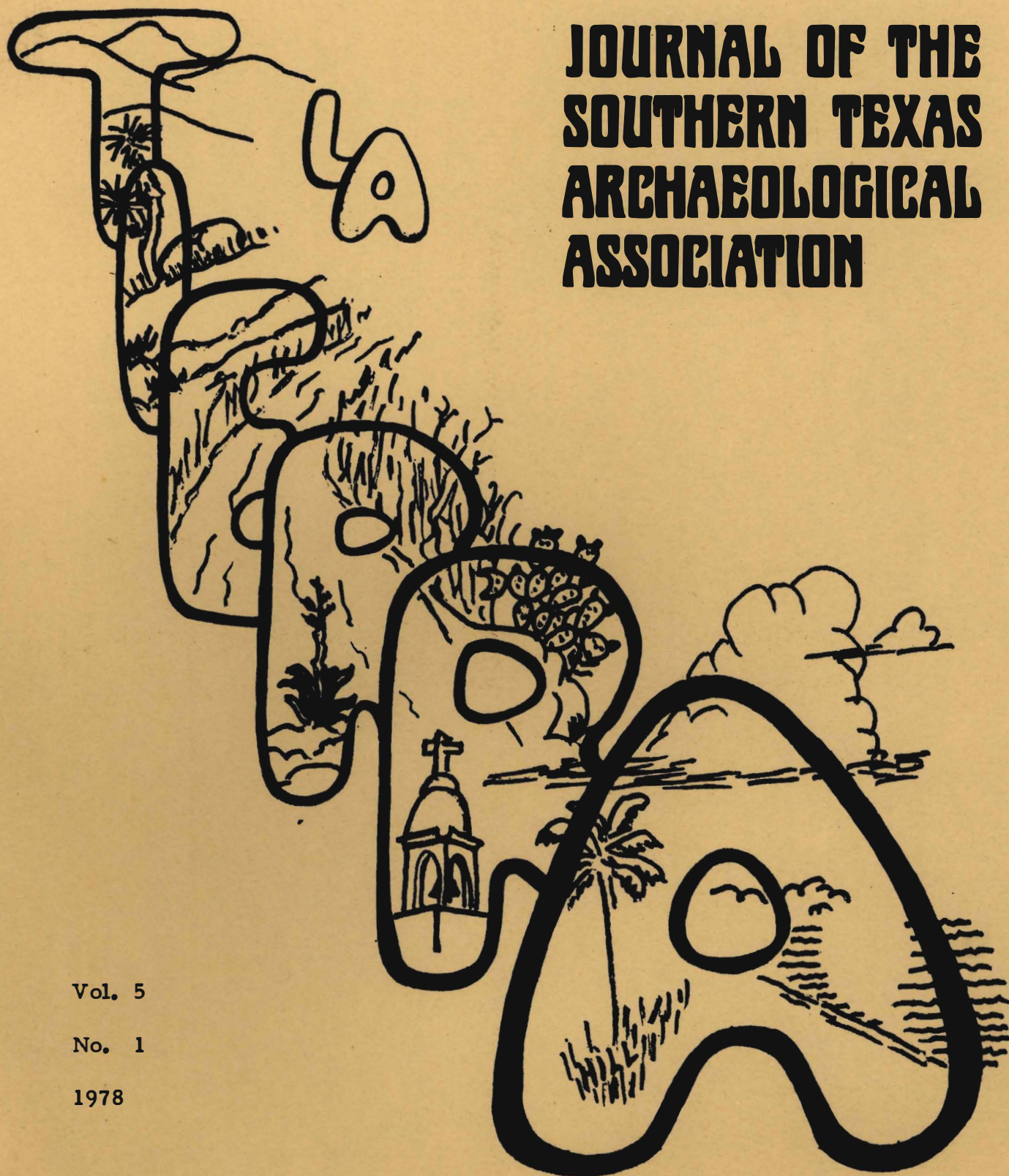


# JOURNAL OF THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION



Vol. 5

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# LA TIERRA

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Journal Editor

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## FROM THE EDITOR

"La Tierra? The Land? Sure, the land of Southern Texas...the land of the perpetual hunter and gatherer...this warm, exciting land of eternal plenty!"

With these words our Premier Editor, T. C. Hill, Jr., initiated the first issue of this journal in January 1974. As we begin Volume 5, it is fitting to recall his words and his spirit - the earthy colloquialisms and the sharply-contrasting gentle feelings of our favorite Coahuiltecan maiden, Little Flower.

Those first issues of La Tierra represented an enthusiastic spirit and a certain charm which is worthy of emulation. As your new editor, I pledge to try to capture some of that spirit, but I will very much need the help of all STAA members to do it. I will need your ideas, your manuscripts, your interest, and your faith.

There is an awful lot of archaeological information out there which really needs to be reported. Not every article has to be a precisely worded scientific statement. There is plenty of room for site reports, descriptions of artifacts or even just illustrations of some of the things you've collected over the years. There's room also for your ideas - Your thoughts about the prehistory (and history) of Southern Texas.

In looking back through the four published volumes of La Tierra, I see quite a few now-familiar names. In the issues to come in Volume 5, I hope that we will see many of these old "Standbys" again and that we can also see many new names as well - those of you who have been reading all this time but who are too hesitant to sit down and write. Don't be shy - we can always spruce up your wording or throw in a few references. But YOU have to help by sending in the basic information and illustrations.

I plan to be an aggressive editor, as some of you have already found out. Don't be surprised to get a call or a letter asking what is going on in your area. Let's share our thoughts and share some of the wealth of information which comes from the kinds of interests we all share. (Remember, T. C., you Promised me a paper on that tubular stone pipe. There! Now you are publically committed.....)

This issue begins with a paper by Tommy and Elaine Saunders; this study will help to introduce our readers to our new Chairman and also serve to show the kinds of things which can be accomplished using artifact collections....

I am looking forward to serving you; I hope that I will have your help in serving the interests of all the STAA membership and, ultimately, in helping to improve our understanding of this land - La Tierra.

## A RANCH SURVEY IN THE UPPER SANTA ISABELLA WATERSHED, WEBB COUNTY, TEXAS

John T. and Elaine L. Saunders

### Abstract

A surface collection of artifacts from a 3,120 acre ranch, all of which lies in the Santa Isabella Creek watershed, is described. This collection was made by James R. Saunders, D.V.M., of San Antonio, while hunting and working cattle throughout the area of the ranch over approximately a twenty-five year period. All lithic material bearing evidence of human alteration was collected. The collection includes 1,822 pieces ranging from large, crude choppers to finely-made projectile points. The collection was used as a model for comparison with the controlled archaeological survey of two specific sites in the same area -- the East and West Branches of the Santa Isabella Creek.

One purpose of this study was to, in some way, devise a method or system by which collections of amateurs can be used in conjunction with professional archaeology.

### Introduction

At this time, there is a paucity of published archaeological data from the Webb County area of Southern Texas. Though there have been numerous collections made, such as this one, there have been few reports which describe the archaeological materials which have been found. There have been attempts at defining the region's cultural units (Sayles 1935; Kelley 1947, 1959; Suhm et al. 1954) and there have appeared a few descriptive reports of archaeological materials (Weir 1956; Nunley and Hester 1966; Hester 1968). This paper will present classificatory and typological data along with comparative and functional analyses of the Saunders collection with the hope that this information will appreciably add to the existing knowledge of the area.

### General Description of the Area

The area is about forty-five miles northwest of Laredo and ten miles east of the Rio Grande. The location is approximately the center of the Tamaulipan Biotic Province of Southwest Texas and Northeastern Mexico (See Figure 1).

During Archaic times, the region was an open savannah grassland. Water was abundantly available in the creeks and rivers. The modern fauna was supplemented by species such as bison, antelope, and prairie dog (Hester 1975). Today, this terrain is gently rolling with low hills and wide valleys, averaging 650 feet above sea level.

Mesquite, thorny brush and prickly pear cover the area at the present time. The soil is sandy clay, and there are stones and pebbles on the tops of the hills and in the arroyos. Larger stones are in the bottoms of the creek beds. The annual rainfall averages about 18 inches; however, recent climatic changes over the past 25 years have shown that this can vary considerably. Temperatures range from slightly below freezing in winter to 110° F. in the middle of summer.

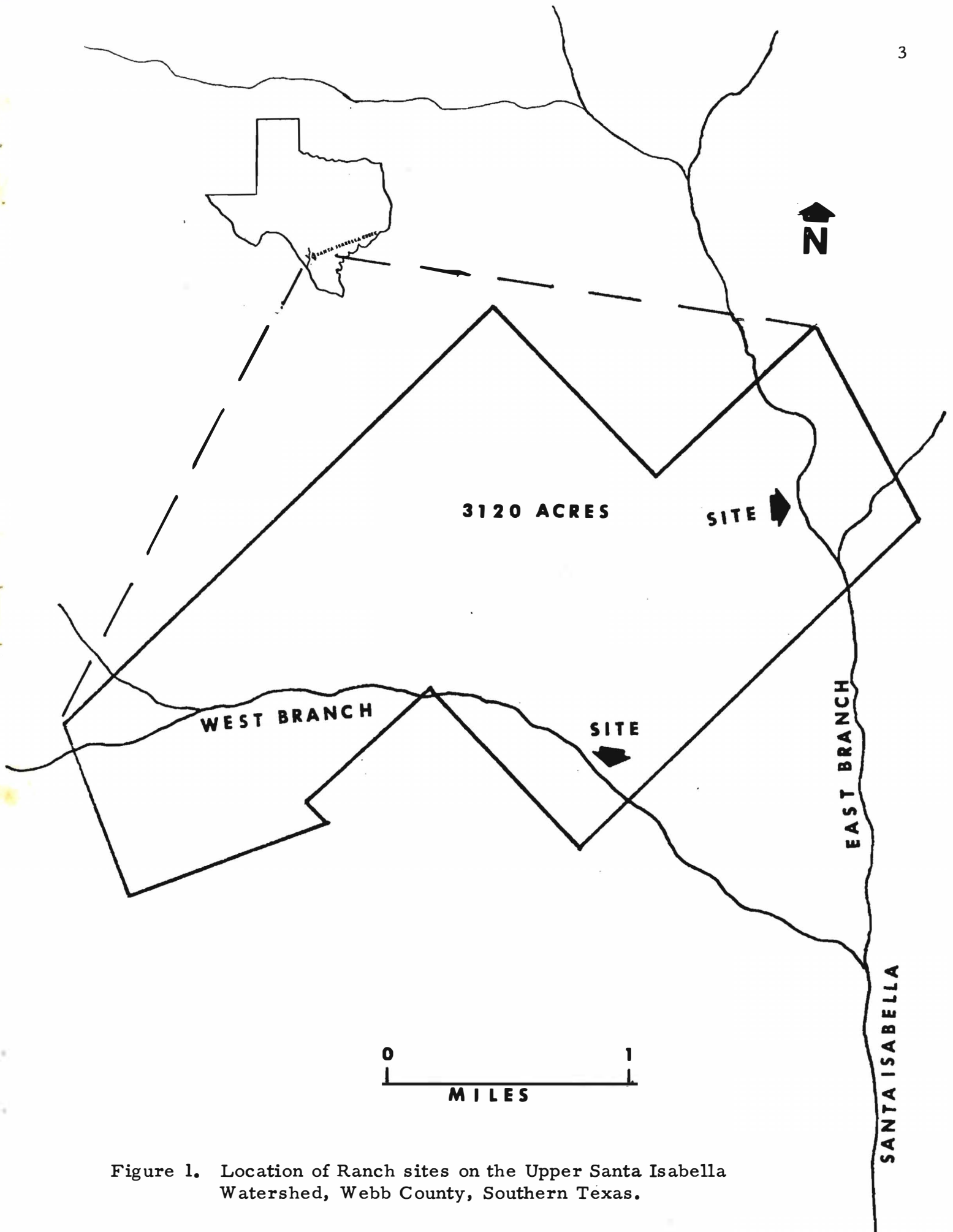


Figure 1. Location of Ranch sites on the Upper Santa Isabella Watershed, Webb County, Southern Texas.

## Categorical Inventory of the J. R. Saunders and Controlled Collections

After thorough study, using the system of classification and typology, the artifacts in Dr. Saunders' collection were divided into 40 categories. Illustrations of each type of artifact are shown in Figures 2 through 9.

For comparative study, a controlled surface collection was made along a one-mile section of the East Branch of the Santa Isabella Creek. These artifacts were divided into the same 40 categories which comprise the model.

An additional controlled surface collection, using the identical sampling system, was collected along the West Branch of the Santa Isabella Creek and divided into the same 40 categories. Due to the heavy rainfall during the latter part of 1976 and early 1977, and the abundant vegetation, this collection was restricted to approximately a one-third mile section along the creek, restricted to a strip 100 meters wide on each side.

All of the artifacts in the three separate collections were enumerated; and, because of the different sizes of the collections, each category was reduced to a percentage of the total of each collection for comparative study (See Table 1).

### Comparative Tests

By observing the concentration of artifacts collected along the East Branch of the Santa Isabella and the availability of water, it was suspected that this area was the zone of occupation. If this observed hypothesis was correct, the activities in the zone of occupation would cause a difference in the distribution of tool categories which would not be equal to the model which was collected at random over the entire ranch.

We conducted the following experiments to test this hypothesis. First we prepared a graph superimposing the tool categories of each collection by percentage to graphically present the technical differences (Figure 10).

A second experiment was conducted by employing Chi-Square tests comparing the East and West Branches with the model. Using 39 degrees of freedom at the .001 level of probability, the critical value (C.V.) was 73.4.

The hypotheses can be stated formally as follows:

East Branch:  $H_0$ : The distribution of tool categories on the East Branch is equal to the distribution of tool categories over the entire ranch.

$H_a$ : The distribution of tool categories on the East Branch is not equal to the distribution of tool categories over the entire ranch.

$$X_{Exp.}^2 = 203.67 > X_{C.V.}^2 = 73.4$$



<u>Categories</u>	<u>J. R. Saunders Collection</u>		<u>East Branch Collection</u>		<u>West Branch Collection</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1. Large choppers	68	3.73	9	8.41	1	3.22
2. Medium choppers	80	4.39	7	6.54	5	16.12
3. Medium crude scrapers	223	12.23	8	7.47	2	6.45
4. Irregular biface scrapers	19	1.04	2	1.86	1	3.22
5. Irregular uniface scrapers	23	1.26	10	9.34	2	6.45
6. Elongated biface scrapers	10	.54	4	3.73	1	3.22
7. Elongated uniface scrapers	23	1.26	5	4.67	0	0
8. Circular biface scrapers	32	1.75	6	5.60	1	3.22
9. Circular uniface scrapers	32	1.75	4	3.73	1	3.22
10. Semi-circular biface scrapers	62	3.40	5	4.67	0	0
11. Semi-circular uniface scrapers	55	3.01	4	3.73	0	0
12. Clear Fork Gouges	9	.49	0	0	1	3.22
13. Guadalupe Gouges	31	1.70	4	3.73	1	3.22
14. Manos	5	.27	0	0	0	0
15. Small, crude worked fragments	332	18.22	17	15.88	6	19.35
16. Small, crude, thin biface fragments	86	4.72	3	2.80	0	0
17. Large, thin biface fragments	18	.98	1	.93	0	0
18. Elongated, thick, medium biface fragments	85	4.66	1	.93	1	3.22
19. Large, square stem-end biface fragments	57	3.12	0	0	1	3.22
20. Large, rounded stem-end biface fragments	94	5.15	2	1.86	0	0
21. Cores	8	.43	0	0	1	3.22
22. Large projectile point fragments	73	4.00	0	0	0	0
23. Medium projectile point fragments	81	4.44	0	0	0	0
24. Leaf-shaped stem-end point fragments	79	4.33	0	0	1	3.22
25. <u>Tortugas</u> type points	88	4.82	1	.93	2	16.12
26. <u>Fresno</u> type points	17	.93	0	0	1	3.22
27. <u>Matamoros</u> type points	3	.16	0	0	0	0
28. <u>Frio</u> type points	9	.49	0	0	0	0
29. <u>Perdiz</u> type points	5	.27	0	0	0	0
30. <u>Bulverde</u> type points	10	.54	0	0	0	0
31. <u>Lerma</u> type points	5	.27	0	0	0	0
32. <u>Gary</u> type points	3	.16	0	0	0	0
33. Leaf-shaped points	33	1.81	1	.93	1	3.22
34. Unidentifiable point fragments	25	1.37	1	.93	0	0
35. Burins	4	.21	0	0	0	0
36. Gravers	4	.21	2	1.86	0	0
37. Drill fragments	2	.10	0	0	0	0
38. Shaft scrapers	7	.38	1	.93	0	0
39. Miscellaneous Unidentifiable tools	17	.93	7	6.54	0	0
40. Hammerstones	33	1.81	2	1.86	1	3.22
Totals	1,822	100%	107	100%	31	100%

Table 1. Categorical Inventories - Santa Isabella Creek Collections.

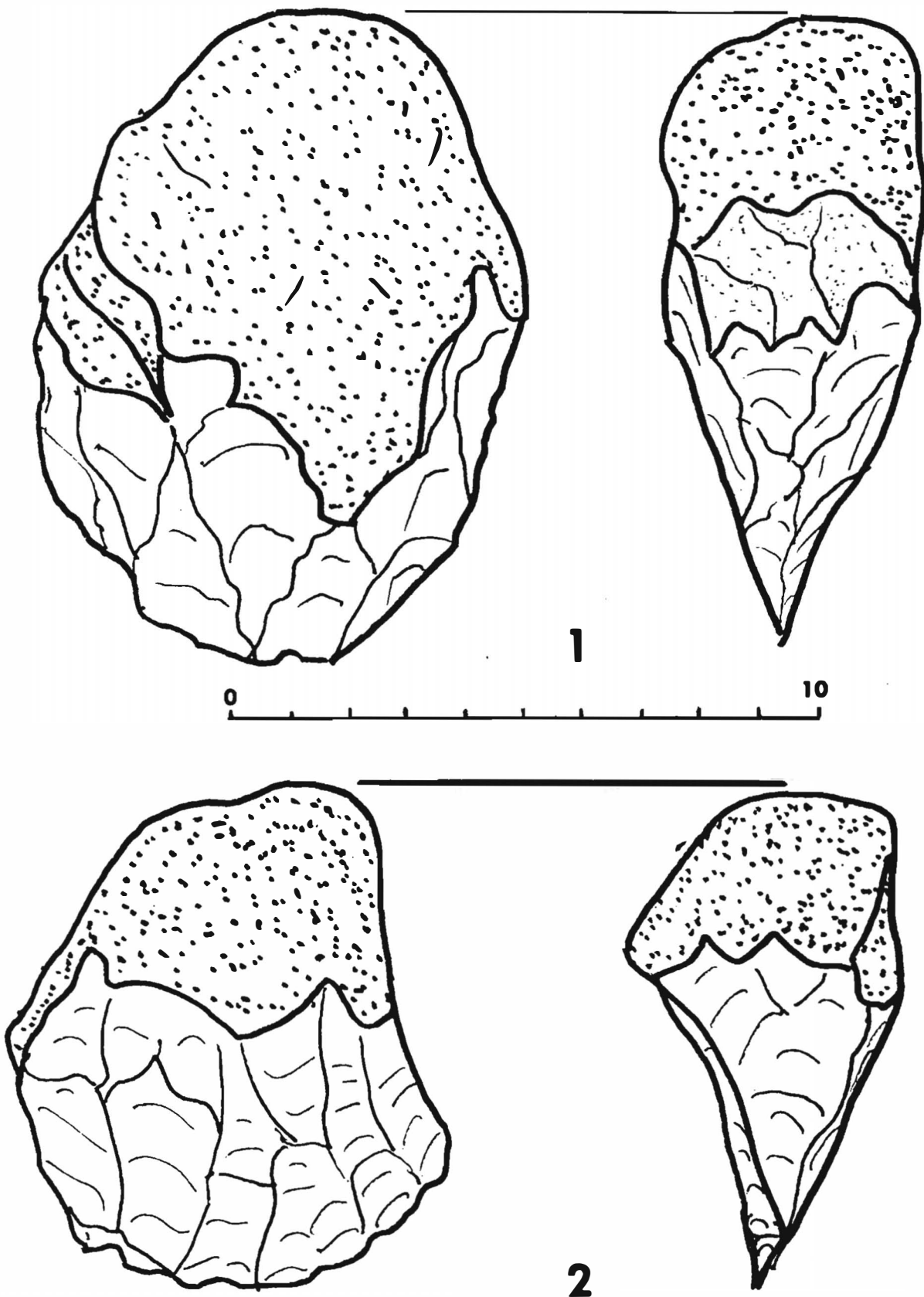


Figure 2



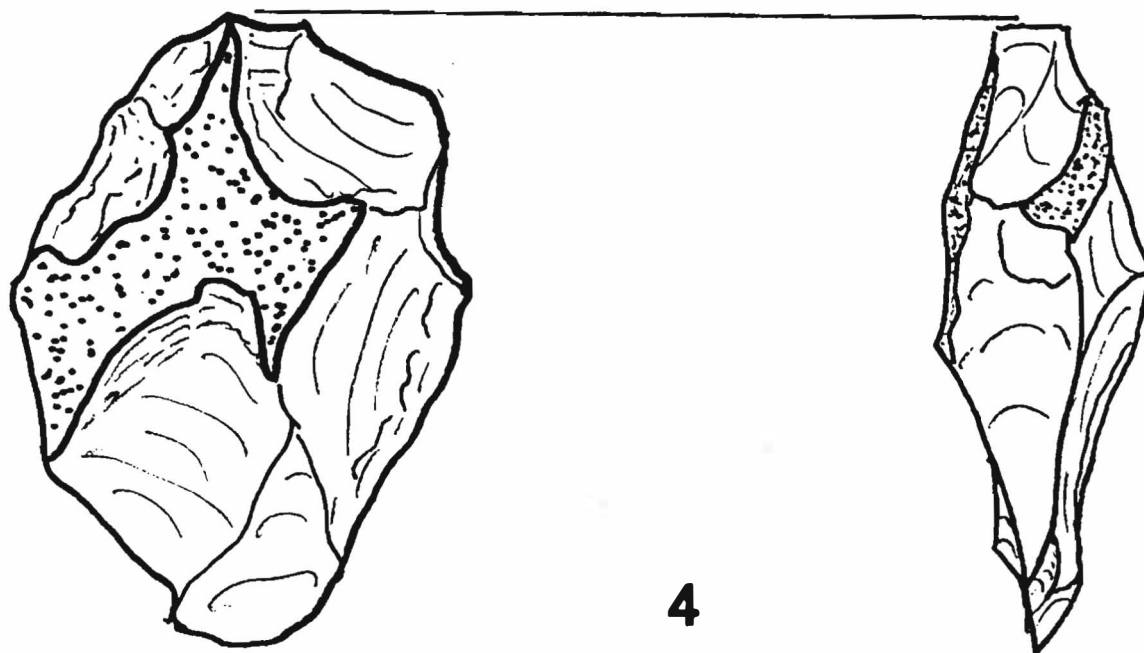
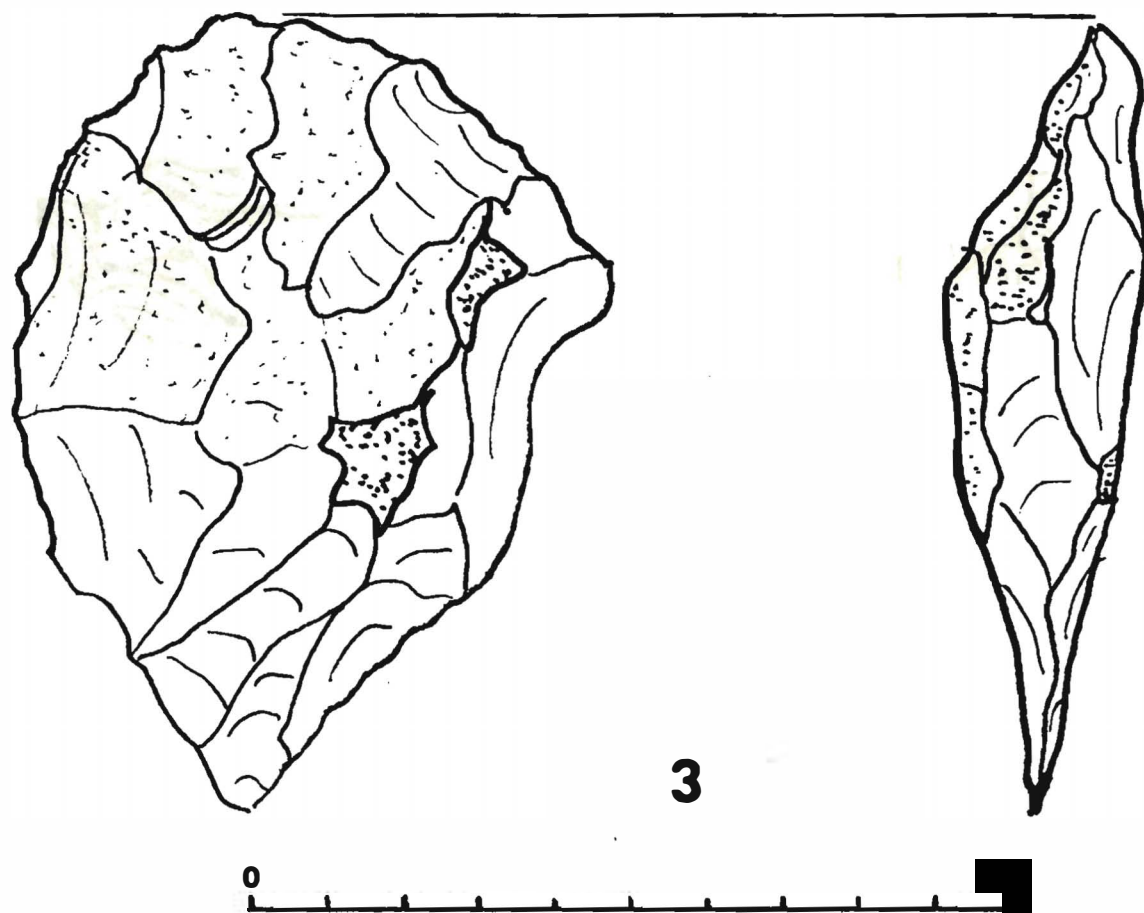


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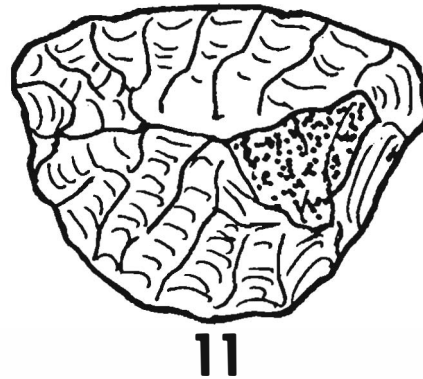
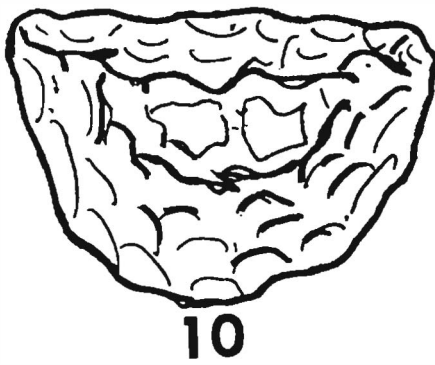
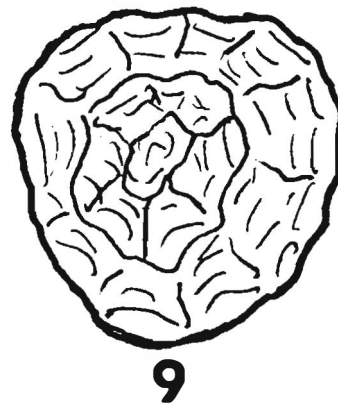
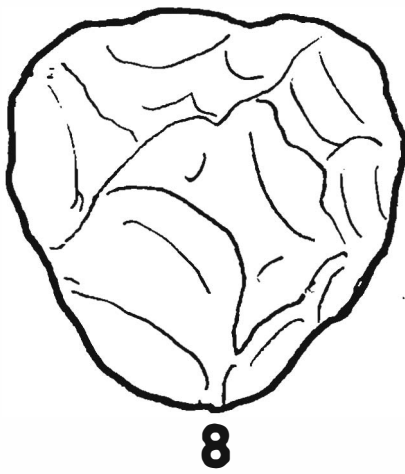
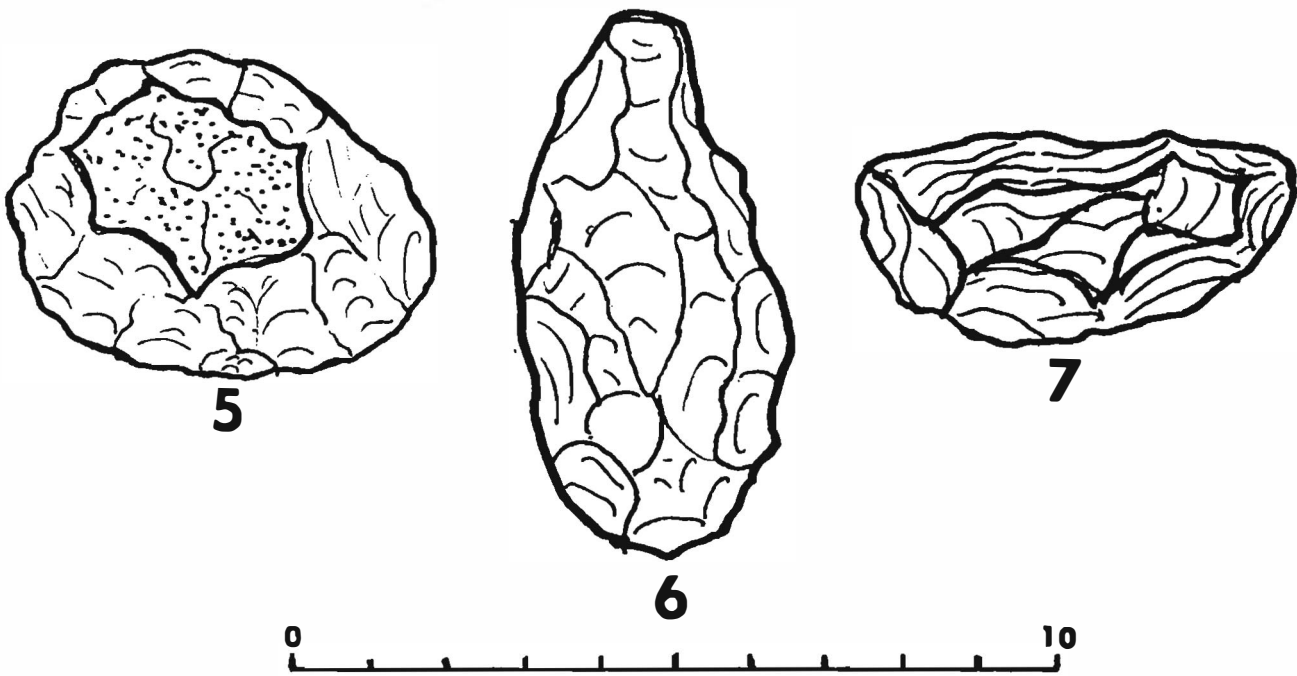


Figure 4.

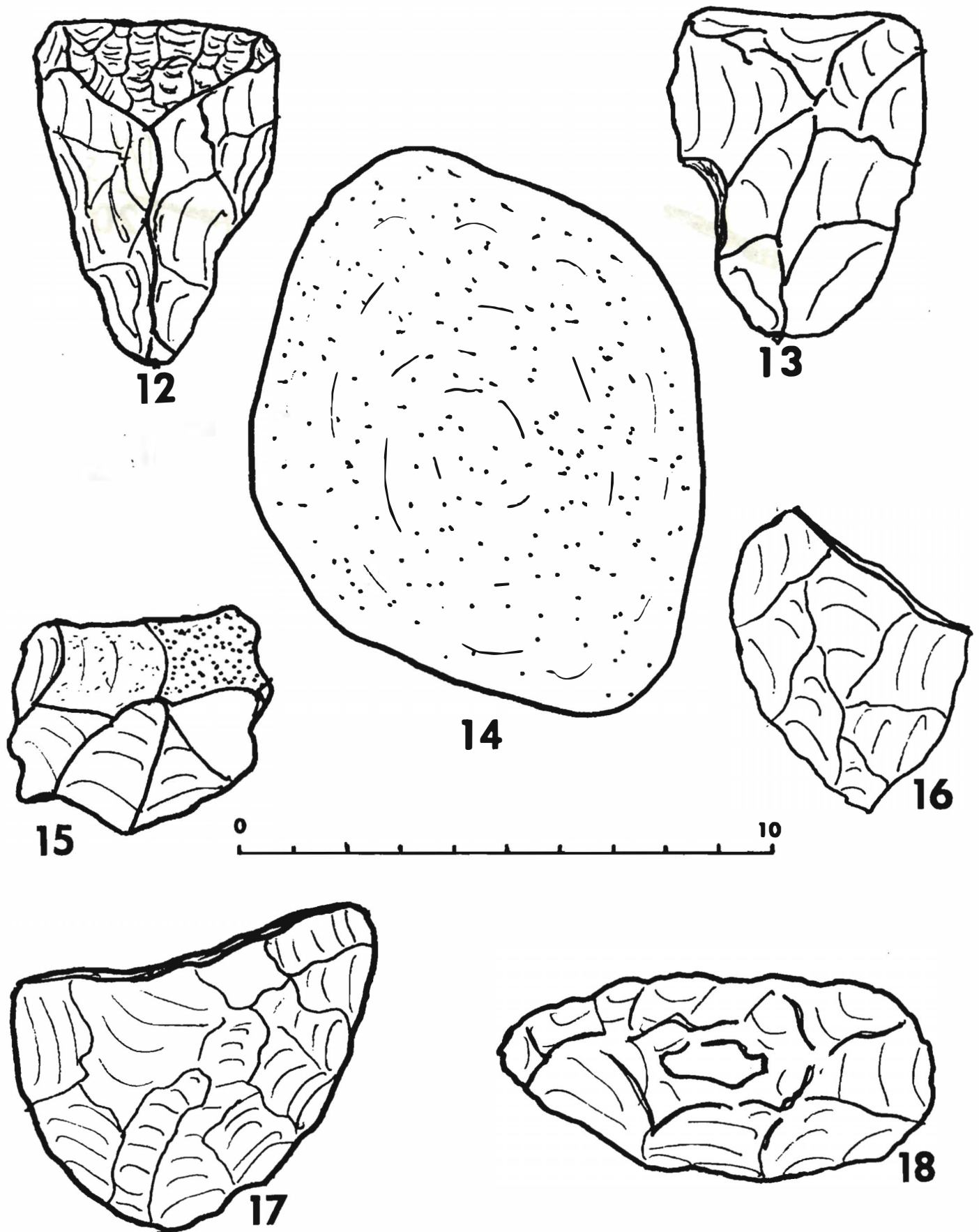


Figure 5.

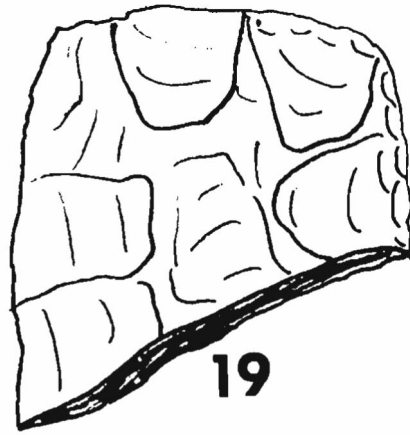
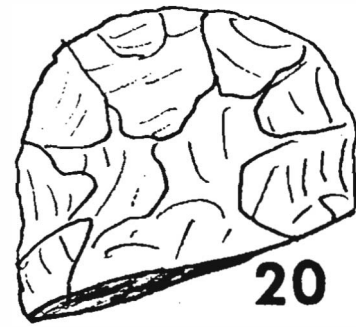
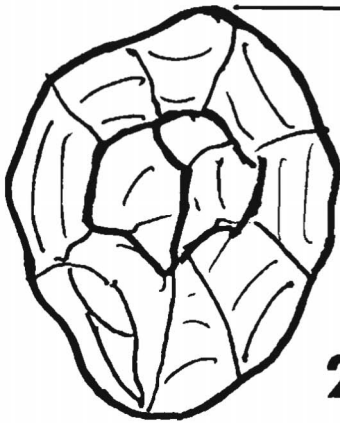
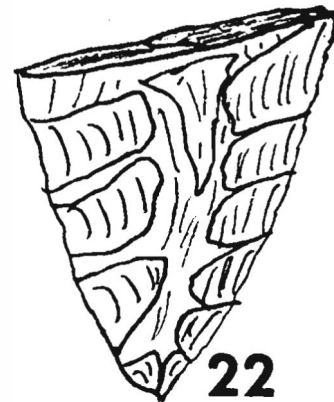
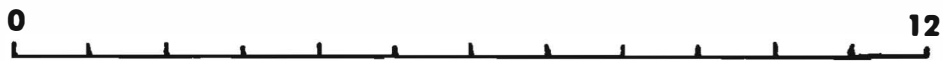
**19****20****21****22****23****24**

Figure 6.



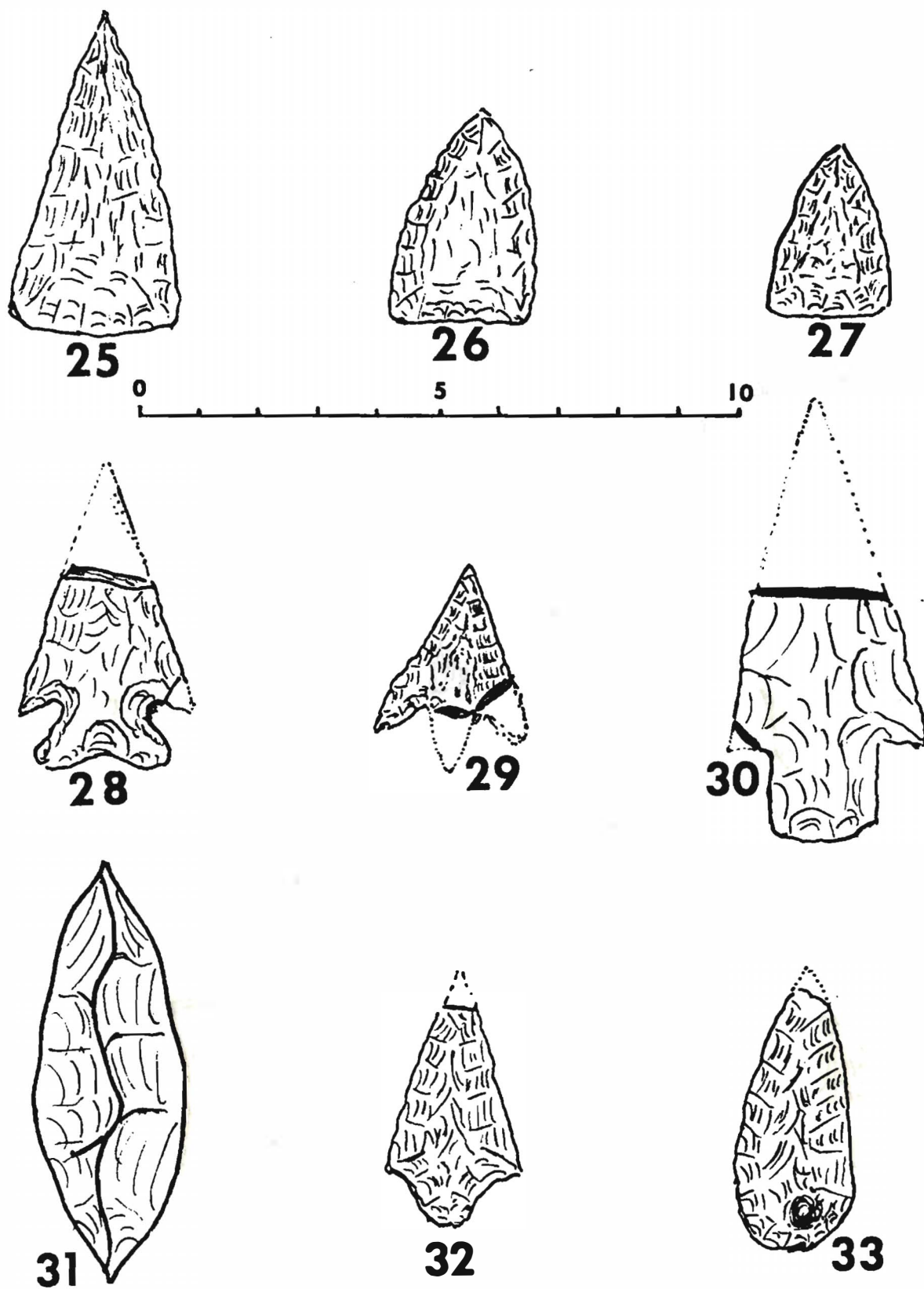


Figure 7.

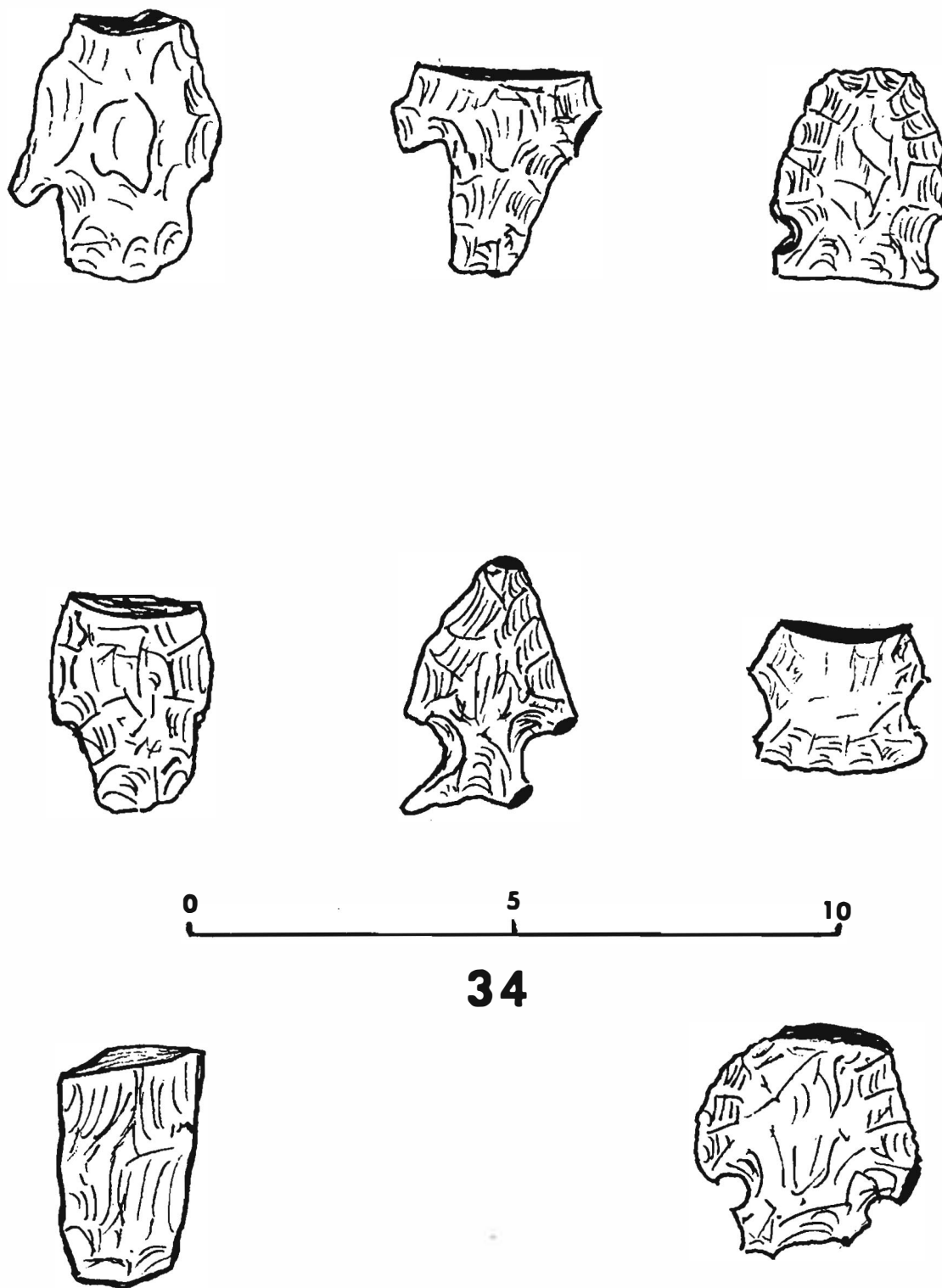


Figure 8.

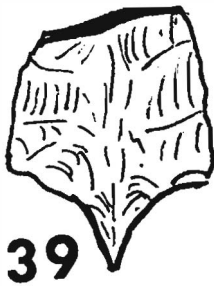
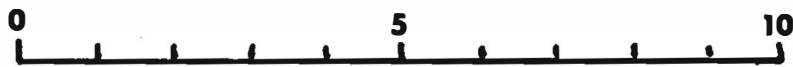
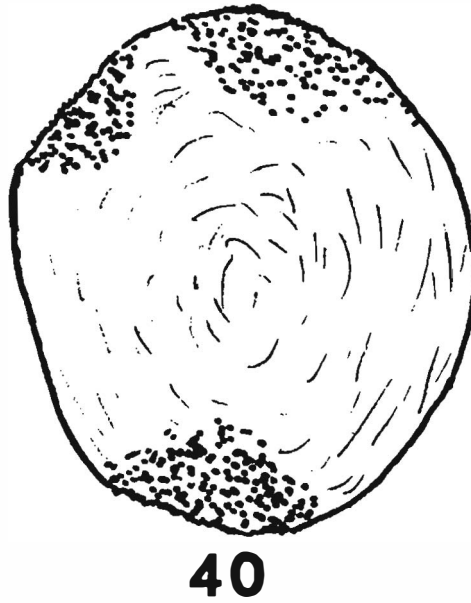
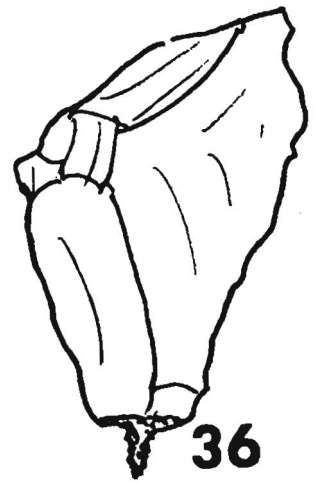
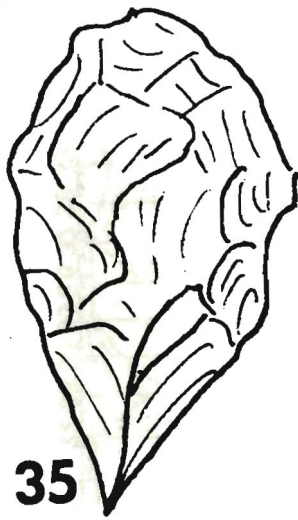


Figure 9.

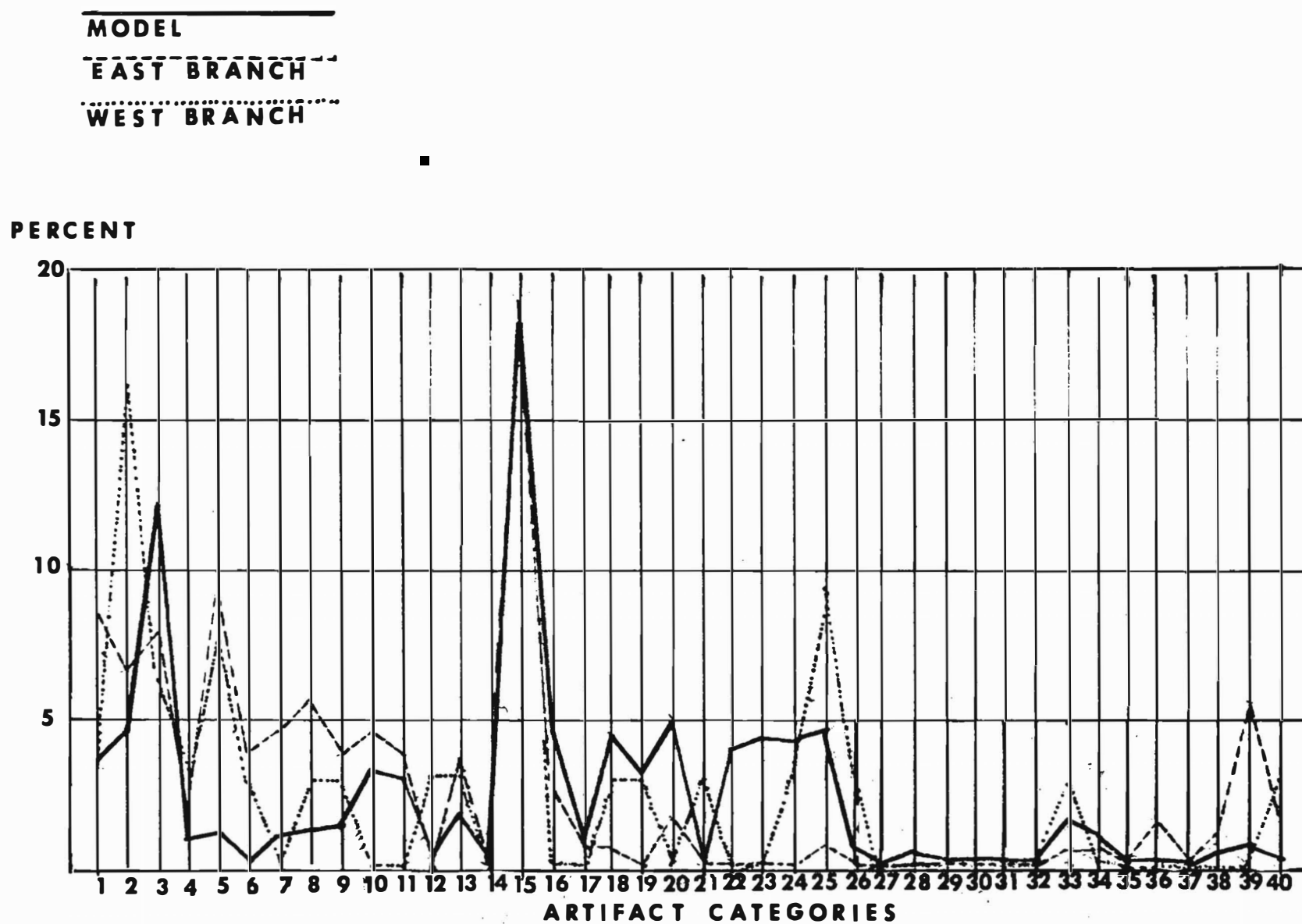


Figure 10.



Categories	J. R. Saunders Collection (N)	East Branch			West Branch		
		Expected	Observed	$\chi^2$	Expected	Observed	$\chi^2$
1. Large choppers	68	3.99	9	6.29	1.15	1	.01
2. Medium Choppers	80	4.69	7	15.76	1.36	5	9.74
3. Medium crude scrapers	223	13.08	8	1.97	3.79	2	.84
4. Irregular biface scrapers	19	1.11	2	.71	.32	1	1.44
5. Irregular uniface scrapers	23	1.34	10	55.96	.39	2	6.64
6. Elongated biface scrapers	10	1.57	4	3.76	.16	1	4.41
7. Elongated uniface scrapers	23	1.34	5	9.99	.39	0	.39
8. Circular biface scrapers	32	1.87	6	9.12	.54	1	.39
9. Circular uniface scrapers	32	1.87	4	2.42	.54	1	.39
10. Semi-circular biface scrapers	62	3.63	5	.51	1.05	0	1.05
11. Semi-circular uniface scrapers	55	3.22	4	.18	.93	0	.93
12. Clear Fork Gouges	9	.52	0	.52	.15	1	4.81
13. Guadalupe Gouges	31	1.81	4	2.64	.52	1	.44
14. Manos	5	.28	0	.28	.08	0	.08
15. Small, crude worked fragments	332	19.49	17	.31	5.64	6	.02
16. Small, thin biface fragments	86	5.05	3	.83	1.46	0	1.46
17. Large, thin biface fragments	18	1.04	1	0	.30	0	.30
18. Elongated, thick, medium biface fragments	85	4.98	1	3.18	1.44	1	.13
19. Large, square stem-end biface fragments	57	3.33	0	3.33	.96	1	0
20. Large, rounded stem-end biface fragments	94	5.51	2	2.23	1.59	0	1.59
21. Cores	8	.46	0	.46	.13	1	5.82
22. Large projectile point fragments	73	4.28	0	4.28	1.24	0	1.24
23. Medium projectile point fragments	81	4.75	0	4.75	1.37	0	1.37
24. Leaf-shaped stem-end fragments	79	4.63	0	4.63	1.34	1	.08
25. Tortugas type points	88	5.15	1	3.34	1.49	2	1.53
26. Fresno type points	17	.99	0	.99	.28	1	1.85
27. Matamoros type points	3	.17	0	.17	.04	0	.04
28. Frio type points	9	.52	0	.52	.15	0	.15
29. Perdiz type points	5	.28	0	.28	.08	0	.08
30. Bulverde type points	10	.57	0	.57	.16	0	.16
31. Lerma type points	5	.28	0	.28	.08	0	.08
32. Gary type points	3	.17	0	.17	.04	0	.04
33. Leaf-shaped points	33	1.93	1	.44	.56	1	.34
34. Unidentifiable point fragments	25	1.46	1	.14	.42	0	.42
35. Burins	4	.22	0	.22	.06	0	.06
36. Gravers	4	.22	2	14.40	.06	0	.06
37. Drill fragments	2	.10	0	.10	.03	0	.03
38. Shaft scrapers	7	.40	1	.90	.11	0	.11
39. Miscellaneous tools	17	.99	7	36.48	.28	0	.28
40. Hammerstones	5	.28	2	10.56	.08	1	10.58
Totals	1,822		107	203.67		31	59.38

Table 2.  $\chi^2$  Values for Each Category in Santa Isabella Creek Collections.

Since  $X^2_{Exp.}$  is greater than the critical value, the null hypothesis ( $H_0$ ) was rejected. Thus, the alternative hypothesis ( $H_a$ ) appears supported bearing out our belief that there would be a difference in the distribution of tool categories.

West Branch:  $H_0$ : The distribution of tool categories on the West Branch is equal to the distribution of tool categories over the entire ranch.

$H_a$ : The distribution of tool categories on the West Branch is not equal to the distribution of tool categories over the entire ranch.

$$X^2_{Exp.} = 59.38 < X^2_{C.V.} = 73.4$$

Since  $X^2_{Exp.}$  is less than the critical value, the null hypothesis cannot be rejected. Thus, we can assert that the controlled collection sample from the West Branch is not significantly different from the uncontrolled collection from the ranch as a whole.

### Function Analysis

By grouping the artifacts from the three separate collections into functional activity categories, an additional analysis was made to, perhaps, better understand the activities during the period of occupation.

The groupings were made by our own personal judgments of the possible multiple uses of the artifacts in each category. The functional groups were: plant gathering and processing, butchering and skin processing, hunting and fishing, stone tool and weapons manufacture, and wood and leather product manufacture.

A bar graph was prepared presenting the percentage of the artifacts of each of the three collections for comparison (see Figure 11).

Due to a large percentage of choppers, scrapers, and biface artifacts, the graph shows a high level of butchering and skin processing activities on the East Branch. Because the percentage of projectile points and point fragments is low, the graph shows that the hunting level of activity occurred on other areas of the ranch away from the permanent campsite.

### Conclusion

We believe that this study clearly shows that the site along the East Branch of the Santa Isabella Creek was the more permanent zone of occupation. The site of the West Branch was of a more temporary nature and could have been used during hunting expeditions and gathering of raw material for stone tools and plant products.

There are numerous quarry sites scattered throughout the ranch, and they tend to be located near the raw materials. Fire hearths occur in these locations, but there is no substantial evidence of occupation.

Due to the large number of artifacts analyzed in this study, we did not include our study of flake technology in this report.

Two possible distortions in this report should be taken into consideration. One is the small size of the sample collection on the West Branch; the other is that there has been a heavy concentration of artifact hunting by amateur collectors along the East Branch. We found very few points in this area.

All work was surface collection and no excavations were made. Using the typology of the points and point fragments, we have estimated that the period of occupation ranged from Early Archaic (4000 B.C.) to the European penetration circa A.D. 1600.

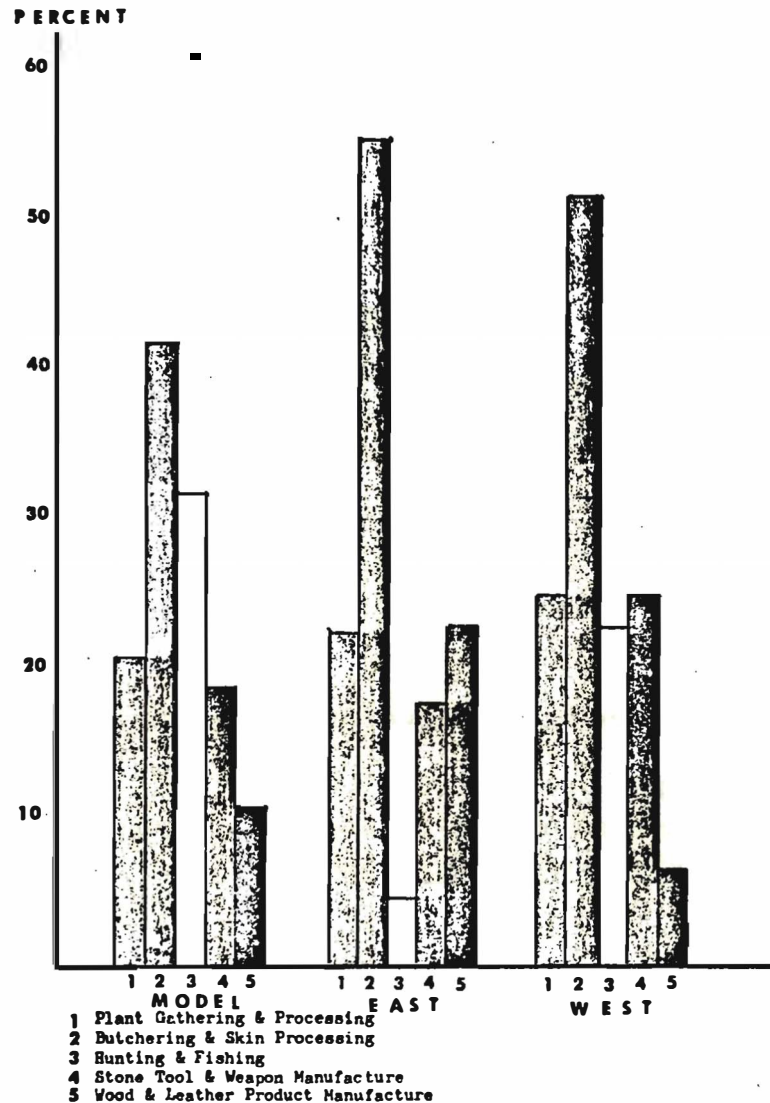


Figure 11.

### Acknowledgment

This paper was developed as a special study project while the authors were attending the University of Texas at San Antonio during the 1976-1977 academic year. It was developed under the guidance of Dr. Joel Gunn. An earlier version of the paper was presented to the STAA quarterly meeting in April 1977.

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## SCOTTSBLUFF POINTS FROM THE J-2 RANCH

Bill Birmingham and J. L. Mitchell

The three Scottsbluff points were recovered from the J-2 Ranch site (41 VT 6) prior to the major STAA excavations at the site. These exceptional specimens were on exhibit at the January 1978 meeting of the STAA at the University of Texas at San Antonio.

Metric data for these late Paleo-Indian artifacts are as follows:

- A, A' - Length 58mm, Width 29 mm, Thickness 7 mm,  
Color, medium brown; this point was found in the  
creek bed.
- B, B' - Length, 56 mm, Width 33 mm, Thickness 7 mm,  
Color, light tan.  
Comment: Point was found below an eroding creek bank.
- C, C' - Length 81 mm, Width 25 mm, Thickness 6 mm,  
Color, dark reddish brown.  
Comment: Point was excavated along with a Golondrina  
and Kinney points.

Scottsbluff points have been found with Bison occidentalis at the Olsen-Cubuck site in Colorado and dated at around 6500 B. C. At the Hell Gap site in Wyoming a radiocarbon date of 6550 B. C. was obtained (Irwin-Williams et al. 1973) where a date of 6520 B. C. was found at the Blackwater Draw in New Mexico for Cody Complex materials which included Firstview, Eden, and Scottsbluff points (Agogino et al. 1976).

However, Hester and Hill (1971) have studied the distribution of Scottsbluff points in Southern Texas and have concluded that the Scottsbluff manifestations in Texas cannot yet be dated since they generally lack the other elements of the Cody Complex, such as Cody Knives and Eden points (Hester and Hill 1971:31). Thus we cannot yet firmly date this point type for Southern Texas. It seems obvious, however, that such specimens do appear to represent the Late Paleo-Indian period and probably predate the Pre-Archaic which began about 6000 B. C.

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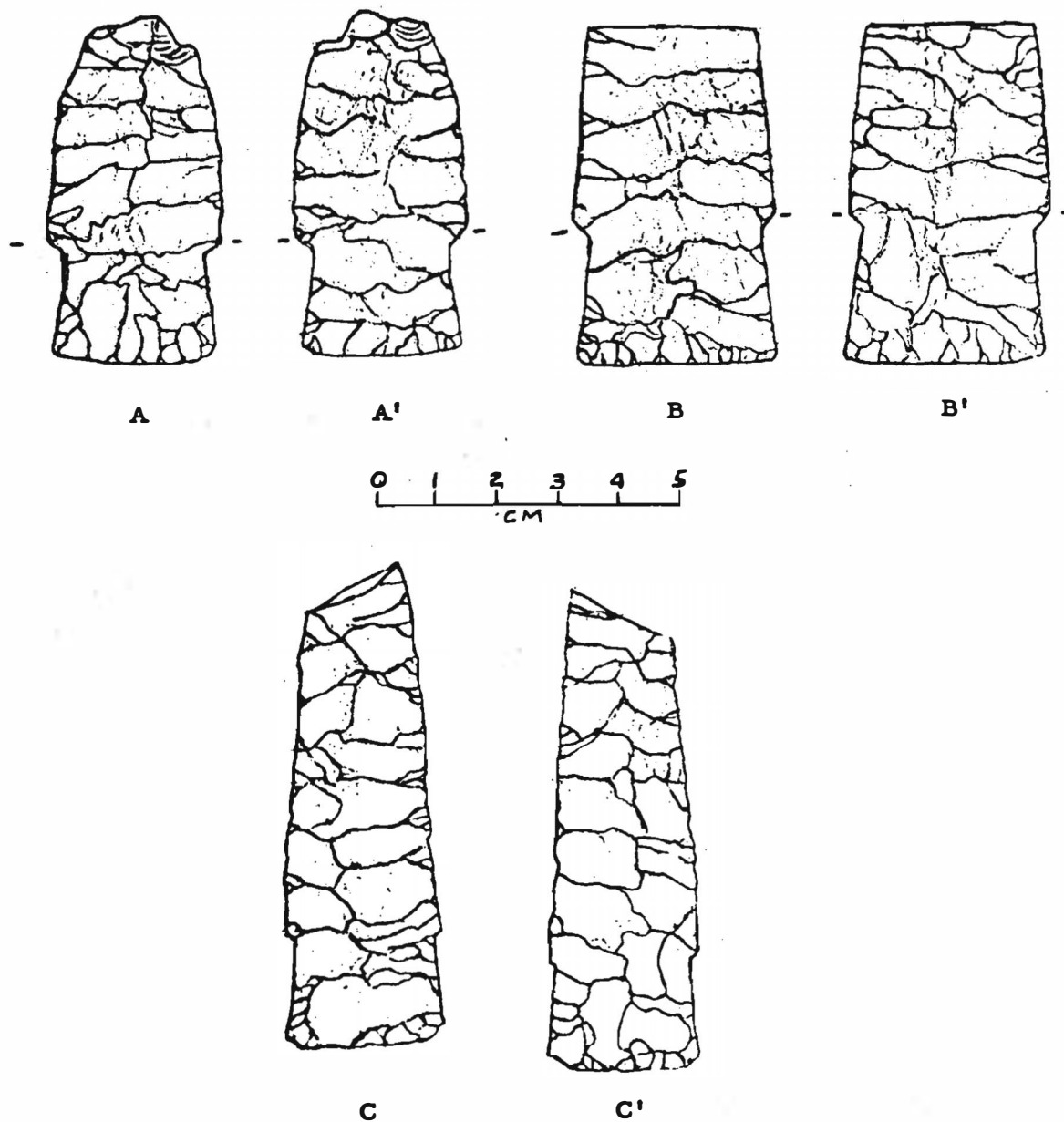


Figure 1. Scottsbluff artifacts from the J-2 Ranch (41 VT 6).  
 (Shown .8 actual size.)

AN ARCHAIC ROCK MIDDEN SITE (41 BN 11),  
BANDERA COUNTY, TEXAS

L. W. Patterson

This report describes a site with a large burned rock midden, 41 BN 11, in Bandera County, Texas. The site is in the central Texas hill country, located on a high plateau, approximately 1,500 feet from the nearest water source on Hondo Creek. The dome-shaped rock midden is about 60 feet in diameter and four feet high. It consists mainly of fist-size pieces of burned limestone, mixed with large amounts of charcoal and soil debris. The location is a deciduous wooded area. There is scattered lithic debris for over 100 feet in all directions from the edges of the rock midden, and no ceramics are present. Artifacts described here are from surface collecting on several occasions, up to December 1977.

Unlike site 41 BN 8 (Patterson 1974) in this same general area, which has a small, Late Prehistoric component, site 41 BN 11 seems to have only materials from the Archaic period. There are no arrow points or other indications of Late Prehistoric artifacts. Using projectile point types to compare with the chronological sequence given by Prewitt (1974:Fig. 7), this site has indications of various occupations from the Early to the Late Archaic, approximately 7000 B.C. to A.D. 500. The inventory of dart points collected is as follows, with some illustrated in Figure 1:

<u>Type</u>	<u>No.</u>	<u>Remarks</u>
<u>Frio</u>	2	Figure 1B, grey flint
<u>Fairland</u>	1	Figure 1H, grey and white flint
Leaf-shaped	1	Figure 1C, dark brown flint
<u>Bulverde</u>	2	Figure 1A, tan flint
<u>Plainview (?) base</u>	1	Figure 1I, tan flint
<u>Abasolo base</u>	1	Figure 1D, grey flint
Triangular	1	Figure 1G, grey flint
Single shouldered	1	Figure 1E, white flint
<u>Angostura base</u>	1	Figure 1J, grey flint
<u>Gower</u>	1	Figure 1F, brown flint
Unclassified fragments	<u>9</u>	-
	21	

The Angostura and Gower point types indicate possible Early Archaic occupations, which Prewitt (1974:Fig. 7) would assign to a time period of 7500 to 6500 B.C. The Gower point resembles specimens illustrated by Sorrow et al. (1967:Fig. 12). Early occupation may also be indicated by a possible Plainview point base; however, due to the fragmentary nature of this specimen, it could be some other point type. Two Bulverde points give a possible Middle Archaic component of perhaps between 5000 and 4000 B.C. or longer. The most recent occupation period is indicated by Frio and Fairland points. Prewitt (1974:Fig. 7) associates the Fairland dart point

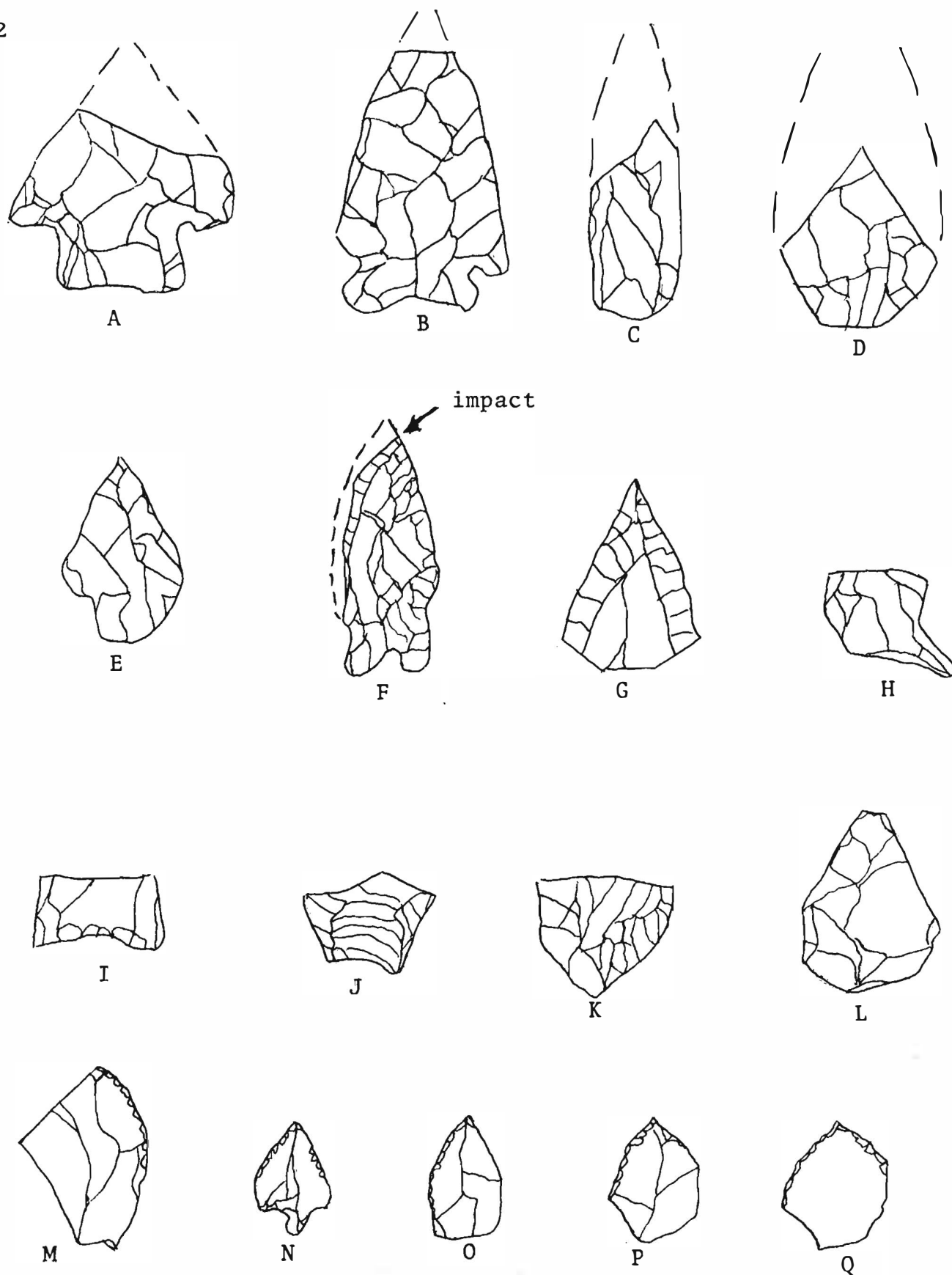


Figure 1. Site 41 BN 11 Projectile Points (actual size). A, Bulverde; B, Frio; C, leaf-shaped; D, Abasolo; E, single-shouldered; F, Gower; G, triangular; H, Fairland; I, Plainview (?); J, Angostura; K, L, unclassified; M-Q, unifacial.



type with the very Late Archaic period of about A. D. 200 to 700. Suhm and Jelks (1962: 195) have indicated a time period of 2000 B. C. to A. D. 500 for the Frio point type. The exact temporal associations of some of the other point types found are not clear, except for being somewhere in the Archaic period. A single shouldered point, Figure 1E, is similar to a point type shown by Sorrow and others (1967:Fig. 43g). The triangular point, Figure 1G, is difficult to classify. It is 7.5 mm thick, and has strongly beveled blade edges and a very deeply thinned base. The Abasolo point basal fragment could be from anywhere in a long time range (Suhm and Jelks 1962:165). Five biface fragments were also found, which possibly are preform pieces.

Eleven small flake points with definite unifacial retouch were found. These may represent early use of the bow and arrow in the Archaic period, as I have proposed previously for Bandera County (Patterson 1974) and for the upper Texas coast (Patterson 1973, 1976).

An industry to manufacture small prismatic blades seems to be present. There are two possible blade core fragments and 17 prismatic blades. Eight blades have widths of 10 to 15 mm, eight have widths of 15 to 20 mm, and one large blade has a width of 25 mm. Nearby site 41 BN 8 has a definite prismatic blade industry, with many blade and core specimens.

Few formal stone tool types are present, other than projectile points. One unifacial "turtle-back" scraper was found. Two definite burins were identified, one with multiple facets. Seven flake graters were found. There is also a possible ground stone concave/convex metate fragment, with nipple-like projections on the convex side, which look like miniature legs (Figure 2L).

A size range distribution was determined for irregular shaped flint flakes that were recovered. The size ranges given indicate flakes which are larger than a given square and smaller than the next largest square. Dimensions are for the sides of each square. This flake size distribution is as follows:

	<u>No.</u>	<u>%</u>
50-60 mm square	1	0.2
40-50 mm square	4	0.7
35-40 mm square	11	1.8
30-35 mm square	27	4.4
25-30 mm square	47	7.7
20-25 mm square	111	18.1
15-20 mm square	214	34.9
10-15 mm square	178	29.1
Under 10 mm	<u>19</u>	<u>3.1</u>
Total	612	100.0

This skewed flake size distribution is characteristic of systematic lithic reductions to produce bifaces (Gunn et al. 1977; Patterson and Sollberger ms). One large overshot biface flake was found.

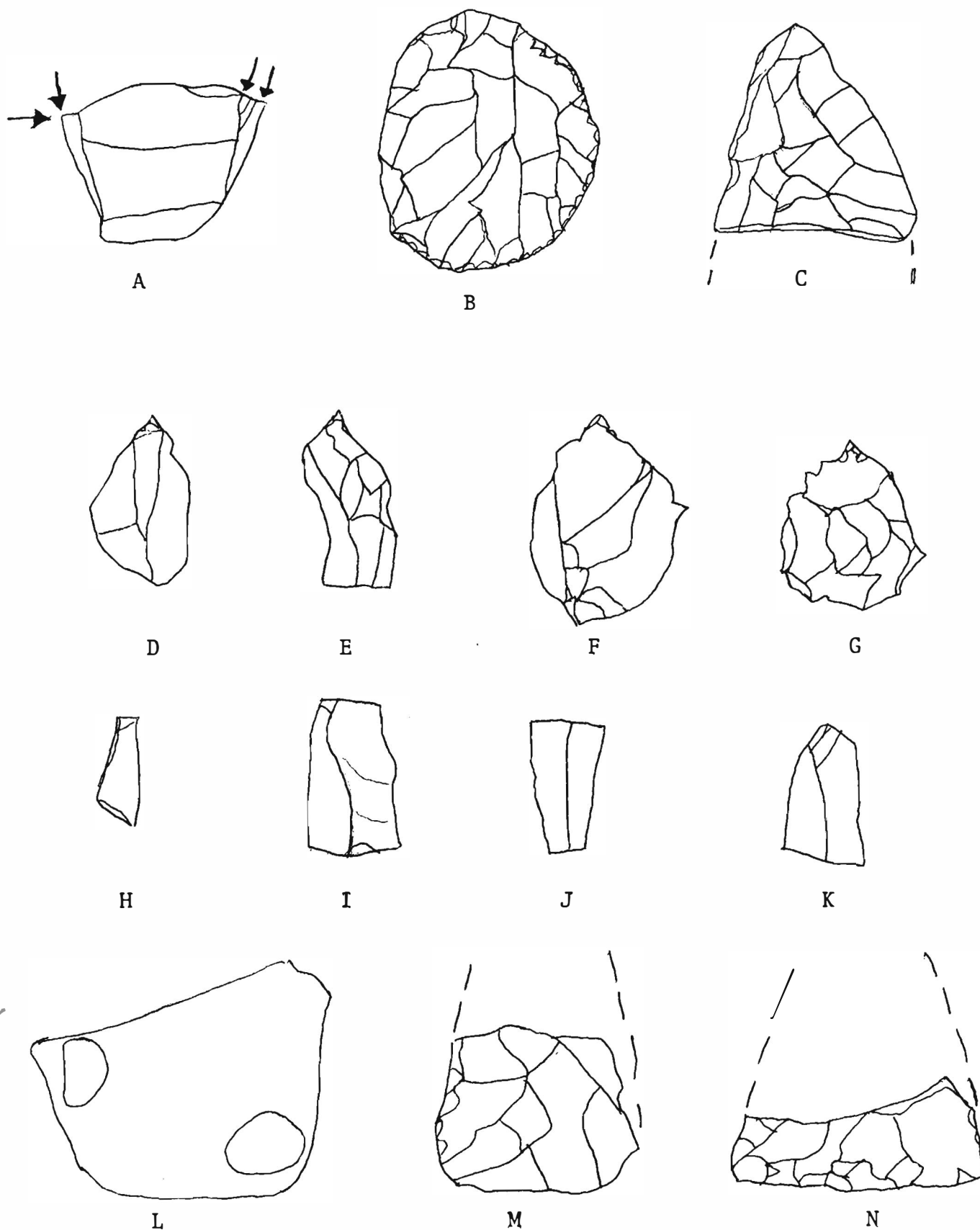


Figure 2. Site 41 BN 11 Lithic Artifacts (actual size). A, burin; B, turtle-back scraper; C, M, N, bifaces; D-G, gravers; H, burin spall; I-K, blade fragments; L, metate fragment (bottom view).

For flakes over 20 mm square, there were 8.5 % primary flakes completely covered with cortex, 19.4 % secondary flakes with some remaining cortex, and 72.1 % interior flakes with no remaining cortex. While the high percentage of interior flakes could represent the importation of trimmed raw materials, I feel that this may also or instead represent that complete lithic reductions to produce finished bifaces from primary raw materials were being done at this site. My comments are based on similar distributions of remaining cortex on flakes from experimental work by J. B. Sollberger and the author. When complete lithic reductions are done from primary raw materials, high percentages of interior flakes are obtained.

There is a general absence of very thick flint flakes on this site. Some of the larger flakes are 6 to 10 mm thick, but most flakes over 20 mm square have thicknesses of 3 to 6 mm. In addition to flakes, ten thick flint chips were found, 20 to 30 mm square. There are five miscellaneous flint cores and one crude discoidal bifacial core.

A few of the flakes have purposeful steep retouch, possibly from trimming of margins for use as scrapers. There are also flakes with steep, even unifacial retouch that probably indicate use wear in scraping. A number of flakes have unifacial and bifacial scalloped edge retouch which is characteristic of cutting activities (Patterson 1975). Some fine "nibbled" retouch on flake edges may indicate planing and whittling functions, as I have observed in experiments with woodworking. There is some evidence of thermal alteration of flint, in the form of "potlid" scars on some flakes. This seems to have been applied selectively to grey flint, and the majority of flakes show no evidence of thermal alteration. Very few flakes show any discoloration from exposure to heat.

The large burned rock midden is composed of fairly uniform fist-size pieces of limestone, at least on the outer surface observed. The overall midden shape is a fairly symmetrical dome. This represents the purposeful placement of several tons of materials. The midden function may have some relationship to cooking, according to a number of published speculations. To me, the midden on this site represents some type of additive activity, where each use of the midden caused more rock to be piled up in a symmetrical manner. It is difficult for me to see how this was caused by the accumulation of small cooking areas, as proposed by Shiner and Shiner (1977:Fig. 16).

My overall impression is that this site represents a long Archaic period occupation sequence, possibly of a seasonal nature, connected with nomadic hunting and gathering Indians. It is a common type of site in this area of the central Texas hill country. This specific site is of interest to the study of the Archaic period, unmixed with later cultural materials.

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# NOTES ON PALEO-INDIAN PROJECTILE POINTS FROM KERR AND BEXAR COUNTIES, SOUTH-CENTRAL TEXAS

Thomas R. Hester, E. T. Miller and Cynthia North

This brief note puts on record three Paleo-Indian projectile points found in south-central Texas. Two of the specimens (Fig. 1 a, b) are from Kerr County, and the third, from Bexar County (Fig. 1 c, c').

The specimens from Kerr County were found by Mr. and Mrs. E. T. Miller in Kerr County, near the boundary with Gillespie County. One specimen (Fig. 1 a) can be classified as Angostura. It is distinguished by parallel flaking and is heavily patinated. A recent break at one corner of the base reveals light brown fine-grained chert underlying the patina. The point is 72 mm long (the distal tip is missing), 25 mm wide at mid-section, and was approximately 15 mm wide at the base. Maximum thickness is 7 mm. Miller's catalog number is BS-4/8-3-75.

The second Kerr County specimen appears to represent the Golondrina type, although the base is more constricted than on most specimens observed by the senior author. The body is marked by random flake scars, and the base has been thinned by the removal of short, crescent-shaped flakes. The specimen is fragmentary, and near the break there appears to be a remnant of edge beveling, suggesting that the specimen had been reworked. The artifact is patinated, and was apparently made from dark brown chert. Length (incomplete) is 39 mm, maximum width is 22.5 mm, basal width is 17.5 mm, and maximum thickness is 6.5 mm. Depth of the basal concavity is 3.5 mm. Miller's catalog number for this artifact is BS-4/8-16-76.

Both specimens were found in close surface association, but no related lithics or buried cultural deposits were noted by the Millers.

The Bexar County specimen (Fig. 1 c, c') was found by Cynthia North at an eroded multicomponent site on Parita Creek in southeastern Bexar County, on the coastal plain of south-central Texas. The specimen is the distal half of a Folsom point, made of light brown fine-grained chert. Flutes extend to within 4-6 mm of the tip; parallel oblique flaking is observed on either side of the flutes. Length of the fragment is 34 mm, maximum width is 19 mm, and maximum thickness is 4 mm.

## Comments

Angostura and Golondrina points are common Late Paleo-Indian forms in this region. Dating of Angostura is uncertain, but Golondrina appears to date earlier than 7000 B.C. based on radiocarbon dates from Baker Cave, Val Verde County (cf. Hester 1978). Distributional data on both types are still incomplete and typological problems plague both forms (T. C. Kelly of UTSA is conducting a continuing study of the Golondrina type.)



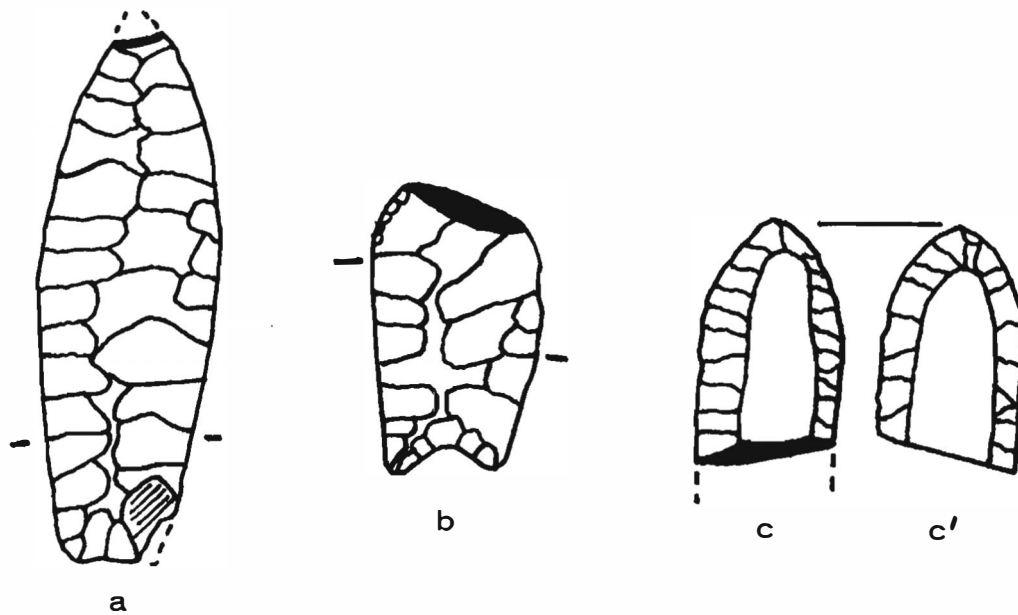


Figure 1. Paleo-Indian Projectile Points, South-Central Texas. a, Angostura point, Kerr County; b, Golondrina point, Kerr County; c, c', Folsom point, Bexar County. All specimens are illustrated actual size; see text for dimensions.

The presence of the Folsom specimen in southeastern Bexar County is of particular interest in terms of distributional studies. Hester (1968, 1974) has published data on the spatial distribution of Folsom in southern Texas but none were documented from Bexar County. Anne A. Fox (personal communication) has told the senior author of other Folsom specimens from the coastal plain of southern Bexar County. In northern Bexar County, a Folsom point was found in STAA excavations at the St. Mary's Hall site (41 BX 229; Hester 1978). Along the southwestern edge of the Edwards Plateau, several Folsom points were found in uncontrolled excavations at Kincaid Rockshelter, Uvalde County. Later, controlled excavations by the Texas Memorial Museum and The University of Texas (Austin) failed to recover any in situ specimens (manuscript in preparation by T. N. Campbell and Glen L. Evans). In general, the Folsom type is thought to date around 8500 B. C. based on radiocarbon dates from several sites in the Southwest and Plains areas. Dibble and Lorrain (1967) obtained a date of 8280 B. C. for a Folsom point found among bison remains in Bone Bed 2 at Bonfire Shelter, Val Verde County.

For an overall review of the Paleo-Indian period in south-central and southern Texas, the reader is referred to Hester (1977).

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## THE AUTHORS

W. W. (Bill) Birmingham is a very active avocational archaeologist who has concentrated much of his work in the Victoria area. He coauthored a paper (with T. R. Hester) on the Johnston-Hellar site published as a special report from the UTSA Center for Archaeological Research in 1976, as well as a report of the Wells Site, Jackson County, in Vol. 3, Number 4 of La Tierra. Bill lives in Victoria, Texas.

Thomas R. Hester is a UTSA professor and the Director of the Center for Archaeological Research. A native South Texan, Tom is a graduate of the University of Texas at Austin and earned his Ph. D. from the University of California at Berkeley in 1973. Since returning to Texas, he has been a major influence in the founding of the STAA and was its first Chairman.

E. T. Miller lives in Kerrville and currently is employed at the Center for Archaeological Research at UTSA.

J. L. Mitchell is an Air Force officer who lives in southwestern Bexar County near Atascosa. He has the good fortune to be your new Journal Editor.

Cynthia North is a San Antonio housewife who has an interest in prehistoric Indian artifacts. She has expanded this interest by taking a course in Texas Archaeology through the continuing education program of UTSA.

L. W. Patterson works for Tenneco, Inc. in Houston. He is very active in a number of archaeological groups and is a prolific author. Although an amateur, he has published a wide range of papers ranging from lithic studies in American Antiquity and the Texas Archeological Society Bulletin to book reviews in the Ohio Archaeologist. Lee has many varied interests but recently has focused on blade technology and lithic experimentation. He has been an active supporter of STAA and has frequently published site reports and other articles in the pages of La Tierra.

John T. (Tom) and Elaine L. Saunders are active STAA members and Tom is the new Chairman of the Association for 1978. He is a real estate developer and builder and co-owner of the firm of Saunders and Trieschmann. He and Elaine met at the STAA project at the J-2 Ranch site and were married in 1976. To learn more about their mutual avocation of archaeology, they have attended graduate courses at UTSA and their paper in this issue is a result of their work in a special studies seminar with Dr. Joel Gunn.