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NEWSLETTER OF THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

LA TIERRA

Quarterly Newsletter of the Southern Texas Archaeological Association

Volume 3, Number 1
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T.R. & Lynda Hester
Newsletter Editors
(this issue)

La Tierra is a quarterly publication of the STAA; for membership information contact the Treasurer. Manuscripts and other items for the newsletter should be sent to: Anne Fox, 106 Fawn Dr., San Antonio.

PASSING THOUGHTS FROM THE CHAIRMAN

It's hard to believe another year has passed---an event-filled one for the STAA and one of which we can be proud. Quarterly meetings have been enthusiastically attended, our membership continues to increase, and many members are becoming proficient in archaeological theory and techniques. A great deal of good, competent field work has been accomplished, both at St. Mary's Hall and at Timmeron. We put on a fantastically successful meeting for the Texas Archeological Society, which broke all records for attendance and good organization, thanks to so many of you who helped out and who attended the sessions. And to cap it all off, steady inroads have been made on the monumental job of washing and cataloging the artifacts from the Timmeron excavations.

We are delighted to see so many members who are willing to turn out for the nitty-gritty part of the business of washing and cataloging. They are the ones who will benefit most in the long run, in understanding what archaeology is all about.

Now it is time to begin to think ahead to a new year for the Society, and to our annual business meeting. The Nominating Committee consists of Tom Hester and Gene Griffin of San Antonio and Jack Klatt of Corpus Christi. Please feel free to send them your suggestions for officers, because a new slate will be elected at the February 7th meeting. Those of you who are familiar with our constitution (La Tierra, Vol.1:2) know that all terms are for one year only, so here's your chance to bring in some "new blood"---make your preferences known.

I want to extend my personal thanks to so many of you who have turned to and helped with our various projects. The success of our organization depends completely on individual participation. It's your show, and let's keep it that way.

Anne A. Fox

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FIRST QUARTERLY MEETING

By the time this issue of La Tierra reaches you, you should have already received a special mailing announcing the first quarterly meeting. The meeting will be held at the new, permanent campus of The University of Texas at San Antonio (UTSA), and will take place in the Humanities-Business Building.

Guest speaker will be Dr. James M. Adovasio of the University of Pittsburgh. Dr. Adovasio (along with Dr. Joel Gunn of UTSA) has been working at Meadowcroft Rockshelter, Pennsylvania. Deep in the deposits of this site, they have uncovered the earliest evidence of man's presence in the New World---dating to 16,000 B.C. This is certainly the most outstanding archaeological discovery in the New World in recent years. Dr. Adovasio is flying to San Antonio specifically to address the STAA. We hope that all STAA members will make an effort to attend.

Registration for the meeting is from 11:30-1:30 on Saturday, February 7, 1976. The annual business meeting (with election of officers for 1976) will begin at 1:30. At 2:30, several short papers by STAA members will be presented. These include a new system of site recording for amateurs to be discussed by Dr. Gunn. Following a coffee break, Dr. Adovasio will begin his slide-illustrated lecture at 3:45. You won't want to miss this lecture. His discoveries have been the subject of articles in over 700 newspapers across the nation and have been featured on the CBS Evening News.

On Sunday, a field trip is being planned. Announcements regarding this will be provided on Saturday.

To reach the new UTSA campus, take IH 10 north out of San Antonio to the DeZavala Road exit and follow the green highway department signs to UTSA. Parking space is available off the south entrance to the campus on UTSA Boulevard.

THE PAYAYA REPORT

STAA members have by now received a special mailing which describes the STAA's first special publication, The Payaya Indians of Southern Texas, authored by Dr. T.N. Campbell of The University of Texas at Austin. This significant study of a major South Texas Indian group is a must for persons interested in the archaeology of our region. If you haven't ordered your copy, please do so right away. Send $1.50 (STAA members special price) to: Shirley Van Der Veer, STAA, 123 E. Crestline, San Antonio, Texas 78201.

STAA LAB WORK

Laboratory work has been accelerated on the material recovered from 41 HY 95 (Timmeron Rockshelter), with those participating excavators now working hard to wash, identify and catalog the materials. Five sessions in November and December have included some 19 STAA members: Betty and Cathy Coakley, Ruth Conners, Laura Ford, Anne Fox, Tom Hester, Lynn Highley, George Meyer, Art O'Connell, Severo Perez, Rick Sowa, Jamis Townsend, Sue Turner, Van and Shirley Van der Veer, Margarita Vazquez, Kate Vaught, Chester Wilkes and Dixie Wilson. All have worked hard and we now have completed 100 lots (some 260 remain to be done).

All STAA members interested in participating in these sessions should call Shirley Van der Veer, 732-5970, San Antonio, so that sessions can be set up starting in January, 1976, one or two times weekly, at 123 E. Crestline, from 7:00 to 10:00 p.m. An effort will be made to suit the times available to participants, probably on Monday, Tuesday or Wednesday evenings all during the winter and into the spring, as there is a lot of work to do. Upon completion of the Timmeron cataloging, the St. Mary's Hall (41 BX 229) cataloging remains to be done---another big job---and we need all the volunteers we can get.

Apart from learning how to identify bone, seed, coprolites, flint (chert), shells, artifacts and other materials, those participating have discovered the fun of working together to accomplish a very necessary job which is a definite part of completing a "dig". After the cataloging is done, we will work with the professionals and complete the report of all sites we excavate. There will be great satisfaction in knowing we have helped in these reports, as well as having gained a great deal of knowledge to assist us in future excavation work.

1975 TEXAS ARCHEOLOGICAL SOCIETY BULLETIN

The 1975 edition of the Bulletin of the Texas Archeological Society (Vol. 46) should now be in the hands of all TAS members. Edited by Harry J. Shafer and Thomas R. Hester, the Bulletin is 269 pages long, containing a variety of papers including ones on a historic Indian burial in the Panhandle, underwater archaeology, prehistoric diets in northeastern Mexico, the late prehistory of south Texas, the prehistory of southwestern Coahuila, a study of Clear Fork gouges, a description of a major burial site in Travis County, and so forth. STAA members with papers appearing in this new Bulletin include Anne A. Fox, James H. Word, Jimmy L. Mitchell, Harry J. Shafer, and Thomas R. Hester.

Copies of the Bulletin are available to non-TAS members for $7.50. Write to: Secretary-Treasurer, Texas Archeological Society, SMU Box 165, Dallas, Texas 75275. While you're at it, join the TAS for 1976; membership is $7.50, and all STAA members are urged to participate in this statewide organization.

ARCHAEOLOGICAL RESEARCH IN SOUTH TEXAS

A variety of archaeological projects have been underway in south Texas and adjoining areas in recent months. UTSA continues its Guerrero Project---excavations at the 18th century Spanish missions in northeastern Coahuila. Dr. Joel Gunn (UTSA archaeologist and STAA member) carried out two weeks of excavation at a burned rock midden site on the UTSA campus; members of his classes at UTSA participated in the excavation and analysis. The Center for Archaeological Research carried out several projects, including surveys in Bexar, Kendall and Comal Counties directed by Thomas C. Kelly. Col. Kelly has also been working with UTSA undergraduate students on the analysis of lithic debris from the Granburg II site (41 BX 271); they appeared on Channel 5 TV news in December. Also working on Granburg materials has been Gene Griffin, concentrating on the projectile points and chipped stone tools. Paul and Susanna Katz conducted excavations (and Harvey Kohnitz aided with photography) at Ursuline Academy in San Antonio for the Center for Archaeological Research, and were also busy early in the fall with plane table mapping at Mission San Bernardo, as part of the UTSA Guerrero Project. Anne A. Fox has completed initial survey activities in the Coleto Creek Project (UTSA Center for Archaeological Research) in Victoria County, where she was greatly aided by STAA members Smitty Schmiedlin and Bill Birmingham. Anne and Feris A. Bass, Jr., have been completing a manuscript on UTSA excavations in Alamo Plaza in Summer, 1975.

The Coastal Bend Archeological Society is undertaking plans for a problem-oriented excavation in their area as part of local Bicentennial activities.

Ed Mokry of Corpus Christi has been carrying out site survey in McMullen and Starr Counties. He recently submitted several site survey forms on new Starr County sites.

NEW PUBLICATION FROM UTSA

The UTSA Center for Archaeological Research has initiated a Special Report series with the publication of SOME ASPECTS OF LATE PREHISTORIC AND PROTO-HISTORIC ARCHAEOLOGY IN SOUTHERN TEXAS, authored by Thomas R. Hester and T.C. Hill, Jr.

This first Special Report describes the authors' recent investigations of late prehistoric aboriginal occupation sites on the south Texas coastal plain. The contents include a brief review of southern Texas prehistory, a discussion of major late prehistoric sites and the settlement pattern evidence, data on the internal structure of sites, descriptions of late prehistoric material culture, detailed data on faunal remains and comments on radiocarbon dates. The concluding statement summarizes the late prehistoric and protohistoric lifeway of the region. The 35-page monograph contains two maps, three pages of line drawings, and an extensive bibliography.

The results of the various research endeavors of UTSA archaeologists will be published in future volumes of this series. Additionally, the series will include contributed papers and monographs dealing with the archaeology and anthropology of Texas, Mesoamerica and related areas.

For the convenience of La Tierra readers, an order form for this report is enclosed.

CORRECTION FOR LA TIERRA 2(4)

In the paper by L.W. Patterson in La Tierra, Vol. 2, No. 4, pp. 17-22, all artifacts shown in Figure 1 were indicated to be "actual size". However, the microlith shown as 1 is an enlarged sketch; actual dimensions are: length, 15.5 mm; width, 9.6 mm.; and thickness, 2.2 mm.

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AN ANALYSIS OF ALTERED QUARTZITE COBBLES FROM VICTORIA COUNTY, TEXAS

Mary Frances Chadderdon

During the course of site surveying and surface collecting along the Guadalupe River and Coleto Creek in 1969 and 1970, William R. Birmingham and E. H. Schmiedlin (Victoria) collected about one hundred quartzite cobbles with abraded or ground areas suggesting alteration by man. Unlike the flat or slightly convex ground surface of the usual mano or hand-milling stone, which were also found in some quantity, they exhibit ground depressions or basins which would seem to render them unsuitable for milling. Thirty-six of these stones (Figs. 1-3) have been assigned a provenience within recorded sites and form the subject of this discussion.

Description of the Specimens

The abraded areas in some instances take the form of angled planes, resulting in two to four "facets" which leave an unground center ridge on each side. On other stones the abrading results in a center trough on one or both sides. Pecking similar to that which results from use as hammerstones is frequently found on the edges and ends of the cobbles, although in some instances the battered appearance of the ends suggests their inefficiency as flint knapping hammers and may simply be the result of incomplete stream rolling action.

The stones vary in size from 115 mm to 57 mm in length, and from 76 mm to 54 mm in width. Colors range through light tan and dark brown, light and dark gray, burnt umber and red. (See Table 1 for detailed descriptions). Depressions vary in depth from 3 mm to 10 mm and, although they are occasionally directly opposite each other on both sides, this does not occur with enough frequency in this sample to appear significant.

Microscopic examination reveals easily discernible differences between ground surfaces, water polished surfaces and surfaces of natural breakage. Complete natural crystals are separate and clear in areas of natural breakage, while glassy smooth polishing is seen on unaltered stream rolled surfaces. Uneven smoothing, truncated crystals, some striation, some pecking and some rippling is apparent in the ground areas. Dark streaks on 75% of the stones are thought by the author to be traces of a black or brown surface accumulation of residue. Asphaltum is commonly found in and near the Gulf Coast waters and is believed to have been used as a hafting binder for dart points in this region (Calhoun 1964). Other dark marks on the surface are attributed by Mr. Birmingham (personal communication) to blows by metal plows.

Several of the stones are so distinctive in alteration as to warrant individual discussion. Stone No. 36 is of a long, oval shape with a deep transverse trough measuring 35 mm wide and 10 mm deep. This groove crosses midway of the length of the stone and is flanked on each side by a shallower trough, neither of which is complete. The reverse also has two shallow grooves, one roughly in opposition to the deep center trough and one opposite a shallow groove on the obverse. Two possible uses come to mind.

The deep trough appears suitable for a shaft straightener into which a rather large shaft of wood made pliable by heat or water could be bound until straightened into the desired shape, or the stone could have been hafted for use as a hammer. Both ends are severely battered and each has lost a portion in natural breakage, whereas there is very little pecking along the sides.

Stone No. 9 (Fig. 1,a) appears to have a long, shallow, broad groove extending almost the length of the stone, on both sides. The grooves, however, are not of uniform depth and, in each case, the center portion is slightly higher. On one side in particular, surface pecking is much more pronounced in the ends of the depression, suggesting that the appearance of a continuous "groove" was unintentional. At first glance the grooves seem intended for hafting, but on each side the groove travels from the lower left to upper right on the stone's long axis. It is not inconceivable that an X-shaped haft may have served some purpose and there is somewhat more battering on the sides than on the ends of the stone.

Stone No. 34 bears two heavily abraded planes on each side, the planes meeting steeply to form a thin edge. The center of the stone in cross-section is diamond-shaped. Each of the four facets contains a shallow, depressed portion, but in general the appearance is that of having been abraded against a flat surface. Both ends are so severely battered as to appear crushed and flattened. Stone No. 17 has all the same characteristics, but in a less advanced stage; the facets do not meet at the edges and appear more as shallow basins than as planes. Stones No. 7, No. 28 and No. 29 (Fig. 2,a) all show incipient characteristics of the same usage: two ground basins on either side of a center ridge on both sides of the stone, together with heavy end battering.

Location and Associated Artifacts

Of the 36 specimens, 80% (29 stones) were found in eight out of twelve sites in a linear arrangement along a low ridge paralleling Rocky Creek, a tributary of the Guadalupe River, about 15 miles northwest of the city of Victoria, Texas. The remaining 20% (7 stones) were found on a high bluff overlooking Coleto Creek at its confluence with Twelvemile Creek, four miles west of the town of Mission Valley and also about 15 miles northwest of Victoria. Site 41 VT 16 on this high bluff, at which six of the abraded stones were found, reveals a depth of at least five meters of occupational debris in the eroded bank. Several squares were excavated at this site and dart points were identified on the basis of Suhm and Jelks (1962) as Pedernales, Bulverde, Morhiss, Darl, Ensor, Shumla and Angostura. Knives, scrapers, choppers, mussel shell, bone and burned sandstone were also found, and the presence of asphaltum on the bases of Morhiss points was noted. The other Coleto Creek site, 41 VT 20, lies farther back from the bluff on a hill and the area is today largely occupied by a house. Only surface collecting was attempted here and Scallorn and Perdiz arrow points were found, together with Ensor and Refugio dart points, mussel shell, choppers and one abraded quartzite cobble.

Of the eight sites on Rocky Creek, only 41 VT 15 was partially excavated. As described by Hester (1969), the site contains a midden approximately one meter thick containing shell and a large quantity of flint. A deep gully

through the site exposes a part of the midden and about 3.5 meters deep in the gully wall is a faint zone of snail shells and flint. Bifacial gouges were taken from this zone. Mr. Birmingham states in his site survey report that the north end of this site was excavated. Point types taken from this site, presumably from both surface and excavation, range from Plainview and Golondrina to Scallorn arrow points, but in the main they represent the Middle and Late Archaic periods. Specifically, they are listed as Abasolo, Bulverde, Morhiss, Palmillas, Pandora, Pedernales, Refugio, Kinney, Lange, Lerma, Marcos, Shumla, Tortugas, Castroville, Darl, Edgewood, Ellis, Ensor and Frio. Also found were bone tools including a deer-bone awl, marine shell tools including a conch adze, a limestone pendant/gorget, choppers, scrapers and manos. Mr. Birmingham estimates that 50% of the points taken from this site had traces of asphaltum on their bases (Birmingham 1971). Four of the abraded quartzite cobbles were found on the surface of this site.

Site 41 VT 3 on Rocky Creek yielded a similar assortment of projectile points (lacking the Plainview or Golondrina), bone tools and manos, asphaltum on the bases of a large percentage of the points, and eight abraded cobbles.

Site 41 VT 30 on Rocky Creek contained nine abraded cobbles, no arrow points, Morhiss, Pedernales, Marcos, Frio, Ensor and Angostura dart points, most with asphaltum on the bases. Site 41 VT 29 contained three abraded cobbles, no arrow points, Ensor, Refugio, Tortugas and Pedernales dart points, most with asphaltum on the bases.

Site 41 VT 23 on Rocky Creek contained two abraded cobbles, Perdiz and Scallorn arrow points and Morhiss dart points with asphaltum traces. Site 41 VT 24 yielded only one abraded cobble, the same point types as 41 VT 23, and also well-made knives, bone tools and marine shells. Site 41 VT 26 contained one abraded cobble, Perdiz and Scallorn arrow points (with traces of asphaltum on the base of a Scallorn), Morhiss, Marcos and Darl points. Site 41 VT 32 also contained one abraded cobble, Scallorn, Morhiss and Darl points, end scrapers and fragments of bone and mussel shell.

Comparative Material

Use of ferruginous sandstone (commonly called ironstone) and hematite as abrading stones is reported fairly frequently. Duffield (1964) refers to awl sharpeners of fine grained sandstone at the Spring Canyon Site, Hutchinson County, Texas, relating to the Panhandle Aspect. Tunnell (1961) describes a coarse sandstone abrading stone with a shallow groove on one side, probably for use in sharpening a tool of bone, stone or wood, found in San Augustine County, Texas. Jelks and Tunnell (1959) report a sandstone rock with a broad, abraded groove across one face found in Upshur County, Texas, at the same site with "nutstones." Nutstones are described as rough, ferruginous sandstone or hematite ground flat or slightly concave on one side and with a small, circular cavity pecked into the ground area (Davis and Davis 1960; Tunnell 1961). It is assumed that the circular pit was designed to hold a nut, which was then cracked with another stone. Hayner (1961) states that the small pitted stone, or "nut stone" occurs in all foci in East Texas, that "every camp site or village area has some of them, and at some sites they are very numerous. Most of the manos that are found here have pits in them." The quartzite cobbles under discussion in this paper do not exhibit the "circular pit" characteristic of the nutstone;

instead, evidence of random pecking is often seen over the surface of the depression, probably to roughen the abrading surface as is done on a metate.

In only a few instances is abraded quartzite discussed. Frank H. Watt (1944), reporting on archaeological material in the Central Brazos Valley area of central Texas, describes "abrading implements" as follows:

> "Pitted manos or 'Anvil Stones' are found in very limited numbers. One form is the usual oval-shaped mano showing numerous contusion marks or having well defined depressions or pits worked into the face of the stone. For other forms, irregular shaped stones were used of the approximate size of the average mano, with a well worked hole or basin in one or two faces. Though usually of quartzite, ironstone boulders have been utilized...A number of forms must be called eccentric or of an incidental shaping by usage. Frequently an isolated object is found that has been used for some special process involving a rubbing or abrasional operation. Their unusual form is probably due to the manner in which the object was used."

Suhm, Krieger and Jelks (1954) note the occurrence of "polishing stones having facets from usage " found near Presidio, Texas in association with the Bravo Valley Aspect. Green and Hester (1973), reporting on the Finis Frost Site in San Saba County, Texas, state: "Occasional quartzite cobbles at the site exhibit highly polished facets, perhaps resulting from use in smoothing or rubbing activities (for instance, as 'pot polishers')."

Experiments

Some of the artifacts found in association with the altered cobbles are listed in site survey reports and include a pendant/gorget of limestone, a conch shell adze, a deer bone awl and an abundance of chert projectile points and tools. In an effort to discover the work in which these stones were used, I attempted to abrade a series of unaltered river-rolled cobbles with each of these materials. Quartz has a hardness of 7.5 on the Mohs scale and I found it extremely resistant to abrasion. A fist-sized, crude chunk of black sandstone native to Victoria County was reduced to a palm-sized rough sphere with no more effect on the quartzite than a slight polish.

An awl or punch was achieved from a split turkey femur by first grinding on quartzite and then smoothing against sandstone. It was necessary to peck the quartzite frequently to roughen the surface, and to wash or brush away the accumulation of abraded particles. Use was made of each natural crack or convolution in the stone which conformed to the surface to be shaped. Repeated pecking with another quartzite cobble and grinding of the bone resulted in a small depression in the stone, which, under the microscope, revealed characteristics similar to those seen in the stones under study. I am of the opinion, however, that it is the pecking which lowered the surface of the stone, and not the grinding action primarily. Perhaps the bone of deer or bison would actually abrade quartzite, but I believe the bone of turkey could as well have been shaped entirely against sandstone.

Stone No.	Length	Width	Thickness	Color	Edge Pecking	#Abraded areas	on #sides	Possible Asphalt	Striated	Site No.
1	84mm	71mm	46mm	Tan	x	4	2	x		41 VT 3
2	67	64	41	Gray	x	2	1	x	x	3
3	87	69	37	Red		2	2		x	3
4	80	55	45	Red	x	2	2	x		3
5	71	67	40	Red	x	2	2	x	x	3
6	91	62	34	D.brown	x	3	2	x	x	3
7	75	70	35	D.brown	x	4	2	x	x	3
8	97	59	38	Red	x	3	1	x	x	3
9	88	65	32	B.umber	x	3	2	x	x	15
10	135	76	44	Red	x	3	2		x	15
11	58	57	29	Red	x	1	1	x		15
12	85	64	43	Red	x	2	2		x	15
13	82	67	34	D.gray	x	2	2		x	16
14	104	69	34	Red	x	2	2		x	16
15	90	65	45	D.brown	x	2	1	x		16
16	66	61	45	L.gray	x	3	1			16
17	82	54	37	L.gray	x	4	2	x		16
18	87	64	36	D.brown	x	3	2		x	16
19	73	59	35	L.brown	x	3	2	x		20
20	83	70	35	Red	x	2	1	x	x	23
21	82	63	30	B.umber	x	4	2	x		23
22	86	65	31	D.gray	x	2	2	x	x	24
23	110	69	35	L.gray	x	3	2	x		26
24	84	66	36	Red	x	1	1	x	x	29
25	95	73	38	D.brown	x	1	1	x		29
26	95	71	40	D.brown	x	2	1	x		29
27	68	60	39	D.gray	x	1	1	x	x	30
28	73	63	42	L.gray	x	4	2	x		30
29	68	62	38	D.gray	x	4	2	x	x	30
30	77	58	28	D.brown	x	1	1			30
31	96	70	48	L.brown		1	1	x		30
32	104	64	37	L.gray	x	2	2	x		30
33	70	55	39	D.gray	x	4	2	x		30
34	88	68	40	L.gray	x	4	2	x	x	30
35	92	62	32	D.gray		2	2	x		30
36	112	58	34	Red	x	5	2		x	32

Table 1. Characteristics of altered quartzite cobbles.

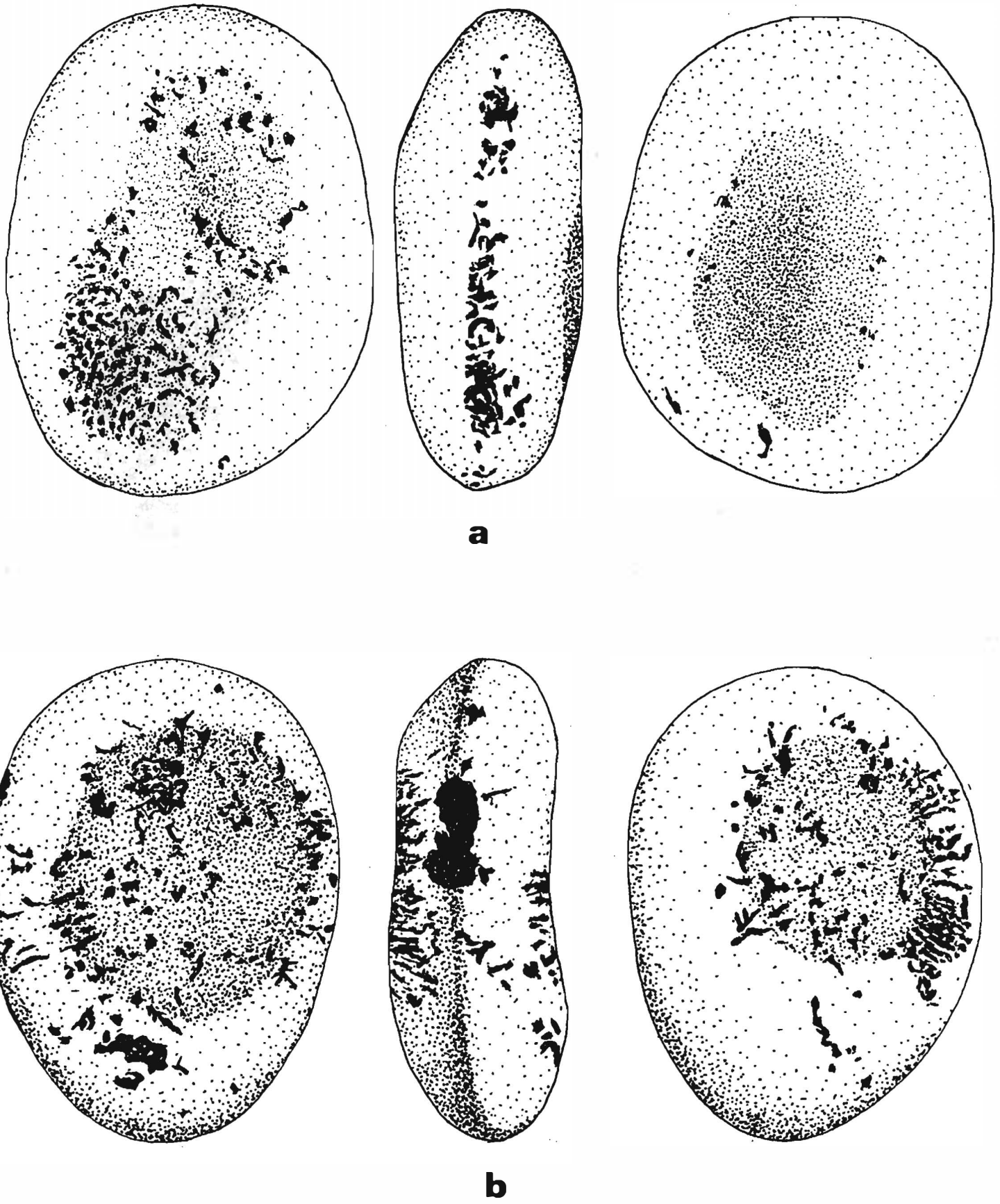

Figure 1. Altered Quartzite Cobbles, Victoria County, Texas. a, Stone No. 9 (41 VT 15); b, Stone No. 22 (41 VT 24) Front, back and edge views are shown. Illustrated approximately actual size (see Table 1 for dimensions).

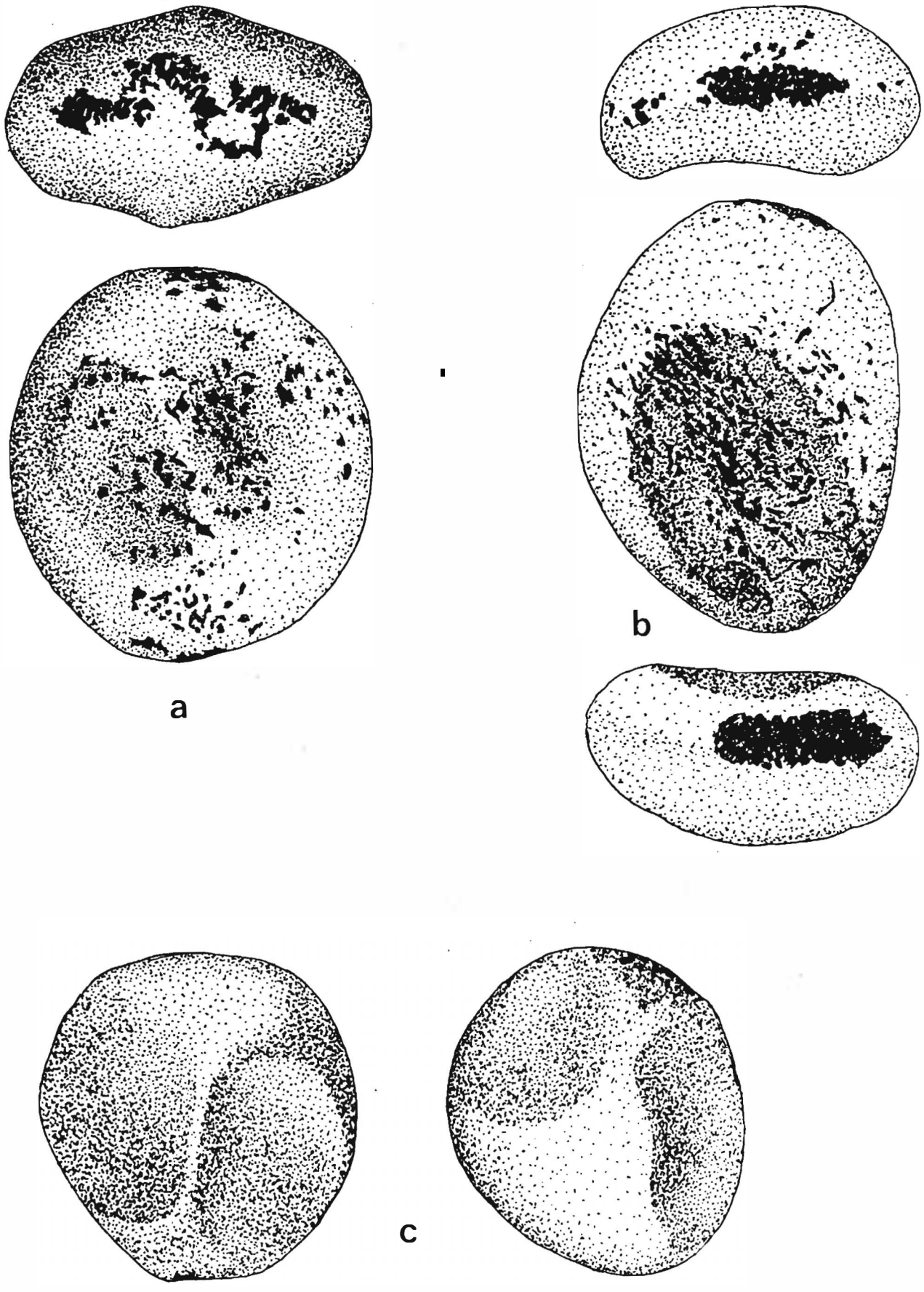

Figure 2. Altered Quartzite Cobbles, Victoria County, Texas. a, Stone No. 29 (41 VT 30); b, Stone No. 30 (41 VT 30) c, Specimen from 41 VT 30 not used in present study. End views shown in a, b. Illustrated approximately actual size (see Table 1 for dimensions).

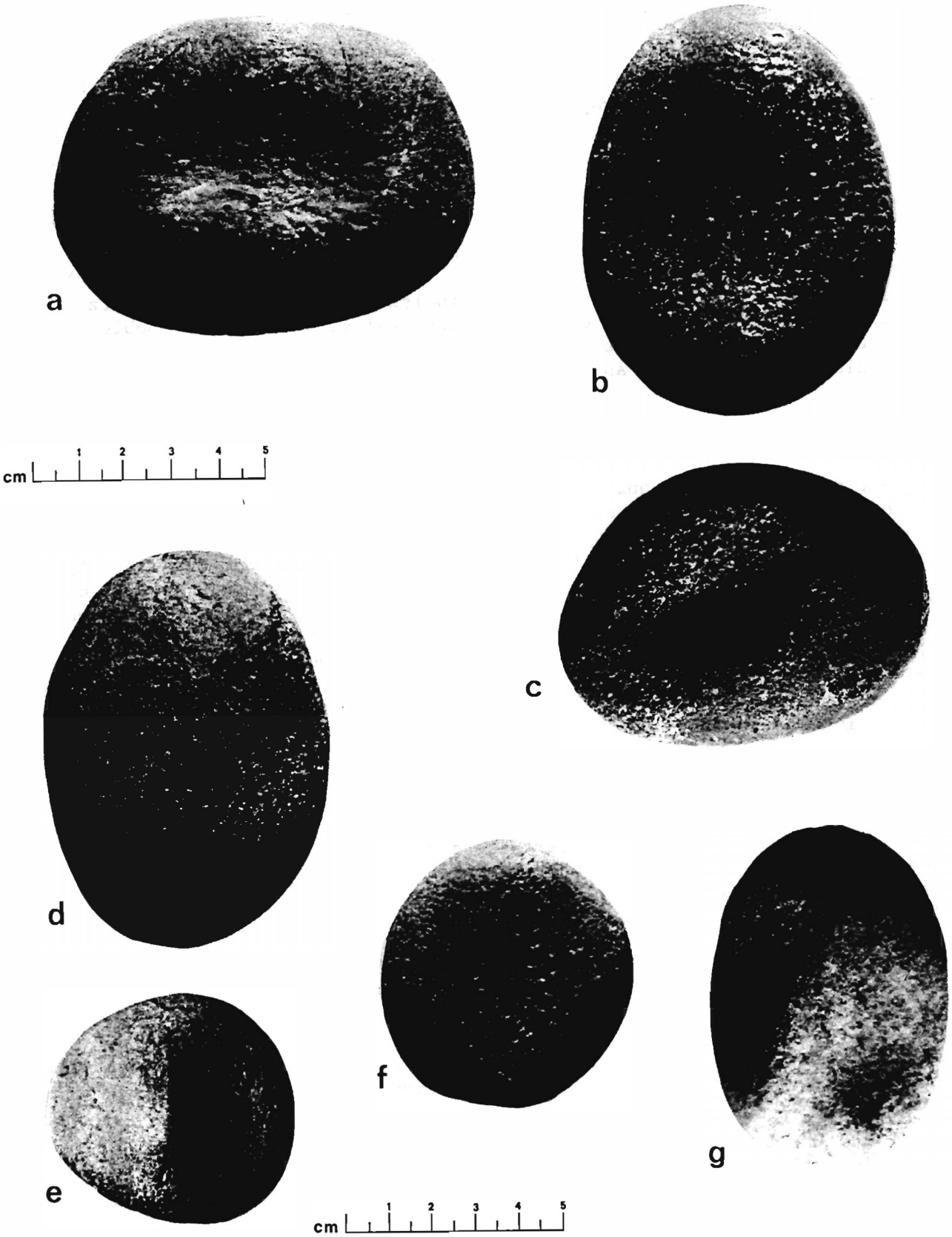

Figure 3. Altered Quartzite Cobbles, Victoria County. a, Stone No. 9 (41 VT 15; see Fig. 1,a); b, Stone No. 24 (41 VT 29); c, Stone No. 30 (see Fig. 2,b); d, Stone No. 35 (41 VT 30); e, Stone No. 5 (41 VT 3); f, Stone No. 11 (41 VT 15); g, Stone No. 12 (41 VT 15). Upper scale is for a-c; lower scale for d-g.

In order to remove all skin and cartilage from the bone, I found it necessary to boil it and then scrape it well with a sharp knife. In this condition, I discovered, the bone is porous and quite susceptible to carving, particularly in the articular sections. I found no satisfactory medium with which to polish the bone, but suspect that it must be allowed to dry very thoroughly before polishing would be effective.

Pecking and grinding was employed to form a small limestone ornament and these activities left a slight depression in the quartzite used. Several hours were spent pecking, washing and grinding quartzite against quartzite. Repeatedly rubbing the sharp edges of flint against a quartzite cobble, as in platform preparation, resulted in only light scratches. Shell proved particularly resistant to abrasion by quartzite and made little or no impression on quartzite cobbles.

Summary and Conclusions

Unquestionably, these stones were subjected to much more intensive and prolonged usage than I have been able to give them in the brief experimental studies described above. Many months of strenuous abrasion would doubtless deepen the small depressions that I was able to achieve, but this presupposes continued use of the same stone, and for the same kind of work in most cases. Coleto Creek and the Guadalupe River provide a surfeit of similar cobbles and it is difficult to imagine that a person would carry them about with him or her for weeks or even months. If this was indeed the case, it is possible that penetration past the dense, compacted surface of the stream rolled stone exposed a somewhat looser and more granular formation, thereby increasing its abrasive qualities.

There has been little published of the archaeology of this portion of the Texas coastal zone, and while the specimens reported here are solely from Victoria County, they may simply have gone unnoticed in adjacent areas. In all probability, river rolled quartzite cobbles were commonly used wherever they occurred, their natural, water worn shapes being utilized to best advantage in various pecking, striking, polishing, abrading, food grinding and flint preparation activities. That the abraded grooves, basins and facet planes in the stones under discussion were the result of human activity seems inescapable; the specific activities which produced them still elude us.

Acknowledgments

I wish to thank Mr. W. W. Birmingham and Mr. E. H. Schmiedlin for permitting the study of these artifacts. Their aid, cooperation and patience are sincerely acknowledged.

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PALEO-INDIAN ARTIFACTS FROM THE MEIER SITE, SOUTHEAST TEXAS

Carl J. Meier, Jr. and Thomas R. Hester

In a previous paper (Meier and Hester 1972), we briefly described archaeological materials from the Meier site, thirteen miles east of La Grange, in Fayette County, Texas. The surface of this occupation site has yielded numerous artifacts linked to the Archaic period, as well as a fluted point, and points resembling the Plainview and Angostura types (Ibid.; see Fig. 1, a-c of this paper).

Subsequent surface investigations at the site by the senior author have led to the discovery of additional Paleo-Indian projectile points, and these are put on record here. They include specimens of the Plainview, Angostura and Clovis types. While the three specimens illustrated by Meier and Hester (1972; see Fig. 1) were found at widely separated spots at the site, three of the recently-discovered artifacts (the Plainview specimens: E635, E638, E673) were grouped within a 10-foot square area in one part of the site.

PLAINVIEW

Meier E635 (Fig. 1,d). The specimen has parallel edges and a slightly concave base, and is reminiscent of the Plainview type (Suhm, Krieger and Jelks 1954:472). Both faces are marked by parallel-oblique flake scars. Basal thinning was accomplished by the removal of three longitudinal flake scars on one side, and by abrupt hinge flakes on the other. The material of manufacture is a gray-brown chert, with pink tones. The specimen has vitreous qualities, suggesting it may be fashioned of thermally-altered chert (Sollberger and Hester 1972). Heavy dulling is present along the lateral edges. Length is 48.0 mm, maximum width, 18.5 mm, and maximum thickness, 6.0 mm. It weighs 7.5 grams.

Meier E638 (Fig. 1,e). This is a proximal fragment of what appears to be a Plainview (or perhaps Golondrina) specimen. The distal tip has been snapped off, and burin-like blows have detached the corners of the proximal end or base (Fig. 1,c). The remaining portion of the basal edge is dulled. The specimen is made of a brown, fine-grained chert. It is markedly biconvex in cross section. Length is 51.5 mm, maximum width, 28.0 mm. and maximum thickness, 7.0 mm. Weight is 12.5 grams.

Meier E673 (Fig. 1,g,g'). Although this specimen appears, at first glance, to be complete, there are technological attributes suggesting that it is an unfinished Plainview point. The material of which it is made is a translucent fine-grained speckled brown chert. Both faces of the point are marked by parallel oblique flaking. However, the basal edges are not smoothed. On close inspection, it can also be seen that attempts to thin the base failed on both sides. An effort to remove a thinning flake on one side (Fig. 1,g) went awry, and detached one basal corner. On the other side (Fig. 1,g'), there is evidence of several repeated attempts to remove longitudinal thinning flakes, but all efforts resulted in hinge fractures. It seems likely that the specimen was discarded after these abortive endeavors.

Using the technological data provided by this Plainview preform, we can suggest that the final tasks after the point was shaped were to (1) thin

the base and (2) smooth the lower portions of the lateral edges and the basal edge. On this specimen, some marginal retouch of the lateral edges has been done prior to the thinning efforts. It is 61.0 mm long, has a maximum width of 23.0 mm, and a maximum thickness of 7.0 mm. Thickness of the base (in the area where thinning attempts were made) is 3.0 mm. The specimen weighs 11.0 grams.

Other Plainview specimens. Basal fragments of two other Plainview points have also been collected from the surface of the site. Both are characterized by parallel to parallel-oblique flake scars. Long vertical flakes thin the base of one specimen.

ANGOSTURA

The basal fragment of a point typologically resembling Angostura (Fig. 1,h; following the definition of Suhm, Krieger and Jelks 1954:402) was collected by Meier about 20 feet from the find-spot of the fluted point reported earlier (Meier and Hester 1972:69; see Fig. 1,a,a'). It has heavily ground lateral edges and a concave base. Length is 40.0 mm and it has a maximum width of 30.0 mm; thickness and weight data are not available.

CLOVIS

A large Clovis fluted point has been collected from a creek-bed 1.5 miles from the Meier site. The specimen is illustrated in Fig. 1,f,f'. It is 105.0 mm long, with a maximum width of 30.0 mm; again, data on thickness and weight are not available. It is made of a dark-brown, fine-grained, translucent chert. Both faces of the point are distinguished by parallel flaking. One corner of the base is missing and the lateral edges are heavily dulled.

CONCLUDING COMMENTS

At least ten projectile points of Paleo-Indian age are now known from the Meier site in eastern Fayette County. While the prehistoric remains at the site are predominantly of Archaic age, these projectile points indicate a significant late Pleistocene occupation. Of particular interest are the broken Plainview points (undoubtedly removed from shafts after breakage and discarded at the site), and a Plainview specimen which is obviously unfinished. Earlier occupation of the site and the immediate vicinity are indicated by the two fluted specimens, one of which is of uncertain context. A recent survey (of the published literature and unpublished data) by the junior author (Hester 1976) reveals that we still have amazingly inadequate distributional data on Paleo-Indian materials along the Texas coast; a perusal of the literature for the post oak-savannah region, within which Fayette County is situated, indicates a situation which is equally abysmal.

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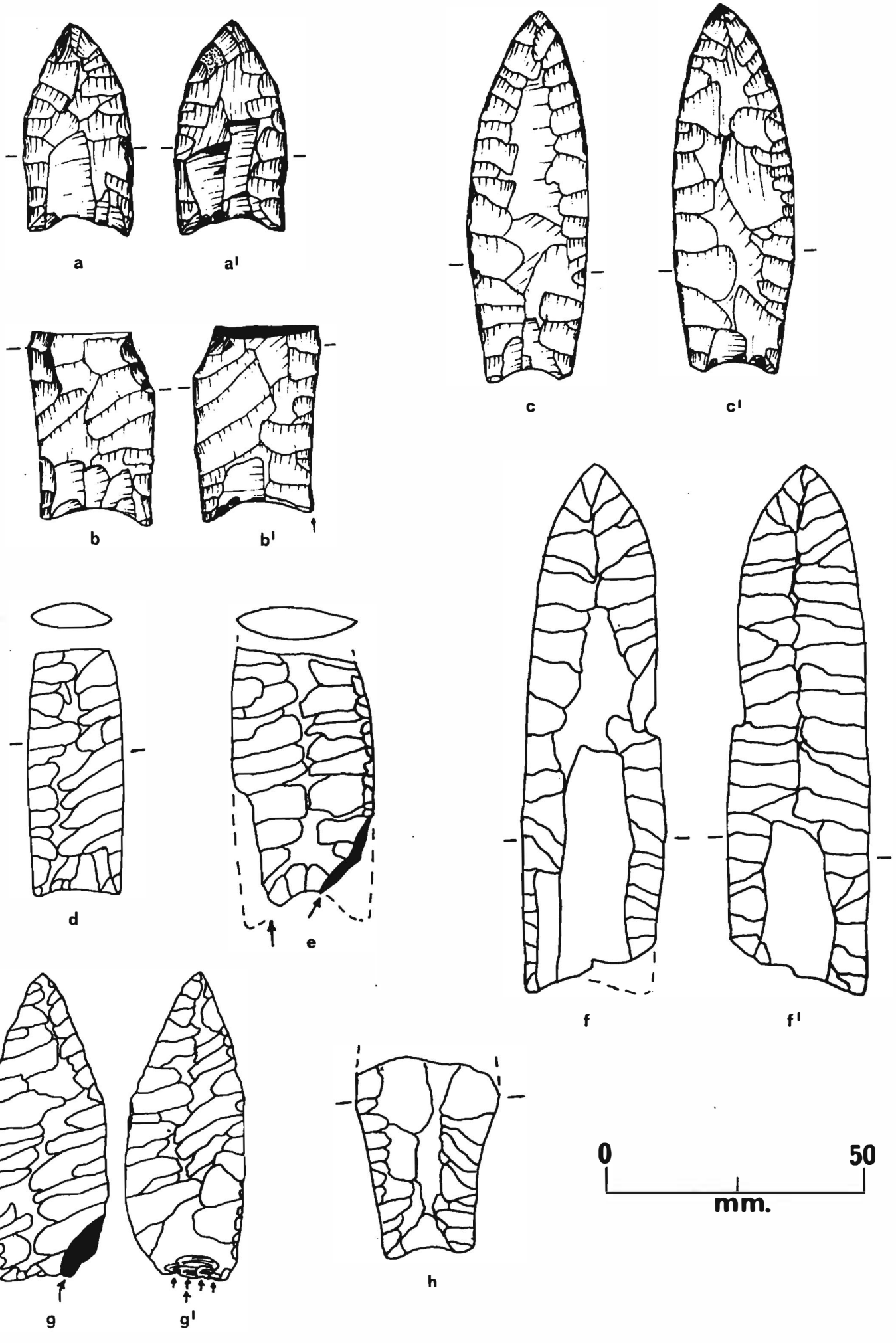
Figure 1. (facing page) Artifacts from the Meier Site, Fayette County, Texas. a-c', from Meier and Hester 1972 (a,a' Clovis; b,b' Plainview; c,c', Angostura); d, Plainview (E635); e, Plainview (E638); f, Clovis; g,g' unfinished Plainview (arrows indicate directions of basal thinning efforts); h, Angostura.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A TENTATIVE NEW TYPE OF LATE PALEO-INDIAN POINT FROM SOUTH TEXAS

Jimmy L. Mitchell

This brief note proposes a possible new type of late Paleo-Indian projectile point from southern Texas. It is one which shares some characteristics with Angostura, Golondrina, and Rio Grande types yet which is distinguishable from each of these.

A specimen of this proposed new type, shown in Figure 1, was discovered in LaSalle County, Texas, within the Nueces River drainage system. It is in the collection of Mr. Charles D. Johnson who lives near Cotulla, Texas. Several other Paleo-Indian projectile points from this collection have been described previously (Mitchell and Winsch 1973; Mitchell 1974) and additional Paleo-Indian materials belonging to Mr. Johnson will be reported in the near future (Mitchell, in press).

The present specimen is 53 mm in length, 24 mm in maximum width, 7 mm in maximum thickness, and weighs approximately 9 grams. The point has a basal width of 14 mm and its basal concavity is 2 mm deep. It is smoothed on the base and both lower sides; maximum smoothing on the lower sides extends to 20 mm. The point has the appearance of alternate beveling but this was achieved without the steeply worked edges typical of some of the beveled types found in South Texas.

This specimen is not easily classified within the existing typology. It has the recurved lower stem typical of Golondrina but also has the narrowing toward the base found in the Angostura type. Orchard and Campbell (1954: Figure 27) reported a similar point which they felt might be a variant of the Angostura point type, but they wisely withheld final judgement (1954: 463). Their specimen was from Blanco County, Texas and was ground on the base and lateral edges. It was alternately beveled on the proximal end. Their specimen measured 49 mm in length, 21 mm in maximum width, 7 mm in thickness, had a basal width of 11 mm and the basal concavity was 1 mm deep (Orchard and Campbell 1954:459). This pattern of attributes is not significantly different from the specimen reported here, although it is very slightly smaller in overall size. Taken together, these specimens may well represent a distinct form of late Paleo-Indian projectile point which has not previously been defined.

Stanton and Hester reported a fragmentary specimen (1968:Figure 1d) which they felt was also very similar to Orchard and Campbell's Figure 2,t. Stanton and Hester state that their specimen was "somewhat reminiscent" of the Hell Gap type and perhaps related to the Angostura point type (1968:5-6). However, since their specimen does not have the recurved lower edges seen in the present specimen and in the point reported by Orchard and Campbell, it cannot be considered as an example of the tentative proposed new type.

The present example is somewhat similar in general blade outline to the Rio Grande point which Perino (1968:78) reports as being similar to the Hell Gap point type. He notes that the Rio Grande point is often called Angostura by Texas archaeologists. However, the specimens he illustrates as examples of the Rio Grande type (Perino 1968:79) do not have the flaring and concave base found in the Orchard and Campbell specimen or in the present example.

The distinctive characteristics of this tentative proposed point type are its alternately beveled proximal end, its narrow waisted stem with recurved lower edges, outward flared basal corners with concave to recurved basal edge, and the smoothing on both lower edges and base. This combination of attributes makes this new type clearly distinguishable even though it shares some of these individual characteristics with a number of later Paleo-Indian projectile point types.

A site-derived name for this tentative new point type is not appropriate since both identified specimens are from general areas rather than from recognized, named sites. The name ORCHARD is proposed since it is through the pioneering work of C.D. (Dave) Orchard that the first specimen of this proposed new type was first reported (Orchard and Campbell 1954). While naming of types for individuals is not the usual procedure, an exception is well deserved in this case. Orchard's 50-plus years of work at the Olmos Dam area of Bexar County and his meticulous cataloguing of the over 8,000 artifacts from that site epitomize what one dedicated individual can accomplish to salvage archaeological data. Hopefully, his Olmos Dam data will be finalized and reported in the near future, since it represents a unique longitudinal, intensive-collecting approach to a site and contains a continuous array of materials from Paleo-Indian times up to the historic period.

The practice of naming new types has gradually fallen into disuse in recent years. In fact, many professional archaeologists prefer not to use type names at all and their reports more often refer to groupings of artifacts based on some descriptive characteristic rather than through traditional type names. They feel that this permits a more scientific basis for studying the attributes, functions, and relationships of the artifacts of prehistoric man. In part, this practice is also a reaction to the overconcern of many amateurs and collectors with naming everything, often inappropriately. A classic example of this is of course the "Clear Fork Gouge" which may have never been used as a gouge at all.

Unfortunately, by using overly broad categories, professional archaeologists may in fact be losing significant amounts of information concerning individual specimen variance.

In actuality, both approaches to the study of artifacts have their place. A good taxonomy of point types is essential to any type of distributional study or to comparative studies between types. Type names facilitate the development of point type sequences and help our understanding of chronological patterns. Indeed, in areas where radiocarbon dates have not been obtained, point type sequences are often used as time or cultural identifiers by all researchers.

It is better to have too many types than too few. With many types, statistical comparisons can be undertaken to cluster types by degree of similarity and to demonstrate relationships between types, sites, and areas. A good taxonomy will hold up through time and is really basic to the human understanding of any science.

In the present case, I have gained the concurrence of several noted south Texas amateur archaeologists in proposing this point type. A number of

people have provided me with drawings or photographs of additional potential Orchard points. The purpose of this report is to broaden that search to the membership of the STAA. If complete data on a sufficient number of additional specimens can be gathered to demonstrate the validity of this tentative new point type, then additional research can be undertaken to determine its geographic distribution and to confirm its dating as a late Paleo-Indian projectile point.

Anyone having specimens similar to that shown in Figure 1 is urged to forward complete data (including photographs or scale drawings if possible) to me at the following address: J.L. Mitchell, 2719 Henderson, W. Lafayette, Indiana 47906.

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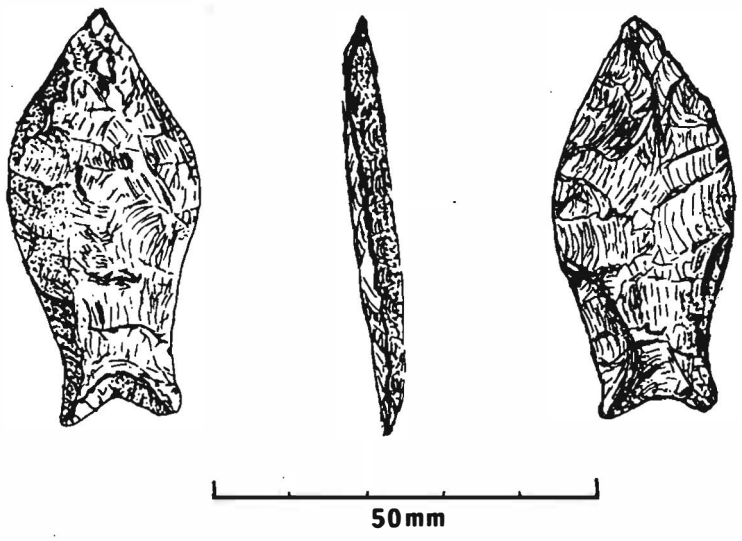

Figure 1. A point of the tentative Orchard type from LaSalle County in Southern Texas.

THE HUT EXPERIMENT

Malcolm Johnson

In a recent issue of La Tierra (Vol. 2, No. 2, 1974), the author described an outline of stones at site 41 GL 44. It was felt that this may represent a hut of approximately seven feet in diameter.

To date no artifacts have been found in the area that would suggest a historic association, and this in turn raised what may be an important question. The Neo American and Archaic peoples that inhabited this area of Central Texas are believed to have been hunter-gatherers with a rather nomadic way of life. If indeed such huts were used by nomadic peoples that had no beasts-of-burden, would they move them from site to site, and if so, how would they be transported? Would the few people that would be able to inhabit such a hut actually be able to carry the necessary hides to construct it?

After making several inquiries and not being able to find anyone who could answer these questions, it was decided to conduct a kind of "experiment". Plans were made to construct a "beehive" shaped framework that would approximate the size of the hut outline.

In making a search of the area for materials that would be long enough, straight enough and flexible enough to be useable, a woody shrub locally known as "salt willow" was decided upon. Some of the plants grow to a height of eight feet or more and the wood is fairly soft with a somewhat pithy center and therefore is relatively easy to cut using only a knife. After locating and cutting a number of suitable poles, a circle seven feet in diameter was scratched on the ground. Then the eight longest poles were selected and sharpened to a point on the butt end. Two poles were then pushed into the ground at opposite points on the circle. They were then bent together and tied in the center. This procedure was continued until all eight poles had been equally spaced around the circle and formed the "beehive" shape that was desired. Smaller poles were then lashed to the first so that they formed a "hoop" just above ground level in order to keep the sharpened ends from "kicking out" of the ground under the stress. Another "hoop" was placed around the uprights a little less than half way up. Still another "hoop" was added near the top to complete the framework. A little less than two and one half hours was required for the writer and his nine year old child to complete the framework from start to finish using only knives to cut and trim the poles.

The resulting "beehive" turned out to be just a fraction more than six feet high in the center which allowed me to stand erect inside with a few inches to spare. The actual living space was a little better than originally anticipated. Allowing space for a small hearth near the center, two average size people could occupy this hut comfortably. Three and possibly more could occupy it if the need arose. The "beehive" shape provides more useable space near the edge of the walls than would a tepee shaped hut of the same dimensions. As a matter of fact it has about the same liveability as a small umbrella tent that I have camped in a number of times, with the added advantage of having no center pole and braces.

This structure would not endure for any great length of time primarily because the soft wood that was chosen would deteriorate fairly rapidly. It has stood, completely unprotected, for nearly eight months now and is beginning to crumble, although if it has been covered by hides and protected it likely would last a year or more. For use by a nomadic group this would be more than adequate.

Now comes the main question. How much hide would it take to cover this structure, and how much would it weigh?

A visit was made to Mr. Earl Schwettmann's taxidermy shop in Fredericksburg, Texas. After explaining what I was trying to accomplish he provided several useful suggestions and helpful information. From a pile of buckskin tanned deerhides we found a hide that was rated by the factory at eight square feet. We placed it on a scale and it weighed out at three quarters of a pound. He stated that rawhide would probably be a little heavier and suggested a weight of one pound per eight square feet. Just as a matter of information, it was estimated that most buffalo hides he had seen would run from twelve to thirty-five square feet and that a south Texas white-tail deer may provide ten square feet. Ten locally killed white-tail deer hides that had been tanned into buckskin would, on an average, provide a rectangle of about six and a half square feet, but this did not include any large size buck hides. Also it must be remembered that in cutting out a rectangle there would be smaller pieces left over that would provide material for smaller objects and thongs, etc.

Now I needed to determine how many square feet of hide would actually be required to cover such a structure. An obvious method would be to buy enough hides to cover it and then measure and weigh them. But of course the cost of prepared hides now days makes this method completely prohibitive.

I then made a visit to Mr. Jack Neal, a registered professional engineer who resides near Comfort, Texas, and who I knew was also interested in such things. After I had discussed with him what I was attempting to do, he very generously offered to take time out from other duties to compute the surface area of a conical shaped structure such as we had built. I will not attempt to relate the mathematical formulas he used but will simply state that he came up with a total area of 98 square feet. Since there would be a number of pieces fastened together either by lacing, sewing, or pinning, he suggested that 20% should be added to the area to allow for the various overlapping seams. This increased the total area to approximately 118 square feet.

Using the previously determined weight of one pound per eight square feet for rawhide from a deer, we can now determine that the covering would weigh something in the neighborhood of fourteen and three quarters pounds. Of course the weight could vary considerably depending on whether the hides were very dry or very wet. Although I have not actually weighed them, I would guess that the poles that were used to construct the framework probably weigh between ten and fifteen pounds.

As a result of this phase of the experiment, I now believe that a couple of hunters or a man and wife with one or two children could occupy a hut of this size. And that it would be feasible for them to carry or drag the necessary material to construct it along with them during their wanderings.

It may also be estimated that as many as eighteen of the smaller and medium sized hill country white-tail deer would have to be killed in order to provide the material for the complete enclosure of such a structure. Only about four buffalo would be required to provide enough material for the hut and it is likely that some use was made of this material. However, buffalo hide would be heavier, and it is entirely possible that the weight factor would tend to limit its use.

Eighteen deer would seemingly provide a considerable amount of meat. So, just to satisfy my curiosity, I made a couple of phone calls to local processing plants to see if I could determine just how much would be involved. According to an employee of Fredericksburg Lockers, Inc., who in season process hundreds of deer, the <u>average hill country deer</u> weighs sixty-five to seventy pounds as it arrives, field dressed, at the lockers. After cutting and wrapping, the average yield of meat is 40 to 45 pounds. In processing meat into jerky a loss of 60% in weight is anticipated due to dehydration. Thus if the useable meat from the 18 deer was all made into jerky only about 306 lbs. would be obtained. If, say three people were being fed, this would amount to only a fraction more than a quarter pound of jerky per person per day for a year.

According to my calculation, then, it would take almost as many animals to shelter this little group as it would to feed them. I suspect this is only a coincidence...or is it?

NOTES ON PALEO-INDIAN PROJECTILE POINTS FROM McMULLEN COUNTY

E. R. Mokry, Jr.

The purpose of this paper is to report, describe, and supplement distribution data on Paleo-Indian projectile points from South Texas. Two specimens were surface collected in the northwest central portion of McMullen County, approximately seven miles west of Tilden, Texas.

The specimens described below were collected by the author and his brother, Larry, while examining surface scatters along the southern floodplain of the Leoncita Creek in McMullen County. Prior reconnaissance of the floodplain has yielded predominately Archaic materials (Tortugas, Abasolo, Ensor, and Darl). Also collected was one arrowpoint specimen (Scallorn) of the Late Prehistoric period. The presence of Paleo-Indian, Archaic, and Late Prehistoric materials on the same surface may be due to several factors as described by Shafer and Hanus (1974:13). It should be noted that the floodplain is under continual cultivation and is subject to periodic flooding (Hester and Hill 1972:35).

Description of Specimens

Specimen #1 (Fig. 1,a) is a basal fragment of a Plainview. It is made of a creamy gray chert. The body is marked by parallel flake scars. Lateral edges are straight and parallel. Basal and lateral smoothing is evident. Basal edge is concave and thinned by the removal of three short longitudinal flakes on the dorsal surface, while on the ventral face, two longitudinal flakes end in a hinge fracture. Dimensions appear in Table 1.

Specimen #2 (Fig. 1,b) is a basal fragment of a Golondrina. This specimen is made from tan and pink chert. It is characterized by recurved lateral edges, resulting in out-flaring basal corners or ears. The base is quite deeply concave. Workmanship is fine with irregular flaking scars. Basal thinning was accomplished by the removal of two arc-shaped flakes on the dorsal face, while the ventral face exhibits three longitudinal flakes ending in hinge fractures. Both the lateral edges and basal concavity have been smoothed. Dimensions in Table 1.

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	Specimen #1	Specimen #2
Length (Fragment)	25.5 mm	21 mm
Maximum Width Body	22	25
Maximum Width Base	--	27
Maximum Thickness	6	5.5
Depth of Concavity	3	5

Table 1. Dimensions of two Paleo-Indian Points from McMullen County

a b

Figure 1. Paleo-Indian Points from McMullen County
a, basal fragment of Plainview
b, basal fragment of Golondrina