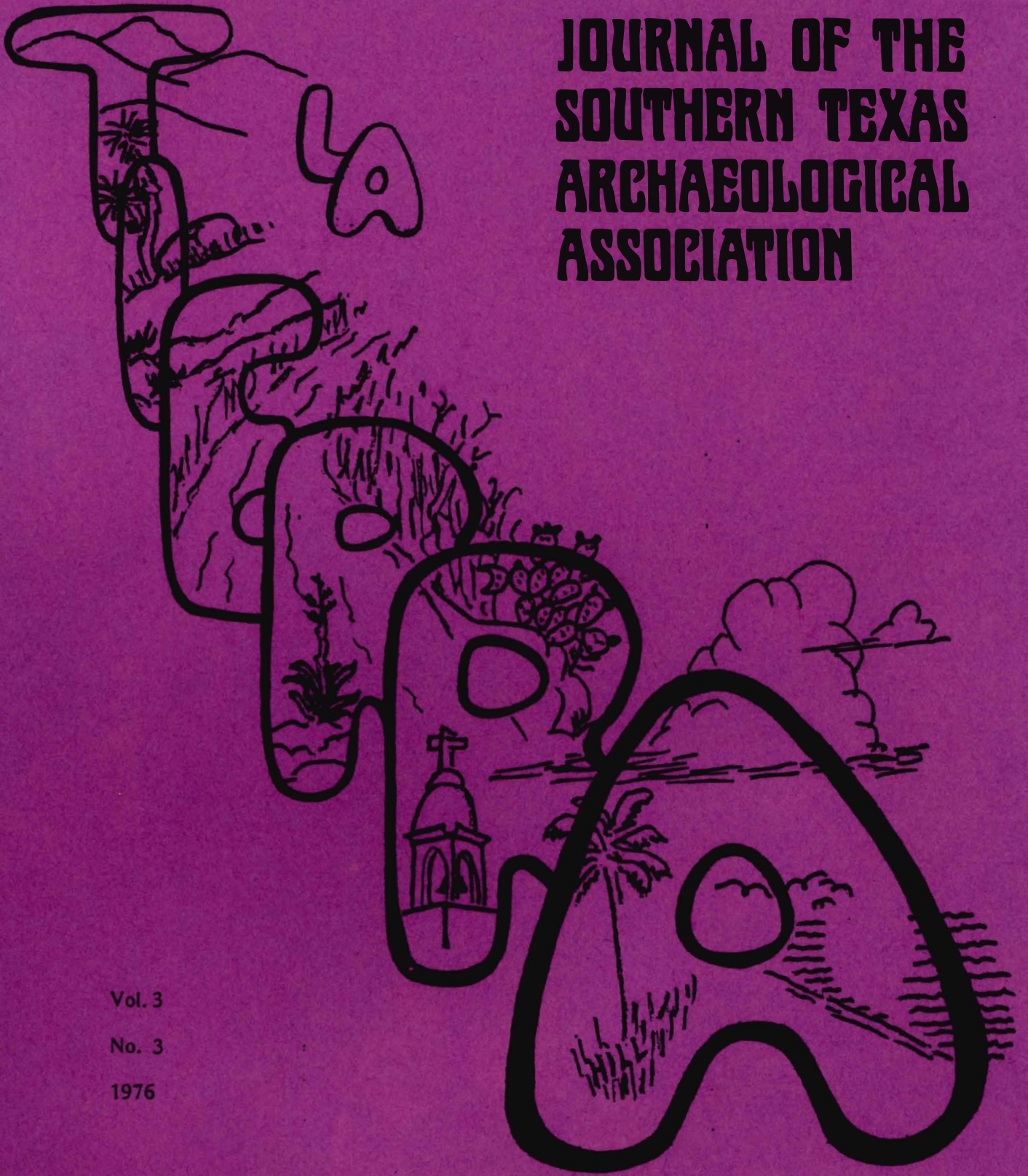


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Journal Editor

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Mary Frances Chadderdon, 3810 Lomita, San Antonio (Treasurer)

La Tierra is distributed quarterly to members of the Southern Texas
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Shirley Van der Veer, 123 East Crestline, San Antonio 78201 (732-5970).

Manuscripts for the Journal should be submitted to Anne Fox, 106 Fawn
Drive, San Antonio, Texas 78231.

FROM THE EDITOR

The decision by your Coordinating Board to initiate a Newsletter and to change La Tierra to a slightly more formal type of publication is now being carried out. In line with the new format for La Tierra, we are intensifying our efforts to find and publish articles on a broad range of subjects which will be of interest to you, including brief reports on S. T. A. A. projects, occasional short articles which have appeared in other archaeological societies' newsletters, and articles on excavation techniques, photography, and artifact identification.

South Texas, our particular area of interest, is a large and tremendously complex area. It encompasses every type of terrain from the rocky hill country to the coastal plain and to the eastern edge of the Pecos River country, and includes sites of all prehistoric periods from Paleo to the Late Prehistoric. The continuum does not stop there, but reaches into the Historic period, which has had even less attention than prehistoric sites. Historic Indian encampments, Spanish trails, ranches, missions, presidios, early Anglo American cabins, ranches and even whole towns lie still undiscovered. This facet of South Texas archaeology will also be covered in some way in each issue. This is more than just a reflection of the current Editor's enthusiasm for historic sites. Although historical archaeology is a comparatively recent pursuit in the South Texas area, it is a part of our archaeological picture which needs more attention and understanding.

You will notice that while most of the articles in La Tierra deal with South Texas, we are not limiting ourselves to this area. When an article is submitted which should be of interest for a specific reason, it will be included. Ivey's article in this issue is such a case. While the area with which he deals is not in South Texas, his paper is an excellent demonstration of the techniques involved in research for historic site location, which can and should be applied in our area as well.

We are delighted to be able to include an increasing number of short articles by S. T. A. A. members, some of whom have never written for publication before. Let us have more for the next issue.

SUMMARY OF S. T. A. A. BEAR CREEK RESERVATION SITE SURVEY

F. Eugene Griffin

I. History: At the request of the Boy Scouts of America, S. T. A. A. members voted to conduct a general site survey of the Bear Creek Boy Scout Reservation in Kerr County. Although S. T. A. A. made its commitment merely to conduct a site survey, members were invited to contribute to the on-going program of archaeological instruction to youth attending summer camp.

II. Location: Bear Creek Boy Scout Reservation consists of 1,030 acres of land located approximately six miles west of Hunt, Texas, on Farm Road 1340 in Kerr County. The caretaker's cottage, situated at the entrance to the ranch, is located at $30^{\circ}03'53''N$ and $99^{\circ}25'06''W$ on a 7.5 USGS Bee Caves Creek Quadrangle map. The Reservation itself lies to the north and west of this point. Bear Creek enters the Reservation approximately 2,000 feet north of the southwest corner and flows across the ranch in a southeasterly direction, joining the North Fork of the Guadalupe River approximately 1,000 feet after leaving the Reservation. The creek is a permanent source of water and is heavily wooded along its entire course.

III. Geology: Several Weeks after the S. T. A. A. archaeological survey, the Boy Scouts of America had a geological survey made of the Reservation. The major geological formation is Edwards Limestone of Cretaceous age with five major chert beds located at the following elevations:

- 1) Chert A is brown chert from 1,888 to 1,895 feet.
- 2) Chert B is recrystallized chert from 1,959 to 1,960 feet.
- 3) Chert C is brownish-grey chert from 1,967 to 1,968 feet.
- 4) Chert D is greyish-brown chert at 2,000 feet.
- 5) Chert E is abundant brown chert between 2,027 and 2,037 feet.

IV. Lithic Terminology: Prior to the site survey the following three types of flakes/chips were agreed upon to standardize terminology:

- 1) Primary flakes/chips were to have 75% dorsal surface cortex.
- 2) Secondary flakes/chips were to have 1 - 74% cortex.
- 3) Interior flakes/chips were to have no cortex.

Since no excavation was attempted, all percentages on site reports and in survey summary were approximations. No attempt was made to identify platform types or thinning flakes or to provide an accurate flake/chip type count.

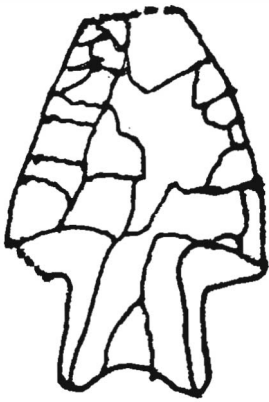
V. Site Terminology: Summary of site survey results will use the following definitions for grouping sites:

- 1) Quarry sites were chert outcrops with chert nodules present and reduction to quarry blanks with no flakes/chips present.
- 2) Quarry-workshop sites were chert outcrops with chert nodules, cores, core fragments and cortex flakes.
- 3) Workshop sites were not associated with chert outcrops and consisted of cores, core fragments, and at least 80% cortex flakes/chips with some interior flakes/chips present.
- 4) Chipping station sites were concentrations of lithic debris which did not have cores or core fragments. In addition, the majority of flakes/chips were interior with cortex less than 50%.
- 5) Multi-purpose sites were concentrations of lithic debris associated with chert outcrops and included chert nodules, cores, and core fragments; also large percentages of cortex flakes, but the majority were interior flakes.

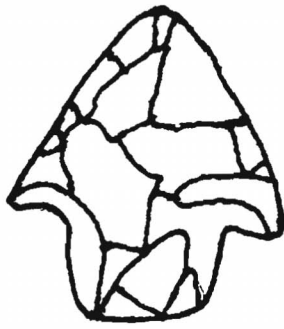
VI. Flora and Fauna: Flora of upper elevations consist primarily of juniper and oak. Along Bear Creek (in order of frequency of occurrence) are cyprus, sycamore, several varieties of oak, black walnut, pecan, willow, ash, cedar elm, hackberry and wild black cherry. In addition, agarita, mustang and fox grapes, and dewberries are present. Fauna includes white-tail deer, jackrabbit and cotton-tail rabbit, squirrel, armadillo, raccoon, opossum, fox, and wild turkey.

VII. Site summary: Two quarry sites, eight quarry-workshops, seventeen workshop sites, fourteen burned rock middens, and four multi-purpose sites were recorded. Four sites were of undetermined nature, and one cave site was tested later with negative results.

VIII. Lithic artifacts: During the survey only three partial projectile points were found, none of which could be classified as to type. The survey did not include any excavation; however, several collections of artifacts were documented by the author. Only one site, 53A, can be definitely assigned to any of the collections. This site is a burned rock midden which has been pot-hunted, but a large amount remains. Previous surface collections, generally in the large field on which site 53A is located, yielded a metate, a Pedernales point, and two Ensor points. Other smaller collections have yielded several preforms, an end scraper and a mortar and pestle. The bulk of the lithic artifacts are from a large



Pedernales



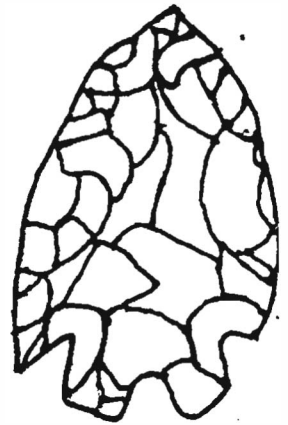
Bulverde.
(Reworked)



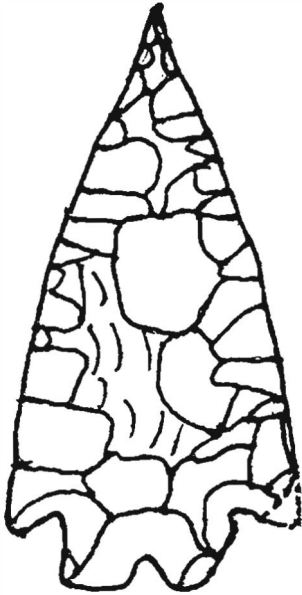
Angostura
(Reworked?)



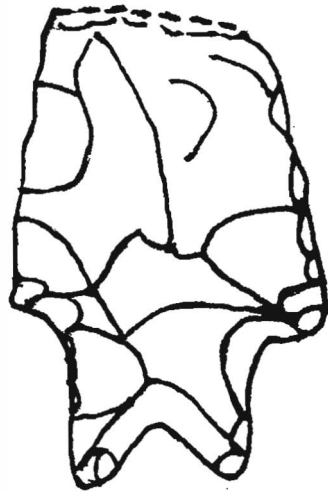
Edgewood



Montell



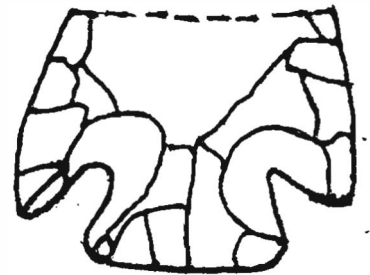
Montell



Pedernales



Untyped



Marcos



Marcos



Marshall



Bulverde



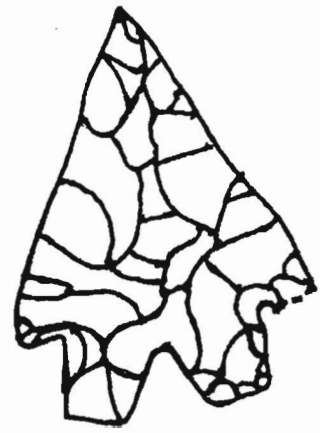
Ensor



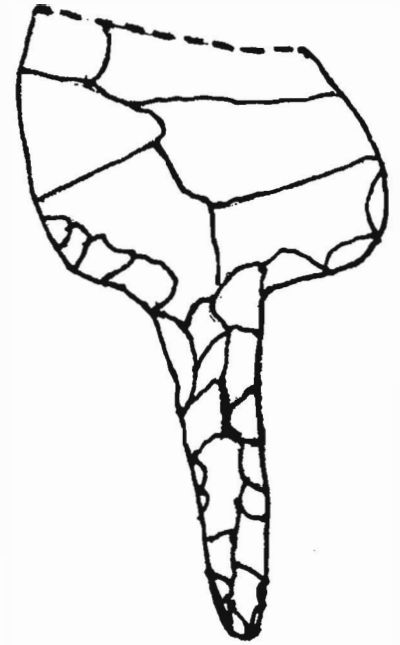
Marshall



Tortugas



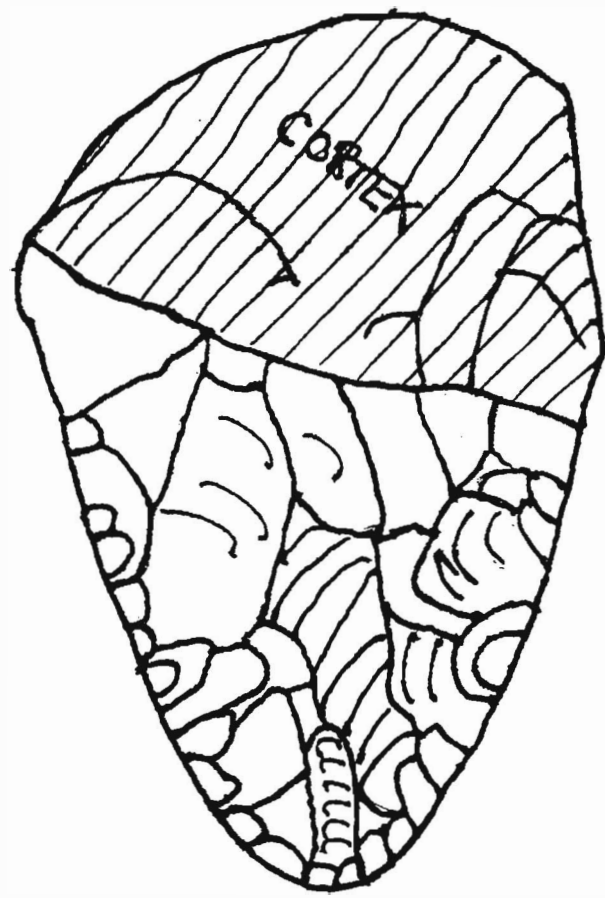
Montell



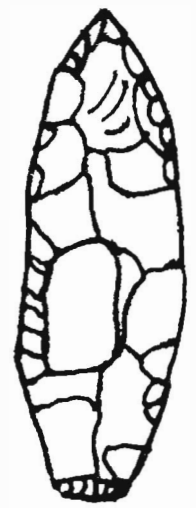
Drill



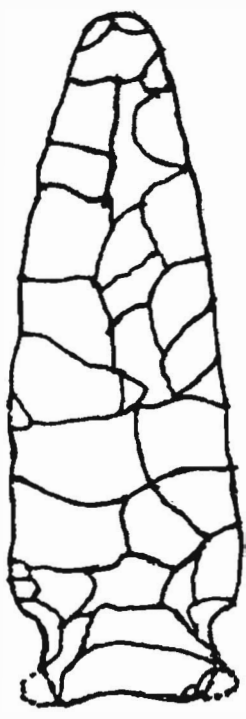
Pandale-like



Butted Knife



Angostura ?



Untyped



Pedernales (Reworked)

1 Guhn and Jelks, Handbook of Texas Archeology: Type Descriptions, 1962

collection extracted from 53A. This contained at least nine Pedernales (two reworked), four Montell, and two Marcos points, one each of Bulverde, Ensor, Edgewood, Tortugas, and Angostura. In addition, a possible identification can be given for one broken Scallorn point, a re-worked Angostura, a Marcos, and an Ensor. Also, several unidentified projectile points, a large number of bifaces, preforms, and scraper-like bifaces also make up this collection. Several projectile points are sketched on back of site reports for 45A and 21A, but these are of indefinite association. In general, both the surface and the burned rock midden lithic artifact collections would indicate a Middle to Late Archaic, or Post-Archaic occupation. Further excavation would possibly yield a more precise temporal placement for the sites at Bear Creek.

IX. Comments. Lithic terminology, site terminology and projectile point identification are given in order to help summarize this site survey. Interpretations or differences of opinion could exist and any corrections or suggestions would be appreciated by the author. The topographical map used for the survey was a 1:2,400 map divided into 1,000 foot by 1,000 foot squares. These have arbitrarily assigned numbers 1 - 54, with each site within that square numbered A, B, C, etc. The sites were then transferred to a 7.5 USGS Bee Caves Creek Quadrangle map. Both the author and the Boy Scout Reservation have the sites plotted on copies of the original topographical map. The contour intervals of the maps used in the field were 5 feet, therefore elevations could be fairly accurately recorded. Copies of the original site survey forms are retained by the author. The site survey form was a temporary one and any weaknesses in its content and organization are the responsibility of the author, as are the terminology and organization of this paper.

X. Acknowledgments: The author would like to thank the staff of Bear Creek Boy Scout Reservation for their assistance, and the members of S. T. A. A. who braved the hill country for two days of a very wet site survey. A special thanks to Carl Ponebshek and Jack Farmer who wore two hats -- Boy Scouts and S. T. A. A. -- and helped the author set up, coordinate, and compile the information that made this report possible. A final thanks to John Dee Johnson, Field Service Director and Camp Director for Boy Scouts of America for his continued efforts to aid in the compilation of this report.

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ARTIFACTS FROM THE JOHNEY CREEK AREA OF LASALLE COUNTY,
SOUTHERN TEXAS

J. L. Mitchell

This report describes artifacts from 41 LS 15, an Archaic site in the vicinity of Johney Creek, northeast of the town of Los Angeles in LaSalle County, Texas. Previous reports from this area include the Outline site, 41 LS 3 (Hester, White, & White 1969), and site 41 LS 17 (Hoover and Hester 1974). The present site, 41 LS 15, is on the opposite side of Johney Creek and approximately 3/4-mile west of site 41 LS 17. Other sites in the vicinity include 41 LS 14, an adjacent pottery-bearing site nearer the creek, and 41 LS 16, a historic site north of 41 LS 14, from which a complete wheel-thrown jug was recovered. All of these sites (LS 14 through LS 16) were discovered by Mr. A. J. Hoover of Harwood, Texas, and are known only through surface-collecting.

The ethnography and descriptive geography of this area has been reported in detail by Hester, White, and White (1969). As noted by those authors, this is basically "brush country" quite typical of much of southern Texas. Yet it is obviously an area rich in archaeological evidence of prehistoric man. As Nunley (1972) has observed, southern Texas is "potentially one of the richest sources of archeological data in North America."

This particular site has produced predominately Archaic artifacts. The site lies on both sides of a ranch road running from a county road to a stock pen and well, a distance of about 1/3-mile. This ranch road shows some evidence of grading sometime in the recent past, which may explain the ease with which the artifacts were recovered. A site report on this site, and the adjacent ones, has been filed with the STAA Secretary, and with the Texas Archeological Research Laboratory in Austin.

Some of the artifacts recovered from 41 LS 15 are shown in Figure 1. The dart points shown on the top row (A - E) are now in the collection of Mr. Hoover. The specimen shown as 1, A appears to be a Marcos point, a type not common in this immediate area. Hester, White, and White (1969) did not report any Marcos specimens at the Outline site but did note one specimen at 41 LS 8, which is also in the Johney Creek drainage. The present Marcos specimen has a reworked tip, but the resharpening is very crudely done.

The specimen shown as Figure 1, B resembles the Darl point type and exhibits beveling which is said to be common with this type (Suhm and

Jelks 1962:179). Darl points have also been reported from LS 1, 4 and 8 (Hester, White, and White 1969).

The dart point shown as Figure 1, C is difficult to classify. It seems to fall within the range of the Ensor point type, a type which is relatively common in LaSalle County.

The fragmentary specimen shown as Figure 1, D resembles the Morhiss point type (Suhm and Jelks 1962:222). No Morhiss points have been reported previously from this vicinity, but this type is said to be a minor type in a complex centered in Victoria County (Suhm and Jelks 1962).

Specimen 1, E is an unusual type which may be an Ensor variant. It certainly is not typical of types usually found in LaSalle County. The fragmentary specimen shown in Figure 1, F is probably a Perdiz point representing a much later time period than most of the Archaic point types illustrated for this site. While this specimen is so damaged as to make classification somewhat uncertain, the pattern of breaks suggests the general Perdiz shape. Perdiz points are fairly common in this area; Hester, White, and White (1969) report 21 such points from LS 1, 3, and 5.

The fragment illustrated in Figure 1, G could be the tip of an arrowpoint or the tip of a drill; there is not enough of the specimen remaining to be certain. Drills are not uncommon in this area; a fairly crude specimen of a drill is shown as Figure 1, H.

A considerable number of scrapers and similar artifacts were recovered at this site. Three of the more interesting of these artifacts are illustrated in Figure 1, I - K. The specimen shown as Figure 1, I has the triangular shape of the "Clear Fork tool" (Hester, Gilbow, and Albee 1973). A number of similar specimens have been reported from LaSalle County sites (Hester, White, and White 1969).

The scraper illustrated as Figure 1, J is a type not usually found in this area. It is made from a water worn cobble and has much of the outer cortex of the cobble remaining on its surface. The other face of the scraper is a single smooth plane with a slight force bulb evident. It is likely that this specimen was made by a single percussion blow which split a river cobble; there was subsequent pressure flaking along one edge to develop a sharp leading edge. The material is also quite different; it is a reddish color, which is vivid in some parts of the specimen. The color and the feel of this scraper suggests that it may be the product of heat treating. However, artifacts of a similar color are found closer to the Rio Grande river, where they are made from the Rio Grande gravels. This specimen certainly does not appear to be made of local material and may represent an artifact which was carried in to the Johney Creek area from the Rio Grande.

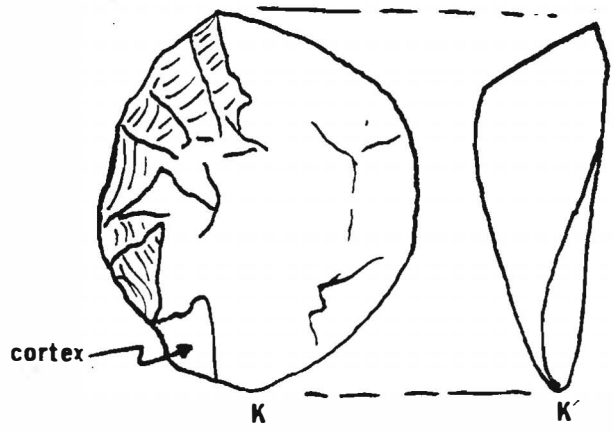
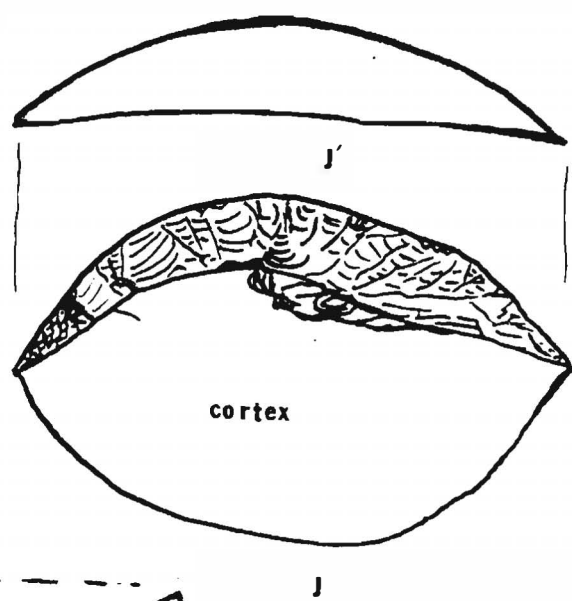
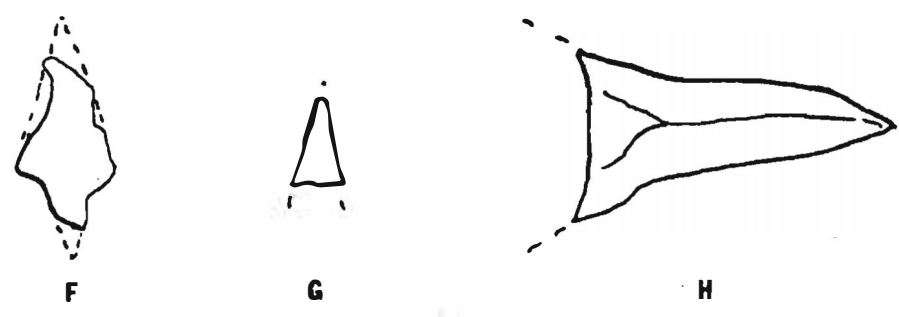
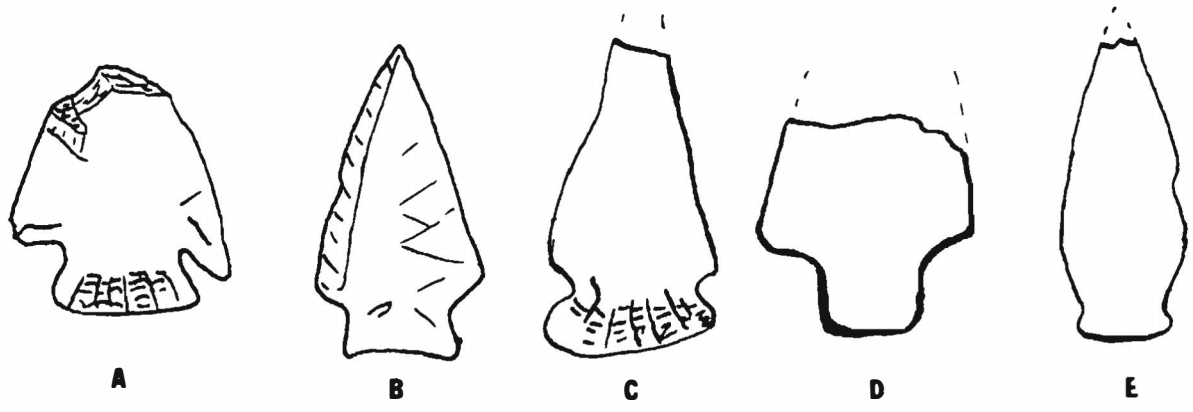


Figure 1

The scraper shown as Figure 1, K is a scraper type more common to the LaSalle County area. Hester, White, and White (1969) illustrate six specimens which they call "Triangular Bifaces, Form 1," but which range in shape from triangular to a rounded-end shape very similar to the present specimen. This scraper is rather crudely made and has part of the outer cortex of the original cobble remaining on its upper surface.

This group of artifacts are certainly not exceptional or unusual (with the possible exception of the scraper shown as Figure 1, J). However, they are sufficient evidence to indicate the presence of another Archaic site in the Johney Creek drainage area of north central LaSalle County. Taken in the context of nearby sites (41 LS 14, 16, 17) it does suggest that this area of Johney Creek has been a favored habitation site from Archaic through early historic times.

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Figure 1 (Preceding page) Artifacts from north-central LaSalle County, Texas: A - E, dart points; F, Fragmentary Perdiz arrowpoint; G, possible drill tip; H, Drill; I - K, Scrapers.

11

THE LIFT-OUT TECHNIQUE A PREHISTORIC LIVING FLOOR

Harvey Smith, Jr., and Tom McGuire

Dry, rock shelter excavation has been a difficult problem, without a satisfactory solution for the archaeologist, for many years. A variety of techniques has been applied to the removal of the dry deposits of habitation refuse that occur in the numerous rock shelters of the Trans-Pecos region (Collins 1969; Kelly and Smith 1963; Dibble and Prewitt 1967; Epstein 1960: 21). Most of these techniques have attempted to follow cultural levels, "peeling" them off one at a time (Word and Douglas 1970:8). However, success in these efforts has been variable and usually less than satisfactory due to large amounts of broken rock, discontinuity of strata and considerable quantities of fiber matting.

To solve this problem of methodology, a pilot project was developed, based on a problem oriented model. The objective of the model was to isolate the actual "living floor" of the aboriginal occupants and remove it intact, thus making it possible to reconstruct the "floor" in a laboratory situation for study and analysis.

The method of removal devised was based on a series of one meter squares that were to be removed one at a time. Each one meter square was further divided into quads by a single vertical and horizontal division. The strata in the habitation deposit selected for the pilot project consisted of a series of fiber matting layers approximately five cms. thick that extended over a considerable area of the shelter floor -- approximately two meters by six meters (Collins 1969: 2). Each layer of tightly packed fiber matting was separated by a layer of roof spalling of equal or greater thickness.

The step-by-step procedure was then as follows:

- A Using a one meter square grid as the horizontal discipline, a single square was excavated.
- B The top layer of roof spalling was removed by careful trowelling and passed through a 1/4" mesh screen in a conventional procedure.
- C The exposed layer of fiber matting was carefully divided into four quadrant sections. Each section or quadrant was separated from the underlying layer of roof spall and lifted out intact.
- D A sheet of plastic (or plastic bag) was spread out immediately adjacent to the square being excavated. The quad section of

fiber matting was lifted out of its original resting place and put directly onto the plastic sheet, intact and without disturbance. The plastic was then folded over the fiber matting and it was placed in an individual, shallow box, marked for position, ready for removal to the laboratory.

- E After all four quad sections of the first one meter square were removed, the same stratum of matting was then removed, in the same manner, from each adjacent square. In this way the complete horizontal stratum or "living floor" was removed and marked for reassembly in the laboratory.

In the actual pilot test, one square meter (consisting of four quad sections) was removed in the manner outlined above and boxed for transfer to the laboratory. This field work was accomplished by the senior author with the assistance of Mr. George Judson, who is an active member of S. T. A. A.

The positive separation of each fiber mat layer, by a layer of sterile roof spalling, provides a discrete, cultural stratum for study and analysis of the fiber matting. In effect, then, a complete depth of occupation, or living floor, can be isolated for determination of the length of time represented, the seasonality of the occupation, the qualitative content of the stratum, and the quantitative content. Thus an opportunity for intensive study of culture change as well as culture history is afforded by the lift-out technique.

Actual laboratory analysis of the one meter test sample was carried out, as a student study project, at the Center for Archaeological Research at the University of Texas at San Antonio. Tom C. McGuire performed the laboratory study and experimented with various laboratory procedures to obtain the best results.

A floor plan drawing was made for purposes of recording the exact position of objects located in the fiber matrix. Hand removal of all items proceeded as each was recorded on the floor plan drawing. Further refinement of provenience was accomplished by recording vertical position as "upper", "middle" and "lower" when this was possible.

Ash, roof spalling, and dirt were removed with a spoon and fine-screened for content such as seeds and bones. This ash and spalling material was removed as completely as possible from the top of each fiber matting layer in the field, since it appears to follow the occupational sequence represented by the fiber mat stratum below it. Any artifactual material located in the roof spalling stratum should be assigned to the occupation level above it.

As the dissection of a typical quadrant was completed, the typical laboratory description contained the following details as reflected by the content

of the sample:

The first notable object removed was a large biface lying on the surface. It was oval in shape, 10 cm. long by 8 cm. wide. Immediately beneath it was a large knot of fiber 3 cm. long. A hollow stick was observed protruding from the center of the matrix, and this area was removed next. Upon removal of the upper and middle center of the matrix, a small grouping of these hollow sticks was uncovered. There was no observable pattern to the grouping. There were three sticks 1/2 cm. in diameter and 5 to 10 cm. long. All sticks were hollow, resembling drinking straws. During removal of the right side of the matrix, two small pieces of bone were found as well as a piece of knotted fiber and a piece of string 11 cm. long. A bone bead was found in the right rear lower level. The only flint chips found were three small chips in the rear center lower level. All chips were less than one cm. in size and were found close together. The only other observable objects were two small groupings of bones. One group of four bones was found in the left front lower level while the second group was located in the left rear center level.

Pecan shells, mesquite pods, walnut shells and various other seeds and berries were recovered, indicating the opportunity and capability of dietary study, seasonality, and quantitative comparisons.

Obviously, a one meter square is a limited sample of any rock shelter; however, it appears sufficient to have tested the capabilities of the "lift-out" technique. Although this method is tedious and requires a great deal more effort, it is rewarding and necessary if we are to learn more than a simple artifact inventory about the culture processes and culture traits of these ancient people.

It would seem practical and desirable to apply the "lift-out" technique to those areas of a rock shelter where fiber matting occurs in discrete layers and covers a reasonable area of the cave floor (Word 1970:10-14). The dry rock shelters of West Texas are one of the few remaining areas where perishable material is preserved (Collins 1969:1). They should be analyzed, however possible, to obtain maximum information. The "lift-out" method affords such a possibility.

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THE CAMINO REAL CROSSING OF THE TRINITY RIVER

James Ivey

There are many historical sites in Texas whose locations are not precisely known. Among these, one of the more interesting in terms of historical significance and potential archaeological value is the town of Nuestra Señora del Pilar de Bucareli.

Bucareli, according to H. E. Bolton, was located on the west side of the Trinity River at the Camino Real crossing, from 1774 to 1779 (Bolton 1970:405). This is assumed to be near the present Texas Highway 21 bridge in Madison County. A number of attempts have been made to locate the remains of this town; the most recent of these was that of William Sorrow in 1972. His work, done under contract to the Texas Historical Survey Committee (now the Texas Historical Commission) was inconclusive, and the site of Bucareli remains unlocated.

An examination of Sorrow's report, "Investigations Into the Location of Nuestra Señora del Pilar de Bucareli," quickly reveals that the problems with the location of the town spring from a more basic question: what was the actual position of the Camino Real crossing of the Trinity River? This is the question this paper will attempt to answer, as a first step towards the eventual location of Bucareli.

The line of the Camino Real from Presidio San Antonio de Bexar to the eastern frontier of the Province of Texas had never been entirely forgotten. Numerous maps of Texas over the last two centuries are in the State Archives, and all are in general agreement as to the course the road followed. In 1915 V. N. Zivley, sponsored by the Daughters of the American Revolution, examined the available documents, and then made a detailed survey of the line of the road on the ground. His field notes dealing with the results of this survey are with the other maps in the State Archives -- they were used as the basis for the modern branch of Highway 21 marked as the "Old San Antonio Road" (Zivley 1915).

Since Zivley's survey, a number of objections to his location of the road-line where it crosses the Trinity have been raised because of local traditions concerning several routes across the river differing from that located by Zivley. It was this uncertainty about the actual location of the crossing that prevented Sorrow from arriving at any firm conclusions. Rather than being able to concentrate on an intensive survey of one small area, he had to briefly survey a number of possible sites for the town of Bucareli and the crossing.

Sorrow based his search on two general assumptions: 1) the road crossed the Trinity River at a ford; 2) the road crossed the Trinity within a few miles of the present Highway 21 crossing. Let us examine these assumptions.

In the documents dealing with Bucareli, at least one clear reference was made to the crossing: Gil Ybarbo reported that among the accomplishments of the inhabitants of Bucareli was "compostura de paso en el Rio Canivas..." (Ybarbo 1777). Bolton interprets this as meaning "an improved river crossing" (Bolton 1970:415) -- presumably the name "Rio Canivas" is an alternate or local name for the Rio Trinidad. The phrasing seems to indicate that a ford, rather than a ferry, is being described. It is likely, then, that Bucareli, and therefore the Camino Real, was at a ford of the Trinity. Sorrow states that C. A. Smith and J. C. Blaine, working in conjunction with Southern Methodist University, located a ford of the Trinity "a few hundred yards downstream (south) of the Highway 21 bridge ... Smith and Blaine... describe a ford characterized by rock ledges extending across the river bed" (Sorrow 1972:21). The rise in the average level of the river with the completion of Livingston Reservoir has effectively prevented further examination of this ford.

Sorrow raises an interesting point here: "one wonders why a ferry would be built at a place where there was a good crossing only 200 or so yards downstream" (Sorrow 1972:24) and considers this to render the Highway 21 bridge area as unlikely to have been the old crossing site.

There were three known fordable places on the Trinity in this area. The first, Bozeman's Crossing, is 3 3/4 river miles upstream from the Highway 21 bridge; the second is the crossing near the bridge; and the third is Hyde's Crossing, 9 1/2 river miles downstream (Sorrow 1972:21); yet most of the crossing activity in this area from at least 1821 to 1930 was by ferry. Why? The answer is probably that fording was more hazardous than an established ferry, at least on the Trinity -- and the river flooded frequently, rendering fords impassable.

Let us now investigate Sorrow's second assumption, that Highway 21 more or less followed the original route of the Camino Real. The first requirement is that the original line of the river bed at the time of the establishment of Bucareli be determined. Unfortunately, no record of the true position of the river in 1774 is available. It is possible, however, to determine the true position of the river in ca. 1835, and by comparing the position of the river then with its present line, determine whether major changes in its position have been taking place.

The primary sources for this determination are in the records of the General Land Office. They are the Nathaniel Robbins file (October 10,

1834), and the Joshua Robbins file (February 15, 1838). These files contain surveys which detail the line of the west shore of the Trinity River. A careful plotting of these surveys to the scale of the USGS quadrangles for this area indicates that this segment of the river has changed little from its present position. The actual banks of the river have moved north and east perhaps 300 feet along most of this part of its course since ca. 1835. This is, in many areas, a change smaller than the width of the riverbed. It would seem to be a reasonable assumption that this small a change in the 141 years since 1835 would indicate negligible change in the 60 years from 1775 to 1835.

Other files in the General Land Office records contain further information pertinent to this inquiry. These are Jesse Young (September 30, 1838), John Crist (April 13, 1835), and James Mitchell (April 20, 1835).

In the Robbins surveys and the Young, Crist, and Mitchell surveys major stream crossings of the survey boundaries are given. In the rolling country of this area, it can be fairly assumed that these streams also have changed little in their positions. When the General Land Office surveys are plotted onto the Elwood-Sand Ridge USGS 7 1/2 minute Quadrangles, most of the stream crossings fall on or within a few hundred feet of their modern counterparts, permitting a highly accurate placement of the boundaries on the ground.

With a base map prepared from the USGS quadrangles and the details found in the General Land Office records, we are ready to begin the attempt to plot the known position of the Camino Real.

Indicated on the General Land Office records are the crossings of the survey boundaries by the San Antonio and La Bahía roads. Plotting these onto the map gives us a general line of the San Antonio Road in ca. 1835. If we add the line of the road as surveyed by V. N. Zivley in 1915, the result is a fascinating display of the road as a dynamic entity (see Figure 1).

Both the ca. 1835 road and the 1915 road ran due east along a low ridge north of present Midway, where a modern dirt road still runs, but their solutions to the negotiating of the double valley of Cedar Lake and Young's Creek differed. The two alternate roads united again to run up Bull's Ridge, only to separate again to cross the Trinity. The 1835 road crossed at Robbins' Ferry, about 1,200 feet upstream from the site of today's bridge, where Zivley's route crossed.

For some reason the old roads tended to stay somewhat downslope on the south side of the ridges, while the modern roads run along the crests. The old roads kept stream crossings to a minimum and selected smoother, east-west ridges over others.

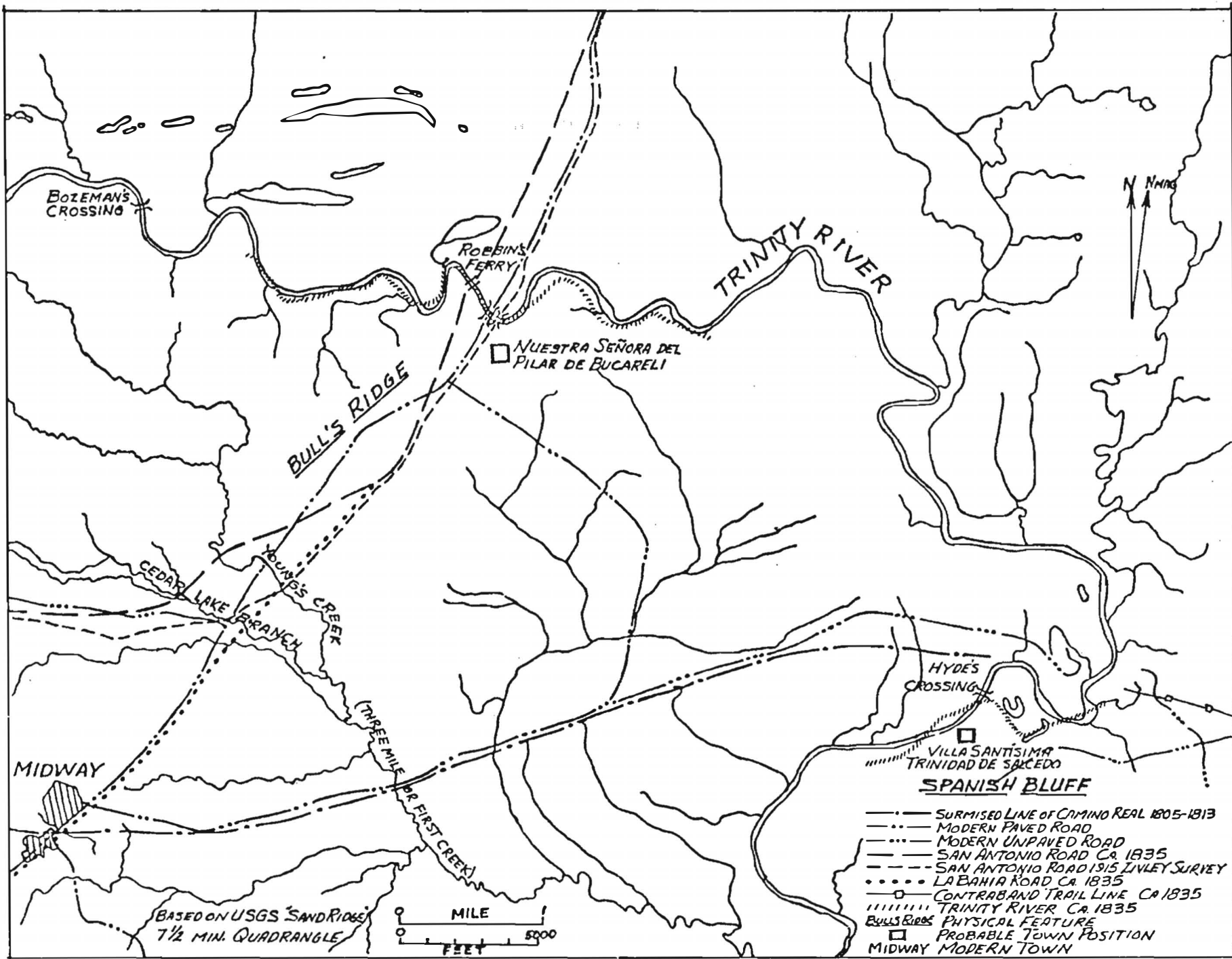
We have access to a slightly earlier map of this immediate region in the Nacogdoches Archives. This is the survey sketch of Nathaniel Trammell's half-league on the southwest bank of the river at the crossing, as surveyed by J. H. Cummings in March, 1826 (Cummings 1826). This sketch is schematic: it does not attempt to depict the physical features with topographic precision. Its features correspond closely with the area of Robbins' Ferry on our ca. 1835 map, and an odd sharp-angled bend in the line of the road immediately northeast of the Trinity on the Trammell map corresponds to a similar bend on the Zivley survey. The Trammell map does not show the La Bahía Road, but a road called the Bedi Trail or Trace is in about the same position. On this map one stream crossing is shown, over what is called both "Three-mile Creek" and "First Creek." This corresponds to Young's Creek, which is the first creek encountered after the Trinity heading west, and the creek three miles from the Trinity heading east. All information on the Trammell map taken together, then, indicates that the San Antonio Road in 1826 crossed the Trinity in the same place (within a few hundred feet) as did the road in 1835 and 1915.

This gives us the precise location of the San Antonio road and the crossing as of ca. 1830. Can we assume that this represents the position of the roads 55 years earlier? Is there evidence for a different road line and crossing? Unfortunately, yes.

During the period 1805-1813, there was a Spanish military outpost named Villa Santísima Trinidad de Salcedo (known later as Trinidad, Spanish Bluff, and Spanish Fort) on the Trinity. According to the official correspondence pertaining to the establishment of this post, its site was selected with the possibility in mind of having to defend against Indian attack, and was placed on the east bank of the Trinity so as not to be separated from its area of responsibility (from the Trinity to Nacogdoches) by flood (Salcedo 1805; Cordero 1805).

The post was apparently placed on top of a bluff on the east bank of the Trinity above Hyde's Crossing, south of the future site of Robbins' Ferry. This bluff was long afterwards called "Spanish Bluff" (Map of Houston County, 1844). In Yoakum's History of Texas (1855), Trinidad is shown as having been at this point, and a branch of the San Antonio Road is shown to have crossed the Trinity in the area of Hyde's Crossing and passed north of the bluff. Yoakum labelled this road the "Contraband Trail." It appears to correspond to a road which branches off the modern "Old San Antonio Road," crosses Highway 21 at the town of Midway, and continues as a back road which leads from Midway to the Trinity in the area of Hyde's Crossing.

With the assistance of Virginia Taylor of the General Land Office, three title files for Houston county were located with information about an old



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road trace running east from Hyde's Crossing. These were the files of James Barnes (1839), Jose Mora (1839), and John Welsh (June 26, 1834). These three surveys mention an old road aligned generally east-west. The James Barnes survey notes simply call this road the "Cencina Road," so far as the letters can be made out (this probably refers to a road to the old town of Cincinnati, about 20 miles south of Hyde's Crossing on the Trinity); the Jose Mora notes specifically call it the Contraband Trace; and the John Welsh notes describe it as "the Old trail leading from Old Spanish Fort on E. side of Trinity to Nacogdoches."

There can be no doubt, then, that a second Camino Real crossing existed for a short period from 1805 to 1813 (when Trinidad was destroyed) in the area of Hyde's Crossing. After the destruction of Trinidad in 1813, the Robbins' Ferry line of the Camino Real became the principal route. The alternate trail did not go out of use, however. It continued to be what it is called by Yoakum, a Contraband Trail, used by importers of goods who wished to avoid Mexican scrutiny in the border checkpoint town of Nacogdoches. With the end of Mexican control, the need for such deviousness passed, and the trail finally went back to weeds.

The existence of this "alternate Camino Real" and second crossing point undoubtedly produced some of the local traditions disagreeing with the Robbins' Ferry crossings, and awareness of the alternate route should help to clear up much of the confusion on this point.

So we have firm proof and fairly precise locations of two lines of the Camino Real. Is there any evidence that would permit us to decide which of these is the original line as of 1774?

There are two bits of evidence which assist us here. First of all, during the five years that Bucareli was established on the Trinity, it experienced two floods of note. The second in 1779 raised the waters of the Trinity halfway up the walls of the buildings of the town (Bolton 1970:437). The first, however, in 1775, only wiped out the town fields on the east side of the river (Bolton 1970:417). This indicates that the west bank of the river in the area of Bucareli and the Camino Real crossing was higher than the east bank. This alone is sufficient to eliminate the Hyde's Crossing line of the Camino Real as the original line, since on the west bank where it approaches the Trinity it passes through a low floodplain with numerous sloughs and swampy areas.

Secondly, Sorrow points out that in Ripperdá to Bucareli (1774), Ripperdá says "se establecieron en dho. Parage con animo de hacer su Labore del Otro lado de dho. Rio, que hay unas Lagunas permanantes . . ." (they intend to cultivate their fields on the other side of the said river where there are some permanent lakes . . ." (Sorrow, 1972). These were the fields later destroyed by the flood. There are permanent lakes on the northeast side of the river just north of the Highway 21 bridge and nowhere else within a number of miles.

It would seem, then, that the overall picture points with a high level of likelihood to the Robbins' Ferry - Highway 21 bridge crossing as being the site of the Camino Real crossing in 1775, and the compound road-lines indicated by the General Land Office records and Zivley's survey as being the course of the Camino Real.

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THE HILLBOLDT SITE, AUSTIN COUNTY, TEXAS

L. W. Patterson

During a flint study program by the Houston Archeological Society, Beth Shoemaker of the Houston Gem and Mineral Society furnished a surface collection of artifacts gathered by that organization from the Hillboldt Site, 41 AU 7, in Austin County, Texas. This site is located between a creek and a secondary dry creek bed, and has approximate dimensions of 175 by 225 yards. Soil is generally of a clay based nature. It would appear that this is a campsite, representing a hunting and gathering lifeway, with intermittent occupations over a long time period. Prehistoric occupations start in the late Paleo or early Archaic period and end in late prehistoric time. There are also indications of occupation by early European settlers, which has been confirmed by some of the older people now living in the area.

The earliest occupation in the late Paleo or early Archaic period is indicated by a lanceolate shaped projectile point, shown in Figure 1. This point is well made, with precise shaping and thinning of the base, and the lateral edges are ground at the basal end. There is, however, no indication of the use of pressure flaking, and flake scars on all margins show the characteristic stepped effect of direct percussion. This point could possibly be classified as a Plainview. Later Archaic period occupation is indicated by a finely pressure flaked base of a Pedernales dart point, and a more crudely formed Kent dart point, having only small amounts of pressure flaking. A Scallorn arrow point, not available for illustration, indicates late prehistoric use of this site. Two small sandy paste potsherds of black color show Woodland or late prehistoric occupation. Aten (1971:Fig. 10) shows pottery starting on the upper Texas Coast at approximately A. D. 200. Evidence of historic occupation is indicated by a glazed potsherd, and discolored brown and purple glass bottle fragments.

According to field notes and labelling of artifacts, this site was sampled in three areas. One area yielded only a Scallorn point and a large pebble chopper. The chopper is made from a large, approximately round flat tan flint nodule, 95 mm in diameter and 23 mm thick, with bifacing on an edge over an interval of 80 mm.

The second area gave the following collection, with little diagnostic material:

Mussel shell	1
Glazed potsherd	1 historic
Cow or buffalo tooth	1
Bone fragments	3

Biface	1	Figure 1g
Biface fragment	1	
Deer metatarsal	1	
Miscellaneous flake core	1	
Limestone pebble	1	
Quartzite hammerstone	1	with wear
Thick flint chips	4	
Flint flake graver	1	
Irregular flint flakes		
Under 15 mm square	10	
15 to 20 mm square	4	
20 to 25 mm square	2	
25 to 35 mm square	3	
35 to 50 mm square	1	

There were no primary cortex flakes in the flake collection over 15 mm square, 20% were secondary flakes with some remaining cortex, and 80% were internal flakes with no cortex. There is some evidence of heat treating of flint, as reddish discoloration on tan flint flakes. Flint flakes show use retouch typical of cutting and scraping functions, with no purposeful retouch evident.

Most of the collection from this site came from a third area, including all of the dart points and prehistoric potsherds. Excluding flint flakes, the collection from this area is as follows:

Petrified wood pieces	2	
Burned rock fragments	5	
Small smooth pebbles	2	perhaps pottery smoothers
Limestone fragments	5	possibly burned
Miscellaneous rock fragments	2	
Grooved sandstone abrader	1	
Quartzite hammerstones	2	with wear
Large quartzite cobbles	8	not worn
Miscellaneous flint cores	5	
Indented flint cobble	1	hafted?
Blade core	1	
Shell fragments	3	perhaps modern
Grooved shell fragment	1	
Thick flint chips	12	
Bone fragments	25	
Potsherds	2	sandy paste
Sandstone mano	1	hand size
Bifaces	2	Figure 1 e, f
Glass fragments	2	brown, purple
Biface fragments	2	

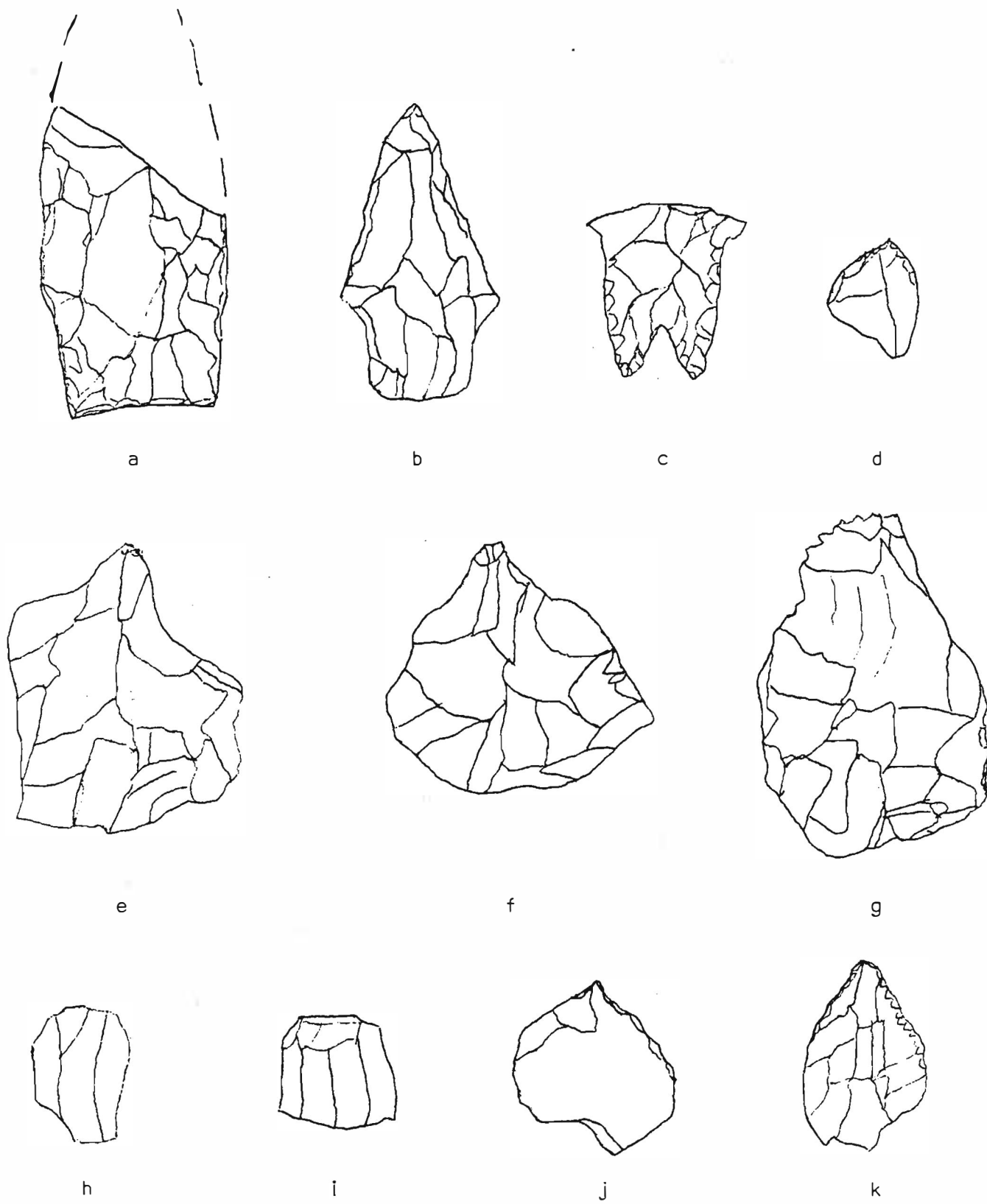


Figure 1 Site 41AU7 Artifacts

a - Plainview point (?), b - Kent point, c- Pedernales point, d - Unifacial end blade, e, f - Beaked bifaces, g - Biface, h - Blade core trim flake, i - Prismatic blade fragment, j - Flake graver, k - Utilized flake, (All shown actual size)

<u>Pedernales</u> point base	1 grey-brown flint
<u>Plainview</u> point	1 grey-brown flint
<u>Kent</u> point	1 grey-brown flint
<u>Dart</u> point blade fragment	1 grey-brown flint

The grooved sandstone abrader is of the type often referred to as for manufacturing projectile point shafts, and has several straight grooves. The prismatic blade core is of blocky rectangular shape, having four parallel facets on one end, with widths of 14, 15, 16, and 19 mm, and a single facet striking platform. Animal bones and projectile points demonstrate hunting activities. The sandstone mano is possibly associated with vegetable food preparation. Burned rock and limestone fragments may be associated with cooking activities. There is ample evidence of lithic tool manufacture on this site, in the form of hammerstones, flint cores, and small flint flakes.

The flint flake collection for the third area is as follows:

Unifacial end blade	1
Prismatic blades and fragments	6
Blade core trim flakes	2 facial
Irregular flint flakes	
Under 15 mm square	14
15 to 20 mm square	14
20 to 25 mm square	8
25 to 35 mm square	5
35 to 50 mm square	4
50 to 70 mm square	1

The unifacial end blade has been shaped as a crude point, perhaps for use as an arrow point (Patterson and Sollberger 1974). Prismatic blades have widths of 13, 15, 16, 18, 19, and 25 mm, for an average width of 17.7 mm. Blade core trim flakes are typical byproducts of prismatic blade manufacture, and have parallel facets on dorsal surfaces. Most of the flint flakes above 15 mm square show some use retouch on edges. Both scraping and cutting functions are indicated, with retouch patterns such as illustrated by Tringham, et al (1974). Prismatic blades show the same types of use retouch on the lateral edges, and no end scrapers are present in this rather small collection. There is enough prismatic blade material, however, to indicate a complete blade industry.

There are 12.5% primary cortex flakes, 25.0% secondary flakes with some remaining cortex, and 62.5% internal flakes with no remaining cortex, in the third area flint flakes above 15 mm square. Flint types in both areas 2 and 3 include tan, brown, pink, and grey-brown flints, and red jasper. A number of specimens in the third area show evidence of heat treating.

This site is typical of inland campsites on the upper Texas coast, with intermittent occupations over long time periods, representing a nomadic lifeway. This type of site is generally near a stream, and seasonal subsistence patterns remain poorly understood. If the lanceolate shaped projectile point can be classified as Plainview, a starting time of 4,000 to 7,000 B. C. (Suhm and Jelks 1962:239) could be indicated for this site. With historic occupation also indicated, the human cultural debris could indicate an occupation period of 6,000 to 9,000 years. No exotic materials from distant locations were found, nor any non-utilitarian artifacts, with the possible exception of a grooved shell fragment. The overall collection for this site resembles inland sites in Harris County for the same time interval, but this site does not have a large enough collection to allow a very detailed comparison. The latest bibliography for the prehistory of the upper Texas coast (Patterson 1975) shows that a few articles have been published for this county, including Dillehay, et al (1972), Duke (1961), Fleming (1959), and Mewwhinney (1961). Archeological activity in Austin County has increased somewhat with the work recently reported by Hall (1975) for a large burial complex.

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