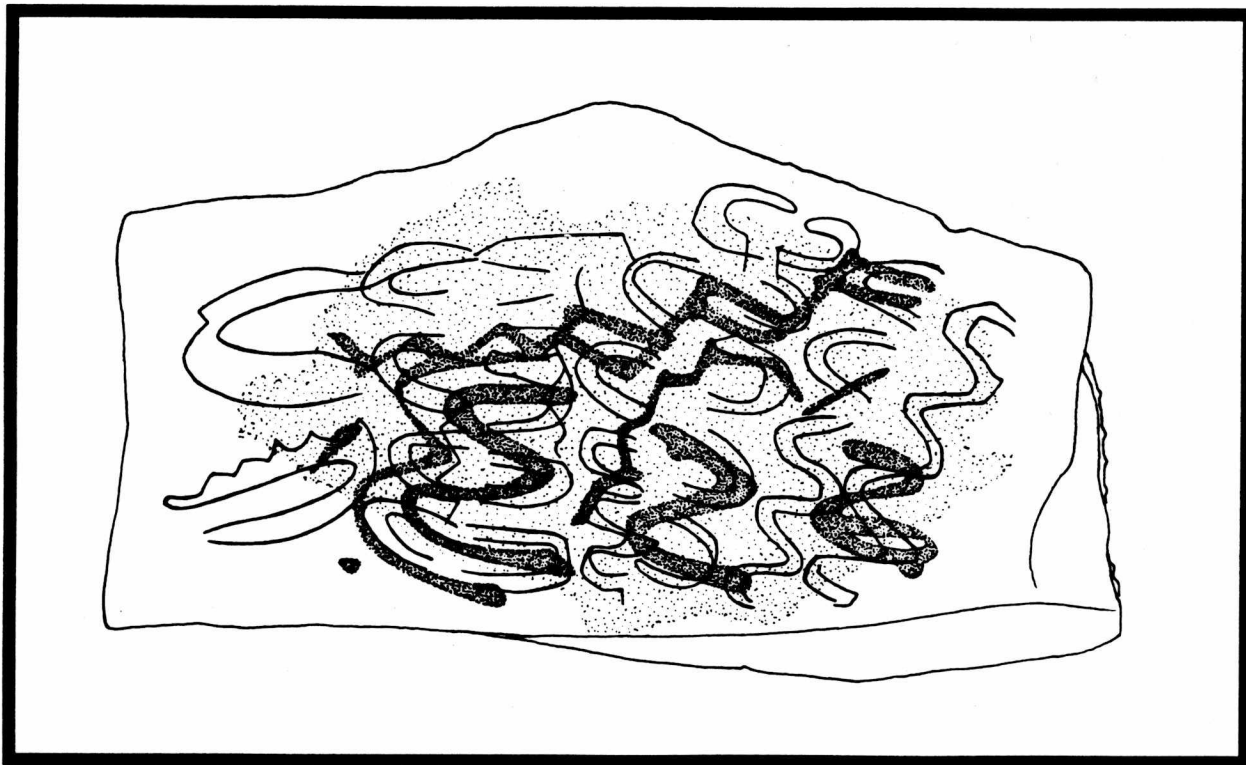


LA TIERRA



VOLUME 19, No. 3
July, 1992

**JOURNAL OF THE
SOUTHERN TEXAS
ARCHAEOLOGICAL
ASSOCIATION**

NOTES ON SOUTH TEXAS ARCHAEOLOGY: 1992-3
 Chipped Stone Artifacts from Site 41DM59, Dimmit County, Southern Texas
 (Thomas R. Hester and Charles M. Whatley) 1

DECORATED FRESHWATER MUSSEL SHELL ARTIFACTS FROM THE LOWER
 RIO GRANDE RIVER OF SOUTH TEXAS
 (C. K. Chandler and Don Kumpe) 8

ADVENTURES IN THE BONE TRADE
 (Al B. Wesolowsky) 15

LATE PREHISTORIC DECORATED FRESHWATER SHELLS FROM WEST
 CENTRAL TEXAS: EXAMPLES OF PORTABLE ART FROM THE
 O. H. IVIE RESERVOIR
 (Christopher Lintz) 19

AN INCISED AND PAINTED PEBBLE FROM REAL COUNTY, TEXAS
 (C. K. Chandler) 24

A PRELIMINARY REPORT ON THE DEWEES SITE, (41KR38), KERR
 COUNTY, TEXAS
 (Murray L. Beadles) 27

AUTHORS 40

About the Cover: An incised and painted pebble from Real County is reported on page 24. Drawn by Richard McReynolds.

Manuscripts for the Journal should be sent to: Editor, *La Tierra*, Evelyn Lewis, 9219 Lasater, San Antonio, Texas 78250. Past issues of the Journal and Special Publications available by requesting an order form from STAA, P. O. Box 791032, San Antonio, Texas 78279. Dr. T. R. Hester may be contacted at the Texas Archeological Research Laboratory, University of Texas, Austin, Texas 78712.

For membership information contact the Membership Chairman, Kay Allison, 301 East Rosewood, San Antonio, Texas 78212 (512-733-1744).

For use of the STAA Lending Library, contact Anne Fox or Kay Allison at the Archaeology Laboratory, The University of Texas at San Antonio, San Antonio, Texas 78249.

Library of Congress Catalog No. 76-649774.

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

La Tierra is now printed on acid-free paper.

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

NOTES ON SOUTH TEXAS ARCHAEOLOGY 1992-3:

Chipped Stone Artifacts from Site 4IDM59, Dimmit County, Southern Texas

Thomas R. Hester and Charles M. Whatley

Site 4IDM59 is an eroded occupation site overlooking Pena Creek, a major tributary of the Nueces River, in northwest Dimmit County. This is within the archaeological area usually described as "South Texas" or the "Rio Grande Plain" (Hester 1980). Archaeological research in Dimmit County has largely involved eroded occupation sites; a few burials have been documented and limited test excavations have been done at some sites (cf. Nunley and Hester 1966; Hester 1984). Documented chipped stone artifact types range from Paleoindian through Late Prehistoric times (Hester 1984).

The lithic assemblage briefly described here was collected by the junior author, who recorded the site with the Texas Archeological Research Laboratory, The University of Texas at Austin, in 1967. A recent analysis of the collection by the senior author indicates a significant Paleoindian and Early Archaic presence at 4IDM59. Included is a Paleoindian tool form -- the so-called Dalton Adz (Turner and Hester, in press)--not previously reported from southern Texas. For the purposes of the present paper, the lithic materials are summarized and briefly described according to their chronological attribution. Typology is based on Turner and Hester (1985; in press).

POSSIBLE HISTORIC MATERIAL

One artifact greatly resembles an aboriginally-made gunflint. It is bifacial and battered along one edge; length is 16 mm, width, 18 mm, and thickness, 6 mm (weight: 2.4 g). There is also a triangular arrow point resembling the Guerrero type (Figure 1,e). Since the Spanish Colonial missions at Guerrero, Coahuila are only 30 miles to the southwest, it is quite likely that these artifacts represent native groups affiliated (for whatever length of time) with one of those 18th century missions (Campbell 1979).

LATE PREHISTORIC

Projectile points attributable to the Late Prehistoric period include Perdiz, Scallorn, Edwards and Zavala. Selected examples are illustrated in Figure 1. Another arrow point is lozenge-shaped, with heavily dulled lateral edges. One intriguing specimen (Figure 3,a) appears to be an "early stage" Toyah Phase beveled knife -- in initial form, prior to having been heavily used (both lateral edges are lightly dulled) and resharpened in the style of that artifact type. It is made of heat-treated flint and is patinated (it is 127 mm long, 40 mm wide, 9 mm thick and weighs 56.2 g). Also in the assemblages is an end scraper made of translucent brown chert (Figure 3,k); it is of a form often associated with Toyah Phase sites in southern and Central Texas. However, the material of which it is made was often favored by Paleoindian flintknappers in South Texas, and an earlier date for this uniface cannot be ruled out.

ARCHAIC

The collection includes a number of dart points typical of the South Texas Archaic: Abasolo, Tortugas (Figure 2), Desmuke (Figure 2), Catan, Matamoros, and Langtry (Figure 2). Also represented are heat-treated "South Texas" Shumla points (of the kind reported by Hester and Collins 1974; see Figure 1, h,q), types more characteristic of Central Texas (e.g., Bulverde (Figure 2, b,g), Lange (Figure 2, h) and Montell), and a Conejo point (Figure 2,e), a



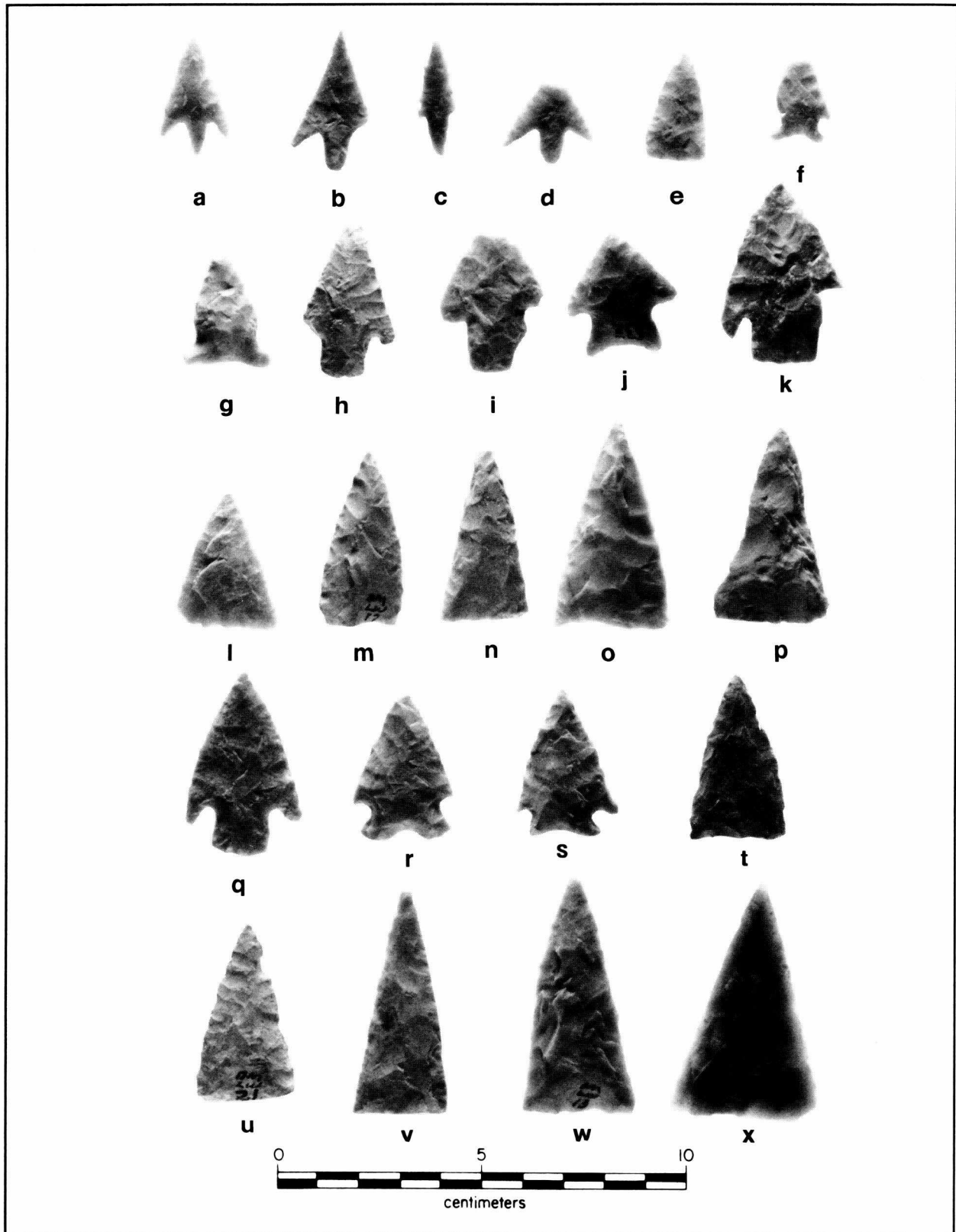


Figure 1. Artifacts from 41DM59. a-d, Perdiz; e, Guerrero; f, Edwards; g, Ensor; h,q, Shumla; i, k, Bell; j, "early corner notched"; l-n, t-x, Tortugas; o, p, Early Triangular; r, s, Frio.

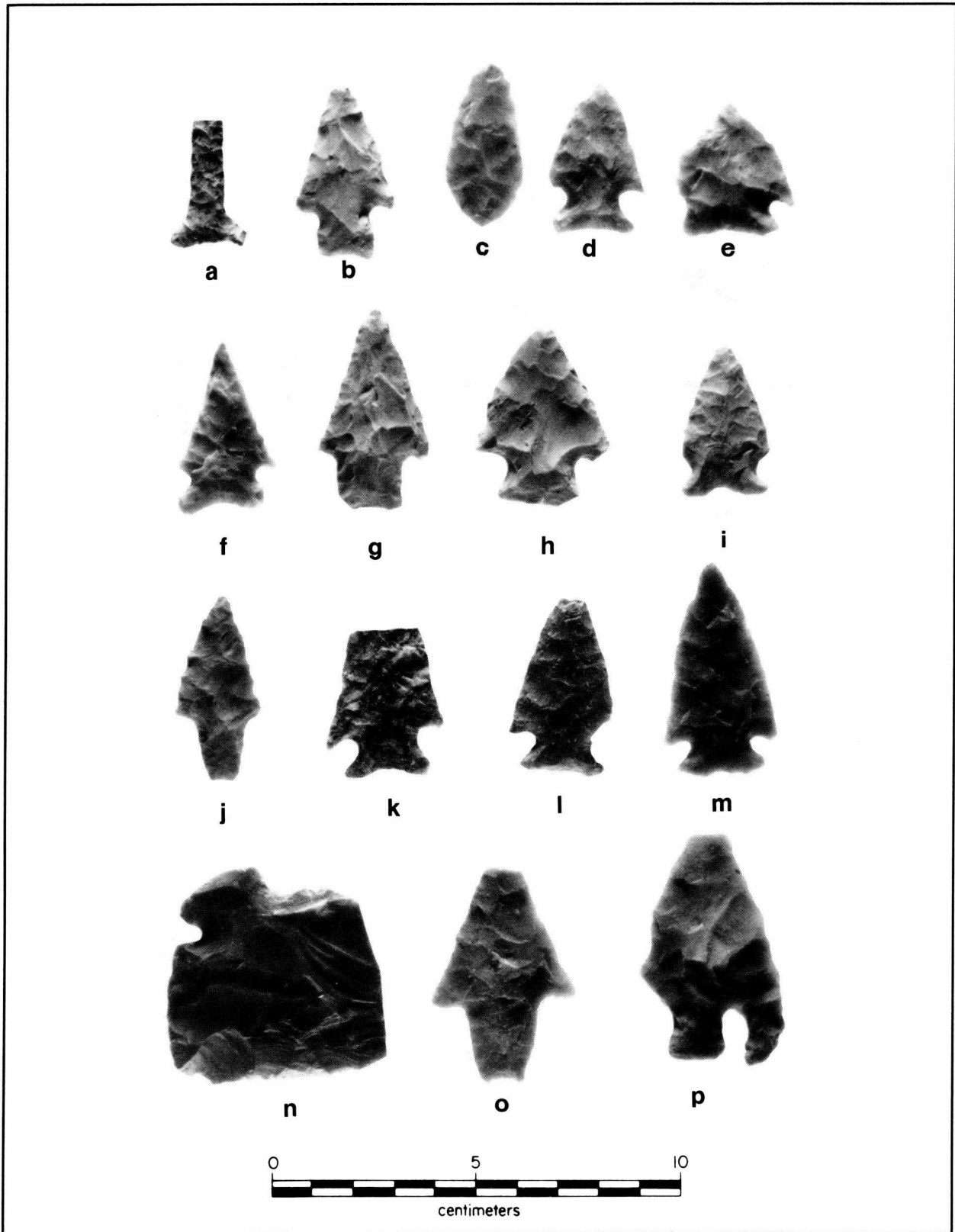


Figure 2. Artifacts from 41DM59. a, drill; b, g, Bulverde; c, Desmuke; d, "early corner notched"; e, Conejo; f, i, Frio; h, Lange; j, o, Langtry; k-m, Martindale; n, corner tang biface; p, Bell.

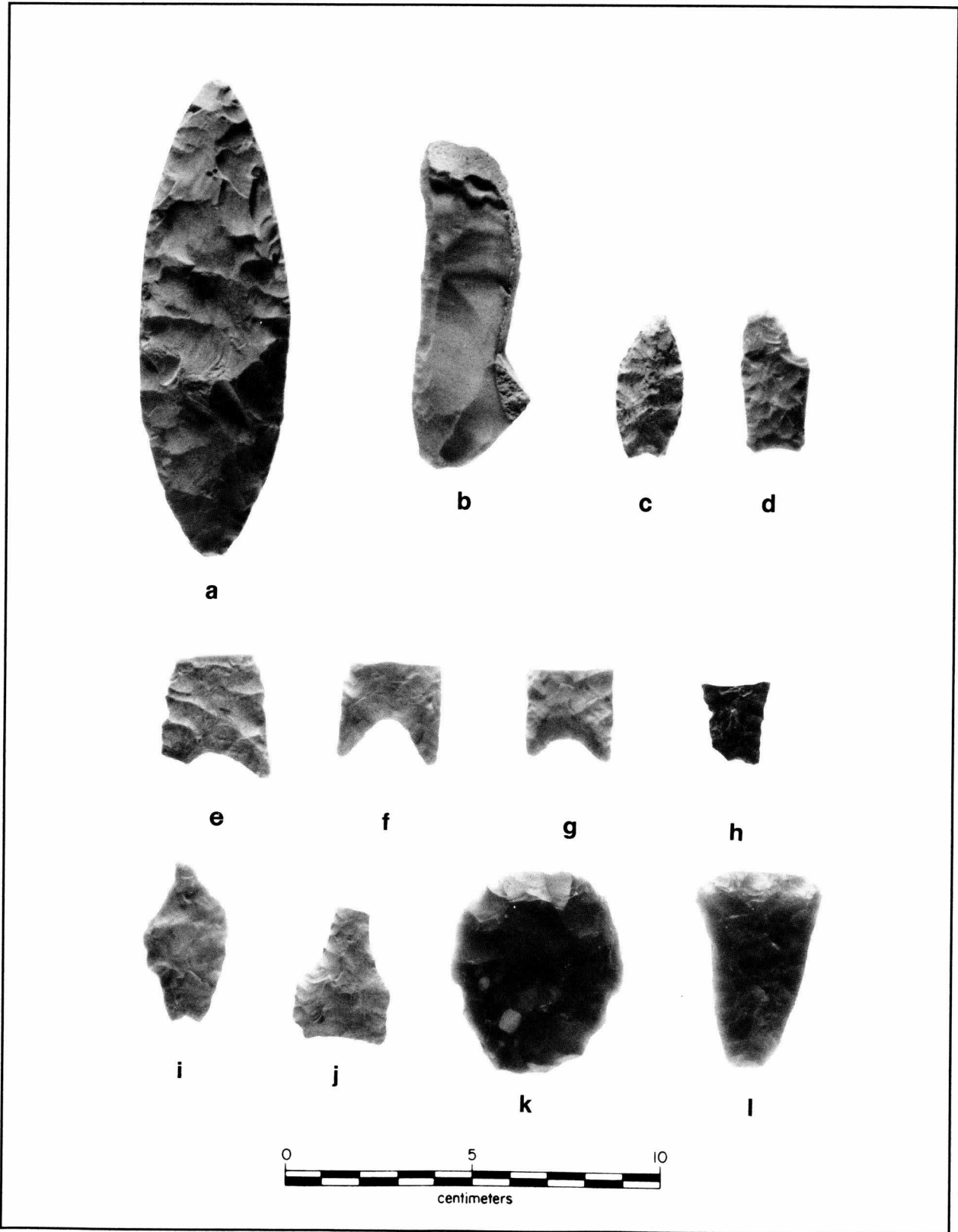


Figure 3. Artifacts from 41DM59. a, Toyah Phase biface; b, trimmed blade; c,d,h,i, Angostura; e,g, Golondrina; f, Barber?; j, drill made on Plainview; k, end scraper; l, Dalton Adz.

Lower Pecos Archaic diagnostic. There are also a number of the small Transitional Archaic types so common in this part of southern Texas --Ensor (Figure 1,g), Frio (Figure 2, f,i) and reworked stubby versions of these types.

Particularly notable are the Early Archaic lithics at 4IDM59. These include Bell (Figures 1,2), Martindale and Uvalde (the "early corner notched" series; Figures. 1,2) and Early Triangular (Figure 1, o,p; quite distinct technologically from their triangular Tortugas counterparts).

Among the other Archaic artifacts are a number of preforms, a drill or perforator (Figure 2,a), a biface made of basalt, and a fragment of a corner-tang biface (Figure 2). Corner-tang artifacts are attributable to the Late Archaic of Central Texas and are uncommon in southern Texas (see, however, such specimens as associated grave goods at the Haiduk site in Karnes County Mitchell et al. 1984).

A number of the Archaic points are of heat-treated material. Some of the triangular dart points have impact flutes at their tips, indicative of their use as projectile points, though some could well have functioned as knives (Allen Bettis, graduate student at The University of Texas at Austin, has recently done a study of breakage patterns on projectile points from a large collection in Webb County; this will hopefully be published in *La Tierra* in a future issue.)

PALEOINDIAN ARTIFACTS

All of the Paleoindian artifacts are illustrated in Figure 3. They include Golondrina (Figure 3,e,g) a Plainview (reworked into a drill; Figure 3,j), and Angostura (Figure 3,c,d,h,i, including a much reworked specimen seen in Figure 3,i). A specimen which appears to be of the Barber type (Figure 3,f) is well outside its range (Turner and Hester 1985); it may be a reworked Golondrina point. Most of the Paleoindian points are patinated; one Angostura that is not patinated is clearly made of heat-treated chert (Figure 3, d).

Though Angostura points were once thought to be very late in the Paleoindian era, recent work at Applewhite Reservoir on the Medina River in Bexar County has provided radiocarbon assays of ca. 6800 B.C. (Thoms 1992).

There are two bifaces in the collection that

don't resemble the usual "gouge" forms found in Central Texas. Indeed, they appear to be Dalton Adzes, a tool form only recently recognized in Texas lithic assemblages (cf. Johnson 1989). The specimen in Figure 3, 1, is a particularly good example. It is finely flaked bifacially, has a beveled bit much unlike bifacial Clear Fork tools, and has a heavily dulled bit edge. The material of which it is made is a glossy (sandblasted?) gray brown chert, a material not usually selected for the manufacture of Clear Fork or related beveled biface/uniface tool forms in southern Texas. The illustrated specimen is 53 mm long, 34 mm wide, 10 mm thick and weighs 19.3 g; the second specimen (not shown) is 60 mm long, 38 mm wide, 15 mm thick and weighs 31.7 g).

The Dalton Adz is reported by Johnson (1989) from sites in eastern and Central Texas (such as Horn Shelter on the Brazos River near Waco); Johnson (ibid.) notes several radiocarbon assays for Dalton and related materials at 8400-7600 B.C.

Another intriguing artifact is a blade (Figure 3,b) that may be of Paleoindian age. It has been trimmed along the left edge (as oriented in the illustration); some cortex remains along the opposite edge. It is 87 mm long, 31 mm wide, 7 mm thick and weighs 23.4 g. Blade technology is rare in southern Texas, usually confined to Toyah or other Late Prehistoric manifestations, especially on the coast (Hester and Shafer 1975). M. B. Collins (cf. Collins 1990) has been examining Clovis technology in Texas, and such blades are often part of that early tradition.

Finally, there is a reworked side-notched dart point with dulled stem edges. This resembles Big Sandy (Turner and Hester, in press), a Paleoindian style found across the southeastern United States and into eastern and Central Texas (at least one specimen of this type was among the materials excavated by M. B. Collins and myself at the Gault site in Bell County in 1991). The Charles Whatley Collection includes at least one other specimen likely of this type from Dimmit County.

SUMMARY

The chipped stone assemblage collected from the surface of site 4IDM59 contains materials common to the southern Texas archaeological

area, as well as a series of artifacts either previously unknown or little documented from the region. It gives an insight as to what can be learned from surface materials collected over a series of years at a particular site -- rather than the brief (and usually uninforming) glance that we get from a one-time visit during traditional site survey efforts. There are items of material culture of particular note from both ends of the time spectrum. A brief Historic Indian occupation is indicated, probably dating from the 18th century and related to the Guerrero missions. The early materials include a number of Early Archaic point types rarely reported (or recognized) in the area. Additionally, there are a number of Paleoindian projectile points (dating from the 7000-8000 B.C. time frame) accompanied by what appears to be tool forms such as the Dalton Adz and trimmed blades. The bulk of the assemblage is related to Middle-Transitional Archaic occupations, with

most of the materials characteristic of southern Texas, though with a number of points (and a corner tang biface) that can be typed and cross-dated into Lower Pecos and Central Texas (cf. Nunley and Hester 1966). The variability in the 41DM59 assemblage is reflected in other sites represented in the Whatley Collection from Dimmit County and surrounding areas. Future contributions in the *Notes on South Texas Archaeology* series will provide additional data, and consider the implications these have for a better understanding of regional prehistory.

ACKNOWLEDGMENTS

Charles M. Whatley made the collection available to the Texas Archeological Research Laboratory for full documentation. Jennifer Bither helped in this task, and Dr. Daniel Julien photographed the specimens.

References Cited

- Campbell, T. N.
1979 Ethnohistoric Notes on Indian Groups Associated With Three Spanish Missions at Guerrero, Coahuila. *Archaeology and History of the San Juan Bautista Mission Area, Coahuila and Texas, Report 3*. Center for Archaeological Research, The University of Texas at San Antonio.
- Collins, M. B.
1990 Observations on Clovis Lithic Technology. *Current Research in the Pleistocene* 7:73-74.
- Hester, T. R.
1980 Digging into South Texas Prehistory. *Corona*, San Antonio.
1984 The Prehistory of Dimmit County. In: *Dimmit County Mesquite Roots*, ed. by Aura Tidwell, pp. 1-6. Wind River Press, Austin.
- Hester, T. R. and M. B. Collins
1974 Evidence for Heat Treating of Southern Texas Projectile Points. *Bulletin of the Texas Archeological Society* 45:219-224.
- Hester, T. R. and H. J. Shafer
1975 An Initial Study of Blade Technology on the Central and Southern Texas Coast. *Plains Anthropologist* 20(69): 175-185.
- Johnson, L., Jr.
1989 Great Plains Interlopers in the Eastern Woodlands During Late Paleo-Indian Times. *Office of the State Archeologist Report* 36:9. Texas Historical Commission, Austin.
- Mitchell, J. L., C. K. Chandler and T. C. Kelly
1984 The Rudy Haiduk Site (41 KA 23): A Late Archaic Burial in Karnes County, Texas. *La Tierra* 11(2):12-37.

Nunley, P. and T. R. Hester

- 1966 Preliminary Archeological Investigations in Dimmit County, Texas. *Texas Journal of Science* XVIII (3): 233-253.

Thoms, A.

- 1992 Late Pleistocene and Early Holocene Regional Land Use Patterns: A Perspective from the Preliminary Results of Archaeological Studies at the Richard Beene Site, 41BX831, Lower Medina River, South Texas. In: *Late Cenozoic Alluvial Stratigraphy and Prehistory of the Inner Gulf Coastal Plain, South-Central Texas*.

Thoms, A., continued

- Lubbock Lake Landmark Quaternary Research Center Series 4 (in press), Lubbock, Texas. (Draft appears in Guidebook, 10th Annual Meeting, South-Central Friends of the Pleistocene, San Antonio, March 1992.)

Turner, E. S. and T. R. Hester

- 1985 *A Field Guide to Stone Artifacts of Texas Indians*. Texas Monthly Press, Austin.

in *A Field Guide to Stone Artifacts of Texas Indians*. Gulf Publishing, Houston.

§ § § § § § § § § § § § § § § § §

FRIENDS OF ARCHAEOLOGY

Have you renewed your membership to the unique, worthwhile and tax-deductible Friends of Archaeology program? Have you told your friends about this opportunity to take an active part in supporting the various archaeological projects undertaken by students and staff alike? Through your contributions threatened sites can be studied and salvaged before the heavy road machinery moves in, special dating studies (radiocarbon dating, trace element analysis of obsidian, bone identification, soils studies, etc.), publication of important reports, acquisition of special laboratory equipment, student research assistance, and the sponsoring of lectures and educational programs usually open to the public can be considered.

Annual memberships range from \$25 for Individual to \$500 or \$1,000 for Patron and Benefactor. The latter may designate funds to support specific program areas. For more information about the Center for Archaeological Research or Friends of Archaeology, write to:

Center for Archaeological Research
The University of Texas at San Antonio
San Antonio, Texas 78249-0675

or call Jack Eaton, Acting Director, Phone: 512-691-4378.

DECORATED FRESHWATER MUSSEL SHELL ARTIFACTS FROM THE LOWER RIO GRANDE RIVER OF SOUTH TEXAS

C. K. Chandler and Don Kumpe

ABSTRACT

Ornaments of freshwater mussel shell are rare in archaeological literature. This report documents and illustrates eight specimens of freshwater mussel shell with incised and notched decorations. Six of these have very detailed elaborate incised motifs of careful execution. One complete specimen has irregular edge notching and several incised lines on the interior that are without pattern. Seven of these specimens are classified as pendants. One might be a triangular arrow point. These artifacts are from along the Rio Grande River in deep South Texas.

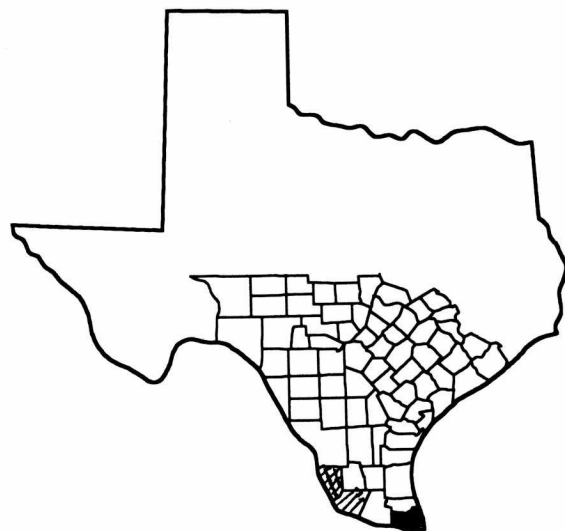
THE ARTIFACTS

Specimen 1, Figure 1, A, is a fragmentary mussel shell pendant with two biconically drilled suspension holes. The shell interior is decorated with two panels of parallel, zigzag, incised lines aligned with the longitudinal axis of the shell pendant. Facing the shell interior with the suspension holes up, the right panel has 13 of these parallel lines and the left has 15. There are several short incised lines at right angles from each panel toward the central area of the shell. These incisions are remarkable for their fineness and uniformity of spacing. Under low power (18X) magnification the individual lines are U-shaped with smooth rounded edges. The edges of the shell have been ground to a subrectangular shape and the margin removed to the pallial line. The two suspension holes are biconically drilled, first from the interior where they apparently penetrated to the exterior and were then finished from the outside. The umbo is also reduced by grinding.

Specimen 2, Figure 1, B, is a fragmentary mussel shell pendant with two biconically drilled holes at the umbo end. Like Specimen 1, these holes are drilled mostly from the interior with

finishing from the exterior. The incised design on this specimen is very similar to that of Specimen 1 in that it consists of incised, parallel zigzag lines. While the uniformity of spacing is maintained, these lines are farther apart and there are fewer of them. Under microscopic examination (18X) these lines are very ragged along their edges and their depth is less uniform than those of Specimen 1. The layers of this shell are beginning to flake away and this may account for the rough edges and irregular depths of the incisions. The shell edges were ground to what appears to have been subrectangular shape much the same as Specimen 1 but smaller. Some of the incisions are five shell layers deep. Forty-seven *Rabdotus* snail shell beads were found associated with this specimen.

Specimen 3, Figure 1, C, is a fragmentary mussel shell pendant with only a portion of a biconically drilled suspension hole remaining. It may have had two holes. This specimen differs from the previous two in that its one remaining unbroken edge is lightly notched full length. This edge was ground prior to notching. It had at least two straight, parallel incised lines along the



Area discussed: Cameron County, black; Starr, striped; Zapata, crosshatched.

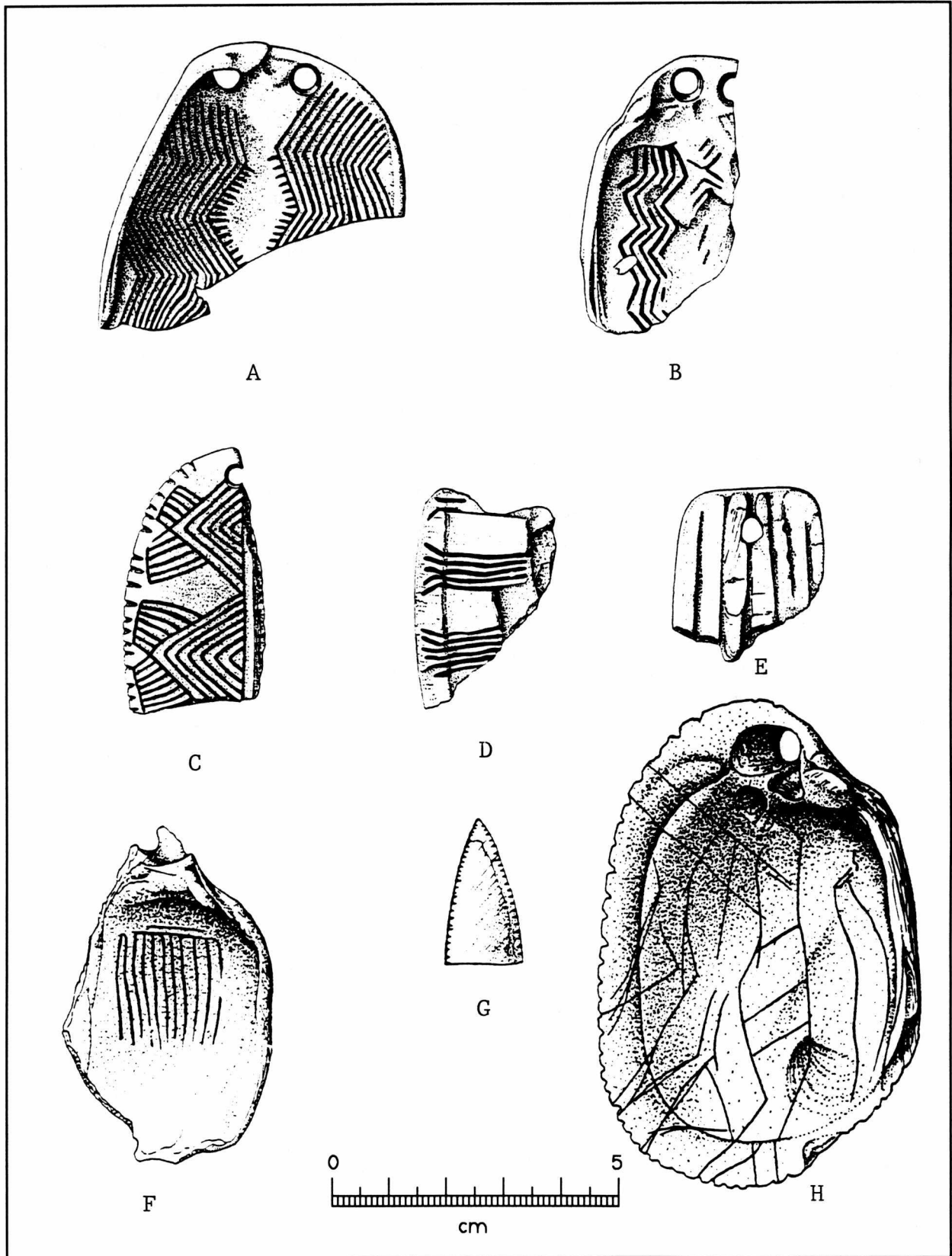


Figure 1. Decorated Freshwater Mussel Shell Pendants from Along the Lower Rio Grande River. Drawings by Richard McReynolds.

longitudinal center below the suspension hole. This fragment is broken along the second of these incised lines. Using the remaining line as a base, two sets of stacked triangles, one group of seven, one group of six, protrude at right angles toward the notched side edge. These stacked triangles are often called "chevrons." All of these incised lines are very neatly done and are well preserved. This shell is in the best condition of these incised specimens and there is no flaking away of the mother-of-pearl. The incised lines are U-shaped with very little rounding of the edges.

Specimen 4, Figure 1, D, is considered to be a fragment of a shell pendant but is too fragmentary for positive identification as a pendant. Its one unbroken edge has been ground and there is no surviving suspension hole. There are two panels of five to six parallel, nearly straight lines at right angles to the finished edge and remnants of a third panel. These incised lines flare outward at the end nearest the finished edge of the shell. These lines are filled with a powdery silty soil. In some areas the outer layer of mother-of-pearl has slipped off and is being held in place by this soil. This powdery deposit is helping preserve this fragment and its decoration. This specimen is considered to have had one or more suspension holes but they were lost in the breakup of the shell. No other artifacts were found with this specimen. It was found on the surface shortly after this site was root plowed.

Specimen 5, Figure 1, E, is a fragment of a rectangular shell pendant with one biconically drilled suspension hole that is drilled mostly from the interior. It has six deeply incised, parallel lines on the shell exterior. These lines are straight and are oriented with the longitudinal axis. The edges have been ground to shape and the shell interior has been ground nearly flat. The exterior may have been ground but this surface is flaking off as much as five layers in some areas and it can not be definitely determined that this face was ground, the probability seems likely. This specimen appears to have been manufactured from the umbo area of the shell. Its maximum thickness is at the suspension hole where most of the interior grinding was done.

Specimen 6, Figure 1, F, is a fragment of what appears to have been a complete shell pendant with interior incising. All edges are too

fragmentary to determine if they were ground to shape. A portion of a single suspension hole remains at the umbo end. This shell is eroding from all surfaces but the incised motif is still identifiable. This motif consists of 11 straight parallel lines oriented with the long axis of the shell with a single horizontal line across the top ends of the vertical lines. This feature survives in only one layer of the shell interior.

Specimen 7, Figure 1, G, is a complete small triangular artifact made of a section of freshwater mussel shell. The two long edges have continuous tiny edge nicks to the interior face only. It has the size and appearance of a Guerrero point but may be some form of jewelry.

Specimen 8, Figure 1, H, is a pendant made of a complete shell with one biconically drilled suspension hole in the thick umbo end. The shell edge has been lightly ground and is continuously notched except for the hinge area. The size and shape of the shell has been minimally altered. The interior pearly layer has several lightly incised straight to wandering lines on its interior surface. Many of these lines are relatively long and extend from the interior to the outer lip. They do not exhibit a definite pattern but under microscopic examination show to be definitely man-made. This specimen was found amid human bone that appeared to represent a single interment. The bones were spread by receding water.

In addition to the decorated mussel shell pendants, two shell pendants without decoration are illustrated. They are more nearly complete than are the incised fragments. They are of the same subrectangular shape as the decorated ones and are illustrated in Figure 2, A and B. They have been ground around all edges and each has a single biconically drilled suspension hole at the umbo end. The exterior surfaces have been ground smooth and this surface is flaking off in the area opposite the suspension hole and umbo. This caused the loss of part of the pendant around this corner. These two specimens better exhibit the overall size and shape of the fragmentary decorated specimens. Their better condition is probably due to the lack of incising, as the incising breaks through several layers of the pearly nacre of the shell and accelerates its disintegration.

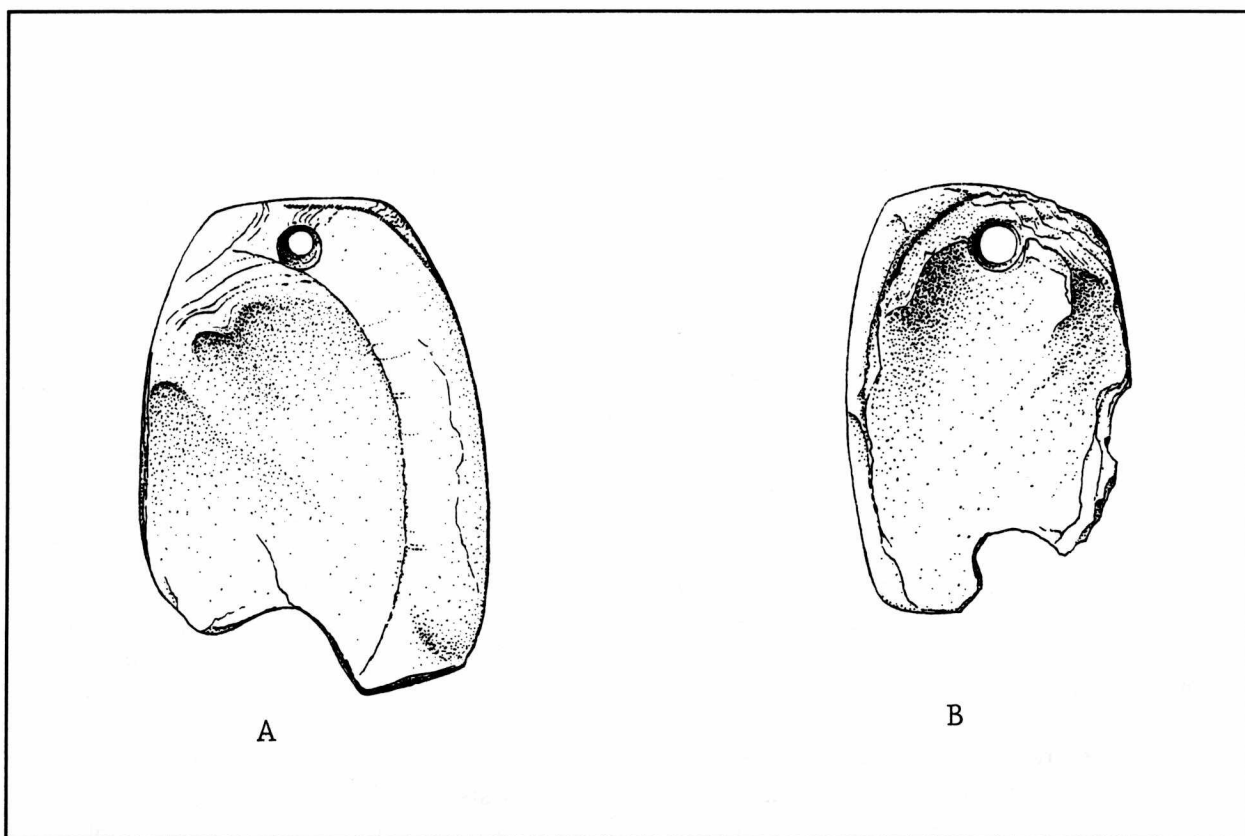


Figure 2. Freshwater Mussel Shell Pendants Without Decoration, from the Lower Rio Grande River. Drawings by Richard McReynolds.

DISCUSSION

The freshwater mussel shell artifacts reported here were all surface collected from along the Lower Rio Grande River and its tributaries. Some, but not all, were exposed by wave action along the shores of Falcon Lake. They are from Starr, Zapata and Cameron Counties and northern Tamaulipas. The elaborate and carefully executed motifs of these specimens have not been found illustrated in the regional archaeological literature.

Because of their fragmentary condition only one of the decorated shells reported here has been identified. Specimen 8, Figure 1, H has been identified as a specimen of *Cyrtonaias tampicoensis* (N. Richard, personal communication 1992). It is commonly known as "Tampico pearly mussel." It is also known as "San Angelo Pearl mussel" and is the mussel that produces the well known Concho River pink pearls (ibid).

The native range of *Cyrtonaias tampicoensis* is from the Panuco River in Tamaulipas and Veracruz, Mexico northward to the Brazos River in Texas. It is the most abundant freshwater mussel species in the Rio Grande drainage (Neck and Metcalf 1988).

There are frequent scatters and clusters of mussel shells (fragments and valves) in prehistoric sites along and near the rivers and arroyos on both sides of the Rio Grande from the Webb County line to the mouth of the Rio Grande. In some instances these shells are eroding from the sides of washes and on some sites there are large accumulations. These clusters and scatters do not have the characteristics of middens. It appears the Indians were gathering the mussels for food and discarding the shell where shucked.

Freshwater mussel shells were widely available but were rarely used for ornaments; probably because of their fragile nature, they had a short life. The grinding of the edges removed the thin,

fragile outer edge thus providing a thicker and stronger edge that improved the appearance of the ornament and helped extend its life. However, the incising and engraving cut through several layers and cut the pearly nacre into small segments that weakened the shell. Some of the specimens reported here have incised motifs cut through at least five shell layers and many of the fractures follow these incisions. It is noted that the suspension holes are all located in the umbo area where the shells are thickest. This may be a conscious effort to protect the artifact from damage due to too much weight supported in a thin area.

A large number of rectangular freshwater mussel shell pendants with drilled suspension holes were recovered at 41BX1 in San Antonio (Lukowski et al. 1988:80). These are without decoration. One highly fragmented mussel shell is edge notched in a manner very similar to Specimen 8, Figure 1, H illustrated in this report. One large subtriangular mussel shell pendant from 41BX1 is punctated and notched. The punctates are single rows of drilled pits in the form of a cross and one circular designs on either side of the vertical bar below the horizontal bar. The broad end of this pendant is notched. The cross design produced in various configurations with shallow punctates is common on large marine shell pendants (see Aten et al. 1976:43-44, Figure 15; Lukowski et al. 1988:74-79). Punctates are extremely rare in the decoration of mussel shell artifacts and this technique does not appear in the decoration of the artifacts reported here.

Anderson (1932) does report artifacts made of freshwater shells with incising and illustrates an assortment of these with photographs. If incising is present it can not be identified from the photographs.

Zavaleta (1991) reported at length on Anderson and his collection and illustrated with photos an assortment of shell artifacts. His Figures 19 and 22 illustrate what appears to be the same shell artifact (called a gorget) in Anderson's Plate 7, No. 15. In neither instance is it identified as incised but close examination by Don Kump of Zavaleta's photos reveals an incised motif of paired zigzag, parallel lines in a longitudinal pattern on the interior of the pearly nacre of this shell. This motif is very similar to the incisions

of Specimen 2, Figure 1, B illustrated in this report.

Freshwater mussels once were present in practically all the streams in the United States and were especially abundant in waters of the limestone valleys. One of the earliest industries established was the making of pearl buttons. Even today it is recognized that the finest pearl buttons are those made almost entirely by hand during the 18th and 19th centuries. The shells were sawed into squares and rounded into button blanks. Some early pearl buttons were 1½ inches in diameter. Beginning about 1850 machines using tubular saws and other mass production devices replaced hand work in the manufacture of mother-of-pearl buttons (Albert and Kent 1949:58).

Pearl button factories were established in New England, Pennsylvania, Maryland and also in the northern Mississippi Valley states of Wisconsin, Iowa and Illinois. Over time the commercialization of the freshwater mussel became centered in the Mississippi Valley. This activity seems to have been a late arrival in Texas. A number of Tampico pearly mussel valves with holes where buttons were cut out were recovered in excavations at Fort Brown (Shaffer 1990:144-145). There is evidence that soldiers at Fort Brown harvested the Tampico pearly mussel for use as both food and button manufacturing (ibid:144-145).

In 1928, Ted and Frank Healy, who were in the button manufacturing business in Muscatine, Iowa, established the Continental Button Factory in Mercedes, Texas. This factory had 48 button cutting machines. The Tampico pearly mussel was utilized as the base for this commercial button manufacturing operation that existed until shortly after World War II (Neck 1990:147).

The use of shell for the manufacture of ornaments and tools is widespread across North America. However, those cultures that had highly advanced shell industries almost exclusively used marine shell even though many of these cultures were far inland from the source of the raw material (see Haury 1965:135-153; Smith and Smith 1989:9-18).

Besides their use as ornaments some shell artifacts were important in certain ceremonies. In the coming of age ceremony of the White Mountain Apache--when a girl passes from childhood to

womanhood--a shell pendant is tied to a lock of her hair to position the pendant on her forehead. This is the sign of Changing Woman, Mother of All Apache People (Quintero 1980:262-271).

SUMMARY

Until late 1991 the state of Texas had never recognized the commercial value of freshwater mussels and precious little research had ever been done on this resource in Texas. In December of 1991 the Texas Parks and Wildlife Department became aware that the Japanese were purchasing large quantities of freshwater mussel in Central Texas for use in their cultured pearl industry. Because, at present, there is no state control of the harvesting of mussel shell except for very low permit fees, the exact quantity of these shells purchased by the Japanese is not known, but for the year 1991 alone it is estimated between 600 and 1,200 tons were shipped from Texas. This has prompted the interest of Texas Parks and Wildlife and the mussel is now being studied at their "Heart of the Hills Research Station" near Ingram.

No radiocarbon dates are available for these Lower Rio Grande River specimens but they are considered to be of fairly recent age on the order of the specimens from west central Texas reported by Lintz (1992-this issue). Lintz reports four specimens from Toyah and pre-Toyah occupations

dating between A.D. 1060 and A.D. 1550 from excavations at O. H. Ivie Reservoir in Concho, Coleman and Runnels Counties.

Unlike the specimens from O. H. Ivie Reservoir, the purpose and function of these artifacts reported here appears to be unquestionable. The consistent rectangular shape, drilled suspension holes and careful attention to the incised, elaborate decoration surely identifies these artifacts as ornaments in the category of pendants.

ACKNOWLEDGEMENTS

We wish to extend our sincere appreciation to Frank H. Dudley III, Mary E. Kumpe, Terry J. Kumpe and Michael J. Ryan for sharing their artifacts with us for study and documentation. We also express our special thanks to Norman Richard and Gene J. Paull of Texas Southmost College in Brownsville and Bruce Aiken of the Historic Brownsville Museum for their very helpful comments and suggestions in the search for references. Robert Howells at the Texas Parks and Wildlife "Heart of the Hills Research Center" at Ingram supplied information on current research about mussel shells in Texas and other information for which we are most grateful. Our particular thanks to Richard McReynolds for his preparation of the illustrations.

References Cited

- Albert, Lillian Smith and Kathryn Kent
1949 *The Complete Button Book*, by John Edwards. Publisher copyright 1949, reprint 1971.
- Anderson, A. E.
1932 Artifacts of the Rio Grande Delta Region. *Texas Archeological and Paleontological Society* 4:29-31.
- Aten, Lawrence E., Charles K. Chandler, Al B. Wesolowsky, and Robert M. Malina
1976 Excavations at the Harris County Boys' School Cemetery: Analysis of Galveston Bay Area Mortuary Practices. *Texas Archeological Society, Special Publication* 3:41-44.
- Haury, Emil W.
1965 Shell. In: *Excavations at Snaketown: Material Culture* by Harold S. Gladwin, Emil W. Haury, E. B. Sayles, and Nora Gladwin, pp. 135-153. University of Arizona Press, Tucson. Originally published 1938, Reprinted 1965.
- Lintz, Christopher
1992 Late Prehistoric Decorated Freshwater Shells from West Central Texas:

Lintz, Christopher (continued)

Examples of Portable Art from the O. H. Ivie Reservoir. *La Tierra* 19(3): 19-23 (this issue).

Lukowski, Paul D., Richard F. Shoup and Robert F. Scott IV.

1988 Archaeological Investigations at 41BX1, Bexar County, Texas. *The University of Texas at San Antonio, Center for Archaeological Research, Archaeological Survey Report* 135:74-80.

Neck, Raymond W.

1990 Button Shells from Fort Brown, Texas. In: *Archaeological Investigations at Fort Brown (41CF96), Cameron County, Texas*, by Shawn Bonath Carlson, Joe Saunders, Frank Winchell, and Bruce Aiken, with contributions by Brian Shaffer and Raymond W. Neck. Published by the Archaeological Research Laboratory, Texas A and M University, Report of Investigations 11.

Neck, Raymond W. and Artie L. Metcalf

1988 Fresh Water Bivalves of the Lower Rio Grande, Texas. *Texas Journal of Science* 40:259-268.

Quintero, Nita

1980 Coming of Age the Apache Way. *National Geographic* 157(2):262-272. (February).

Shaffer, Brian S.

1990 Analysis of the Faunal Remains. In: *Archaeological Investigations at Fort Brown (41CF96), Cameron County, Texas* by Shawn Bonath Carlson, Joe Saunders, Frank Winchell, and Bruce Aiken with contributions by Brian S. Shaffer and Raymond W. Neck. Published by the Archaeological Research Laboratory, Texas A and M University, Report of Investigations 11.

Smith, Marvin T. and Julie Barnes Smith

1989 Engraved Shell Masks in North America. *Southeastern Archaeology* 8(1):9-18.

Zavaleta, Antonio N.

1991 Mr. A. E. Anderson, "The Father of Valley Archaeology," and his "Indian Relic Collection" published in *Still More Studies in Brownsville History*, edited by Milo Kearney. The University of Texas at Brownsville.



**TEXAS
ARCHEOLOGICAL
SOCIETY**

Highly respected annual *Bulletin of the Texas Archeological Society*; Newsletter, *Texas Archeology*; one week summer field school; fall convention. Write to:

Texas Archeological Society
Center for Archaeological Research
The University of Texas at San Antonio
San Antonio, Texas 78249-0675

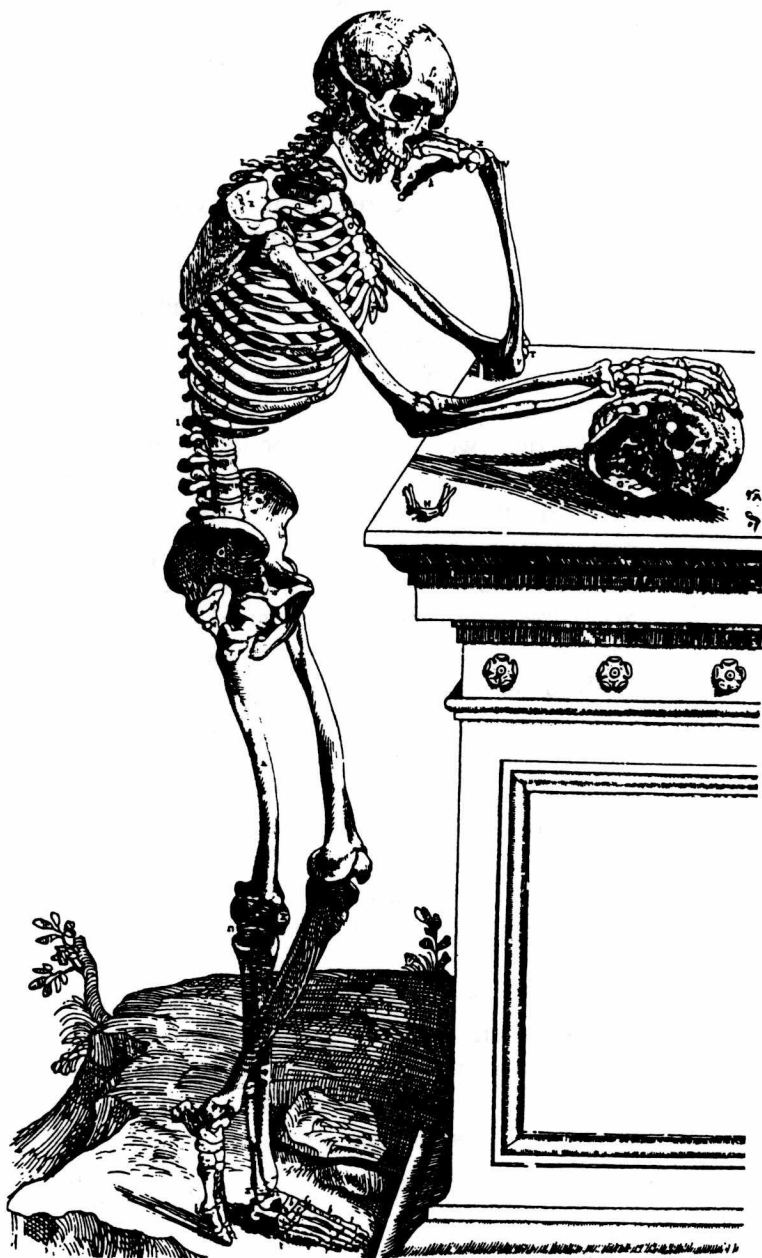
ADVENTURES IN THE BONE TRADE¹

Al B. Wesolowsky

The facetious title of this little reminiscence derives, of course, from Dylan Thomas' largely autobiographical *Adventures in the Skin Trade*. Lest one think that I buy and sell bones, I assure the gentle reader that my "trade" is only in a knowledge of bones, particularly human ones, their anatomy, and what they can tell us about earlier human lives. The "adventures," and small ones they are, I am quick to admit, largely revolve about people's often odd notions concerning skeletal anatomy and their readiness to share them with archaeologists. Fieldworkers who have had any experience to speak of in excavating cemeteries have had such misapprehensions foisted upon them by fascinated bystanders, and even, occasionally, by well-intentioned colleagues.

There is something about burials that has an appeal to the onlooker that is unique in public perceptions of archaeology. Something about viewing the corporeal remains of another human, no matter how distant the time in which this ancestor lived, fascinates, disturbs, and even repels the idly curious. By the same token, these sensations can produce some of the most outlandish or innocently funny misperceptions and will, presently, bring us to the lesson that these stories contain.

Once, in Texas, I happened to visit the aftermath of uncontrolled digging of prehistoric burials on Redfish Bay, not far from Corpus Christi. The pothunter had excited the interest of the local newspaper and had spared no details in describing his finds as doubtless those of the Karankawa Indians who had, in fact, inhabited the area during the historical period. Of all the hundreds of known historical Indian groups in Texas, the Karankawa were singled out by the early Spanish explorers as being "exceptionally



*This remarkable study of a skeleton examining a skull is a product of the work of Andreas Vesalius (1514-1564), the Flemish anatomist, and appeared in his *De humani corporis fabrica* (1542), a work regarded to this day as the most historically influential of medical publications.*

¹This article was first published in *Context*, Newsletter of the Center for Archaeological Studies at Boston University, 7:3-4 (Spring 1989) 11-13, and appears here with the permission of the publisher and the author.

tall" (perhaps six feet, which, after all, may have been quite tall to a sixteenth-century Spaniard) and "fierce"; and, since they practiced an occasional ritual of devouring strips of flesh sliced from their captives, have been branded in modern eyes as cannibals.

The pothunter did not know anatomy, but this circumstance did not deter him from holding up a looted leg bone against his own leg for comparison. Since some six inches of his own thigh bone was obscured by his pelvis, of course the bare bone looked truly enormous. Another skeleton was that of a child in which the adult dentition was beginning to develop and could be seen through breaks in the jaw bones; in fact, the permanent teeth were starting to erupt beneath the baby teeth, just as they do in all humans.

Not only were these the bones of giants, we were told, but clearly, with this formidable array of teeth, these Indians were well-equipped to devour their hapless neighbors. The pothunter may not have known his anatomy, but the newspaper editor clearly knew good copy when he had it, and helped to perpetuate the largely mythical status of these coastal dwellers as a folk so savage that, in this case at least, they required not one, but two sets of teeth to perform their barbaric rituals. The newspaper headline, predictably, trumpeted the discovery of "Double-Fanged Karankawa Cannibal Giants."

On other occasions I have been clearing away the earth that covered a burial and found that the lower jaw had dropped down and that the cranium had settled back, so that the mouth appeared to have been stretched wide open to a degree that was not anatomically possible in a living person. As the soft tissues of a burial disintegrate, the bone can, under the pressures of the earth overburden, fall into positions that greatly exaggerate those which can be assumed by a living being. The explanation that is regularly proffered to me by curious onlookers? "Look at how wide the mouth is opened. That poor person must have died in terrible agony!"

An extended burial, one in which the corpse is laid out, flat on the back, often results in a skeleton that looks as if it must have belonged to an exceptionally tall individual. Again, as the soft tissues decompose, the bones settle and often separate a little at the joints. An inch or so at

each of the major joints of the body, plus the tendency of the bones of the feet to separate out, will result in lurid popular reports of "giants" easily seven feet or more in living stature.

Archaeologists, I am happy to say, do not perpetuate these particular false impressions, but others have arisen that serve to show the value of an interdisciplinary approach on excavation projects. One could be excused, I suppose, for looking askance at an archaeologist who would confuse an Ionic capital with a triglyph, or could not distinguish a Folsom point from a side scraper, but should we so regard the colleague who hasn't the training to know a human bone when it appears in the excavation? Rather than curse the anatomically untutored, one of the benefits of interdisciplinary projects is the opportunity to light a few candles.

One project that I visited had, in earlier seasons, excavated a series of small tombs into which a succession of interments had been made. That is, the initial interment was laid to rest and the grave sealed; some time later, the grave would be reopened and pious hands would introduce a second corpse and, in so doing, would disturb to some degree the earlier remains. The process would be repeated as many as a dozen times for a single grave, over a span perhaps of several generations.

When, many centuries later, archaeologists opened the grave, they were perplexed at the seeming welter of bones which to their eyes were tumbled about higgledy-piggledy. Accordingly, the plans that were drawn of the contents of these graves would have a few oblongs at one end (likely representing crania) and some half-hearted pencil strokes elsewhere that conveyed eloquently the archaeologist's frustration at trying to make sense of what seemed to be a charnel house. From the field notes, these could have been simply ossuaries (repositories for disarticulated bones or secondary burials).

As additional graves were opened, we were able to clear off the bones and, now armed with some knowledge of anatomy, we could discern in the upper levels of a grave limbs still articulated with the torso. Clearly this, the latest interment, was not appreciably disturbed. After that skeleton was documented and removed, we continued on down, clearing off successive layers of bones,

each stratum representing an event of interment, and the skeletons became more and more disarticulated as we approached the floor of the grave. Clearly, then, the lowest (earliest) skeleton had suffered the most disturbance, the later ones successively lesser degrees of disarticulation.

We now had the evidence, based on contextual study of the anatomical elements, to identify the practice of introducing successive corpses into tombs over a period of time. The disarticulation of the earlier skeletons showed that enough time had elapsed after burials to permit some disintegration of soft tissues. These were definitely not ossuaries for bones from other graves, nor were they mass graves with multiple simultaneous interments, as after a plague or war. Instead, the evidence indicated a peaceful, commonplace ritual and taught us something about the treatment of the dead by the living at this site.

It should be pointed out that it took time to excavate and document these skeletons; sometimes as much as a day and a half of tedious brushing, measuring, and drawing were required in order to evaluate associations among bones and to reconstruct the sequence of events that took place within a single grave. I was told that in earlier seasons a grave could be cleared in thirty minutes; obviously, different questions were being asked of the data in different seasons. The difference, then, is more than just one of technique, or of training; the difference is one of the expectations that the archaeologist has of the data and of the questions that are being raised.

On a different project, a colleague who was working in another part of the cemetery breathlessly reported that they had found a cremation of a dog. This was interesting news, since we had found many cremations of humans, some with a few nonhuman bones that likely represented a funeral meal, but no nonhuman cremations. As we walked to the other excavation I had visions of opening a new chapter in the study of mortuary customs for this particular culture. We arrived, and my colleague was graciously going to let me share the excitement of discovery by letting me identify which of the two exposed graves contained the canine cremation. The graves, however, seemed to my eye to contain the usual jumble of the burned, shattered fragments of bone so characteristic of the

cremation of an adult. I looked at the first grave, then at the second, then up at the field supervisor and said "Well, I give up. Where is it?"

"Here, look," I was told as my attention was directed to one of the cremations. "See the skull? Here's the braincase, here's the little snout. It's just as plain...."

"Oh, dear," I had to say, "you're looking at part of the upper arm bone of a human, the humerus. The 'braincase' is the rounded ball joint that goes into the shoulder socket. The 'snout' is just part of the shaft of the bone. This is a human cremation."

"Not a dog?"

"Nope, sorry. It's just one of us folks."

Finally, at one site the ruins of an ancient church were being excavated when, in the foundation of what would have supported the altar, a cruciform cavity was discovered. This feature measured perhaps 40 cm in either direction, and clearly formed a cross. It was definitely a "built-in" construction, and not created by loose stones becoming dislodged. This small reliquary crypt had been broken into in antiquity, and any precious contents would surely have been plundered. But it was full of earth, and might not the looters have overlooked the bones of a saint in their greed for treasure?

I was summoned to the spot in anticipation of the discovery of what could be the mortal remains of a Martyr of the Faith, whose bones had been lovingly interred within this church and which had conferred sanctity upon the structure and upon those who had worshipped here in ages past. It had the makings of a dramatic moment, in that hot, windswept valley, with the shattered remains of antiquity, tumbled columns and broken walls, all about us. Were we about to recover a relic more precious to the faithful than the gauds and jewels that were coveted by the plunderer?

There were bones in the crypt! "Finally," I thought, "something that will make up for all the 'Double-Fanged Karankawa Cannibal Giants' and 'Canine Cremations' I've had to endure."

More bones! Since they were, quite properly for holy relics, fragmentary and disarticulated, they were collected onto a tray and passed up to where I was standing on the edge of the trench. After a few moments of silent study, I sighed.

"Do we have the bones of Saint Demetrius?" I

was asked, half jokingly.

"Nope," I replied, "this time you *have* found his dog."

At our present remove, these small adventures in the bone trade may elicit a smile, but there is, I think, a deeper lesson to be learned. Some sorts of misidentifications and downright weird interpretations on the part of the public will probably always be with us. But the interdisciplinary projects with which I have had the good fortune to be associated have had a very positive role in opening up the awareness of colleagues to the sorts of information that we can gain from contextual study of human and faunal remains.

Note that I said "contextual" study. My experience has been that human osteology can make a considerable contribution to archaeology when a specialist can examine the remains *in situ*. One can deduce patterns of articulation and disturbance in buried skeletons that can help to reconstruct the sequence of events involved in the treatment of the corpse. Often, skeletal remains are so fragile that they cannot survive even the most gentle of exhumations, and osteological observations are made *in situ*, or they are not made at all.

Laboratory study of skeletal materials remains

valuable, or course, and these can supplement and extend observations made in the field. The point is that the field observations are contextual, and therefore represent a direct archaeological application of specialized training and expertise. The laboratory work is still archaeological in the sense that it contributes to an understanding of the past through the direct examination of excavated material, but I think that laboratory work is at its most rewarding when it supplements field examination.

The days of shipping a crate of excavated skeletal remains to a specialist who has never set foot on the site (or *any* site, for that matter) are not over, and probably never will be. Modern field archaeology, when done at its best, requires so varied a host of specialists, or at least those with specialized training, that few projects command the resources to prepare for every eventuality of context and discovery. What we are witnessing, and this even within the last twenty years, is a heightened awareness of the role of context in guiding the observations of specialists. To add yet another to a growing list of paraphrases of the dictum of Gordon R. Willey and Philip Phillips, "archaeology is context, or it is nothing."

JOIN THE UNDERGROUND!

HOUSTON ARCHEOLOGICAL SOCIETY

The Houston Archeological Society invites all members of the Southern Texas Archaeological Association to join the busy and productive Houston group for further experience and knowledge of Texas' archaeological past.

On weekends HAS members spend time in the field investigating sites ranging from Stone Age Indian camps to early Texans' settlements. In addition to artifact analysis and writing reports, workshops and on-the-spot training sessions are offered to develop field and laboratory skills.

Monthly meetings are held on the second Friday of each month at the University of St. Thomas, M. D. Anderson Hall, 3900 Mt. Vernon. You are cordially invited.

For additional information call 713-523-3431 or write the Houston Archeological Society, P. O. Box 6751, Houston 77265.

**LATE PREHISTORIC DECORATED FRESHWATER SHELLS
FROM WEST CENTRAL TEXAS: EXAMPLES OF PORTABLE ART
FROM THE O. H. IVIE RESERVOIR**

Christopher Lintz

ABSTRACT

Archaeological investigations at the O. H. Ivie Reservoir in Concho, Coleman and Runnels Counties, recovered four fragmentary specimens of engraved freshwater shells from Toyah and pre-Toyah occupations dating between A.D. 1060 and 1550. Three contain crudely executed motifs on the interior nacre which served an unknown function; the motifs are reminiscent of pictorial art. One was decorated with a series of regular tic marks along a natural edge and could represent a piece of jewelry. This paper calls attention to these rarely documented kinds of artifacts, and speculates on their uses, drawing comparisons with rock art forms.

INTRODUCTION

Recent investigations in the O. H. Ivie Reservoir (formerly Stacy Reservoir) in Concho, Runnels and Coleman Counties, Texas (see Figure 1), recovered four freshwater bivalve fragments from different sites with engraved decorations. The lightly engraved designs, for the most part, are not obvious. The parallel, regular and repetitive spacing of lines suggests art, rather than incidental scratches on the shell made in conjunction with meat extraction. The careful design execution along the interior finished edge of one specimen is in marked contrast with the crude engraved pictorial motifs on the interior surfaces of the other three shells. This note provides brief descriptions and temporal/cultural affiliations for the four specimens.

THE ARTIFACTS

The first specimen consists of a rectangular shell fragment from an unidentified species with uncut but cleanly snapped or broken margins on two edges. The specimen (FS-3.4) was recovered

during the testing phase from approximately 120-130 cm below surface from TP 1 at 41CN19. A radiocarbon date on charcoal from comparable depths in this portion of the site yielded a carbon isotope adjusted age of A.D. 1060 ± 130 (Tx-6760); diagnostic artifacts from the 80-cm-thick sloping occupation zone include one Clifton, one Fresno, two Scallorn and two unidentified arrow points, one Yarbrough and three unidentified dart points.

The design motif occurs on the interior tablet or pearly nacre portion of the shell. It consists of two series of faintly engraved and relatively long parallel lines with numerous short lines radiating

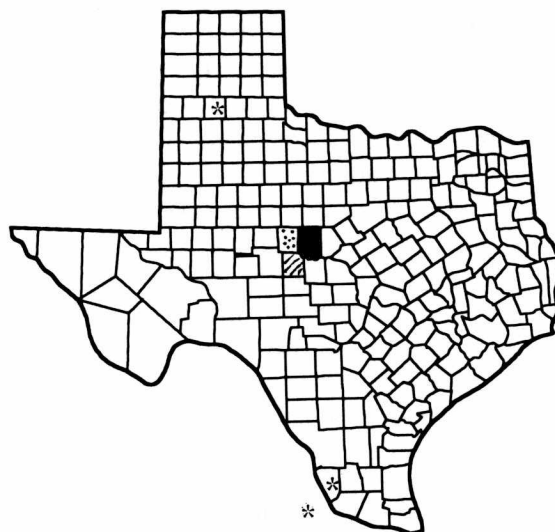


Figure 1. Texas map showing Concho (striped), Runnels (dotted) and Coleman (solid) Counties. Star (*) shows locations of comparative examples of artifacts.

away from the two longer sets of parallel lines (Figure 2 a). The engraved execution is relatively

poor with radiating lines of different lengths and depths of incision. Spacing consistency is poor with occasional line overlap. Insufficient portions of the design are present to permit reconstruction of the entire motif. The partial motif on this specimen is uncertain, but the radiating lines are reminiscent of feathered or fringed anthropomorphic figures common in Lower Pecos and occasionally in Central Texas rock art (cf. Kirkland and Newcomb 1967:45, 162).

The decoration of the second specimen (FS-3774.1) is on the interior tablet of a right valve of a *Lampsilis teres* recovered from N507.64/E103.49 at a depth of 104 cm below datum) in Block A at 41CC131, a Toyah phase campsite with at least three distinct occupations. This provenience is along the southwest ashy margins of a large rock-filled communal hearth (Feature 19A) which is surrounded by a series of five smaller basin hearths with and without associated rocks. A total of eight radiocarbon dates were obtained from Block A or adjacent test pits; four dates were obtained from the communal hearth or the associated hearths. Three of these dates range between A.D. 1502 ± 70 (Tx-6506) and 1547 ± 70 (Tx-6509). The fourth date of A.D. 976 ± 220 (Tx-6522) is anomalously early and may represent the reuse of dead wood, or the central portion of a thicker log; it is not considered to accurately date the occupation. Associated materials from this long-term campsite include Leon and Doss ceramics and Perdiz points, and are consistent with the Toyah occupation assignment.

The decorated shell is missing portions of the anterior border and dorsal edge (Figure 2, b). Although the anterior area has a jagged edge, the dorsal edge has a clean snap (not cut) which occurred after the design was executed. Excavation damage from a pick mattock is also present, but it does not seem to have impacted the design element. The design motif has been faintly engraved into the interior tablet or nacre (pearly) portion of the shell. The complex motif consists of possibly four interrelated elements. Element 1 is a series of three overlapping convex curves along the ventral edge. Element 2, occurring above and to the right (posteriorly) of Element 1, is a large triangular area with at least ten long, semi-parallel lines sweeping from upper left to lower right. Element 3 overlaps Element 2 and

occurs above Element 1; it consists of two long crossed lines with at least eight short parallel segments between the right two adjacent arms of the X. Element 4 consists of at least three vertical lines, two of which span the left "arms" of Element 3; however, the curvilinear, non-parallel nature of these lines at different lengths suggests that this element is not comparable to the short parallel segments of the third element. The design execution is relatively sloppy. Abutting lines frequently overlap, other lines are non-parallel and many lines show considerable variation in lengths and depths.

At least two speculative interpretations are possible for the elements depicted on FS-3774.1. In both instances, Element 1 is interpreted to be a possible undulating ground surface. Element 2 is either a conical tipi-like structure or an unidentified pile of goods. Element 3 may be either a trail away from the structure, or perhaps a travois. Element 4 may be an abstract representation of an anthropomorphic figure on the trail or a person pulling the travois. Other interpretations are also possible.

The third specimen (FS-4190.1) was recovered as three fragments, two of which were conjoinable (Figure 2, c). The refitted piece was restored and consists of an irregularly shaped fragment of an unidentifiable bivalve with portions of a crudely executed motif on the interior pearly or nacre portion of the shell. The isolated fragment is a small lip or edge probably from the same shell. All three fragments of FS-4190.1 were recovered from N507/E101, Level 12 (110-120 cm below datum) at 41CC131, which is two to three meters west of the provenience for FS-3774.1, but outside the ashy area of Feature 19A. Specimen FS-4190.1 is also from one of the Toyah phase components at the multicomponent site; despite its proximity to the other decorated shell specimen, the somewhat greater depth of this specimen precludes any demonstrated association between these two artifacts.

Only small remnants of the motif are discernable (Figure 2, c). The engraved lines on the conjoinable fragments are faint but consist of three discrete elements. Element 1 consists of three parallel lines on the left portion of the fragment which curve to the upper left. Element 2, along the lower center of the shell, consists of

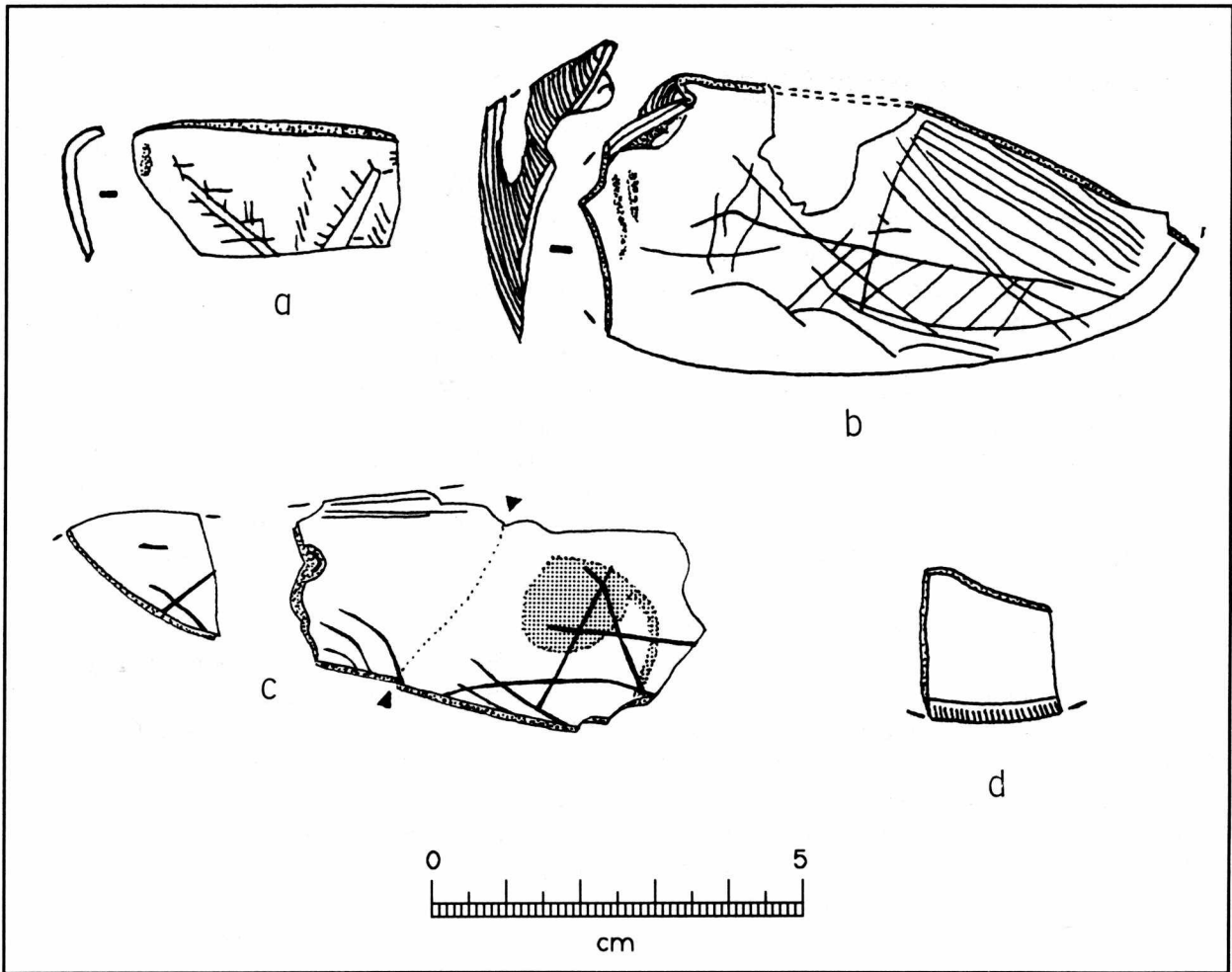


Figure 2. Engraved shells from the O. H. Ivie Reservoir, Concho, Coleman and Runnels Counties, Texas. a, Specimen FS-3.4, TP 1, 120-130 cm below surface, 41CN19; b, Specimen FS-3774.1, N507.64/E103.49, 104 cm below datum, 41CC131; c, Specimen FS-4190.1, N507/E101, 110-120 cm below datum, 41CC131; d, Specimen FS-2512.1, Feature 52, Backhoe Trench 70, 41RN169.

one slightly convex line near the broken bottom with two overlapping straight parallel lines sweeping across the left edge of the motif. Element 3 is a triangular element with three overlapping lines which was placed above Element 2 and on the posterior adductor muscle scar. All three elements are executed crudely with lines overlapping and extending beyond intersecting lines. The three engraved lines on the isolated fragment consist of two longer crossed lines and one short segment. An insufficient amount of the motif remains to speculate on the nature of this design.

The fourth specimen (FS-2512.1) is an irregular fragment showing one natural edge or rim with faint engraved bordering decorations (Figure 2, d). Overall the regular patterning tends to accentuate the modification and this specimen is more easily identifiable than the other specimens. It was recovered next to Feature 52, an ash lens, exposed in Backhoe Trench 70, adjacent to Block C at 41RN169. A series of seven radiocarbon dates from this short-term Toyah phase winter bison processing camp ranges from A.D. 1370 \pm 70 (Tx-6325) to A.D. 1520 \pm 100 (Tx-

6793). Using the averaging procedures of Long and Rippeteau (1974), a mean age of A.D. 1428 ± 37 is obtained for the occupation. Associated materials include portions of three restorable Leon Plain ceramic vessels, and Perdiz points.

The design motif on FS-2512.1 consists of numerous short parallel tic marks oriented perpendicular to the natural shell edge which is segregated by a long border line paralleling the interior rim. Unlike the other three specimens reported herein, the engraved execution is careful and precise with nearly equal spacing in the tic marks. Most likely, this specimen with carefully engraved markings served a different purpose and may have been some form of jewelry.

SUMMARY AND COMPARISONS

All four specimens are from Late Prehistoric contexts attributed to the Toyah phase, or occupations immediately preceding the Toyah phase. The precise execution of the edge decorated shell (FS-2512.1) from 41RN169 stands in marked contrast to the relatively crudely engraved motifs on the interior of shells from 41CN19 and 41CC131. It seems likely that the specimen from 41RN169 is a piece of jewelry, whereas the others may represent pictorial motifs on transportable artifacts.

The interpretation of the three shells with crudely executed designs on the interior of the shells is problematic due to their incomplete condition, sloppy rendition and abstract forms. It is uncertain whether the incisions constitute the sole manner of shell decoration, or if the marks represent guide lines for painted patterns which have not been preserved. The function of these artifacts is uncertain; a wide range of uses are possible including mnemonic records of biographical events or tales, fetishes or medicine bundles, toys or gaming pieces, ornamented shell containers, or even decorated utilitarian tools which left little evidence of wear. It is equally unclear if the recovery of these objects in their broken condition represents an intentional pattern, or if it underlies the reason for their discard.

Although relatively abundant literature exists

on marine shell jewelry and even on cut and sculptured freshwater bivalve shells in Texas, I have rarely found references of comparably engraved pictures on freshwater shells. One fragmentary freshwater bivalve with interior engraved motifs was recovered from Deadman's Shelter, 41SW23, within the Mackenzie Reservoir basin along the eastern edge of the Llano Estacado (Hughes and Willey 1978:185, Figure 63). The motif consists of relatively unpatterned series of two or three parallel lines, some of which intersect at angular orientations. Like the examples from the O. H. Ivie Reservoir, the Deadman's site example has relatively poor execution with some slightly offset double strokes, and inconsistent overlapping elements at line terminations--especially at intersections with other lines. A few line series extend to the edge of the shell. No distinctive motif patterns are interpretable from this example. This specimen was recovered from Stratum B, which was radiocarbon dated between A.D. 465 ± 70 (SI-1897) and A.D. 710 ± 65 (SI-1898) and attributed to the Palo Duro Complex. Discussions with C. K. Chandler have identified three other examples of engraved freshwater shells from south Texas (see Chandler and Kumpe 1992, this issue). All are from the Don Kumpe collection. One specimen, from near the town of Zapata, Zapata County), along the north shore of Falcon Reservoir, consists of a shell with a continuously serrated lip, a perforation near the posterior end, and crudely engraved, relatively long lines on the interior pallet which extend mostly to the anterior edge. The serrated edge, the perforation, and the trailing lines extending to the edge of the shell are attributes not observed on the shells from west central Texas. Two other examples in the Kumpe collection from Starr County near the community of Chapeno contain elaborate designs involving closely spaced, multiple parallel lines in regular areas which show relatively careful execution. These latter two contrast with the three from the present west central Texas specimens in the regularity of execution and elaborate nature of the motifs.

In summary, these types of decorated shell artifacts are rarely reported in the regional archaeological literature. The faint incisions make

them relatively easy to overlook. These specimens may be more common than presently known. Other researchers and collectors should carefully examine their recovered shell for comparable kinds of modification. Current contextual information suggests that these specimens are widespread from the southern Plains to northern Mexico and range in age from ca. A.D. 500 to 1500. Only through the recovery of similar examples in other contexts can we begin to understand the use of these interesting artifacts.

ACKNOWLEDGEMENTS

I would like to thank Owen H. Ivie and Ernest Lillard of the Colorado River Municipal Water District for the opportunity to conduct excavations at sites yielding these artifacts near the confluence of the Colorado and Concho Rivers. Mr. C. K. Chandler provided information about other engraved shells in private collections.

References Cited

Chandler, C. K. and Don Kump

1992 Decorated Freshwater Mussel Shell Artifacts from the Lower Rio Grande River of South Texas. *La Tierra* 19(3):8-14. (this issue)

Hughes, Jack T. and Patrick Willey, editors

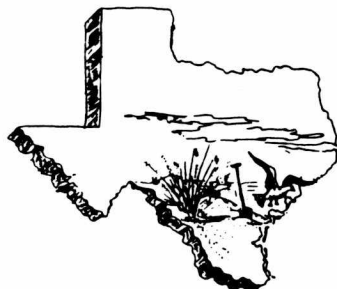
1978 Archaeology at Mackenzie Reservoir. *Office of the State Archeologist, Archeological Survey Report 24*, Austin.

Kirkland, Forrest and W. W. Newcomb, Jr.

1967 *The Rock Art of Texas Indians*. University of Texas Press.

Long, Austin and Bruce Rippeteau

1974 Testing Contemporaneity and Averaging Radiocarbon Dates. *American Antiquity* 39(2):205-215.



COASTAL BEND ARCHEOLOGICAL SOCIETY

Another local archaeological society our readers may find interesting to participate in is the Coastal Bend Archeological Society, recently risen from a short functioning hiatus, and now a very active group.

A recent business meeting vote has returned their monthly meeting to the first Wednesday of each month. The meetings will be in the Hilltop Community Center, Corpus Christi, at 7:00 o'clock p.m.

Contact Larry Beaman, 303 Rolling Acres Dr., Corpus Christi, Texas 78410 for further information.

AN INCISED AND PAINTED PEBBLE FROM REAL COUNTY, TEXAS

C. K. Chandler

ABSTRACT

Painted pebbles are well known in the Lower Pecos and Big Bend areas of West Texas and a few are known from the Nueces River drainage in Uvalde, Edwards and Zavala Counties. Incised pebbles occur in much smaller numbers and their distribution is generally more to the east of the Pecos. Pebbles with both incising and painting are rare and have seldom been reported in the archaeological literature. This report concerns a single specimen with both incising and painting.

THE ARTIFACT

This thin, flat limestone pebble was recovered from an overhanging rockshelter site near the headwaters of the Frio River in northeastern Real County. It is illustrated by Richard McReynolds (Figure 1) showing one face with fine line incisions only and the opposite face with a pattern of fine line incisions, then a thin coating of dark gray paint followed by a group of black painted sinuous and zigzag lines over this dark gray background. The artifact is basically rectangular in form but has a bulging area midway of one long edge. Both faces are naturally smooth and edges are lightly rounded. There is no evidence of grinding or abrasion to smooth or otherwise shape it in preparation for the incising and painting. One face is finely incised with several lines in a wandering irregular pattern with no indication of an attempt to portray any particular image, such as an animal, person or thing. These shallow lines wander in all directions from edge to edge and under low power microscopic examination are readily identifiable as manmade. They appear to have been made with the sharp corner of an unretouched flint flake or a tiny graver.

The opposite face has three stages of surface alteration. This face is incised with a more definite pattern of two near parallel lines in the shape of horseshoes ("U" shaped) with their open ends facing. Some are longer and sinuous. These

incisings and most of this face are then painted over with a thin coat of dark gray to black paint that covers most but not all of this side. The third stage of alteration is the application of a much darker black-painted motif applied in several sinuous lines that do not follow directly over the pattern of the incised lines below them. Some are single zigzag lines in the shape of "S" and "Z". One of the longer lines has formed elongated rectangles. It appears that the incisions and paintings are related in some manner and were probably done at the same time. Maximum dimensions of this stone are: Length, 135 mm; Width, 70 mm; and thickness varies from 6 mm at one end to 11 mm on the opposite end. It weights 156 grams.

DISCUSSION

Painted pebbles have long been known as an interesting and conspicuous cultural trait of the early inhabitants of the Lower Pecos and Big Bend regions of Texas (Davenport and Chelf, no date). While a few are known to occur east of the Lower Pecos, their eastern limits have generally been considered to be Edwards and Kinney Counties. However, in recent years several from the Nueces River drainage system in Uvalde and Zavala Counties have been documented by Ray Smith and Richard McReynolds. Nearly all of the specimens from the Lower Pecos and Big Bend areas have black paint. All but one of those known from the Nueces River area have red paint. Davenport and Chelf report that occasionally the designs are scratched first and then painted.

A diligent search of the literature has not revealed any reports of three stages of decorative surface alteration where a pebble is incised, then covered over with a solid paint cover that then has a motif painted on. This



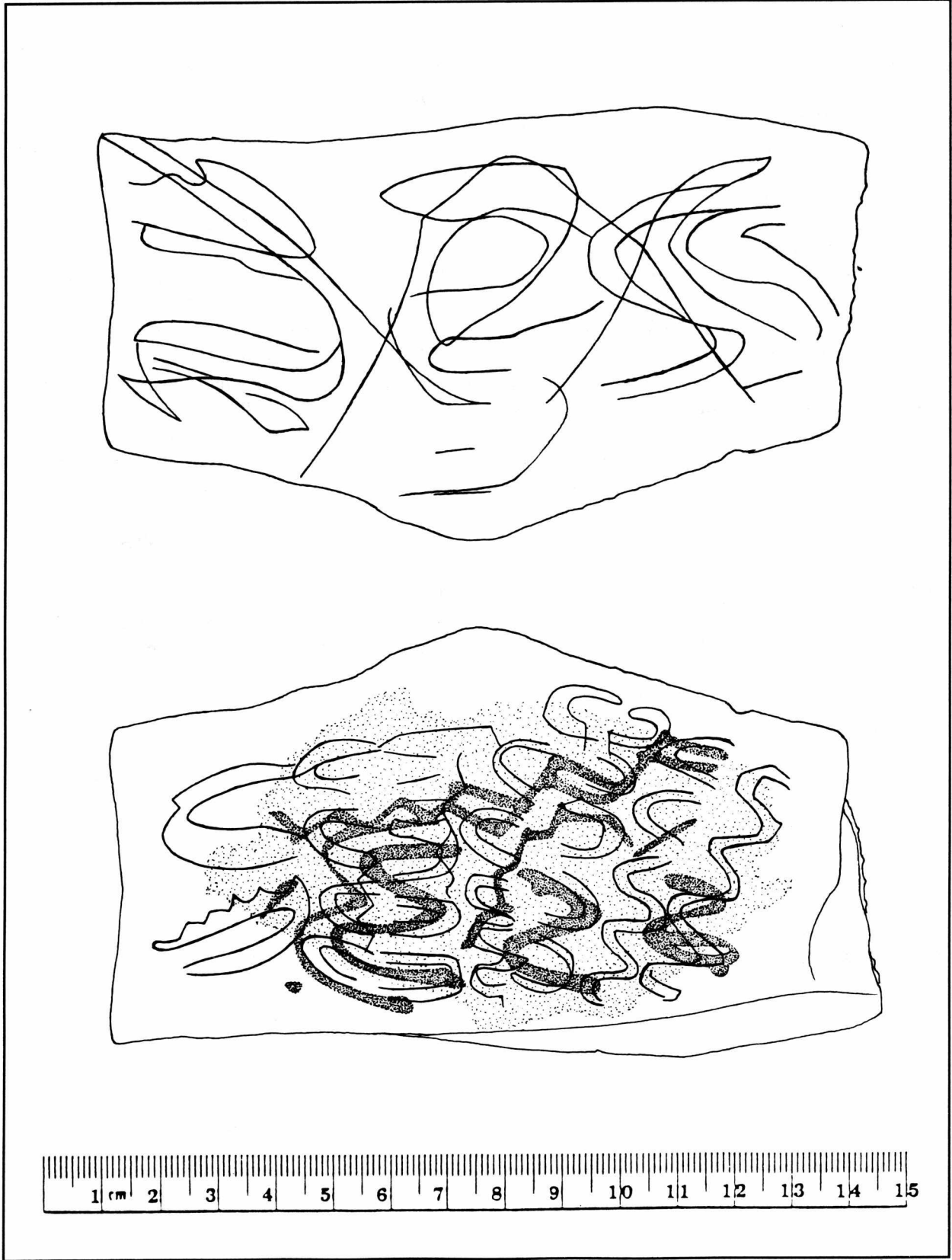


Figure 1. Both Sides of Painted and Incised Pebble from Real County, Texas. Drawing by Richard McReynolds.

is reminiscent of painters who salvage a canvas by painting over an earlier painting to reuse the canvas for a new one.

At the Levi site, Greer and Treat (1975) report several small flat limestone pebbles with short parallel incisions without paint, and one painted incised pebble which has four parallel incised lines with four painted lines over them in the same direction. Two of the painted lines are directly over the incised lines indicating deliberate intent. While there is some similarity between the incised and painted lines on the specimen reported here, there is no obvious intent to follow the incised lines with the painted ones.

The rockshelter where the Real County specimen was recovered has considerable fire fractured rock and bone, some woven matting and lots of fibrous material within the deposit. A number of lithic artifacts were also recovered from this shelter but none of this material has been viewed by the author. A review of the total artifact assemblage from this shelter would help establish a time period of occupation and perhaps establish some cultural affiliations.

The presence of dry fibrous materials and woven matting is very unusual this far east and may indicate contact or association with Lower

Pecos peoples. However, wooden artifacts and fragments of basketry and matting are known from the Kyle site in north central Texas (Jelks 1962). Most of this material came from the Toyah Focus zone, but the painted pebbles from this site came from both the Austin and Toyah Focus deposits.

CONCLUSIONS

The incised and painted pebble reported here is unique for its three-stage alteration of the surface and [for the fact that] no other similar specimens have been reported for this general area. Except for the Val Verde County incised pebble with the spiderweb design (Chandler 1991) it is noticeably larger than the vast majority of painted or incised pebbles previously reported. Its cultural affiliations and time period are uncertain.

ACKNOWLEDGEMENTS

I extend my sincere appreciation to Claude Haby for the loan of this specimen for documentation and to Tom Guderjan for bringing it to my attention.

References Cited

- | | |
|---|---|
| Chandler, C. K.
1991 An Incised Pebble from Val Verde
County, Texas. <i>La Tierra</i> 18(2). | Greer, John W. and Patricia A. Treat
1975 Incised and Painted Pebbles from the
Levi Site, Travis County, Texas.
<i>Plains Anthropologist</i> 20(69). |
| Davenport, J Walker and Carl Chelf
n.d. Painted Pebbles from the Lower Pecos
and Big Bend Regions of Texas. | Jelks, Edward B.
1962 The Kyle Site. <i>Anthropology Dept.,
The University of Texas at Austin,
Archaeology Series, No. 5.</i> |



NEW PUBLICATION

The long-awaited report on *Prehistoric Basketry of the Lower Pecos, Texas* has finally reached the bookstands. Roberta McGregor, author and STAA member of many years, is the Associate Curator of Anthropology at the Witte Museum. Bobbie has compiled in her book her knowledge and analyses of woven objects found in the arid rockshelters of the Pecos and Devils rivers' canyons. A fine collection of these artifacts can be seen at the Museum.

A PRELIMINARY REPORT ON THE DEWEES SITE, (41KR38), KERR COUNTY, TEXAS

Murray L. Beadles

ABSTRACT

The Dewees site includes 2 burned rock mounds, a stone lined basin, and occupational debris scattered over an area of one hectare (2.47 acres) in Kerr County, Texas. Dart points, arrow points, imported stone tools of basalt, sandstone, gneiss, and granite, and glazed pottery shards, indicate sporadic occupation that began in the Early Archaic and lasted into historic times.

INTRODUCTION

The Dewees site was first recorded by Goldschmidt (1934) during a highway right of way survey. It was located again by Briggs (1971) while surveying the area of a proposed reservoir and assigned the trinomial. In 1985 we were asked by the owner for help in determining site function.

The site is situated on the edge of a relatively level terrace on the west bank of Johnson Creek in Kerr County, Texas, about five km north of the town of Ingram. Occupational debris is scattered over an area of about one hectare parallel to an ancient creek channel that is now dry. Surface evidence included two burned rock mounds and a possible third, a limestone metate found in the fence row, two potholes at the lip of the ancient channel, and abundant chert debitage.

Our investigation was limited by a property line fence on the north, a slope into the ancient channel on the east, the present channel on the south, and a lack of surface materials on the west.

The terrace was apparently farmed at one time in the past. There are no old large trees on the level ground, an irrigation pump and intake pipe are partially buried in the creek bank, and a few posts from what may have been a perimeter fence are still standing. The surface is now covered with native grasses and forbs under small juniper brush.

METHODS

Stakes were placed at 10-meter intervals along magnetic north-south and east-west lines and their surface elevations recorded. Each square in the grid received the number/letter designation of the stake at its SW corner (see Figure 1). Each square meter in a square also received a number, starting at the grid stake with Units 1 to 10 along the south and Units 1 to 91 along the west side.

Materials collected from the surface in those areas lacking vegetative cover were counted and classified to compare relative densities across the site, and aid in the selection of units to be tested.

Excavation units were placed in the apparent center of each mound and at selected locations to determine the depth of the occupational materials, locate primary activity areas, and to recover diagnostic artifacts. Excavation proceeded in 10-cm horizontal levels from the ground surface at the stake. Excavated soils were sifted through 1/4-inch screens.

Recovered materials were sorted into various categories such as biface fragments, utilized flakes, tool types, projectile points, cores, etc. Projectile points were placed into a named type when possible. Flakes were not separated from the chips, both were classified as flakes and sorted into one of four categories: fire damaged, primary (if more than 50% cortex was present), secondary (if less than 50% cortex) and interior (if no cortex was present).

Tool terminology follows the examples given by Turner and Hester (1985) in their field guide. However, mano stones found in this area of the Edwards Plateau are limestone, and occasionally chert, river



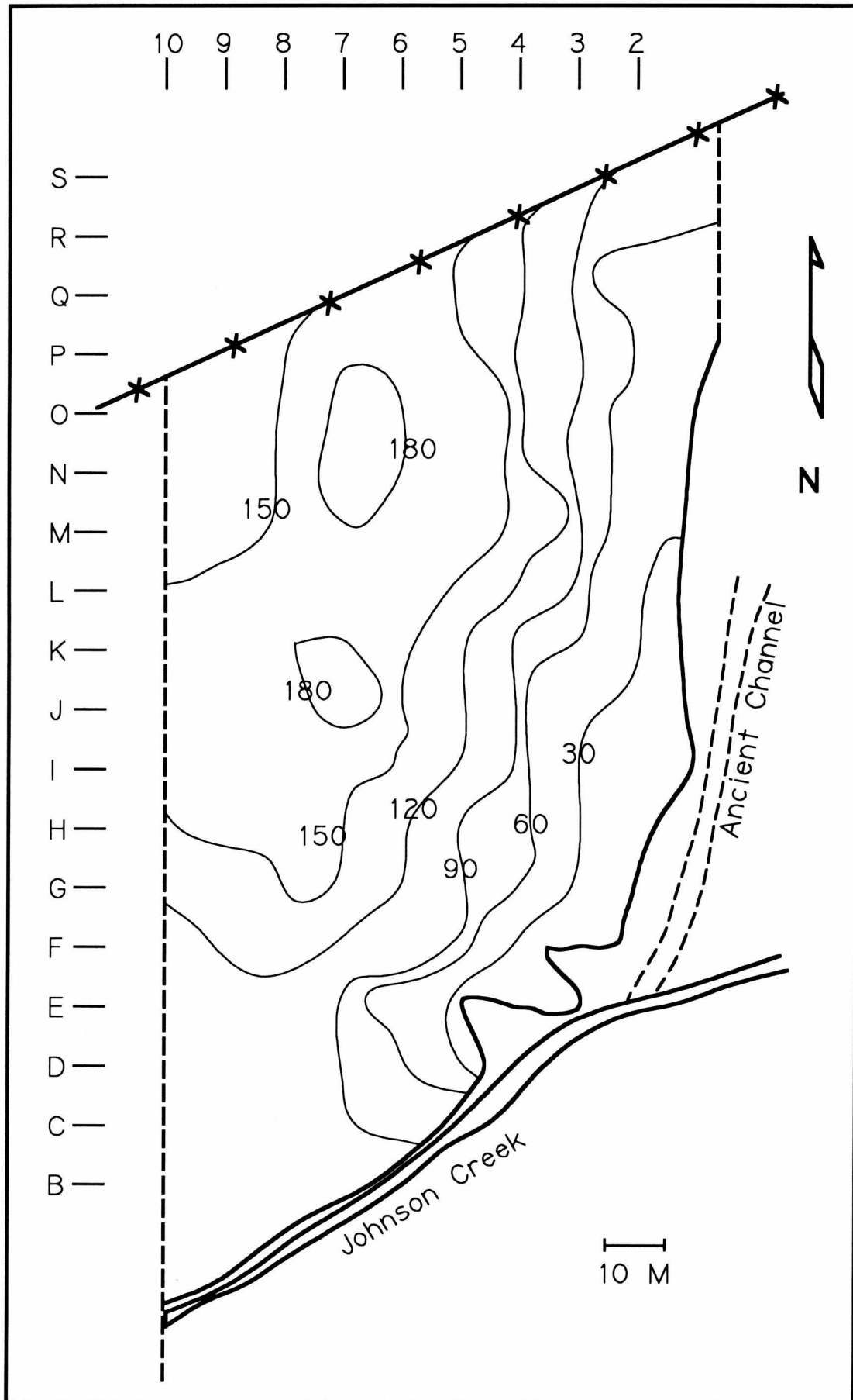


Figure 1. Grid layout and 30-cm contours (41KR38).

cobbles that have been flattened on one or both faces by use. Both the unpitted and pitted (nut-stone) types are included.

RESULTS

Surface Collection

Debris was collected from the surfaces of squares in Rows 6, 7, and 8 (except those centered over the mounds), Squares A, B, and C in Row 9, Squares E, F, G, and H in Row 5. Heavier vegetation in other areas prevented collection. However, surface materials were collected from excavation units placed in vegetated areas.

Debris was absent from squares in Columns A and B, and few pieces were found in Column C, indicating the southern limit of occupation. The debris extended northward to the fence row and the northern limit may be on the adjacent property. However, the area across the fence was not examined. Surface materials were present to the slope into the ancient channel to the east, and as far west as Row 10.

Three projectile points were found. An Angostura was in Square H5, a Nolan stem in Square C7, and a Pedernales stem in the pothole backdirt in Square F4.

The surface also held large bifacially worked tools, tested chert cobbles, and unworked chert. Higher than average numbers were found in Squares F5, G6, H5, H6, K5, K6, and N6. None were in Squares C8, D6, D8, D9, E8, E9, and H8.

Flakes and chips were present from Column C to the fence. Greater than average numbers of primary pieces were in Squares C5, H6, H7, N6, and O6, secondary pieces in Squares F5, H6, H7, and O6, interior pieces in Squares G6, H7, K8, L8, and N6.

Burned limestone fragments were clustered over the mounds and scattered in most of the squares. However, no intact hearths were noted.

Other items recovered include:

25 biface fragments (Squares C7, F5, F6, H7, K8, L6, L7, L8, N6, N7, N8, O6, and O8)

23 utilized flakes (Squares E7, E8, G5, H6, H7, L7, M6, and O8)

10 scrapers (Squares E8, H5, H7, K7, K8, L7, L8, and O6)

7 mano stones (Squares H5, H6, J4, K7, L4, and M8)

4 hammerstones (Squares E9, G5, L7, and M7)

3 metates (Squares G6, H5, and Q5)

2 gravers (Squares N8 and O6)

1 limestone fragment with 4 parallel grooves (Square K6)

1 optical quality quartz fragment (Square E5)

1 calcite crystal fragment (Square N6)

Historic objects included a lamp bulb, glass fragments, rifle and shotgun shell cases, pieces of wire, tin cans, and other small pieces of metal.

The surface of Square H7 held a high number of primary, secondary, and interior flakes, utilized flakes, biface fragments, and scrapers, indicating an activity area that may have been occupied by the last group to use the site.

Pothole, Square F4.

Both the contents of, and the backdirt from, the pothole in F4, Units 55 and 56, were screened. The pit, 2 x 1.2 meters in size, had sloping sides and an irregular floor that reached a maximum depth of 54 cm. No additional excavation was attempted.

One Edwards, two Perdiz and three arrow point fragments were recovered with a plain shard, five utilized flakes, two lithic drill stems, a Pedernales point stem, a lateral segment from a large blade, 32 bone fragments, a glass flake, the brass end of a 410 gauge shotgun shell, and 1,529 flakes. Five hundred twenty-nine (35%) of the flakes were fire damaged, 94 (9%) of the remainder were primary, 196 (20%) secondary, and 710 (71%) interior.

Feature A, Square G9.

This feature is an oval concentration of fist-sized burned limestone fragments. The feature is 8 meters in diameter rising 30 cm above ground level. A 2-meter square (Units 9, 10, 19, 20) was excavated in the central portion with the G8 stake at the SE corner.

Level 1 had a light colored soil mixed into the rock fragments, perhaps the result of weathering. Level 2 had typical dark mound soil and burned rock fragments that continued to a depth of 43-47 cm. The mound rocks were of approximately equal size from top to bottom and no large rocks were found.

The NW unit (19) was excavated to a depth of 1 meter to profile a cone-shaped disturbance that was first noticed in Level 2 in the west wall. This disturbance, 40 cm wide at the top and 65 cm deep, contained more soil than rock fragments and intruded 20 cm into a light colored soil and river deposited gravels on which the mound rested. No reason for the disturbance was found.

Three intact Langtry points were found, one each in Units 9, 19, and 20, at depths of 20, 21, and 10 cm respectively, with an Almagre in Unit 10 at 13 cm, all in the mound rocks. Level 1 also contained a lithic drill stem, two biface fragments, and a utilized flake. Level 2 had a biface fragment, a core, and a chopper. No pieces were found in Levels 3 and 4; however, a lateral segment of a large blade was in Level 5. Of the 1,713 flakes, 659 (38%) were fire damaged, 92 (9%) of the remainder were primary, 123 (12%) secondary, and 839 (80%) interior.

Feature B, Square J7. This feature appeared as a 20-meter diameter concentration of burned limestone fragments rising 50 cm above ground level. A 2-meter-square test (Units 1, 2, 11, 12) was placed near the center of the mound with the J7 stake at the SW corner and the soil surface at the stake used for reference. Excavation exposed burned rock fragments in a dark sticky soil covering a level-topped platform of larger rocks encountered at 68 cm depth. The exposed portion of this platform extended 60 cm centrally into both west units (1 and 11) and was 116 cm wide. The rocks, 4 to 9 cm thick and 15 to 35 cm long, appeared to have been carefully selected to fit each other. The platform rested on a brown soil with many small charcoal flakes evident and may have been erected in a slight depression. Other similar sized rocks were found in the two east units (2 and 12) with one alignment of 28 rocks extending from the SE corner of Unit 2 to the NW corner of Unit 12 in Levels 10 and 11. All four units also contained isolated rocks in Levels

10, 11, and 12. The platform rocks appeared to have been only slightly heated and were not fragmented. The exposed portion was removed in an effort to find diagnostic materials that could be associated with the platform base. No artifacts were recovered, but a large increase in the number of flakes was recorded.

A Pedernales point was recovered in Level 1, a Pedernales stem in Level 6, and a Nolan point in Level 7 at 65 cm depth. All three were in the mound rocks. Level 1 also had four biface fragments and a 2 x 5 cm piece of sheet metal; Level 2, an arrow point fragment and two biface fragments; Level 3, flakes only; Level 4, a preform and a biface fragment; Levels 5 and 6, flakes only. Level 7 also had a utilized flake and a mano stone; Levels 8 and 9, flakes only; Level 10, an ovate preform and two biface fragments; Level 11, 3 biface fragments; Level 12, flakes only. Of the 5,240 flakes recovered 1,491 were fire damaged, 290 (8%) of the remainder were primary, 352 (9%) secondary, and 3,107 (83%) interior. Fifty percent of all the flakes were in Levels 9, 10, 11, and 12.

Feature C, Square M5. Feature C was a 16 x 18 meter oval of burned limestone fragments 20 cm high mixed with larger unburned rocks. A one-meter-square test (Unit 6) was placed near the center five meters east of the M5 stake and soil surface at the unit used for reference. Excavation exposed both native limestone rocks and burned fragments in a light colored soil in Level 1. Soil color darkened and the ratio of burned to unburned rocks increased into Level 3 where a very dark soil and burned rock fragments ended on a layer of larger flat rocks. Excavation of two additional units (M5-5 and L5-96) through Level 4 exposed the southern edge of a round basin 110 cm in diameter and 15 cm deep, lined with a single layer of flat rocks up to 23 cm long. Unit 6 was excavated through a layer of sterile soil on which the basin rested and into a layer of river gravels encountered at 75 cm.

Level 1 contained a Perdiz arrow point at 10 cm depth, two plain shards, seven biface fragments, three utilized flakes, a core, quartz flake, 13 bone fragments, and a mineral fragment composed of clear quartz grains in a black matrix; Level 2, a plain shard and 13 bone fragments;

Level 3, a core and eight bone fragments; Level 4, a mano stone and a quartz fragment. The bone fragments were 1.5 to 5 cm long and poorly preserved.

Thirty-one percent or 1,013 of the 3,221 flakes recovered were fire damaged, 182 (8%) of the remainder were primary, 364 (16%) secondary, and 1,662 (75%) interior; 1,454 (45%) of the total were in Level 1.

Square L7. A two-meter-square test was placed on level ground north of Feature B with the L7 stake at the SW corner including Units 1, 2, 11, and 12. Nineteen burned rock fragments were collected from the surface with 13 native rocks, 11 primary flakes, 25 secondary, and 26 interior flakes. The ratio of native rocks to burned rocks increased downward to Level 5, where the burned rocks ceased. Unit 11 was deepened through Level 7 into sterile soil.

Level 1 contained a Perdiz arrow point, an unclassifiable dart point, 8 biface fragments, 4 utilized flakes, a piece of fence wire, scraper, graver, and a chopper; Level 2, an unclassifiable dart point, six biface fragments and a crude preform; Level 3, a Montell and a Pedernales point, nine biface fragments, three preforms, and a utilized flake; Level 4, nine biface fragments, graver, mano stone, and two tested cobbles; Level 5, an unclassifiable dart point, four biface fragments, two utilized flakes, a lithic drill handle, and two tested cobbles.

Of the 12,064 flakes recovered 1,719 (14%) were fire damaged, 816 (8%) of the remainder were primary, 1,070 (10%) secondary, and 8,459 (82%) interior fragments.

Square F5. A two-meter-square test including Units 9, 10, 19 and 20 was placed with the F4 stake at its SE corner. The surface sloped 20 cm from the NW corner to the SE corner so partial Levels 1 and 2 were combined for removal. All units were excavated through Level 5, and Unit 19 through Level 8, into a soil color change with increased gravel content. The soil in this area contained few rocks and appeared to be a single alluvium deposit.

The surface held 31 burned rock fragments, a scraper, a utilized flake, and 30 fire damaged flakes, three primary, three secondary, and 48

interior flakes. Levels 1 and 2 contained two brushed shards, two biface fragments, a utilized flake, scraper, quartz fragment, and 12 bone fragments; Level 3, two Perdiz arrow points, a brushed shard, four biface fragments, one utilized flake, a mano stone, and 36 bone fragments; Level 4, a brushed shard, two utilized flakes, four biface fragments, and 23 bone fragments; Level 5, core, one biface fragment, one utilized flake and one bone fragment.

All the bone fragments were small pieces of larger bones and provided no information about the animal(s) represented.

Of the 2,839 flakes, 682 (24%) were fire damaged, 243 (11%) of the remainder were primary; 192 (9%) secondary, and 1,722 (80%) interior flakes.

Square F4. The F5 test was extended into Square F4, Units 1, 2, 11 and 12, with the hope of adding to the number of shards collected. The surface sloped 27 cm across this square, with partial Level 1 extending across one-third and Level 2 across two-thirds of the area. Both levels were combined for removal. The same type of soil encountered in F5 continued through F4. All units were excavated through Level 5.

A brushed shard, black mineral fragment, utilized flake, four primary, seven secondary, 27 interior, and 13 fire damaged flakes were found on the surface. Levels 1 and 2 held two Perdiz arrow points, a plain shard, one biface fragment one utilized flake, and eight bone fragments; Level 3, a Clifton and two Perdiz arrow points, three plain shards, six biface fragments two utilized flakes, a lithic drill stem, 67 bone fragments and two tooth fragments. Level 4 produced a Perdiz, a brushed shard, a plain shard, four biface fragments, graver, two black mineral fragments, a quartz fragment, and 51 bone fragments. In Level 5 was found an Alba arrow point, two biface fragments, scraper, and 31 bone fragments. Of the 3,543 flakes, 1,062 (30%) were fire damaged; 322 (13%) of the remainder were primary, 322 (13%) secondary, and 1,837 (74%) interior flakes.

The black mineral fragments matched the one found in Feature C, Unit M5-6, Level 1. The bone and tooth fragments were too small to indicate the type(s) of animal.

Square H3. A two-meter-square test of Units 1, 2, 11, 12, was excavated at the H3 stake. All units were removed through Level 6 and Unit 12 through Level 7. Eighty-eight burned rock fragments, six primary, four secondary, 33 interior, and 12 fire-damaged flakes were found on the surface. Burned rock fragments and numerous small pieces of bone were found in the upper six levels. A phalange in Level 1 and a maxilla with six teeth in Level 3 were from a white-tailed deer (*Odocoileus virginianus*). The rest of the bone fragments were small pieces of larger bones.

Level 1 contained an Alba, Perdiz, and an Edwards arrow point, eight plain shards, eight biface fragments, seven utilized flakes, graver, quartz crystal fragment, black mineral fragment, calcite fragment, wire nail, 128 bone and two tooth fragments. In Level 2, an Edwards, four Perdiz and four arrow point fragments, 10 plain shards, a punctate, and a glazed shard, two Fairland, a Frio, an unclassifiable dart point, lithic drill handle, scraper, seven biface fragments, eight utilized flakes, a quartz fragment, a piece of micaceous gneiss, mussel shell, 206 bone and three tooth fragments were found. Level 3 produced an Edwards, three plain shards, graver, three utilized flakes, Castroville, Kinney, Ensor dart points, four biface fragments, 150 bone fragments and the maxilla. Level 4 held a Montell, Martindale, and an unclassifiable dart point, graver, scraper, knife, four biface fragments, two utilized flakes, 71 bone fragments and two tooth fragments. Level 5 contained an unclassifiable dart point, knife, three biface fragments, three utilized flakes, and 56 bone fragments and Level 6 only 53 bone fragments. Level 7 produced a biface fragment. Of 13,644 flakes recovered 2,449 (18%) were fire damaged, 1204 (11%) of the remainder were primary, 1,487 (13%) secondary, and 8,504 (76%) interior flakes.

The location and contents on an additional 18 one-meter square tests are as follows:

H7-1

Surface. 14 burned rocks, five primary, four secondary, 21 interior, and one burned flake.

Level 1. Graver, hematite fragment, one biface fragment.

Level 2. Pedernales stem, unclassifiable dart

point, one biface fragment, mussel shell, tooth and bone fragment.

Level 3. Graver, two biface fragments, bone fragment.

Level 4. One biface fragment.

Level 5. Flakes only.

Of 2,035 flakes, 244 (12%) were fire damaged; 140 (8%) of the remainder were primary, 147 (8%) secondary, and 1,504 (84%) interior.

I6-1

Level 1. A plain shard, three biface fragments.

Level 2. Two Perdiz, two plain shards, two biface fragments, one utilized flake, hematite fragment, bone fragment.

Level 3. Pedernales, two Bulverde, two biface fragments, 11 bone fragments.

Level 4. Graver, four biface fragments, mussel shell, 15 bone fragments.

Level 5. Flakes only.

Of 2,700 flakes, 400 (15%) were fire damaged; 189 (8%) of the remainder were primary, 132 (6%) secondary, and 1,987 (86%) interior.

I7-1

Level 1. Two bone fragments.

Level 2. Drill (reworked Pedernales), bone fragment.

Level 3. Two cores, one biface fragment, mussel shell, bone fragment.

Level 4. Unclassifiable dart point, butted knife, two biface fragments, tested cobble, limonite fragment.

Level 5. Unclassifiable dart point, nine bone fragments.

Level 6. Flakes only.

Of 3,508 flakes 533 (15%) were fire damaged; 264 (9%) of the remainder were primary, 208 (7%) secondary, and 2,503 (84%) interior.

I5-1

Surface. One biface fragment, two primary, two secondary, and nine interior flakes.

Level 1. Six plain shards, one biface fragment.

Level 2. Edwards, two biface fragments, 16 bone fragments.

Level 3. Unclassifiable dart point, one preform, two biface fragments.

Level 4. Unclassifiable dart point, one biface fragment, bone fragment.

Level 5. Bone fragments.

Of 1,794 flakes 305 (17%) were fire damaged; 113 (7%) of the remainder were primary, 119 (8%) secondary, and 1,257 (84%) interior.

J5-11

Surface. Sixteen burned rocks, two primary, four secondary, three interior and two fire-damaged flakes.

Level 1. Plain shard, core, one biface fragment, mussel shell, 20 bone fragments.

Level 2. Mussel shell.

Level 3. Chopper, scraper.

Level 4. Flakes only.

Of 1,664 flakes 271 (16%) were fire damaged; 142 (10%) of the remainder primary, 96 (7%) secondary, and 1,155 (83%) interior.

J7-10

Level 1. Marshall, two biface fragments.

Level 2. Core, two biface fragments, three bone fragments.

Level 3. Pedernales stem, scraper, 10 bone fragments.

Level 4. One biface fragment, two bone fragments.

Level 5. La Jita, tested cobble.

Level 6. Flakes only.

Of 2,954 flakes 326 (11%) were fire-damaged; 195 (7%) of the remainder primary, 159 (6%) secondary, 2,274 (87%) interior.

J8-1

Level 1. Wire segment, one biface fragment, six bone fragments.

Level 2. Four biface fragments, one utilized flake, three glass fragments.

Level 3. Three biface fragments, core, mussel shell, eight bone fragments.

Level 4. Pedernales stem, four biface fragments, one utilized flake, mussel shell.

Level 5. Two preforms, four biface fragments, quartz fragment, nine bone fragments.

Level 6. One preform, four biface fragments, one utilized flake, 13 bone fragments.

Level 7. One biface fragment, mussel shell, two bone fragments.

Level 8. Flakes only.

Of 6,594 flakes 1,007 (15%) were fire-damaged; 557 (10%) of the remainder were primary, 374 (7%) secondary, and 4,657 (83%) interior.

J9-1

Level 1. Two biface fragments, one utilized flake.

Level 2. Bell dart point, bone and tooth fragment.

Level 3. Two biface fragments, quartz fragment.

Level 4. Pedernales, scraper, biface fragment, core.

Level 5. Unfinished dart point, three biface fragments, scraper, butted knife, two utilized flakes, two cores, bone fragments.

Level 6. Pedernales stem, biface fragment, bone fragment.

Level 7. Preform, crude Pedernales, biface fragment, bone fragment.

Level 8. Bone fragment.

Level 9. One utilized flake, mussel shell, bone fragment.

Of 4,672 flakes 471 (10%) were fire-damaged; 388 (9%) of the remainder were primary, 276 (7%) secondary, and 3,537 (84%) interior.

J9-2

Level 1. Perdiz, two biface fragments, mussel shell.

Level 2. Three biface fragments, bone fragment.

Level 3. Three biface fragments, bone fragment.

Level 4. Castroville, three biface fragments, one utilized flake, opaque quartz fragment, two bone fragments.

Level 5. Two biface fragments, one utilized flake, core, bone fragment.

Level 6. Preform, biface fragment, utilized flake, core, 10 bone fragments.

Of 4,905 flakes 684 (14%) were fire-damaged;

454 (11%) of the remainder were primary, 350 (8%) secondary, and 3,417 (81%) interior.

Note: A limestone rock fragment with four parallel grooves removed from the wall halfway between the above two units at 38 cm depth.

J9-4

Level 1. Five biface fragments, core, four bone fragments.

Level 2. Perdiz, Pedernales, two biface fragments, mussel shell, bone fragment.

Level 3. Marcos, biface fragment, core.

Level 4. Biface fragment.

Level 5. Six biface fragments, bone fragment.

Level 6. Pedernales stem, core, bone fragment.

Level 7. Unclassifiable dart point, scraper, core, bone fragment.

Level 8. Flakes only.

Of 5,575 flakes 639 (11%) were fire-damaged; 495 (10%) of the remainder were primary, 359 (7%) secondary, and 4,082 (83%) interior.

J9-6

Level 1. Edwards, plain shard, glass fragment, biface fragment, wire and metal fragments, four bone fragments.

Level 2. Core, biface fragment, two utilized flakes, nine bone fragments.

Level 3. Unclassifiable dart point, biface fragment, core, three bone fragments.

Level 4. Fire-damaged biface fragment.

Level 5. Core, utilized flake, biface fragment, three bone fragments.

Level 6. Scraper, two choppers, four biface fragments, utilized flake, two cores.

Level 7. Biface fragment, utilized flake, mussel shell, six bone fragments.

Level 8. Drill tip, mussel shell, 12 bone fragments.

Of 7,385 flakes 1,031 (14%) were fire-damaged; 586 (9%) of the remainder were primary, 411 (6%) secondary, and 5,357 (84%) interior.

J9-8

Level 1. Biface fragment, glass piece, two bone fragment.

Level 2. Perdiz, two biface fragments, glass piece, bone fragment.

Level 3. Crude unifacial flake arrow point, two biface fragments scraper, bone fragment.

Level 4. Pedernales, seven biface fragments, scraper, core, seven bone fragments.

Level 5. Pedernales stem, preform, two biface fragments, core, graver, utilized flake, nine bone fragments.

Level 6. Core, utilized flake, mussel shell, three bone fragments.

Level 7. Drill stem tip, biface fragment, four bone fragments.

Of 5,945 flakes 890 (15%) were fire-damaged; 574 (11%) of the remainder were primary, 403 (8%) secondary, and 4,078 (82%) interior.

J9-10

Level 1. Wire, metal, and glass fragments, two cores.

Level 2. Perdiz, glass fragment, three biface fragments, utilized flake, 20 bone fragments.

Level 3. Two choppers, three biface fragments, utilized flake, mussel shell.

Level 4. One utilized flake, five bone fragments.

Level 5. Two Pedernales, La Jita, drill (re-worked Pedernales), butted knife, five biface fragments, core, utilized flake, two mussel shells, 14 bone fragments.

Level 6. Scraper, three biface fragments, utilized flake.

Level 7. Core, biface fragment, mussel shell, five bone fragments.

Of 5,876 flakes 912 (16%) were fire-damaged; 436 (9%) of the remainder were primary, 352 (7%) secondary, and 4,176 (84%) interior.

J10-1

Level 1. Flakes only.

Level 2. Flakes only.

Level 3. Flakes only.

Level 4. Marshall, quartz fragment.

Level 5. Two biface fragments, utilized flake, core, quartz fragment.

Level 6. Biface fragment.

Level 7. Flakes only.

Of 791 flakes 79 (10%) were fire-damaged; 75 (11%) of the remainder were primary, 61 (9%) secondary, and 576 (81%) interior.

K6-1

- Level 1. Perdiz, core, two bone fragments.
- Level 2. Unclassifiable arrow point, arrow point tip, three biface fragments.
- Level 3. Scraper, three biface fragments, mussel shell, 24 bone and two tooth fragments.
- Level 4. Three cores.
- Level 5. One flake.

Of 2,921 flakes 481 (16%) were fire-damaged; 202 (8%) of the remainder were primary, 186 (8%) secondary, and 2,052 (84%) interior.

K7-1

- Level 1. Two biface fragments.
- Level 2. Plain shard, two biface fragments.
- Level 3. Two biface fragments, four bone fragments.
- Level 4. Pedernales stem, metate fragment, three biface fragments, utilized flake, quartz fragment, three bone fragments.
- Level 5. Nolan, biface fragment, 18 bone fragments.
- Level 6. Preform, eight biface fragments, mussel shell, 21 bone fragments.
- Level 7. Three bone fragments.
- Level 8. Core, utilized flake, three bone fragments.

Of 5,276 flakes 797 (15%) were fire-damaged; 439 (10%) of the remainder were primary, 308 (7%) secondary, and 3,732 (83%) interior.

K8-1

- Level 1. Preform, biface fragment, utilized flake.
- Level 2. Two majolica shards, two biface fragments, 11 bone fragments.
- Level 3. Lithic drill, two biface fragments, mussel shell.
- Level 4. Preform, core, six biface fragments, paint stone fragment.
- Level 5. Pedernales, five biface fragments, bone fragment.
- Level 6. Biface fragment, utilized flake, two bone fragments.

Of 3,930 flakes 452 (12%) were fire-damaged; 307 (9%) of the remainder were primary, 169 (5%) secondary, and 3,002 (86%) interior.

N6-1

- Level 1. Three biface fragments.
- Level 2. Flakes only.
- Level 3. Graver, two bone fragments.

Of 879 flakes 79 (9%) were fire-damaged; 79 (10%) of the remainder were primary, 64 (8%) secondary, and 657 (82%) interior.

O7-1

- Level 1. Mussel shell.
- Level 2. Edwards, La Jita, quartz fragment, core.
- Level 3. Two utilized flakes, biface fragment, mussel shell.

Of 664 flakes 106 (16%) were fire-damaged; 52 (9%) of the remainder were primary, 50 (9%) secondary, and 456 (82%) interior.

Pottery Shards

At least four varieties of pottery are represented in the 53 shards recovered (Table 1). Variations such as surface colors, clay texture, tempering agent, surface finish, and the distances between the excavation units where shards were found, indicate that they are from a minimum of seven vessels.

All the shards are small. The largest is 3.3 cm long and 2.5 cm wide, and thicknesses vary from 4 to 12 mm. Several of the shards have a smooth edge that may have been cut by a plow, and none of the shards could be matched to create a larger piece.

Forty-one shards are smooth on both faces (Figure 2, a) and are listed under Plain in Table 1. Eight shards have striations on one face that appear to have been made by brushing the wet clay with grass or straw (Figure 2, b). One shard shows uniform-sized punctations that were made with a tool (Figure 2, c). Another shard has an 8-mm-wide glazed band across one face (Figure 2, d), and two shards are majolica ware (Anne Fox, personal communication).

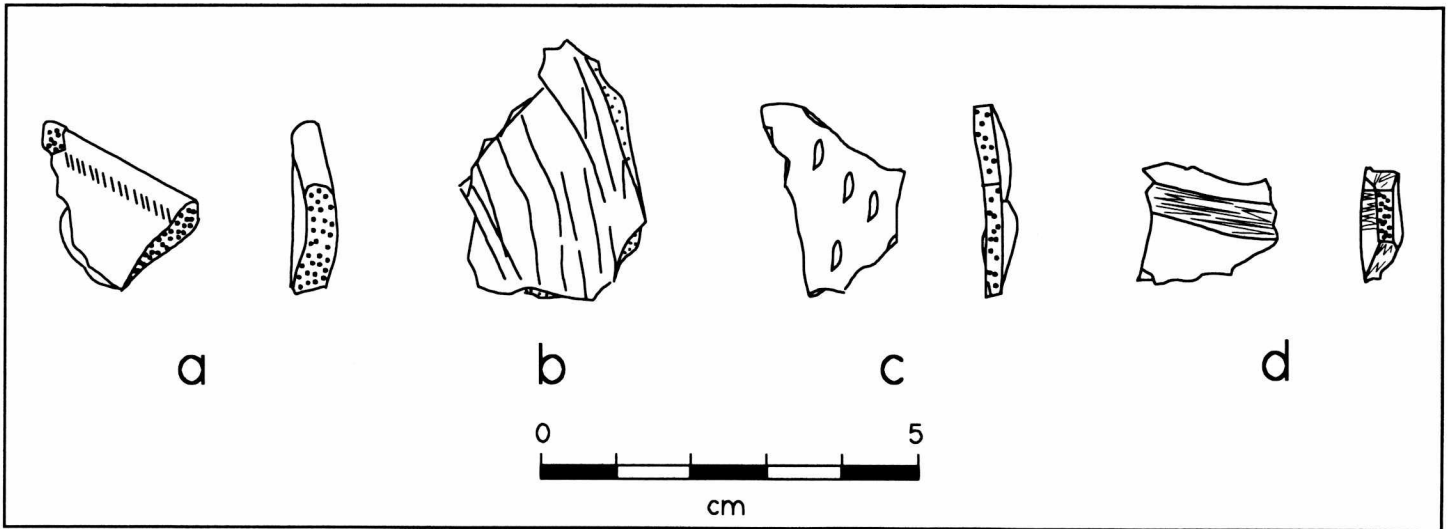


Figure 2. Pottery shards, 41KR38. a, smooth; b, brushed; c, punctated; d, glazed band.

Table 1. Provenience of Pottery Shards, Dewees Site (41KR38).

<u>Unit</u>	<u>Type</u>	<u>Level</u>	<u>No.</u>	<u>Unit</u>	<u>Type</u>	<u>Level</u>	<u>No.</u>
E4	Plain	Pothole	1	H3-1	Plain	3	2
F4	Plain	Pothole	1	H3-1	Glazed	2	1
F4-1	Brushed	Surface	1	H3-2	Plain	1	2
F4-2	Plain	3	1	H3-2	Plain	2	3
F4-11	Brushed	1 & 2	1	H3-11	Plain	1	6
F4-11	Plain	3, 4	3	H3-11	Plain	2	1
F4-12	Plain	2	1	H3-12	Plain	2	1
F4-12	Brushed	4	1	H3-12	Plain	3	2
F5-9	Brushed	1 & 2	1	J5-1	Plain	1	7
F5-10	Brushed	4	1	K7-1	Plain	2	1
F5-20	Brushed	1 & 2, 3	2	K8-1	Majolica	2	2
H3-1	Punctate	2	1	L5-96	Plain	2	1
H3-1	Brushed	2	1	J9-6	Plain	1	1
H3-1	Plain	2	5	M5-5	Plain	1	2

COMMENTS AND CONCLUSIONS

Projectile points are in the proper sequence at the site, arrow points with shards in the uppermost levels and dart points below, with a few exceptions. A total of 111 points were recovered; however, 20 dart and six arrow points cannot be placed into a named type because of damage to

their stems. Two Pedernales points have their blades reduced to form perforators. These were found in Unit I7-1, Level 2, and J9-10, Level 5. The remaining types with their proveniences are listed in Table 2. Five of the named types are represented by a single example, and six types by two examples.

Only 17 of the 45 excavated units contained

Table 2. Provenience of Projectile Points, Dewees Site (41KR38).

Type	Unit	Level	No.	Type	Unit	Level	No.
Alba	F4-12	5	1	Perdiz	F-4	P	1
	H3-11	1	1		F4-1	2	1
Almagre	G9-10	2	1		F4-2	4	2
Angostura	H5	S	1		F5-9	3	1
Bell	J9-1	2	1		F6	P	1
Bulverde	I6-1	3	2		H3-1	1,2	2
Castroville	H3-11	3	1		H3-2	1,2	2
Cliffton	F4-1	3	1		H3-11	2	1
Edwards	F4	P	1		H3-12	2	2
	H3-1	2	1		I6-1	2	1
	H3-2	1,3	2		J9-2	1,2	2
	H3-11	2	1		J9-4	2	1
	J5-1	2	1		J9-8	2	1
	J9-6	1	1		J9-10	2	1
	O7-1	2	1	K6-1	1	1	
Ensor	H3-11	3	1	L7-1	1	1	
	H3-12	1	1	Pedernales	F4	P	1
Fairland	H3-1	2	2		H7-1	2	1
Frio	H3-11	2	1		I6-1	3	1
	K6-1	2	1		J7-2	1	1
	L7-2	1	1		J7-10	3	1
Kinney	H3-11	3	1		J7-11	6	1
	H3-12	2	1		J8-1	5	1
La Jita	J7-10	5	1		J9-1	4,5,7	3
	J8-1	4	1		J9-4	2	1
	J9-10	5	1		J9-6	4	1
	O7-1	2	1		J9-8	4	2
Langtry	G9-9	3	1		J9-10	3	1
	G9-10	1	1		J9-10	5	2
	G9-19	2	1		K7-1	3,4	2
Martindale	H3-2	4	2	K8-1	5	1	
Montell	H3-1	4	1	L7-1	3	1	
	L7-12	3	1				
Nolan	C7	S	1				
	J7-12	7	1				
	K7-1	5	1				

P - Pothole
S - Surface

Table 3. Projectile Point Types, Units, and Levels in units containing more than one type.

Unit	Level						
	1	2	3	4	5	6	7
F4-2		Pe	Cl				
G9-10	La	Al					
H3-1	Pe	Pe,E,F		Mo			
H3-2	Pe	Pe,E		M			
H3-11	A	Pe,E,Fr	En,K,C				
H3-12	En	Pe,K					
I6-1		Pe	P,Bu				
J8-1				L	P		
J9-10		Pe	P		P,L		
J9-8		P		P			
J9-6	E			P			
J9-4		Pe,P					
J9-1		B		P		P	P
K6-1	Pe	Fr					
K7-1			P	P	N		
L7-1	Pe		P				
O7-1		E,L					
A - Alba		Cl - Clifton		K - Kinney		Mo - Montell	
Al - Almagre		E - Edwards		L - La Jita		N - Nolan	
B - Bell		En - Ensor		La - Langtry		P - Pedernales	
Bu - Bulverde		F - Fairland		M - Martindale		Pe - Perdiz	
C - Castroville		Fr - Frio					

more than one point style (Table 3). The depth relationship among the various styles is therefore less reliable as a chronological indication, and is further complicated by the presence of Pedernales points in 15 units at various depths from Level 1 through Level 7. The implied use from Early Archaic to neo-archaic time has also been recorded by Hester (1971) at a site in Uvalde County, and problems associated with its use as a chronological index are discussed by Patterson (1989). There is, however, an apparent shift southward across the site in the areas occupied by each subsequent group.

The first occupants probably used the northern end of the site. Biface fragments in Units N6-1 and O7-1, and a La Jita point in O7-1, are patinated, a condition not found in units to the south. Some 80 meters further south, Units F4 and F-5 contained arrow points and shards without an

Archaic component. This shift, and the absence of key index markers for some phases, may have been the result of stream meanders that caused periodic loss of a nearby water source. This type of change is continuous--two floods in the same month in 1987 filled the channel at the south edge of the terrace and created a new channel about 100 meters further south.

In the space between these two extremes are two burned rock mounds and a stone-lined basin. The basin cannot be dated, a Perdiz arrow point and shards were in the soil layer above the basin, and no points were recovered at the level of the basin.

The burned rock mound in Feature B had three Pedernales and a Nolan point in the rock fragments. Using the Nolan point for an index marker places the mound in the Clear Fork phase at the beginning of the Middle Archaic stage in the

chronology proposed by Prewitt (1985). The Bell, Martindale and La Jita points found in this area may indicate a date for the level platform under the mound; certainly it is older than the mound above it. However, no points were recovered in the platform levels in those units where it was exposed. Feature A had Langtry and an Almagre point in the rock fragments, indicating an intrusion from the southwest that occurred in the Middle Archaic stage.

East of Feature A, in Unit H3, Ensor, Kinney, Castroville, and Montell points indicate an occupation during the Late Archaic stage.

The last groups to occupy the site left imported stone tools made from basalt, sandstone and gneiss, and granite river cobbles on the surface in late Historic time. We can thus interpret site use as sporadic, because of the absence of point styles denoting certain phases, and short term, as indicated by the presence of only one or two examples of most of the types. These occupational episodes

occurred from the Early Archaic into Historic times.

An additional comment about the Edwards arrow point can be made. The presence of both Perdiz and Edwards points, and the absence of Scallorn points, supports Sollberger's (1967) observation that the Edwards was the first arrow point manufactured in this area, and provides more evidence for Mitchell's (1978) suggestion that it be used to mark the end of the Archaic stage when present at a site.

ACKNOWLEDGEMENTS

No report can be complete without mention of, and thanks to, the persons who helped make it possible: E. T. Miller, Laura Patton, and Sara Gray spent long hours excavating, washing, counting, and cataloguing artifacts, then provided the impetus to complete this report.

References Cited

- Briggs, Alton K.
1971 An Archeological Survey of Ingram Reservoir. *Texas Historical Survey Committee and Texas Water Development Board. Archeological Survey Report 9.*
- Goldschmidt, Walter R.
1934 Reconnaissance in Kerr County. Ms. on file, Texas Archeological Research Laboratory, The University of Texas, Austin.
- Hester, Thomas R.
1971 Archeological Investigations at the La Jita Site, Uvalde County, Texas. *Bulletin of the Texas Archeological Society* 42:51-148.
- Mitchell, J. L.
1978 The Turtle Creek Phase: An Initial Late Prehistoric Component in Southern Texas. *La Tierra* 5(4).
- Patterson, Leland W.
1989 Early Dates for the Pedernales Point. *La Tierra* 16(1).
- Prewitt, Elton R.
1985 From Circleville to Toyah: Comments on Central Texas Chronology. *Bulletin of the Texas Archeological Society* 54:201-238.
- Sollberger, J. R.
1967 A New Type of Arrow Point with Speculations as to its Origin. *The Record* 23(3).
- Turner, Ellen Sue and Thomas R. Hester.
1985 *A Field Guide to Stone Artifacts of Texas Indians.* Texas Monthly Press, Austin.

AUTHORS

MURRAY L. BEADLES is retired from the USDA Livestock Insect Laboratory in Kerrville, where he conducted research on the chemical and biological control of external parasites of livestock. Murray's interest in archaeology started in Oklahoma after finding "Indian relics" on the family farm. He is currently a member of the Texas Archeological Society, Southern Texas Archeological Association, the Oklahoma Anthropological Society, and a past president of the Hill Country Archeological Society.

C. K. CHANDLER, Documentation Chairman of STAA, is a retired railroad management official and engineering consultant with an insatiable interest in Texas archaeology. He is Past President of the Texas Archeological Society and a member of the Coastal Bend Archeological Society. C. K. was the 1985 Robert F. Heizer Award winner for his extensive work in south Texas archaeology (see Vol. 13, No. 1). Also, in 1985, he recorded more archaeological sites with the Texas Archeological Research Laboratory than any other individual. C. K. is a valued contributor of manuscripts to *La Tierra* and the *Bulletin of the Texas Archeological Society*, covering such varied subjects as metal points, rock art, and hearthfield sites in Terrell County. He has been honored by being named a TAS Fellow, and was also appointed as a steward for the Office of the State Archeologist. The Chandlers reside in northern San Antonio.

CHRISTOPHER LINTZ is the director of the Cultural Resource Program for the Austin office of Mariah Associates and serves as the Principal Investigator for the CRM studies conducted at the O. H. Ivie (Stacy) Reservoir. He received his M.A. and Ph.D. from the University of Oklahoma, and his B.A. from Arizona State University. He has worked in the Southern High Plains, the Caddoan area, and Central Texas during the past 22 years; six previous years were misguided in Southwestern and Great Basin archaeology.

DON KUMPE is a lifelong native of the Lower Rio Grande Valley. He and his wife, Mary, own and operate a jewelry store on South Padre Island. The store's specialty is jewelry that is designed and finished "while-u-wait." Don is a member of STAA. As a teenager he began collecting artifacts while on camping trips in Starr County. This led to his 30 years of continuous interest in the archaeology of the Lower Rio Grande River.

AL B. WESOLOWSKY, at present the Managing Editor of Boston University's *Journal of Field Archaeology*, is a graduate of The University of Texas at Austin. His particular interest in the archaeology of cemeteries has taken him to field projects in Texas, the Southeastern United States, Massachusetts, and the Classical archaeology of the Balkans. He recalls his Texas days with fondness and has adopted Townes Van Zandt's "Pancho and Lefty" as his theme song.

CHARLES M. WHATLEY has been an educator in Texas schools for a number of years, just finishing a stint as a superintendent in southeast Texas. His archaeological interests began in the mid 1960s when he taught in the Carrizo Springs schools in south Texas, and began to record sites with the Texas Archeological Research Laboratory (TARL). He has recorded sites in several south Texas counties and recently loaned his collection to TARL for documentation. He currently resides on his farm in Richards, Texas.

THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

The Southern Texas Archaeological Association brings together persons interested in the prehistory of south-central and southern Texas. The organization has several major objectives: To further communication among avocational and professional archaeologists working in the region; To develop a coordinated program of site survey and site documentation; To preserve the archaeological record of the region through a concerted effort to reach all persons interested in the prehistory of the region; To initiate problem-oriented research activities which will help us to better understand the prehistoric inhabitants of this area; To conduct emergency surveys or salvage archaeology where it is necessary because of imminent site destruction; To publish a 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.

S T A A OFFICERS AND STAFF - 1992

CHAIRMAN - Ray Blackburn (San Antonio)

VICE-CHAIRMAN - Kay Hindes (Charlotte)

SECRETARY - Lea Worcester (San Antonio)

TREASURER - Diane Couch (San Antonio)

LA TIERRA

Editor - Evelyn Lewis (San Antonio)
Staff Artist - Richard McReynolds (S.A.)
Columnist - Thomas R. Hester (UT-Austin)
Production- Shirley & Van Van der Veer (S.A.)

NEWSLETTER

Editors: Herb & Kay Allison (San Antonio)

SPECIAL PUBLICATIONS

Editor: Jimmy Mitchell (Converse)

AREA CONSULTANTS

Tom Beasley (Beeville)
Bill Birmingham (Victoria)
Rita Gunter (Corpus Christi)
T. C. Hill (Crystal City)
Malcom Johnson (Fredericksburg)
Tom Kelly (San Antonio)
Ed Mokry (Corpus Christi)
Lee Patterson (Houston)
Ray Smith (San Antonio)

FIELD DIRECTORS

Anne Fox (San Antonio)
Thomas H. Guderjan (San Antonio)
Robert J. Hard (San Antonio)
Wilson McKinney (San Antonio)
E. H. (Smitty) Schmiedlin (Victoria)
Ray Smith (San Antonio)

IMMEDIATE PAST CHAIRMAN

Ray Blackburn (San Antonio)

COMMITTEE CHAIRPERSONS

Discovery

C. K. Chandler (San Antonio)

Documentation

Kay Hindes (Charlotte)

Educational Programs

Elaine McPherson (San Antonio)

Hospitality

Lea Worcester (San Antonio)

Mailing

Leanne & Mike Vaillette (S. A.)

Membership

Kay Allison (San Antonio)

Organizational Activities

John Ruff (San Antonio)

Program

Don Lewis (San Antonio)
Shirley Mock (San Antonio)

Program Coordinator

Kay Hindes (Charlotte)

Publication Sales

Publicity

Wilson McKinney (San Antonio)
Barbara Meissner (San Antonio)

Registration

Frances Ward (San Antonio)

Social

Mark Kuykendall (San Antonio)

Special Projects

Lynn Highley (San Antonio)
Bobby McGregor (San Antonio)

Telephone

Paul Ward (San Antonio)

STAA LIBRARY

(See Table of Contents)