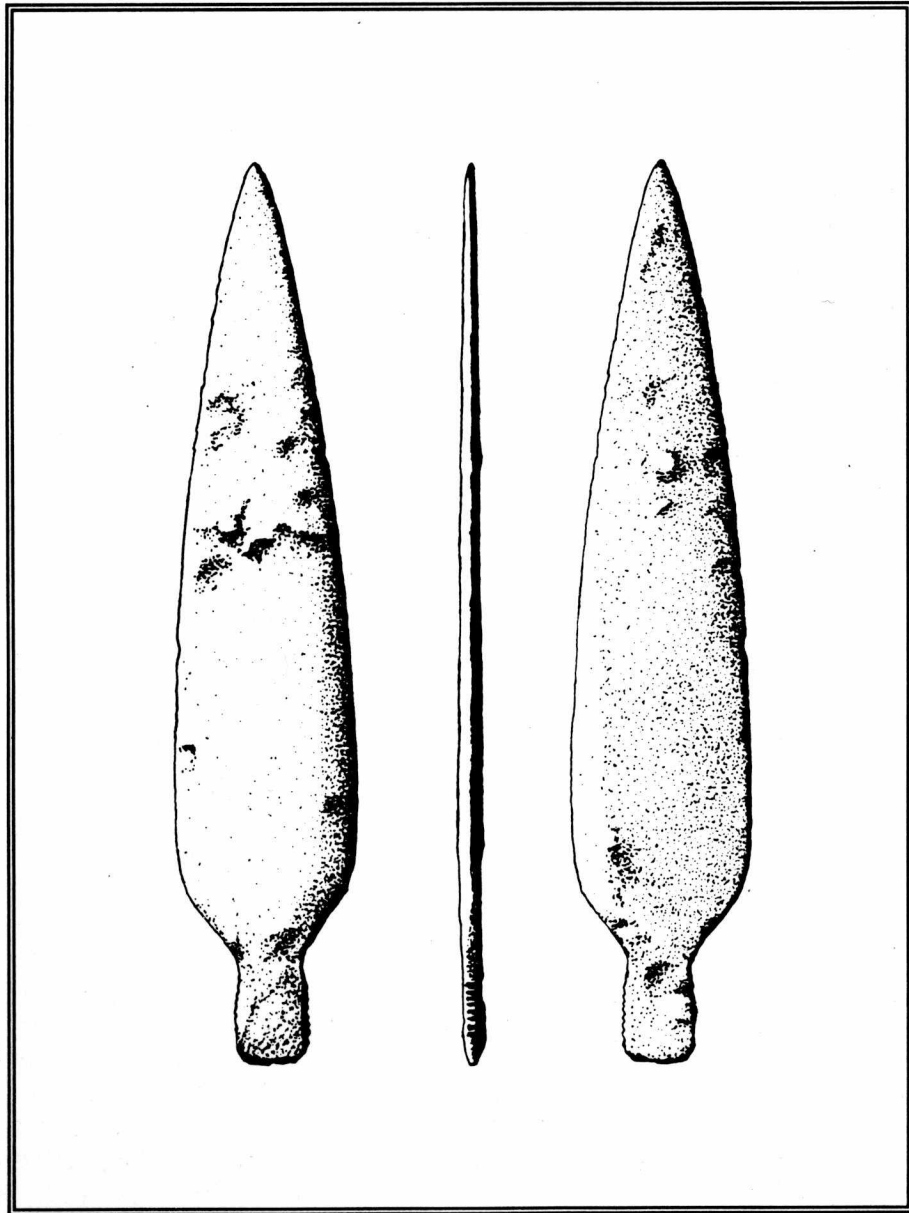


LA TIERRA



VOLUME 20, No. 4
October, 1993

**JOURNAL OF THE
SOUTHERN TEXAS
ARCHAEOLOGICAL
ASSOCIATION**

LA TIERRA

QUARTERLY JOURNAL OF THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

Volume 20, No. 4
October, 1993

Evelyn Lewis
Editor

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About the Cover: A metal projectile point from Medina County, Texas. See report on page 29 by C. K. Chandler. Illustrated by Richard McReynolds. Other illustrations by Richard are on pages 6, 30, and 40.

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 (Jim Mitchell), 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 (210-733-1744).

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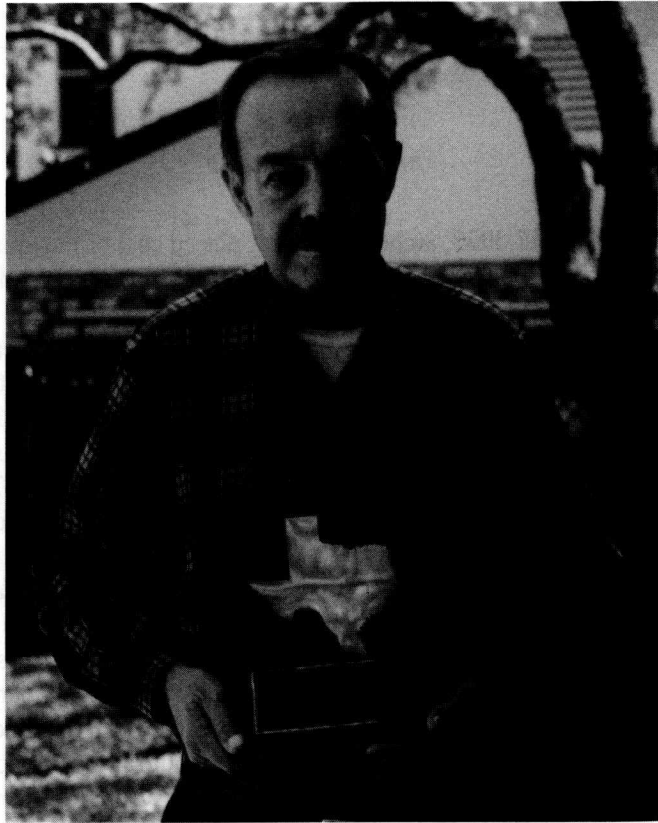
All articles in *La Tierra* are now summarized in *Abstracts in Anthropology* published by the Baywood Publishing Company.

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

IN MEMORIAM



Raymond C. Blackburn

January 2, 1933

September 21, 1993

*Do not stand at my grave and weep.
I am not there, I do not sleep.
I am a thousand winds that blow.
I am the diamond glint on snow.
I am the sunlight on ripened grain.
I am gentle autumn rain.
When you wake in the morning hush,
I am the swift, uplifting rush
Of quiet birds in circling flight.
I am the soft starlight at night.
Do not stand at my grave and weep.
I am not there. I do not sleep.*

A Native American Prayer

NOTES ON SOUTH TEXAS ARCHAEOLOGY 1993-4:

Remembering the Alamo: 20 Years of Archaeology by The University of Texas at San Antonio

Thomas R. Hester

Between October 2 - November 17, 1973, archaeologists and students from the newly opened campus at The University of Texas at San Antonio (UTSA: then housed in the Koger Office Center on Babcock Road) conducted test excavations on the grounds of the Alamo (Figure 1). This represented the first organized archaeological excavation conducted by UTSA in the Texas area (Dr. R. E. W. Adams at UTSA had been working in the Río Bec area of the Maya lowlands). For the Alamo project, the author and Dr. Adams were the project's principal investigators, and the work was done under the terms of Texas Antiquities Permit No. 40. Sixteen UTSA students took part (Figure 2), some of them later to become members of the Southern Texas Archaeological Association when it was formed in December 1973, and of the staff of the Center for Archaeological Research when it was created in 1974. Anne Fox, then at the Witte Museum, provided a tremendous amount of assistance and insight.

The excavations consisted of four test pits. One was placed between the museum building and the acequia, one was adjacent to the acequia on its east side and two others were east of the acequia (Figure 1). The two easternmost units (2x2 meter squares; Figure 2 shows Unit 3 just getting underway) revealed that there were no intact deposits related to the Alamo's role as a mission (San Antonio de Valero), let alone its famed battle era. Rather, there was a lot of late 19th and early 20th century ceramics, glass, and bricks. This was related to businesses and houses that had been built in that area; some of the stores apparently had basements that had cut deeply into the deposits. A smaller test pit was placed adjacent to the acequia (Figure 1). We wanted to see if the present concrete acequia, inhabited by numerous goldfish, followed the route of an original acequia. Again, we found much subsurface disturbance and again, relatively recent artifacts. Though documentary evidence suggests that the present concrete-lined acequia follows the approximate course of a mission-period ditch, it is unlikely that the original waterway could be detected due to disturbance (Adams and Hester 1973:2). The fourth

unit, placed east of the museum building and west of the acequia (Figure 1), and again produced disturbed materials.

Thus, the 1973 excavations by UTSA at the Alamo provided clear-cut data on portions of the grounds that had been disturbed, and where it is unlikely that any further excavation would be necessary (Adams and Hester 1973). Jack Eaton (1977) has reviewed the earlier archaeological excavations at the Alamo, and monographs in progress by Anne Fox and colleagues will provide data on other fieldwork in the late 1970s and during the 1980s. Remembering the 1973 Alamo excavations is significant in that it set the stage for the next 20 years of fieldwork by UTSA. Much of that fieldwork took place in downtown San Antonio, but ranged as well across Texas, into New Mexico, and has involved projects in Mexico, Guatemala, and Belize (and most recently, Dr. Bob Hard's work in Turkey). More than 200 volumes have been published on those two decades of research, with many more still "in progress." The 1973 Alamo excavations provided students and volunteers the first opportunity to work together on an organized project, and as I noted earlier, this yielded dividends with the creation of the STAA and the CAR in the months following the excavations.

Acknowledgments

Among the students and volunteers who worked at the 1973 Alamo excavations were members of my ANTH 533 class at UTSA (Regional Cultures of Native America): George Berberich, Louis Fardatta, Jilly Gates, Edwin S. (Ned) Harris, R. L. Keller Michael McLeod, Sherry Miller, Jimmy L. Mitchell (who claims I forced this graduate student class to work there), and Jamis Townsend. Other students and volunteers included Anne A. Fox, Harvey P. Smith, Jr., Feris A. Bass, Margarita Vasquez, Charlotte Balusek, and Molly Madden. The names of some of the other volunteers and students are missing, and apologies are offered for any oversights.

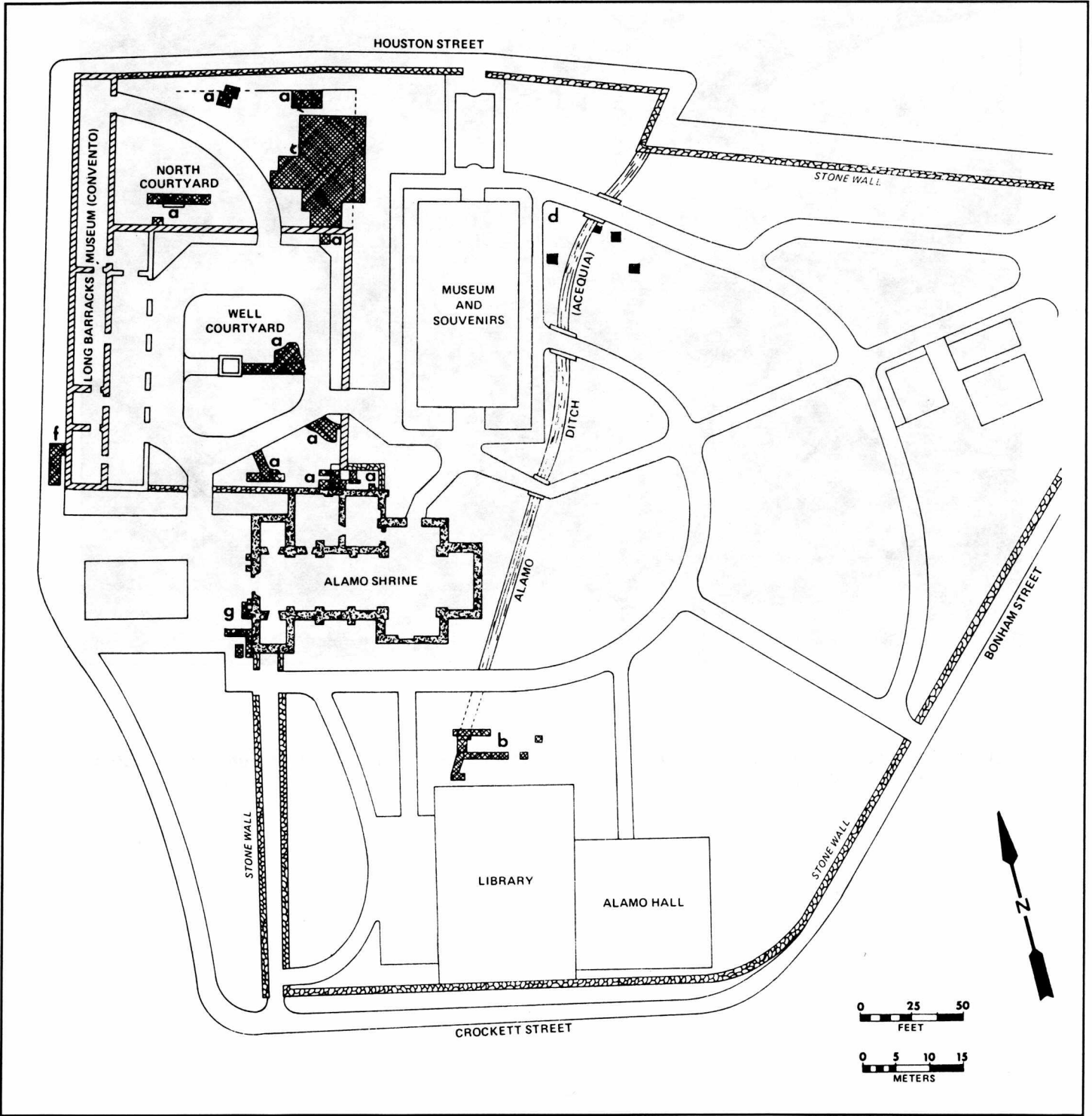


Figure 1. Location of the 1973 excavations at the Alamo. The four units are located near the letter "d" to the right of the museum and souvenirs building (adapted from Eaton 1977:Figure 7).



Figure 2. Excavations underway in the 1973 Alamo excavations. Left, Molly Madden; right, Feris A. Bass. Photograph by the News and Information Office, The University of Texas at San Antonio.

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PIN DRILLS FROM TAMAULIPAS, MEXICO

C. K. Chandler and Don Kump

ABSTRACT

A collection of tiny chert drills surface-collected from sites in coastal northeastern Tamaulipas, Mexico is reported with supporting evidence of their use in a rotary fashion. The probable method of obtaining proper size source material is also explored.

THE ARTIFACTS

All specimens reported are illustrated in Figure 1. The thirteen stone drills reported here were collected from eroded surface sites in northeastern Tamaulipas, Mexico over a period of several years. All specimens are bipoined and are minutely flaked over nearly all their surfaces. All are complete except one which has a broken end (Figure 1, K). All have been microscopically examined for evidence of use wear. Eleven specimens have rounding and polish of edges at one or both ends. One has wear polish in the midsection only (Figure 1, C) with none on the ends. One has no use wear in any area (Figure 1, F). One specimen (Figure 1, J) has a tiny burin-like scar at each end on opposite sides. Measurements vary in length from 16 to 29 mm with an average length of 21 mm. Maximum width is in the middle one-third of the artifact and this varies from 4.3 to 7.7 mm with an average of 6 mm. Most specimens are biconvex in cross section at the ends with only two edges making contact in a drilling operation. In the middle area where the maximum widths were recorded the minimum widths were also recorded as measures of thickness. These dimensions vary from 2.8 to 6.7 mm with an average of 4 mm. All specimens were weighed and they range from .3 to 1.4 grams for an average weight of .57 grams.

Twelve of the specimens are made of good to excellent quality chert and one specimen is of limestone that is nearly marble (Figure 1, L).

Small chert drills are reported at several coastal sites. One complete drill and two drill fragments are reported by Aten et al. (1976) from the Harris County Boys' School Site (41HR80) on Galveston

Bay. The one complete drill is small and bipoined much like the Tamaulipas specimens.

Gunter (1985) reports a number of minutely flaked chert drills from the northern half of Padre Island. Most of these are distal or proximal fragments but six are complete. Only two are identified as bipoined. Three have one widely flaring end that appears unworked. Some of those illustrated are much like these from Tamaulipas.

Prewitt (1974) mentions small "pin-like" drills (previously described by MacNeish in 1958) from Cameron County but none of these are illustrated or described in detail by Prewitt.

Story (1968) reports one drill fragment and one modified burin spall that was probably a drill from 41SP63, the Ingleside Cove Site, and small planoconvex flakes with minimal retouch into drills or punches are reported from 41JK7, the Anaqua site.

Weir (1956) reports two drill fragments from the La Perdida site in Starr County.

While all of these specimens have been referred to as drills, wear analysis is not reported for any of them. The need for more research to determine the technology and function of many artifact types is vividly pointed out by Turner and Hester (1993). They take the case of the burin. Why were they formed and what were they used for? Burins are found on flakes, on broken bifaces, and on projectile points. Why do some Paleo-Indian points have burins at the corners of the base? Burins were probably intended to serve as engraving or incising tools but microscopic examination of some burins indicates no evidence of use (*ibid*). There are indications that in many cases the knapper was actually after the burin spalls which make excellent drills for boring shell and other tough materials such as sandstone and limestone ornaments.

SUMMARY

Artifacts made from marine shell and from fine-grained sandstone are fairly common in the Rio Grande delta area. Many of these are ornaments in the form of pendants and gorgets that have drilled holes. Pendants made of freshwater

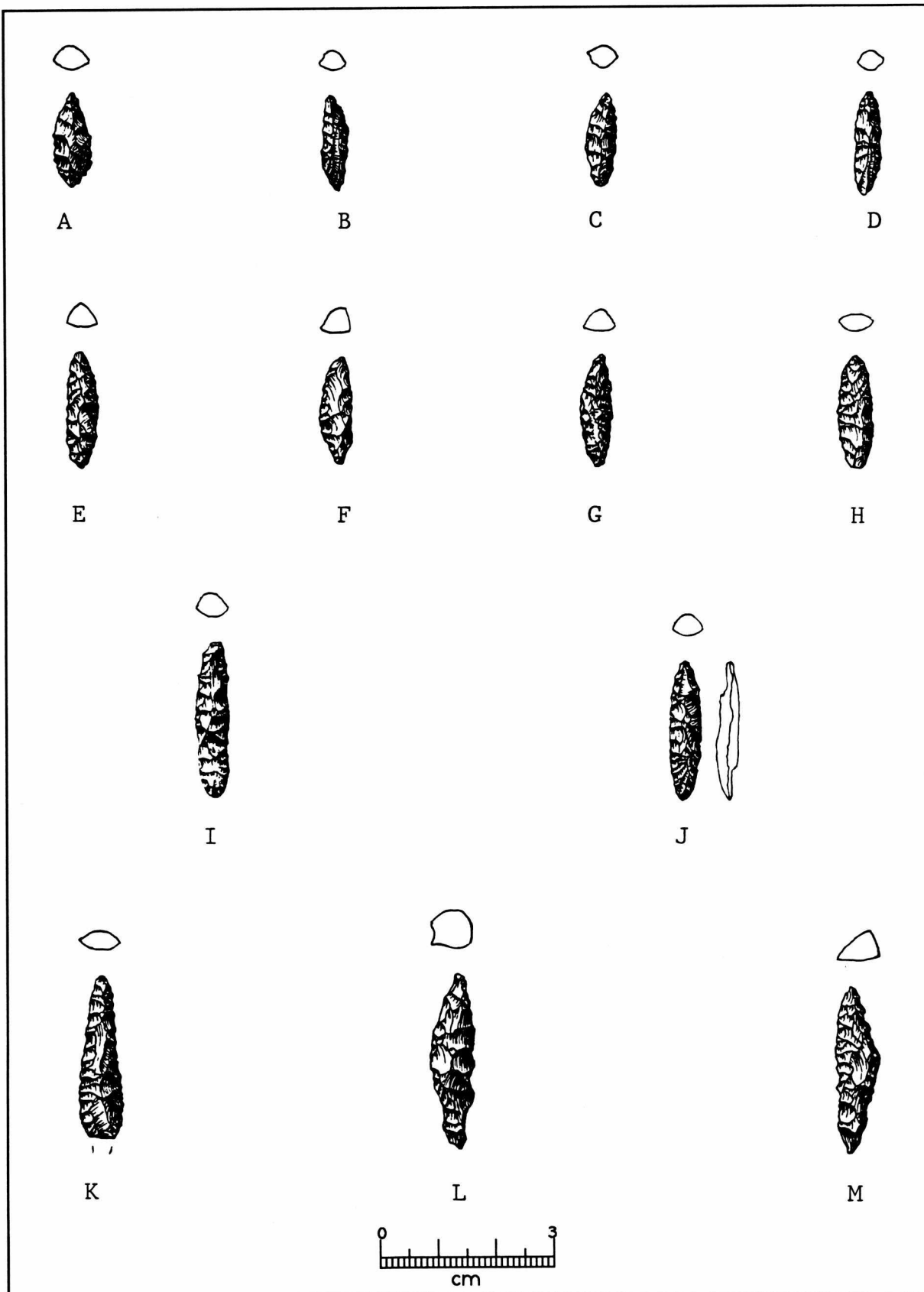


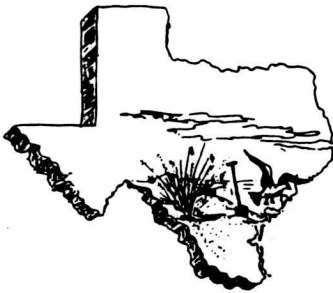
Figure 1. Pin Drills from Coastal Northeastern Tamaulipas, Mexico.

mussel shell with biconically drilled holes occur occasionally along the Lower Rio Grande (Chandler and Kumpe 1992). The production of such holes requires the use of tools specifically de-

signed for that purpose. Use wear analysis of the drills reported here reveal wear and polish with occasional circumferential striations on one or both ends that strongly support their use as drills.

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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.

**A REPORT ON SOME PALEO-INDIAN AND EARLY ARCHAIC
ARTIFACTS FROM THE SINKHOLE SITE (41WM754),
WILLIAMSON COUNTY, TEXAS**

Norman G. Flaigg

ABSTRACT

Several artifacts, mostly of Paleo-Indian or very Early Archaic origins, found in or near a sinkhole near Georgetown, Texas, are described in this report. The find is unique in that it is the only reported find of the recovery of Angostura points from a sinkhole. Associated with the sinkhole, either on the surface outside the sinkhole or on nearby burned rock middens, were the fragments of a Clovis point, two Plainview points, several Angostura points and fragments, a basal section of a Scottsbluff-like point, and a number of basal sections of an unclassified Late Paleo-Indian to very Early Archaic point. Fragments of a human skeleton in the collection reportedly were removed from a burned rock midden located outside the sinkhole but near its entrance.

**HISTORY OF DISCOVERY AND
INVESTIGATIONS**

In the summer of 1988, Scott Eason of Austin, Texas, took a collection of artifacts to the Office of the State Archeologist (OSA), Texas Historical Commission (THC). The artifacts were inspected by Mark Parsons, who recognized that they were unusual. Among the artifacts were the basal sections of two Angostura dart points that Eason said he had found while "scraping around" in the bottom of a sinkhole. Parsons expressed an interest in the site, and Eason gave him directions to the locale. At Parson's request, the artifacts were loaned to the OSA for photographing. Following completion of the photo-documentation, the artifacts were returned to Eason.

On September 8, 1988, Patricia Mercado-Allinger of the OSA and Dan Prikryl, then of the THC's Department of Antiquities Protection, inspected and recorded the site, which was designated 41WM754. Because of imprecise direction, it was impossible to determine which sinkhole of several was the actual site, and due to lack of time the sinkholes were not entered. During the inspection, a number of burned rock middens were identified in the area, and it was

noted that most of them had been damaged by relic hunters.

On September 12, 1989, Parsons, in the company of Eason, visited the site to make sure the recorded sinkhole was actually the source of the Angostura points and to enter the sinkhole and record it in more detail. This inspection revealed that the site recorded as 41WM754 was the correct site and that, in the year between visits, a great deal of potholing had taken place. Eason had other artifacts that he said had been found within 100 feet of the sinkhole. Two other artifacts in his collection, a fragment of a Clovis point and the basal section of a Scallom point, were not associated with the sinkhole. The Clovis point reportedly was found on a large burned rock midden, where it had been discarded by relic hunters digging in the midden. The provenience of the Scallom point is unknown.

Parsons entered the sinkhole, located the source of the Angostura points, and made a sketch map of the sinkhole.



Williamson County darkened

The Eason Collection, which was loaned to the OSA for study, consists of the following:

| <u>Artifact Designation</u> | <u>Description</u> |
|-----------------------------|---|
| A, B, C, D | 4 basal fragments of Angostura points |
| E, K, L, M, N | 5 basal fragments of an unnamed Paleo-Indian point (?) or preform |
| F | 1 fragment of a Clovis point (actually two pieces glued together) |
| G | 1 medial section of an unidentified Paleo-Indian point |
| H | 1 medial fragment of a beveled Paleo-Indian point (?) |
| I, J | 2 basal fragments of parallel-sided Paleo-Indian points (Plainview-like?) |
| O, P | 2 basal sections of contracting-base bifaces |
| Q | 1 basal section of a Scallom point |
| R, S | 1 complete and 1 basal section of lanceolate bifaces |
| T | 1 portion of a human skull consisting of six fragments glued together |
| U | 1 bison astragalus bone |
| V | 1 fragment of a worked conch shell, probably part of a pendant |
| W | 1 chalky concretion |

In addition, Parsons collected an irregular preform and a medial fragment of a biface from the surface near the sinkhole. Two other small biface fragments are present in the Eason collection, but their provenience is unknown.

LOCATION AND DESCRIPTION OF THE SITE

The Sinkhole site (41WM754) is located on the eastern edge of the Edwards Plateau in central Williamson County near the San Gabriel River. The site lies on a gentle slope of shallow soils and exposed bedrock supporting a wooded area of oak and juniper with a sparse yaupon and grass understory.

The site consists of a series of burned rock middens, a possible incipient midden, and a sinkhole with three surface openings. These features are lined up in a WNW-ESE direction covering an area about 300 meters east-west and 100 meters north-south. Figure 1, a sketch map of the site, shows the arrangement of the middens and the sinkholes.

The westernmost opening is the best entrance even though it is the smallest opening, being about 1.5 by 2.5 meters and 1 meter deep. It drops into a room about 15 meters in diameter. This room opens into a larger room to the east that has an opening measuring about 10 by 20 meters. This opening is about 4 meters deep and is called the "Tree Hole" because it is marked by the growth of trees. Passages to the north, northeast, and southeast extend from this room. The room extending to the north (perhaps slightly northwest) is 10 by 15 meters in extent and is a dead end. A

smaller branch to the northeast is about 5 by 7 meters in size, and a small passageway from this branch leads to other caverns. It was in this room that Eason found artifacts C, D, and possibly K and N. Reportedly they were found within a depth of one foot. One other artifact, J, was found in the "Tree Hole."

The southeast passage continues for about 35 meters and branches. The left branch extends for another 50 meters to the third sinkhole opening, which is the largest and about a meter deep except where it opens into the cavern below. The right passage appears to go deeper underground and was not explored.

The general layout of the cavern is shown in Figure 2.

The central sinkhole area is large enough to have served as a living space. That it has been used as a recreational area for the past 100 years is evidenced by fragments of nineteenth-century beer bottles in the talus cone. The walls are smoke blackened and graffiti is everywhere. Recent fire hearths are present, as are large amounts of recent trash. At the time the site was recorded, in 1988, there were five potholes in the large burned rock midden. When the site was reinspected on August 12, 1989, the midden had been almost entirely destroyed by relic collectors. In addition to the destruction of the middens, exploratory potholes had been dug in several locations around the middens and in the sinkholes.

CULTURAL CHRONOLOGY

The Sinkhole site is located on the mid-eastern edge of the Central Texas Archaeological

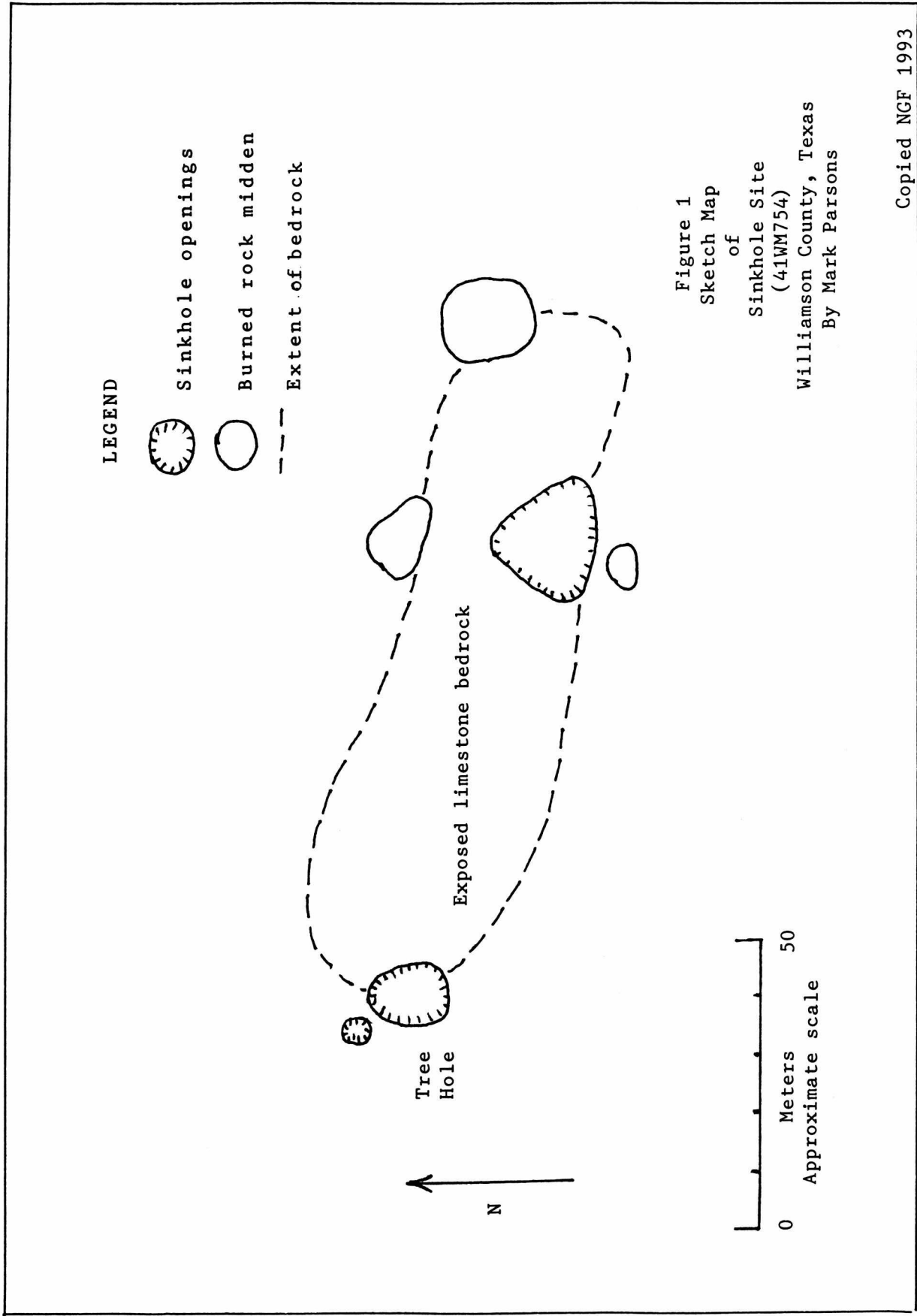


Figure 1. Sketch map of the Sinkhole Site (41WM754).

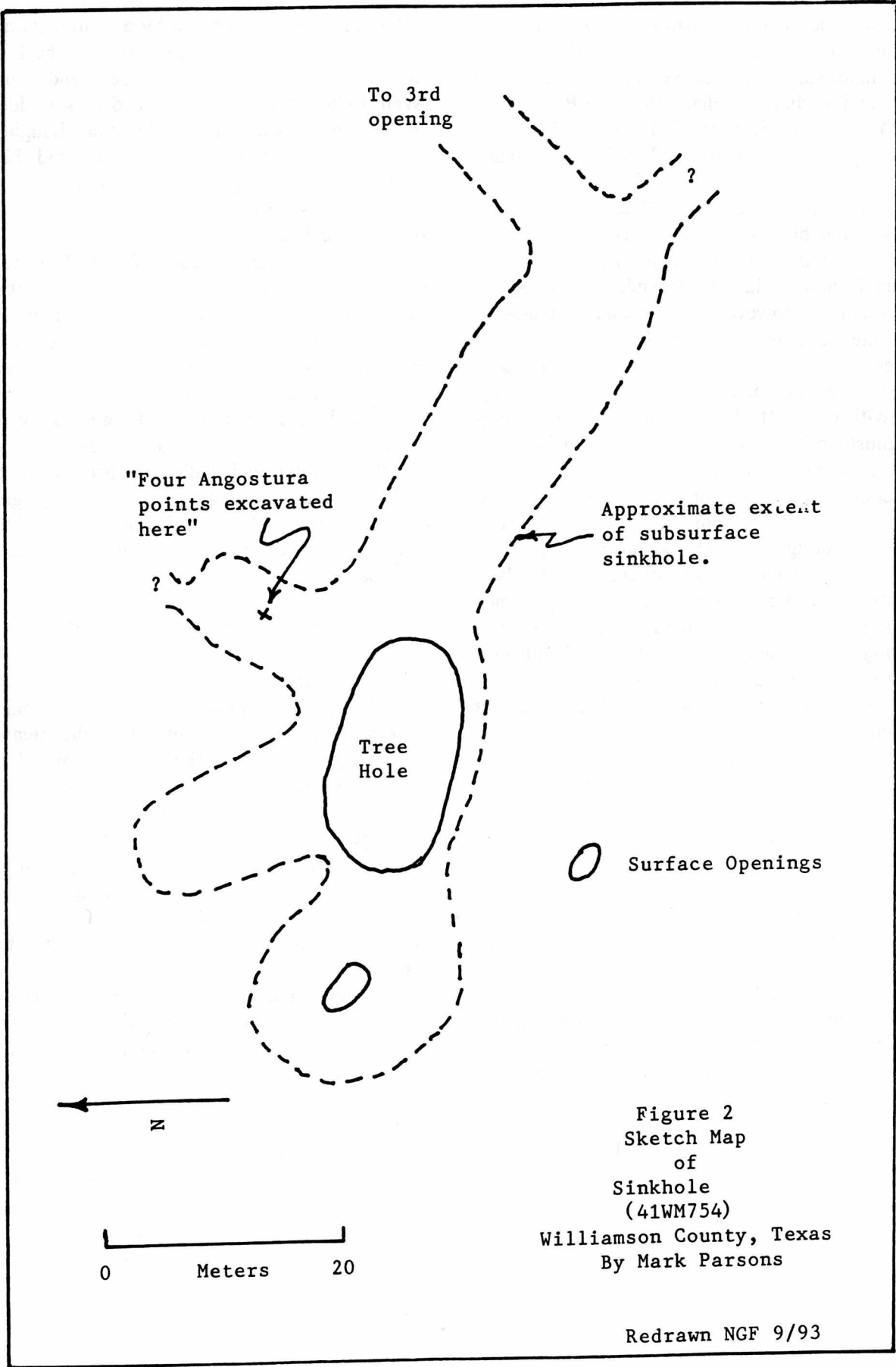


Figure 2. Sketch map of the sinkhole.

Region as defined by Prewitt (1981: 72, Figure 2). Cultural chronology for this region is divided into four major stages (ibid:65-89): Paleo-Indian (8500 B.P. and earlier), Archaic (8500 B.P. to 1250 B.P.), Neo-Archaic (1250 B.P. to 200 B.P.: this period is referred to herein as Late Prehistoric) and Historic (200 B.P. to present, taken as A.D. 1950).

The subsistence pattern of the earliest stage in the cultural history of Central Texas, the Paleo-Indian period, is often characterized as one of nomadic hunters largely dependent on big-game procurement. However, it is reasonable to assume that the subsistence included the collecting of vegetal and other foods. This period began about 12,000 years ago and lasted until 8,500 years ago (Prewitt 1981:77). The earliest projectile points diagnostic of the Paleo-Indian stage are Clovis and Folsom points, which are characterized by fluting. Other points diagnostic of this stage are Plainview, Angostura, and Golondrina. These later points have no fluting but retain the lanceolate, parallel-sided form characteristic of earlier points. The later points also exhibit skillful parallel-to-unpatterned flaking and have dulled basal edges to facilitate hafting (Turner and Hester 1993:55). Scottsbluff points, also a Paleo-Indian type, follow these traditions, with the addition of a small shoulder offsetting the stem.

The Archaic stage is characterized by a subsistence pattern of migratory hunting and gathering, with a trend toward a greater reliance on gathering. In Central Texas, the Archaic is divided into early, middle and late periods to facilitate discussion.

The Early Archaic period covers about 4,000 years, from 8500 B.P. to 4600 B.P. Subsistence probably depended on the hunting of deer and small animals supplemented by the processing of vegetal foods. This period is marked by changes in the style of projectile points and tools and by the introduction of grinding implements and ground-stone ornaments (Turner and Hester 1993:55). Some point types diagnostic of this stage are called Early Triangular, Early Barbed, Gower, Bell, Martindale, and Uvalde. These points generally have barbs, stems, and random flaking patterns. Burned rock middens may have come into existence near the end of this period (Prewitt 1981).

The Middle Archaic, extending from 4600

B.P. to 2250 B.P., is marked by a continuation of the hunting and gathering processes of the Early Archaic, with an emphasis on deer and acorns (Weir 1976:125-127, 130). Burned rock middens are common sites of this period and are thought to be specialized for acorn processing (ibid.:125). Diagnostic projectile point types for this period are Nolan, Travis, Bulverde, Pedemales, Marshall, Williams, and Lange.

The Late Archaic, from 2250 B.P. to 1250 B.P., is noted as a period of reliance on a wide variety of resources. Projectile point types typical of this period are Marcos, Montell, Castroville, Frio, and Ensor. These points tend to be smaller than those of earlier periods.

The Late Prehistoric is designated by the appearance of the bow and arrow and ceramics, but the hunting and gathering pattern of the Archaic seems to continue without any great change (Prewitt 1981:68). The beginning of this stage is marked by the presence of Scallorn arrowpoints.

PREVIOUS INVESTIGATIONS

The trinomial of the Sinkhole site, 41WM754, is an indication of the archaeological richness of Williamson County and of the intensity of investigations there. The same is true of the adjoining counties, especially Travis and Bell. The sheer number of archaeological sites and investigations in the region makes detailed discussion untenable in an article-length study. However, several important investigations of prehistoric sites in Williamson County are discussed briefly here in terms of their contributions and significance to Central Texas archaeology. In addition, a summary of several major sinkhole investigations demonstrates the significance of this site type to our understanding of prehistory.

Most of the detailed archaeological investigations in Williamson County have been undertaken in connection with proposed reservoirs along the San Gabriel River or in connection with proposed highway construction. Sites investigated in conjunction with reservoirs include those of the North Fork (Georgetown Reservoir), South Fork, and Laneport (Granger Reservoir) projects (Shafer and Corbin 1965; Eddy 1973; Jackson 1974;

Moore, Shafer, and Weed 1978; Prewitt 1982). The investigations at the Loeve-Fox site (41WM230) (Prewitt 1974) were very important in defining the cultural sequences of the Late Prehistoric for Central Texas.

More recently the State Department of Highways and Public Transportation, now the Texas Department of Transportation (TxDOT), has conducted extensive investigations at the Wilson-Leonard Site (41WM253) on Brushy Creek in southwestern Williamson County. During routine inspection of the proposed right-of-way for FM 1431 between Cedar Park and Round Rock, the discovery of a cluster of burned rock middens and a promise of intact subsurface archaeological deposits attracted additional attention from project archaeologists. Testing of the site revealed that it contained significant data. Excavation of the site began in January 1982, and 28 months later the excavations had exceeded a depth of four meters and had uncovered one of the most complete archaeological sequences yet identified in Texas. In addition, the site provided one of the oldest burials (between 8000 and 11000 B.C.) ever found in a well-defined context. "Leanderthal Lady," as the discovery was dubbed, made national headlines.

The report of these discoveries has not yet been published. Briefly, the excavations showed that there were two major periods of occupation at the site. In the earlier period, stream-borne deposits buried a series of Paleo-Indian occupations in sediments amounting to about two meters in thickness. This period lasted for about 2,000 years. In the later period, evidence of occupation was deposited in a layer about 1.5 meters thick over a period that may have lasted 8,000 years (Collins 1993). The earlier deposits contained Angostura, Plainview, an early stemmed form, and Midland-like projectile points (recovered in descending order). Non-diagnostic artifacts were found at depths of about 25 cm below the Midland-like points. The upper deposits contained a few artifacts diagnostic of every known prehistoric phase of the Archaic and Late Prehistoric periods of Central Texas.

In 1991 TxDOT awarded a contract to the Texas Archeological Research Laboratory of the University of Texas at Austin for the analysis and reporting of the 1982-1984 investigations. Included

in the contract were provisions for the excavation of a test column (referred to as a "witness" column by Collins [1993]) adjacent to the earlier excavation block, in order to apply advanced techniques not available during the earlier excavations. This excavation was undertaken during the period from July through November 1992. Completion of the report is scheduled for 1996 (M. Collins, personal communication, 1993).

Another important investigation, at the Rowe Valley Site (41WM37), was conducted by the Texas Archeological Society during three consecutive field schools in 1982, 1983, and 1984. The Rowe Valley site provided an in-depth view of Late Prehistoric occupations of the Austin and Toyah phases. Components of village functions such as chipping stations, butchering areas, and cooking areas are suggested by the investigations, and some indications of trade relations are suggested by the ceramic sherds. Styles of the recovered arrowpoints varied greatly, from Caddoan to South Plains types, suggesting a gathering of people in very late prehistoric times under pressure from invasive groups (E. Prewitt, personal communication, 1993). The report on these investigations is in progress.

Few sinkholes have been excavated professionally in Texas and even fewer have been reported in published works. Probably the best summary of sinkhole burials in Texas is contained in Table 1 of the Seminole Sink report (Turpin 1985:13). To date, Seminole Sink (41VV620) in Val Verde County is the only professionally excavated and fully reported sinkhole site in the state (Turpin 1985; Turpin 1988; Turpin and Bement 1988). There, at least 21 human skeletons were found in one section of a talus cone. Prehistoric cultural material directly associated with the burials consisted of one Early Corner Notched dart point. The Early Corner Notched point is suggestive of dates between 8900 and 4000 B.P., with the preponderance of the evidence suggesting Early Archaic activity.

Important as the Seminole Sink site is, Val Verde County is far afield from Williamson County, and it is necessary to look at other, less fully reported, sites in the Central Texas vicinity for potentially comparable data. Closer to the Sinkhole site area are Hitzfelder Cave (41BX26) in Bexar County, the Bering Sinkhole (41KR241) in

Kerr County, Hiereman Cave (41WM268) in Williamson County, and the Stillhouse Springs site (41TV20 and other site numbers) in Travis County.

Hitzfelder Cave (41BX26), a sinkhole located about 30 miles north of San Antonio, was discovered in 1942 (Givens 1968). For a number of years the owner excavated the sinkhole and in 1967 discovered an unusual skull fragment. Professional help was called in and the site was excavated in 1967 and 1968 by a group of student volunteers from Trinity University under the direction of R. D. Green. The remains of an estimated 30 to 45 individuals were recovered. Associated cultural material included worked shell, (3 bone awls, 30 bone beads, and 5 dart points: 3 Frios, 1 Pedemales, and 1 Marshall-Lange mix [Turpin and Bement 1988]). The radiocarbon date for the site, 1000 ± 190 B.P., is believed to be unreliable due to periodic inflows from the surface. The artifacts suggest Late Archaic activities during the period 1000 to 4000 B.P.

Bering Sinkhole (41KR241) in Kerr County was used as a cemetery for about 6,000 years during the Archaic period. A minimum of 27 individuals of both sexes were interred in this sinkhole. Cultural material mixed with the skeletons consisted of 22 bone beads, 1 bone needle, 1 deer antler billet, 6 dart points, 3 bifaces, 2 unifaces, 1 modified turtle carapace, a cache of 14 large triangular bifaces, and 1 drill (Bement 1991a). In a more detailed report Bement (1991b) identifies the dart points as 1 Frio, 1 Bulverde, 3 Lanceolate or Travis, 1 Uvalde, and 2 Martindales; all are clearly of Archaic origin.

Hiereman Cave (41WM268) was discovered when a landowner retrieved dirt from a series of sinkholes to construct a lawn at his nearby house (Turpin 1985: 12). Scattered bones and teeth in the dirt were recognized by Mrs. Hiereman, a nurse, and were reported to the University of Texas at Austin (Grant D. Hall, personal communication, 1993). There are about five sinkholes at the site, and two had been excavated for lawn dirt. In the mid-1970s, Grant Hall partially excavated a third sinkhole but did not get to the bottom of the cultural deposits. He recovered human skeletal material and some Archaic points (Hall, *ibid.*). Turpin (1985:12) reported that the dart points were Ensor and either Pedemales or Uvalde types, but

the specimens have been returned to the Hieremans. No formal report was made of the excavation, but the remaining material is stored at the Texas Archeological Research Laboratory (Hall, *ibid.*).

The Stillhouse Springs site (41TV20; also 41TV273, 41TV331 through 41TV336, and 41TV543 through 41TV545) was first recorded by Jack C. Pearce in the 1920s. The property on which the site is located, originally part of the A. F. Burney Ranch and later owned by Egbert Smith (now deceased), is currently owned by the City of Austin and is called Stillhouse Springs Park. The area was surveyed by the Travis County Archeological Society (TCAS) in March 1981. The recorded sites consist of dual rockshelters, six burned rock middens, and four lithic and/or burned rock scatters (Howard and Freeman 1989:28). A series of sinkholes, which have not been formally recorded, are reported to contain cultural materials similar to those in the sites discussed above.

In July 1981 two of the sites, a burned rock or lithic scatter (41TV331) and a burned rock midden (41TV332), were partially excavated by the TCAS under the direction of Elton Prewitt. At 41TV331 five 1x2 meter units, excavated to a depth of 40 centimeters, yielded 7 dart points. According to level reports, types represented are Wells, Nolan, Bulverde, and Nolan-Travis-like. Three 1x2 meter units excavated at 41TV332 to a depth of 40 cm yielded an Angostura point. Other cultural material consisted of burned rocks, part of a sandstone metate, scraps of bone (probably deer), and debitage. The majority of the artifacts indicate a predominantly middle Archaic occupation with a lesser Early Archaic occupation (Howard and Freeman 1989:28). The sinkholes apparently were investigated only by Egbert Smith, and there are no records of his work. At present the material excavated by the TCAS is in the possession of Sterling Hayes, who is preparing a videotape on this site (Hayes, personal communication, 1993). The sites in the Stillhouse Springs area have not been described in a published report (*ibid.*).

A small sinkhole called the Mittel site (41SL15) was recently investigated by Darrell Creel (personal communication, 1993). Creel recovered the remains of at least five individuals, some bone beads, and an arrowpoint. This sinkhole is one of the few sites in the state to yield an artifact made from a human bone. The site has been nominated

to the National Register, and a report is in preparation.

Archaeological investigations in Williamson County have made many important contributions to our understanding of prehistoric occupations in Central Texas, but our knowledge of the region still is incomplete. The Sinkhole site, and its contribution of data on Paleo-Indian points recovered from a sinkhole site type, adds to that knowledge, and the site has the potential to yield still more valuable information.

DESCRIPTION OF LITHIC ARTIFACTS

Paleo-Indian and Early Archaic Bifaces

Description of the Bifaces

The nomenclature (Artifact A, B, etc.) assigned to the artifacts from the Sinkhole site in the initial reports is used here to avoid any confusion in the record.

Artifact A (Figure 3) is a small, almost complete dart point so heavily patinated that its original color cannot be determined; even the fracture at the tip is patinated. It is 46 mm long (incomplete), 22 mm wide, and 7 mm thick. About ± 10 mm of the tip was removed by the fracture. The flaking has a parallel oblique pattern, and the base is thinned on one face by three or four parallel longitudinal flakes and on the opposite face by short lunate flakes. The base is ground, straight, and about 13 mm wide. The stem edges are ground for 22 mm on one edge and 26 mm on the other. This artifact, found on the surface near the sinkhole, is confidently classified as an Angostura point.

Artifact B (Figure 3) is the basal portion of a dart point that is terminated by a snap fracture. The lithic material is a tan (with a pinkish tinge) chert with some cream-colored mottling and has numerous black inclusions about 1 mm wide and 2 to 5 mm long of some black mineral resembling hornblende or augite, a material not normally found in Texas. (A similar material occurs in either South Dakota or Wyoming.) The specimen is 38 mm long (incomplete), 24 mm wide, and 9 mm thick. The stem is 26 mm long and 21 mm wide, and both edges are ground. The base, which is ground and has a concavity of about 2 mm, is beveled by 2 or 3 parallel longitudinal flakes on one face and by a

wide short flake on the opposite face. The stem has a definite, very small shoulder on one edge and may have had a shoulder on the opposite edge. Flaking appears to be mostly random with just a suggestion of horizontal parallel flaking, but the fractures make it difficult to see a consistent pattern. This point cannot be placed in any type category with confidence, although some of its characteristics suggest the Morrill type. Its provenience is unknown.

Artifact C (Figure 3) is the basal section of a dart point made of a light brown (with a pinkish cast) chert with small white mottles and small inclusions of a black mineral similar to that noted in Artifact B; the material may have been heat treated. It is 41 mm long (incomplete), 26 mm wide, and 10 mm thick. Termination is probably the result of an impact, leaving a complicated fracture pattern. One face has oblique to nearly horizontal parallel flaking, while the opposite face has nearly random flaking with only a suggestion of an oblique parallel pattern. The proximal edges are ground for 27 and 28 mm. The base is 16 mm wide and lightly ground, and it has a concavity of about 2 mm. Short, irregular, lunate flakes at the base give it a beveled shape. Both faces are convex, one face much more strongly than the other, resulting in a thick, unbalanced, biconvex cross section. This artifact, dug from within the sinkhole, has characteristics of the Angostura point type.

Artifact D (Figure 3) is a long, narrow dart point terminated by a hinge fracture at the tip. The lithic material is a gray chert that is heavily patinated to white over most of the faces and even on the broken tip. It is 65 mm long (incomplete), 27 mm wide, and 8 mm thick. The basal end is contracting and ground on both edges for 30 and 33 mm respectively. The base is 11 mm wide and has a concavity of 2 mm; it is not ground. The faces are heavily worn, but there is a suggestion of oblique to horizontal parallel flaking. The cross section is biconvex. This point, dug from within the sinkhole, is clearly of the Angostura type.

Artifact E (Figures 3 and 7) is the basal section of a dart point terminated by an impact fracture. The lithic material is a dark brown chert that is heavily patinated to a light brown (with a pinkish cast) with cream-colored mottles. Small patches of a thin carbonate encrustation are scattered widely over both faces, as well as in the

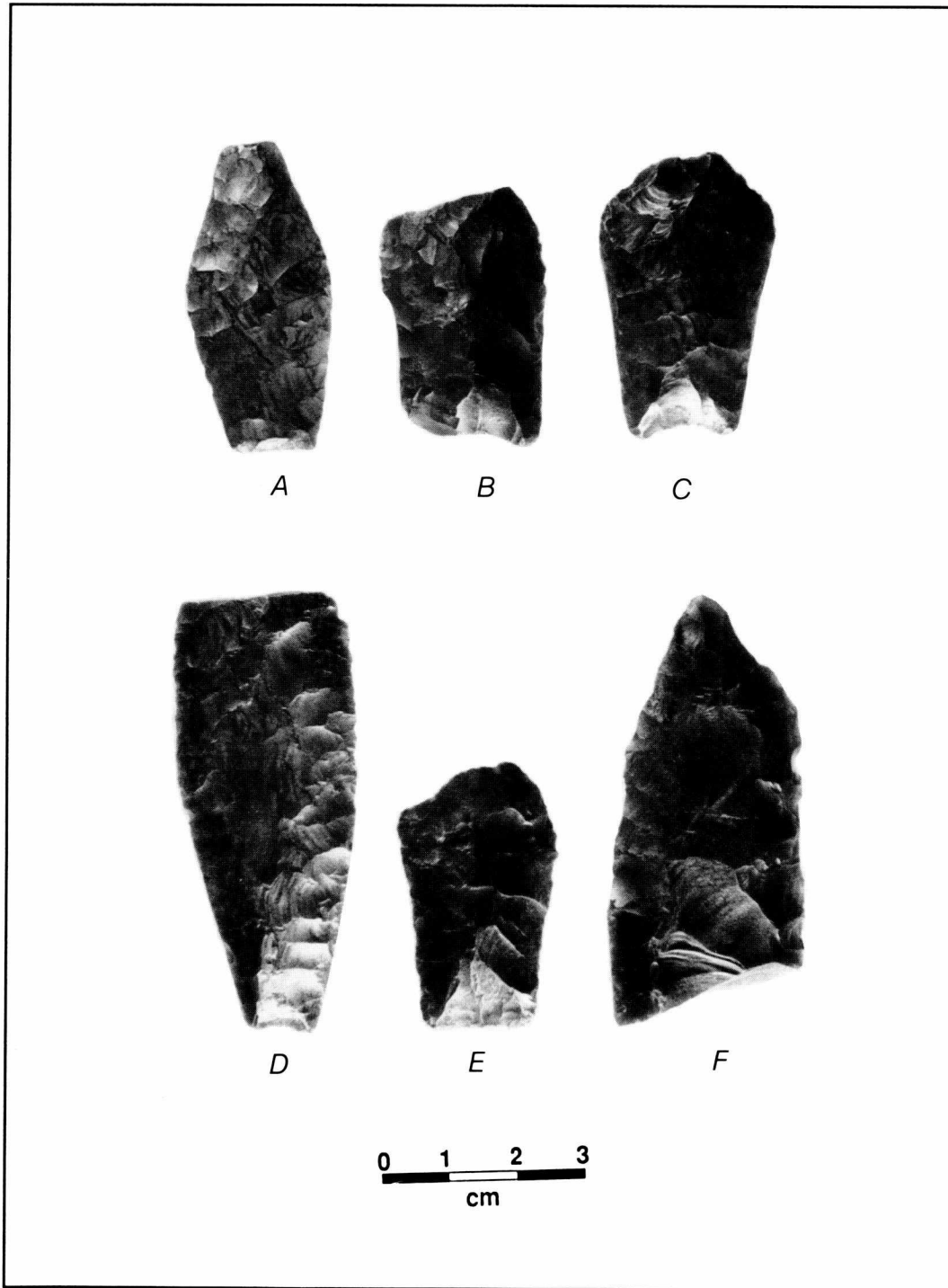


Figure 3. Projectile points, Sinkhole Site: A – D, Angostura; E, unclassified; F, Clovis.

fractured area. It is 48 mm long (incomplete), 24 mm wide, and 7 mm thick. The basal end is slightly contracting, and one edge is very lightly smoothed for about 30 mm. The opposite edge is smoothed for about 20 mm but is terminated where the smoothing is interrupted by the fracture scar. The base is straight, lightly smoothed, and 17 mm wide. It is thinned on both faces by 2 or 3 parallel longitudinal flakes. The cross section is biconvex, and there is a hint of horizontal-parallel flaking, but the pattern is not strong. A potlid in the fracture scar indicates that the artifact was burned after being broken. This artifact is difficult to classify. Although it shares some characteristics of Angostura, the basal thinning is not characteristic of that type. In addition, this specimen has similarities to points K-M (see discussion of E, K-N group below), suggesting that it fits with that group more readily than with the Angostura type specimens. It was found on the surface near the sinkhole.

Artifact F (Figures 3 and 6) consists of adjoining fragments of a biface made of a mottled gray chert. Scattered areas of white patina are present on one face, and the edges are highly patinated. The assembled length of the artifact is 63 mm (incomplete), while the width is 29 mm, and the thickness is 8 mm. About 19 mm of the longer edge is ground, suggesting that the biface had a basal section with ground edges. The basal area is missing due to a snap fracture. Reworking of the distal end occurred after the snap fracture and after the patina formed. The patina pattern and the reworking of this point present an intriguing mystery. The faces have irregular flaking with numerous long, wide, irregular flake scars. The cross section is biconcave at the broad end and biconvex at the distal end. Portions of fluting scars occur at the broad end. These characteristics suggest that this may have been a finished Clovis point that was broken while it was being reworked. It was found in the backdirt of the larger burned rock midden.

Artifact G (Figure 4) is the midsection of a biface made of a dark gray chert, similar to the Edwards chert from the Georgetown area. One face of the artifact has a thick, white patina. The snap fractures at both the ends also are patinated. A carbonate encrustation occurs in a deep scar on the unpatinated face. The biface is 69 mm long (incomplete), 26 mm wide, and 7 mm thick. The flaking is well done, with just a suggestion of a parallel

oblique pattern. One edge is sinuous, and the other is straight and slightly serrated. One edge at the broad end is ground for about 3 mm, indicating grinding of the stem area. About 20 mm from the broad end a misstrike took off too much material, leaving a notch. At the broad end is the deep, carbonate-encrusted scar that is probably the result of fire damage. This artifact is probably a rejected Paleo-Indian or Early Archaic preform, and its provenience is unknown.

Artifact H (Figure 4) is the medial section of a narrow biface, probably a projectile point. The lithic material is a tan chert that is moderately patinated to cream color on both faces. At the tip and basal area a few millimeters have been removed by snap fractures, which also are patinated, indicating that the breaks are very old. The specimen is 64 mm long (incomplete), 20 mm wide, and 7 mm thick. A strong bevel on the right edges of both faces is the result of reshaping. Although the original flake pattern is largely obliterated, traces indicate a possible oblique parallel pattern. About 8 or 9 mm of the broad end edges are ground, and this portion contracts from 20 to 17 mm in width. Without the basal portion, it is impossible to classify this artifact, although it seems to be a very early type. It could be a reshaped Angostura point, since reshaping often results in beveled edges on this type (Perino 1985:15). Another, more remote possibility is that it is a Hoxie point, although there are no indications that shoulders were ever present (Elton R. Prewitt, personal communication, 1993).

Artifact I (Figure 4) is a badly damaged basal portion of a projectile point made of a tan chert with small inclusions of milky quartz. Its incomplete dimensions are 51 mm long, 22 mm wide, and 7 mm thick. One of the "ears" at the base has been snapped off. At the distal end is a complex pattern of fractures that may have been the result of one or two events. One possibility is that an impact force on the tip snapped the tip off and continued down one edge for 34 mm, removing several mm of that edge. Still another possibility is that there were two events, one being an impact force that snapped off the tip and the other being a burin strike on the snapped tip. Slight wear occurs at the intersection of the snap and burin fractures. Arguing against the burin idea is the fact that the impact fracture is beveled and not square, as one would

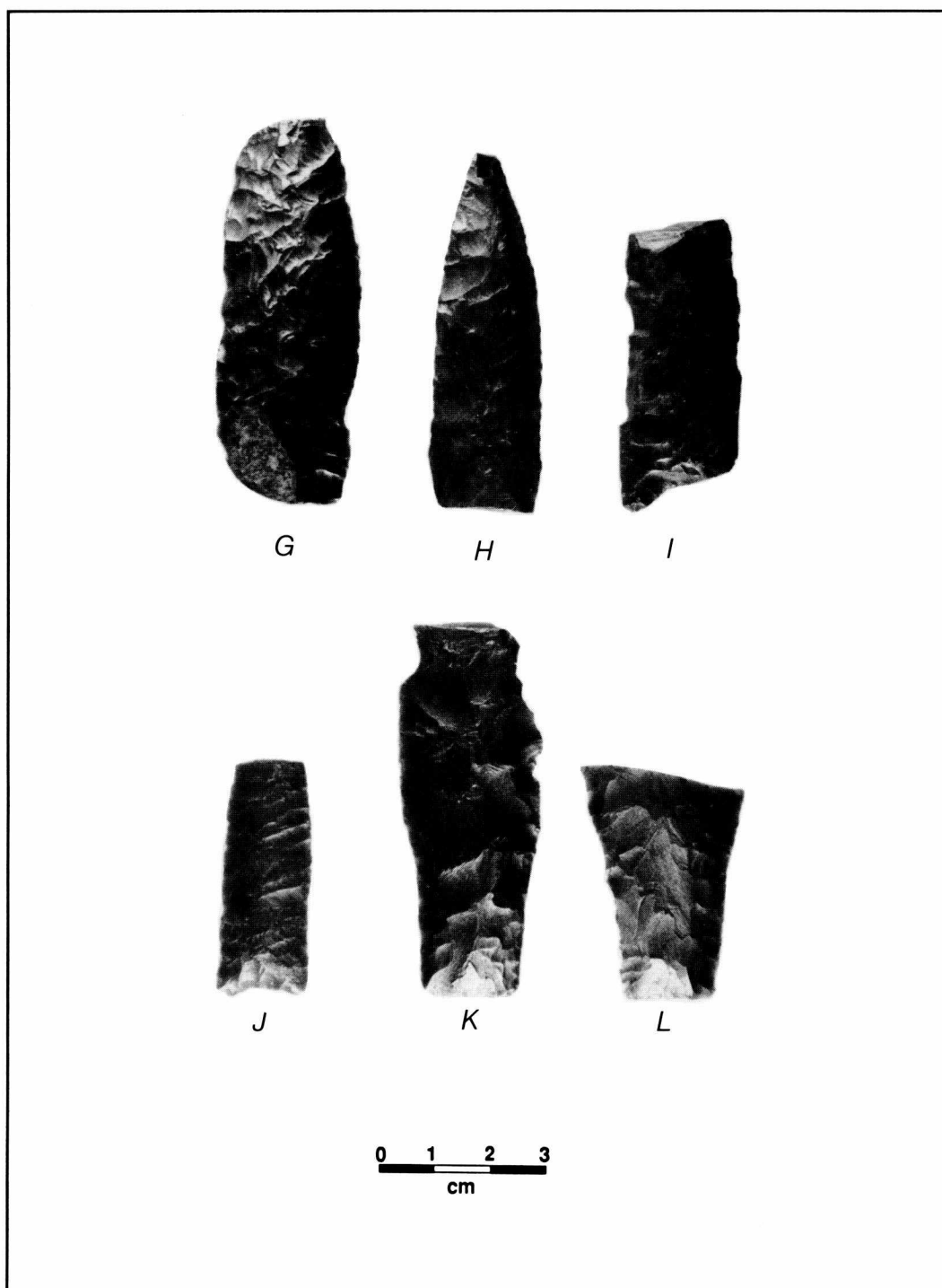


Figure 4. Projectile points, Sinkhole Site: G, preform; H, resharpened Angostura; I – J, Plainview; K – L, unclassified.

expect from an attempt to make a burin. Both the stem edges (ca. 27 mm), and the base (21 mm wide and 4 mm in concavity) are ground. The previously discussed fractures disturb the flaking pattern, but it was probably parallel oblique on one face and more random on the opposite face. The cross section varies from planoconvex to biconvex. Flake scars at the base are short and lunate. It is difficult to classify this artifact because of the extensive damage, but it more closely resembles Plainview than other early point types. Its provenience is unknown.

Artifact J (Figure 4) is the basal portion of a beautifully made projectile point. Made of a tan chert, it is 43 mm long (incomplete), 16 mm wide, and 5 mm thick, and is terminated by a hinge fracture. Flake patterns on the faces vary from oblique to horizontal parallel. The cross section is biconvex. The base is smoothed, as are the stem edges, for 17 and 19 mm respectively. The base is 17 mm wide and has a 2 mm concavity. Basal thinning was accomplished by removing several parallel, longitudinal flakes from one face and short lunate flakes from the opposite face. Britt Bouseman (personal communication, 1993) reports a specimen in the Plainview site collection that is very similar to this specimen. Artifact J was found in the sinkhole opening called the "Tree Hole."

Artifact K (Figures 4 and 7) is the basal portion of a long, narrow biface, probably a projectile point. Made of a yellowish, light brown chert, it is 67 mm long (incomplete), 26 mm wide, and 9 mm thick. It is terminated by a hinge fracture. Both faces show wear on the flake ridges, and the flaking pattern is random. The basal end has parallel edges, and both stem edges and base are lightly to moderately ground. Grinding extends for 25 mm on both edges of the stem. The stem is straight and 17 mm wide. Basal thinning was accomplished by several long, parallel flakes on one face and by multiple random flakes on the other face, resulting in a wedge-shaped profile. A burin strike on the snap fracture at the distal end of the artifact produced a burin scar about 10 mm long. The burin shows moderate wear under magnification. This artifact does not satisfactorily fit any of the existing type descriptions and, until more data are available, must remain unclassified. Application of Kelly's (1982, 1983) criteria for Paleo-Indian points is not useful in this case, since the criteria

result in low percentages for both Plainview and Angostura points. This artifact may have been found in the sinkhole with Artifacts C and D.

Artifact L (Figures 4 and 7) is another basal section of a biface that is probably a projectile point. The lithic material is a tan novaculite with numerous small brown areas that are probably iron stains. Incomplete dimensions for the length and width are 43 mm and 29 mm, respectively, and the thickness is 8 mm. The specimen is terminated by a snap fracture. Stem edges are ground for 21 mm and 24 mm, and the stem tapers from a width of 22 mm at the end of the stem smoothing to 17 mm at the base, which is straight and lightly smoothed. There is a little haft wear on the basal edge. The flaking pattern is of a random nature. Basal shaping was accomplished by removing three longitudinal flakes from one face and short lunate flakes from the opposite face, giving the base a bevel-wedge-shaped profile. With only the basal portion present, it is difficult to classify this point. Application of Kelly's (1982, 1983) criteria results in a "possible" Angostura designation. Some characteristics of the Hell Gap type also are present. For the moment, this artifact best fits with artifacts E and K of this collection. The provenience of this artifact is unknown; presumably it was a surface find near the sinkhole.

Artifact M (Figures 5 and 7) also is the basal portion of a biface that is probably a projectile point. The lithic material is a light brown chert with small brown inclusions that are probably iron stains. This material is similar to that of Artifact K but is darker and lacks a yellowish tint; the material may have been heat treated. The incomplete length and width are 36 and 24 mm, respectively, and the thickness is 7 mm. The flaking is random, and the flake ridges show some wear. Basal edges are ground for 17 and 23 mm. The base is straight, 15 mm wide, and lightly ground. Basal thinning was achieved by removing three parallel flakes from one face and multiple short flakes from the other, giving the base a predominantly beveled profile. Stem edges are straight and slightly contracting. This is another artifact that is difficult to classify. Although it fits Kelly's (1982, 1983) criteria for the basal portion of an Angostura point, visual inspection of the artifact suggests otherwise. It, too, seems to fit best with the E, K-N group. It was found on the surface near the sinkhole.

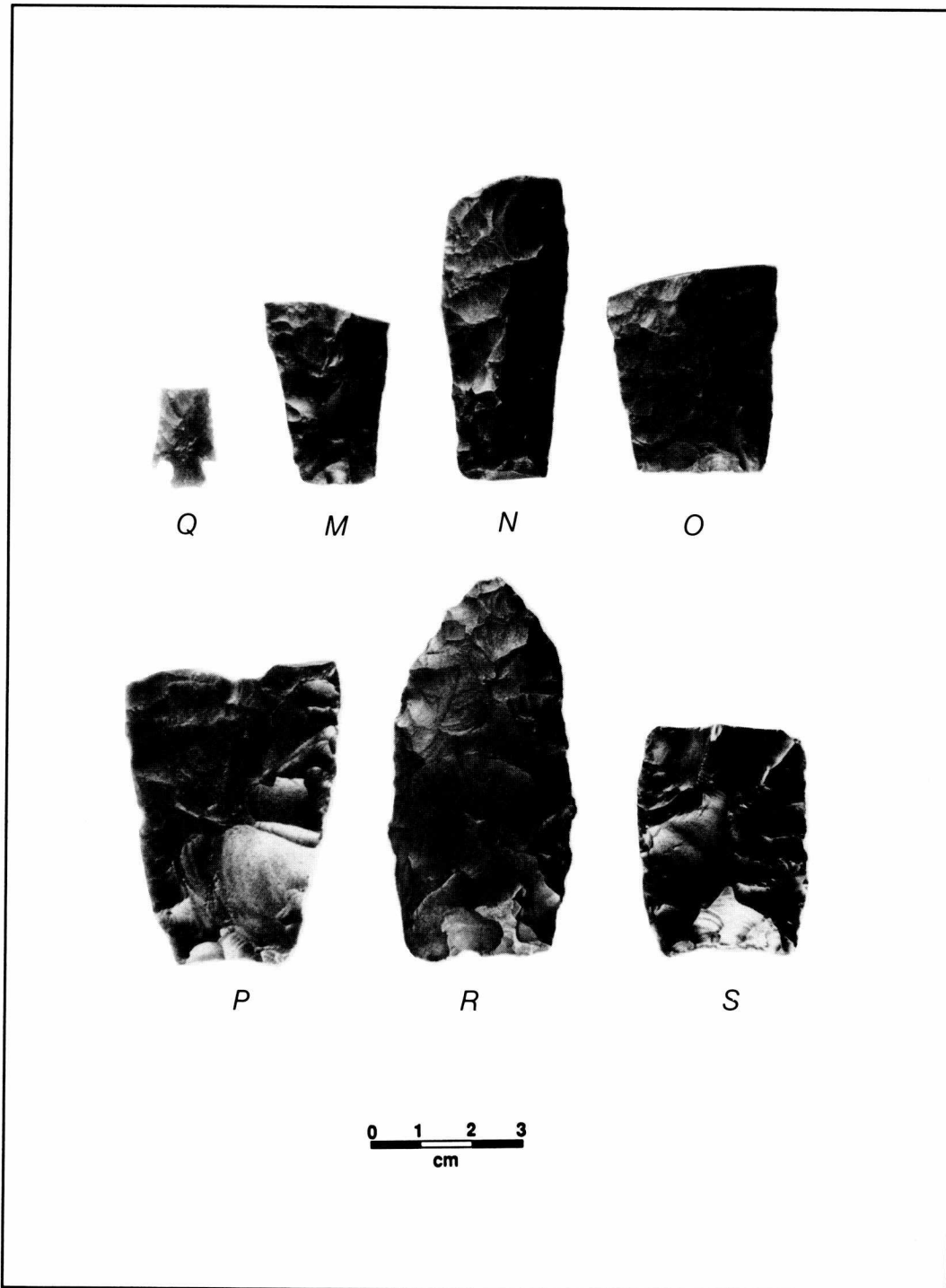


Figure 5. Projectile points, Sinkhole Site: Q, Scallorn; M, N, unclassified; O, Scottsbluff-like; P, R, preforms; S, preform (Clovis?).

Artifact N (Figures 5 and 7) is another basal portion of a biface that is probably a projectile point. The lithic material is a yellowish brown chert that has numerous small, lighter colored, circular inclusions. It is 58 mm in length (incomplete), 24 mm in width, and 8 mm in thickness. The termination is a hinge fracture. Flaking on both faces has a random pattern. One face is rather flat, while the opposite is strongly convex with the suggestion of a keel that is enhanced by a 5 mm x 5 mm knot near the base. The stem edges are ground for 28 and 32 mm. The base is straight, 18 mm wide, and moderately smoothed; it is squared off by what seems to be the remnant of a snap fracture on one face and is beveled by multiple short flakes on the opposite face. This artifact fails to meet Kelly's (1982, 1983) criteria for an Angostura point by measurements of 1 mm in two categories. The 1 mm discrepancies could be ignored, but visual inspection does not support classification of the specimen as Angostura-like. It best fits with the E, K-N group. This artifact may be one of those found in the sinkhole.

Artifact O (Figure 5) is the stem of a large biface that is terminated by a snap fracture. The lithic material is a light gray chert mottled with some still lighter gray areas. Some light, scattered carbonate encrustation is present on one face. The artifact measures 40 mm in length (incomplete), 34 mm in width (incomplete), and 8 mm in thickness. The flaking is of a coarse, horizontal parallel pattern with some fine retouch on the edges, which are lightly smoothed for their entire length. There is the suggestion of a shoulder on one edge 24 mm from the base, but it could be due to the removal of a flake in that area (T. R. Hester, personal communication, 1993). The specimen has a biconvex cross section. The base is straight, 25 mm wide, lightly smoothed, and beveled with short, multiple flakes on both faces. The presence of the small shoulder and the coarse horizontal flaking makes it tempting to force this artifact into the Scottsbluff type; however, the evidence is inconclusive. The artifact was found on the surface in the vicinity of the sinkhole.

Artifact P (Figure 5) is a biface made of a yellowish, light brown chert that may have been heat treated. A brown dendritic inclusion occurs on one face near the broad end. The specimen is 59 mm long, 44 mm wide, and 10 mm thick. The

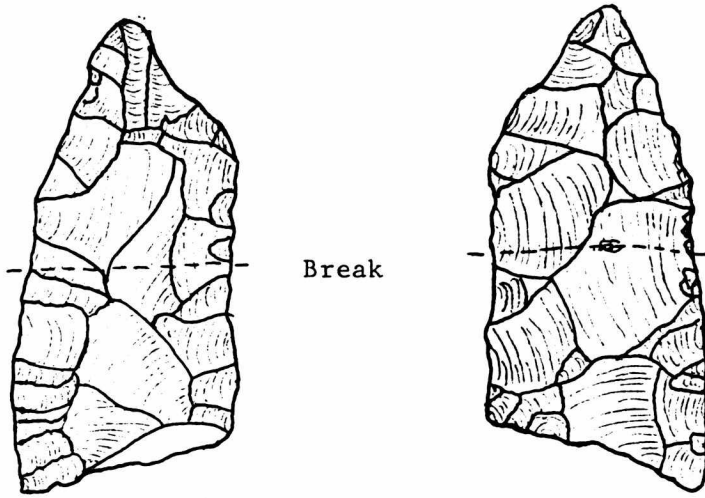
flaking pattern is random and mostly of percussion origin. Edges are lightly ground, probably for platform preparation, as the fish-scale pattern is still present in many areas. The base is about 20 mm wide and has a concavity of 1.5 mm. The workmanship indicates that this is a preform, and the shape suggests that additional knapping might have produced an Angostura point. The artifact was found on the surface near the sinkhole.

Artifact R (Figure 5) is a biface made of a cream-colored chert that is lightly mottled with lighter shades. It is 75 mm long, 36 mm wide, and 11 mm thick. The flake pattern is random and entirely the result of percussion. The edges are sinuous and without rounding. The base is straight and 28 mm wide. This is a basic preform for some type of projectile point. It, too, was found on the surface.

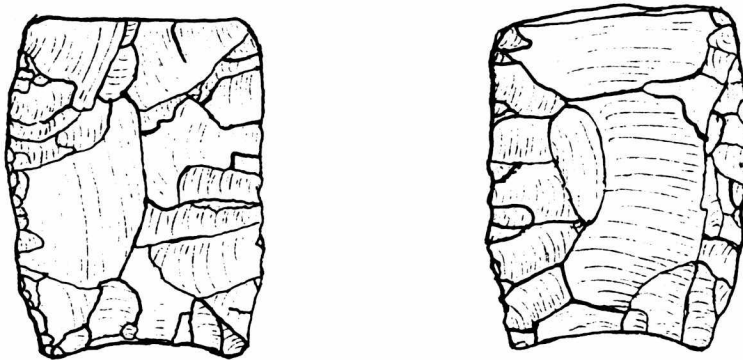
Artifact S (Figures 5 and 6) is the basal portion of a biface made of dark brown chert that has small white inclusions. The lithic material is translucent on the thin edges and is probably from an Edwards chert source. The specimen is terminated by a snap fracture. Partial dimensions are: length, 45 mm; width, 33 mm; and thickness, 7 mm. The flaking pattern is random and mostly of percussion origin; the edges are straight, and the cross section is plano-convex. This is probably a portion of an advanced preform, perhaps of a Clovis point. The artifact was found on the surface in the sinkhole area.

Comments on the E, K-N Group

Artifacts E and K through N (Figure 7 and Table 1) share several traits that make them stand out from other projectile points in the collection. For example, all of the specimens have contracting stems with straight sides, and all have straight bases. They are considered lanceolate in shape, although some have suggestions of slight shoulders. Most also have the following characteristics: (1) random flaking patterns, (2) ground stem edges, (3) ground bases, and (4) somewhat similar basal thinning. Their thicknesses vary from 7 to 9 mm, their basal widths from 15 to 18 mm, and their contractions of the stem, in the proximal 20 mm, from 2 to 6 mm. Only Artifact E differs significantly, and then in only one trait, horizontal parallel flaking. While Artifacts E and, possibly L, M, and



Artifact F. Reworked Clovis point.



Artifact S. Preform (Clovis?)

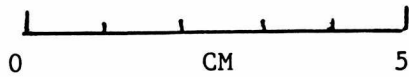


Figure 6
Artifacts F and S
Sinkhole Site
(41WM754)
Williamson County, Texas

NGF 9/93

Figure 6. Sinkhole Site: Artifacts F and S, a reworked Clovis point and a possible Clovis preform.

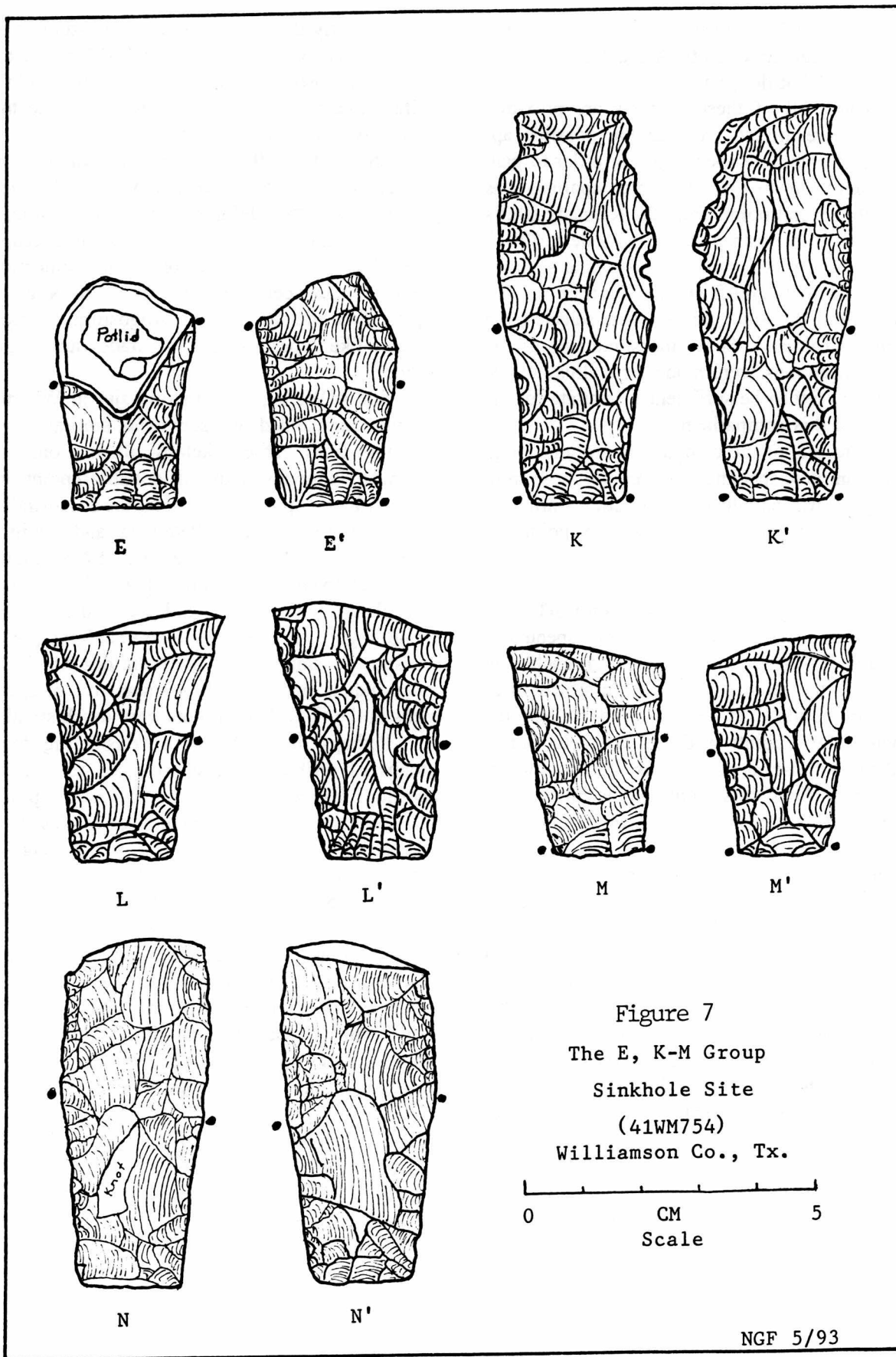


Figure 7. Sinkhole Site: Artifacts in the E, K - N Group.

N could be said to meet Kelly's (1982, 1983) criteria for Angostura points, Artifact E is the best candidate for that designation.

Because all of these artifacts are proximal sections, there are no clues to the possible appearance of complete specimens. In order to gain more insight into this problem, a comparison was made with several points from the Kennedy Bluffs site (41BP19) in Bastrop county (Goode 1989). A number of complete points and proximal sections from the Kennedy Bluffs site having traits similar to those from the Sinkhole site were selected and compared (Table 1). Some measurements of the 41BP19 specimens were made from illustrations, but they are felt to be sufficiently accurate for the purposes of this comparison.

The results of the comparison are intriguing. Several complete specimens are among those from Kennedy Bluffs having characteristics similar to Sinkhole site specimens. These complete points are lanceolate in shape, 61 to 74 mm long, 18.5 to 22.0 mm wide, and 7 to 9 mm thick. Their overall appearance is Angostura-like. Application of Kelly's (1982, 1983) criteria to Kennedy Bluffs specimens A through K (Goode 1989:Figure 22) resulted in all meeting the requirements for classification as Angostura points. Yet Goode, who studied the Kennedy Bluffs points in detail, was reluctant to call them Angostura points. His reasons for not calling them Angostura points are as follows: (1) all have straight bases, (2) all have straight stem edges, (3) their cross sections are flatter than those of Angostura points, and (4) they do not "feel" like Angostura points (Glenn Goode, personal communication, 1993). Goode, in his discussion of the points (Appendix I in Bement 1989), mentions that similar points have been found in a few sites in Bastrop, Fayette, and Williamson Counties. This sparked a search for descriptions of similar points in the archaeological literature for those counties.

One of the sites with a few similar points is the Sandbur site (41FY135); however, that collection was unavailable for inspection because of remodeling at the Texas Archeological Research Laboratory, where they are stored.

Kinkaid Shelter (41UV2) has yielded several comparable points that have square bases. One of them, 908-2b, is classified as an Angostura point, while the other two, 908-2z and 908-2j, are unclassified (M. Collins, personal communication, 1993). The flaking of the two points is more Angostura-like than specimens in the E, K-N group, yet they,

too, are subtly different from the Angostura point.

The Wilson-Leonard site (41WM235) also has yielded Angostura points, but inspection of the artifact catalogue for the site revealed none that obviously resembles those in the E, K-N group. Interestingly, the 1992 investigations at the Wilson-Leonard site indicate that there may be a 1400-year gap between the definite Angostura-producing occupations and the later, Gower-producing occupations (Britt Bouseman, personal communication, 1993). If the specimens in the E, K-N group represent a transition from Angostura to more Archaic-like types, were they made during this period?

Site 41WH19, a prehistoric site in Wharton County, has yielded two somewhat similar points (judging from rather sketchy illustrations). A number of Plainview points, a Scottsbluff point, and two San Patrice points are among the Paleo-Indian specimens found there (Patterson and Hudgins 1981, 1983; Hudgins and Patterson 1983). Figure 4A in Patterson and Hudgins (1981:12) depicts a lanceolate point resembling those in the E, K-N group. Figure 1F in Patterson and Hudgins (1984:22) shows a small lanceolate point described as a Paleo-Indian lanceolate. It is suggestive of specimens in the E, K-N group but very much smaller.

Perhaps the problem in considering these groups of artifacts is that we need to ask the question: Exactly what is an Angostura point? There seems to have been a tendency to classify as Angostura those points having a broad range of morphological characteristics. In studying this problem, points classified as the Hell Gap type should not be overlooked. While primarily a northern plains type, its presence in Texas has been noted (Mallouf 1990). Artifacts K-M in the Sinkhole collection are not greatly unlike the stem sections of Hell Gap points. Additional and closer study of these square-based points could result in the recognition of a new point type.

Late Prehistoric Arrowpoint

Artifact Q (Figure 5) is the proximal section of a Scallorn arrowpoint made of a light gray chalcedony. The tip is missing, as are both basal corners of the tang. The remaining length is 21 mm, the width is 13 mm, and the thickness is 3 mm; both edges are serrated. Termination is the result of a snap fracture. The artifact was found outside the sinkhole.

TABLE 1. Characteristics of the E, K-N Group and Similar Artifacts.

| Site (41) | Artifact Designation | Dimensions (mm) | | Length | Width | Thick. | Flake Pattern | Stem Smooth. (mm) | Stem Edges | Width 20 mm above base | Base Width (mm) | Con- traction in 20 mm | Base Ground | Base Shape | Base Thinning | | Kelley's A* | Patina | | |
|--------------|-------------------------|-----------------|------|--------|-------|--------|------------------|-------------------------|---------------|---------------------------------|-----------------------|---------------------------------|----------------|---------------|---------------|----------|----------------|--------|-----|-----|
| | | Obv. | Rev. | | | | | | | | | | | | | | | | | |
| WM754 | E | 48* | 24* | 7 | 21 | 17 | 4 | light | straight | 21*/29 | straight | 20 | 17 | 4 | light | straight | 2-3 LF | 2-3 LF | yes | yes |
| | K | 67* | 26* | 9 | 20 | 17 | 3 | light | straight | 25/25 | straight | 20 | 17 | 3 | light | straight | 2-3 LF | MRF | no | no |
| | L | 43* | 29* | 8 | 20 | 17 | 3 | light | straight | 24/22 | straight | 20 | 17 | 3 | light | straight | 3 LF | 3 LF | ? | ? |
| | M | 36* | 24* | 7 | 21 | 15 | 6 | light | straight | 17/27 | straight | 21 | 15 | 6 | light | straight | 3 LF | MRF | yes | yes |
| | N | 58* | 24* | 8 | 20 | 18 | 2 | no | straight | 28/32 | straight | 20 | 18 | 2 | no | straight | snap | MRF | ? | ? |
| BP19 | Fig. 22A | 88 | 22 | 8 | 20 | 16 | 4 | yes | straight | yes | straight | 20 | 16 | 4 | yes | straight | ? | ? | yes | yes |
| | Fig. 22B | 91 | 22 | 8 | 19 | 13 | 6 | yes | straight | yes | straight | 19 | 13 | 6 | yes | straight | MRF | ? | yes | yes |
| | Fig. 22C | 83 | 22 | 7 | 20 | 16 | 4 | yes | straight | yes | straight | 20 | 16 | 4 | yes | straight | MRF | ? | yes | yes |
| | Fig. 22E | 74 | 21 | 9 | 17 | 13 | 4 | ? | straight | ? | straight | 17 | 13 | 4 | ? | straight | ? | ? | yes | yes |
| | Fig. 22F | 61 | 20 | 8 | 18 | 13 | 5 | yes | straight | yes | straight | 18 | 13 | 5 | yes | straight | ? | ? | yes | yes |
| | Fig. 22J | 78 | 21 | 8 | 20 | 14 | 6 | yes | straight | yes | straight | 20 | 14 | 6 | ? | straight | MRF | ? | yes | yes |
| | Fig. 22K | 74 | 18 | 7 | 15 | 12 | 3 | yes | straight | yes | straight | 15 | 12 | 3 | yes | straight | MRF | ? | yes | yes |
| | Fig. 23B | — | — | 8 | 19 | 16 | 3 | yes | straight | yes | straight | 19 | 16 | 3 | yes | straight | ? | ? | no | no |
| | Fig. 24C | — | 29+ | 9 | 25 | 18 | 7 | ? | straight | ? | straight | 25 | 18 | 7 | ? | straight | ? | ? | ? | ? |
| | Fig. 24D | 69+ | 30+ | 9 | 22 | 17 | 5 | yes | straight | yes | straight | 22 | 17 | 5 | yes | straight | MRF | ? | yes | yes |

* = incomplete

LF = linear flakes

MRF = multiple random flakes

DESCRIPTION OF OTHER ARTIFACTS

Artifact T is a portion of a human skull consisting of six fragments glued together. The portion is roughly rectangular in shape and is 96 mm long and 71 mm wide. The thickness varies from 4 to 7 mm. Judging from the thickness, this is a portion of an adult skull. No abnormalities were observed in this artifact. It reportedly was found in backdirt from the larger, damaged burned rock midden.

Artifact U is the astragalus bone from an adult or near adult bison. It, too, was found in the backdirt of the large burned rock midden.

Artifact V is a fragment of a worked conch shell. It is 81 mm long, 43 mm wide (partial width) and 2 to 6 mm thick. The general shape is that of a truncated pyramid with one corner and one side edge missing. Three of the edges have been rounded and ground smooth. The artifact's use is unknown, but it was probably some sort of ornament. It was found with Artifacts T and U.

Artifact W is a small white limestone concretion. There is evidence of human use or modification of this artifact.

Miscellaneous Lithics. The small medial fragments (>4 cm) of thin bifaces are made of various gray and brown cherts. None of the fragments is diagnostic of any particular artifact. The "irregular preform" collected by Parsons is a small preform that could not be thinned and was thus discarded. It does not appear to have been used in any fashion.

DISCUSSION

The Sinkhole site is unique in that it has produced the only reported occurrence of Paleo-Indian through Early Archaic points inside a sinkhole. Although the documentation of the specimens is not all that might be desired, there seems to be no reason to doubt Eason's report that Artifacts C and D were dug from within the sinkhole. The report that one of the Plainview points came from the "Tree Hole" entrance is intriguing, but it is not hard evidence.

The presence of Clovis, Plainview, Scottsbluff-like, and Angostura points in the vicinity of the sinkhole is also unusual. While the sample is small, the clustering of these early point types near the sinkhole makes the situation doubly interesting.

The large talus cone in the "Tree Hole" has good potential for yielding important information. For instance, there is a possibility that burials are

present, and the sample of very early artifacts suggests that the burials could be very early too. Because of the site's potential for rare data, every effort should be made to protect this site until it can be properly investigated.

The E, K-N group is an interesting and puzzling assemblage. The presence of basal grinding and the general morphology suggest a carryover of Paleo-Indian knapping practices, but the workmanship on the blades is suggestive of the Archaic. While there is a temptation to call these Angostura points (Artifact E, especially), there are subtle differences between these specimens and classic Angostura. More intensive study might justify the description of a new point type to resolve this problem.

The new point type might have most of the following general characteristics:

- Length: 60 to 95 mm (very tentative)
- Width: 18 to 30 mm
- Thickness: 7 to 9 mm
- Basal width: 13 to 18 mm
- Stem width, 20 mm above base: 15 to 25 mm, usually about 20 mm
- Basal grinding: light, most of the time
- Stem edge grinding: light to moderate most of the time, extending 20 to 30 mm along edges
- Shape: Angostura-like, but with rectangular stem, base usually very straight, stem edges straight and usually expanding (2-7 mm in 20 mm), and some specimens exhibiting a weak shoulder
- Cross section: thin, lenticular in unsharpened specimens, diamond-like in resharpened specimens

Archaeologists should be looking for points of this description in or near Angostura occupation levels. The recovery of projectile points having these characteristics may assist in developing a more precise definition of the Angostura point type. The scientific recovery of such points and more precise dating may also help to test the hypothesis that a 1400-year gap occurs between Angostura-producing occupations and later, Gower-producing occupations (Britt Bouseman, personal communication, 1993).

ACKNOWLEDGEMENTS

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Archeologist, Robert J. Mallouf, and members of his staff Catherine A. Hoyt and Helen Simons contributed a great deal to this writing, and Hoyt also photographed the artifacts. Thomas R. Hester and Elton Prewitt gave invaluable aid in the identification of the bifaces. The cooperation of Scott Eason in loaning the artifacts to the Office of the State Archeologist, Texas Historical Commission, for

study, resulted in a significant contribution to our record of Paleo-Indian and Early Archaic artifacts. It is hoped that his action will encourage others who possess similar material to make their collections available to researchers. Elizabeth Andrews, of the Texas Archeological Research Laboratory, also photographed the artifacts.

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METAL PROJECTILE POINTS FROM MEDINA COUNTY, TEXAS

C. K. Chandler

ABSTRACT

Four metal projectile points from Medina County in south-central Texas are illustrated and discussed. All four are made of iron and three are arrow points but the fourth one is a spear or lance point.

THE ARTIFACTS

Specimen 1, Figure 1, A-A', is made of thin iron and has been cut out with a chisel. It is heavily rusted over all surfaces but is in unusually good condition. The rust buildup has increased its original thickness and has obliterated any evidence that would determine whether the blade edges were sharpened with a file or by grinding with a stone. The blade edges are sharpened from both faces but mostly from one side. The chisel-cut stem has not been ground or filed but does have seven tiny notches on each side that are almost obliterated by the heavy rust buildup. These notches can best be identified by feeling with a fingernail.

Dimensions are: Overall length 51 mm; Width at the shoulders 19 mm; Thickness 2.3 mm; Stem length 11 mm with a 10.2 mm width at the base. Stem edges are relatively straight and the shoulders taper at about 45° to the maximum width of the blade.

This point was found on the surface of Site 41ME74 by Eric Haby south of Highway 90 along Hondo Creek. A number of lithic artifacts have been collected from this site. They include several Edwards and Scallorn arrow points, some large flake scrapers and Archaic dart points dating from the Early to Late Archaic time periods, and four Leon Plain potsherds. These sherds are tan to buff in color with some fire mottling and they all appear to be from the same pot. Two of the sherds fit together. While a direct association between the metal point and the potsherds reported here cannot be established, metal (brass) arrow points are previously reported as found on

sites yielding Leon Plain sherds (Chandler 1986).

Specimen 2, Figure 1, B-B', is made of thin iron and appears to have been cut out with metal shears. It is heavily rust coated and has several rust pits, but is in reasonably good condition. The heavy rust coating has increased its thickness and made detailed examination for evidence of method of manufacture difficult. However, under microscopic examination the stem edges show no evidence of notching, which is common with many metal arrow points. The blade edges appear to have been ground or filed more from one face. The irregular thickness is caused by the rust buildup. The stem expands in a long gentle curve to the shoulders. Dimensions are: Length 46 mm; Width 18 mm; Thickness 2.4 to 3 mm; Stem Length 21 mm; Blade Length 25 mm; Base Width 8.5 mm; Weight 5.8 grams.

This point was found by Tom Fillinger in an automobile tire track on a high bank along Seco Creek south of Highway 90. It is an isolated surface find.

Specimen 3, Figure 1, C-C', is made of thin iron and has been cut out with a chisel. It has heavy rust encrustation on one side only. The reverse has had a similar rust buildup that has flaked off. This heavy rust obscures the details of manufacture, but it appears to have been cut out of thin sheet metal with a chisel. The stem lightly contracts to a straight base and expands in a slope to the shoulders. The existing condition of the blade edges indicate it was alternately sharpened to opposite faces. The distal tip is broken and missing and this appears to have shortened the blade length by approximately three to four millimeters. There is no evidence of notching of the stem edges.

Maximum dimensions: Length 40.7 mm; Width 18.0 mm; Thickness 2.5 mm; Stem is 13 mm long and lightly contracts



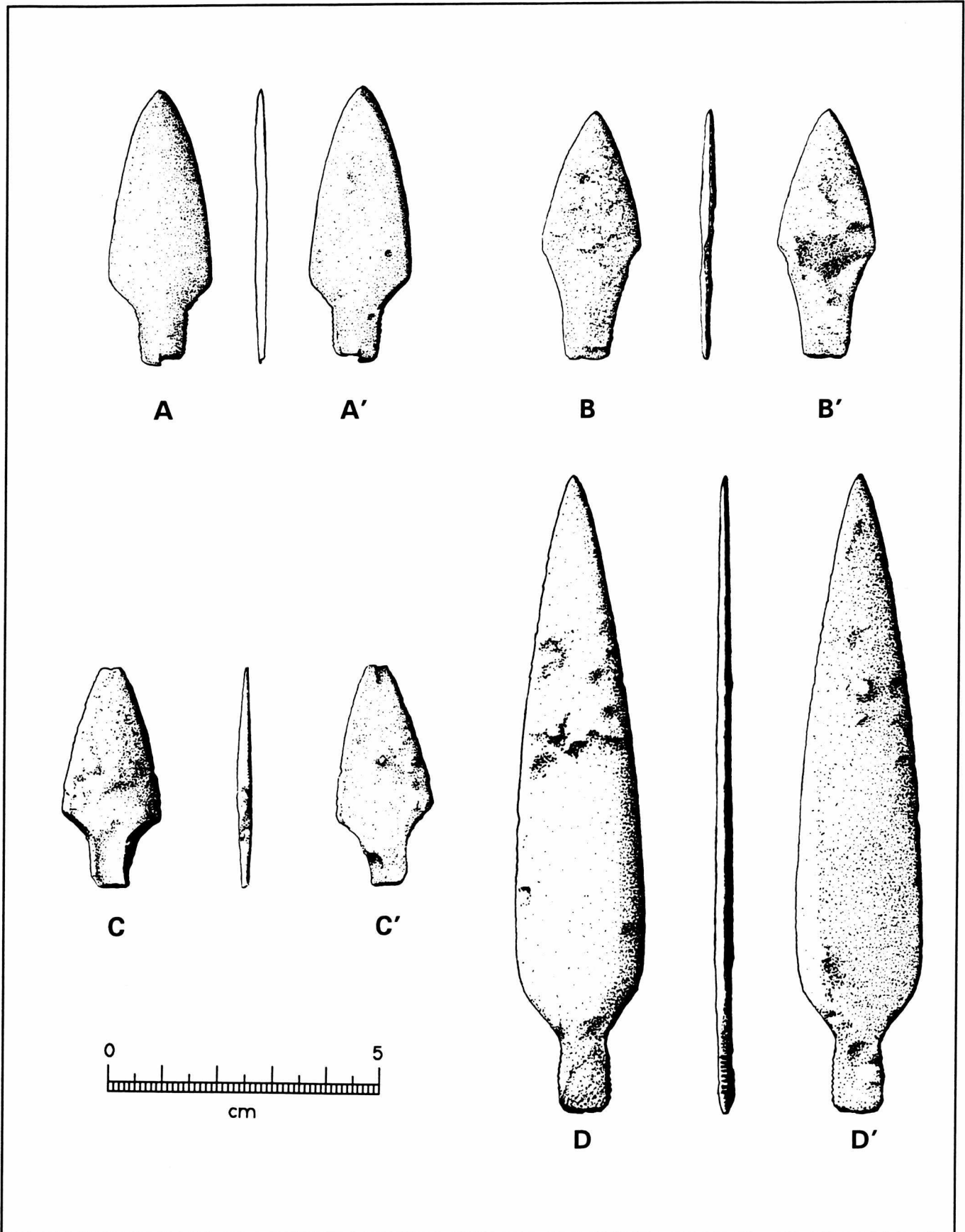


Figure 1. Metal projectile points from Medina County.

to 7 mm wide at the base. Weight, 5.1 grams.

This point was found on the surface in southwestern Medina County by Ray Harbison.

Specimen 4, Figure 1, D-D', is made of thin iron and all edges have been filed or ground to the extent of obliterating evidence of whether it was cut out with a chisel or shears. Its tapering thickness from stem to distal tip may indicate it was made by a hammer and forge process. It is heavily coated with rust with some large rust pits. However, it is in very good condition. There are numerous longitudinal striations on one face and many similar diagonal striations on the opposite face that are scratched into the heavy rust coating and, in some instances, have removed a thick rust flake and exposed a tiny spot of parent metal. This condition is best identified with low power magnification. It appears these striations were caused by the artifact being dragged by cultivation equipments. There are eight very small, closely spaced notches in one edge of the stem. The opposite edge appears to have had a similar number, but rust corrosion and buildup have almost totally obliterated these. Blade edges from the shoulders to the distal tip have been sharpened from both faces.

Dimensions are: Length 118 mm; Width 24 mm just below the shoulders; Thickness 2.6 mm on the stem; 1.7 mm near the distal tip; Stem Length 14.5 mm and Stem Width 10.5 mm. Weight 25.3 grams.

This point was found on the surface in a cultivated field east of Hondo Creek in southeast Medina County by Malcolm Watson in early 1992.

DISCUSSION

Metal projectile points have been occasionally reported from many areas of south and central Texas, but always in small numbers (Chandler

1984, 1986; McReynolds 1982; Mitchell 1980; Mitchell and Highley 1982; Schuetz 1969; Smith 1984).

The possible association of these projectile points with specific historic Indian groups remains speculative. However, the Apache, and later the Comanche, were very active raiders throughout much of central and southwest Texas and their use of metal weapons is well documented.

In plotting the locations of these four metal points found in Medina County, they appear to set a pattern that closely follows the route of one of the earliest roads from Mexico to San Antonio.

Many of the early routes from Mexico crossed the Rio Grande near present-day Guerrero, Coahuila. There are many route variations of the Old San Antonio Road but all followed a narrow corridor of waterholes and campsites. Current evidence suggests some of these roads were established as early as 1689 and 1690. Many of these early roads followed ancient Indian trails. Various trails of this route were known as "The Upper Presidio Road," "The Camino Pita," and "The Camino de los Tejas" (McGraw 1991).

The Camino de los Tejas crossed the Frio River in the immediate vicinity of Old Frio Town in northwestern Frio County, a few miles from where the Harbison metal point was found in extreme southwest Medina County. This road then crossed Seco Creek near a permanent waterhole where the Fillinger metal point was found, then crossed the steep Hondo Creek just south of site 41ME74 where the Haby metal point was recovered. This route then proceeds northeast to cross San Francisco Perez Creek near Devine. The Watson metal point was found along this route between the Hondo and San Francisco Perez Creek crossings.

It appears that stream crossings may have been preferred locations for raiding parties to attack these early travelers.

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EDITOR'S NOTE

The Southern Texas Archaeological Association recently celebrated 20 years of vigorous participation in the discovery, conservation, and preservation of the evidence of earlier lifestyles in southern Texas. As members of the STAA, it has been your activities in the field and in your communities which have established the value of these efforts.

Your published reports and presentations at STAA meetings are clear demonstration of your enthusiastic search for evidence of mans' past activities. Your "digging and reporting" have produced material for an outstanding publication, *La Tierra*. Now is the time to plan for the New Year and continue the writings. Refer to the INFORMATION FOR CONTRIBUTORS page in Vol. 20, No. 1 of *La Tierra* as you compose your report, especially paragraph 3, for those sending computer disks.

Let's make 1994 the start of another 20 years of archaeological progress.

Evelyn Lewis

LOOKING AT THE DATA: A RESPONSE TO PATTERSON

Robert A. Ricklis

ABSTRACT

L. W. Patterson recently published a set of comments in Vol. 20, No. 1 of *La Tierra* on an article of mine which appeared in Vol. 37 No. 140 of *Plains Anthropologist*. The Ricklis article offered certain perspectives on the emergence of a Late Prehistoric bison hunting complex on the central coastal prairie of Texas. A response to Patterson is merited for two reasons. First, *Plains Anthropologist* is probably not readily accessible to many readers of *La Tierra*, and Patterson did not, I believe, adequately summarize the main points of the article. Second, his arguments, though touching upon significant and interesting questions in Texas prehistory, are based on questionable interpretations of field data.

INTRODUCTION

The main issue in the *Plains Anthropologist* paper (Ricklis 1992a) was the question of the origin of the Late Prehistoric artifact assemblage identified variously as the Toyah Phase (Prewitt 1981; 1985) or Toyah Horizon (Black 1986). This assemblage, consisting of Perdiz arrowpoints, thin bifacial knives (often alternately beveled), unifacial end scrapers, a prismatic blade-core lithic technology and simple, usually plain bone-tempered pottery, made a rather abrupt appearance in the archaeological record ca. A.D. 1250/1300. Because the assemblage is usually found associated with some quantity of bison bone (e.g. Hester 1975; Prewitt 1981; Black 1986; Highley 1986; Huebner 1991), a general functional linkage has been made between the assemblage, as an archaeological culture, and a lifeway involving some reliance on bison hunting. The relatively sudden appearance of the Toyah assemblage has been inferentially linked with a major influx of bison into central and southern Texas ca. A.D. 1200-1300, as postulated by Dillehay (1974).

Two basic interpretations of this phenomenon have been articulated. The first suggests that new people moved into central and southern Texas, as

they followed the southward-expanding bison herds (e.g. Prewitt 1985; Johnson n.d.), bringing with them the new artifact assemblage. An alternate perspective is that the appearance of the Toyah assemblage represents the widespread adoption of a new tool kit which was well suited to the hunting and processing of large game animals (e.g. Hester 1975; Black 1986; Mallouf 1987). While these two interpretations are certainly not mutually exclusive, they each refer to fundamentally different processes to explain change in the archaeological record.

In my paper, I presented data which show that the "Toyah" lithic assemblage appeared abruptly within the area of the coastal Rockport Phase, and at about the same time as it did elsewhere in the larger Texas region. Information was also presented which indicated that this correlated—as elsewhere—with a significant and new shift to bison hunting, which was integrated into a pre-existing adaptive pattern coastal resource use. Since the Rockport Phase represents, largely if not entirely, the linguistically and ethnically distinct Karankawan groups of the central Texas coast (Campbell 1960; Newcomb 1961, 1983; Ricklis 1990, 1992b), the combined archaeological and ethnohistorical data provide a case in which, by far, the more likely mechanism for the spread of the assemblage was adoption of an adaptively advantageous tool kit rather than major influx of outsiders from the interior. This case study was presented to show that migration of peoples need not *necessarily* be invoked to explain the observed changes in archaeological material culture, and that hunter-gatherers could have had the adaptive flexibility to change technological patterns when it was advantageous to do so.

THE QUESTION OF ARROWPOINT CHRONOLOGY

Patterson's primary objection to my article was that I subscribed to a generally accepted view that Perdiz points, as a major element in the Late Prehistoric assemblage, appeared ca. A.D. 1250-1300,

replacing earlier arrowpoint types, most notably Scallorn, which is placed in the central Texas chronology at ca. A.D. 700-1250/1300 (Prewitt 1981). Considering this perspective "provincial," Patterson (1993:28) argues that Perdiz arrowpoints in fact appeared in southeast Texas a good bit earlier, ca. A.D. 600, and that the generally accepted sequence of Scallorn-followed-by-Perdiz does not apply for that area. By extension, he suggests that it may not apply for much of the area of the Rockport Phase, either.

There is no particular reason to assume, *a priori*, that Perdiz points could not have originated in southeast Texas. However, the arrowpoint chronology which Patterson posits for southeast Texas is not convincingly supported by the available data. Contrary to his claims, the arrowpoint chronology in the region is neither well-dated nor stratigraphically demonstrated. A brief examination of some key examples of site data which Patterson (1991, 1993) uses to support the proposed southeast Texas arrowpoint chronology suffices to demonstrate this point:

Site 41WH12. This is a multicomponent site in Wharton County investigated by the Houston Archeological Society (Patterson and Hudgins 1989). Patterson (1993:28-29) states that findings at this site indicate that "the Perdiz point was known to Indians of both the Rockport Phase and the southern part of Central Texas as early as A.D. 900." This assumption is based on a purported association of Perdiz arrowpoints and a radiocarbon date, on clamshells, of A.D. 900, (though the link with central Texas and the Rockport Phase is unclear). However, examination of the published site report (Patterson and Hudgins 1989) reveals little support for such an association. First, the radiocarbon date in question is of dubious value relevant to the issue under discussion. No correction factor for ^{13}C is provided for the radiocarbon assay, suggesting that it is, in fact, uncorrected. If the sample were wood charcoal, this would not be a real problem, since the ^{13}C correction is generally on the order of only about 30 years. In the case of shell or bone, however, the ^{13}C correction factor can be on the order of several hundred years, obviously a significant discrepancy when dealing with questions of Late Prehistoric chronology. Secondly, the reported excavations yielded only

three typical arrowpoints—2 Perdiz and 1 Scallorn—with none in demonstrated direct association with the dated shell.

Site 41WH19. This is another multicomponent site in Wharton County investigated by the Houston Archeological Society (Patterson et al. 1987). As may be seen in Table 1, the vertical distribution of points at this site has the earmarks of a deposit which has been mixed through bioturbation. Stratum 1B (the uppermost; see Patterson et al. Figure 2) yielded four typed arrowpoints (2 Perdiz, 1 Scallorn, 1 Scallorn-like), along with four dart points (1 possible Gary preform, 1 Ensor, 1 Kent and 1 Travis). Stratum 1A (below 1B) produced 2 arrowpoints (1 Edwards, 1 Perdiz) and six dart points (2 Kent, 1 Ellis-like, 1 Yarbrough, 1 Travis-like, 1 Gary). Thus, both strata contained admixtures of Archaic and Late Prehistoric point types. Also, as may be seen in Table 1, the depths of the various points do not suggest any kind of chronologically meaningful vertical position of the specimens; in some instances, dart points were found *above* arrowpoints. If, as Patterson suggests, such a deposit reflects actual cultural chronology, then it would have to follow that dart points such as Gary, Kent and Ensor may be later than Perdiz arrowpoints!

Given the great quantity of data from Texas which precludes such an interpretation, it is safe to infer that there was considerable mixing of the deposits at 41WH19 and that the vertical position of the few arrowpoints can hardly be the basis for a regional chronology.

The Owen Site, 41HR315. Located in Harris County, this is another multicomponent site, with time-diagnostic point types from a 60-cm-thick deposit representing Paleo-Indian through Late Prehistoric occupations (Patterson 1980). The site produced a vertical distribution of projectile points that is very generally congruent with chronological expectations, insofar as Paleo-Indian types such as Plainview and Angostura came from the lowest 10-cm excavation level, Archaic types were found at higher levels, and Late Prehistoric arrowpoints occurred only in the top 40 cm of the excavated deposit (see Table 2). However, there is insufficient resolution in the vertical distribution of the various specimens for reliable fine-tuning of

Table 1. Projectile points in Strata 1B and 1A, Site 41WH19 (from Patterson et al. 1987)

| <u>Stratum</u> | <u>Point Type</u> | <u>No. of Specimens</u> | <u>Depth in Stratum</u> |
|----------------|----------------------|-------------------------|-------------------------|
| 1B | Scallorn | 1 | 0-20 cm |
| | Scallorn-like | 1 | 10 cm |
| | Perdiz | 2 | 0-20 cm; 20-40 cm |
| | untyped arrowpoint | 1 | 0-20 cm |
| | Gary (?) preform | 1 | 20-40 cm |
| | Ensor | 1 | 15 cm |
| | Kent | 1 | no provenience |
| | Travis | 1 | no provenience |
| 1A | Edwards (arrowpoint) | 1 | 15 cm |
| | Kent | 2 | 0-20 cm; 30 cm |
| | Ellis-like | 1 | bottom of stratum |
| | Yarbrough | 1 | 39 cm |
| | Travis-like | 1 | 15-30 cm |
| | Gary | 1 | 0-15 cm |

Table 2. Projectile point types by arbitrary levels, Site 41HR315 (from Patterson 1980).

| | Depth (cm) | | | | | |
|--------------------|------------|-------|-------|-------|-------|-------|
| | Surface | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
| Arrowpoints | | | | | | |
| Perdiz | | 1 | 3 | 2 | | |
| Scallorn | 1 | | | | | |
| Catahoula | | | 1 | | | |
| Dart Points | | | | | | |
| Gary | 1 | | 2 | | 6 | 2 |
| Ellis | 1 | | | 2 | 5 | |
| Kent | | 1 | 1 | 2 | 12 | 3 |
| Darl | | | | 1 | 3 | |
| Carrollton | | | | 1 | 2 | 6 |
| Yarbrough | | | | 1 | 1 | |
| Bulverde | | | | 2 | 11 | 4 |
| Williams | | | | 1 | | |
| Palmillas | | | | | 1 | |
| Shumla-like | | | | | 1 | 1 |
| Wells | | | | | 1 | |
| Yarbrough-like | | | | | 1 | |
| Early Stemmed | | | | | | 1 |
| San Patrice | | | | | | 1 |
| Trinity | | | | | | 2 |
| Plainview | | | | | | 1 |
| Angostura | | | | | | 1 |
| Ponchartrain | | | | | | 1 |

chronologies. For example, Late Archaic dart points such as Gary and Ellis (Turner and Hester 1993) are found in the bottom 20 cm along with Paleo-Indian and Early Archaic types, and Perdiz arrowpoints occur in the 30-40 cm level along with Middle and Late Archaic types such as Bulverde, Williams, Ellis, Kent and Darl. For the long time span represented by the artifacts, the deposit is quite thin (60 cm, or only about 24 inches), and it is expected, as well as apparent, that natural agencies of bioturbation resulted in considerable mixing of cultural materials over the millennia.

THE PROBLEM OF CERAMICS

In addition to considering lithic chronologies, Patterson makes certain statements concerning ceramics that require comment. In response to my suggestion that, to date, no point of origin has been defined for Toyah bone-tempered plainware pottery (Ricklis 1992a:271) he states that "Ricklis...is also incorrect about the origin of Toyah bone-tempered pottery. Story (1990:246) notes the early presence of bone-tempered pottery in Northeast Texas, well before the Toyah Phase." The implication here is that Story has suggested an east Texas origin for Toyah pottery. Story's comment, however, is taken out of context and misrepresented. Actually, she notes that "bone-tempered ceramics, known under the typological rubric Leon Plain"—the ceramic component of the Toyah assemblage—are "late" in time. This material is distinguished from an early bone-tempered pottery in East Texas which she believes may be related to early ceramics of southwest Arkansas (Story *ibid.*); Story makes no genetic linkage between the two kinds of bone-tempered pottery in this discussion, and thus implies no particular hypothesis for the origin of Toyah pottery.

CONCLUSIONS

Patterson (1993) asserts that Perdiz points are present in southeast Texas by ca. A.D. 600, and that they thus are earlier in that area than elsewhere in Texas. The actual excavated data are simply too ambiguous to support this claim. As the examples above show, the key sites in south-

east Texas are not characterized by discrete, single component occupational zones in which radiocarbon dates are unequivocally associated with Perdiz arrowpoints. This is in marked contrast to a number of sites in central and southern Texas in which the Perdiz arrowpoint, along with the other elements of the Late prehistoric assemblage, are found on definable occupational surfaces in association with discrete, radiocarbon-dated features (e.g. Black 1986; Highley 1986; Ricklis 1989; Johnson *n.d.*). Such contexts, or stratigraphically unmixed depositional sequences, are essential for definitively placing a given artifact type within a sound chronological sequence. Patterson's sites have produced only small samples of arrowpoints, and these appear to be from vertically mixed, relatively thin deposits. The various sites reported by Patterson present, in the aggregate, an impressive quantity of information for the southeast Texas region. They do not, however, demonstrate a temporal priority for Perdiz points in that area, and therefore do not provide convincing evidence for the geographic or temporal origin for this element of the Toyah assemblage.

The point(s) or origin of Perdiz points and Toyah pottery remain to be defined. Given the large number of reported sites in Texas of the relevant time period (see Huebner 1991), it is notable that no given area has produced a preponderance of early Toyah dates; the assemblage seems to show up at around A.D. 1300, give or take a few decades, within its entire range (though this does not preclude eventual discovery of a geographic clustering of relatively early sites which might represent a point of origin). It is possible that the assemblage was so well suited to a hunting lifeway that it was quickly adopted over a wide area in response to the tremendous economic boon of a rapidly growing and expanding bison population. In this sense, the hunter-gatherers of prehistoric Texas may have been entirely capable of, and amenable to, quickly maximizing economic opportunities through advantageous technological change. Assumptions that these people were inherently conservative, so that change was either gradual or due to influx of new sociocultural groups, should be tested against alternative interpretations of change in the archaeological record.

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AN INCISED PEBBLE FROM NORTH BEXAR COUNTY, TEXAS

C. K. Chandler

ABSTRACT

A small lightly incised limestone pebble from north Bexar County is reported and illustrated. Incised and engraved pebbles are rare in the archaeological literature of Texas and this specimen is reported here to add to data on these scarce artifacts.

INTRODUCTION

Engraved and incised stones have long been of interest to the archaeological community but are rarely found and less often reported in the literature. When found they generally occur one at a time and are usually associated with Archaic to Late Prehistoric materials; however, such stones have recently been reported in association with Clovis points and other Paleo-Indian age lithics at a site (41BL323) in Central Texas (Hester, Collins and Headrick 1992).

THE ARTIFACT

This limestone specimen was recovered from an unrecorded site about five miles north of Loop 1604 in north Bexar County east of Highway 281 in mid-1993. It is quite small and thin with incising on one side only. One end is broken. Incising consists of vertical zigzag and straight, closely spaced lines oriented with the long axis. Oriented with these lines to one side is a row of disconnected egg-shaped figures. All of these incisions are very shallow and can best be seen with low magnification. Dimensions are: Length, 45 mm; Width, 30 mm; Thickness, 5 mm. It weighs 12 grams. It is basically rectangular but increases in width to 38 mm at the broken end. It is illustrated in Figure 1.

It was found in association with several heavily patinated dart points, most of which are Nolan. Among the other dart points is one La Jita and one Bulverde. The few other points are not readily identifiable but one closely resembles a Plainview.

The identifiable points associated with this incised pebble are all of the Early Archaic time period (4000 B.C.-2500 B.C.) (Turner and Hester 1993) and it is presumed this incised pebble is of that time frame.

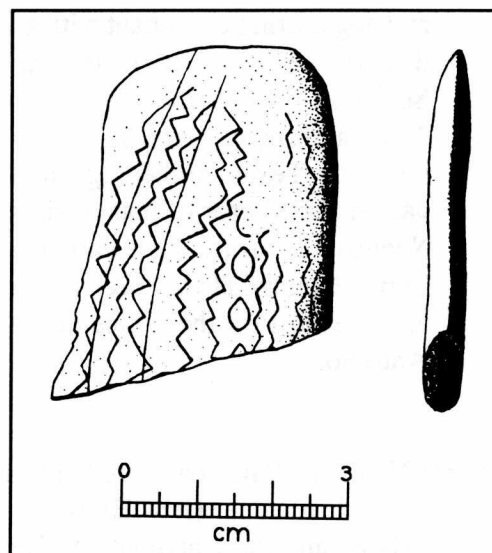


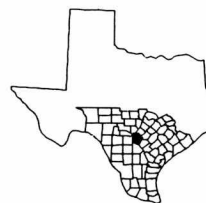
Figure 1. Incised limestone pebble from north Bexar County. Scott Reilly collection.

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