# ARCHAEOLOGICAL SURVEY AND ASSESSMENT OF PROPERTIES FOR THE CONQUISTA PROJECT IN LIVE OAK AND KARNES COUNTIES, TEXAS

Harvey P. Smith, Jr.

Center for Archaeological Research
The University of Texas at San Antonio
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## INTRODUCTION

At the request of Mr. Galen Quigley, representing the Conquista Project, Falls City, Texas, the Center for Archaeological Research at The University of Texas at San Antonio conducted an archaeological and historical assessment of five land tracts in Karnes County and one land tract in Live Oak County. The contract for this work was confirmed by a letter from Mr. Quigley dated March 2, 1978.

In compliance with the above agreement, a field team consisting of Harvey Smith, crew chief, and Don White was authorized to proceed with field survey work. Field investigations were under the general supervision of Dr. Thomas R. Hester, Director of the Center, and Mr. Jack Eaton, Assistant Director. Field work was accomplished in the latter part of March 1978.

The five land tracts in Karnes County are contiguous and are discussed as a group in this report. The one land tract in Live Oak County is discussed separately. Upon completion of field work, collected materials were analyzed by the author as a part of the preparation of this report. Specimens, together with field notes and photographs, are on file at the Center for Archaeological Research.

## ARCHAEOLOGICAL BACKGROUND

Prehistoric remains have been known and collected in the past in both Karnes and Live Oak Counties. These evidences of early occupation are usually concentrated along the fringes of various waterways, above the normal flood levels.

Previous archaeological work has established a tentative chronological framework based on changes in projectile point styles through time. Thus only a generalized chronology can be stated at this time for the southern Texas area, representing the Texas coastal plain south of the Edwards Plateau and the Guadalupe River drainage (Hester 1976a:83-84).

Paleo-Indian Period.....9200-6000 B.C.
Pre-Archaic Period.....6000-3500 B.C.
Archaic Period.....3500 B.C. - A.D. 1000
(Early-Middle-Late)
Late Prehistoric Period.....A.D. 1000-1600
Historic Period.....A.D. 1600-Present

All of these time periods are represented by the cultural remains found in this area thus far, with most evidence attributable to the broad Archaic time span. The prehistoric sties include open camp sites, temporary camp sites, quarry workshops and buried middens (Hester 1976b:6). Surface manifestations consist of lithic scatter which includes cores, thick bifaces, thin bifaces (including projectile points), with scattered burned rock and occasional intact hearths.

## PRIOR ARCHAEOLOGICAL WORK

In addition to research reported here, there are extensive current investigations now in progress in the region, particularly in Live Oak County. The Center for

Archaeological Research has conducted several previous surveys, recording six sites in Live Oak County (41 LK 83, 98, 99, 100, 101, 102) and seven in Karnes County (41 KA 35, 37, 38, 39, 40, 41, 42). Field reports are on file at the Center for Archaeological Research.

Work by the Center continues with a major project in the survey and mitigation of sites in the proposed Choke Canyon Reservoir (Grant Hall, personal communication). This work follows the previous cultural resource survey of Choke Canyon Reservoir conducted by the Texas Historical Commission (Lynn, Fox and O'Malley 1977).

The Texas Department of Highways and Public Transportation is also conducting extensive excavations of a deep, buried midden and burial site (41 LK 28) in Live Oak County adjacent to Texas Highway 9, approximately four kilometers north of Three Rivers (Charles Johnson, personal communication).

Due to the proximity of many of these sites to the project areas reported in this present study, it is possible to draw useful comparisons between the cultural remains, the ecological and topographical conditions and the settlement patterns.

## FIELD METHODS

Initial inspection of each land tract was made with Mr. Galen Quigley, representing Conquista Project, so that proper identification of boundaries and land owner cooperation could be established. Land tract boundaries were located on USGS 7.5 minute topographic maps which were used for further reference during field surveys. The areas were surveyed by walking, with transects laid out for efficient coverage of all land tracts. Intensive inspection was made of all water courses and other potential prehistoric habitation areas (e.g., along stream terraces, at the confluence of streams, etc.).

Where cultural remains were discovered, their extent and distribution were recorded. Selected shovel tests were made to determine the depth and intensity of occupational remains, and all material was passed through 1/4-inch mesh screens for recovery of artifacts and other cultural debris. Controlled surface collecting was conducted at the one major occupation site found, using a large scale grid to provide horizontal separation between the stream terrace and the adjacent uplands, as well as linear division parallel to the creek. Intrasite patterning was more closely defined by use of this grid, although much greater refinement of scale would have been desirable if time had permitted.

Since the one major site area discovered would be destroyed by planned mining operations, all cultural materials were collected. Intrasite location for all these materials was recorded by reference to the horizontal grid coordinates.

## KARNES COUNTY LAND TRACTS

The Karnes County land tracts included in this report are as follows:

a. Pawelek
b. Butler-Hackney
c. Lauw
d. P. J. Lyssy
e. Gabrish

A total of approximately 2,000 acres is represented by these five contiguous tracts of land. This general area is typified by heavy outcroppings of silicified wood embedded in the Tordilla Sandstone which surfaces in this area and is from the Whitsett Formation of the Jackson Group (geology department, Conquista Project; personal communication).

A local landmark known as Tordilla Hill is the highest and most prominent outcropping of the Tordilla Sandstone. It is located on the Pawelek tract and was thoroughly inspected. Two small rockshelters found there showed no evidence of prehistoric occupation. There was a considerable amount of historic graffiti carved into the numerous sandstone slabs and outcroppings. One date of 1886 was found, along with names of persons; one large incised cross was noted and it has a smaller superimposed cross.

Although each land tract in this Karnes County group was thoroughly inspected by walking parallel transects at 20 meter intervals, no evidence of ancient occupation was found. Previous reports from the Center, recorded by Stephen Black (letter reports on file), indicate sites 41 KA 37, 38, 39, 40, 41 to be located approximately two kilometers northeast of our study area. These were reported as lithic scatters with a considerable number of lithic artifacts and with quarrying activities evident.

The absence of recognizable sites in our study area seems to result from the lack of any reliable water source. Only minor drainage systems are present. The importance of reliable water sources to local prehistoric hunters and gatherers has been made clear in earlier research (cf. Taylor 1964; Hester 1976b).

### Recommendations

Due to the absence of any visible prehistoric remains, no further work is required on these five land tracts.

## LIVE OAK COUNTY LAND TRACT

The one land tract in Live Oak County was the Martin property, consisting of 265 acres adjacent to Sulphur Creek, approximately two kilometers southeast of the community of Ray Point and approximately 11 kilometers east of Three Rivers, Texas (Fig. 1). Field work on this tract revealed a prehistoric habitation zone on the second alluvial terrace above and east of Sulphur Creek. The site extended along the entire frontage of the creek approximately

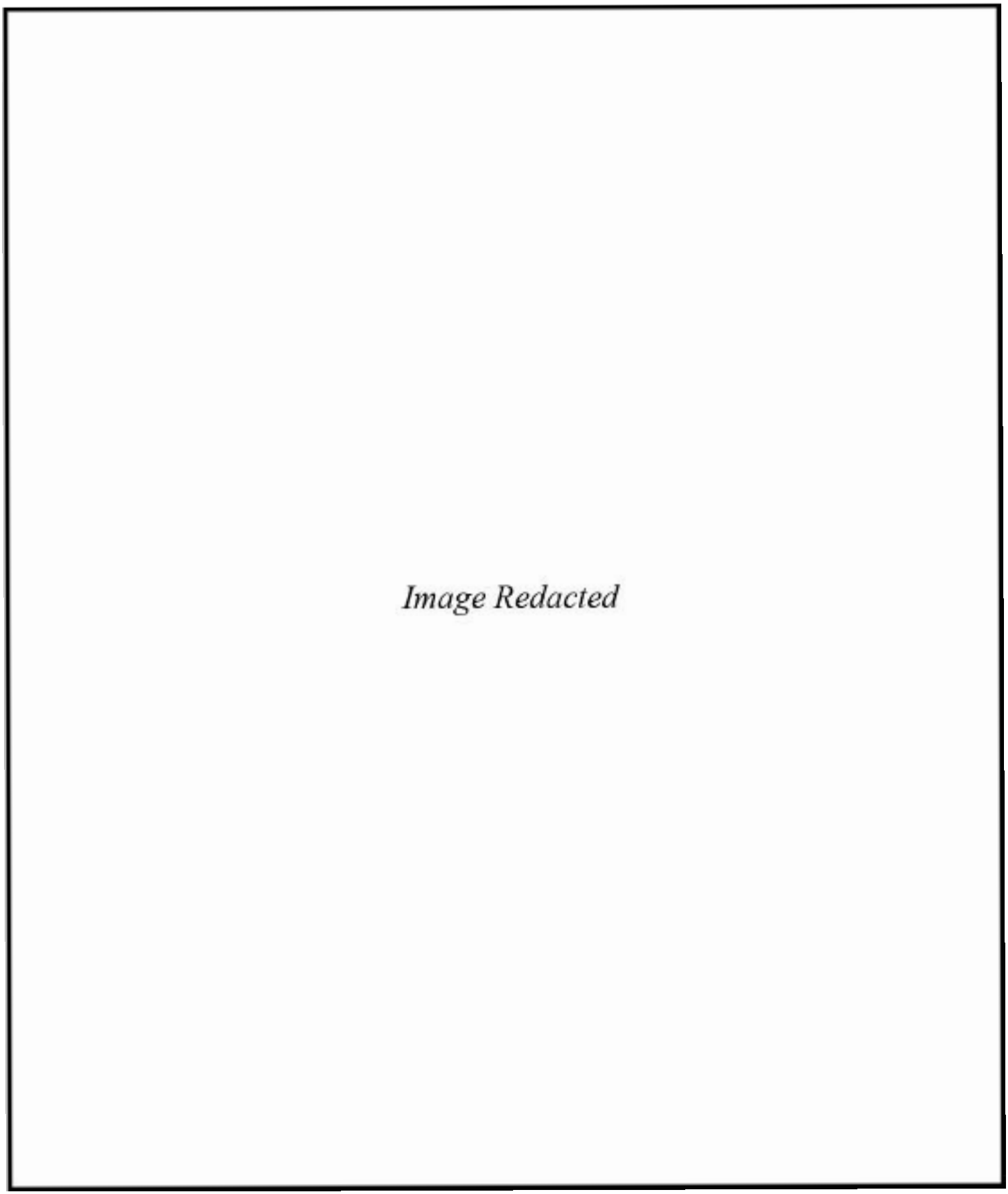


Figure 1. *Site 41 LK 117*. Shown are the locations of site boundaries and grid units (heavy black lines); dashed lines are fence lines. Also indicated are contour lines (10 ft intervals) and the relationship of the site to Sulphur Creek.

1000 m (north-south) by 300 m (east-west). The width of this habitation zone extends across the second terrace and into the higher ground of the uplands.

This area falls into the Tamaulipan Biotic Province (Blair 1950), which is characterized by an intermingling of prairies and of groves of oak and elm extending over gently rolling plains. Mesquite and thorn bushes dominate the area, with grasses present in open spaces. In the site locality, oak and elm are found close to the creek on the first terrace. Occasional heavy erosional cutting extends back through the higher ground of the second terrace. Light sheet erosion exposed cultural debris in various areas.

A thin cover of sandy loam covers the site, but there are outcroppings of chert cobbles and silicified wood (including palm). The deeper erosional cutting reveals the Catahoula volcanic sand which is the basic underlying stratum and appears as chunks of yellow and white clay when exposed (geology department, Conquista Project; personal communication).

Recent modification, including a series of bulldozer roads and core drilling activities, has disturbed the site area. The bulldozer roads were used as grid references. They appear to have created minimal damage since, as we soon discovered, the entire site consists of a medium to light lithic scatter.

## Site Description (41 LK 117)

The cultural remains at 41 LK 117 consist primarily of a medium to light lithic scatter with greater concentrations in some areas. This lithic debris extends rather consistently and continuously over the whole site. The occupation area encompasses the second alluvial terrace and an upland area above it, the whole of which runs parallel to the course of Sulphur Creek.

The depth of cultural debris was very shallow. Shovel tests were negative except for the recovery of a few flakes in the top 10 centimeters. Sheet erosion would occasionally reveal cultural material in the top 5 to 10 cm. Deeper erosional cuts confirmed the very shallow occupation zone and also exposed a top soil depth of sandy loam of not more than 20 to 40 cm.

Horizontal control for the surface collecting process was established by dividing the second terrace area into five parts and the adjacent uplands into four parts. All visible lithic material was collected. Considering the time available, we felt this was our best method to obtain intrasite cultural definition. See Table 1 for results and Figure 1 for grid.

## Cultural Materials

A wide variety of chipped lithic materials, some ground stone items, and a few ceramics were collected from the surface of the site. These materials are generally typical of this part of southern Texas (Lynn, Fox and O'Malley 1977).

TABLE 1

HORIZONTAL DISTRIBUTION OF CULTURAL MATERIALS

| Terrace Unit | Cores | Thick Bifaces | Thin Bifaces | Unifaces | Misc. | Pottery | Totals | Percent |
|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 13 | 7 | 4 | 1 | -- | 29 | 22.5 |
| 1-B | 2 | 1 | 3 | -- | -- | -- | 6 | 4.6 |
| 2 | 1 | -- | -- | 2 | 2 | -- | 5 | 3.9 |
| 3 | 3 | 1 | 4 | 2 | -- | -- | 10 | 8.7 |
| 4 | 4 | 4 | 2 | 2 | -- | -- | 12 | 9.3 |
| Sub Total | 14 | 19 | 16 | 10 | 3 | -- | 62 | 49.0 |
| Upland Unit | | | | | | | | |
| 1-B-U | 3 | 1 | -- | 2 | -- | -- | 6 | 4.6 |
| 2-U | -- | 2 | 2 | 2 | -- | 7 | 13 | 10.0 |
| 3-U | 2 | 3 | 3 | -- | -- | -- | 8 | 6.4 |
| 4-U | 12 | 6 | 11 | 7 | 3 | -- | 39 | 30.0 |
| Sub Total | 17 | 12 | 16 | 11 | 3 | 7 | 66 | 51.0 |
| Totals | 31 | 31 | 32 | 21 | 6 | 7 | 128 | 100.00 |

In analyzing the lithics, the author followed the general core reduction concept suggested by Patterson (1977:53-82). The artifacts will be listed with cores first and will then follow a processual sequence toward the thin bifaces, finally dealing with the diagnostic bifaces (projectile points). Miscellaneous artifacts are also described.

## *Cores*

Cores were made mostly from chert with a few found of silicified wood.

### *Tested Cobbles*

Several cobbles had been modified with only a few exterior flakes removed and without a prepared platform. These appeared to be testing blows designed to evaluate the chert.

### *Split Cobbles*

The split cobble core type was found in the study area and seems to confirm the technique previously described by Lynn, Fox and O'Malley (1977:100; see also Hester 1975:215).

### *Biface Cores*

Another reduction technique found in the study area was the biface core (Fox *et al.* 1974: 35-37). This core type is rather widespread and has been found by the author as far north as Kendall County (see also Hester 1975:217).

### *Cortex-platform Cores*

This core type appears to be a local manifestation of the reduction process and is believed by Lynn, Fox and O'Malley (1977:100) to be derived from the split cobbles described above. It is thought by the author also to be closely related to the process used to strike off the so-called "sequent scraper" diagnostic of the Trans-Pecos (Nunley, Duffield and Jelks 1965; Lorrain 1968:66). The Trans-Pecos tool, however, is usually derived from a smaller cobble, having an average diameter of approximately five cm. The cortex usually remains on the perimeter except where edge retouch removes it. Other cortex platform cores from southern Texas have been described by Hester (1975:217).

### *Multi-platform Cores*

Several cores were found that had two or more well-defined platforms from which flakes had been removed. In some instances the platforms were on opposite ends, and in others they were located on one or more

sides of the core. This development appears to be a reflection of opportunism on the part of the knapper, as he took advantage of the variable fractures of the chert cobbles.

*Step Platform Cores*

A distinct variant of the multi-platform core was found which had a step or a shelf type of break below the original platform, which was utilized in turn as a second platform. Again we see the opportunism of the knapper allowing him to more fully utilize the lithic resource.

*Single Platform Cores*

A single platform may be created as the result of the split cobble technique or the removal of a large flake, resulting in a single facet prepared platform (Hester 1975:215). This is the most numerous type of core with the possible exception of the expended core which would logically be expected to occur in considerable numbers.

*Expended Cores*

The point at which a core might be considered to be expended will obviously vary with the individual knapper and the availability of the lithic source. Several collected cores were quite small and seemed to be fully expended; i.e., no further usable flakes could be detached.

*Thick Bifaces*

The thick biface is chipped on both faces and is found in various shapes depending on the final tool shape desired by the knapper. These bifaces represent phases in the continuum of the reduction process and represent "fossilized" stages of lithic reduction (Patterson 1977). The thick bifaces found at 41 LK 117 represent the normal range of shape outlines and also illustrate the progression of the reduction process mentioned above (see Lynn, Fox and O'Malley 1977:215).

*Thin Bifaces*

The thin biface ranges through the completion end of the reduction continuum (*ibid.*) and terminates with various completed artifacts. Patterson (1977) postulates five stages of reduction from the core to the completed tool or projectile point in her reduction continuum. Stages 3, 4 and 5 are all in the thin biface category. Stages 3 and 4 could be considered as preforms (later to be completed as projectile points or knives) or as completed tools with a cutting or scraping function. Stage 5 is shown by Patterson to usually be a projectile point in its finished form.

The projectile points found at 41 LK 117, as part of the surface collection, are placed in the thin biface category for purposes of tabulation (See Table 1). However, these projectile points are also itemized separately since they have a value in placing the cultural occupation of the site into a temporal context.

Based on projectile point chronologies in adjacent central Texas (Johnson, Suhm and Tunnell 1962:122) and Trans-Pecos Texas (Johnson 1964:96), the projectile point surface collection from 41 LK 117 can be tentatively grouped as follows: (see Fig. 2)

Late Archaic: *Ensor, Frio* and *Darl* points
Middle Archaic: *Langtry* and *Pedernales* points
Early Archaic: *Bulverde* point
Archaic (age unknown): *Tortugas* and *Abasolo* points
Possible Paleo-Indian: lanceolate form points

As implied by this tabulation, the Archaic stage is well represented across a broad time spectrum at this site. A Late Prehistoric occupation is also apparent given the presence of plain ware bone-tempered pottery sherds (Hester and Hill 1971), although no diagnostic arrow point types from this late period were found.

*Miscellaneous*

The miscellaneous category indicated in Table 1 includes the following artifacts (also see Fig. 3):

*Terrace Units:*

End scraper made on a primary flake. Length: 5.5 cm.

Bifacial gouge-like tool with convex bit on distal end, showing hinge flake wear. Length: 6.5 cm.

Flake tool with one distal bit, one retouched edge and one possible graver point on proximal end. Length: 5.5 cm.

*Upland Units:*

*Clear Fork* tool. Length: 5 cm.

*Guadalupe* tool. Length: 7 cm.

Ovoid grinding stone fragment of white, pink and red quartzite. Length: 10 cm.

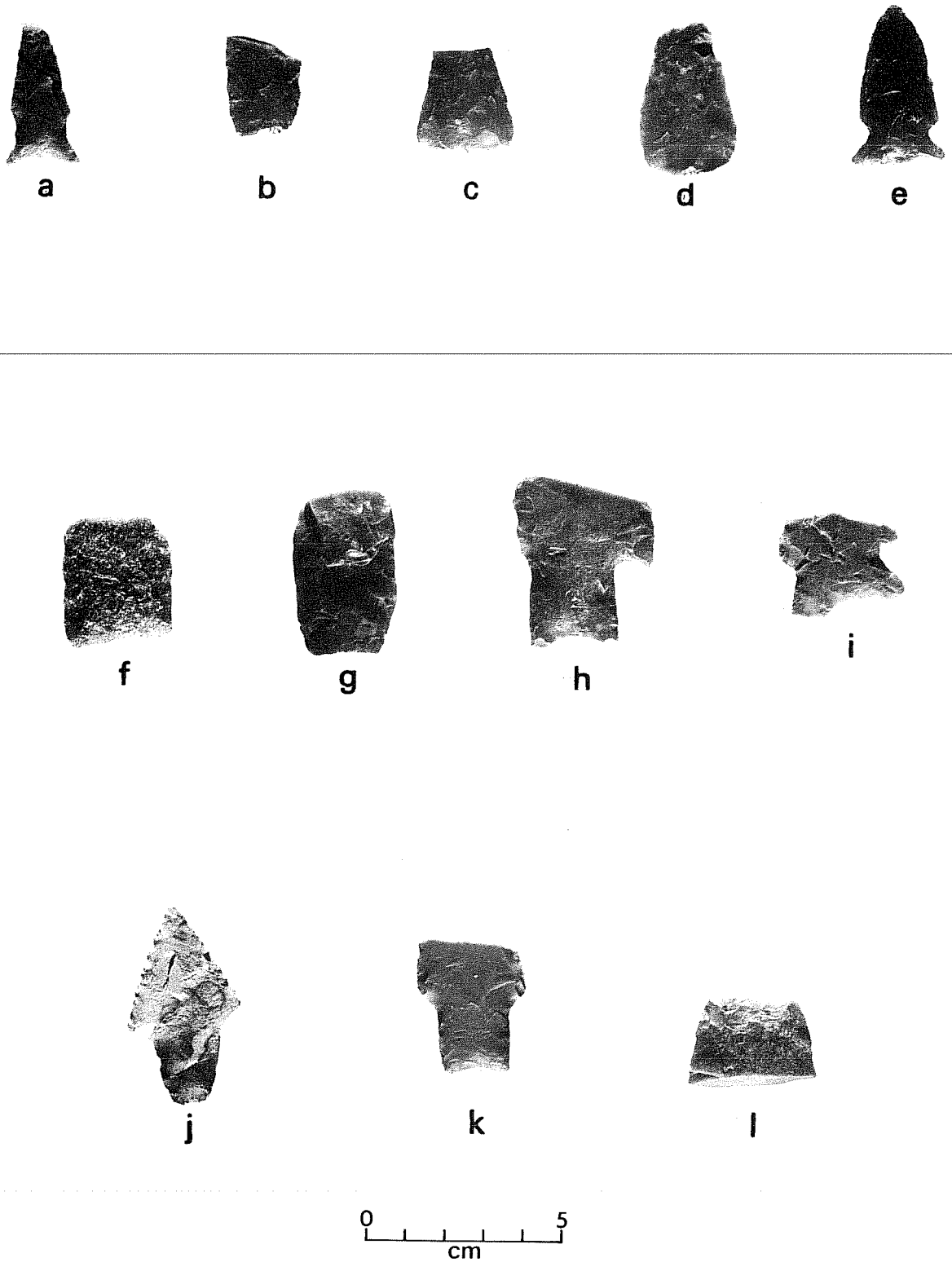


Figure 2. *Projectile Points from 41 LK 117.* a, *Darl*-like; b,g,l, lanceolate; c,f, *Tortugas*; d, *Abasolo*; e, *Ensor*; h, *Pedernales*; i, *Frio*; j, *Langtry*; k, *Bulverde*.

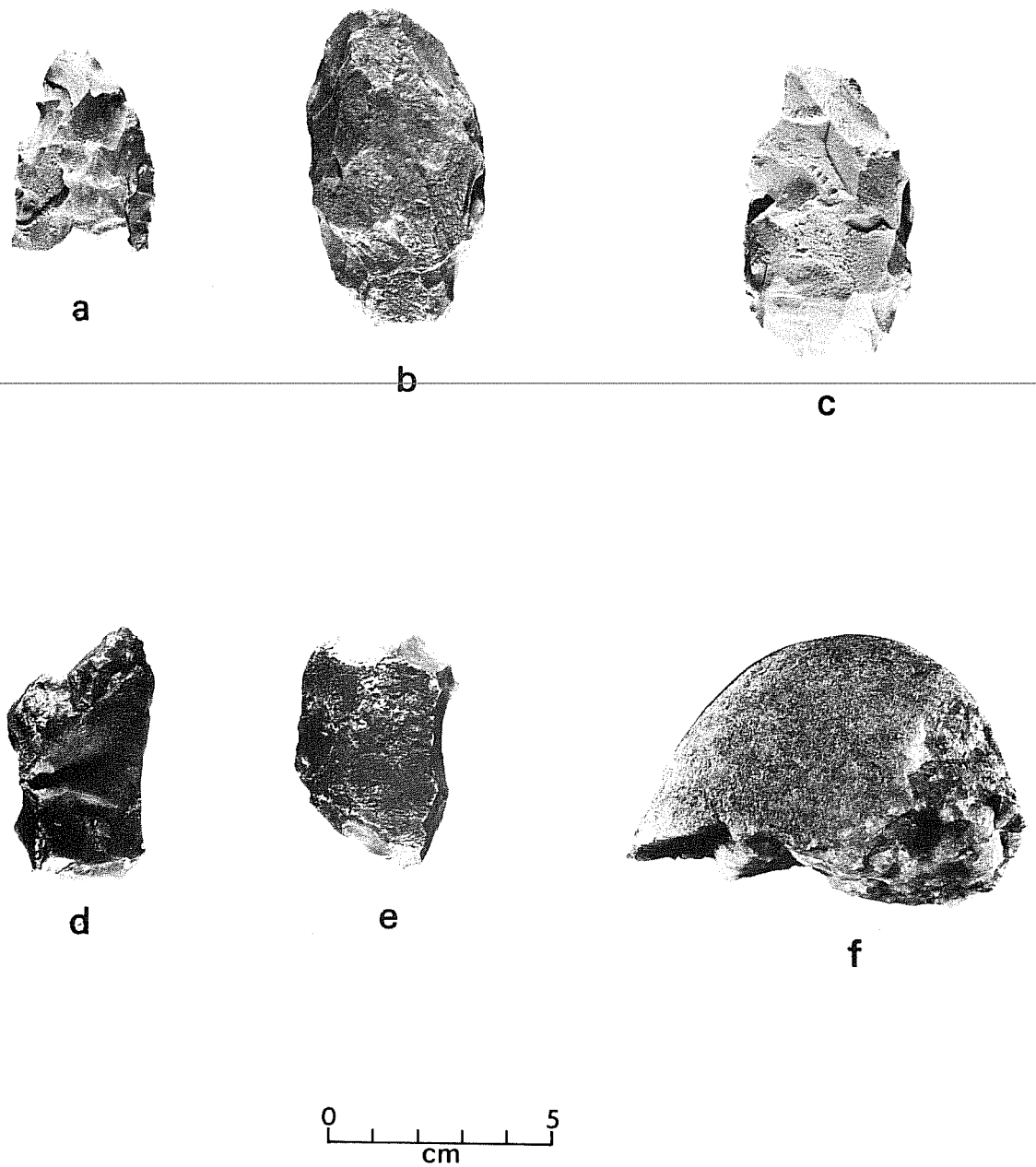


Figure 3. *Miscellaneous Artifacts from 41 LK 117.* a, *Clear Fork* tool; b, bifacial gouge-like tool; c, *Guadalupe* tool; d, flake tool; e, end scraper; f, ovoid grinding stone.

## Horizontal Distribution of Cultural Materials

Horizontal gridding of the site area, as mentioned above, was established to hopefully provide information on intrasite function of cultural activities and to show any specific ecological bias for certain activities. Since the site area includes both the stream terrace and the upland zone adjacent to Sulphur Creek, the grid was designed to separate these two ecological zones (see Fig. 1). As noted earlier, the terrace area was divided into five units and the upland into four, with all cultural artifacts recorded by unit (see Table 1).

The results of this tabulation reflect an almost equal distribution for all implied activities between upland and stream terrace. Although chert cobbles are more prevalent on the uplands, quarry reduction of cores and bifaces occurred in balanced numbers on the terrace and the upland areas. Thin bifaces, including projectile points, were exactly the same in number on the terrace and upland.

Only two concentrations were noted on the grid, Unit No. 1 at the exterior west end of the site area and Unit No. 4-U at the east. Unit 4-U contained 30% of all recorded artifacts and Unit 1 contained 22.4%. These concentrations could reflect an intrasite settlement pattern with activities grouped toward the two ends of the site area.

Based on all recorded artifact distributions, the cultural activities at 41 LK 117 appear to be homogeneous throughout the site area. There appears to have been similar cultural activity in the upland and terrace areas.

## Exotic Lithic Materials

The prehistoric knappers seemed willing to utilize the available exotic lithics, consisting of both silicified wood and palm. Apparently their opportunist attitude encouraged them to make a variety of tools and projectile points from the colorful, translucent material. This use of both silicified wood and palm is reported by Grant Hall in the Choke Canyon Reservoir and by Charles Johnson at 41 LK 28 (personal communications).

The surface collection from our study area (41 LK 117) yielded cores, bifaces, modified flakes, gouge-like bifaces, preform bifaces, thin biface (projectile point) fragments and flakes of silicified wood and palm (Fig. 4). No apparent aesthetic value was placed on these more exotic lithic materials by the prehistoric inhabitants, but they obviously made abundant practical use of them.

One grinding stone fragment of red, pink and white quartzite which was found showed considerable smoothing and use wear (Fig. 3).

## Pottery

Seven sherds of plain ware tan to gray pottery were found on 41 LK 117. Six of these fitted together, forming one large fragment. Slight amounts

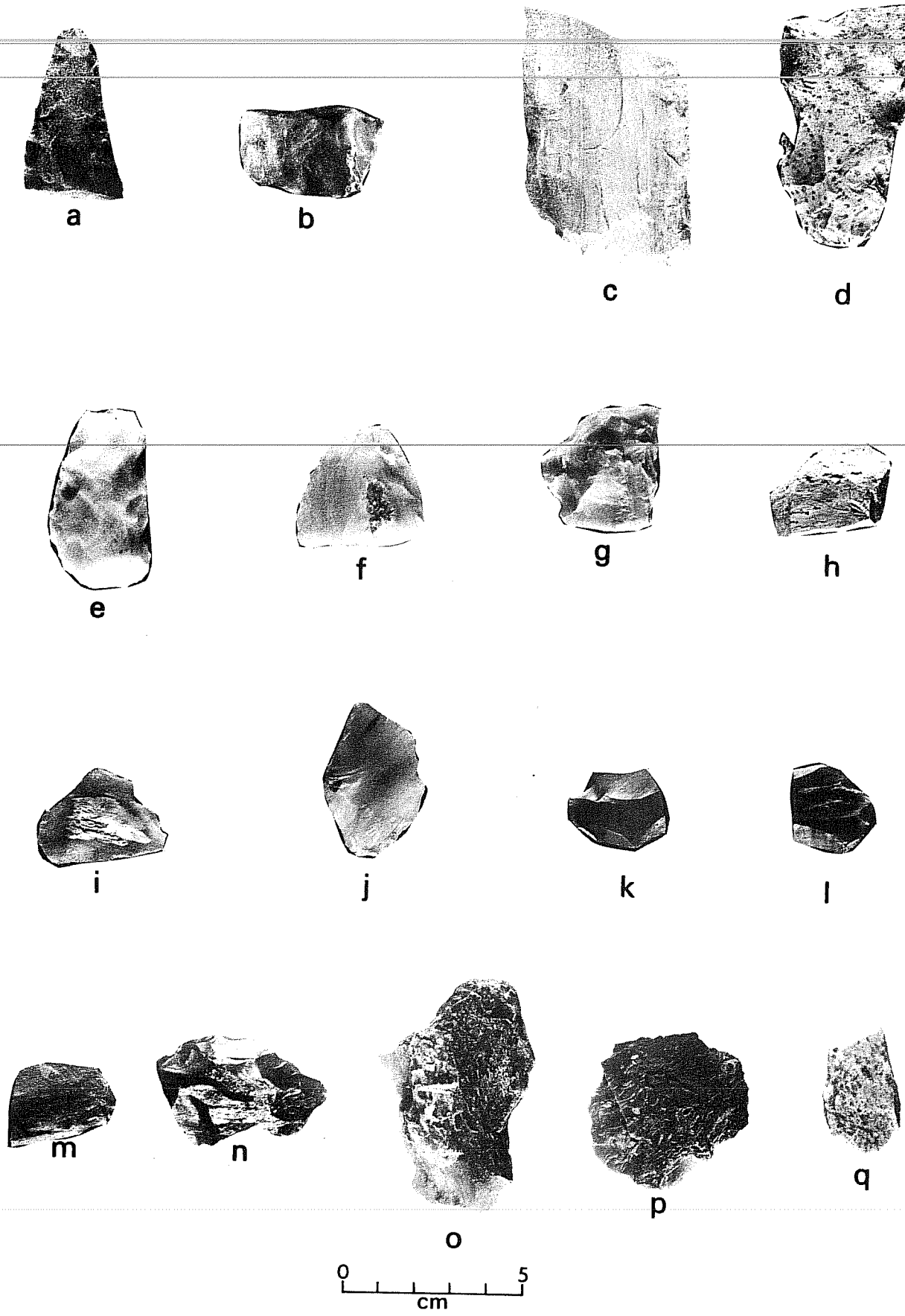


Figure 4. *Silicified Wood and Palm Artifacts from 41 LK 117.* a, biface distal fragment; b,c, biface basal fragments; d,e, palm wood bifaces; f-q, silicified wood flakes and chips.

of asphaltum were found on the surface of the large, reassembled sherd. Striations on the surface were visible, but were very faint. A smoothed to slightly polished finish was present.

A rather coarse bone and grit temper was used. The grit appeared to be ground from local materials with a variety of color and undoubtedly includes a portion of silicified woods.

This pottery compares closely with the central Texas variety referred to as *Leon Plain* (Suhm and Jelks 1962:95-96). Generally, the presence of this plain ware pottery indicates a Late Prehistoric occupation (Hester and Hill 1971).

## Private Collections

As supplementary information, private lithic collections belonging to the land owner, Mr. Martin, and to Mr. Elo Braune, the owner of a farm directly across Sulphur Creek from the site area, were inspected. These cultural materials generally conformed to our surface collection from 41 LK 117. The Archaic period was well represented; in addition, diagnostic artifacts from both the Paleo-Indian and the Late Prehistoric periods were present in these collections.

There was a particularly interesting lanceolate-shaped dart point in the Braune collection, with a blade outline and concave base very similar to *Angostura*. However, a distinct variation was the broadly notched basal edges that were smoothed. The broad notching of the basal edges produced a fishtail effect. Similar points have been found at 41 LK 28 (Charles Johnson, personal communication) near Three Rivers, only 10 kilometers from 41 LK 117. This *Angostura* variant has also been identified in the Barber collection which comes from sites near Fredericksburg, Texas (T. R. Hester, personal communication).

Another aberrant Paleo-Indian projectile point was seen in the Braune collection. The specimen has lanceolate outline with the maximum breadth toward the distal point. This biface had an almost half-round proximal base. Edge dulling occurred on basal sides and the round base.

Two *Perdiz* arrow points indicated Late Prehistoric occupations. One gouge in the *Clear Fork* style was included in the Braune collection, as well as several points made of silicified wood and one of palm. Several triangular forms, as well as *Tortugas* and *Pedernales*, were representative of the Archaic. Two stemmed points appeared to be Early Archaic forms.

## Recommendations

The one major prehistoric site (41 LK 117) found on the Martin tract represents a medium to light lithic scatter with no significant depth to the occupational debris. A total, controlled surface collection was made by the survey team. No further archaeological investigation is recommended.

## CONCLUSIONS

Intermittent occupation of stream terrace sites constitutes one of the major settlement patterns of the prehistoric inhabitants of southern Texas. Many of these sites, including 41 LK 117 on Sulphur Creek, have a linear characteristic (Hester 1976a:85; Shafer and Baxter 1975:73) with an apparently homogenous content as revealed by our grid tabulation of the surface collection (see Table 1). With the site area extending approximately 1000 m along the creek, no intrasite variables were visibly pronounced, with the exception of a concentration of material in the grid units at each end. Upland and terrace areas at this site reflected balanced distributions of all lithic types used for both quarry utilization and for final tool manufacture.

A processual sequence of lithic reduction is well illustrated in the surface collection. Also noted is a willingness of the prehistoric knappers to make frequent use of the more exotic lithic materials--silicified wood and palm. A similarity was recognized between the split cobble-cortex platform technique and the manufacture of the "sequent scraper" tool of the Trans-Pecos. Two distinctive core types were recognized--the *multi-platform core* and the *step platform core*. These core types reflect the opportunistic character of the early knappers as they sought to utilize the material at hand to the best advantage.

The thin biface category included diagnostic projectile points apparently representing the three basic divisions of the Archaic stage: Early, Middle and Late, as defined by Johnson, Suhm and Tunnell (1962:122, Fig. 45). The Late Prehistoric was inferred by the presence of plain ware pottery sherds and by arrow points in private collections. Thus we see repeated Archaic occupations, but a relatively minor Late Prehistoric habitation at 41 LK 117.

Inspection of the Braune collection revealed two aberrant Paleo-Indian projectile points. One is a lanceolate form with a well-rounded base, smoothed on both sides and base. The second appears to be a possible *Angostura* variant, with shallow notches on the basal edges creating a fishtail appearance.

The survey as a whole revealed one large prehistoric occupation site along the stream terrace of Sulphur Creek in south Live Oak County. This occupation pattern is typical of a great many of the waterways of south Texas and emphasized the importance of water to these early inhabitants.

The medium to light occupation, with no significant depth of prehistoric remains, led to the decision to make a total, controlled surface collection. As noted above, no further investigation will be required.

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