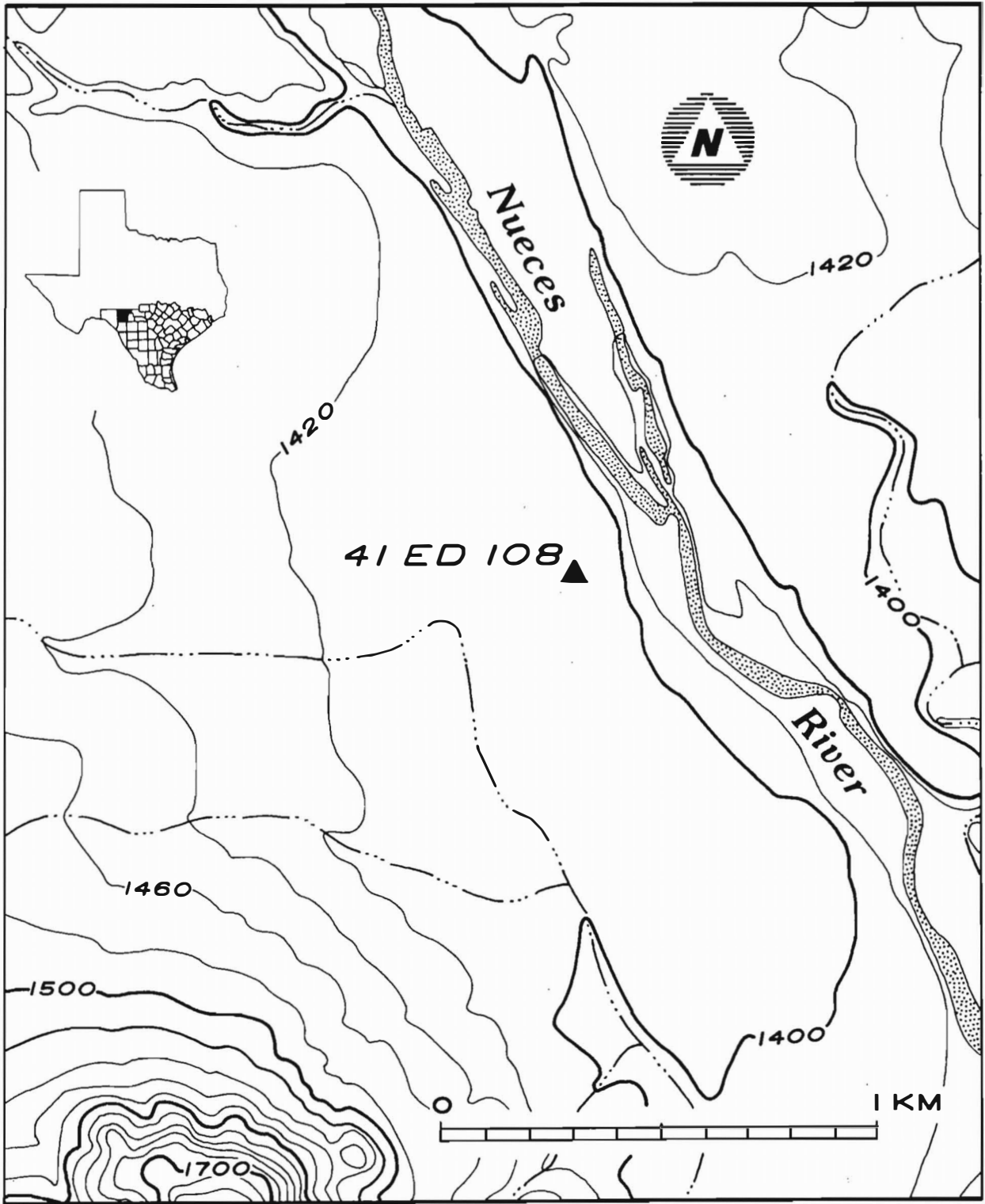


Figure 1. Location of Incised and Grooved Cobble in Edwards County. Inset is Map of Texas showing Edwards County (darkened area).



Figure 2. Dorsal View of Incised and Grooved Cobble.

The function of these artifacts is unknown, but the frequent evidence of thermal alteration suggests strongly that heat was involved in their use. Presumably the cobbles were heated in a fire and then used as thermal reservoirs to dissipate heat to some substance applied to the ridge and grooved surface, resulting in the observed polish. The most plausible explanations advanced so far are that the stones are either shaft straighteners or some sort of texturizing device designed to impart an artificial texture to some sort of hide or fabric. Repeated heating seems to account for the usually fragmentary condition of the artifacts when found.

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## ARCHEOLOGICAL STEWARDSHIP IN THE BIG BEND

Enrique R. Madrid

### ABSTRACT

Archeological Stewards are volunteer agents of the Office of the State Archeologist (OSA) who focus their attention and actions on their home territory. This is a summary of the activities of the Steward for the Redford, Texas area (previously published in the **Stewards' Newsletter**).

### INTRODUCTION

I manage a small general store in the Big Bend of Texas. I daily see the impact a steadily increasing local population and a seasonal influx of tourists, campers, fishermen, hunters, backpackers, and pothunters have upon my wilderness. The Camino Del Rio, Highway FM 170, a gateway to the Big Bend National Park and reputed to be one of the ten most scenic highways in the United States, crosses a major archeological zone in Texas. The Rio Grande parallels the highway and is a popular white water rafting and canoeing route. This is an area of historic Indian pueblos, Spanish entradas and Presidios, Apache and Comanche activity, as well as Archaic Desert and Paleo-Indian traditions.

Several years ago with the assistance of Barbara Baskin, Texas Historical Commission archeologist, and Mary Polk, State Legislator, I began work to protect the Indian Pueblo of El Polvo. Years of work with multiple heirs to the land, 32 at one point, resulted in it becoming a State Archeological Landmark. After assisting Robert Mallouf, State Archeologist, with sites in my area, I was invited to join the Stewardship Network.

Being bilingual and a Mexican-American helps me to reach wary landowners, distrustful of a state agency which is trying to save their history but is separated from them by a different culture and language. Living on the Rio Grande, the dangers I fear for sites in Texas I see multiplied in Mexico. Their border population is rapidly growing; American tourists and pothunters are reaching their wilderness as well.

I have sought concerned persons in Mexico to begin parallel preservation efforts. An organization has now been formed in Ciudad Ojinaga, Mexico, called Amigos de la Cultura Ojinaguense. It enlists local citizens, businessmen, lawyers, doctors, and teachers in furthering the cultural development of the community. Their interests cover all aspects of learning and study. I am encouraging them to create and support an archeological stewardship program of their own. I have approached them with my message and have been met with enthusiasm and support.

### A GENERAL IDEA OF MY WORK

1. Because of my business I have an opportunity to meet countless people: scholars, scientists, environmentalists, writers, photojournalists, etc. I work with those who can further preservation in many ways. I make sure Bob Mallouf meets the really important ones.

2. Tourists and pothunters both stop, asking for information. Tourists receive it, pothunters receive OSA brochures and a lecture.

3. University field study groups arrive frequently. In our store, we have a small museum and public library, to which they are welcome. Our library

has been the classroom and base for the Southwestern Field Studies Course from Earlham University, Indiana, for two years. Our town is the winter headquarters for the Outward Bound School of the Big Bend. I work with their instructors to make sure archeological preservation ethics are included in their curriculum of backpacking, canoeing, desert survival, and ecological and personal awareness.

4. I guide scholars, photojournalists, and writers through the area and in Mexico. I make them aware of archeological preservation and ask them to present it in their work. I quote from the recently published book, **La Frontera: The United States Border with Mexico**, by Alan Weisman and published by Harcourt, Brace and Jovanovich:

"The preservation of archeological sites particularly impassioned him [Enrique Madrid] because the Indians weren't merely ancient people, but his ancestors. At the rate of five thousand sites a year, pottery hunters and developers in Texas violate or discard the history that his people have been too busy surviving to preserve. The endangered species he defends, like the Conchos pupfish and the rough-footed mud turtle, can always be bred, but archeological sites are irreplaceable." (p. 74)

5. I have worked with a local landowner, with archeologist Dr. J. Charles Kelley, and Presidio city and county officials to preserve the historic Pueblo of San Cristobal at La Junta de los Ríos. A donation to the State could not be arranged but its preservation by a historical foundation is assured.

6. The nearby Pueblo of San Antonio de Padua, because of its partial donation to the State, is protected from the impact of major high bridge construction presently underway on Highway FM 170.

7. This same site and two State Archeological Landmarks in the Redford area have been bypassed by a private telephone company laying an underground cable. The Texas Antiquities Committee alerted them to the importance of the sites and elicited their cooperation.

8. I monitor sites at every opportunity and keep track of pothunters of both sides of the border.

9. I have assisted in preparing and transcribing an oral history of the Redford region.

10. I assist archeologists in visiting Spanish Presidio sites in Mexico. I speak to Mexican officials and urge their involvement in preservation. Several of these Presidios, properly excavated and reconstructed would be a cultural and economic boon to this region of Mexico.

11. I organized a group of Big Bend citizens to participate in the Dallas Folk Festival. We made adobes, ropes from desert plants, hand-forged iron horseshoes and tools, and exhibited Big Bend quilting styles in downtown Dallas.

12. I try to practically guarantee that every visiting scholar/scientist/archaeologist/interesting person receives at least one good Mexican meal at my home.

13. I strive, literally, to "think archeological preservation" at every appropriate moment of my life. I include my steward's work in every business

and pleasure trip. Every friend I meet is seen as a potential ally and supporter. I search every conversation for hints of personal attitudes, possible cooperation, conflict, and information for future reference.

WORK NOT YET BEGUN -- WORK UNFINISHED

1. Los Amigos de la Cultura Ojinaguense: Because of the Mexican economy, the group is financially strapped. International sources of assistance must be located. The members have requested training in archeological surveying. Several can attend the projected Typology Seminar. As a group or as individuals, they will be able to provide assistance in translating. They can provide assistance for American scholars working in the area, e.g., the Texas Historical Commission or the Chihuahuan Desert Research Institute, Alpine, Texas. They can work with the National Institute of Anthropology and History in Mexico to locate, records, and project sites. They can secure the assistance of local, state, federal, and military authorities. (One American dealer in artifacts has recently been closed down by the Mexican Army in Mexico across from the town of Lajitas, Texas.) Los Amigos has the potential of becoming an invaluable liaison group for Border scholarship and preservation. May such groups spread to other border cities. [Ed. Note: Rose Trevino, also a Steward, is starting another such group across from Laredo.]

2. Extreme demands on my time and resources prevent the recording of arrow point, metate, and artifact collections. Oral histories in my area remain unrecorded, document collections remain unmicrofilmed. Regional ethnographic studies remain on the drawing board. A vital working relationship with County historical groups has yet to materialize. I await impatiently the arrival of an alidade for mapping. It is clear I have two hands too few.

3. This work awaits:

a. preservation work in the Chinati Mountains -- initiated with one landowner.

b. preservation work in the Bofecillos Mountains -- initiated with a major landowner.

c. preservation work in the Ruidosa-Candelaria area -- have not had time; known ring of collectors living in area.

d. preservation of Spanish Presidios in Big Bend area -- already begun.

e. preservation and lobbying work for archeological investigations of the Comanche War Trails in cooperation with the Big Bend National Park and Mexico.

f. preservation work on the Alamito and Cibola Creek drainages -- work started.

g. preservation work in the La Junta-Coyame-Cuchillo Parado area of Mexico -- for the Mexican stewards.

h. investigation and preservation work in the sand dune area of Samalayuca -- for the Mexican stewards.

i. preservation work on the Paleo-Indian culture in the region awaits the Mexican stewards.



j. preservation and archeological efforts on Texas historic battlefields in cooperation with the Fort Davis Historical Site -- not yet initiated.

k. preservation and archeological efforts on major battle-field sites in Mexico -- at Sacramento and Tres Castillos, Chihuahua.

l. historical and ethnographic research on the mestization of the peoples of La Junta and on Mexican-Anglo interactions.

m. and so it goes....

4. I want to obtain the active assistance and cooperation of the Roman Catholic Church in the effort toward archeological preservation. Mexican-Americans constitute a major group within the Church. The Church's voice can be a tremendous moral support for the preservation of the archeology and history of the Native- and Mestizo-American. Other religious groups, especially those actively seeking Hispanic members, must become involved. The Jewish religious community known for its traditional defense of citizens' rights must participate.

5. Environmental and Wilderness Preservation groups have yet to be reached. Though experts in ecology, wilderness camping, and survival, they wander the wild, discovering, and impacting, sites without the knowledge for recording or reporting them. One member of the Sierra Club in West Texas reports that pothunting is not unknown among the members of his group.

6. I wish to do work with lawyers and legal scholars to study various aspects of site protection. It is obvious that a legal remedy must be found for the tremendous rate of site destruction. A compromise which protects landowner rights as well as the rights of a people to their history must be found. The feasibility of laws which prohibit the inter- and intra-state commerce of Native-American artifacts can be studied. The inclusion of principles from Native-American Common Law into the legal system can be studied. An examination of Mexican Law which makes antiquities the property of the Nation must also be studied.

## CONCLUSION

The above is some of the work I've done and have yet to do. I wish now to discuss what motivates me and fills me with a sense of urgency. I want to instill this urgency in you.

I am a Mexican-American. A part of me is directly descended from the Native-American. I am genetically brother to the Apache and the Aztec. I feel personally the tragedy that has befallen the Native-American. The continuing destruction of archeological sites in Texas affects me directly. It is my culture, that of the Native-American and Mestizo-American, which is being destroyed. The Indian and the Mestizo are not extinct, we have not disappeared. The work you do as Stewards preserves and protects the culture of a living people, a people who, for many reasons, cannot protect its own history. It will not always be this way. Rising educational and economic levels and a growing population will change this. Mexican-American/Anglo-American populations in Texas will achieve parity in thirty years. This power will not be ignored.

The country of Mexico shares this history; it, too, is Indian and Mestizo. And Mexico is one of the fastest growing nations on Earth. Mexican population growth estimates range from 154 million in 2025 to 1 billion in 2100. We know

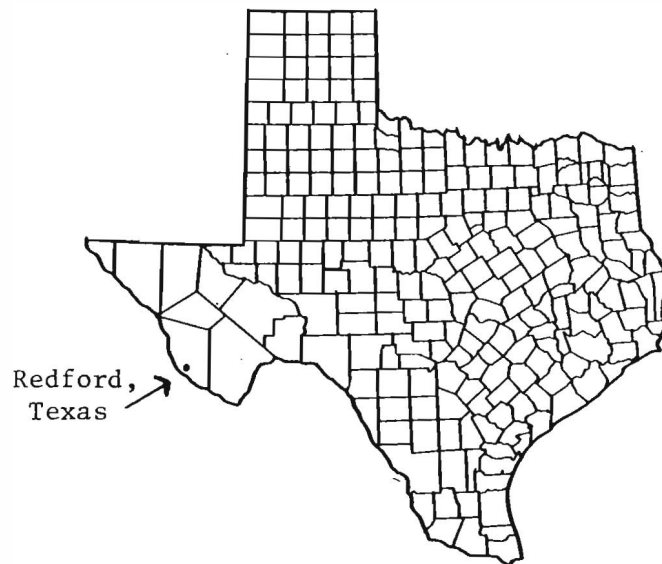
too well where a major portion of them will come to live and work. The borders cannot be closed to such numbers. There is no alternative to preparing ourselves and our society to receive them.

We must know who they are so we may understand them and in understanding, learn tolerance, and with tolerance, we may more easily accept them.

It is on the basis of our identity, of who we are, that we relate to each other as individuals and as societies. The histories of peoples are their identities. Nothing is more intimate to a people than archeology. The extreme social pressures that we foresee as a result of this growth will be controlled in part by the knowledge that archeology gives us. It gives us understanding. Every archeological site destroyed, every arrowhead stolen, every attitude or law which closes avenues of communication between these two nations of the Rio Grande will harm us all.

These are concerns that move me as a Steward. It is not my intent to bring fear or despair to you, but rather a sense of urgency and maturity to the reason for our work. What little we can do allies us with those who work everywhere for peace.

[Editor's Note: This report was written for the **Steward's Newsletter** and is reproduced here courtesy of its Editor, Kerza Prewitt, with the consent of the author.]



## THREE BONE AND SHELL ARTIFACTS FROM THE UPPER TEXAS COAST

Malcom L. Johnson

## ABSTRACT

This paper documents a bone flute, a shell bracelet, and a shell bead which were found on the southeast Texas coast near Anahuac in Chambers County.

## INTRODUCTION

In the early 1940s, Mr. Richard Freis acquired a bone flute, a shell bracelet, and a large shell bead from a Mr. Mitzen. These and other artifacts were reportedly found in the 1930s by Mr. Mitzen and others engaged in road building in or near the town of Anahuac, which is located in Chambers County, Texas on the northeastern shore of Trinity Bay, near the mouth of the Trinity River (see Figure 1). Although the exact location of the site is not known, the artifacts are quite unusual and their occurrence in the area should be documented.

During road building operations in the 1930s, a burial site was disturbed. From what he recalls of his conversation with Mr. Mitzen, it was the impression of Mr. Freis that a number of burials were uncovered. Among the grave goods specifically mentioned as being found with the burials by Mr. Mitzen were four flutes, three or four large conch columella beads, and two shell bracelets. It is not certain if there were any diagnostic projectile points found directly associated with the burials. Mr. Freis recalls a statement made by Mr. Mitzen that he had "only some small arrowheads, and that he would like to have some larger arrowheads [dart points] for his collection" (Richard Freis, personal communication, April 1984). It is uncertain if these "small arrowheads" were actually associated with the burials, or if they were collected from the surface.

## DESCRIPTION OF THE ARTIFACTS

The large shell bead (Figure 2, A) is made from a conch columella and is similar to other conch columella beads that have been reported from various

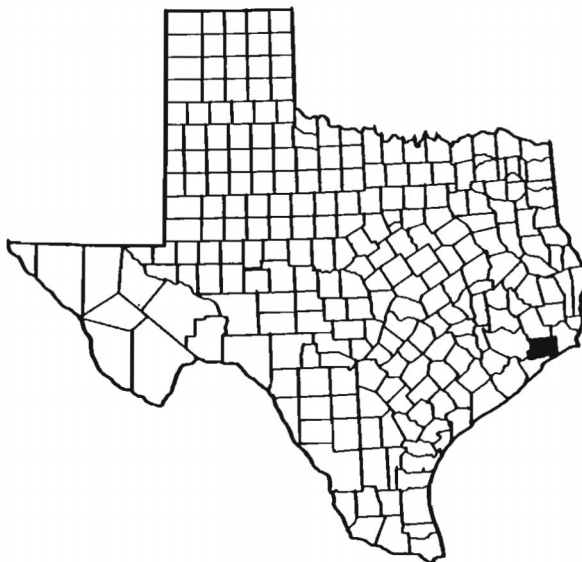
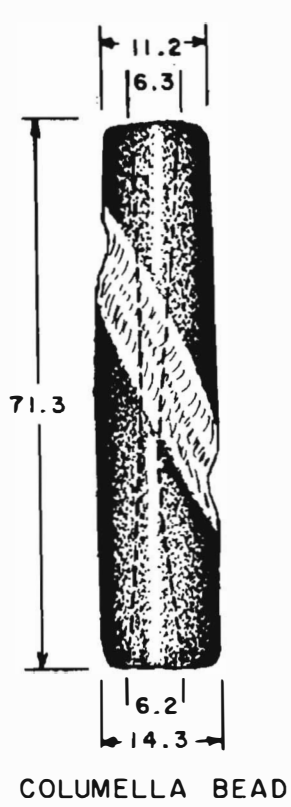
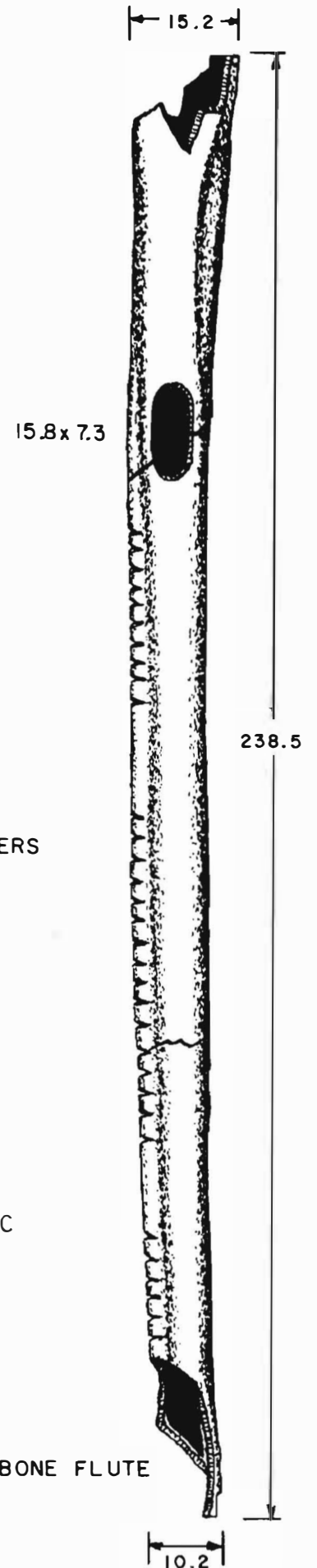


Figure 1. Map of Texas showing Chambers County (darkened area).



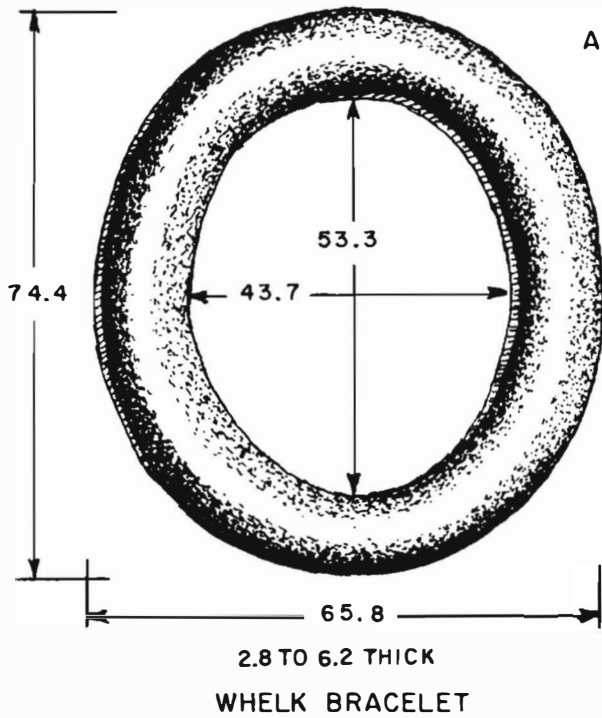
COLUMELLA BEAD

A



BONE FLUTE

ALL DIMENSIONS IN MILLIMETERS



WHELK BRACELET

B

Figure 2. Bone and Shell Artifacts from the Anahuac Area of Chambers County, Texas

locations along the Texas Coast and from inland sites (Hole and Williamson 1973; Janota 1980). Its total length is 71.3 mm and its outside diameter varies from 11.2 mm at the smaller end to 14.3 mm at the larger end. It has been drilled biconically through the long axis, with the apertures meeting approximately at the mid-point of the bead. The apertures themselves are not perfectly round but are slightly oval in shape. The aperture on the smaller end of the bead measures 5.6 mm to 6.3 mm across, while the aperture on the larger end measures 5.6 mm to 6.2 mm across. The apertures decrease in diameter toward the midsection of the bead until they reach a diameter of about 2.3 mm where they meet. The outer surface of the bead is smoothed, but the smoothing has not obliterated the anal canal.

The shell bracelet (Figure 2, B) appears to have been made from the outer whorl of a large conch shell. It is somewhat oval in shape, with outside dimensions of 74.4 mm along the long axis, and 65.8 mm along the narrower axis. The bracelet must have been made from a fairly large-sized conch, since the whorl ranges from 2.8 mm to 6.2 mm in thickness. The inside opening of the bracelet, through which the hand must pass, is also oval shaped, being 53.3 mm wide along its long axis, and 43.7 mm wide along its short axis. The opening is fairly well centered, so that the width of the bracelet itself is about equal all the way around. All the edges are smoothed. This bracelet has been referred to in a previous article (Johnson 1981). It should be noted that the bracelet described here is made of the outer whorl of a conch shell, while the bracelet found by the late Ray Russell along Oso Creek near Corpus Christi in Nueces County was, to the best of my recollections, made from a fairly large clam shell with traces of the umbo still present. Bracelets made of the outer whorl of conch shell have also been reported from near Brownsville (Prewitt 1974), while a different type of shell bracelet, made of twelve conch columella beads, has been found in Bowie County (Miroir et al. 1973).

The bone flute (Figure 2, C) or whistle, has a length of 238.5 mm. For descriptive purposes, the end that contained the mouthpiece will be referred to as the top, and the opposite, or open end, will be referred to as the bottom. The top end is damaged, but the remaining protruding portion on the left side seems to have actually been the end of the bone instrument. The bottom end is also damaged, and it is likely that a small portion is missing, so that the original length was somewhat greater than 238.5 mm. The flute or whistle has been broken into three major pieces but has been well mended. The bone from which the instrument is made is tentatively identified as a leg bone of a large bird, such as a heron. It has a slight curve to the left (as viewed with the air-hole up, and the mouthpiece toward the viewer). Along the right side is a small ridge that runs most of the length of the bone. Into and along this ridge, at right angles to it, have been placed a series of small cuts or notches. They are not deep, and are 3 to 4 mm in length, and are spaced fairly evenly apart. The first series of ten notches begins approximately 77.5 mm from the top, or mouth end, of the flute. They begin at about 7.62 mm below the air vent and are spaced about 2.5 to 3 mm apart. After a blank space about 17.8 mm wide, a second series of notches begin: they are sixteen in number and are spaced about the same as the first series. There is a blank space of about 15.24 mm in length before a third series of notches, seven in number, which are also about equally spaced. Unfortunately the flute is damaged and it cannot be determined if there were more than seven notches in this third series. The air vent begins about 53.34 mm from the top end of the instrument and is an elongated oval 15.8 mm long and 7.3 mm wide. A wooden mouthpiece or reed may have been inserted into the bone and adjusted under the air vent until it produced the desired tone. The bone has a maximum width at the top end of 15.2 mm, and tapers to a width of 10.2 mm at the bottom end. The bone itself is fairly light, the walls being 1 to 1.5 mm in thickness. As stated above, the instrument more properly should be referred to as a whistle rather than a flute, since it has no tone or pitch holes with which to change the sound. Since the

sound is determined by the length of the air column, this instrument would likely have a mellow, low-pitched sound.

#### HISTORICAL DOCUMENTATION

Possibly the earliest reference to a flute in the Gulf of Mexico region is that made by Cabeza de Vaca shortly after he began his journey in 1528. While they were still along the western edge of Florida seeking the village of Apalachen, he states:

"on the 17th of June a chief came who was carried on another Indian's shoulders; he was preceded by many players of flutes made of reeds" (Bandelier 1922:21).

In 1665, the Spanish made an expedition to find and punish the Cacaxtle Indians in southwest Texas for raids they had made. During the battle, an elderly Cacaxtle woman played a flute to encourage the warriors (Campbell 1984:8).

An eyewitness account of the instruments used by the Karankawa in one of their ceremonies has been given by Mrs. Alice Williams Oliver. In her **Notes on the Carancahua Indians**, she describes the ceremony and makes the following observations:

"There were three instruments of music...a large gourd filled with small stones or shot...a fluted piece of wood, which was held upon the knees of the player and over which a stick was quickly drawn producing a droning noise...a kind of rude flute, upon which no air was played, but which was softly blown in time to the chant" (cited in Gatschet 1891).

Her description of the flute may be significant. Since she refers to it as "a kind of rude flute, upon which no air was played," she evidently means that it did not change notes or tone as a flute would that had two or more tone holes. Perhaps she was describing a one-hole instrument similar to the one reported here.

#### ARCHAEOLOGICAL EVIDENCE

Other bone flutes or whistles have also been documented archaeologically in this area of the coast. To the west of Anahuac on the west shore of Galveston Bay, during excavations which were carried out at Harris County Boys' School Cemetery, three other bone flutes or whistles were located associated with a burial. In the site report they are termed "Flageolets." The two flageolets that are illustrated in the report appear very nearly identical to the one from Anahuac, except that they do not have any notches along their sides. It was suggested that the tibia bones from which they are made may be from a great blue heron, stork, or crane. The cemetery at the Harris County Boys' School Site has been related to the Turtle Bay Period or about A.D. 600 to A.D. 950 (Aten et al. 1976).

At the Harris County Boys' School Cemetery there were also 191 conch columella beads recovered. Of these, the largest two average 40.3 mm long, and 15.5 mm in diameter, while the bead found near Anahuac is 71.3 mm long, and it reportedly was not the largest one. Thus, it seems the beads found at Anahuac, on the east side of the bay, are considerably larger than those recovered on the west side of the bay.

At Anahuac, two bracelets made of conch whorl were recovered. At Harris County Boys' School Cemetery there were no conch whorl bracelets found, but at

least one burial, Number Two, which also had the three flageolets with it, may have had a bracelet made of columella beads strung together around the right wrist. Unfortunately, it is not known if the Anahuac bracelets and flutes were all associated with the same burial or not.

#### DISCUSSION

One observation about the whelk shell bracelet from Anahuac that can be made has to do with its size. The opening through which the hand must pass is 53.3 mm wide, by 43.7 mm. This seems too small for an adult hand to pass through. A possible explanation may be that the bracelet was placed on the wrist as a child, and after reaching adulthood it could not be removed. If this assumption is correct, it could indicate that positions of rank among these people were inherited. If burials are located with bracelets in the future, this is a question that needs to be addressed.

The four flutes from Anahuac and the three flageolets from Harris County Boys' School Cemetery appear to be very similar. The exception is the Anahuac flute which has three sets of notches along one side. It is not known for certain if any of the other Anahuac flutes had notches or other decoration. The purpose of the notches is not clear. They may represent some type of counting system, such as the number of ceremonies participated in over a three-year period. Or, the three sets may have some specific symbolism, since the number three is believed to have had a symbolic meaning to some coastal Texas groups (Campbell and Campbell 1981). It is also possible that the flute may have been used as a dual purpose instrument as both a flute and as a type of rasp.

The flute could have been played and used in a "festive" ceremony, or the notches along the side could have been used as a rasp. If used as a rasp, it may equate with the "death instrument," the Cayman, mentioned by Morfi. As discussed in a previous article (Johnson 1987), Cayman is a Spanish word that translates as "alligator." The cayman was used in two types of mitote, the war dance and the funeral dance. It was played prior to, and during, the ceremonial eating of a captive. Clicking a bone or shell along the notches may have been meant to simulate the clicking or snapping of an alligator's teeth. The Cayman instrument may have been associated with an "alligator" or "maneater" cult or clan. At least one effigy that represents a lizard or alligator has been found. In 1929, along Petronilla Creek in Nueces County, an inverted pot was noticed in the bank. Inside of the pot was a second pot, and inside the second pot was a third small pot. The third pot was shaped somewhat like a bird, and inside the third pot was a piece of sandstone with an alligator carved in relief. The carving evidently was placed inside the pot at the time the pot was made, since it would not fit through the neck opening of the pot. It seems apparent that this alligator carving represents a secret or cremonial object (Martin 1930). Although the pottery is not adequately described, it was speculated at the time that it may have come from Louisiana, Arkansas, or middle Mississippi Valley.

#### CONCLUSION

Bone and shell artifacts found in the 1930s near Anahuac have been described and compared to artifacts found at Harris County Boys' School Cemetery. The sites are located on opposite shores of the Galveston-Trinity Bay area. This increases to seven the known number of flutes or "flageolets" from this area.

An interesting observation can be made about the beads and bracelets which are objects of personal adornment. On the west side of the bay area, at the Harris County Boys' School Site, the beads are a smaller size and there is no evidence of whelk shell bracelets. However, at least one bracelet made of

columella beads strung together may be represented. In the report on the Harris County Boys' School Cemetery it is mentioned that the beads from the Caplen Site, on the east side of the bay area, are larger than the beads from the Harris County Site on the west side of the bay. Apparently the beads found at Anahuac, which is also on the east side of the bay area, are considerably larger than the ones from the Harris County Site. The Anahuac site also contained the circular bracelet made of conch whorl.

Although it is only speculation, the apparent difference in preference of objects of personal adornment may indicate these sites were inhabited by different groups of people. It is possible that the bays and major rivers served as natural cultural boundaries.

#### ACKNOWLEDGEMENT

I wish to thank Mr. and Mrs. Freis for allowing me to document and illustrate these interesting artifacts.

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## AUTHORS

LELAND C. BEMENT is a native Texan from the Houston area who has spent most of his life in the Midwest. He earned a BA in Anthropology from the University of Colorado, and then returned to Texas to pursue his graduate studies at the University of Texas at Austin. In 1986, he received an MA in Anthropology and now works as a Staff Archeologist with the Texas Archeological Survey. He is married, has two children, and lives in Austin.

KENNETH M. BROWN is a Research Associate with the Center for Archaeological Research, The University of Texas at San Antonio. He has made a number of presentations to STAA quarterly meetings, including reports of his work at Berger Bluff and the Baker Cave. Ken recently published an excellent analysis and summary of Guadalupe Tools in the 1985 **Bulletin of the Texas Archeological Society**. He is a long time member of both the TAS and STAA. Ken plays dobro and lead guitar with Timbre Line, a San Antonio bluegrass band. He lives near Helotes, Texas at the edge of the hill country.

MALCOM L. JOHNSON is a peach farmer and cartographer in addition to being a regional consultant and frequent contributor to this journal. Malcom is a former Chairman of STAA and was active in the original Coastal Bend Archeological Society when he lived in the Corpus Christi area where he grew up. Malcom and his family presently reside on a peach ranch near Fredericksburg, Texas.

ROCHELLE J. LENEAVE is originally from Pennsylvania and lived in several parts of the country before settling first in Houston and finally in San Antonio. She became involved in archaeology and joined STAA three years ago; she now has a BA in Anthropology from UTSA and is currently working on an MA in archaeology. She is also on the staff of the Center for Archaeological Research. Rochelle has worked on a number of prehistoric and historic sites in Texas, and spent one season in Belize with the Colha project. She lives in San Antonio.

ENRIQUE R. MADRID is an active Archeological Steward with the Office of the State Archeologist (OSA) for the Big Bend area of Texas. He is manager of a small general store in Redford, Texas, and spends much of his time and energy in the cause of protecting and documenting historic and prehistoric Indian cultural heritage. His eloquent description of his work as a steward marks him as an exceptional individual who is deeply involved in cultural conservation. All STAA members traveling out Redford way are encouraged to stop by his store to say hello.

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