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Powell Bend of the Colorado River - 1709

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Jimmy L. Mitchell
Editor

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Cover Illustration: The cover illustration is the Powell Bend of the Colorado River as pictured by Bob Parvin. See article by T. N. Campbell "Espinosa, Olivares and the Colorado River Indians, 1709" in this issue. Sketch reprinted from the *Sayersville Historical Association Bulletin*, No. 2, Fall, 1982.

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EDITORIAL

THE SAYERSVILLE CONNECTION

Recently, Tom Hester sent me a xerox copy of an article by Tom Campbell from the *Sayersville Historical Association Bulletin*, with the suggestion that it might be reprinted in *La Tierra* for the benefit of STAA members. I contacted Dr. Campbell for permission, and through him was able to contact Mr. Davis McAuley, the editor of the *SHAB*, who also granted permission for republication of the article. The result of all this negotiation is the article on the following pages as the leading article for this issue.

In the process of all this, I was delighted to learn of the Sayersville group and their activities. Sayersville, for those of you who do not know, is a small community in northcentral Bastrop County, near Camp Swift (I will admit, I had to borrow a Bastrop County map from a friend in Smithville to be able to locate Sayersville...). The *SHAB* Number 2 (Fall 1982) which Editor McAuley kindly sent me is a 16-page (counting the cover) volume which is literally filled with well-written, well-illustrated reports of the activities of the group. It included a report by John Prager on the springs of Bastrop County, a living anthropology report by Peggy Trepagnier of a visit with the oldest resident of the Sayers area, an article by Anibal Gonzalez on the Espinosa-Olivares-Aguirre Expedition of 1709, and an article by E. Mott Davis on how to report archaeological and historical sites in the Sayersville area, as well as numerous short reports and notices. The issue is professionally typeset and includes some very excellent photos.

I would particularly like to note and commend the contributions of Dr. E. Mott Davis and Dr. Thomas N. Campbell, both of the University of Texas at Austin, to the Sayersville group. Their efforts to support the Sayersville society, as evidenced by the articles they have written for the *SHAB*, exemplify the kind of encouragement and support which vocational archaeologists can and should provide for local avocational societies. To these two gentlemen from Austin, I say a hearty Well Done!

In a telephone conversation with Mr. McAuley, I also learned that the group meets every Sunday to work on projects, and are currently engaged in cataloging 200 artifacts from one of the member's farm as well as trying to relocate the specific sites involved. I was greatly impressed by the enthusiasm, dedication, and resourcefulness of this group, and I highly commend them for their work to date. Outstanding!

The Editor

Suggested Route of the 1709 Spanish Entrada

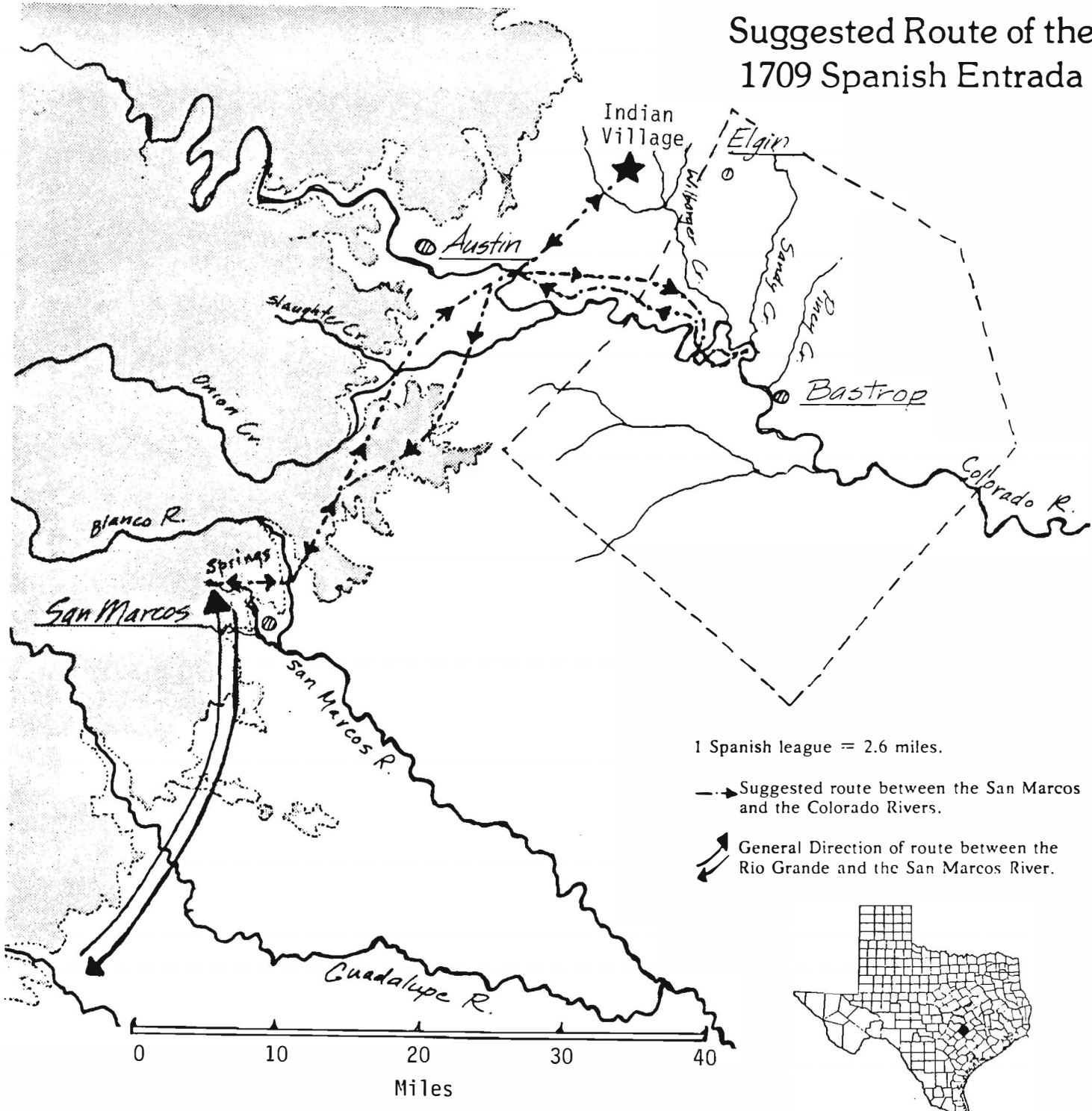


Figure 1. Map of the Central Texas Colorado River Area. The shaded area on the left is the Edwards Plateau (over 656 feet); the dashed outline is the modern area of Bastrop County; the star is the approximate location of the Indian Village visited in what is now eastern Travis County. The western edge of Bastrop County is in the Blackland Prairie while the majority of the county is in the Post Oak zone; the edge of the Post Oak belt runs from about the 'g' in Elgin south to the point where a creek is shown crossing the southwestern county line. (Map adapted from Gonzalez 1982:6. Original by Margaret Campbell, with the assistance of Anibal A. Gonzalez and Bob Parvin.)

ESPINOSA, OLIVARES AND THE COLORADO RIVER INDIANS, 1709*

T. N. Campbell

INTRODUCTION

Anibal Gonzalez (1982) has recently presented evidence which indicates that the Espinosa-Olivares-Aguirre expedition of 1709 to the Colorado River explored a relatively short section of the river valley between present-day Austin and Bastrop (see Figure 1). This expedition has never received much attention from historians, who have assumed that it reached the Colorado River farther downstream than the recorded facts permit. Based on careful analysis of terrain description given in the expedition diary, supplemented by travel in the area, Gonzalez' study leaves little doubt about where the expedition went; this enables us to determine the approximate location of an Indian encampment visited by the Spaniards in 1709. The several Indian groups who shared this encampment, and who ranged over a fairly large area, will be discussed in this article.

By 1709, many hunting and gathering Indian groups had been displaced from their traditional territories by the slow northward advance of the Spanish settlement frontier in what is now northeastern Mexico, and also by the eastward and southeastward expansion from the southern Plains of Apache bands who had become aggressive after acquiring horses from the Spaniards of New Mexico. Remnants of certain groups displaced by Spaniards and Apaches moved from several directions into the long grassland strip lying between the highlands of central Texas and the heavily wooded portion of eastern Texas. Here they usually found in abundance the bison they had always hunted and, by living together in fairly large encampments with groups native to the grasslands, there was enough manpower to resist the Apaches, who by 1709 were in firm control of the highlands to the west. The refugee groups, who had come from diverse areas and who spoke a variety of languages, were able to communicate with each other and with the grassland natives by means of a well-developed sign language.

As nearly all hunting and gathering Indian populations began to decline after Europeans appeared, the prevailing trend was for displaced remnants to merge with other remnants. Afterwards the smaller remnants lost their ethnic identities, as well as their languages, and their names were no longer recorded in European documents. This explains why, for any given area, the number of recorded Indian groups became smaller with the passage of time. It also indicates that any hunting and gathering groups that maintained an ethnic identity into the 19th century represented an amalgam of diverse groups over a long span of time.

Although the diary of the 1709 expedition refers to 14 Indian groups encountered between the Rio Grande and the Colorado River, only those groups seen near the Colorado will be considered here. The diary lists the names of three groups living

* Dr. Campbell, Professor Emeritus of Anthropology at The University of Texas at Austin, is an authority on the history of the Indians of Central and South Texas. He has written this research paper for the *Sayersville Historical Association Bulletin* as a companion piece to a paper by Anibal Gonzalez in the Fall 1982 *SHA Bulletin*, "The Overlooked Entrada," which told about the Espinosa-Olivares-Aguirre expedition to the Colorado River in 1709. In the present paper, Dr. Campbell reviews the historical documents to determine what Indian groups actually were in this area at the time of that expedition, and whether they were natives here or had come in from elsewhere. It is reprinted here with the permission of the author and the *SHAB*.

near what appears to have been modern Wilbarger Creek: Yojuane, Simaomo, and Tusonibi; but the presence of a fourth group, Cantona, is implied by the name "Capitan Cantona," said to have been "capitan of the Yojuanes." As will be shown, Cantona was the name of a fairly well documented Indian group known to Spaniards prior to 1709. The principal aim of this study is to establish some kind of credible identity for each group and determine if it was native to the area or if it was a migrant group displaced from some other area.

Before 1709, other Indian groups, mainly seen in shared encampments, had been encountered by Spanish travelers at various localities between the Guadalupe River (New Braunfels to Cuero section) and the Colorado River (Austin to Columbus section). The Spanish expedition of 1709 spent only two days in the Austin to Bastrop section of the Colorado River. If this expedition had gone farther downstream, other Indian encampments probably would have been recorded. Between 1689 and 1709, Spanish documents referred to quite a number of Indian groups as living between the two rivers (Bolton 1916; Gomez Canedo 1968), particularly Apayxam, Catqueza, Chaguantapam, Cava, Emet, Manam, Muruam, Panasiu, Sana, Tohaha, and Toho. Some of these were probably native to the area, others not. Still other groups were also encountered during this same 20-year period: a known immigrant group, Mescal, and hunting and trading parties from Indian groups then living in distant areas, such as Caynaaya, Cholome, Cibola, and Jumano from western Texas and Hasinai from eastern Texas. Thus, prior to 1709, there is evidence of considerable ethnic complexity in the Colorado River area, and this will be shown in more detail when the Yojuane, Simaomo, Cantona, and Tusonibi are discussed below. Furthermore, at various times after 1709, still other groups were recorded for the same area, among them Coco, Cumercai, Huyugan, Mayeye, Pamaya, Payaya, Sijame, and Tonkawa, not to mention Apache and Comanche raiding parties of still later times. As the early documents do not record very much detail about most of these Indian groups, scholars have always found it difficult to make sense out of the confusion.

THE COLORADO RIVER INDIANS

Yojuane

The commonly used name Yojuane has been recorded in at least 35 different ways, most of them readily recognizable, such as Diujuan, Iojuan, Jojuan, Joyvan, Uojuan, Yacovane, and Yuhuanica. The name appears in numerous documents, although few of these specify localities where Yojuane settlements were actually seen by Europeans. The Yojuane of Texas lost their ethnic identity by the latter half of the 18th century. No sample of their everyday speech was ever recorded, and very little descriptive detail on their culture can be found in documents.

For approximately 75 years, the Yojuane have been regarded as Tonkawan in language and culture, but this linkage of Yojuane with the Tonkawa has never been proved. The identification of the Yojuane as a Tonkawan group originated with Herbert E. Bolton (Hodge 1910:II,998-999), a much respected historian who assumed that if the Yojuane had at some time shared the same encampment with Tonkawa, or had entered the same Spanish mission at approximately the same time as some of the Tonkawa, then the Yojuane must have been a subdivision of the Tonkawa. Bolton was not fully aware of the magnitude of Indian territorial displacement, and he did not note that the Yojuane were often recorded as sharing the same native encampment, or entering the same Spanish mission, with Indian groups known not to have been Tonkawan. Furthermore, Bolton believed that all the Indian languages formerly spoken in Texas were known to the linguists of his time, and he sometimes arbitrarily assigned Indian groups to one or another of the languages then known. Linguists of today are well aware that relatively few of the Indian languages spoken in Texas are represented by recorded speech samples (Goddard 1979). Bolton also overlooked evidence that the Yojuane and Tonkawa, when together, communicated by means of a sign language. It now seems unfortunate that

Bolton's identification of the Yojuane as Tonkawan was so positively stated that his opinion has gone unchallenged for such a long time. If he had continued his Indian studies, Bolton probably would have altered his interpretation of the evidence.

It has recently been learned, from a document that has either been overlooked or ignored by historians, that the Yojuane first became known to Europeans in 1601, when Juan de Onate led a Spanish expedition from New Mexico into the Great Plains (Newcomb and Campbell 1982:32,38). In this document, "Yuhuanica" is given as one of eight local group names for Indians collectively known as Aguacane, whom Onate erroneously referred to as Escanjaques. In 1601, these Indians were living in what is now west-central Oklahoma, and competent linguists think that all eight group names are recorded in a Wichita dialect. The same document mentions "Tancoa" as enemies of these Aguacane Indians. It thus appears that the Yojuane were not originally native to the Texas area, and were not Tonkawan in language, but rather were Wichita-speaking Indians who were displaced southward some time after 1650, probably as the result of Apache and Osage intrusions into their homeland.

In 1691, some of the Yojuane were first recorded as being in what is now Texas (Casanas de Jesus Maria, in Swanton 1942:251), and from this time until the middle of the next century Yojuane were recorded in various localities in the prairie and post-oak belts, mainly between the Brazos and Red Rivers west of the pine woods of eastern Texas. Their western boundary seems to have been determined by various Apache groups and, later, by Comanches.

In 1709, the Yojuane were evidently new to the Colorado River Valley. Documents written prior to 1709 do not refer to any Yojuane as living along the Colorado River or to the south of it. The diary of 1709 states that "the Indian captain of the Yojuanes, called Cantona, comes and goes to the Texas with his people," (Gonzales 1982:7) and this indicates that these Yojuane were then ranging mainly to the north of the Colorado River, where later 18th century documents consistently place all Yojuane populations. In 1719, some of the Yojuane were recorded on the Red River (Wedel 1971:74). In 1727 some were reported on the Trinity River northwest of the Hasinai (Wheat 1957,I:Map No. 115), in 1754 some were living in a generally northerly direction from the Spanish settlement of Nacogdoches (Anonymous 1754:2), in 1759 some were seen on one of the upper headwater branches of the Trinity River (Newcomb and Field 1967:261-264), and in 1767 Yojuane were also reported between the upper Sabine and the Red River (Kinnaird 1958:map).

An especially informative reference to the Yojuane was made in 1768 by Gaspar Jose de Solis (Kress and Hatcher 1931:57-58), who found Coco, Mayeye, Yojuane, and Tonkawa living in an area near the junction of the Little and Brazos Rivers of present-day Milam and Robertson Counties. Solis noted the diversity of languages spoken in that area and said that "all the nations have one thing in common, that is the sign-language, with which they talk not only for hours but entire days." Bolton, who believed that the Mayeye, Yojuane, and Tonkawa all spoke the Tonkawa language, did not recognize the significance of Solis' statements about linguistic diversity and use of a sign language. It seems very likely that each of the four groups named by Solis spoke a different language. By 1768, it may be noted, other Wichita-speaking peoples of the Oklahoma area had moved down into the same part of northern Texas, among them Kichai, Taovaya, Tawakoni, and Yscani.

Simaomo

The name Simaomo, which appears in relatively few primary documents, is variously rendered as Siamomo, Simaoma, Simaomo, Simomo, Simono, and Sinaoma. Such evidence as has been recovered from documents suggests that the Simaomo were not native to the Colorado River Valley, where some of them were seen in 1709 by Espinosa and Olivares, but represent a population remnant that had been displaced from northeastern Coahuila and the adjoining part of present-day Texas late in the 17th century.

The earliest record of the Simaomo in Texas was made by Gregorio de Salinas Varona, who had participated in the 1689 and 1690 expeditions of Alonso de Leon in search of La Salle's Fort St. Louis and French captives held by Indians north of Matagorda Bay. In 1692, Salinas Varona wrote a letter to the Viceroy of New Spain in which he suggested that the recently-abandoned Spanish missions of eastern Texas should be reestablished on the Colorado River. In this letter, Salinas Varona indicated that the Simaomo lived between Matagorda Bay (Gomez Canedo 1968:277-307) and the Colorado River to the north. He also said that Simaomo was an alternate name for the Indian group known as Cantona (Ibid:272-273). This last statement, cited by Bolton as the basis for identifying both Simaomo and Cantona as Tonkawan groups because of their association in 1709 with the Yojuane, is now open to question.

In 1693, after becoming governor of Coahuila, Salinas Varona led an expedition from Monclova to eastern Texas and kept a diary which until recently has not been available for study (Ibid:277-307). This diary, apparently never seen by Bolton, recorded observations of various Indian groups encountered between the Guadalupe and Colorado rivers and noted which groups shared the same encampment. It said nothing about Simaomo and Cantona being different names for the same Indian group. The omission probably indicates that Salinas Varona no longer believed his statement of 1692 to be true. His summarizing list of Indian groups encountered between the two rivers includes both the Simaomo and the Cantona, and elsewhere in the diary, when indicating which groups shared the same encampment, the Simaomo and Cantona were not recorded as living together. The Simaomo shared encampments with Mescal, Sana, and Tohaha, as well as with Hasinai hunters from eastern Texas and Jumano hunters and traders from western Texas. It may also be noted that in 1693, Salinas Varona recorded no encounters with Yojuane anywhere along his entire route from Monclova to the Hasinai villages of eastern Texas.

The Simaomo and one of their encampment associates, the Mescal, were first known in an area that lies some 250 miles to the southwest of the Colorado River, in northeastern Coahuila and the adjacent part of Texas just north of the Rio Grande. The Simaomo were recorded there only once, but numerous documents recorded the Mescal between the years 1670 and 1691. The names "Siamomo" and "Miscale" both occur on a long list of Indian groups said to have been living in a northerly direction from Monterrey during the period 1650-1690 (Leon et al. 1961:189). The better documented Mescal, prior to 1691, were associated with an area that extended from the Rio Sabina of northeastern Coahuila as far northeastward as the Frio River southwest of San Antonio, Texas, and some of the Mescal were still living at Mission San Juan Bautista near the Rio Grande as late as 1772 (Campbell 1979:23-24).

It thus seems reasonable to conclude that some of the Simaomo and Mescal had migrated to the eastern part of central Texas shortly before 1690, when Salina Varona saw Simaomo between Matagorda Bay and the Colorado River. We hear nothing further about the Simaomo after Espinosa and Olivares saw them on the Colorado River in 1709. In 1716, some of the Mescal were recorded as living in a large encampment near the junction of the San Gabriel and Little Rivers in present-day Milam County (Tous 1930:14,16-17). In this same encampment were remnants of many Indian groups who had migrated from northeastern Coahuila and vicinity. A few of the Simaomo may have gone there with the Mescal. The visiting Spaniards did not record names for all Indian groups represented. One later source indicates that remnants of 22 different Indian groups were at various times associated with this particular encampment assemblage (Wheat 1957,I:Map No. 115).

The earliest recorded location of the Mescal, as well as statements made by early missionaries about languages spoken in northeastern Mexico and southern Texas, suggests that the Mescal may have spoken a dialect of the Coahuilteco language (Godard 1979:364); and the Simaomo, who came from the same area as the Mescal, could also have spoken the same language. Bolton (Hodge 1910,II:573), noting Simaomo association with Yojuane in 1709, thought that this indicated a Tonkawan language for the Simaomo. Such evidence as is now available seems to indicate that the Simaomo and Yojuane came to the Colorado River area from opposite directions, and today it appears likely that neither of these groups was Tonkawan in speech.

Cantona

The Cantona are known only from Spanish documents written between 1690 and 1750, and it is evident that in the second half of the 18th century the Cantona declined in number and were absorbed by other Indian groups. The name Cantona has been rendered in at least 18 different ways, the two principal forms of the name being (1) Cantona (Cantanual, Cantoma, Canttona, Canttuna, Cantu, Cantuan, Cantuna, Cantunal, Contuna) and (2) Cantauhaona (Cantouahona, Cantouhaona, Cantujuana, Cantujuana, Cantujuna, Cautohaona, Cautouhaona). Documents that give specific locations for the Cantona before 1709 place them between the Guadalupe and Colorado Rivers. This suggests that they may have been native to that area, although it is possible that they were displaced from the Edwards Plateau by Apaches shortly before they became known to Europeans. No recognizable form of the name Cantona has been found in documents that pertain to distant areas.

The Cantona first became known in 1690, when Alonso de Leon was searching for French captives among Indians living north of Matagorda Bay. Somewhere near the Colorado River, Leon visited an encampment shared by Cantona, Cava, Emet, Sana, Tohaha, and Toho (Bolton 1916:384,419). The next year, 1691, Teran de los Rios encountered Cantona on the Guadalupe River northeast of present-day San Antonio, and at this time they were sharing an encampment with a different set of Indian groups: Catqueza, who were said to be native to the area, and four groups from western Texas: Caynaaya, Cholome, Cibola, and Jumano, who had come eastward to hunt bison and to trade (Gomez Canedo 1968:178,240-241).

Then in 1692, as noted in the Simaomo section above, Salinas Varona wrote that Simaomo was another name for the Cantona, apparently an error that he later abandoned. The following year, 1693, Salinas Varona reported Cantona in an encampment near the Colorado River, in which there were also some Jumano from western Texas and some Hasinai from eastern Texas. Between the Guadalupe and Colorado Rivers Salinas Varona also reported seeing two additional groups: Saquita (probably a variant of the name Catqueza) and Muruam, almost certainly descendants of the Mariames known to Cabeza de Vaca some 150 years earlier (Ibid:298,306).

According to the diary of 1709, Capitan Cantona was well known to Spaniards. He was evidently the same Cantona leader who guided Teran de los Rios to eastern Texas in 1691. He was probably also the "great Cantujuana" known to Jose de Urrutia as leader of the Cantona, Emet, and Toho who lived on the Colorado River. Urrutia, a soldier, was severely injured in 1693 while returning from eastern Texas, was befriended by the Cantona leader, whose people nursed him back to health, and lived with these Indians for seven years (1693-1700), later boasting that he was a great help to them in their battles with the Apaches (Dunn 1911:239).

The last clear locational record of the Cantona seems to have been made in 1716, when Espinosa accompanied Diego Ramon to eastern Texas and noted that a few Cantona were living with other Indians in the large encampment near the junction of the San Gabriel and Little Rivers (Tous 1930:16-17).

It is no longer possible to agree with Bolton's ideas about Cantona identity: that they were the same people as the Simaomo, or that they were linguistically and culturally related to the Yojuane, whom Bolton regarded as Tonkawans but were almost certainly of Wichita affiliation. The diary of 1709 is the only known Spanish document that links the name Cantona with Yojuane, and no document has yet been found that mentions Cantona encamped together with a people designated by some variant of the name Tonkawa. Today it is not possible to determine what language was spoken by the Cantona, for no sample of their speech was ever written down. Damian Mazanet, a missionary who knew the Coahuilteco language, made it clear that the Cantona did not speak Coahuilteco (Gomez Canedo 1968:240). The Cantona probably spoke one of the unrecorded Indian languages of Texas.

Tusonibi

So far as is now known, Espinosa and his fellow travelers were the only Europeans who ever saw and reported an Indian group bearing the name Tusonibi. In various sources this name has been rendered as Fusolabi, Fusolibi, Tasonibi, Tusolivi, and Tusonibi. It is possible that these Tusonibi were the same as a people variously recorded in northeastern Mexico as Juzan, Tuisoni, Tusane, Tusonid, and Tuzan, and who in relatively late times were included among Indians collectively known by the Spanish name Carrizo (Campbell 1979:51). This possibility is somewhat strengthened by the fact that remnants of two additional groups from northeastern Mexico, Simaomo and Mescal, had moved into the area lying between the Guadalupe and Colorado Rivers before the year 1709. If the Tusonibi of the Colorado River were indeed the same as the Tusan of northeastern Mexico, this lends little support to Bolton's (Hodge 1910, II:854) identification of the Tusonibi (he called them "Tusolive") as Tonkawan in affiliation because they were encamped with Youjuane in 1709. Today the most important statement that can be made about the Tusonibi is that we do not know enough about them to determine their linguistic and cultural affiliations.

In summary, it may be said that Bolton seems to have been so intent on identifying various Indian groups in the eastern part of central Texas as Tonkawan in affiliation that it never occurred to him that Yojuane, Simaomo, Cantona and Tusonibi could have originated in three widely separated areas and came together near the Colorado River in 1709 because of displacement by Spaniards and Apaches. It is no longer possible to follow Bolton and regard Simaomo and Cantona as alternate names for the same Indian population; or to regard Simaomo, Cantona, and Tusonibi as related to the Yojuane; or to regard all four groups as related to the Tonkawa. The association of these groups on the Colorado River in 1709 was incidental to displacement and migration, and there is no good reason for assuming that they shared the same encampment because they spoke the same language or had identical cultures.

| Name | Homeland | Language Group |
|----------|--|----------------|
| Cantona | Colorado River area of Central Texas | unknown |
| Yojuane | North-central Oklahoma [north of the Red River] | Wichita |
| Simaomo | Northeastern Mexico | unknown |
| Tusonibi | Northeastern Mexico | unknown |

Only one of the four Indian groups a Spanish expedition in 1709 reported along the Colorado River in the Bastrop vicinity was possibly native to the area. There is no evidence that any of the four was a group related to the Tonkawa, as earlier historians have believed.

CULTURAL DESCRIPTION IN THE 1709 DIARY

The diary of 1709 contains a substantial amount of cultural description, but this is presented in a generalized way that makes it virtually impossible to link the described behavior with specific Indian groups. This description occurs in two separate parts of the diary. One part refers to about 50 unnamed Indian groups of

southern Texas and northeastern Mexico, among whom both Espinosa and Olivares had served as missionaries. The other part refers to the four Indian groups encountered on the Colorado River. There is no satisfactory way to determine if any descriptive passages of one part also pertain to Indians specified in the other. The cultural description in the second part refers collectively to the Youjuane, Simaomo, Cantona and Tusonibi, and here it is not possible to tell if the behavior described is actually attributable to each of the four groups. As these groups seem to have originated in different areas, and to have spoken diverse languages, it is doubtful if their cultures were originally identical.

Espinosa and Olivares were able to observe the Colorado River Indians for only a short period, actually less than two full days, and thus did not have time enough to learn very much about the Indians. It must be recognized that these men were missionaries, not scientists, and were not motivated to ply the Indians with questions about who they were and how they lived, and then to put the answers into a diary. After all, these missionaries had come to the Colorado River expecting to meet the Tejas Indians and to make arrangements for reestablishing missions among them. To them, the Colorado River Indians were a side issue. Yet, considering how little was recorded about these Indians in both earlier and later documents, the diary turns out to be fairly informative.

Houses and Settlements

The Colorado River Indian encampment visited by the Spaniards in 1709 is said to have contained approximately 2,000 persons. It is important to note that the Indian group names recorded in the diary are linked, not with this settlement, but with a group of 77 individuals from it who earlier had come into the Spanish base camp. If, while actually in the Indian encampment, the Spaniards had asked for the names of all Indian groups represented there, additional ethnic group names might have been recorded.

The Indian settlement visited was clearly a temporary encampment, which is indicated by use of the Spanish word *rancheria*. The diary of 1709 says nothing about the practice of agriculture, which requires permanent settlements, and no documents pertaining to this part of Texas refer to agriculture among the Indians except at Spanish missions. The documents now available show that, between the years 1690 and 1709, all Indian groups that lived between the Colorado and Guadalupe Rivers supported themselves by hunting and gathering. These documents indicate that no group confined its food-getting activities to an area as small as a modern Texas county. The various groups, either singly or in association, seem to have ranged over areas equivalent in size to at least seven or eight Texas counties.

Spanish documents tell us little about the nature of the houses and settlements of specific Indian groups in this area. Spaniards had little interest in systematic description of "huts" and their arrangement in settlements, particularly of hunting and gathering Indians. This is well illustrated by the diary of 1709, which reports a visit to an encampment of some 2,000 people and says not one descriptive word about houses or the settlement plan. This casual attitude is even more evident when we note that, prior to visiting the occupied encampment, the Spaniards had passed by an abandoned encampment, which they did describe, although quite briefly. Yet nothing was said about what Indian groups had used this settlement. The Spaniards could easily have found out by asking the Indians of the occupied settlement, which was not very far away.

Nevertheless, the brief description of the abandoned encampment is valuable because it does tell us something about Indian housing in that area. The Spanish party, before encountering any Indians in that area, came upon the abandoned settlement, which consisted of about 150 houses (*jacales*) arranged in a semicircular pattern. This was found a little over one mile north of the river. The houses are said to have been large, well made, and round in floor plan. Nothing is said about building materials, other details of house form, or distance between houses. In the same locality

the Spaniards saw four graves covered with tree branches, and two of these graves gave off an offensive odor that indicated recent burial. This locality was about 10 miles from the occupied settlement later visited by the Spaniards. It would have helped if the diary had noted that the occupied encampment was similar to, or different from, the abandoned encampment.

Foods

The only foodstuff mentioned is bison meat, but the diary of 1709 is unusually informative on the subject of bison. It gives a brief but good description of the bison as an animal, and it records interesting observations about the distribution of bison in the region traversed by the Spaniards. It is said that no bison, or even their tracks, were seen until the Spaniards approached the Colorado River. Many herds were seen on both sides of this river, and reference is made to deep tracks and pathways at places where animals had crossed the stream west of the more thickly wooded part of present-day Bastrop County. The absence of bison from the western part of southern Texas at this time was probably due to a regional drought, since the diary notes that the Rio Grande was unusually low and that some streams to the north of it were entirely dry. Apparently only the larger, spring-fed streams that headed in the Edwards Plateau had much water at this time.

It thus seems reasonable to think that the large Indian encampment visited by the Spaniards was made possible by an abundance of bison in the open grassland areas of Bastrop and Travis Counties. It was April and the bison herds were evidently moving slowly northward as the growing season advanced. The diary mentions that bison meat was the most common food of Indians who lived "in the neighborhood of the Tejas Indians," by which is probably meant those who ranged the prairie lands west and southwest of the Tejas or Hasinai Indians. The Spaniards were told that a few of the Tejas sometimes traveled southwestward as far as the Colorado River to obtain bison meat. It is further noted that bison meat was extensively used by Indians "in the hills," obviously referring to the Apaches.

Clothing

The diary refers to Indian clothing, mainly the lack of it. It is said that almost all of the Indians were entirely nude, and that the remainder wore very little clothing. No garment is described, no ornaments mentioned, and nothing is said about tattooing or body painting.

Horses, Weapons, and Warfare

The Colorado River Indians had horses, but no impression is given of how many they had. In fact, horses are mentioned in only two passages, both referring to leaders on horseback. One allusion is made to the bow and arrow, which were undoubtedly used in both hunting and warfare. Nothing is said about warfare other than that their principal enemies were Apaches. The size of the encampment suggests that a population of at least 2,000 was necessary to discourage Apaches from attacking them.

Greeting Behavior

For the Yojuane and their associates, the diary of 1709 describes a form of greeting behavior that has not been recorded for other Indian groups in the Texas area. This consisted of jovial shouting, embracing, and profusive caressing of the face and arms. The two missionaries were much impressed when all the Spaniards received this treatment. It is possible that this custom was shared by other Indians of the area, and that it was not recorded because Europeans were not often considered

eligible for such a close, friendly relationship. One wonders if, in this case, anxiety over their Apache enemies to the west led these Indians to seek firm friendship with the Spaniards.

CONCLUSIONS

The Espinosa-Olivares-Aguirre expedition to the Colorado River in 1709 was, in terms of its objective, a failure. Faulty information had led Spanish missionaries to believe that the Tejas or Hasinai Caddo Indians had migrated southwestward to the Colorado River, and the purpose of the expedition was to meet the Tejas there and arrange for missions to be reestablished among them. The report of Tejas migration was revealed as erroneous by hunting and gathering Indians found encamped near the Colorado River, and the disappointed missionaries returned to their base in Coahuila. The expedition thus had no great historical significance, but the diary which records this expedition has value because of the information it contains about various Indian groups encountered by the Spaniards, particularly those living near the Colorado River in present-day Bastrop and Travis Counties.

The four Colorado River groups - Yojuane, Simaomo, Cantona, and Tusonibi - have long been regarded as closely related to each other and as Tonkawan in language and culture. An examination of documents written both before and after 1709 reveals no clear evidence of a Tonkawan affinity for any of these Indian groups. The Cantona seem to have been native to the Colorado River area, but the three remaining groups appear to have been population remnants displaced from distant areas. The Yojuane, now identifiable as a Wichita-speaking group, originally lived north of the Red River in what is now Oklahoma. The Simaomo, and possibly also the Tusonibi, can be traced to an area in northeastern Mexico. The languages spoken by the Simaomo, Cantona, and Tusonibi remain unknown. As the four Colorado River groups of 1709 seem to have had diverse origins, their cultural characteristics as described by Espinosa and Olivares must be regarded as a composite. It is illogical to think of these cultural characteristics as being in any way representative of early Tonkawa culture.

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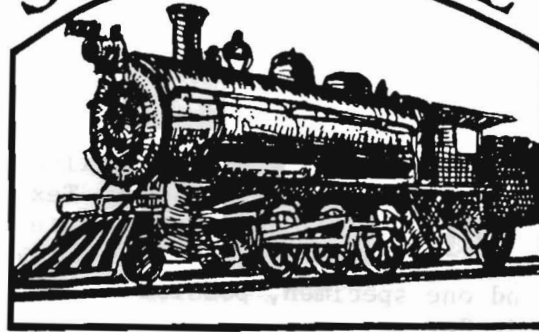
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ANALYSIS OF SURFACE-COLLECTED MATERIALS FROM 41 GL 12, AN
ARCHAIC SITE IN GILLESPIE COUNTY, TEXAS

Bill Moore

ABSTRACT

This report describes and analyzes surface-collected materials from site 41 GL 12 on the Pedernales River in Gillespie County, Texas. Artifacts from this site indicate it was occupied primarily during the Middle and Late Archaic Periods of Central Texas prehistory. The presence of *Bulverde*-like points may indicate an Early Archaic component; and one specimen, possibly an arrow point, may be representative of a Late Prehistoric Period occupation.

INTRODUCTION

In 1968, I recorded site 41 GL 12 in Gillespie County (Figure 1). As this site was being mitigated by collectors, I decided to obtain a surface collection so that some information would be preserved. I made several trips to 41 GL 12 and collected projectile points and other recognizable bifaces and tools from the surface.

CULTURE SEQUENCE

The culture sequence for Gillespie County has been defined primarily on the basis of diagnostic projectile point forms. Chronologies for this area have been proposed by Suhm, Krieger and Jelks (1954), Suhm (1960), Weir (1976), Greer (1979) and Prewitt (1981). The sequence for Gillespie County, as outlined by Greer (1979) includes the Paleo-Indian Period (circa 12,000 B.P. - 8000 B.P.), the Pre-Archaic Period (8000 B.P. - 5500 B.P.), the Archaic Period (5500 B.P. - 700 B.P.) and the Late Prehistoric Period (circa 700 B.P. - European Contact).

PREVIOUS WORK

Although 159 archaeological sites are known in Gillespie County (Carolyn Spock, March, 1983:personal communication), many of these sites were recorded during large-scale surveys. For example, 66 sites were recorded during an intensive survey of the Enchanted Rock State Natural Area (Assad and Potter 1979). Previous archaeological work in Gillespie County has been summarized by Ing (1970), Denton (1976),

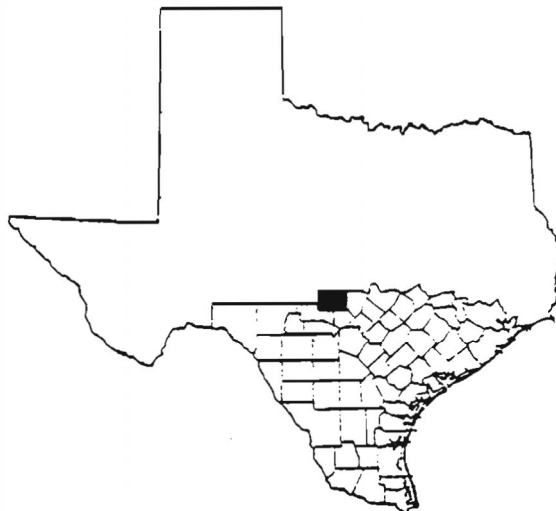


Figure 1. Map of Texas showing Gillespie County (shaded area).

Gunn and Mahula (1977), Greer (1979) and Nightingale (1982). Recently, a survey of a Lower Colorado River Authority transmission line was conducted by the Texas Archeological Survey and reported by Nightingale (1982).

THE SITE

Site 41 GL 12 is situated in a plowed field and located on a second terrace of the Pedernales River approximately 60 meters south of the river. The site consists of a burned rock midden which has been damaged by plowing, pothunting and erosion. Information concerning the exact location is on file at the Texas Archeological Research Laboratory (TARL) in Austin, Texas.

No attempt was made to define the limits of this site, although lithic artifacts and debitage were observed over a large area along the ridge east of the burned rock midden. In 1980, a small pothole was observed in the center of the burned rock midden, and debitage was noted at 20 centimeters below the surface. There is a nineteenth century German limestone house and barn approximately 300 yards to the southwest of 41 GL 12. Projectile points, tools and debitage have been found in this area.

ARTIFACTS

Artifacts collected from 41 GL 12 consist of projectile points, projectile point preforms, refurbished projectile points (possibly used as knives, drills or other kinds of tools), choppers, scrapers, miscellaneous bifaces, biface fragments and manos. The size of the collection from this site precludes a detailed discussion of each specimen. In this paper only gross categories are discussed, and certain examples are illustrated in Figures 2 through 5. The collection will be curated at the Center for Archaeological Research, The University of Texas at San Antonio.

Projectile Points

This is a category which is sometimes overused. Artifacts possessing the physical appearance of a projectile point are usually referred to as dart points or arrow points. This assumption can be misleading as many of these specimens may have functioned as knives. Because of contact with rocks due to plowing or hooved animals, surface-collected specimens, especially those from rocky areas such as Central Texas, may have lost any signs of wear which would indicate their use as knives or other implements.

It is the recognition that artifacts evolve over time and how this is reflective of culture change that is important to the archaeologist. For example, a predominance of arrow points in a site suggests the advance technology of the bow and arrow has replaced the atlatl, or spear thrower, in that society. One result of this new technology could be the procurement of greater quantities of game with less effort and a population increase which could lead to more groups occupying the same area.

Often analyses are slowed and become ineffective by those researchers who place too much emphasis on matching artifacts with established types. In this article, emphasis is placed on the change in projectile point styles over time. Similarities to known types, as identified by Suhm and Jelks (1962), are mentioned when possible. A total of 94 artifacts from 41 GL 12 are believed to have functioned as projectile points. Point typology is from Suhm and Jelks (1962) unless otherwise noted.

Early Archaic Types

The Early Archaic in Central Texas is identified by the presence of dart points usually characterized by straight or parallel stems and straight bases. *Bulverde*, *Nolan* and *Travis* are major types of this period. The placement of these types in the Early Archaic is based on evidence from well-stratified sites such as

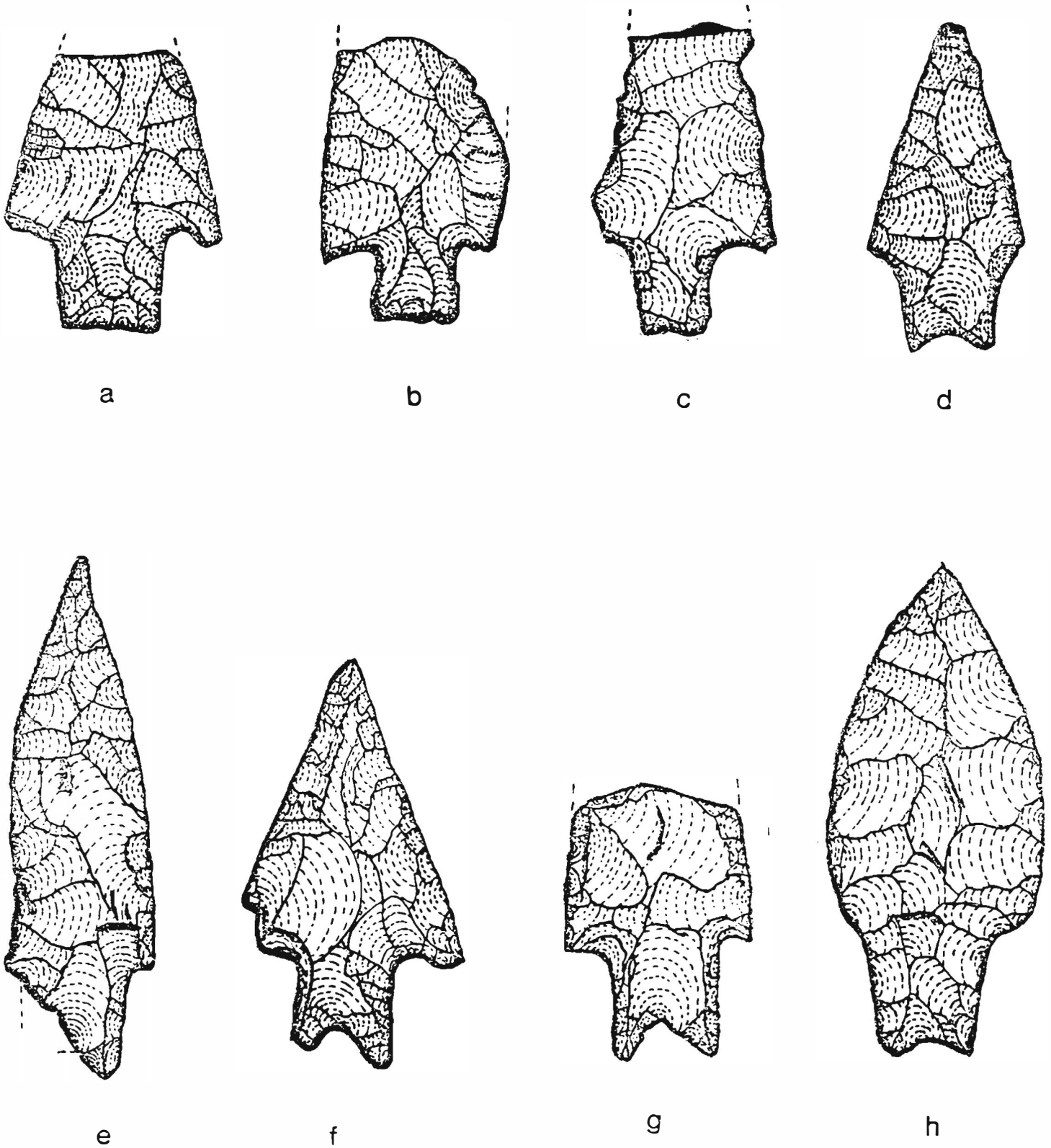


Figure 2. Surface-collected artifacts from Site 41 GL 12, Gillespie County, Texas: a-c Early to Middle Archaic types; d-h Middle Archaic types (*Pedernales*-like). All specimens actual size.

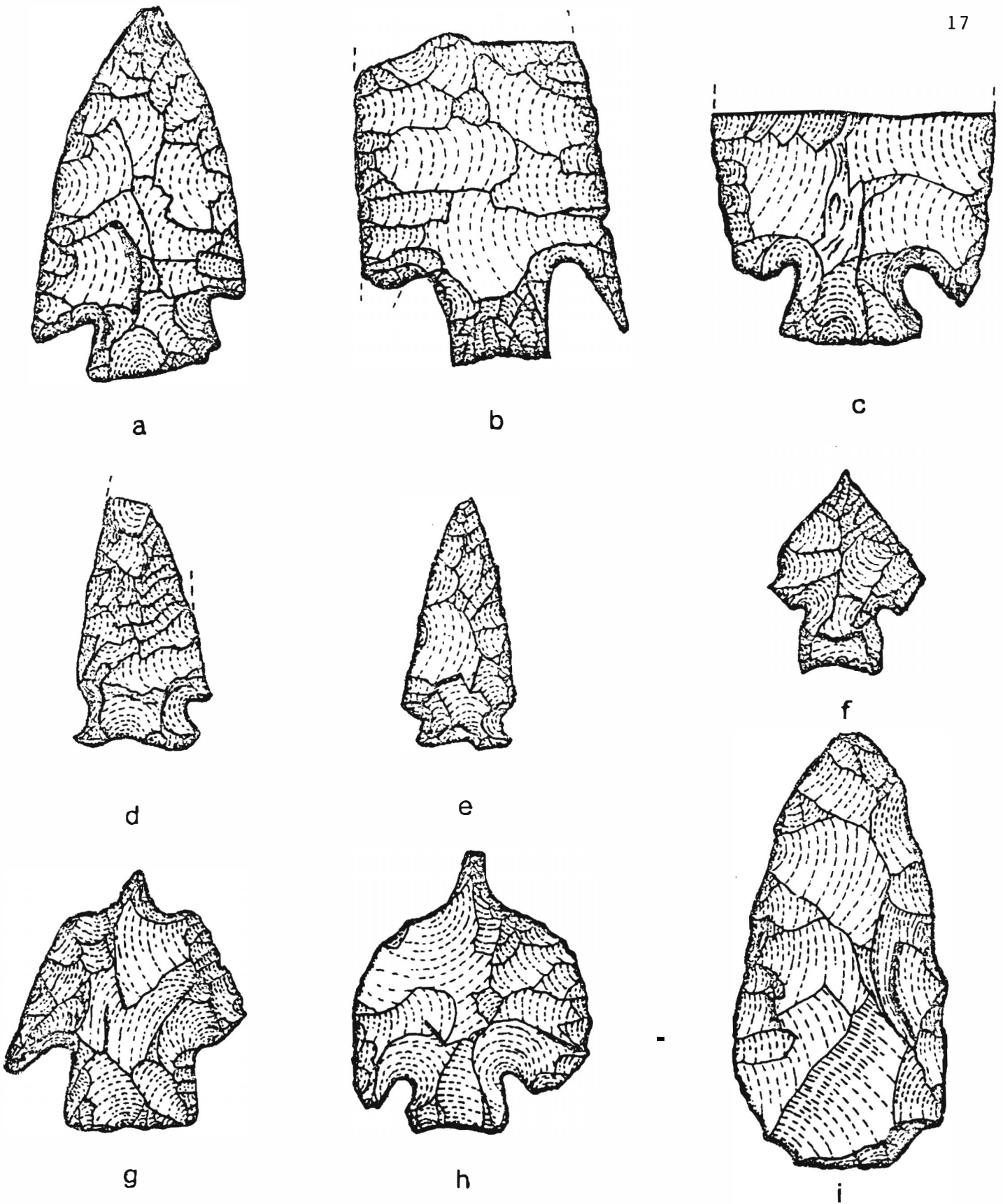
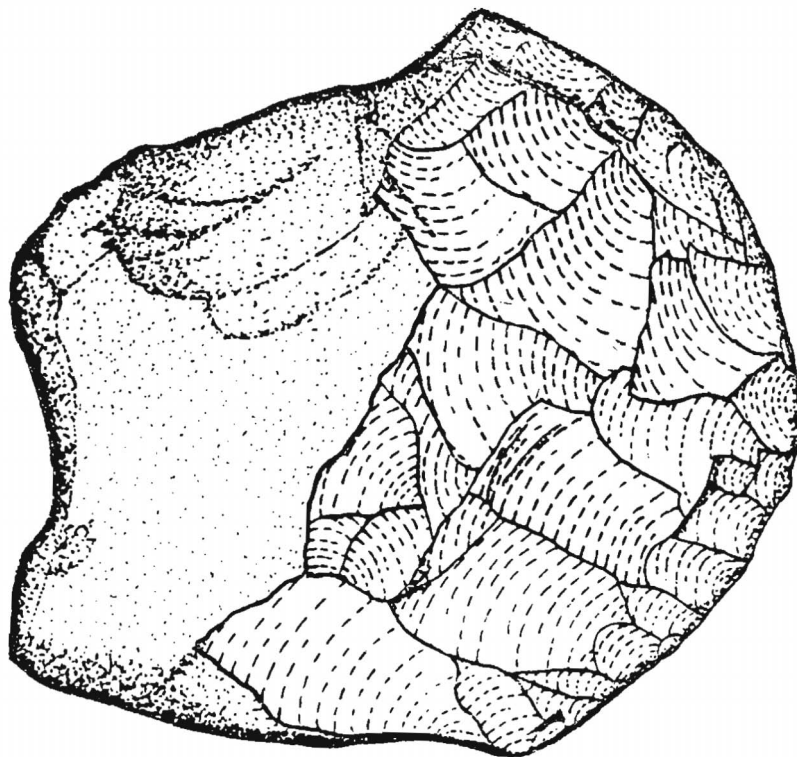
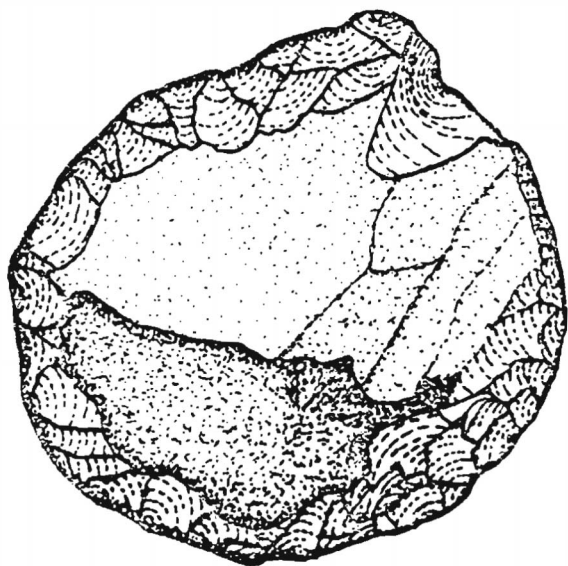


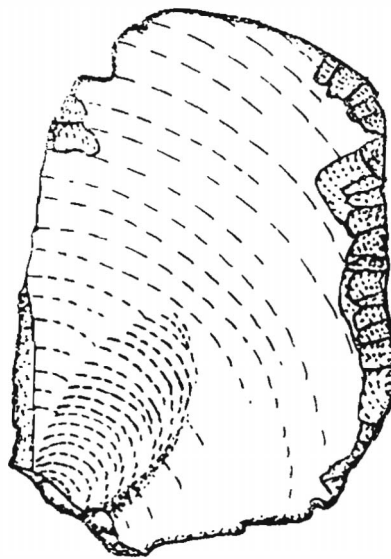
Figure 3. Surface-collected artifacts from Site 41 GL 12, Gillespie County, Texas: a-e, Late Archaic types; f, possible arrow point; g-h, reworked projectile points; i, miscellaneous biface. All specimens actual size.



a



b



c

Figure 4. Surface-collected artifacts from Site 41 GL 12, Gillespie County, Texas: a, tool manufactured from large cobble; b-c, utilized flakes. All specimens actual size.

the Devil's Mouth Site (Johnson 1964), the Wunderlich Site (Johnson 1962) and the Oblate Rockshelter (Tunnell 1962). Nine specimens from 41 GL 12 are similar to projectile points of this period. Three examples of this category are illustrated in Figure 2 (a-c).

Middle Archaic Types

This period is marked by the continuance of *Bulverde* points and the introduction of the *Pedernales* type. These Middle Archaic types are typically found in burned rock middens. The *Pedernales* point is characterized by a straight, somewhat rectangular, stem with a concave base. There is a great variation in this type, which may reflect a cultural change such as different hafting techniques or a wider selection of game being hunted. A total of 44 *Pedernales*-like points have been collected from 41 GL 12. Examples are illustrated in Figure 2 (d-h). Several specimens from 41 GL 12 appear to have been reworked, and this may explain some of the variation in this point type. One specimen (Figure 2, h) is unique in that the barbs have been removed and the blade was alternately beveled. Some of the nine specimens discussed above as belonging to the Early Archaic Period may be Middle Archaic types. Specimen "a" in Figure 2 is an excellent example of the *Bulverde* type.

Late Archaic Types

A wide variety of projectile point forms characterizes the Late Archaic Period. Expanding-stemmed, corner-notched and side-notched forms developed and include the following types: *Castroville*, *Marshall*, *Marcos*, *Montell*, *Edgewood*, *Frio* and *Ensor*. The increase in point types is further evidence of the technological and cultural changes that were occurring during the Archaic. Examples of this category are illustrated in Figure 3 (a-e). A total of 24 projectile points from site 41 GL 12 have been placed in this category.

Late Prehistoric Period Types

This period is marked by the use of the bow and arrow and subsequent decline of the atlatl. Markers for this period include the *Scallorn*, *Perdiz* and *Toyah* types. One specimen (Figure 3, f) from 41 GL 12, due to its size and thinness, may have functioned as an arrow point. The base of this specimen suggests that it may have been reworked into an arrow point from a *Pedernales* dart point. Only one artifact has been assigned to this category.

Dart Point Fragments

A total of 16 biface fragments, probably broken dart points, were found at the site. These specimens possess enough of the base to suggest that they were intended to be dart points or hafted tools. These specimens are too fragmented to place into identifiable categories. Due to the presence of hinge fractures on some artifacts, it is apparent that they were broken during the manufacturing process. Others could have been damaged on impact.

Refurbished Points

Projectile points which have been reworked for the purpose of functioning as drills, perforators and other tools are common in Central Texas sites. Two specimens from 41 GL 12 (Figure 3, g-h) belong in this category. These artifacts were manufactured from Late Archaic types *Castroville* (Figure 3, g) and *Marshall* (Figure 3, h) which suggests a wider inventory of usable tools by the end of the Archaic.

Bifaces

Miscellaneous Bifaces

Two specimens are ovoid bifaces which may represent finished tools used for scraping or cutting. Due to their thickness and unfinished appearance they may also represent early stages in the lithic reduction process of dart point manufacture. This sample is illustrated by one specimen (Figure 3, i).

Scrapers, choppers and other kinds of tools were commonly fashioned from large cobbles by simply removing enough cortex to produce a cutting edge. Two examples of this technique were found at 41 GL 12. This category is illustrated by one specimen (Figure 4, a).

Biface Fragments

A total of 80 miscellaneous biface fragments was collected. This group consists of distal tips, medial segments and unidentifiable portions of large bifaces that may have functioned as tools such as scrapers and choppers or may represent manufacturing failures broken during the reduction process.

Flakes

Utilized Flakes

Two examples of utilized flakes were collected from 41 GL 12. One specimen (Figure 4, b) is a primary cortex flake (uniface), circular in shape, with a working edge around virtually all of its surface. These artifacts are sometimes referred to as turtleback scrapers. The other specimen (Figure 4, c) is an interior flake, elongate in shape, and possesses a working edge on one edge of its ventral surface.

Manos

Two fragmented manos and one complete mano were found at site 41 GL 12. These artifacts are indicative of plant exploitation. One specimen (not drawn to scale) is illustrated in Figure 5. The specimen measures 4.5 inches in length, 2.5 inches in width and 1.25 inches in height.

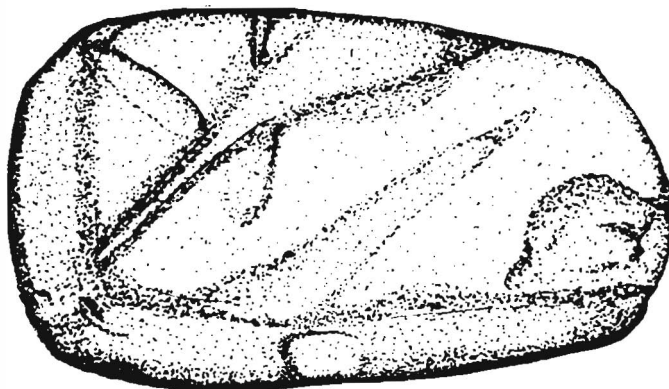


Figure 5. Surface-collected artifact from Site 41 GL 12, Gillespie County, Texas: Mano. (Not drawn to scale).

CONCLUSIONS

The conclusions which can be arrived at from a surface collection have to be regarded as general in most cases. However, certain statements regarding the temporal affiliation and probable function of 41 GL 12 can be made based on the artifact assemblage collected from the site.

The presence of dart points with parallel stems and straight bases similar to *Travis*, *Nolan*, and *Bulverde* types suggests the site may have been occupied during the Early Archaic Period. The predominance of *Pedernales*-like points in combination with the above-mentioned types is a strong point in favor of a Middle Archaic occupation, possibly the main occupation period of the site. Continued occupation into the Late Archaic Period is evidenced by the number of corner-notched and side-notched forms which are similar to known types *Ensor*, *Frio*, *Castroville*, *Marshall* and *Marcos*.

The increase in point types during the Late Archaic Period suggests such culture changes as an increase in population, different hunting strategies and possibly a change in weaponry. The presence of Late Archaic points which have been reworked into drills or perforators may represent a change in technology. Perhaps different resources were being exploited or new uses were being found for existing resources, hence the need for a new tool type. The presence of manos suggests that plant materials were being utilized. The small number of reworked flakes and the large number of broken tools is evidence of the abundance of raw materials in the area. Flint nodules are common and broken tools were often simply discarded. In fact, the Pedernales River was named for the large amount of flint in the area. In Spanish, *pedernales* is the plural form meaning flint.

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PALEO-INDIAN PROJECTILE POINTS FROM
JIM WELLS AND NUECES COUNTIES, TEXAS

C. K. Chandler, Florence Knolle and Mary Margaret Knolle

ABSTRACT

Seven Paleo-Indian projectile points have been recovered from sites along the Jim Wells - Nueces County line near the Nueces River. These specimens are surface finds from the Knolle Jersey Farms and are illustrated and described here along with a Corner Tang knife from one of the sites.

INTRODUCTION

These artifacts have been recovered from cultivated or otherwise disturbed sites along Javelin Creek near its confluence with the Nueces River (see Figure 1). They were picked up by Florence and Mary Margaret Knolle over a period of recent years and were found in association with a large number of Archaic materials. There has been a considerable amount of archaeological investigation in the Texas Coastal Bend area, but controlled and dated excavations have been scarce. There are no Paleo materials reported from controlled excavations; however, a relative chronology based on the style of projectile points and supported in other areas by radiocarbon dates would place a number of these artifacts in the early Prehistoric periods.

While there are few recorded *Clovis* or *Folsom* artifacts in the region, a number of projectile point types assignable to Late Paleo-Indian times (*Plainview*, *Golondrina*, *Angostura*, *Scottsbluff*) occur with surprising frequency.

Hester (1970) reports a *Folsom* point found by Mrs. Elwood Hess near Oso Creek, south of Corpus Christi, in Nueces County. *Plainview* and *Angostura* are also known from a few sites along the Oso. A *Folsom*-like fluted specimen was found by Jerry Bauman of Corpus Christi at his site B-10 in Nueces County.

Malcom Johnson (personal communication) reports a *Plainview* basal fragment from a Nueces County site three to four miles inland from Nueces Bay.

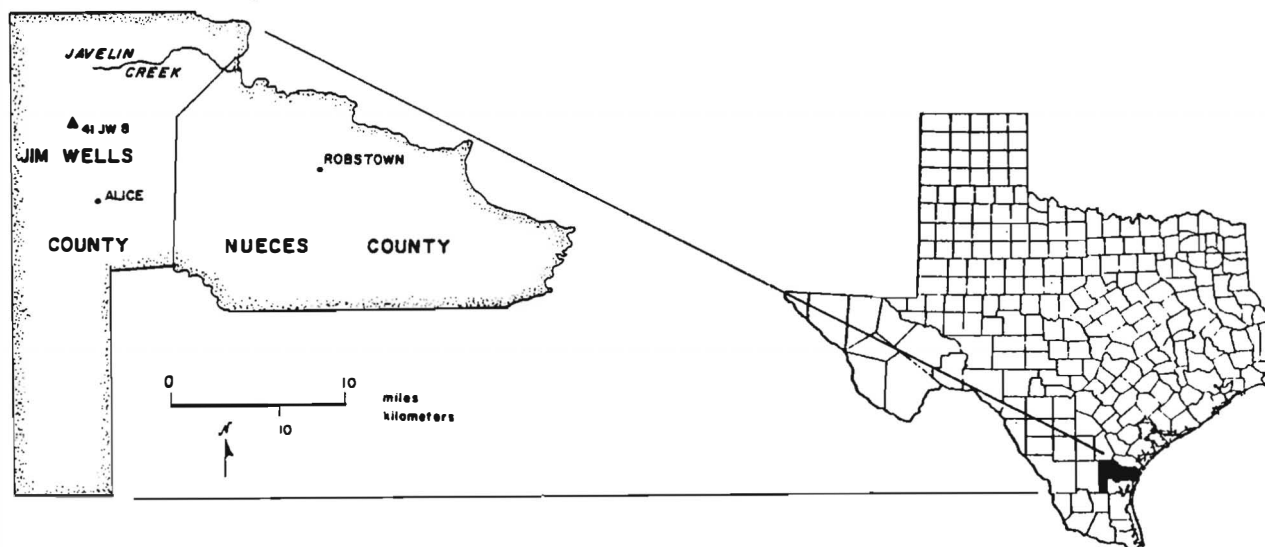


Figure 1. Location of Javelin Creek in Jim Wells and Nueces County, southern Texas.

Patterson and Ford (1974) report several Paleo-Indian projectile points from 41 NU 110 on Petronilla Creek in western Nueces County. These were three *Angostura*, a perforator made on an *Angostura* and a basal fragment of a *Scottsbluff*.

Chandler (1982) reports a number of Paleo-Indian points from San Patricio County just northeast of and across the Nueces River from the Javelin Creek materials reported here.

The Banquette Bend Site (41 NU 63) in western Nueces County yielded very little in the way of datable information. A relative chronology of the materials recovered would place the earliest occupation of this site in the Late Archaic. There was no material suggestive of Paleo times recovered. (See Black 1978.)

Jim Wells County is almost unknown archaeologically. At the time of this writing, there have been only nine sites recorded in Jim Wells County, and only one of these (41 JW 8) has been excavated and reported. The Hinojosa Site (41 JW 8) is a Late Prehistoric site dating to about 1300 A.D. The artifact assemblage is dominated by *Perdiz* points, tiny end scrapers and bone-tempered ceramics. There was no evidence of earlier Archaic occupations. (See Hester 1977.)

ARTIFACT DESCRIPTIONS

Following are descriptions illustrated in Figure 2. Dimensions are in millimeters and are given under the following headings: L = maximum length; W = maximum width; T = maximum thickness; MW = minimum width, BW = basal width; BC = basal concavity. Weight is given in grams under "Weight" in Table 1.

Complete *Angostura* (Figure 2, a). Reddish brown flint. Irregular flaking. Basal concavity is formed by two short lunate flakes from one side without subsequent retouch. Lateral edges are smoothed approximately one-half its total length. Base is not smoothed. Compared to its length, this artifact is more narrow than most.

Angostura (Figure 2, b). Light tan flint. Irregular flaking. Basal concavity is formed by irregular flake scars from both sides. Lateral edges are smoothed approximately one-half its total length. Approximately 2 mm of the distal tip is missing. Blade has been resharpened with more than normal restriction.

Fragmentary *Angostura* (Figure 2, c). Purplish brown flint. Irregular flaking. Lateral edges are heavily smoothed to its widest point. Distal tip shows some minor resharpening. One side of the blade has a large fire spall, and the basal portion is missing due to what appears to be thermal fracturing.

Angostura basal fragment (Figure 2, d). Yellowish tan flint. Irregular flaking. Base has been thinned on one side by three narrow flakes. The longest of these is 13.6 mm. The opposite side has only two thinning flakes. Lateral edges are lightly smoothed; base is not smoothed.

Complete *Plainview* (Figure 2, e). Creamy tan, good quality flint. It has a waxy feel and vitreous surface indicative of heat treatment. Flaking is irregular with some flakes terminating in step fractures. Basal concavity is formed by a single lunate flake struck from one side with subsequent retouch to opposite side. Tips of both basal ears are broken. It appears if both broken ear tips were present the basal concavity would be over 4.0 mm. Lateral edges are smoothed for approximately one-half its total length and the base is lightly smoothed.

Plainview basal fragment (Figure 2, f). Dull ivory flint. Flaking is irregular with fine retouch. Base is thinned on one side with three channel flakes, two of which extend beyond the fracture. Opposite side is thinned by one large thin channel flake with subsequent retouch. Lateral edges are heavily smoothed, base lightly so.

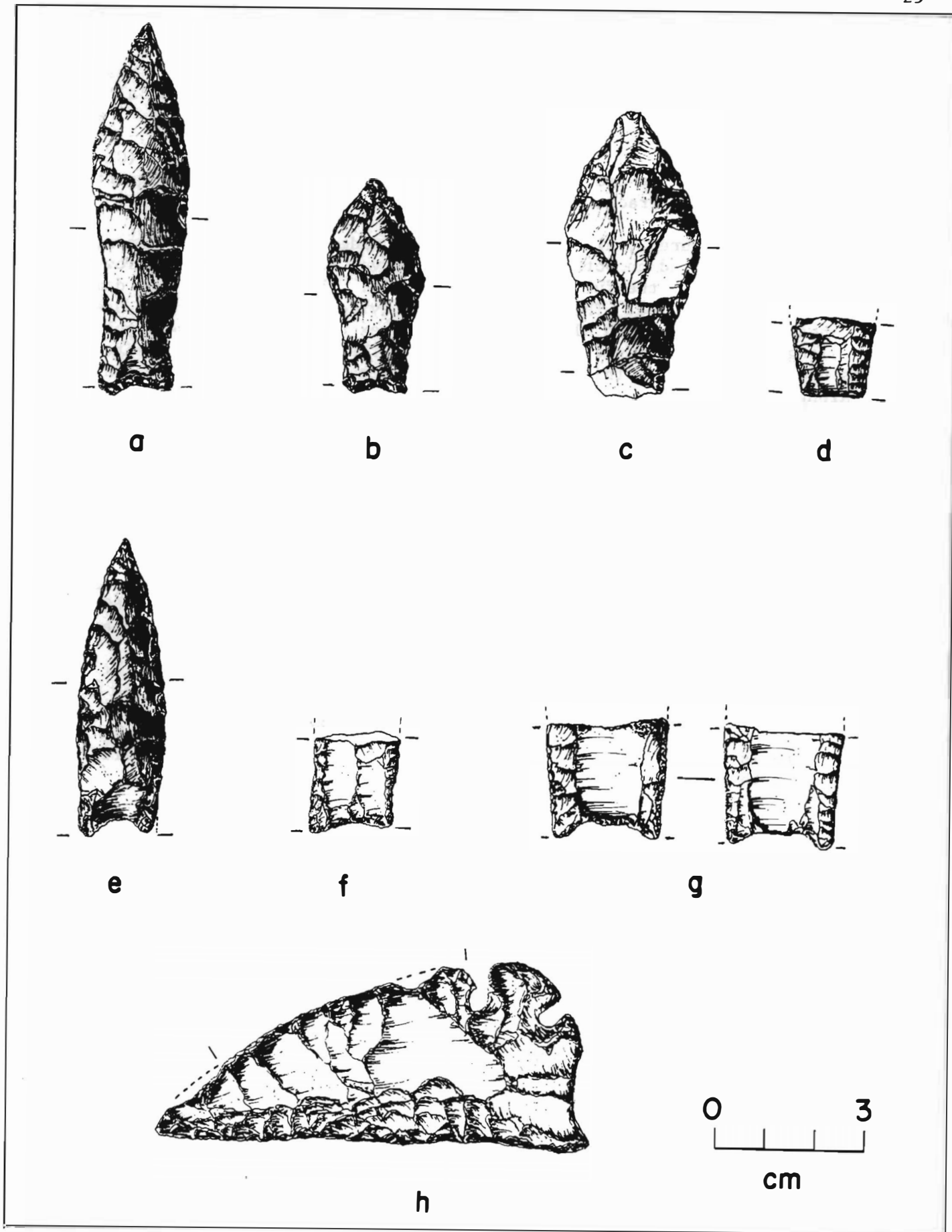


Figure 2. Paleo-Indian projectile points and a Corner Tank artifact from sites along Javelin Creek in Jim Wells and Nueces Counties, southern Texas. See text for identification. (Illustrations by A. J. McGraw.)

Folsom basal fragment (Figure 2, g). Creamy tan, good quality flint. It has a very waxy feel and vitreous surface indicative of heat treatment. It is bifacially fluted, and basal nipple is present. Lateral edges and base are smoothed. Parallel flaking is present with extremely fine lateral edge retouch to both sides. This artifact does not appear to have been broken in the manufacturing process (Glen Goode, personal communication) but did break at a weak point. There is a small quartz inclusion at the line of fracture.

Corner Tang Knife (Figure 2, h). This specimen is made of a good quality grayish tan flint. It is thinned on both faces by the removal of long, wide, shallow flakes that appear to go the full width of the blade. There is light plow damage along the upper convex edge. This artifact shows evidence of considerable use. There is heavy use wear polish along the upper convex edge, and this wear polish extends along the flake arrises across the blade. The straight edge opposite the tang has been resharpened. This resharpening has removed most of the use wear polish along this edge but this wear polish is still visible along some of the more prominent flake arrises.

While Corner Tang knives have been reported from many areas of the state (Patterson 1936), they never occur in quantity and are previously unreported from Jim Wells County. Very few have been reported from controlled excavations and even fewer from dated contexts. Corner Tang knives recovered from controlled excavations include seven specimens from the Morhiss site, one specimen from the Britton site (Story and Shafer 1966), four specimens from the McCann site (Preston and Shiner 1969) and two specimens from the Ernest Witte site (41 AU 36; Hall 1981). Two radiocarbon dates, 130 B.C. and 380 B.C., were obtained from a hearth in the same zone as the one Britton site specimen, and radiocarbon dates of 520 B.C. and A.D. 360 were obtained from bone samples of burials at 41 AU 36 that included the two Corner Tang artifacts as grave goods.

Weir (1976) places Corner Tang knives in the Twin Sisters Phase of the Terminal Archaic (between 2000 and 700 years B.P.). This time frame would tend to be supported by the very few radiocarbon dates available.

While surface finds cannot be reliably dated, the Corner Tang specimen described here is proposed as contemporaneous with the associated Archaic artifacts recovered from the surface of the same site.

TABLE 1
Artifact Dimensions

| Spec. | L | W | T | MW | BW | BC | Wt. |
|-------|------|------|------|------|------|-----|------|
| 2,a | 74 | 20.2 | 8.4 | 13.7 | 15.5 | 1.7 | 11.5 |
| 2,b | 43.3 | 21.0 | 8.6 | 13.4 | 13.5 | 1.2 | 7.0 |
| 2,c | 58 | 22.2 | 7.7 | 17 | - | - | 12.6 |
| 2,d | - | 17.7 | 5.9 | 12.6 | 12.6 | - | 2.2 |
| 2,e | 60.8 | 18.8 | 8.1 | 15.4 | 15.4 | 3.5 | 10.0 |
| 2,f | - | 17.7 | 6.3 | 16.5 | 17.0 | 1.6 | 4.1 |
| 2,g | - | 24.4 | 4.7* | 21.3 | 21.5 | 3.2 | 3.6 |
| 2,h | 88.5 | 38.1 | 7.7 | - | - | - | 24.2 |

* Specimen 2,g is 2.4 mm thick through the center portion

CONCLUSIONS

The cultural materials recovered from the disturbed surface of the Javelin Creek sites represent the longest span of archaeological time recognized on the Texas Coast.

There is virtually no data available on early prehistoric cultural remains in the area immediately south of the Nueces River and inland from the coast. The potential for these sites to reconstruct and identify specific cultures, periods and lifeways is high.

The chance that these sites may represent a zone of cultural transition between the inland and the coast or that they represent the migration of one cultural group between the two areas are interesting questions which cannot be answered on the basis of present knowledge.

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EXCAVATIONS AT AQUARENA SPRINGS, SAN MARCOS, TEXAS

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INTRODUCTION

During the summer of 1982 archaeological excavations were carried out by Southwest Texas State University at 41 HY 160, a prehistoric site at Aquarena Springs in San Marcos, Hays County, Texas. The excavations were a part of the first field school conducted by SWTSU and 35 students participated. The Aquarena Springs area provides an excellent location for the examination of prehistoric behavior not only because of its proximity to the University, but, more importantly, the intersection of three environmental zones presents an opportunity to investigate a unique adaptation.

ENVIRONMENT

Roughly 17 million years ago, during the Miocene epoch, major faulting lifted what is now Central Texas from beneath sea level. This faulting caused springs to issue along the fault (Shiner 1983). The San Marcos River originates at Aquarena Springs in San Marcos. The river begins at the lower end of the Edwards Aquifer, insuring available water even during the most severe of droughts, and is joined by the Blanco River two and one-half miles downstream. The water temperature remains a constant 71°F year-round, varying only one or two degrees (Davis n.d.). The temperature, in combination with continual water flow, accounts for the presence of the river's unique flora and fauna. Some of these species found in the upper parts of the river are "range-restricted, or, in certain cases, endemic..." (Davis n.d.:2). These include species such as Texas Wild Rice (*Zizania texana*), the San Marcos Dwarf Salamander (*Eurycea nana*), the Fountain Darter (*Etheostoma fonticola*), Mosquito fish (*Gambusia geiseri*) and the Giant Fresh Water Shrimp (*Macrobrachium carcinus*), an invertebrate the size of a lobster. There is an abundance of fish and vegetation within the river, significantly more than what is present in other streams that also issue from the aquifer.

The same faulting that created the river also led to the development of two distinct, habitable environmental zones: The Edwards Plateau to the west of the Balcones Fault, and the Blackland Prairie to the east. San Marcos lies directly on the Balcones Fault which is the common boundary of these two resource areas with a third environmental zone, the river itself, in between.

The Edwards Plateau is characterized by small hills ranging in elevation from 1,300 to 4,000 feet above sea level. The soil is thin due to the underlying limestone and is alkaline as well as generally low in nutrients. The limestone layers give this area a stair-like appearance, and slope varies from 1% to 12%. During a stage of climax vegetation, grasses average 85%, woody 10%, and forbs 5% of the plant population.

The topography of the Blackland Prairie is mainly level with gently rolling uplands, with an elevation that ranges from 250 to 700 feet. The soils of this resource area are able to hold large amounts of water and have high natural fertility, and slopes are mainly in the range of 0% to 8%. Grasses average 83%, woody plants 8%, and forbs 8% of the total plant population at a stage of climax vegetation (Johnson 1982).

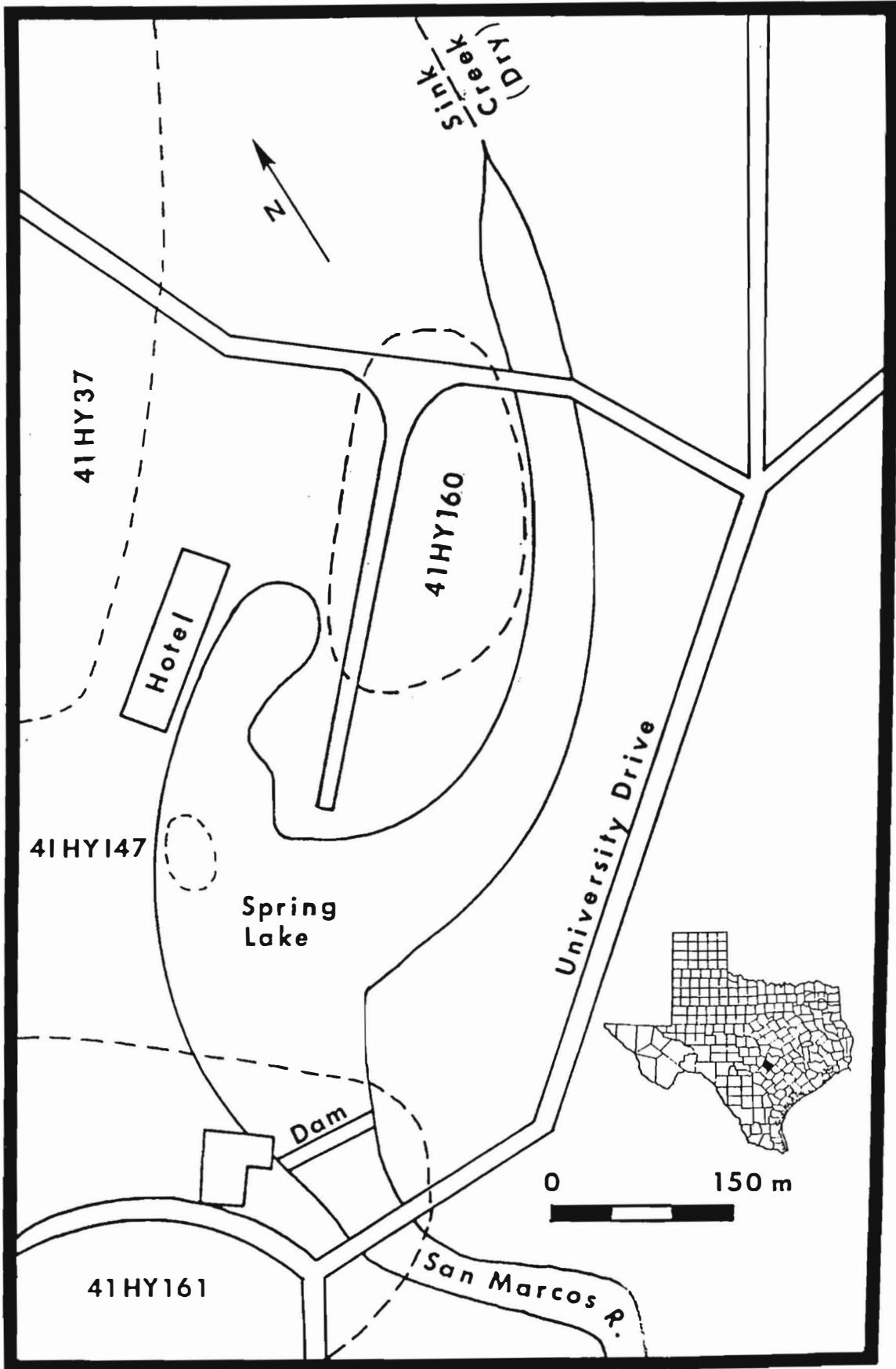


Figure 1. Map of Aquarena Springs and Archaeological Sites, Hays County, Texas. The 1982 Southwest Texas State University Archaeological Field School excavated test pits in the golf course area (site 41 HY 160).

Both the Edwards Plateau and Blackland Prairie resource areas maintain a variety of native plants that are useful to humans for edible, medicinal, and domestic purposes. Some of these are the prickly pear, watercress, dewberries, vine fruits, Live and Texas Oaks, Sumac, and the Maximilian sunflower. The abundance of forbs, grasses and cover plants in the hill country provide an environment well suited to the deer, dove, quail, rabbit and wild turkey native to the area. The plains at state of climax vegetation are too open for deer to frequent; however, bison, antelope, and now-extinct large grazing animals were once common.

Ten thousand years ago, the climate of the San Marcos area was much cooler. Today, the annual mean temperature is roughly 68°F while the mean annual precipitation is 33 inches. Cold polar air flowing south and warm tropical air traveling up from the Gulf of Mexico create fronts which cause winter rains and sudden changes in temperature. The January mean temperature is 50.6°F, and the July mean temperature is 83°F.

EXCAVATIONS

The site chosen for excavation is situated adjacent to the head of Aquarena Springs. It is located just southeast of the springs and typically is flooded one or two times every one to ten years. The soil type is Frio silty clay with a moderately suited vegetative establishment. Prehistoric debris was observed on the surface covering an area approximately 300 meters north-south by 200 meters east-west (Figure 1). During the course of the 1982 field school, 34 square meters were excavated to varying depths. The deepest unit (XU 1) was excavated to a depth of 2.40 meters below the surface. Artifacts were recovered from below the water table, but the bottom of the cultural deposit was not encountered because of the logistical problems involved in excavating below the water table. The water table has risen approximately 12 feet in historic times due to the construction of the dam which formed Spring Lake. It is reasonable to suspect that the cultural deposit continues for some depth below the present water table as evidence by apparent in situ Paleo-Indian remains (site 41 HY 147, see Figure 1) recovered approximately 10 feet below the surface of the lake by archaeologists from Southern Methodist University (Shiner 1983).

The site under investigation by SWTSU is 41 HY 160. The excavation units had to be placed to avoid the flow of golfers, balls and carts. Excavations demonstrated that historic disturbance has minimally affected only the uppermost 15 cm of the site. The remainder appears undisturbed.

Numerous carbon samples were collected, although these have not been processed. As a result, the chronology of the site currently rests on the recovery of 75 projectile points of which 53 are of identifiable types of known chronological association (Suhm and Jélks 1962; Weir 1976; Sorrow, Shafer and Ross 1967, and Hester 1980).

The Late Prehistoric Period (1200 A.D. - 1600 A.D.) was represented by the presence of *Alba*, *Cliffton*, *Perdiz*, and *Scallorn* points. There apparently was no stratigraphic difference in the vertical distribution of *Scallorn* and *Perdiz* points as noted for some Central Texas sites (Jelks 1962). The vast majority of these points were recovered from 0 to 20 cm below surface.

The Archaic - Late Prehistoric Transitional Period or Twin Sisters Phase (1 - 1200 A.D.; Wier 1976) is represented by the presence of *Darl*, *Fairland*, and *Edgewood* points. These were recovered from 10 to 40 cm below surface.

The Late Archaic or San Marcos Phase (0 - 1000 B.C.) is represented by the presence of *Ensor*, *Frio*, *Marshall*, and *Castroville* points. Most of these points were recovered from 30 to 50 cm below surface. The Middle Archaic or Round Rock Phase (1000 B.C. - 2000 B.C.) is represented by *Pedermales* points and were found mainly from 50 to 70 cm below surface. The Early Archaic or Clear Fork Phase (2000 B.C. - 3000 B.C.) is represented by Early Stemmed and *Nolan* Points, most of which were from 70 to 190 cm below surface. A typical profile is shown in Figure 2.

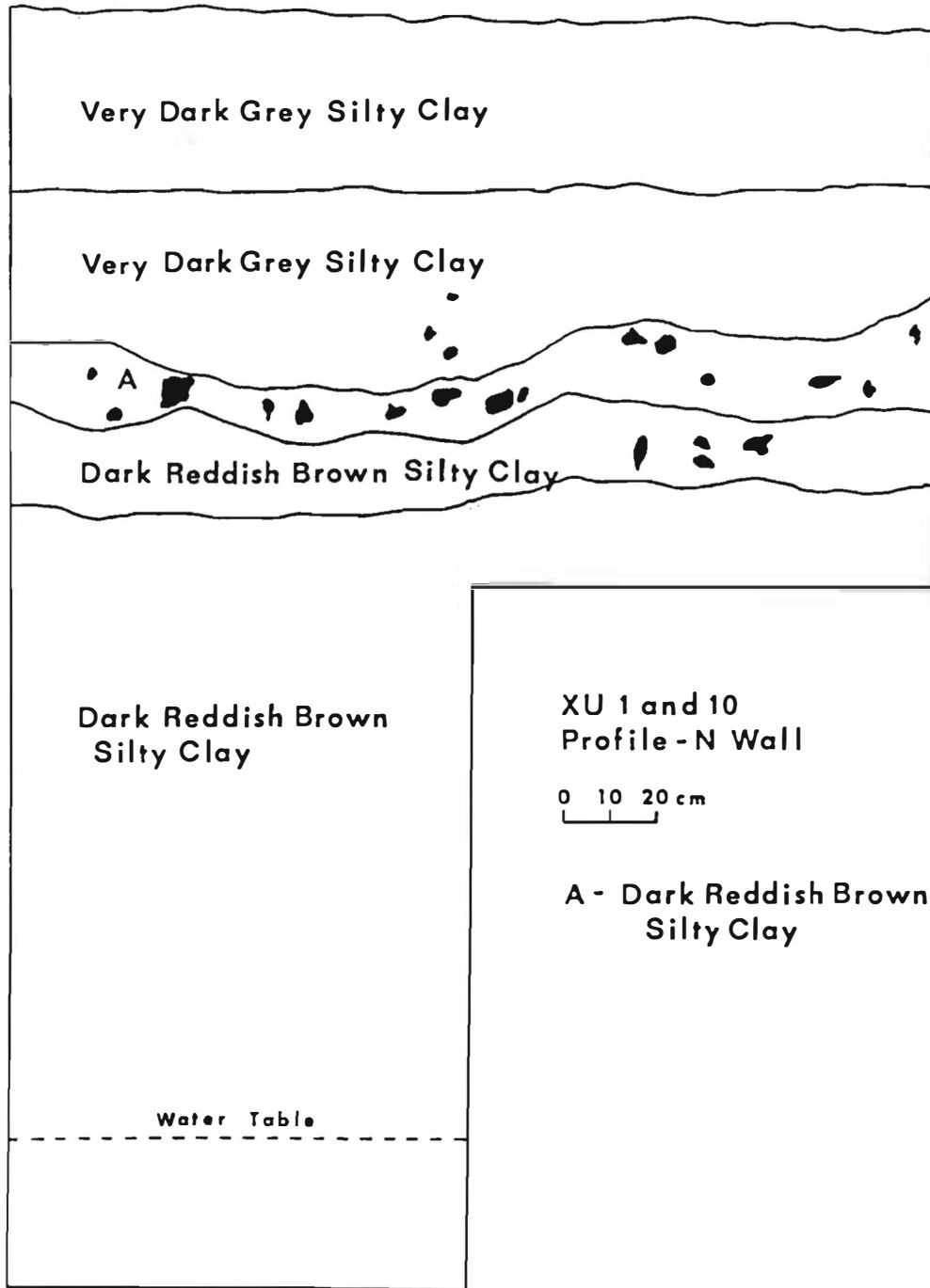


Figure 2. Profile of XU 1 and XU 10 at 41 HY 160, Hays County, Texas.

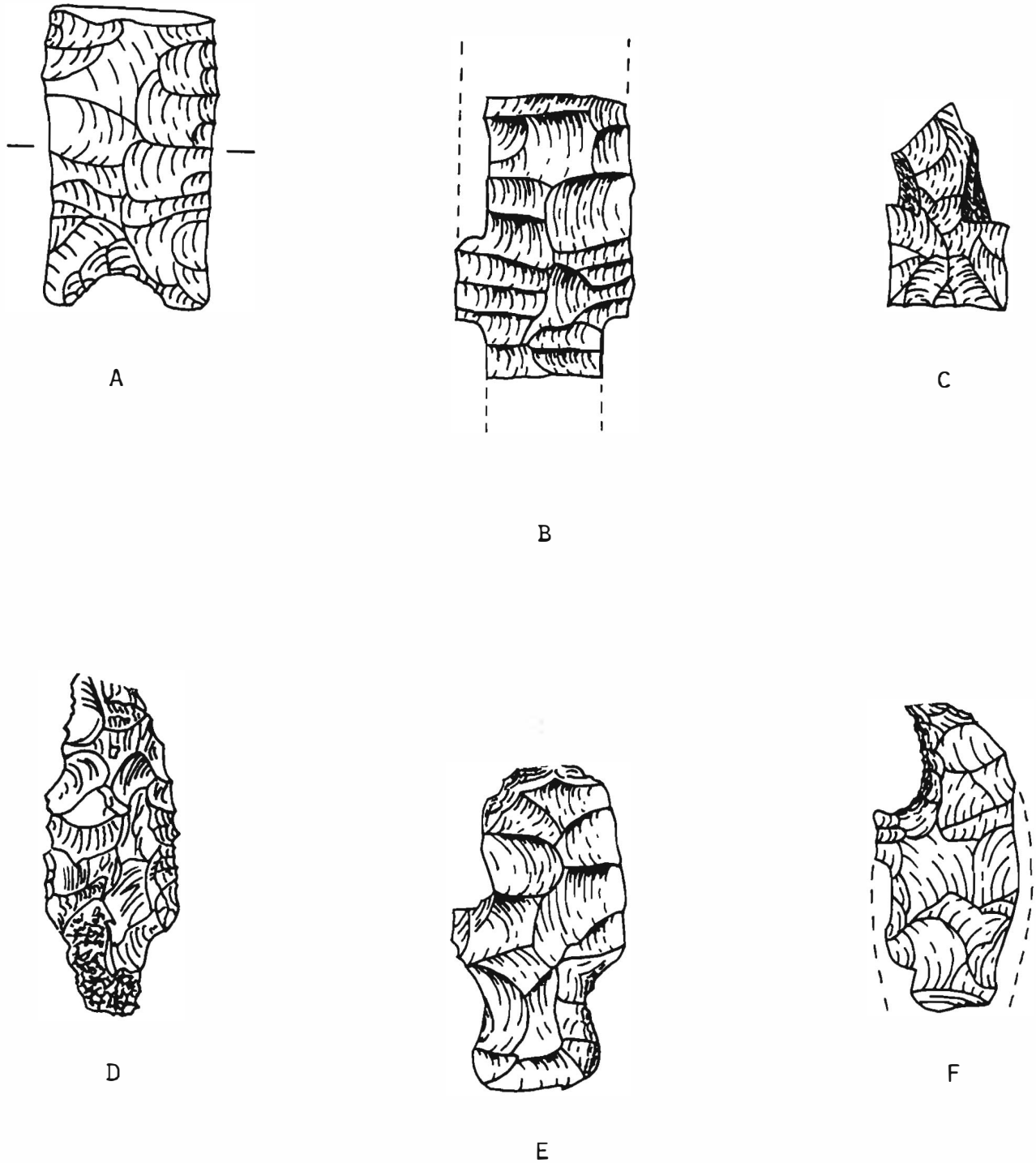


Figure 3. Artifacts from Site 41 HY 160, Hays County, Texas: a, *Golondrina* (40-cm level); b, *Eden/Scottsbluff* (80-cm level); c, Stemmed base (90-cm level); d, Stemmed point (225-cm level); e, Slightly notched point (95-cm); f, Spokeshave (205 cm).

Absent from 41 HY 160 were any of the points characteristic of the long Archaic - Paleo-Indian Transitional Period or San Geronimo Phase (3000 B.C. - 7000 B.C.; Wier 1976). It should be noted however, that points of the preceding period were recovered at the water table and the excavation continued only about 25 cm beyond this level. Thus it is entirely possible that the San Geronimo Phase is present below the level at which the excavation was terminated.

The Paleo-Indian Period (7000 B.C. - 10,000 B.C.) is represented by the presence of a *Golondrina* point and a possible *Eden/Scottsbluff* point. These points were found at depths of 40 cm and 80 cm respectively. The *Golondrina* point was the deepest point recovered from that excavation unit; however, Early Archaic points were recovered from deeper levels in other areas of the site. A stemmed point was recovered in the same unit below the level in which the possible *Eden/Scottsbluff* fragment was found (see Figure 3). Thus, the depositional nature of Paleo-Indian materials is not known and will be one of the topics of future research at this site.

During the excavations 504 stone tools were recovered (Table 1). In addition to these tools, 35,140 pieces of lithic debris were also recovered. The density of the tools and debris was greatest from 0 to 30 cm below surface.

| | |
|-----------|--------------------------------|
| 9 | Choppers |
| 45 | Scrapers |
| 31 | Cores |
| 43 | Fine Bifaces |
| 41 | Moderately Worked Bifaces |
| 19 | Crude Bifaces |
| 75 | Projectile Points |
| 170 | Use-Retouched Pieces |
| <u>70</u> | Intentionally Retouched Pieces |

504 Total

35,140 Pieces of Lithic Debris

Table 1. Summary of Lithic material from 41 HY 160.

Statistical manipulations on the vertical and horizontal distributions of tools and debris are currently in progress and are not available at this point in time; however, the general classificatory scheme is presented.

Thirty-one cores were recovered. These were classified according to direction of flake removal and types of platforms. The classification utilized is an altered rendition of the one used in the analysis of the cores from Choke Canyon Reservoir (Hall et al. 1982). The counts include: 1 unidirectional - natural platform; 3 bidirectional - natural platform; 12 bidirectional - natural and prepared platforms; 3 multidirectional - natural platform; 7 multidirectional - natural and prepared platforms; 5 exhausted cores.

Nine choppers were recovered. They were placed into two categories: Primary (5 specimens) are those in which a chopping tool was the final product, and Secondary (4 specimens) are those which appear to be cores utilized for chopping.

Forty-five scrapers were recovered and classified according to the location of the scraping edge. Counts are as follows: 14 side; 9 end; 10 end and side; 7 circular; and 5 broken.

Forty-three fine bifaces were recovered. Tools classed as fine bifaces include all those bifaces which are thin and lenticular in cross-section and have been worked by pressure flaking. Their ends are rounded or pointed.

Forty-one moderately worked bifaces were recovered. These tools were shaped with little or no pressure retouch.

Nineteen crude bifaces were recovered. On these tools crude percussion flakes were removed leaving short, deep flake scars. The edges are usually zig-zag

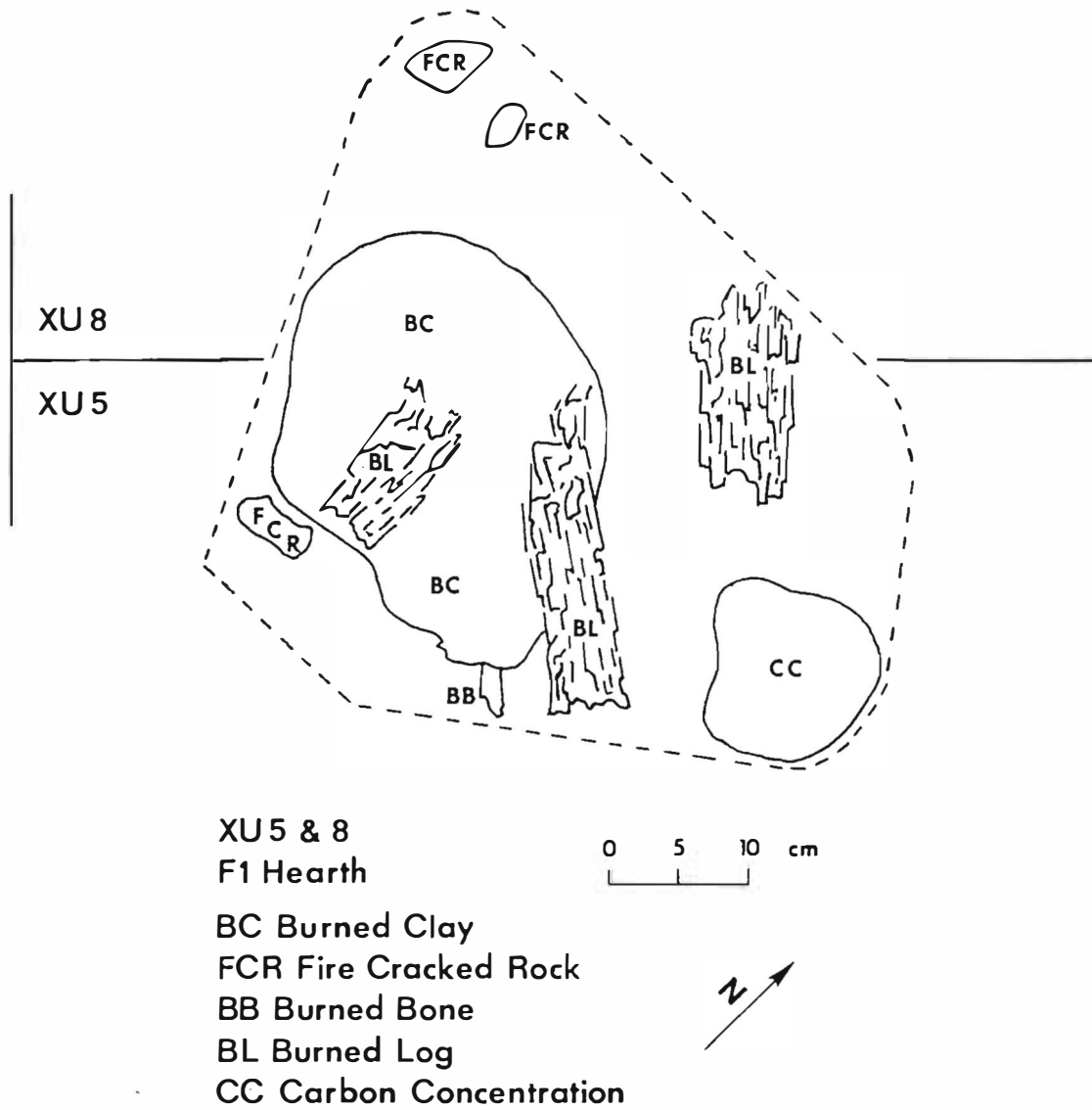


Figure 4. Hearth at 41 HY 160.

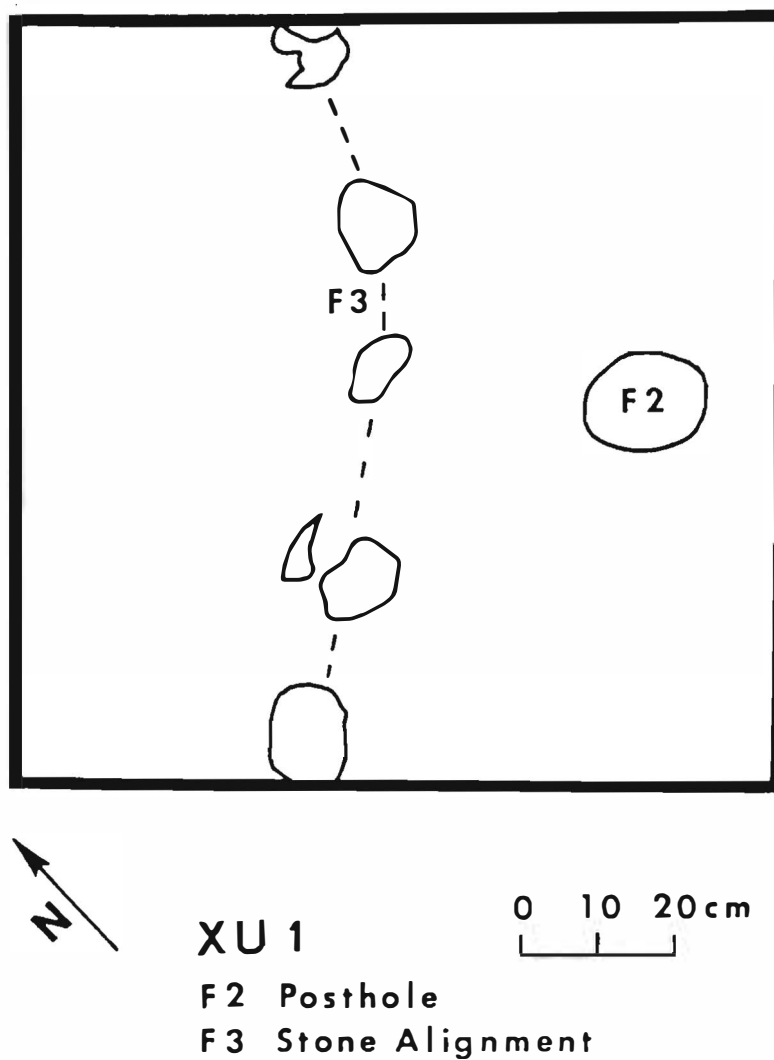
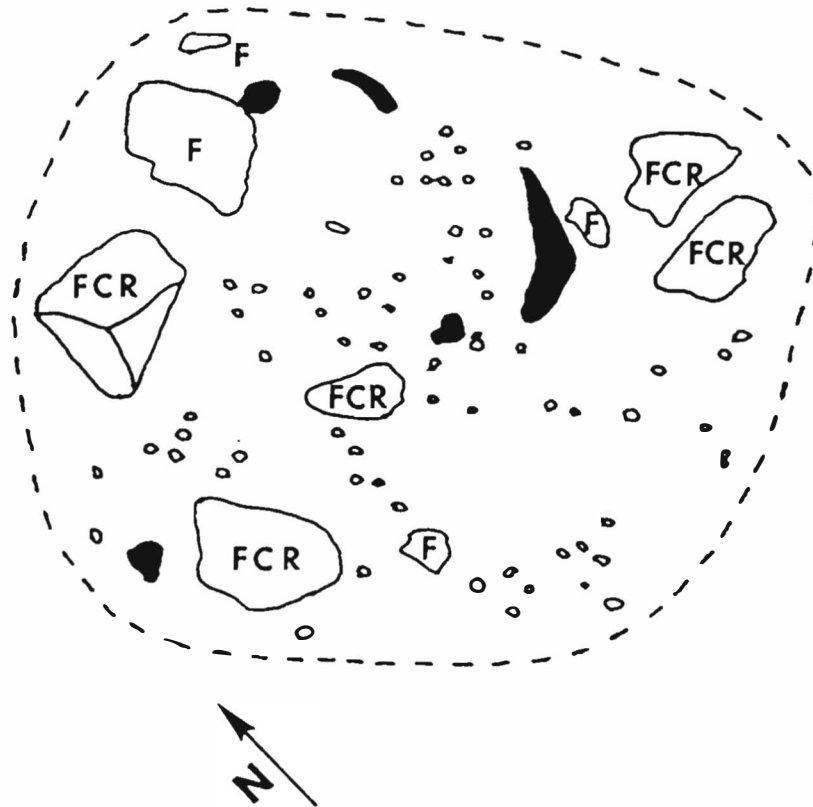


Figure 5. Stone alignment and posthole at 41 HY 160. These features were encountered at 48 cm below the surface in Excavation Unit 1.



XU6

F2 -Trash Pit

FCR Fire Cracked Rock

● Bone

F Chert Flake

0 5 10 cm

Figure 6. Trash pit at 41 HY 160.

shaped. Eighteen of the nineteen are broken, some due to failures in the reduction sequence and others due to use breakage.

Edge wear analysis is currently in progress to determine not only the functions of the above-mentioned tools, but also the 71 intentionally retouched pieces and 170 use-retouched pieces. The presence of use-retouch was made on the basis of inspection by the naked eye. Microscopic edge examination of what is presently classed as debris will no doubt yield hundreds of additional use-retouched pieces.

A source of chert cobbles has been located approximately 1.0 km to the north of the site. The close proximity of a chert source explains the presence of thousands of usable flakes at the site that were not utilized or modified. Conservation of raw material was not a factor in the reduction sequence. Of the 35,140 pieces of lithic debris, the majority are interior flakes, many of which appear to be from the final stages of reduction. Thus it appears that tool finishing was an important activity at this site.

Three bone tools were recovered. One is a complete awl 20 cm long made from an unidentified long bone. Another is an incomplete awl made from a deer metapodial with hatch marks on the butt end very similar to a specimen from Stillhouse Hollow (Sorrow, Shafer and Ross 1967). The third is an incomplete flesher with a beveled edge. In addition to these bone tools, several hundred unworked pieces of bone were recovered. Species represented include bison, antelope, and deer. This material is currently being analyzed.

Portions of 3 sandstone grinding slabs were recovered. All were 0 to 20 cm below surface, the zone containing mainly Late Prehistoric and Transitional remains. Twenty-six ceramic sherds were also recovered from this zone. Most of the sherds are Leon Plain although Caddoan types are also present.

During the course of the excavations 13 features were encountered. These include: 5 hearths (Figure 4); 3 stone alignments (Figure 5); 2 burned rock middens; 1 posthole (Figure 5); 1 trash pit (Figure 6); and an area which contained charcoal and chunks of fired, shell-tempered clay perhaps relating to ceramic production. It should be noted that fire-cracked rock was found throughout the site and that only the very dense concentrations were designated as features. The significance of the stone alignments has not been determined. They were composed of fist-sized stones (Figure 5). Evidence for prehistoric structures in Central Texas is extremely rare. It may be that the construction techniques are such that they are archaeologically difficult to recognize. The stone alignments may represent rocks that accumulated along the edges of the now invisible structures. The nature of these stone alignments is one of the topics for future research at this site.

SUMMARY

The objectives of the first field season were to test site 41 HY 160 at Aquarena Springs to get an idea of the type of cultural deposits present and the time periods represented. The excavations have shown that the site was occupied from the Late Prehistoric Period back to at least the beginning of the Early Archaic. The presence of Paleo-Indian points suggests an earlier occupation although the nature of their deposition is not clear. Ongoing analysis is focusing on changes in exploitive patterns as evidence by the faunal remains and statistical manipulations of the vertical and horizontal distributions of artifacts and other debris. Future research at this site will focus on clarifying the nature of earlier deposits as well as block excavations to clearly define features and activity areas.

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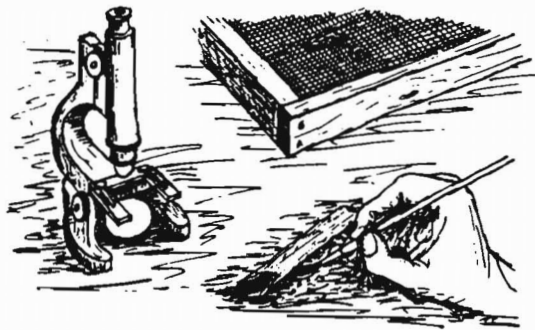
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- FLORENCE & MARY KNOLLE are wives of Henry and Edward Knolle respectively, These two families operate the Knolle Jersey Farms (the world's largest Jersey herd) near Sandia, Texas, in Jim Wells and western Nueces Counties. Florence and Mary Margaret are members of the Texas Archeological Society and the STAA and have a long-time interest in the history and prehistory of South Texas. This is their first contribution to this journal, and their sharing of this information adds to the growing knowledge of the earliest inhabitants of South Texas.
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FIELD AND LABORATORY HANDBOOK

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