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THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

The Southern Texas Archaeological Association brings together persons interested in the prehistory of south-central and southern Texas. The organization has several major objectives: To further communication among amateur and professional archaeologists working in the region; To develop a coordinated program of site survey and site documentation; To preserve the archaeological record of the region through a concerted effort to reach all persons interested in the prehistory of the region; To initiate problem-oriented research activities which will help us to better understand the prehistoric inhabitants of this area; To conduct emergency surveys or salvage archaeology where it is necessary because of imminent site destruction; To publish a quarterly journal, newsletters, and special publications to meet the needs of the membership; To assist those desiring to learn proper archaeological field and laboratory techniques; and To develop a library for members' use of all the published material dealing with southern Texas.

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LA TIERRA

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Jimmy L. Mitchell
Editor

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EDITORIAL

WHAT A YEAR.....

What a year this has been already. Here we are at the final issue of Volume Six, closing out a very active and rewarding year. It went by much too fast for me.

For STAA, I think it has been a very outstanding year. We have had some very exceptional programs, thanks to program chairman Grant Hall. He also arranged a spectacular Barbeque at the Dan Baker House in July where *both* the food and the program were worth it.... And we need to thank the Dan Baker family for their exceptional hospitality. They are some kind of people.....

I want to also thank all those who have been so helpful in getting out *La Tierra* this year. All those authors who have worked so hard to write and have suffered my editing so tolerantly. We've now reached a point where we are getting manuscripts well in advance and consistently get some pretty good material. Keep it coming...

A special thanks to Dr. S. Alan Skinner who was kind enough to permit us to extract pieces of his dissertation for publication in a series of three articles this year. Dr. Skinner was kind enough to furnish additional data to be included in these articles and to send the negatives for his photographs and tables. I hope that all of you have enjoyed reading his reports on the 1971 and 1972 T.A.S. Field School. Having been a participant in the 1972 Field School, I know that I find it very gratifying to read a report of a project that I was involved in, even if my involvement was mainly wandering up and down those Kerr County hills trying to keep up with Emmett Shedd of Post, Texas. But I learned a lot from that Field School; it's a thing I will always remember...

In this final issue for 1979, we have a wide variety of articles for your reading pleasure. They range across all of South Texas, from the upper coast around Houston literally down to the Rio Grande. I think you will enjoy every article; every one of them has something to teach us about the archaeology of Southern Texas.

THE PARIS SITE (X41 KR 1), KERR COUNTY, TEXAS¹

S. Alan Skinner

ABSTRACT

The Paris site was one of the four sites excavated during the Texas Archeological Society field schools of 1971 and 1972, which were held in the Turtle Creek watershed a few miles southwest of Kerrville, Texas. The Paris site included a burned rock midden and adjacent living and working areas. During excavation of the site, seven stone-lined hearths were located, one of which was on the surface of the mound; none were within the mound. Only one stratigraphic level was discernable; it contained both Archaic and Late Prehistoric materials. *Edwards* and *Sealorn* arrowpoints were the most common diagnostic projectile points recovered on the surface and during excavation of the site. On the basis of an analysis of the architectural features of the site and an examination of the clustering of various classes of artifacts, it is suggested that the mound at the Paris site represents a separate and distinct activity area within the site. The mound may have been created by the people who manufactured *Edwards* arrowpoints.

INTRODUCTION

The Paris site is located on the south side of Turtle Creek about 2.4 miles upstream from its confluence with the Guadalupe River. The site is situated on a relatively level bench that is located at the junction of three environmental zones (Guadalupe River floodplain and terrace system, Turtle Creek valley with Frio-Lewisville soil, and Glen Rose formation upland; Skinner 1974:8-15). The bench is composed of lime cemented floodplain gravel and sand bar deposits of undetermined age (Figure 1) which are at the base of the limestone upland. This formation may represent a previous (Pleistocene) river terrace, however, at present this is undetermined. The bench stands about fifteen feet above the surrounding terrain and projects northward about 150 feet from the base of the Glen Rose limestone slope. It appears as a peninsula or spit of land that stands out in the area. The bench has relatively steep slopes on the north and west edges and a more moderate grade to the east. A thin scatter of grass covers the bench and there are trees, mainly junipers and oaks, located on the western edge of the bench. A thin layer of soil (usually six to twelve inches thick) rests upon the lime cemented deposits which underlie the site.

The site had been recorded by the Hill Country Archeological Society, and we inspected the site in February, 1971 during my first visit to the Hill Country. At that time it was pointed out that what appeared to be a small low mound of fire-cracked limestone chunks was present on the west central part of the bench. Artifacts, notably lithic debris, were present on the ground surface around the mound. The ground was covered with some grass and many leaves so it was not possible to see artifacts all over the surface of the bench. It was also noted at that time that many *Edwards* arrowpoints (Sollberger 1967) had been found at the site.

In June of 1971 the site was first investigated for the purpose of outlining the limits of the site. The ground cover was removed and artifacts were noted in an area that extended about sixty feet east from the northern end of the bench. The mound appeared as a concentration of burned limestone chunks which rose less than two feet above the surface of the bench. The mound was roughly oval in plan (Figure 2) and measured about 24 (N-S) x 21 (E-W) feet. Soil on the site appeared to be shallow and thus we expected the cultural deposit to be relatively thin.

¹ This report is adapted from Dr. Skinner's doctoral dissertation and is published here with the permission of the author.

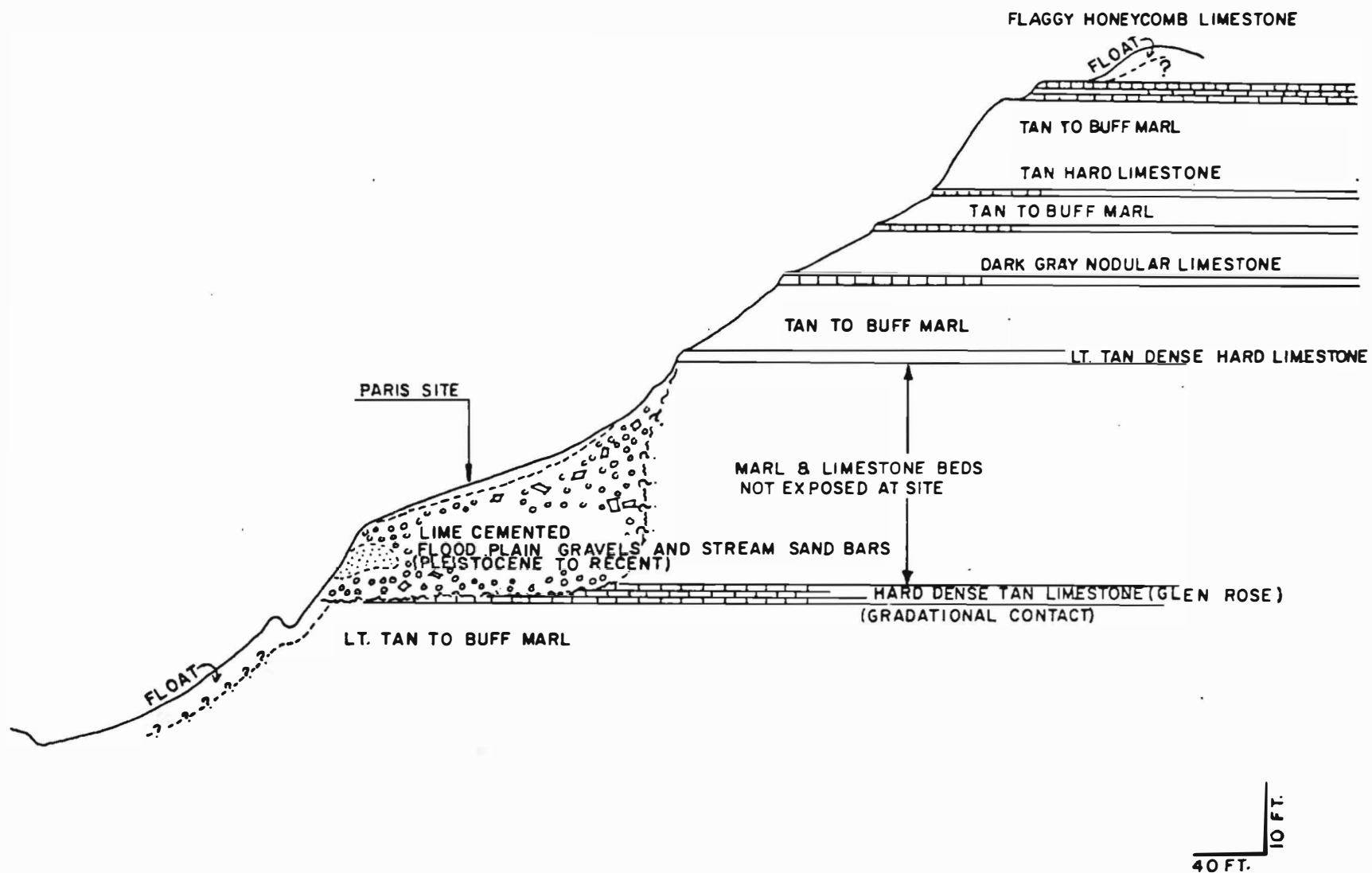


Figure 1. Paris Site - Geological Profile.

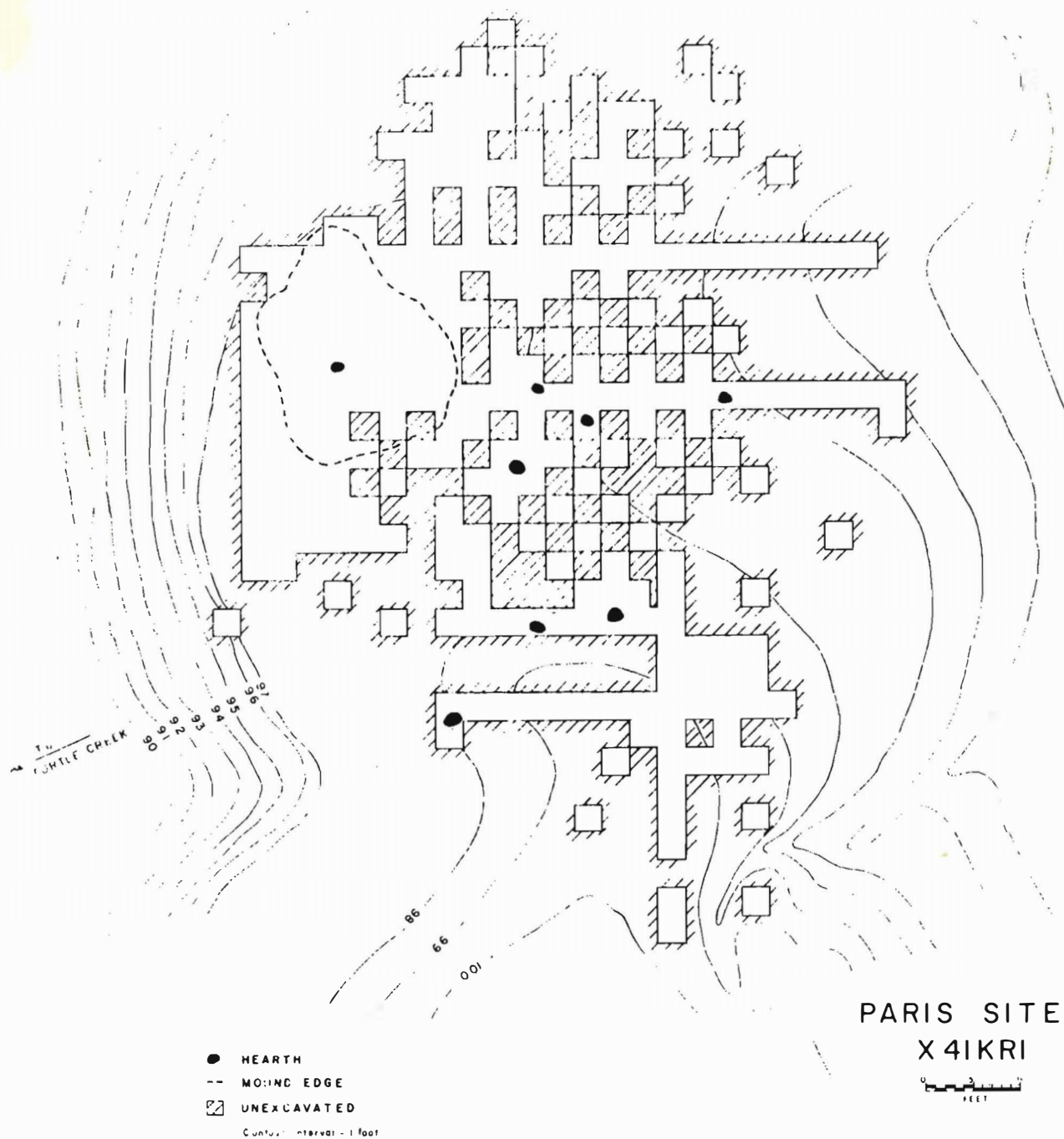


Figure 2. Excavation of the Paris Site (X41 KR 1), Kerr County, Texas (Adapted from Skinner 1974:156).

The Paris site was chosen for intensive excavation because the site consisted of a burned rock mound which had a relatively small living and/or work area adjacent to the mound. These factors meant that the Paris site included the items necessary to test the hypothesis that had recently been proposed about the organization of mound sites in Central Texas (Sorrow 1969:51). In addition, the size of the site and its depth meant that a large area of the site could be adequately sampled. Therefore, it was feasible to expect that specific activity areas could be outlined at the site. At the time that the Paris site was selected, we were unaware that it represented the easternmost mound site within the watershed, nor did we understand how it compared to mounds elsewhere within the Turtle Creek Watershed.

Two methodological factors also influenced the selection of the Paris site. First, I wanted to show field school participants the potential value of the small site which frequently is ignored by archaeologists (Talmage, Chesler *et al.*, 1977). Such sites have received little attention because they are shallow and can not be used to develop vertical point sequences and frequently do not contain large artifact samples. Small sites are more common than large sites and would lend themselves to the kinds of studies that amateur archaeologists who have limited time and facilities are capable of handling. Second, the Paris site was conveniently located within walking distance of the field camp.

EXCAVATION

The site was gridded off into 3 x 3 foot squares. The grid was oriented parallel to the long axis of the bench rather than on magnetic north because we wanted to be able to use the excavations for transect profiles of the site deposit. Squares were placed in order to checkerboard the site and determine where cultural materials ceased to appear. In addition, the surface of the mound was cleared of all ground cover, thus exposing the burned limestone chunks. When features, particularly hearths, were exposed, an attempt was made to determine if a work area was located in the adjacent area. At the end of the first season, the mound had been isolated and several hearths had been exposed in the area adjacent to the mound. At this time it was proposed that undisturbed Archaic deposits related to the mound construction might be buried under slope wash at the south end of the bench. Therefore, excavation was conducted in this area in 1972 to test this proposition. Three additional hearths and a "living floor" were uncovered during this excavation period.

A total of 260 3 x 3 foot squares were excavated (Figure 3) at the Paris site. Excavation was done in six inch levels where this was possible, but many parts of the site did not have more than six inches of soil on top of the sterile subsoil. This was not true in the mound or in some areas at the south end of the bench where the deposit was occasionally twelve inches thick. Trowels and brushes were the primary excavation tools, and where possible, tools and burned rock were left in place within the square. All excavated soil was screened through one-quarter inch hardware cloth. The screened fill from several squares was water-screened, but no systematic attempt was made to use this technique throughout the site.

ARCHITECTURAL FEATURES

Mound

The surface of the mound was exposed by excavation. A north-south trench and an east-west trench were created by excavating contiguous squares across the mound. The mound outline is roughly oval in plan but not as symmetrical as it appears on the surface. Fractured limestone chunks make up the main fill of the mound. The chunks are tightly packed and the spaces are filled with a dark (charcoal gray) crumbly soil. There were very few artifacts in the mound fill. The maximum depth of the mound was eight to ten inches in the center, and the mound tapered off to the edge.

A stone-lined hearth was located in the south central part of the mound. The hearth, which had been built on the surface of the mound, was made from limestone



a

a. View of the Paris Site showing excavation in 1971. Looking northeast.



b

b. The burned rock mound at the Paris Site, looking to the northeast.

Figure 3. Two Views of Excavations at the Paris Site.

slabs. The slabs were still in place but had been broken by heat. The hearth was oval in plan and centered around a large flat limestone slab.

Artifacts from the mound fill included snail shells, charcoal, flakes and chips, chipped stone tools, and several projectile points.

Hearths

Seven stone-lined hearths were located during the excavation of the Paris site. Each of the hearths is relatively small in size (12-18 inches in diameter) and it was impossible to isolate a living surface adjacent to any of the hearths. Charcoal was not present in the hearths, but some of the limestone slabs and cobbles showed evidence of having been heated and burned. In most cases the slabs had been laid on the soil in a shallow depression. Broken burned limestone chunks were found in the fill surrounding the hearths, but there was no evidence that they had been raked out of the hearth or that they had been gathered together in a cluster. Dating the hearths is difficult because there are few artifacts directly associated with them and other dating techniques were not possible.

The architectural features of the Paris site show that the burned rock mound is an activity area that is separate from the living area as evidenced by the hearths and the sub-surface artifacts. These remains do not show whether the hearths and mound were contemporary and made by the same people or whether there are two separate occupation periods present. It is possible from a traditional viewpoint to argue that there are two components present, but recent research at such sites as Bammel (Beadles 1971), La Jita (Hester 1971), Lamb's Creek site (Sollberger 1948), the Real site (Skinner 1979) and the Wunderlich site (Johnson, Suhm and Tunnel 1962) suggest that the mound at the Paris site could have been made by people who were manufacturing *Edwards* arrowpoints.

The artifact assemblage from the Paris site includes a total of 37,713 pieces which are listed by artifact class in Table 1. Artifacts collected from the surface of the site and those collected during cleaning the mound surface are not included in this analysis. Only materials collected during the sub-surface excavation are presented here and the deposit is treated as being of a single level although some artifacts from the southern end of the site were from below six inches. Nevertheless, plotting of cultural features and artifacts did not enable us to isolate an Archaic "dart point" occupation zone below a Neo-American arrowpoint zone nor could spatially separate areas be distinguished.

Lithic debris is present in almost all sequences except those downslope on the eastern edge of the site. Nevertheless, there are several isolated and overlapping concentrations of lithic debris illustrated in Figure 4. Lithic debris is present but scarce in the southern and southeastern sections of the site and is also of low density in the fill of the mound as shown by the trenches which bisect the mound. The highest density is in the northern end of the site where a density of greater than 600 pieces is present. There are also small hot spots within this overall concentration. No hearths were recorded in this area and the fill in this part of the site is shallow, thus indicating that the concentration is a real pattern. The second large concentration has more than 350 pieces per square in the center and is located at the southeast edge of the mound. Lithic debris clusters around the mound but not in the mound fill nor was there evidence of lithic debris being concentrated on top of the mound itself.

The pattern of discarded artifacts clustering outside the mound limits is illustrated by the distribution of cores and bifaces in Figure 5 and the projectile distribution in Figure 6. Arrowpoints are concentrated in the northern end of the site and occur in the southern area along with dart points. Dart points occur in the mound fill and so do arrowpoints. There is no evidence of significant horizontal or vertical separation of these projectiles within the mound.

Projectiles, particularly arrowpoints (See Table 2), dominate the tool assemblage, and retouched pieces are the only other tool that is common. Hunting appears to be the prominent maintenance activity next to flint knapping. Food processing is indicated by the ground stone tools.

TABLE 1. Artifact assemblage at the Paris site.

	Number	Percent
Lithic Debris	36,680	97.26
Cores	281	.74
Bifaces	<u>384</u>	<u>1.01</u>
	37,345	99.01
Retouched Pieces	144	.38
Scrapers	3	-
Notches	4	.01
Gravers	14	.03
Borer	1	-
Burins	2	-
Arrowpoints	159	.42
Dart Points	<u>33</u>	<u>.08</u>
	37,705	99.93
Manos	2	-
Pitted Stones	4	.01
Metates	<u>2</u>	<u>-</u>
Total	37,713	99.94

TABLE 2. Projectile Points from the Paris Site

	Complete	Incomplete	Total
Dart Points:			
<i>Ensor</i>	-	2	2
<i>Fairland</i>	2	2	4
<i>Frio</i>	3	2	5
<i>Marcos</i>	-	1	1
<i>Martindale</i>	-	1	1
<i>Pedernales</i>	-	2	2
Unidentified	<u>1</u>	<u>17</u>	<u>18</u>
Total Dart Points	6	27	33
Arrowpoints:			
<i>Alba</i>	-	7	7
<i>Edwards</i>	1	31	32
<i>Perdiz</i>	1	1	2
<i>Scallorn</i>	1	25	26
Unidentified	<u>4</u>	<u>88</u>	<u>92</u>
Total Arrowpoints	7	152	159

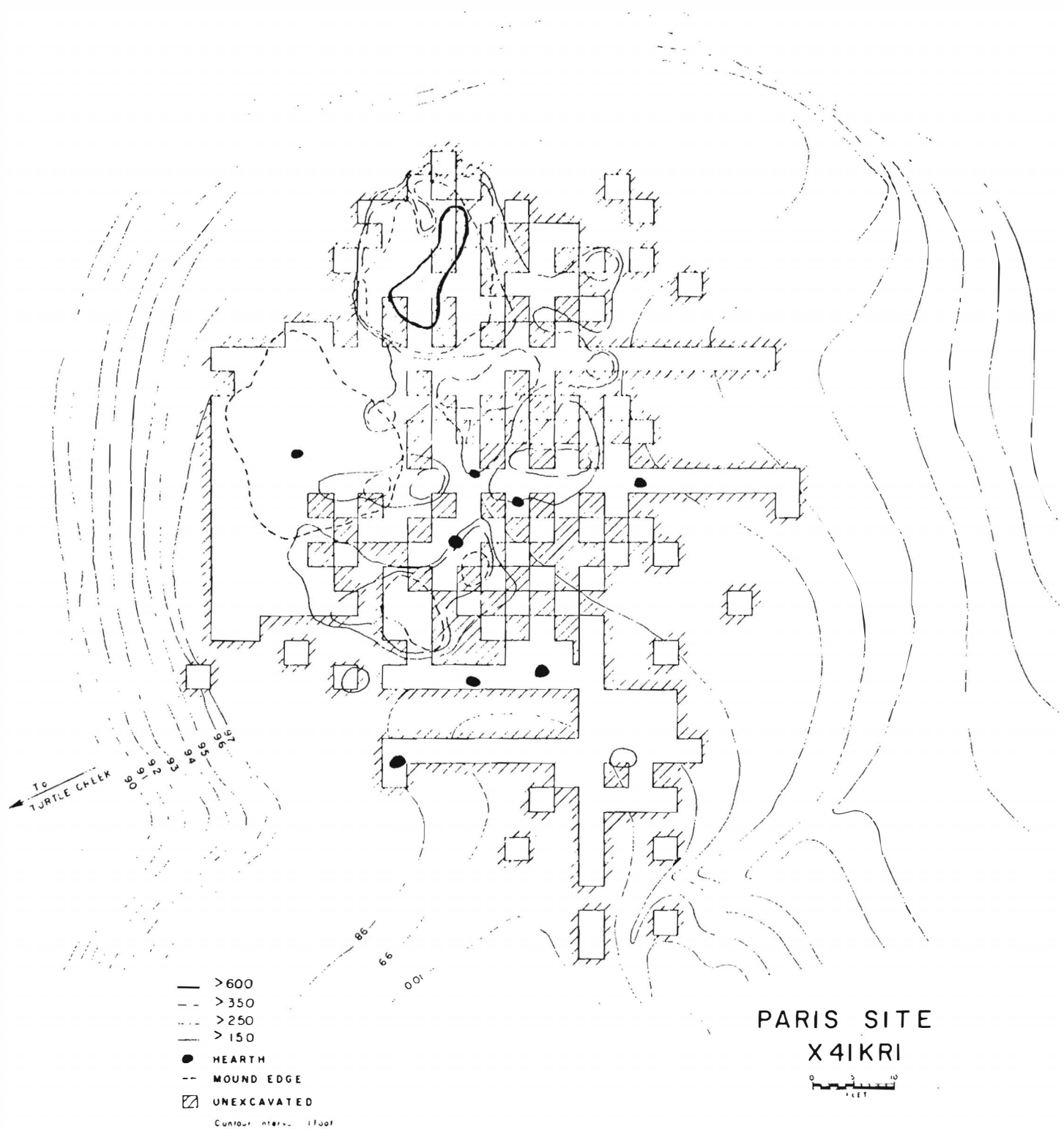


Figure 4. Distribution of Lithic Debris at the Paris Site (Adapted from Skinner 1974:163).

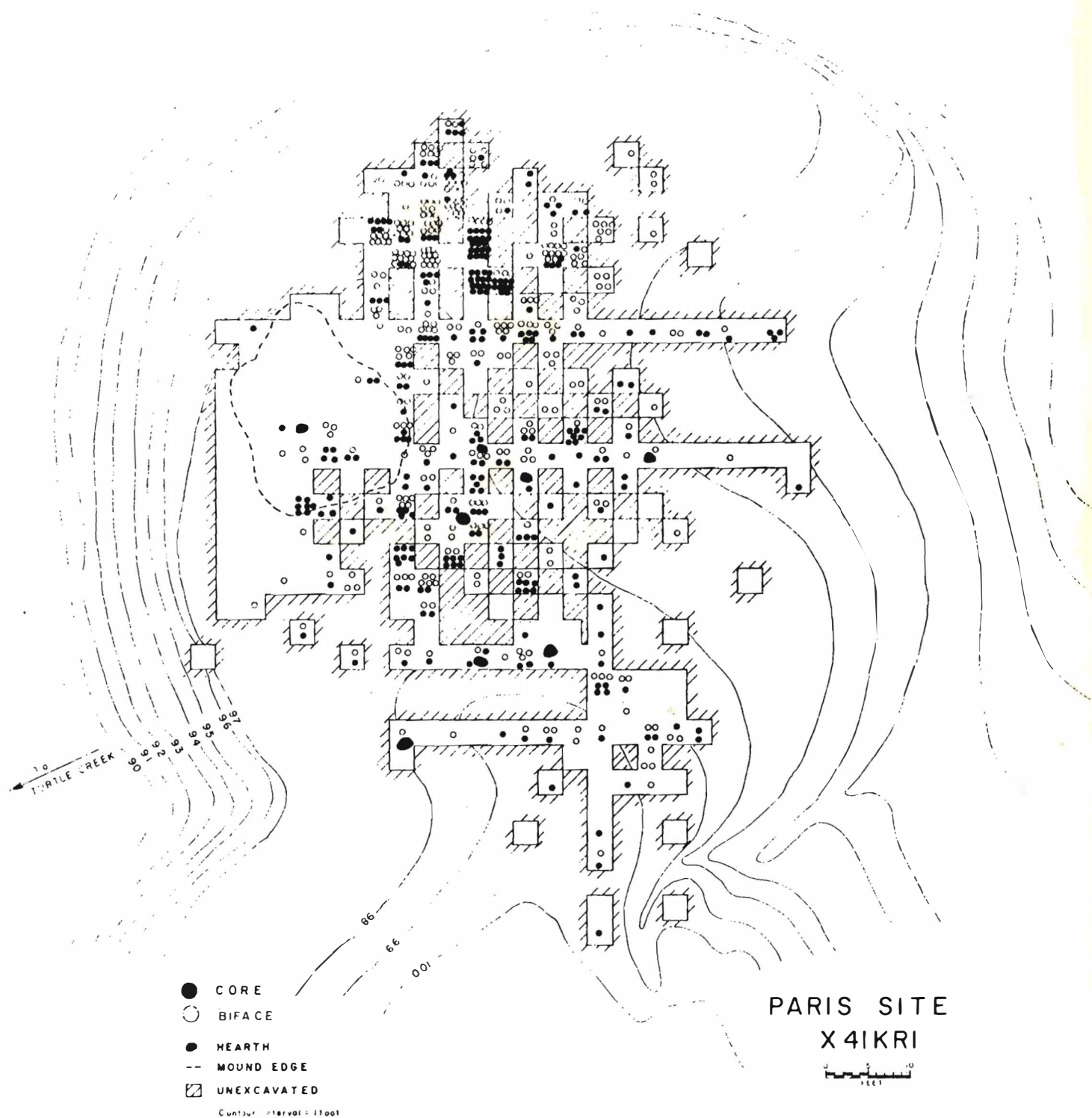


Figure 5. Distribution of Cores and Bifaces at the Paris Site (Adapted from Skinner 1974:165)

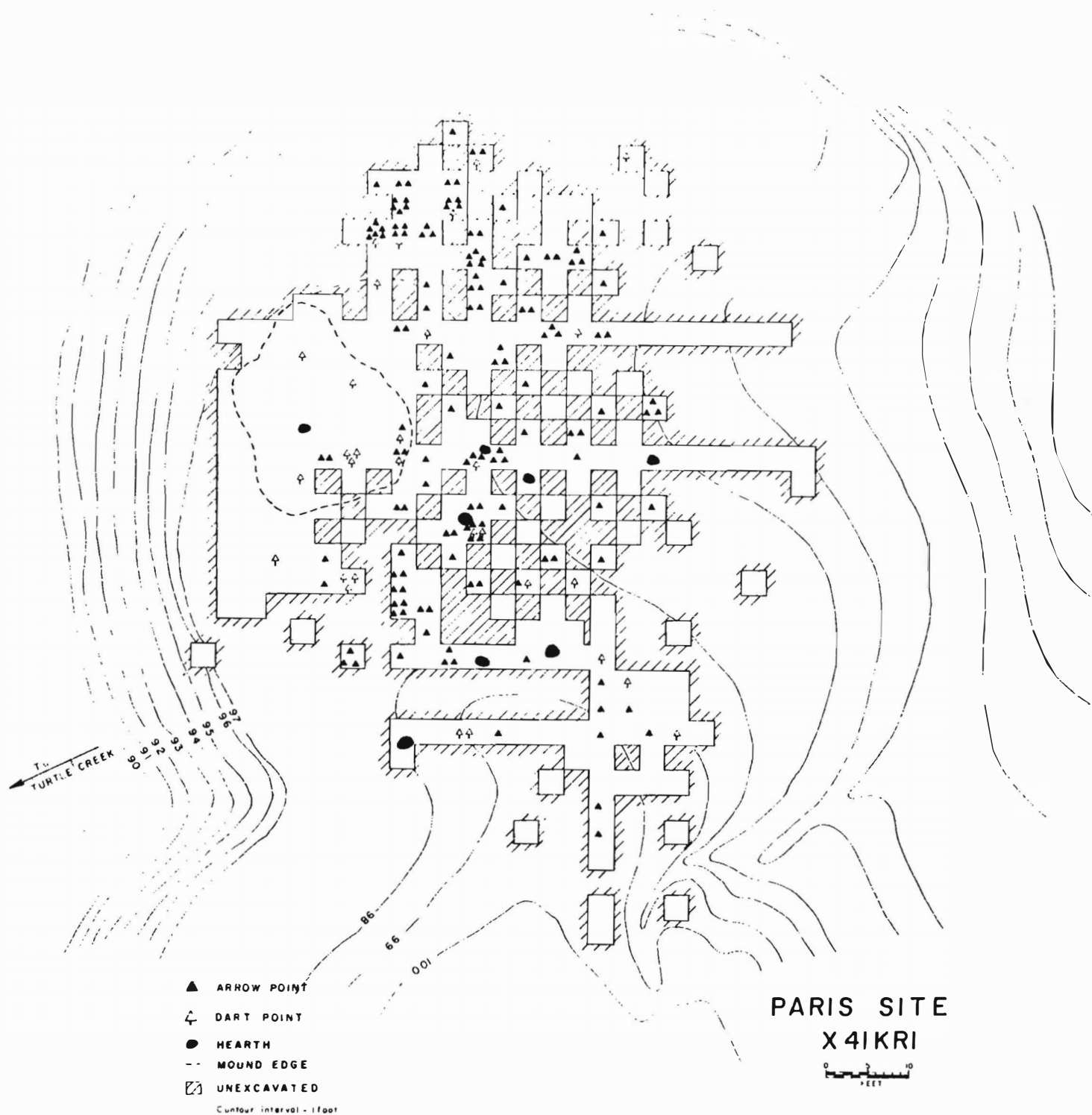


Figure 6. Distribution of Projectile Points at the Paris Site (Adapted from Skinner 1974:167).

TABLE 3. Lithic debris from the Paris site.

	Number	Percent
Flakes		
Primary	291	.79
Secondary I	517	1.40
Secondary II	3,149	8.58
Interior	5,831	15.89
Biface Thinning	<u>236</u>	<u>.64</u>
	10,024	27.30
Chips		
Primary	623	1.69
Secondary I	932	2.54
Secondary II	6,377	17.38
Interior	<u>18,724</u>	<u>51.04</u>
Total	36,680	99.95

TABLE 4. Cores/bifaces from the Paris site.

			<u>Cores</u>			
			Number		Percent	
Single			60		21.35	
Nineth Degree			18		6.40	
NOSE			1		.35	
Opp. End			2		.71	
Cir. Unf.			8		2.84	
Cir. Bif.			8		2.84	
Mult. Unpatt.			73		25.97	
Fragment			<u>111</u>		<u>38.50</u>	
Total			281		99.96	
<u>Bifaces</u>						
Whole			Broken		Total	
	No.	Pct.	No.	Pct.	No.	Pct.
A	-	-	-	-	-	-
B	11	2.86	6	1.56	17	4.42
C	17	4.42	20	5.20	37	9.63
D	15	3.90	136	35.41	151	39.32
E	<u>9</u>	<u>2.34</u>	<u>130</u>	<u>33.84</u>	<u>139</u>	<u>36.19</u>
Total	54	14.04	330	85.90	384	99.97

Lithic debris (Table 3) makes up 97.26 per cent of the artifact assemblage and cores and bifaces are 1.74 per cent of the total assemblage. These categories constitute more than 99 per cent of the assemblage. The flake to chip ratio is 1:2.6 and is considered indicative of the high rate of flake breakage that is associated with flint knapping. The relative importance of interior flakes/chips and of broken bifaces (Table 4), especially stages D, E, and F, lend support to the interpretation that flint knapping, particularly biface preparation, was an important activity at the Paris site. In addition, the large number of projectile point bases (179 of 192) emphasizes the importance of rehafting at the site.

CONCLUSIONS

The Paris site is an example of small burned rock mounds that have been recorded within the Turtle Creek Watershed. The site was considered to be representative of mounds when excavation began, but the representativeness of this mound for mounds within this watershed or for south central Texas burned rock mounds in general can not be determined at present. This is the first small mound site that has received intensive excavation outside the limits of the mound itself. In addition to the interpretations above, several general observations deserve attention.

- 1) Flint knapping was an important activity at the site, and it was carried out in the area of the site adjacent to the mound but not on the mound itself;
- 2) Stone-lined hearths are located in activity areas around the mound but not within the mound itself; hearths are adjacent to areas of high lithic debris intensity but not within the high density areas;
- 3) Hearth stones show little evidence of having been broken by heat, and the small number of hearths does not suggest that these hearths were eventually made into the mound.

On the basis of this excavation, it is suggested the mound at the Paris site represents a separate and distinct activity area within the site. The purpose of this activity area is at present undetermined, although the mound is interpreted as a purposefully accumulated pile of fire-cracked stone and not as just a trash dump or flint knapping/work area. It is suggested that future research be directed at determining what caused the stones to be concentrated and whether or not they have remained in place or have been piled in a mound after having been burned and cracked. This author expects that the mounds may be cooking or food processing areas where large quantities of seasonally available foodstuffs were prepared for consumption.

ACKNOWLEDGEMENTS

[Editor's Note - In closing this series of three reports from Dr. Skinner's dissertation research, it is appropriate to acknowledge some of those who contributed to the project. In Dr. Skinner's words "This study is the result of the efforts and persistence of some 450 odd members of the Texas Archeological Society. The Hill Country Archeological Society (located in Kerrville, Texas) hosted the 1971 and 1972 T. A. S. Summer Field Schools in Archeology. In particular I wish to thank Murray Beadles, Andy Paris, and Dick Gingrich for their help in arranging access to private property and for providing a comfortable campground for the schools. These men and their families were a constant source of information about the local archaeology and knew how to deal with the problems of ticks, chiggers, snakes, rain, and heat. ... (Skinner 1974: p.vi)."]

References

- Beadles, Murray
 1971 Interim Report - Bammel Site (41 KR 10). *The Arti-facts*, Hill Country Archeological Society, Vol. 2, No. 2:3-6.
- Hester, Thomas R.
 1971 Archeological Investigations at the La Jita Site, Uvalde County, Texas. *Bulletin of the Texas Archeological Society*, Vol. 42:51-138.
- Johnson, L., Jr., D. A. Suhm, and Curtis Tunnell
 1962 Salvage Archeology of Canyon Reservoir: The Wunderlich, Footbridge, and Oblate Sites. Texas Memorial Museum, Bulletin No. 5.
- Skinner, S. Alan
 1974 Prehistoric Settlement of a "Natural Area." Unpublished PhD Dissertation, Department of Anthropology, Southern Methodist University.
 1979 The Real Site (X41 KR 166), Kerr County, Texas. *La Tierra*, Journal of the Southern Texas Archaeological Association, Vol. 6, No. 3:26-31.
- Sollberger, J. B.
 1948 Lamb's Creek Mound. *The Record*, publication of the Dallas Archeological Association, Vol. 3, No. 1.
 1967 A New Type of Arrow Point With Speculations As To Its Origin. *The Record*, Vol. 23, No. 3.
- Sorrow, W. M.
 1969 Archeological Investigations at the John Ischy Site: A Burnt Rock Midden in Williamson County, Texas. *Papers of the Texas Archeological Salvage Project*, No. 18.
- Talmage, V., O. Chesler, and Staff of Interagency Archeological Services
 1977 *The Importance of Small, Surface, and Disturbed Sources of Significant Archeological Data*. U. S. Department of the Interior, National Park Service, Cultural Resource Management Studies.

SURVEY OF ARCHAEOLOGICAL SITES IN STARR COUNTY, TEXAS

Edward R. Mokry, Jr.

INTRODUCTION

In November and December 1974, an archaeological survey was carried out along the upper Arroyo los Olmos, Starr County, Texas. Reconnaissance of an area, confined within the boundaries of a 900-acre ranch, northwest of the community of El Sauz, led to the documentation of five archaeological sites.

An initial survey of the Arroyo los Olmos had been conducted in August 1974, by personnel from the Center for Archaeological Research (CAR), The University of Texas at San Antonio, and students from Richland College. The survey was carried out to locate and assess archaeological sites that may be damaged or destroyed by proposed floodwater retarding structures. During the course of the survey, fifty-two archaeological sites were recorded and evaluated (Nunley and Hester 1975: ii-2).

AREA AND ENVIRONMENT

The survey area reported in this paper is located in west-central Starr County (Figure 1). This portion of South Texas is characterized by a level to rolling topography. Elevations are generally between 250 to 400 feet above sea level. Soil types vary from clay to sandy loams.

The climate has been described as semiarid and megathermal (Blair 1950; Hester 1976). A low, intermittent rainfall is the dominant environmental restriction of the area.

The grassland or savannah type vegetation that probably dominated this area in prehistoric times (Hester 1976) has gradually changed to the present cover of shrubs and low trees. Present vegetation includes mesquite, acacia, ebony, mimosa, paloverde, numerous cactii, and various short grasses. Isolated growths of willow trees are found along the present channel of the Arroyo los Olmos.

Blair (1950) has included this area in his Tamaulipan Biotic Province. Species common to this area include whitetail deer, javalina (Collared Peccary), bobcat, coyote, badger, armadillo, jackrabbit, cottontail, and a large variety of small rodents. Reptilian species include the Diamondback rattlesnake, Indigo Blue, coachwhip, turtle, sand lizards, swifts, and the Texas Horned Lizard.

RESULTS OF SURVEY

Five archaeological sites were recorded during the survey of the upper Arroyo los Olmos, its adjacent floodplain, and bordering uplands. In this section, a brief description of each site is presented. See Table 1 for artifact distribution.

Site 41 SR 133

The site is located on a high ridge overlooking the southern floodplain of the Arroyo los Olmos, from a point 800 meters (.5 mile) west of the main channel and 800 m southwest of site 41 SR 93 (recorded by CAR). A sandero runs approximately east-west through the site. Occupational debris, exposed by sheet erosion, is scattered over a compact sandy clay floor. The area of occupation is estimated at 35 x 75 m. Vegetation on the site includes native grasses, cactii, ebony, mesquite yucca and acacia.

Eighteen artifacts were recovered including an *Angostura*, various Archaic points, and a *Starr* arrowpoint (See Table 1). No cores and little knapping debris was observed. Occasional fire-fractured stones were observed but no hearths. Due

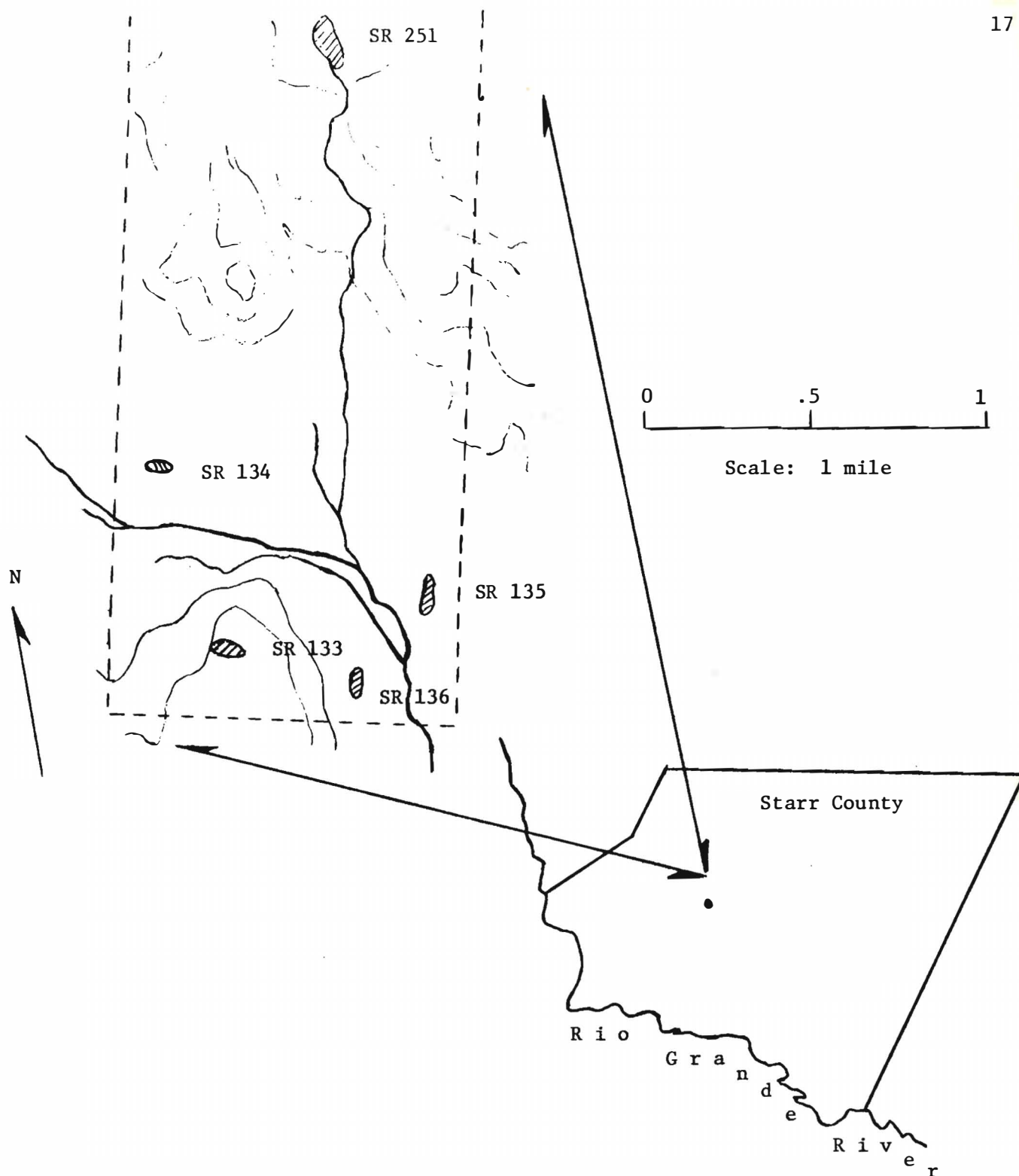


Figure 1. Location of site in relation to Starr County and the Rio Grande River.

to the varied inventory of archaeological materials, it is assumed that this site was a short-term campsite, perhaps on seasonal rounds, over a lengthy period of time.

Site 41 SR 134

The site is about 800 meters east of the confluence of the Arroyo los Olmos and Chapote Creek and 200 m north of the main channel of the Arroyo los Olmos. Surface area of the site was approximately 40 x 50 m. A fine wind-blown sandy soil covers this floodplain site, and occupational debris including land snails, scattered fire-fractured stones and flake debris occur in deflated areas on a compact gray sandy floor. Artifacts recovered included several *Tortugas* points and a *Starr* arrowpoint. Vegetation on the site includes mesquite, cactii, yucca and native short grasses. This site possibly represents a short-term occupational site with reoccupation on a seasonal basis.

Site 41 SR 135

The site is located on the eastern floodplain approximately 100 m east of the main channel of the Arroyo los Olmos. Site 41 SR 96 (recorded by CAR) is located approximately 200 m to the southwest. The site is approximately 45 m long and 20 m wide, and is parallel to a sandero running north and south.

Occupational debris including *Tortugas* and *Matamoros* points, a side-notched arrowpoint, land snails, flakes and baked clay nodules which had been exposed by sheet erosion and deposited on a compact sandy clay floor. Native short grasses, mesquite, cactii, and acacia abound in the area. It is assumed that much of the site is still intact since erosion occurs only along the western edge of the site.

Site 41 SR 136

A floodplain site, located approximately 175 m west of site 41 SR 96 (CAR survey), covers an area estimated at 50 x 30 m. Occupational materials exposed by sheet erosion and deposited on a compact sandy clay floor include a single *Tortugas* point, scattered fire-fractured stones, land snails, and occasional flint flakes. Small patches of short grasses, acacia, mesquite, and other chaparral group type vegetation occur on and around the site. A fine wind-blown tan sandy soil, crusty in areas, and 6 to 10 cm thick overlies the compact sandy clay floor.

This small site appears to represent a short-term campsite, possibly re-occupied during seasonal food gathering rounds. The occurrence of a *Noetia ponderosa* shell fragment is possibly significant evidence of contact between coastal populations and the peoples of the Arroyo los Olmos area.

Site 41 SR 251

This large site is situated in an upland environment and overlooks the extensive northern floodplain of Arroyo los Olmos. Extensive erosional cuts and sheet erosion have deposited occupational debris on a compact gray to white sand floor. Based on the concentration of occupational debris, it is assumed that the site covers an area approximately 300 m long which varies from 50 to 100 m wide. There is a heavy concentration of lithic materials, numerous land snails, lumps of baked clay, accumulations of fire-fractured stones, intact and disarrayed hearths, flakes, bone fragments, and occasional mussel shell fragments. Erosion on the site has revealed four distinct geological zones, with depths varying from surface to 65 cm. Most of the archaeological materials (see Table 1) were collected from the upper limits of Zone II (25 to 40 cm), a gray to gray white fine sand. Vegetation on the site includes mesquite, acacia, yucca, opuntia, ebony, paloverde and patches of short grass.

TABLE 1. Distribution of Artifacts by Site

Artifact	Site	SR 133	SR 134	SR 135	SR 136	SR 251	Total
<u>Projectile Points</u>							
<i>Starr</i>		1	1			1	3
Side notched				1		3	4
<i>Abasolo</i>						1	1
<i>Angostura</i>		1					1
<i>Catan</i>		1					1
Corner notched		1					1
Corner notched, rounded base				1			1
<i>Matamoros</i>		1		1		1	3
<i>Tortugas</i>		1	3	2	1	8	15
Miscellaneous		1				6	7
Distal fragments		1	1	1	1	10	14
Medial fragments		2				2	4
Basal fragments		3	3			11	17
<u>Other Bifacial</u>							
Core-Choppers						8	8
Heavy bifaces						3	3
Olmos bifaces						2	2
End scrapers						1	1
Misc. bifaces		3	1	1	2	22	29
Gouge-scraper		1				2	3
<u>Unifacial</u>							
Circular, large						1	1
Circular, small						3	3
Side scraper		1				2	3
End Scraper						2	2
Misc. uniface						3	3
Utilized flakes			2				2
<u>Other</u>							
Cores						5	5
Hammerstone						1	1
<u>Ground Stone</u>							
Abrader, sandstone						1	1
Quartzite cobble						1	1
<u>Miscellaneous features</u>							
Hearths, intact						2	2
Hearths, disarrayed						6	6
Baked clay nodules				*		*	
Fire-fractured stones		*	*		*	*	
<u>Shell</u>							
Oliva shell tinkler						1	1
Mussel shell fragments					2	2	4
Marine shell					1		1
<u>Bone</u>							
Fragmentary sp. indet.						7	7
Total		18	11	7	7	119	162

* = present but not counted

Observed Features

During initial walks over the site, numerous isolated features were observed, including two intact hearths, one slightly disarrayed hearth, and five completely disarrayed hearths. On the northern border of the site, a feature of particular interest was isolated. This feature consisted of numerous flakes or chipping debitage, a prepared blank, preforms, possibly discarded preforms, and four complete and fragmentary arrowpoints.

After observing this feature, a "dog-leash" collection (10 feet in diameter) was conducted. Artifacts and flake debris surface-collected during the collection include:

<u>Artifact</u>	<u>Total Number Collected</u>
<i>Starr</i> arrowpoint	1
Side-notched arrowpoints	3
Blank	1
Preforms	8
Planforms	5
Quartzite cobble with abraded or ground facets	1
Recovered flakes	89

Starr

Triangular in outline, with slightly concave lateral edges, and a deep concave base. Length: 26 mm; maximum width: 17mm; maximum thickness: 2 mm; depth of basal concavity: 4 mm.

Side-Notched arrowpoints

Triangular in outline, with straight to slightly concave lateral edges and base slightly concave. The specimens are characterized by deep, narrow side notches near the basal edge, with the resulting tangs squared. Length of complete specimen: 36 mm; maximum width: 21 mm; maximum thickness: 4 mm. Estimated lengths of fragmentary specimens: 35 to 40 mm; maximum width: 18 to 22 mm; maximum thickness: 3 to 4 mm; and depth of notch on lateral edge: 4 to 5 mm. (See Figure 2.)

Blank

Possibly heat treated. Somewhat triangular in outline, with a rounded base. Specimen exhibits a rather ragged and thick form, with a number of large thinning flakes removed from both faces or surfaces. Length: 49 mm; maximum width: 36 mm; and maximum thickness: 22 mm.

Preforms

Triangular in outline, lateral edges vary between straight, convex to concave. Basal edges are straight to well rounded. Specimens exhibit only a general design of being projectile points. In some instances, very similar to small triangular dart points. Lengths vary between 35 to 45 mm; widths: 19 to 26 mm; and thickness between 8 to 17 mm. Two specimens may have been discarded due to thick obstructions, causing hinge flakes during thinning process.

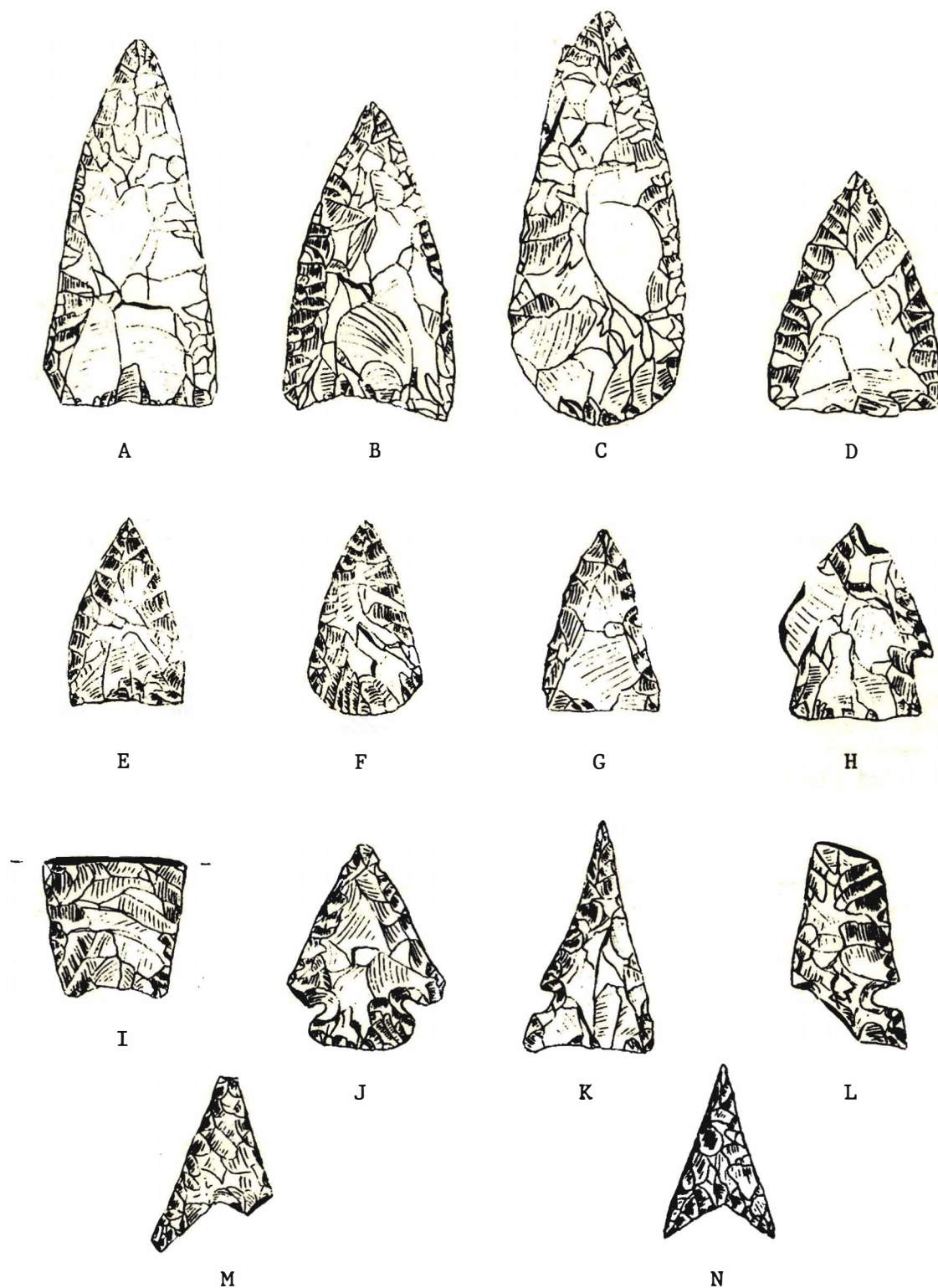


Figure 2. Surface-collected artifacts from Starr County sites. A,B, *Tortugas* (SR 251); C, *Abasolo* (SR 251); D, *Tortugas* (SR 134); E, *Matamoros* (SR 133); F, *Catan* (SR 133); G, *Matamoros* (SR 251); H, Corner-notched (SR 133); I, *Angostura* (SR 133); J, Corner-notched with rounded stem (SR 135); K, L, Side-Notched Arrowpoints (SR 251); M, *Starr* (SR 134); N, *Starr* (SR 251).

Planforms

Triangular in outline, with lateral edges straight to convex. Primary flaking occurs on all specimens, with little or no secondary flaking. One specimen exhibits a slight indentation on a lateral edge, possibly indicating an attempt at notching. Two specimens retain thick obstructions, resulting in hinge flakes, and may have been discards. Lengths vary between 35 to 45 mm; widths: 21 to 25 mm; and maximum thickness: 5 to 8 mm.

Quartzite Cobble with abraded or ground facets

A quartzite cobble with two small abraded or ground areas forming angled planes. One abraded or ground plane is slightly depressed. Depth of this depression is approximately 1 mm. Under magnification of 10X and 15X, striations, uneven smoothing and light rippling is evident in the two abraded areas (Chadderdon 1976: Mokry 1976).

Flake Debris

Eighty-nine flakes recovered during the "dog-leash" collection were analyzed, and each category used is based on the definitions by Hester (1971).

<u>Type of Flake</u>	<u>Number</u>	<u>%</u>
Initial cortex flakes	5	6.0
Secondary cortex flakes	12	13.0
Interior flakes	5	6.0
Flake fragments	65	73.0
Fragmentary worked biface edge	1	1.0
Utilized flake	<u>1</u>	<u>1.0</u>
.	89	100.0

After cleaning and grouping into each category, eight flakes were recognized as having color and material characteristics of the worked and/or complete bifaces, included are:

<u>Type of Biface</u>	<u>Number</u>	<u>Number and Type Flake</u>
Preform	2	3 flake fragments 1 interior flake
Planform	1	4 flake fragments

It is assumed that this cluster of artifacts, in various stages of reduction/manufacture and flake debitage represents a specialized activity, i.e. flint knapping.

It is possibly significant that there was a complete absence of cores and hammerstones, possibly indicating: 1) the reuse of large flakes and chipping debris from the earlier Archaic occupation; 2) that chert material was collected and partially reduced in another area, and brought to this location, and 3) flake removal was produced by the use of an antler or bone billet.

Due to the small flake sample, it is difficult to ascertain the real means of reduction, but the presence of a few flakes with small platforms and bulbs of percussion would indicate some sort of direct percussion.

The presence of arrowpoints within this cluster would indicate a specialized activity attributable to a temporary or short-term Late Prehistoric occupation; the types of arrowpoints (*Starr* and side-notched) suggests that this occupation was very late in that period or may even be protohistoric.

DISCUSSION AND CONCLUSIONS

The sites reported in this paper are the result of an archaeological survey along the upper Arroyo los Olmos, in west-central Starr County, Texas. A brief description of each site, the immediate environment, and materials collected has been presented.

Based on time-diagnostic projectile points collected, a tentative chronology, ranging from Late Paleo-Indian, through the Archaic and up to the Late Prehistoric or Protohistoric is present within the survey area.

The Paleo-Indian period is represented by a single *Angostura* point from site 41 SR 133. The presence of this projectile point suggests the presence of Paleo-Indian occupations during the terminal Pleistocene. Further evidence of such occupations along the Arroyo los Olmos are possibly evident at the La Perdida Site, located approximately ten miles downstream (Weir 1956), and at 41 SR 120, an upland site, that has possible evidence of Pleistocene occupation (Nunley and Hester 1975). The existence of Late Paleo-Indian projectile points on predominately Archaic sites poses a number of questions, and this problem has been discussed by others (Weir 1956; Hester 1968). The occurrence of such distinctive terminal Pleistocene points seems to indicate the real presence of Pleistocene occupations within the general area, if not within a specified survey or study area.

The Archaic period is characterized by the occurrence of a variety of dart point styles common to South Texas, including the *Abasolo*, *Tortugas*, *Matamoros* and *Catan*. Within the survey area the sites and artifacts are largely attributed to this period, and probably reflect occupations by groups who continued a hunting and gathering lifeway.

Based on excavations at the Falcon Reservoir, Suhm, Krieger and Jelks (1954) proposed the Falcon and Meir Foci for this portion of South Texas. During the excavations, a radiocarbon date of about 2700 B.C. was obtained for the Falcon Focus (Campbell 1960).

Newton (1968) has suggested that an unbroken continuum exists, based on morphological similarities, among projectile points collected in Starr County.

Subsequent research (Nunley and Hester 1975) has provided data showing these earlier constructs to be an oversimplification. Nunley and Hester concluded that presently there are no valid statements concerning the prehistory of Starr County.

Due to the lack of controlled data from stratified archaeological sites, the formulation of an internal chronology for the Archaic along the Rio Grande of Southern Texas is not yet feasible. Much more work needs to be done before a realistic sequence can be developed.

The *Starr* and side-notched arrowpoints can be attributed to the Late Prehistoric (Neo-American) period.

The presence of arrowpoints on sites with largely Archaic accumulations would seem to indicate that the Late Prehistoric peoples of the area continued to utilize the same micro-environments and sites that were undoubtedly used during the Archaic.

Starr arrowpoints appear to be quite common in South Texas, especially in Cameron and Starr Counties, and have been considered a major trait of the Brownsville Focus (Suhm and Jelks 1962). The distinctive side-notched arrowpoints from sites 41 SR 251 and 41 SR 135 are similar to specimens from sites in Duval County and neighboring Tamaulipas, Mexico (Hester 1972). Presently, only a few specimens have been documented in South Texas and with this limited documentation, it would appear that this arrowpoint type may be a localized form with limited areal distribution. Only through further site documentation, controlled excavations, and surface collections can the distribution and chronology of these arrowpoints be better understood.

The sites located during the survey are located in two distinct environments: (a) upland, and (b) floodplain.

Sites in upland areas are generally small and are usually in close proximity to the present arroyo. Occupational materials are scant, with few lithic materials, occasional fire-fractured stones, indicating possible hearths, and little chipping

debris. In most cases, sites of this nature probably represent short-term occupations, and may indicate a continued exploitation of both riverine and upland resources. It is speculated that sites in this area may also represent the fluctuation in water availability, channeling, high or low water level, or the existence of perennial ponds. The exception, site 41 SR 251, a long-term upland site, is located a good distance from the present channel. This site may possibly indicate the existence of a spring or perennial pond, and may represent the exploitation of the flora and fauna specifically related to the upland environment, with occasional supplement from the riverine resources.

Floodplain sites in most cases are very similar to the upland sites, i.e., minimal occupational debris. Again these sites appear to represent short-term occupations, and are related to the exploitation of both the riverine and upland resources.

In summary, all the sites are lithic scatters where, in most cases, the artifacts have been displaced from their original context by erosional process, and represent short-term to long-term occupations. It is further speculated that the settlement patterns and seasonal subsistence rounds probably did not differ greatly during the different periods of occupation.

ACKNOWLEDGEMENTS

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References

- Blair, W. F.
1950 The Biotic Provinces of Texas. *Texas Journal of Science*, Vol. 2, No. 1:93-117.
- Campbell, T. N.
1960 Archeology of the Central and South Sections of the Texas Coast. *Bulletin of the Texas Archeological Society* Vol. 29:145-176.
- Chadderdon, M. F.
1976 An Analysis of Altered Quartzite Cobbles from Victoria County, Texas. *La Tierra* Vol. 3, No. 1:6-15.
- Hester, T. R.
1968 Paleo-Indian Artifacts from Sites Along San Miguel Creek; Frio, Atascosa and McMullen Counties, Texas. *Bulletin of the Texas Archeological Society* Vol. 39:147-161.

1971 Archeological Investigations at the La Jita Site, Uvalde County, Texas. *Bulletin of the Texas Archeological Society* Vol. 42:51-148.

1972 The Surface Archeology of Three Sites in Duval County, Southern Texas. *Bulletin of the Lower Plains Archeological Society* No. 2.

1976 *Hunters and Gatherers of the Rio Grande Plain and the Lower Coast of Texas*. Center for Archaeological Research, The University of Texas at San Antonio.
- Mokry, E. R., Jr.
1976 Notes on an Altered Quartzite Cobble from Webb County. *La Tierra* Vol. 3, No. 2:4-7.

- Newton, M. B., Jr.
1968 The Distribution and Character of Sites, Arroyo Los Olmos, Starr County, Texas. *Bulletin of the Texas Archeological Society* Vol. 38: 18-24.
- Nunley, P. and T. R. Hester
1975 An Assessment of Archaeological Resources in Portions of Starr County, Texas. *Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report No. 7.*
- Suhm, D. A., A. D. Krieger, and E. B. Jelks
1954 An Introductory Handbook of Texas Archeology. *Bulletin of the Texas Archeological Society* Vol. 25.
- Suhm, D. A. and E. B. Jelks
1962 Handbook of Texas Archeology: Type Descriptions. *Texas Archeological Society, Special Publication No. 1.*
- Weir, F. A.
1956 Surface Artifacts from La Perdida, Starr County, Texas. *Bulletin of the Texas Archeological Society* Vol. 27:59-78.

BLACK-ON-WHITE POTTERY VESSEL
FROM CENTRAL TEXAS

Malcom Johnson

This black-on-white pottery vessel was found a little over one hundred years ago, and has remained in the same family ever since.

According to family history, Mr. William Kiehne was living near where Knopp School is, in Gillespie County, Texas.

During the period of about 1865 to 1870, Mr. Kiehne was grazing his cattle and horses in the then open range, between the Knopp School area and the southern side of Enchanted Rock.

Early one morning, Mr. William Kiehne, accompanied by a friend, Mr. Crockett Riley, rode out on horseback to round up some cattle.

Quite accidentally they rode into a small Indian camp. A campfire was still burning, and two pots were sitting on the ground near it. The Indians had evidently seen or heard the riders coming, and had run off into the woods and left the camp. Mr. Kiehne dismounted, picked up the pots, and brought them to his home. The tribal affiliation of the Indians was never known.

Several tribes are known to have been frequenting the area at the time.

In May of 1870, a young boy, Herman Lehmann, was captured by Apaches near his home. His parents had settled on Squaw Creek, about twenty-five miles northwest of Fredericksburg. From the book that he later wrote, "Nine Years Among The Indians, 1870-1879," it can be seen that from the beginning of the Civil War, and for several years after it was over, Indians made periodical raids into the area, and to the outskirts of San Antonio and Austin.

Lehmann mentions that the Apaches made pouches from hides to carry meat and honey in. They had water containers made from strips of woven dogwood, and coated with pine pitch. They also used the stomach and intestines of buffalo and cattle to carry water in. However, he doesn't mention that the Apaches used pottery. Although they made many trips into Mexico, New Mexico, Arizona, and Utah, where they could have traded for it, or taken it during raids. Apparently pottery was too fragile to be of much use to these hard riding Apache raiders. He states that Apaches seldom took squaws along in the raiding party, but that the Comanches traveled in larger, better protected parties, and they frequently took their squaws along.

Other artifacts that belonged to Mr. Kiehne and that have been kept in the family, are a pair of bracelets made of clam shell. They are perforated at the beak portion, and may have had dangles attached to them, or themselves worn as dangles or on a necklace.

The grandchildren do not know where or when Mr. Kiehne obtained these bracelets. They only remember that they "were kept in the larger pot."

So it may be that these bracelets were picked up at the same time that Mr. Kiehne found the pots.

It should not be overlooked that the Indians who had the pots at their camp may have actually been Hopi or other Indians from the New Mexico area. They may have been on a trading excursion to the coast. This could account for the fact that the Indians left their camp, instead of attacking the two men when they rode in.

The exact site where the camp was located is no longer remembered. However, such a find deserves reporting, even if one must say they came from somewhere in the northeast quarter of Gillespie County.

The pots are unique, first of all, because they are the only complete pottery vessels that have been found in the area to my knowledge. Sites in Gillespie County with even a few sherds are few and far between. Secondly, they are unique because of the type pottery that they are. Instead of being the usual Leon Plain, or similar type, they are Black-On-White. The white is a good white color, similar to Acoma pottery. After comparing the pot to various photographs, I tend to think that the designs are more like Hopi than Acoma. However, the question of the pots' origin is still undecided.



Figure 1. Black-on-White pottery vessel found in Gillespie County, Texas.



Figure 2. Front view of Black-on-White pottery vessel showing possible Kachina figure.

To date, only one of the vessels has been seen. The other one, said to be similar, but smaller, is with another relative in a different town.

The vessel is globoid in shape. The base of the pot is curved, and does not have a flat bottom. However, it sits upright fairly well. The neck is roughly two inches in height, and flares outward slightly at the mouth.

The handle is made up of three coils of clay which have been fused together to form a sort of "T" cross section (Figure 1, A-A'). It appears the handle was applied by inserting the ends through holes in the pot and then flattening and smoothing it on the inside. I believe this is referred to as a riveted handle.

Around the rim is a narrow black band. Below that, around the neck, is a sort of fret design. From the book "Pottery Treasures" by Jacka and Gill, 1976, we may be able to get some idea of the significance of some of the designs. The fret design is sometimes used for mesas and canyons. However, a design similar to the one on the pot is also used as a serpent symbol, the guardian of springs and streams.

On the front of the pot is a symbol which may depict a Kachina, which represents the forces of nature (Figure 2). The black square between the Kachina's feet may represent the Four Seasons or Four Winds, and shows that He has power over them. The zig-zag lines represent lightning, and the hatched areas probably represent clouds or rain.

The symbol that looks like a "Y" with a crooked tail, may be a version of the upside-down pyramid, which is used to depict the wind, or whirlwind.

One interpretation, then, of these symbols, might be that the serpents are guarding the mouth of the vessel, to keep out impurities, and that the Kachina, or Great Spirit, has control of the Wind, Rain, and Lightning forces of the Four Seasons.

I wish to thank Mr. Kiehne's granddaughter and her husband for allowing me to photograph, and report on, this fine pottery vessel.

References

Jacka, Jerry, and Spencer Gill

1976 *Pottery Treasures*. Graphic Arts Center Publishing Co., Portland, Oregon. (Photographs by Jerry Jacka and text by Spencer Gill)

Lehmann, Herman

1971 *Nine Years Among the Indians, 1870-1879*. San Felipe Press (Second Edition-Revised), Austin, Texas.

ARCHEOLOGICAL SUMMARY OF THE UPPER TEXAS COAST

L. W. Patterson

INTRODUCTION

The availability of a significant amount of published literature on the archeology of the upper Texas coast is a rather recent development. In fact, the 1958 review of archeology in various Texas regions by the *Bulletin of the Texas Archeological Society* (Vol. 29) did not even have a separate summary for the upper coast. Wheat's (1953) survey of a bayou system west of Houston is the first publication of detailed archeological information for this region. Since that time, the Texas Archeological Survey, Texas A & M University, and the Houston Archeological Society have been the principal organizations conducting research in this region. A regional bibliography is available (Patterson 1976a), which is being updated on a periodic basis, and that now lists 168 published articles. Both professionals and amateurs have made significant contributions. It is now possible to outline the prehistory of the upper Texas coast, although much work remains to be done before a detailed synthesis can be made. Work is still mainly in the data gathering stage, although some general observations on subsistence and cultural change can now be made.

DEFINITION OF REGION

For the regional bibliography, I have defined the upper Texas coast (Patterson 1976a) as a 20 county region of coastal and adjacent counties, bounded on the west by the Brazos River and on the east by the Sabine River. This is similar to Campbell's (1958:178) previous definition. Archeological studies have not been made uniformly throughout this region, although the Texas Archeological Research Laboratory has now recorded a number of sites in all counties. Information has increased rapidly in the last 10 years, especially for counties that previously had few recorded sites.

The upper Texas coast has several ecological zones, including coastal plains, mixed woodlands, marshlands and littoral areas. In a broader sense, this region joins the boundaries of several geographical and cultural adaptation areas, including the eastern woodlands, Gulf coast and the southern Great Plains. Discussions that follow in lifeways and external relationships reflect this diversity, although this region was very conservative in regard to cultural change.

CHRONOLOGY

The earliest recognized occupation in this region is the Paleo-Indian period of roughly 7,000 to 10,000 B.C. Geologically, this is the terminal Pleistocene. The earliest materials are a few surface finds of *Clovis* fluted points (Suhm and Jelks 1962:177, Long 1977). Hester (n.d.) has written a summary for the later part of this time period for the entire Texas coast, but details remain vague due to the small data base. Many sites from this period may presently be under water, due to coastal subsidence. All that can really be said at present is that there are traces of Paleo-Indian occupation. Many remains of Pleistocene fauna, such as elephant and horse have been found here, but not in definite association with artifacts.

Slightly more information is available on the next Early Archaic occupation period of approximately 7,000 to 4,000 B.C., although little information exists on the cultural transition to this later period. No precise dating of cultural remains has been done, and dating is estimated by data on the same types of projectile points from other regions. Definition of narrow time ranges is not yet possible, as projectile point types can be used for long time periods. Even a relative chronology of point types does not seem to be currently possible, because of the small data base.

Point types found on the upper Texas coast, and generally recognized as Late Paleo/Early Archaic are: *Plainview* (Wheat 1953:213, McClure 1977:11, McGuff and Cox 1973:21, Patterson 1978:3), *San Patrice* (Duke 1971, McClure 1977:11, Long 1977, McGuff and Cox 1973:21, Patterson 1978:3), and *Angostura* (Patterson 1978:3, Ambler 1967:Fig. 23). Some points have also been found in the lowest stratum of site 41 HR 315 (Patterson field notes) that fit Shafer's (1977:Fig. 4) description of early stemmed points. Long (1977) has illustrated *Dalton* points from the Beaumont beach area which are usually regarded as transitional Paleo/Archaic, and McGuff and Cox (1973:21) have reported similar *Meserve* points in Harris County, as well as *Lerma* points from the same general time period.

Evidence for Middle Archaic occupation of approximately 4,000 to 2,000 B.C. consists of projectile points usually dated to this period in north-central Texas (Smith 1969). The point types include: *Carrollton* (Duke 1971, McClure 1977:13, Patterson 1976b:173), *Trinity* (Patterson 1976b:173), and *Williams* (Patterson 1976b:173, McClure 1977:11). All of these point types usually have ground stem edges. *Bulverde* may also start in the Middle Archaic, as in central Texas (Prewitt 1974:Fig. 7), but continues well into later periods (Patterson 1978:3). There is some evidence that stemmed points of the general *Gary/Kent* category may start in the Early to Middle Archaic (Wheat 1953: Table 5, Patterson HR 315 field notes).

A greater amount of information is available for the Late Archaic period of 2,000 B.C. to A.D. 100, and for all later periods. The Late Archaic ends with the start of ceramics (Aten 1971: Fig. 10, Aten and others 1976: Fig. 16). Projectile point typology of this time period is covered by McClurkan (1968), Shafer (1968), Wheat (1953), and Patterson (1976b). Numerous sites of this period in Harris County have been published in the Houston Archeological Society Newsletter by W. L. McClure and L. W. Patterson (See References, Patterson 1976a). Typical point types of the Late Archaic on the upper Texas coast are *Gary*, *Kent*, *Elam*, *Ellis*, *Palmillas*, *Ensor*, *Refugio* and *Yarbrough*. Many dart point types continue into the next Woodland period.

The Woodland period of approximately A.D. 100 to 600 is here defined as from the start of ceramics to the start of general use of bifacial arrowpoints. Shafer (1975) has reviewed this period and notes little evidence of change from the Late Archaic. Some dart point types, such as *Kent* and *Gary*, tend to become smaller in the Woodland period (Patterson 1976b:173). References given above for the Late Archaic also show projectile point sequences in the Woodland period. Tight chronological sequences for dart point types in the Late Archaic and Woodland periods are generally not possible, due to long time periods of use of most types. Some studies have been made to establish ceramic sequences (Aten and Bollich 1969, Aten and others 1976), with mixed success. The start of ceramics does seem to be reliably dated to approximately A.D. 100 (Aten and others 1976:Fig. 16). After that, however, ceramic chronologies tend to be vague. The extreme eastern end of the upper Texas coast has a sequence of ceramics somewhat related to neighboring Louisiana (Aten and Bollich 1969), as might be expected. For most of the region, however, there are not enough variations in ceramics with time to give the ordered type of chronological sequences that have been possible in Louisiana. Goose Creek sandy paste pottery predominates throughout post-ceramic time. Aten and others (1976: Fig. 16) have published a ceramic sequence for the Galveston Bay area, but its applicability to even adjacent areas is open to question. For example, bone-tempered pottery seems to occur earlier than generally conceded (Patterson 1976b, 1977), and the occurrence of incised pottery is highly variable from coastal to inland sites. The greater frequency of incised pottery on marine adapted sites may reflect some cultural differences.

The Late Prehistoric period, starting some time after A.D. 600, is characterized by the predominant occurrence of small bifacial arrowpoints (Wheat 1953, Patterson 1976b). Typical types found in this region are *Perdiz*, *Scallorn*, *Fresno*, *Catahoula* and *Clifton*. Other types occurring with somewhat less frequency are *Alba*, *Bonham* and *Bassett*. A few small *Gary/Kent* type dart points still occur during the Late Prehistoric. There is some evidence (Patterson 1976b), now including formal excavation (Patterson 1978), to indicate initial use of the bow and arrow in the Archaic period,

with a long period of concurrent use of the spear-thrower (atlatl), before final predominance of the bow and arrow in the Late Prehistoric. Some inland sites show less use of pottery in the Late Prehistoric than in the preceding Woodland period (Patterson 1976b). Use of grog-tempered pottery at some sites has been noted as a Late Prehistoric trait (Aten and others 1976: Fig. 16).

LIFEWAYS

As previously noted by Willey (1966:329-337) and Jelks (1978:100), the prehistoric occupation sequence of the upper Texas coast is characterized by a nomadic hunting and gathering lifeway which continued essentially unchanged for thousands of years. Few detailed subsistence studies have been published, and the exact nature of seasonal subsistence patterns remains largely unknown. Wheat (1953) has given details of faunal remains over a long time period, and Dillehay (1975) has published a detailed study of subsistence for the lower Trinity River. Deer and turtle constitute the most numerous faunal remains on the many inland sites of all ages that I have surveyed in this region. Marine adapted sites in the littoral areas present a contrast to the inland generalized hunting and gathering pattern. The most frequent type of marine site is the Rangia brackish water shell midden, which is also common on the Louisiana coast (Aten 1967, Ambler 1967, Gilmore 1974, Shafer 1966). As would be expected, most food remains are of a marine nature on these sites, such as gar and alligator, although some amount of hunting activity can sometimes be demonstrated from remains such as deer bones. Marine sites tend to have more ceramics and few lithics compared to inland sites.

Although a rather uniform lifeway persisted in this region, some cultural and technological changes did occur, such as changes in projectile point types, increasing use of the bow and arrow in later time and the introduction of ceramics. As Shafer (1974) has noted, these changes did not seem to alter basic life styles. Marine resources seem to have been increasingly utilized in later time with the highest percentage of shell middens being post-ceramic. Patterson (1976b) has published a study of technological changes for inland Harris County, and the greatest amount of change is noted in the Late Prehistoric. Use of the bow and arrow becomes predominate, instead of darts and the spear-thrower, although the spear-thrower does not seem to have been totally replaced. A more mobile life style seems to have occurred, which can be caused for a number of reasons, perhaps even including greater population pressures. Cohen (1977:83) has noted that people may settle down to agriculture or become more mobile when population pressures increase. Agriculture may not have been a viable subsistence option for the upper Texas coast (O'Brien and Spencer 1976). Details of non-utilitarian aspects of lifeways in this region remain sparse. This is probably because nomadic peoples do not leave many sophisticated cultural remains, and because many materials utilized are perishable. Two mortuary studies by Aten and others (1976) and Hole and Wilkinson (1973) show that decorative items such as bone beads and shell pendants were used, and that the Indian's life did have some ceremonial and/or recreations items. Rattles and bone flutes are good examples (Aten and others 1976). Incised linear art motifs occur in both bone and ceramics. The forthcoming study by Hall (n.d.) will show additional details of grave goods, connected with a mortuary site in Austin County, with items such as ground stone boatstones, a large ceremonial type bifacial knife, and incised bone items.

EXTERNAL RELATIONSHIPS

While the general life style persisted over a long time period, outside influences on the upper Texas coast are detectable. The projectile point styles of the Paleo and Early Archaic periods are part of a wide distribution throughout North America. Middle Archaic dart point types in this region are characteristic of styles found in adjacent areas to the north and east, as well as the Edwards Plateau. The Late Archaic period has projectile point types characteristic of all adjacent regions. Examples are: *Pandora*, *Refugio* and *Shumla* points common to the central Texas coast;

Pedernales points found normally on the Edwards Plateau, and *Darl* and *Yarbrough* points found to the north. Patterson (1975) has noted that most point types that occur in the Late Archaic in Louisiana also are found on the upper Texas coast. The *Ponchartrain* type dart point is characteristic of Louisiana and also occurs in this region (Patterson 1978, McClurkan 1968). *Ellis* and *Gary/Kent* point types found on the upper Texas coast have particularly wide distributions in other regions of eastern North America. In the Late prehistoric period, *Perdiz*, *Scallorn* and *Fresno* arrowpoints found in this region have wide distributions in eastern and central Texas. *Toyah* arrowpoints found in Harris County (Patterson 1976b) show possible Late Prehistoric contact with the southwest, possibly through the so-called Gilmore Corridor (Kreiger 1948). Although little evidence exists, the upper Texas coast remains a likely route for transmission of Mesoamerican influences to Poverty Point and other eastern cultures.

Bone tempered pottery found as early as the Woodland period on the upper Texas coast may show Caddo influences (Dee Ann Story, personal communication) from the north. Shafer (1968) and McClurkan (1968) have shown some Caddo pottery types from sites on the northern edge of this region. Caddo influences over the entire region do not appear to be strong, however. The strongest influence on ceramic types of the upper Texas coast appears to be from Louisiana, with a few examples of the early Tcherfuncte type (Aten and others 1976) and many examples of later Coles Creek incised designs (Aten and Bollich 1969). While ceramics were probably introduced from Louisiana, the main pottery style in this region in all post-ceramic time periods remains Goose Creek Plain with sandy paste. Pottery found on the upper Texas coast is generally not well made, and probably illustrates the transmission of a general idea rather than specific manufacturing techniques such as those that produced the well made pottery types of Louisiana. The shell middens of the upper Texas coast do seem to reflect the same general culture as similar sites in southern Louisiana.

The use of small prismatic blade technology may start as early as the Middle Archaic in this region. This technology is possibly related to the concurrent introduction of the bow and arrow, and may represent a diffusion pattern from the far north (Patterson 1973).

SUMMARY

Presently available evidence shows that there has probably been at least 10,000 years of prehistoric human occupation on the upper Texas coast. A very conservative hunting and gathering lifeway persisted throughout the prehistoric period, with technological changes having little effect on the basic pattern. Detectable external influences also seem to have had little effect on living patterns. This region is no longer an archeological "blank." An extensive literature now exists, and many archeological sites have been recorded in each county of this region. Detailed syntheses of subsistence and settlement patterns remain as future research goals. Much more data is also needed to define any possible regional trading and to obtain a clear picture of the Paleo and Early Archaic periods.

References

- Ambler, J. R.
1967 Three Prehistoric Sites Near Cedar Bayou, Galveston Bay Area. *State Building Commission, Archeology Program, Report No. 8.*
- Aten, L. E.
1967 Excavations at the Jameson Site, Liberty Co., Texas. *Houston Archeological Society Report 1.*
- 1971 Archeological Excavations at the Dow-Cleaver Site, Brazoria Co., Texas. *Texas Archeological Salvage Project, Technical Bulletin 1.*

- Aten, L. E. and C. N. Bollich
1969 A Preliminary Report on the Development of a Ceramic Chronology for the Sabine Lake Area of Texas and Louisiana. *Bulletin of the Texas Archeological Society* Vol. 40:241-258.
- Aten, L. E., C. K. Chandler, A. B. Wesolowsky and R. M. Malina
1976 Excavations at the Harris County Boy's School Cemetery. *Texas Archeological Society, Special Publication No. 3.*
- Campbell, T. N.
1958 Texas Archeology: A Guide to the Literature. *Bulletin of the Texas Archeological Society* Vol. 29:177-254.
- Cohen, M. N.
1977 *The Food Crisis in Prehistory.* Yale University Press.
- Dillehay, T. D.
1975 Prehistoric Subsistence Exploitation in the Lower Trinity River Delta, Texas. *Texas Archeological Survey, Research Report 51.*
- Duke, A. R.
1971 Analysis of Lithic Material from 41 HR 73. *Houston Archeological Society Newsletter* 36:3-6.
- Gilmore, K.
1974 Cultural Variation on the Texas Coast: Analysis of an Aboriginal Shell Midden, Wallisville Reservoir, Texas. *Texas Archeological Survey, Research Report 44.*
- Hall, G.
n.d. Allens Creek: A Study in the Cultural Prehistory of the Lower Brazos River Valley, Texas. *Texas Archeological Survey, Research Report 61.*
- Hester, T. R.
n.d. A Survey of Late Pleistocene Archeological Remains Along the Texas Coast. Unpublished manuscript on file with the author.
- Hole, F. and R. G. Wilkinson
1973 Shell Point: A Coastal Complex and Burial Site in Brazoria County. *Bulletin of the Texas Archeological Society* Vol. 44:5-50.
- Jelks, E. B.
1978 Diablo Range, in *Chronologies in New World Archaeology*, edited by R. E. Taylor and C. W. Meighan, Academic Press, pp. 71-111.
- Kreiger, A. D.
1948 Importance of the "Gilmore Corridor" in the Culture Contacts Between Middle America and the Eastern United States. *Bulletin of the Texas Archeological and Paleontological Society* Vol. 19:155-178.
- Long, R. J.
1977 McFaddin Beach. *Patillo Higgins Series of Natural History and Anthropology, No. 1.* Spindletop Museum, Lamar University.
- McClure, W. L.
1977 White Oak Bayou, 41 HR 89. *Houston Archeological Society Newsletter* 55:9-17.
- McClurkan, B.
1968 Livingston Reservoir, 1965-66: Late Archaic and Neo-American Occupations. *Texas Archeological Salvage Project, Paper 12.*

McGuff, P. R. and W. N. Cox

- 1973 A Survey of the Archeological and Historical Resources of Areas to be Affected by the Clear Creek Flood Control Project, Texas. *Texas Archeological Survey, Research Report* 28.

O'Brien, M. J. and C. Spencer

- 1976 The Upper Texas Coast: Environmental Variables and Human Adaptations. *Texas Journal of Science* Vol. 27(4):453-463.

Patterson, L. W.

- 1973 Some Texas Blade Technology. *Bulletin of the Texas Archeological Society* Vol. 44:69-111.
- 1975 The Poverty Point Culture, as Seen from Southeastern Texas. *Louisiana Archaeology* Vol. 2:153-162.
- 1976a Bibliography of the Prehistory of the Upper Texas Coast, No. 3. Houston Archeological Society, Special Publication.
- 1976b Technological Changes in Harris County, Texas. *Bulletin of the Texas Archeological Society* Vol. 47:171-188.
- 1977 An Archaic-Woodland Site: 41 HR 223, Harris Co., Texas. *Houston Archeological Society Newsletter* 56:4-7.
- 1978 Preliminary Report on Site 41 HR 315, Harris Co., Texas. *Houston Archeological Society Newsletter* 59:2-4.

Prewitt, E. R.

- 1974 Archeological Investigations at the Loeve-Fox Site, Williamson Co., Texas. *Texas Archeological Survey, Research Report* 49.

Shafer, H. J.

- 1966 An Archeological Survey of Wallisville Reservoir, Chambers Co., Texas. *Texas Archeological Salvage Project Report* 2.
- 1968 Archeological Investigations in the San Jacinto River Basin, Montgomery Co., Texas. *Texas Archeological Salvage Project, Paper* 13.
- 1974 Archeology and Indians of Southeast Texas. In Participants Handbook, *The Big Thicket*, Contemporary Science Seminar, University of Houston and Houston Museum of Natural Science.
- 1975 Comments on Woodland Cultures of East Texas. *Bulletin of the Texas Archeological Society* Vol. 46:249-254.
- 1977 Early Lithic Assemblages in Eastern Texas. In *Paleoindian Lifeways*, edited by E. Johnson, *The Museum Journal* 17:187-197, Lubbock.

Smith, C. A.

- 1969 Archeology of the Upper Trinity Watershed. *The Record*, Vol. 26, No. 1.

Suhm, D. A. and E. B. Jelks

- 1962 Handbook of Texas Archeology: Type Descriptions. *Texas Archeological Society, Special Publication* No. 1.

Wheat, J. B.

- 1953 The Addicks Dam Site. *Bureau of American Ethnology, Bulletin* 154:143-252.

Willey, G. R.

- 1966 *An Introduction to American Archaeology*, Vol. 1, Prentice-Hall.

A NOTE ON ARROWPOINTS COLLECTED IN WEBB AND DUVAL COUNTIES

Lynn Highley

Several types of Late Prehistoric projectile points were recently loaned to the Southern Texas Archaeological Association for documentation. Mr. Bromley Cooper of Kingsville, Texas, surface-collected the arrowpoints from several sites along the border area between northeastern Webb County and northwestern Duval County. Specimens available for examination include *Bonham*, *Edwards*, *Harrell* and *Toyah* points. A large number of *Scallorn* and *Perdiz* points have also been collected from these two counties.

ARCHAEOLOGICAL BACKGROUND

Very limited information has been published regarding archaeological findings in Webb and Duval counties. Beasley (1978) recorded a Late Prehistoric site in Webb County with a predominance of *Perdiz* arrowpoints. Saunders and Saunders (1978) documented a large collection of artifacts from Webb County with the majority of the diagnostics belonging to the Archaic period. However, several *Fresno* and *Perdiz* arrowpoints were listed in the artifact inventory.

Very few sites have been recorded in Duval County. In 1976, three sites (41 DU 5-7) were recorded by the Center for Archaeological Research. Late Prehistoric artifacts included several potsherds and one *Scallorn* point surface-collected from 41 DU 7 (information on file, CAR, UTSA).

ARROWPOINT DESCRIPTIONS AND DISCUSSION

The six types of arrowpoints are briefly described and discussed. Measurements are in millimeters; weights are in grams. The following abbreviations were used: L: length; BW: blade width; T: thickness; SL: stem length; SW: stem width; NW: neck width; and W: weight. Incomplete measurements are enclosed in parentheses. Incomplete specimens were not weighed.

Bonham (1 specimen; Fig. 1, A) The triangular blade has recurved lateral edges and barbed shoulders. The stem is rectangular. The specimen was found in Duval County. L: 4.0; BW: 1.8; T: 0.3; SL: 0.8; SW: 0.5; NW: 0.5; WT: 1.5.

Bonham points are common to eastern and north central Texas and are occasionally found in the Pecos River area (Suhm and Jelks 1962:267). They are dated from 800-1200 A.D. (*ibid*). A similar specimen was recently collected from McMullen County during investigations carried out by the Center for Archaeological Research for the Nueces River Project (personal observation).

Edwards (22 specimens; Fig. 1, B, C) *Edwards* arrowpoints have deep corner-notches and sharply barbed shoulders. The base is broadly concave. The triangular blades have straight or slightly concave lateral sides. One specimen has alternately beveled lateral sides. Raw materials used include chert, quartzite and silicified wood.

Two *Edwards* points were found in Webb County; 20 were found in Duval County. L: 2.1-3.6; BW: 1.1-(1.8); T: 0.3-0.5; SL: 0.5-(0.8); SW: 0.4-1.6; NW: 0.5-(1.0); WT: 1.0-1.4.

The distribution of *Edwards* points has recently been reviewed by Mitchell (1978). *Edwards* points have been documented as far south as Live Oak County, but information regarding their presence in Duval and Webb counties has not been



A



B



C



D



E



F



G

Figure 1. A, *Bonham* point; B, C, *Edwards* points; D, E, *Harrell* points; F, G, *Toyah* points. (Drawn to actual size.)

previously recorded. *Edwards* points have radiocarbon dates of A.D. 930, 960 and 1040 from the La Jita site in Uvalde County (Hester 1971:114-115) and A.D. 1090 from 41 BX 36 (Gerstle, Kelly and Assad 1978:253).

Harrell (2 specimens; Fig. 1, D, E) These side-notched points have a broadly concave base and are similar to *Washita* points (Bell 1958:98). They were found in Duval County. L: (1.2)-2.0; BW: 1.2-1.5; T: 0.3; SL: 0.7; SW: 1.4-1.5; NW: 0.7-0.9; WT: 1.0.

Harrell points are common in north Texas, but occasionally occur as far south as the upper Brazos River and Trinity River drainages (Suhm and Jelks 1962:275).

Perdiz and Scallorn. According to Mr. Cooper, *Perdiz* and *Scallorn* points occur more frequently than other arrowpoints in this part of south Texas. He has collected numerous specimens which will be analyzed later as part of a more in-depth study of artifacts he has collected in Duval County.

Toyah (2 specimens; Fig. 1, F, G) These specimens are similar to *Harrell* points, but the base has a central U-shaped notch. One specimen is serrated. They were found in Duval County. L: 2.0-2.8; BW: (1.1)-1.3; T: 0.3-0.4; SL: 0.6-0.8; SW: (1.0)-1.6; NW: (0.8)-1.0; WT: 1.5.

Toyah points are common in the west-central and Trans-Pecos areas of Texas (Suhm and Jelks 1962:291).

CONCLUDING REMARKS

Although this collection of arrowpoints is small and from several different locations, it has been briefly discussed to show the occurrence of several varieties of Late Prehistoric projectile points in Webb and Duval counties. *Perdiz* and *Scallorn* points have been recorded from several sites in this area of south Texas, but reported occurrences of *Bonham*, *Edwards*, *Harrell* and *Toyah* points are rare.

[Editor's Note: This report extends the distribution of *Edwards* and other Late Prehistoric arrowpoints into Duval and Webb counties, thus considerably enlarging the known distribution of *Edwards* arrowpoints and thus the area of the Turtle Creek Phase. The presence of *Toyah* and side-notched arrowpoints in these counties raises some intriguing questions concerning later portions of the Late Prehistoric and the early Historic periods which require additional research.]

References

- Beasley, Tom S.
1978 A Late Prehistoric Site in Webb County, Texas. *La Tierra* Vol. 5, No. 2:4-9.
- Bell, Robert E.
1958 Guide to the Identification of Certain American Indian Projectile Points. *Oklahoma Anthropological Society, Special Bulletin* No. 1.

Gerstle, Andrea, Thomas C. Kelly and Cristi Assad

- 1978 The Fort Sam Houston Project: An Archaeological and Historical Assessment. *Center for Archaeological Research, The University of Texas at San Antonio, Archaeological Survey Report No. 40.*

Hester, Thomas R.

- 1971 Archeological Investigations at the La Jita Site, Uvalde County, Texas. *Bulletin of the Texas Archeological Society* Vol. 42:41-148.

Mitchell, J. L.

- 1978 The Turtle Creek Phase: An Initial Late Prehistoric Component in Southern Texas. *La Tierra* Vol. 5, No. 4:32-43.

Saunders, John T. and Elaine L. Saunders

- 1978 A Ranch Survey in the Upper Santa Isabella Watershed, Webb County, Texas. *La Tierra* Vol. 5, No. 1:2-18.

Suhm, Dee Ann and Edward B. Jelks

- 1962 Handbook of Texas Archeology: Type Descriptions. *Texas Archeological Society, Special Publication No. 1.*

THE ROBERT F. HEIZER MEMORIAL AWARD

The Editor is pleased to announce the establishment of the Robert F. Heizer Memorial award for outstanding contributions to the study of Archaeology.

The late Robert F. Heizer was one of the most outstanding leaders in the field of Archaeology in the United States of America, and perhaps in the world. He was for many years a Professor of Anthropology and Coordinator of the Archaeological Research Facility at the University of California at Berkeley. He received his Ph. D. at Berkeley in 1941 and did archaeological fieldwork in California, Nevada, Mexico, Guatemala, Bolivia, Egypt, and Southern Texas. Dr. Heizer authored numerous publications dealing with his work, including two reports in the *Bulletin of the Texas Archaeological Society* (1957 and 1976) on the Olmec site at La Venta. He was also co-author (with Philip Drucker) of the basic report on that site published in the *Bureau of American Ethnology Bulletin* 170 (1959).

Dr. Heizer had a direct impact on Archaeology in Southern Texas through his work as co-principal investigator at the Baker Cave and through his talk to the annual meeting of the Texas Archeological Society in San Antonio on October 30, 1978. He had perhaps an even greater indirect impact on Archaeology in Southern Texas through his students (most notably Dr. Thomas R. Hester) and friends, who were among those responsible for the founding of the Southern Texas Archaeological Association in 1973 and the Center for Archaeological Research of the University of Texas at San Antonio in 1974.

We will honor the memory of Dr. Heizer and his contributions to archaeology by annually presenting this award to an individual who has made an outstanding contribution to the study of the archaeology of our area. We can think of no more fitting a way to both remember Dr. Heizer and to honor his memory than through the recognition of the work of others.

Nominations for this award based on work accomplished during 1979 may be submitted to the Chairman of the Nominations Committee (Jim Mitchell, 6 Southeast Road, Randolph AFB, TX 78148) not later than December 1, 1979.

THE AUTHORS

LYNN HIGHLEY is the STAA Vice Chairperson for 1979, and a research associate at the Center for Archaeological Research of the University of Texas at San Antonio. Lynn has authored a variety of reports at the Center and recently coauthored a report on the Scorpion Cave in Medina County for the *Bulletin of the Texas Archeological Society* Vol. 49.

MALCOM L. JOHNSON lives in Fredericksburg. Mr. Johnson has previously published a number of articles in *La Tierra* including a "Possible Hut Site in Central Texas" (Vol. 2, No. 2, April 1975), "The Hut Experiment" (Vol. 3, No. 1, Jan. 1976), and more recently "Oliva Shell Beads or Dangles, San Patricio County, Texas" (Vol. 6, No. 3, July 1979). Malcom has a couple of more reports in progress...

EDWARD R. MOKRY, JR. of Corpus Christi is a former chairman of STAA (1977) who has made a number of presentations to STAA meetings. Ed's archaeological interests extend well beyond the Corpus Christi area and include the area around Three Rivers ("Notes on Paleo-Indian Projectile Points from McMullen County," Vol. 3, No. 1, Jan. 1976) and Webb County ("Notes on an Altered Quartzite Cobble From Webb County," Vol. 3, No. 2, May 1976). In the current issue, he deals with sites in Starr County.

LEE PATTERSON of Houston is a frequent contributor to *La Tierra* and needs little introduction for our readers. Lee has published in archaeological journals and publications all over the United States and Canada and is one of the most active avocational archaeologists in the country. His summary of the archaeology of the upper Texas Coast covers a 22 county area around Houston; this paper was invited in order to provide STAA readers in South Texas with an overview of the archaeology of that area. Some of Lee's ideas may be controversial, such as his inclusion of a Woodland horizon between the Archaic and the Late Prehistoric. However, I am sympathetic with his views. Lee has authored a much longer and more detailed overview of his area which is to be published in the 1979 *Bulletin of the Texas Archeological Society* Vol. 50.

S. ALAN SKINNER has returned to Dallas after a long, hot summer in West Texas. Alan has been introduced to STAA readers twice already this year (April and July) and his background need not be repeated here. Dr. Skinner is now associated with Archaeology Resource Consultants, 4420 Pimlico Drive, Dallas, Texas 75214. Telephone (214) 368-0478. The A.R.C. stationary includes a quote which says something for all of us:

"THE PAST BELONGS TO THE FUTURE BUT ONLY THE PRESENT CAN PRESERVE IT"