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EDITORIAL ..... 1

MISSION NUESTRA SEÑORA DE LA LUZ & PRESIDIO SAN AGUSTÍN DE AHUMADA: The Orcoquisac Historic District in Chambers County, Texas
(Lynn Highley, Anne Fox and Will Day) ..... 2

INITIAL EMPLOYMENT OF THE BOW AND ARROW IN SOUTHERN NORTH AMERICA
(L. W. Patterson) ..... 18

AN OX SHOE AND METAL SCRAPING TOOL FROM THE MONTGOMERY SITE
(Wayne Parker) ..... 27

AN IRON PROJECTILE FROM GILLESPIE COUNTY, TEXAS
(Richard L. McReynolds) ..... 30

BOOK REVIEW: *Allens Creek: A Study in the Cultural Prehistory of the Lower Brazos River Valley, Texas* by Grant D. Hall ..... 33

A POTTERY VESSEL FROM 41 MC 320, THE NICHOLS I SITE, MCMULLEN COUNTY, TEXAS
(Curtis Dusek) ..... 40

REFLECTIONS (J. B. Sollberger) ..... 43

AUTHORS ..... 44

Cover Illustration: Drawing by Heidi Mitchell. See page 17.

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EDITORIAL

## THE HOUSTON ARCHEOLOGICAL SOCIETY & SOUTHEASTERN TEXAS

In this issue we are highlighting several articles on archeological investigations in southeastern Texas, including the El Orcoquisac district (Mission Nuestra Señora de la Luz and Presidio San Augustín de Ahumada) and the Allens Creek area. The role of the Houston Archeological Society in these two investigations is worthy of note.

In 1969-1970, the HAS group, under the direction of W. L. Fullen, conducted survey and testing of the El Orcoquisac area in Chambers and Liberty Counties, and located the original site of the mission and presidio. Their work was invaluable in the development of information on the area, and was so acknowledged in the final Wallisville Lake report (Fox et al. 1980).

In the Allens Creek project, the Houston Archeological Society, through its then-president C. K. Chandler, was instrumental in the identification of the area to the Houston Power and Light as an important archaeological area requiring investigation. HAS participated in the initial survey of the area (Dillehay et al. 1972).

These kinds of involvements by the Houston Archeological Society in key archaeological projects in their area of the state, reflect the kinds of actions and activities where avocational groups can make significant and lasting contributions to the archaeology of Texas.

STAA would like to recognize and honor the Houston Archeological Society for their very important work in these two projects, through this issue of *La Tierra*. HAS has set an example for the rest of us in Texas to follow. Well Done!!!

The Editor

# MISSION NUESTRA SEÑORA DE LA LUZ & PRESIDIO SAN AGUSTÍN DE AHUMADA: The Orcoquisac Historic District in Chambers County, Texas

Lynn Highley, Anne Fox and Will Day

## ABSTRACT

During 1979, the Center for Archaeological Research of the University of Texas at San Antonio conducted archaeological survey, testing, and historical research in the Wallisville Lake area of Chambers and Liberty Counties, east of Houston. One aspect of this project was the identification and analysis of Spanish Colonial sites in the area; the little-known Mission Nuestra Señora de la Luz and the Presidio San Agustín de Ahumada. Based on the UTSA-CAR research and work by Curtis Tunnell, Dick Ambler, and members of the Houston Archeological Society, the history and archaeology of these relatively short-lived Spanish Colonial sites is now better known. The following article summarizes the history and archaeology of these sites; the information is a revised version of a longer report published earlier (Fox, Day, and Highley 1980) involving all the sites (prehistoric - late 19th century) in the Wallisville Lake area.

## INTRODUCTION

In the middle 18th century, Spanish Texas encompassed the eastern half of present-day Texas and a part of western Louisiana. By 1731 Spain, fearing French expansion into this area, established military posts and missions in the region. The capital of the province of Texas was Los Adaes which was erected west of the Red River, opposite the French settlement at Natchitoches. Other military posts and missions included Nacogdoches, San Antonio, and La Bahía (Figure 1).

In 1745 rumors concerning active French trading in the lower Trinity River area prompted a sudden new interest in the coastal area of eastern Texas. To curb French aggression, Presidio San Agustín de Ahumada was established on the lower Trinity River in 1756, and plans were made for a civil settlement. Mission Nuestra Señora de la Luz was established to serve the Orcoquisac Indians who lived along the lower San Jacinto and Trinity Rivers (Bolton 1970:325-374; Casteñeda 1939:46-98).

The presidio and mission were abandoned in 1772 after a brief, stormy existence. The location of the site was an overriding factor in the failure of the project. The Spanish residents had to contend with a swampy, insect-infested region that caused constant medical problems; natural calamities such as floods and hurricanes, added to the setbacks suffered by the community. The extreme isolation of the site resulted in a constant lack of supplies, including food, clothing, arms, and ammunition (Rader 1971: 106).

Because of administrative incompetence and internal dissention, the proposed civil settlement never developed beyond the planning stage. Contrary to the normal mission pattern, the Orcoquisacs were not brought into the mission but continued to live in their own village; this lack of institutional manpower severely impeded the economic and sociopolitical development of the community. In 1770 and 1771, troops were recalled to San Antonio to help defend that community, leaving only three soldiers and the missionaries at El Orcoquisac. In early 1772, the remaining Spaniards left the area, effectively abandoning the mission and presidio (Casteñeda 1939:98). By the end of the century, Louisiana had passed from France to Spain, effectively ending the French threat in the area, and the presidio and mission were never reestablished.

## THE INDIANS

Various Atakapan-speaking Indian groups were present in the lower Trinity River region in the mid-1700s when the Spanish became interested in the area. The Orcoquisac

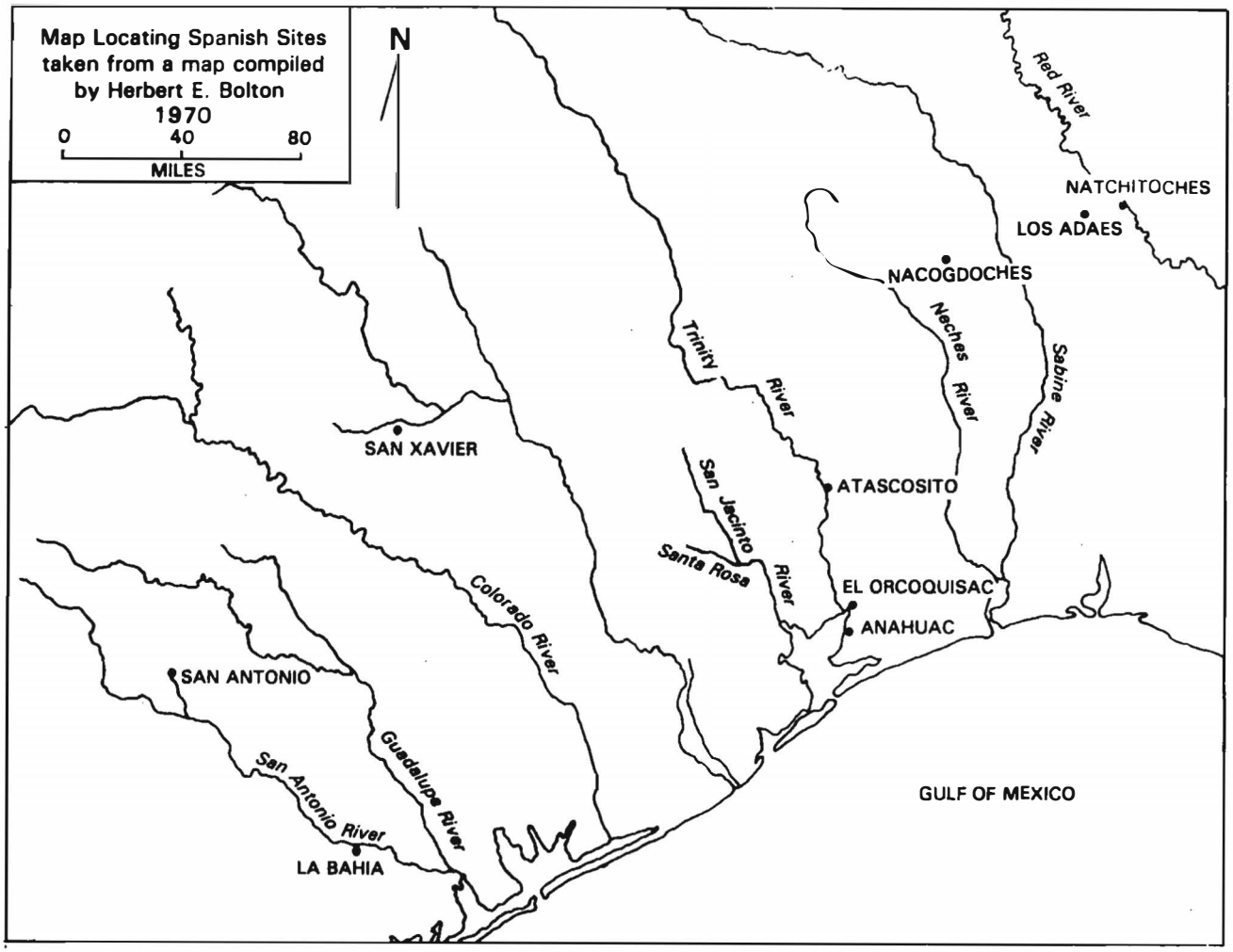


Figure 1. Location of Spanish Colonial Sites in mid-18th Century Texas. (Adapted from Fox, et al. 1980:Figure 14, p. 38. Courtesy of the Center for Archaeological Research of the University of Texas at San Antonio.)

became the best known group when the mission and presidio were established in their area. The Orcoquisacs were related to several other Atakapan-speaking groups; the Bidais lived north of the Orcoquisacs along the middle Trinity River and the upper San Jacinto River (Mayhall 1939:97). Ethnohistoric accounts suggest strong cultural, social, and political ties to the Orcoquisacs. The Deodoses lived north of the Bidais, while the little-known Patiris lived in the San Jacinto River valley north of the Orcoquisacs (Newcomb 1961:316).

The Orcoquisacs were not agricultural but relied on fishing, hunting, and gathering for their subsistence. They apparently lived in relatively permanent villages when not engaged in seasonal migration. Perhaps because of a better geographic location, the Bidais, Deodoses, and Patiris practiced agriculture or at least limited gardening (Story 1981:147) although hunting was also an important activity in their culture.

The Orcoquisacs were divided into four or five groups, each under a different leader. At the time of initial Spanish contact, the group leaders included Canos,

El Gordo, Mateo, and Calzones Colorados. The Bidais were divided into several groups which may have totaled as many as seven separate bands; Antonio and Tomás were the only Bidai leaders known to the Spaniards (Bolton 1970:332-336, 341).

## THE SPANISH ERA

In 1745 the captain of the presidio at La Bahía, Don Joaquín de Orobio y Bazterra, wrote to the viceroy in Mexico about rumors of French activity along the lower Trinity River. Orobio was ordered to explore the area to determine French aggression and to gather information regarding the Indians of the region (Bolton 1970:328). Orobio left La Bahía with 21 men on December 6 and finally arrived in early January at the Spanish presidio at Nacogdoches, hoping to find a feasible route to the lower Trinity from there (see Figure 1 for relative locations). At Nacogdoches, Orobio learned that 15 shipwrecked Frenchmen had passed through on their way from the coast to the French settlement at Natchitoches (ibid.:329-330).

Leaving on February 7, Orobio followed the Bidai trail to their territory and on March 6 arrived near the Trinity River at a place he called Santa Rosa de Viterbo. Seven Bidai *rancherías* were located at this site; the Bidai were familiar with French traders who came every year with guns, cloth, and knives as trade goods. Some French traders came by sea while others traveled overland from Pachina Indian territory (from the Sabine east to the Mississippi River) where they had been living. The Bidais reported that the French had recently selected a site for a permanent trading post in Orcoquisac territory.

Orobio traveled 30 leagues southwest from Santa Rosa de Viterbo and on March 15 arrived at a place he called San Raphael, which Bolton (1970:330) identifies as present-day Spring Creek. Two Orcoquisac *rancherías* were located at the site, and the Indians were familiar with the French who were expected to return in the summer. Orcoquisac leaders reported that there were no French settlements among the Cocos, Cujanes, or Karankawas who lived southwest of Orcoquisac territory, but that three or four French families were among the Pachina nation (east of the Sabine River). Several Frenchmen had recently been lost among the Cujanes, to the southwest. On March 23 Orobio visited the proposed French site on the Nuestra Señora de Aranzazu (the present-day San Jacinto River); he decided the site lacked the natural resources necessary to build and maintain a sizeable settlement. On April 6th, he returned to La Bahía and reported the extent of French encroachment to the viceroy (ibid.).

On May 3, 1747 and again on October 2, 1747, a group of Orcoquisacs journeyed to La Bahía to request that a mission be established in their territory (Rader 1971: 26). In January 1748, the viceroy ordered Orobio to explore the coastal region from the Guadalupe River to the Trinity in order to locate possible sites for a Spanish settlement (Casteñeda 1939:49). In June, Orobio visited the Trinity River area, about 15 leagues from its mouth. Orcoquisac Indians contacted him there and took him and his party back to their village by canoe. The Spaniards camped near the Orcoquisac village and distributed food, tobacco, and trinkets to the Indians. Orobio returned to La Bahía on July 4th and reported his findings to the viceroy (Casteñeda 1939:50-51).

On December 23, 1747, the viceroy chose to establish three missions along the San Xavier River in central Texas (see Figure 1) and deferred action on the Lower Trinity area. The San Xavier (now called the San Gabriel) River area was selected to counter the more immediate problem of the *Rancheria Grande* aggregate of various Indian groups from northeastern Coahuila, led by the Ervipiame. Other Indians of the *Rancheria Grande* included Mayeyes, Deadose, Yojuane, and Tonkawa groups. They ranged mainly between the Colorado and Brazos Rivers, perhaps on the Little River. The clustering of groups, which may have numbered as many as 2,000 persons, was troublesome, and the San Xavier missions were probably established to help curb them. Negotiations with several groups during 1745 - 1746 had led to the establishment of a mission by Father Mariano, who met with Yojuane, Deadose, Mayeye, Yerbipiame, and Cocos groups at the site in early 1746. The viceroy's approval in December 1747 was followed by the king's approval in early 1748 (Gilmore 1982:3-5).

The second San Xavier mission was Mission San Ildefonso; it was created in late 1748 and early 1749 about one league east of the original mission. San Ildefonso was created for 65 families of 96 Orcoquisacs, 88 Bidais, and 55 Deadose; these groups were placed together since they spoke a similar language and intermarried freely, according to Father Benito (Gilmore 1982:5). A third mission was reserved for the Cocos and their relatives from the coast, and by 1749 there were 71 individuals at Candelaria, which had not yet been formally founded as mission (ibid.).

Mission San Ildefonso (and the other San Xavier missions) were not successful. Smallpox left 40 dead in San Ildefonso in May 1750. The missionary, Father Ganzabal, reported a surviving population of 65 Bidais adults, 10 Pastias, and 32 Orcoquisacs. The Bidais had three distinct groups, each with a separate chief; the Orcoquisacs had five groups. Conditions at the San Xavier missions continued to deteriorate due to crimes by the presidial troups and their commander, due to bad weather, and the continued lack of food and supplies. By the summer of 1753, many soldiers and Indians had died of an epidemic, and the remainder were seriously ill; the commander requested permission to move. By 1755, the San Xavier missions were abandoned (see Kathleen Gilmore's report on the San Xavier Missions in the January issue of *La Tierra* for a more complete discussion of their failure).

During the years of the San Xavier experiment, the governor of Texas, Jacinto de Barrios y Jáuregui, devised an illegal trade network which extended into the Bidai and Orcoquisac territories of eastern Texas (1751-1759). Among his agents were some of the soldiers stationed at Los Adaes. Guns and ammunition were bought from the French at Natchitoches in direct violation of the viceroy's orders; the Indians traded horses, corn, and hides to the Governor's agents for the European trade goods. The Governor, using Spanish funds, purchased the corn and horses for the garrison from himself. The hides were either sold illegally at Natchitoches or shipped to Saltillo, Mexico (Casteñeda 1939:52-53; Rader 1971:28-29).

In a way, this illegal activity led to the founding of the Orcoquisac mission and presidio. In mid-1754, the Governor learned that four French traders and two Spaniards were established near the mouth of the Trinity in Orcoquisac territory. On September 20, 1754, he dispatched Lt. Marcos Ruiz (one of his agents) and 25 men to inspect the lower Trinity region and arrest the Frenchmen. Ruiz recruited Bidai Indian support by distributing trade goods among them and promising their leader, Tomás, a horse if they succeeded (Arias 1754, Cordova 1754). Similarly, the Orcoquisacs were given gifts and recruited for the expedition. On October 10, 1754, Joseph Blancpain, Elias George, Antonio Dessars, and two Black slaves, Bernardo and Joseph, were arrested at their camp situated two leagues above the mouth of the Trinity River. The Orcoquisacs living nearby informed the Spanish that Lacreu, a French trader, had recently left Blancpain's camp to return to New Orleans for 50 French families waiting to settle in Texas.

The Governor urged the viceroy to establish a presidio at the mouth of the Trinity to prevent further French incursions. In addition, the Orcoquisacs had recently visited in Nacogdoches, San Xavier, San Antonio, and La Bahía to request that a mission be established for their nation. Reports of the soldiers of the cooperation of the Orcoquisacs during the expedition suggested that the Indians were peaceful, although addicted to thievery, and that their leader was most inclined to Spanish endeavers (Arias 1754; Cordova 1754).

On February 12, 1756, the new viceroy of Mexico, Don Agustín de Ahumada Villalón Mendoza y Narvaez, Marqués de las Amarillas, ordered the immediate occupation of the lower Trinity to forestall further French encroachment. The site of Blancpain's post was to be occupied by a company of 30 soldiers, who, upon completing their six years of military service, would become the basis for a civilian settlement. A mission was to be established to serve both the Bidais and Orcoquisacs. The initial location of the presidio and mission would be temporary; after an adequate site for the proposed civil settlement was established, the presidio and mission would be moved near the colony (Amarillas 1756).

On May 16, 1756, Lt. Marcos Ruiz and 30 soldiers left Los Adaes with horses, cattle, oxen, arms and ammunition, equipment and supplies. They established the presidio on May 26 at the site of Blancpain's camp and named it San Agustín de Ahumada in honor of the viceroy. In the latter part of 1756, Fray Bruno Chavira and Fray Marcos Satereyn arrived at El Orcoquisac and established the Mission Nuestra Señora de la Luz. The Governor did not approve of the missionaries; the older missionary died and the younger left due to illness before Barrios could have them removed by royal decree. The replacement missionary was not impressed with the conditions of the mission and asked to be removed, or to have the mission moved. He recommended a more habitable place called El Atascosito several miles north of the present mission (see Figure 1) but the move was never authorized and the missionary was replaced (Casteñeda 1939:75).

One proposal was to move to a western branch of the San Jacinto River called the Springs of Santa Rosa (present-day Spring Creek) since it appeared a suitable location for a colony. It was also near the village of Canos, a major leader among the Orcoquisacs. The site was located in the center of the Orcoquisac nation, which then consisted of five villages or *rancherías* ranging from Santa Rosa to the San Jacinto with one village on the Trinity River (Miranda 1757). The authorities in Mexico agreed to the removal but the move never took place. Many factors were responsible, but a major one was the inability to find 50 families willing to go to such a remote frontier settlement. Several alternate sites were considered but in early 1758, government officials in Mexico abandoned the idea and recommended that no further action be taken to establish a civil colony at El Orcoquisac (Casteñeda 1939:85).

A new governor of Texas was appointed in early 1759, Don Angel Martos y Navarrete, who tried to reenergize the project. Fray Abad opposed moving the mission, and wrote to the viceroy on the advantages of remaining at El Orcoquisac (ibid.:86-87). He reported that the mission had recently been moved a short distance from the presidio and was showing progress. Fray Abad added that the Indians would object to such a move. Despite Fray Abad's appeal, the viceroy sided with the governor and ordered a move. The move, however, never took place (Bolton 1970:355-356).

On November 23, 1763, Raphael Martínez Pacheco replaced Domingo del Río as commander of the presidio. Pacheco was concerned for the lack of conversion of the Indians to a mission life, and urged the Indian groups to enter the mission. He felt he was making progress and appealed to the governor for additional financial support.

Governor Martos did not approve of Pacheco's appointment and in June 1764, he traveled to El Orcoquisac to enforce the move (to Los Horconsitos). An intense confrontation followed for the next month which ended with both the missionaries and the Indians supporting Pacheco by objecting to the move.

By August 28, all but five of the soldiers at Presidio San Agustín de Ahumada had deserted to Natchitoches; they alleged physical assaults by Pacheco against several soldiers at the presidio. According to the deserters, the missionaries and Indians were also preparing to leave El Orcoquisac (Cordova et al. 1764).

Governor Martos sent Lieutenant Marcos Ruiz to arrest Pacheco and replace him as commander of the post. Ruiz and 22 soldiers approached the presidio on October 7, but Pacheco was apparently prepared for a siege; he and three soldiers refused to submit to the governor's arrest order. Pacheco called upon the Orcoquisacs and Atakapas for help against his attackers. After three days of negotiations, Ruiz set fire to Pacheco's quarters, but Pacheco and a companion escaped through a secret door. Part of the church also burned.

Pacheco and his friend were given refuge for a time at La Bahía. Pacheco then traveled to Mission San José at San Antonio, where he was arrested (Casteñeda 1939:92). He eventually traveled to Mexico where he was imprisoned (Bolton 1970:371).

At El Orcoquisac, chaos ensued. Calzones Colorados admitted to being bribed to oppose removal of the settlement to Los Horconsitos. Del Río was implicated and subsequently arrested. In November, Ruiz was arrested for burning the presidio. In 1767 charges were filed against Governor Martos for the burning of the presidio; his trial lasted 14 years and he was heavily fined (Bolton 1970:372).

On September 4, 1766 a hurricane destroyed all of the supplies and severely damaged most of the buildings. The commander asked to move the presidio to higher ground, and it was moved to a low hill a quarter of a league from its original site (Castañeda 1939:94).

In 1767, the Marqués de Rubí, on an inspection of Texas, visited El Orcoquisac and was not favorably impressed. He cited the uselessness of the presidio, the lack of inclination of the Indians to be missionized (noting that since its founding not a single Indian had joined), and poor living conditions. Rubí declared that since Louisiana had been ceded to Spain in 1762, the presidio was no longer needed to counter the French threat (ibid.:95).

In 1769, Pacheco returned as commander of the post having been found innocent of all charges. His administration was marked by reconstruction and reform. He personally provided food, clothing, and other supplies at his own expense, including hiring a physician for the presidio. In October 1769, he helped rescue 125 shipwrecked families who were sent to Natchitoches.

In the summer of 1770, the governor of Texas, Baron de Ripperdá, asked Pacheco to send part of the garrison to help defend San Antonio against hostile Indians. In September 1771, Pacheco was required to take the remainder of his men to San Antonio. He left three men with the missionaries to guard the mission, but they, too, left within several weeks (ibid.:98).

This presidio and mission at El Orcoquisac were totally abandoned in 1772. The lower Trinity River region continued, however, to be a focal point for activities aimed at halting foreign aggression. In 1803, Spain returned Louisiana to France, and within a month it was sold to the United States. The United States was viewed as an imminent threat to Spanish control of Texas, and plans were formulated to reestablish military posts and colonies in the area (Clay 1977:87-91).

In 1805, Governor Antonio Cordero sent a Sergeant Urrutia and 50 soldiers to El Orcoquisac to halt illegal activities in the area; smuggling was rife, and horse herds were being driven to Louisiana. Within a few months, Captain Geronimo Herrera established a garrison at Atascosito (near present-day Liberty) having rejected El Orcoquisac as unsuitable for horses and people (Clay 1977:91-92).

In January 1818, 400 French exiles sought refuge in Texas in the same general area. Spanish forces were again called to the area, but friendly Indians warned the settlers who escaped to Galveston Island. A devastating hurricane struck killing many of them; the survivors were given a ship by Jean Laffite, who controlled the port of Galveston, so they could escape to New Orleans. On October 19, 1818, Spanish troops arrived at the abandoned French fortress and destroyed it (Castañeda 1939).

In January, 1835, Santa Ana began his campaign to control Texas, and Mexican military forces established Fort Anahuac. Texan colonists rebelled against Mexican authority, and the Mexican forces were driven out of the area (Harry 1940:14-17).

On August 2, 1858, the area around El Orcoquisac, now a part of the state of Texas, was organized into Chambers County. Wallisville became the county seat. In 1859, it was granted its first post office, and by 1876 had a population of 200. In 1907, the county seat was moved to Anahuac (Partlow 1974:145).

## ARCHAEOLOGICAL INVESTIGATION OF THE PRESIDIO SAN AGUSTÍN DE AHUMADA (41 CH 57)

The site of the Presidio San Agustín de Ahumada (now designated 41 CH 57) is located between the Trinity River and Lake Miller (see Figure 2). Although the site is referred to as the presidio, it is actually composed of a number of prehistoric and historic sites in one location. Joseph Blancpain built his trading post on a shell mound, a place affording good drainage in wet weather, not realizing it had been a prehistoric camp site. Lt. Ruiz dutifully established the presidio on the site of the trading post. The missionaries' house and church were apparently located nearby, perhaps on the slightly elevated area 30 meters east of the presidio (see Figure 3).

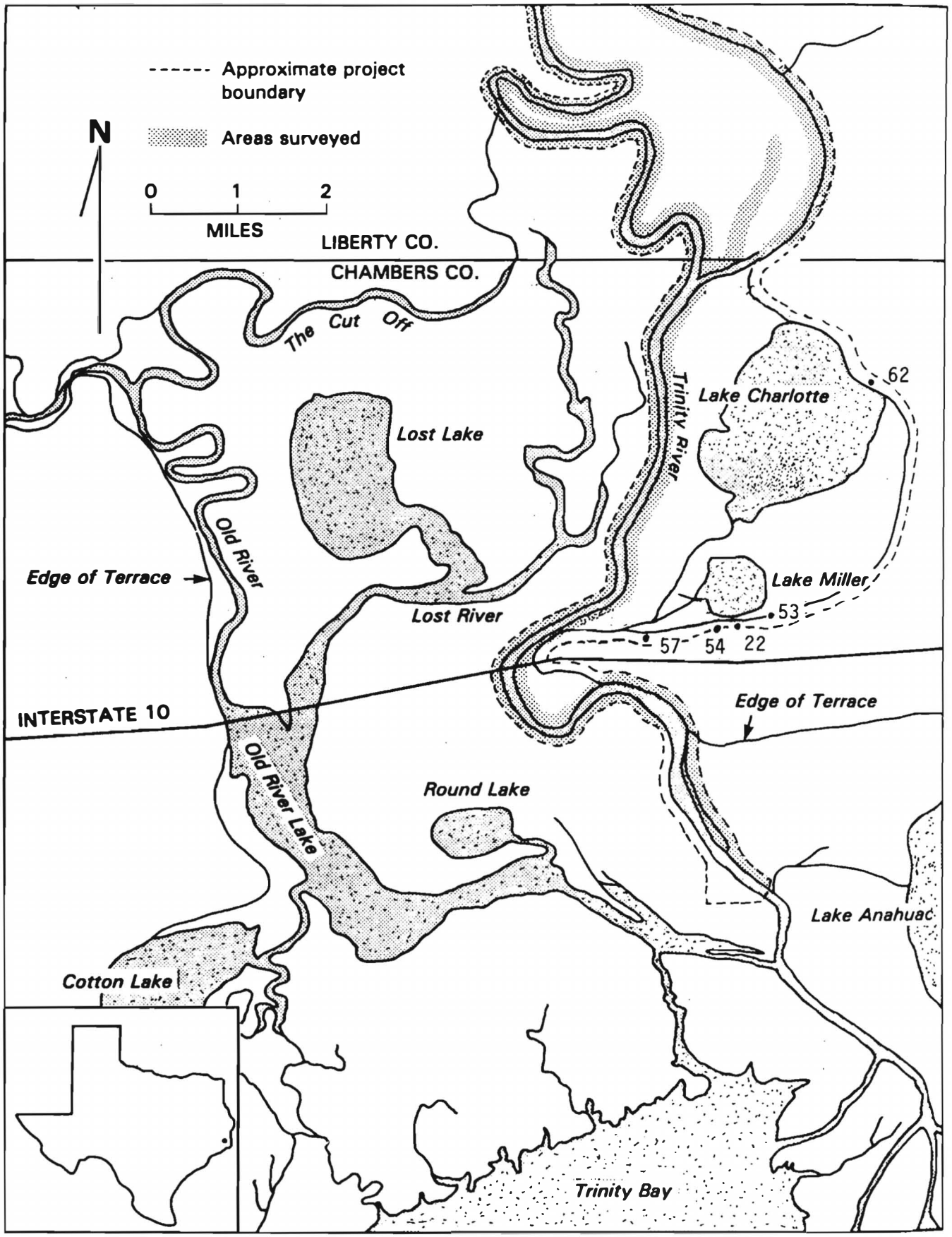


Figure 2. Location of sites in the Orcoquisac Historic District area of Chambers County, Texas. 41 CH 57 - First site of presidio and mission; 41 CH 22 - Orcoquisac camp; 41 CH 54 - Second site of mission; 41 CH 53 - Second site of presidio. (Map adapted from Fox et al. 1980:Figure 14, p. 38; courtesy of UTSA-CAR.)

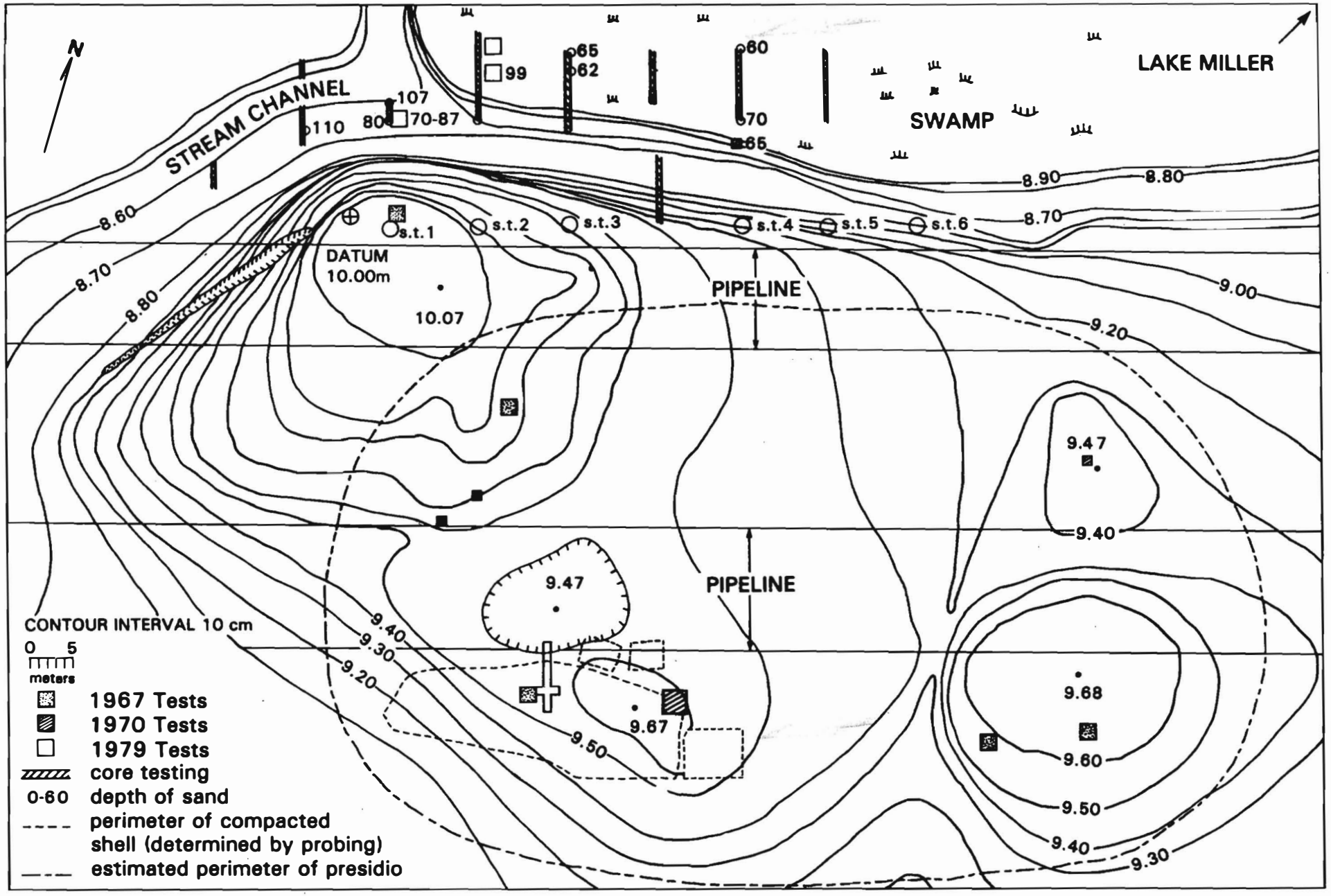


Figure 3. Map of the Initial Location of Mission La Luz and Presidio Ahumada (site 41 CH 57). (Adapted from Fox et al. 1980:Figure 24, p. 84; courtesy of UTSA-CAR.)

During the winter of 1969-1970, members of the Houston Archeological Society, under the direction of W. L. Fullen, conducted extensive surface collecting and limited subsurface testing at the site. The area was mapped and a grid laid out.

The site is located on a low mound on what was once the southwest shore of Lake Miller. The lake has silted-in rapidly in historic times; in the 18th century the site was actually on the lake shore. The area today is overgrown with vegetation, and the former shoreline is a swamp. Several pipeline easements are the only areas which are cleared and mowed regularly.

The testing in 1970 located what appears to be a prepared shell layer into which postholes had been dug about 55 meters south of the lake shore. Surface collections carried out in 1967 and 1970 revealed Spanish and French ceramics concentrated primarily in an area 10 to 60 meters south of the shore line (W. L. Fullen, personal communication). Since this area contains noticeable elevations on the topographic map, it seems likely that the Spanish presidio and mission, and, therefore, the earlier French trading post, were located here.

A concentrated program of testing was carried out by the Center crew with the help of a number of members of the Houston Archeological Society and interested local volunteers. A series of six 30-cm diameter shovel tests were dug along the top of the bank, through and deeply into the shell midden deposit. All soil removed was screened through ¼-inch mesh. A total of 37 unidentifiable prehistoric sherds, four grog-tempered sherds, and 37 sandy paste sherds were recovered from the shovel tests. One flake fragment and one primary flake were the only lithics recovered. Spanish artifacts found were two sherds of blue-on-white majolica, four fragments of a heavily patinated green bottle, and part of a metal buckle (see Figure 4).

Systematic corings were taken through the swamp at the north side of the site. This search and a subsequent cesium alkali vapor magnetometer survey failed to reveal any evidence of the Blancpain sloop or the wharf used by the presidio (which was mentioned in the Spanish documents). A survey using a Heath Kit Metal Locator and a Coinmaster 5,000/D metal detector resulted in the recovery of modern nails, tin cans, and barbed wire. Only one Spanish artifact, the buckle fragment mentioned earlier, was recovered by this method; it probably was from the backdirt of a previous test trench.

Faunal remains, other than shell, included 371 bone fragments recovered from the shovel tests and core samples. Fish remains constitute 89 percent of the total and included 110 alligator gar scales; other species included a smaller gar, sheepshead (a type of Drum), and one of the large *Sciaenids* (black drum or spotted weakfish). One turtle fragment of the seven shell fragments was burned; at least two individual turtles were represented since two neural bones recovered were of different thicknesses. Only 13 mammal bones were identified (seven percent of the total sample); eight of the specimens were *Odocoileus virginianus* (white-tailed deer) while the remainder were *Bos taurus* (cow) or a similar large mammal.

Although the site has been disturbed by pipelines and other intrusions, a large percentage of the site remains. The 1979 testing determined that the historic site occupies only a portion of the prehistoric shell midden. No trace of Blancpain's boat or dock was located but may still be in the area. The site is an important historic location and has been admitted to the National Register of Historic Sites, thus coming under the protection of federal law. Some method is needed to protect the site from the higher water level anticipated with the development of the Wallisville Lake project.

## ORCOQUISAC CAMP AND PREHISTORIC SITE (41 CH 22)

A large shell midden located on the southeast side of Lake Miller is thought to be the site of the Orcoquisac encampment when the Spanish mission and presidio were in operation (see Figure 5). The shell midden was first reported by Shafer (1966); it consists of a high shell mound surrounded by a widespread scatter of shell over a

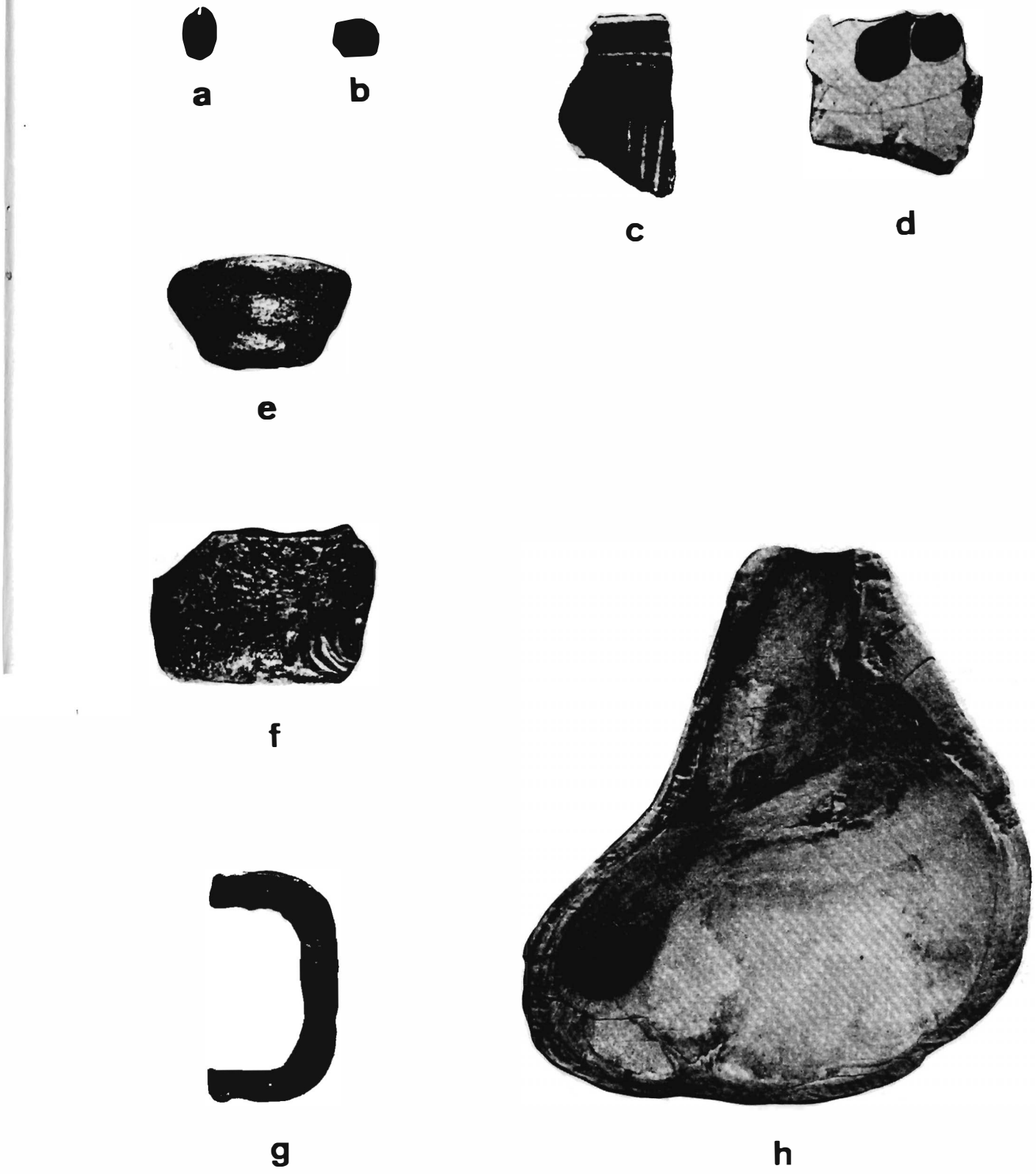


Figure 4. Spanish and Indian Artifacts from the Orcoquisac Historic District. a-b, blue glass beads (b from 41 CH 22 area); c-d, blue-on-white majolica (41 CH 57): e-f, green bottle glass with heavy gold patina (41 CH 57); g, molded brass buckle from 41 CH 57; h, modified conch shell tool (41 CH 62, a multi-component site near Lake Charlotte). (Photo from Fox et al. 1980:89, courtesy of UTSA-CAR.)

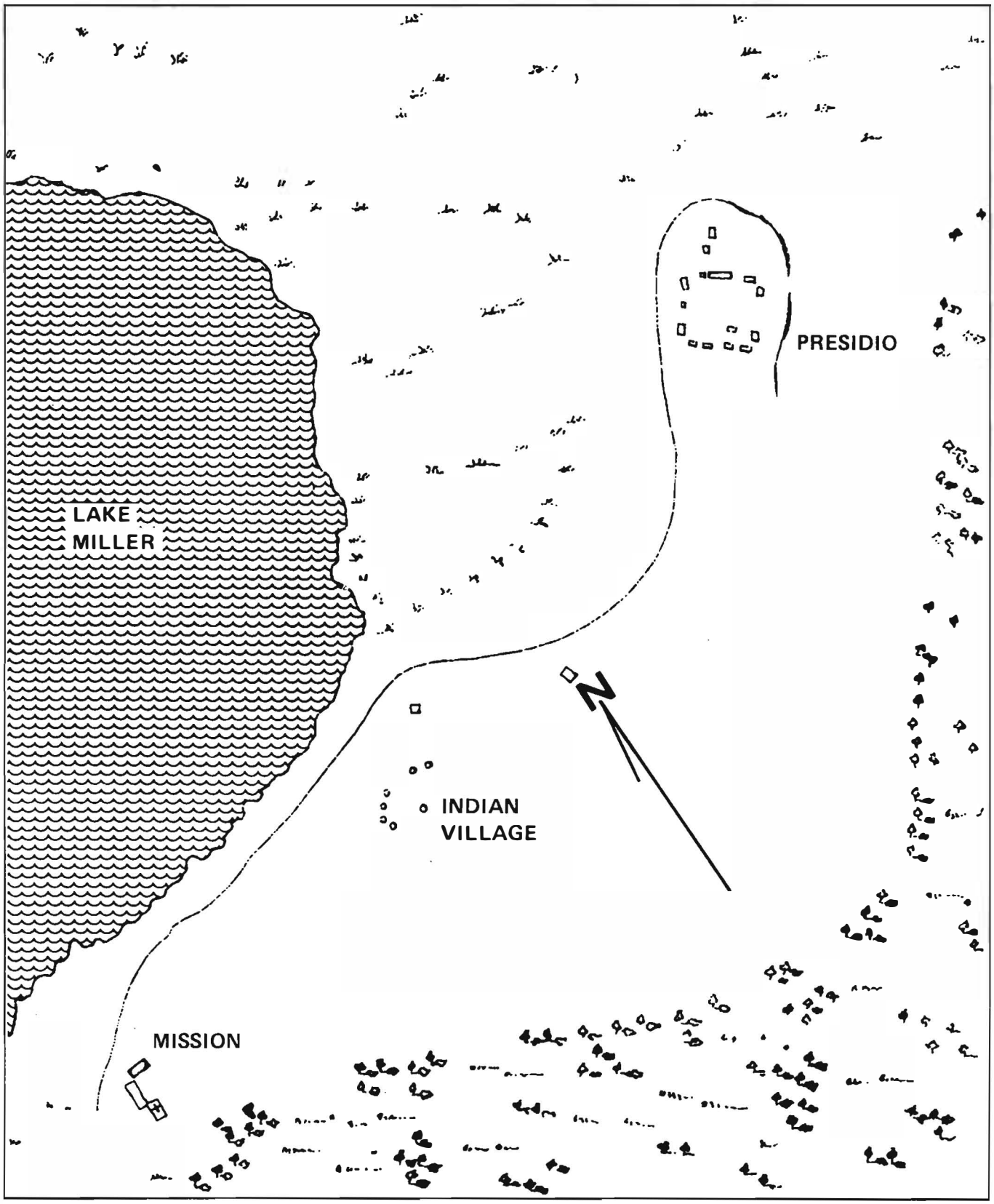


Figure 5. Taken from Map of Spanish Establishments on Lake Miller in 1776. Shown are the second locations of the mission and presidio. Original by Joseph de Urrutia; (redrawn from Hotchkiss 1966). (Fox et al. 1980:Figure 25; courtesy of UTSA-CAR.)

large area. A bank along Lake Miller forms the northern boundary of the site. This bank ranges in height from approximately 0.5 to 2.0 meters. A stand of oak trees forms a canopy which provides shade over a short grass carpet on the mounded area. Two pipelines traverse through or near the site from east to west.

Investigation was begun with a random surface collection to determine the extent of the site. Exposed *Rangia* shells and other cultural remains were used to estimate its extent. Since the second site of the mission is located nearby, and since there was no noticeable break in the surface indications of shell and artifacts, the entire area was mapped as one site (see Figure 6).

Information on cultural remains and depth of 41 CH 22 was attempted with a shovel test in the approximate center of the shell mound, about 50 meters south of the lake shore. Shovel testing proved extremely difficult and time consuming; two crew members worked diligently for four hours and were able to excavate and screen the matrix from only one test area 30 cm in diameter and 50 cm deep. A compact layer of *Rangia* clam shells, 91 bone fragments, 27 prehistoric ceramic sherds (all but nine too small for analysis), and two chert flakes were recovered.

Core tests were conducted to examine changes in soil and cultural remains. As the coring proceeded southward, the midden deposit became thinner, until in Test 7, the shell layer was only surface to eight centimeters. The midden appears to be more than 50 cm thick toward the lake shore and thins out toward the south; a layer of sterile clay underlies the site.

A random surface collection and a 30-cm diameter x 50-cm deep shovel test provided a sample of 62 prehistoric sherds, 21 of which were less than 1 $cm^2$ and were eliminated from the total sample. Of the sherds large enough to identify (41 total) ten were grog-tempered and 31 were sandy paste ceramics. The sandy paste sherds appeared at all levels but grog-tempered ware appears to be somewhat late in the sequence.

Faunal remains other than the *Rangia* shell, included 70 bone fragments, of which only 27 (39 percent) were identifiable. Fourteen percent of the total bone recovered had been burned. One deer element (*Odocoileus virginianus*) was recovered, along with one fragment of turtle. The remainder of the vertebrate remains were fish including species such as the alligator gar, other gar, catfish, and striped mullet.

One glass bead fragment was recovered from the surface in the pipeline right-of-way. The bead is made of blue glass and represents the only evidence of historic occupation at the site. Eight chert flakes were also collected.

As evidenced by the presence of grog-tempered and sandy paste untempered wares, occupation of the site may have begun as early as A.D. 1000 and continued to the time of Spanish contact. The glass bead was recovered from a spot halfway between the shell mound and the suspected area of the mission. Thus, there is no surface evidence recovered so far which would unequivocally confirm this shell mound as the historic Orcoquisac encampment.

## MISSION NUESTRA SEÑORA DE LA LUZ (Second Site), 41 CH 54

A surface survey was also conducted to locate the site to which the Mission Nuestra de la Luz was removed. A 1966 survey by Fullen of the Houston Archeological Society yielded numerous sherds of majolica and other Spanish artifacts from a limited area on the top of the hill where the mission is presumed to have been located. The present survey, however, failed to produce any Spanish Colonial artifacts.

A map of El Orcoquisac done in 1767 shows three buildings, one of which is identified as the church (see Figure 5). In 1768, Padre José Marenti reported the church to be 12 by 7 *varas*, covered (roofed?) with shingles and plastered mortar, and whitewashed. A house for the padres was 23 *varas* long with a hall, two cells, and a porch, also plastered and whitewashed and covered with shingles. There was also a kitchen building and a cemetery. The mission square was 21 *varas* (or approximately 57 feet or 17 meters) wide (Marenti 1776).

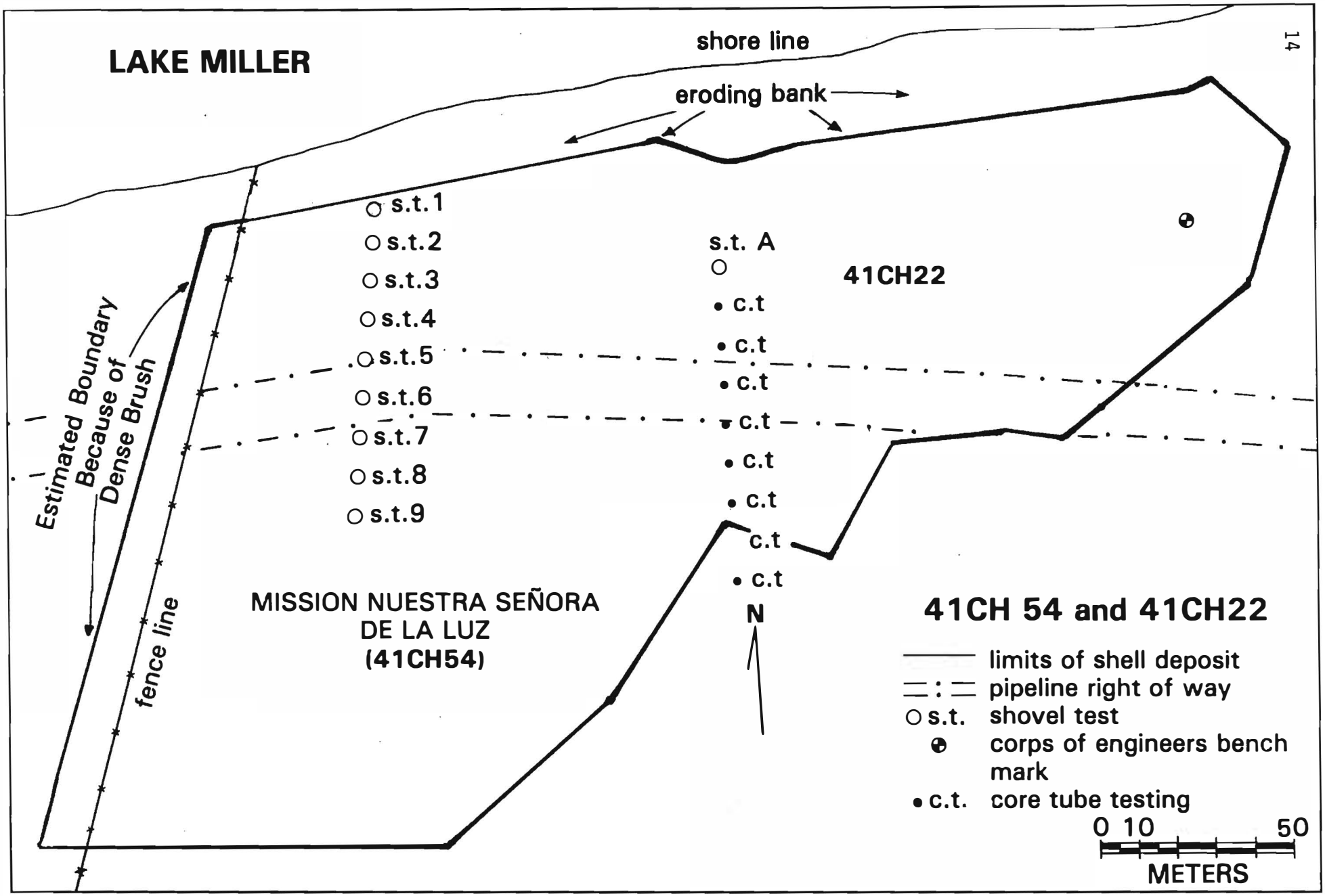


Figure 6. Map of 41 CH 22 (Indian Camp) and 41 CH 54 (second site of Mission La Luz). (Adapted from Fox et al. 1980;Figure 28, p. 96; courtesy of UTSA-CAR).

In order to determine the northern boundary of the mission and to assess what effect the proposed reservoir might have on the site, a row of shovel tests was dug from the high water mark on the edge of the lake south through the pipeline easement and onto the mission site (see Figure 6). The average depth of these tests was 60 cm; in each case, *Rangia* shell was encountered near the surface and continued to about 60 cm on the slope. This tapered off to about 20 cm in the area of the mission.

In shovel tests and surface collections, materials recovered were mostly late 19th century artifacts. Prehistoric sherds recovered from the tests included four unidentified, four grog-tempered, and three sandy paste untempered sherds. Two chert flakes were also found. Sixty bones were also recovered from the shovel tests, including deer, cow, and several species of fish.

## PRESIDIO SAN AGUSTÍN DE AHUMADA (Second Site), 41 CH 53

In 1966, testing was carried out at the second site of the presidio; this work was conducted under the direction of Curtis Tunnell and Richard Ambler, and its tentative identification as the second location of the presidio was confirmed (Tunnell and Ambler 1967). Much of the site was destroyed when gravel was removed to build Interstate Highway 10. During the present project, no Spanish or Indian artifacts were found on the surface of the site.

## CONCLUSIONS

The archaeological surveys and testing reported here represent a very limited part of a more extensive research program in the Wallisville Lake area of Liberty and Chambers Counties in far southeastern Texas. The project was conducted under contract with the U. S. Corps of Engineers to assess the impact of the proposed Wallisville Lake. The project met its programmed objectives, and recommendations were made on a wide variety of prehistoric and historic sites in the region (for details, see Fox, Day, and Highley 1980).

As one phase of the project, both historical documents and archaeological evidence were studied to clarify the role of the Presidio San Agustín de Ahumada and Mission Nuestra Señora de la Luz during Spanish colonial developments in the area. The results of this study indicated that the Spanish colonial sites have an interesting, but short-lived history. Both the mission and the presidio failed, in part due to unfavorable (for the Spanish) environmental conditions, in part due to poor planning and a lack of volunteer settlers, and in part due to poor leadership and the power struggles to control profitable smuggling operations. In the end, as with the San Xavier missions (see Gilmore 1969, 1982), both the Indians and the Spanish could no longer sustain an uneconomical and degenerating settlement. The total lack of converts (some of whom may have had some knowledge of the debacle at San Xavier) made it impossible even for the church to sustain its missionary operation.

Gilmore (1982) asked the question as to why some Spanish settlements succeeded and others failed? There is, of course, no final answer to such a question. In the case of El Orcoquisac, however, it was clear from the first that internal Spanish conflicts among the administrators, the military and the clergy (among those striving to support or exploit the Indians economically and those striving for their souls) doomed the project to failure.

## ACKNOWLEDGEMENTS

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Cover Illustration by Heidi L. Mitchell

The illustration recreates an event on June 11, 1748, when Don Joaquín de Orobio y Bazterra, Captain of the presidio at La Bahía, acting on instructions of the viceroy, visited the lower Trinity River area. An Orcoquisac Indian leader insisted on taking Orobio back to his village "at the mouth of the Trinity" by canoe (Casteñada 1939:50-51, as cited in Fox, Day and Highley 1980:41). The rest of the Spanish party came overland and camped near the village when they distributed food, tobacco, and trinkets to the Orcoquisacs.

# INITIAL EMPLOYMENT OF THE BOW AND ARROW IN SOUTHERN NORTH AMERICA

L. W. Patterson

## ABSTRACT

Early diffusion of the bow and arrow from the far north to southern North America is considered, and associated types of lithic technology are discussed. It is proposed that what is now stated to be the introduction time of the bow and arrow in southern North America instead represents the start of an evolved, standardized technology which was preceded by earlier initial use of the bow and arrow using other forms of lithic technology. Specific examples on this subject are given for Texas.

## INTRODUCTION

Throughout southern North America, the introduction of the bow and arrow is commonly stated to begin at approximately A.D. 500, with the start of the general use of small standardized types of bifacial projectile points. This article discusses the possibility that use of the bow and arrow started much earlier in this area, and that the early time period of diffusion and technical evolution of the bow and arrow is generally ignored. The possibility of terminal Pleistocene diffusion of the bow and arrow from Asia to the New World is recognized. However, study of the diffusion and local cultural adaptations of the bow and arrow is virtually untouched. This has led to some speculations on the cultural impacts of introduction of the bow and arrow in southern North America that are rather doubtful. For example, Ford (1974:402) states for sometime around A.D. 400 that "One new technological change that could have been used to disrupt trade arteries was the replacement of the atlatl by the bow and arrow, introduced from Asian and Arctic sources into the Midwest at this time." If, however, there was gradual replacement of the atlatl by the bow and arrow, as discussed by Cressman (1977:106) for the Great Basin, a different cultural interpretation would be required. I favor the view that introduction of the bow and arrow was not a sudden process.

My opinion is that there are three major reasons for lack of understanding of the introduction of the bow and arrow in southern North America. First, the concurrent use of the bow and arrow and the atlatl (spear thrower) lead to confusion in classification of some small bifacial projectile points resulting from the different weapon systems. Second, the diffusion of the bow and arrow did not occur on a uniform basis, and in some places the introduction of the bow and arrow may have even occurred more than once. Last, the lithic technologies associated with the early use of the bow and arrow in southern North America are not well identified, as will be discussed here in detail. Also, of course, there is the general problem that there are few remains of perishable wooden parts of weapons systems to use for positive diagnosis.

It is currently popular to emphasize archaeological studies relating to local adaptations and to ignore the possibilities of diffusion as a mechanism for technological change. To obtain balanced studies, all possible mechanisms of change should be considered. The history of the diffusion of the bow and arrow has tended to be overlooked. The final evolved, standardized technology of the bow and arrow is accepted without allowing for an earlier period of introduction and local refined adaptations.

## OLD WORLD BACKGROUND

Some investigators comment that the bow and arrow may have started in Africa, and then diffused to Europe before or during the Mesolithic period. Chard (1969:129) feels that the bow and arrow may represent a single invention with subsequent rapid

worldwide diffusion. Use of the bow and arrow is firmly established in the Mesolithic period in Europe, the Middle East and central Asia, usually associated with microliths used to make compound arrow points. There is also evidence of earlier use of the bow and arrow in Eurasia during the Upper Paleolithic.

Use of the bow and arrow in northeast Asia is of particular interest for the problem of diffusion to the New World. Stemmed arrowheads have been found in Kamchatka dating to 12,000 B.C. (Chard 1974:37). Unifacial arrowheads and inset blades have been found in Siberia dating to about 9,000 B.C. (Aksenov 1969:Fig. 1). The Bering Land Bridge (Muller-Beck 1967:381) provided a route for diffusion of the bow and arrow from Asia to the New World during the terminal Pleistocene period, at approximately 13,000 to 10,000 B.P.

## NORTHERN NORTH AMERICA

Earliest use of the bow and arrow in the New World seems to be associated with bone points with inset segments of microblades. Barbed arrowheads dating to approximately 8,000 B.C. have been found at the Trail Creek site in Alaska (Larsen 1968:54). Inset blades of the early Akmak phase of the Onion Portage site in Alaska may have had use for barbed arrowheads (Anderson 1970:58), similar to Trail Creek in time. The bow and arrow seems to have diffused to the eastern part of northern North America in a relatively short time period. Small bifacial points are associated with the bow and arrow in the Maritime Archaic of Labrador (Fitzhugh 1972, 1978). Fitzhugh (personal communication) feels that use of the bow and arrow is established here by 5,000 B.C., and that the start of use may be moved even earlier with future data. Somewhat later (2,000-3,000 B.C.) use of the bow and arrow is found with the Arctic Small Tool Tradition that spread throughout northern North America (Dummon 1977:79).

Having reviewed data for early use of the bow and arrow in northern North America, I note that there is a significant time gap for published uses farther south. The literature gives the impression that there is a "magic line" at about the 50th Parallel which required considerable time for southward diffusion of the bow and arrow to overcome. This boundary is, of course, more apparent than real. It represents the small data base due to lack of detailed study of diffusion of the bow and arrow. I feel that there is no good reason for concluding that the use of the bow and arrow started in the Late Prehistoric of southern North America. A useful weapon system such as this should have experienced continuous diffusion, even if at an uneven rate.

## SOUTHERN NORTH AMERICA

### General Comments

The literature in general establishes start of the use of the bow and arrow in southern North America at a relatively late time. Ford (1974:402) places the start of the bow and arrow at about A.D. 400 in the midwestern United States. Kehoe (1978:82) places the arrival of the bow and arrow in the northwestern Plains at A.D. 100. The bow and arrow is stated to start at approximately A.D. 500 in Arizona (Martin and Plog 1973). In Texas, Suhm and Jelks (1962) generally place the start of the bow and arrow at A.D. 0 to 500, and Aten (1971:Fig. 10) shows its arrival on the upper Texas coast at A.D. 600. Hester and Heizer (1973:8) see the introduction of the bow and arrow in the Great Basin at about A.D. 500. The bow and arrow is also given a late start in central California at A.D. 300 to 500 (Elsasser 1978:43). Streuver and Holton (1979: 251) state that the bow and arrow started sometime after A.D. 400 at the Koster site in Illinois.

Counter to the general literature, there are some comments on possible earlier use of the bow and arrow in southern North America. Swanson (1972:210) feels that that start of a new distinctive small bifacial point series may indicate possible use of the bow and arrow as early as 6,000 B.C. in Idaho. Small points weighing under two grams are possible arrowheads as early as Stratum 8 (2,700 to 1,250 B.C.) at Hogup

Cave in Utah (Aikens 1970:Table 4 and page 184). Dalley (1976:71) shows use of the bow and arrow as early as 680 B.C. at Swallow Shelter in Utah. Webster (1980:65) has reported dates for the bow and arrow beginning as early as 3,300 B.P. in western Idaho, at the northern end of the Great Basin. Hughes and Willey (1978:185) give a radiocarbon date of A.D. 120 for arrow points in the Texas Panhandle, but Hughes (personal communication) feels that this is fully evolved technology and that the start of the bow and arrow here should be earlier. In any event, all data has later dates for introduction of the bow and arrow in southern North America than in the far north, which gives a strong case for diffusion as the mechanism for technological change in this case. Even further south in Mesoamerica, Tolstoy (1971:Table 2) shows *Bassett*, *Fresno* and *Perdiz* arrow point types in the Middle Preclassic at 850 to 400 B.C.

## BIFACIAL POINT TECHNOLOGY

There are several problems in study of early use of the bow and arrow in southern North America. One problem is classification of bifacial projectile points, especially when there was concurrent use of the atlatl and the bow and arrow. This concurrent use of two weapon systems is well established on the Gulf Coast. Wheat (1953:Table 5), Aten (1979:435) and Patterson (1980) show that dart points and arrow points occur in the same Late Prehistoric strata at sites on the upper Texas coast. Hudson (1976:76, 116) gives examples of historic uses of the atlatl on the eastern Gulf Coast.

Thickness and weight are the attributes most commonly used to distinguish dart points from arrow points. Fenenga (1953) proposes a maximum weight of 4 grams for arrow points. Thomas (1978:469) gives a mean weight of 2.07 grams for arrow points with a standard deviation of 0.28 grams. I have proposed (Patterson 1976:Fig. 4) that points weighing under 2 grams represent evolved bow and arrow technology on the upper Texas coast, and that points weighing 2 to 3 grams generally represent earlier transitional forms of arrow points using dart point styles. I have previously shown a complete continuum of sizes and weights on a single archeological site for contracting stem *Gary* dart points and *Perdiz* arrow points (Patterson 1973a). Sollberger (1967, 1970) reached a similar conclusion for expanding stem types of dart and arrow points in central Texas. At site 41 HR 315 (Patterson 1980) on the upper Texas coast, bifacial points weighing 2.5 grams start possibly before 1,500 B.C. and continue through the Late Archaic and Woodland periods to approximately A.D. 600, until replacement by lighter established arrow point types. This represents possible use of the bow and arrow 2,000 years or more prior to the currently accepted start, well ahead of other significant late technological changes such as the introduction of ceramics. There are several published examples outside of Texas of small bifacial points that might represent early use of the bow and arrow in the Archaic period in southern North America. These include the northeastern United States and southeastern Canada (Ritchie 1969:Plate 29-10-11; Stewart and Dragoo 1954:Plate 1; Winters 1969:Plate 13; Wright 1978:Table 1).

I have emphasized the idea that projectile points weighing under 3 grams should generally be classified as arrow points, unless data exists to prove otherwise in specific cases. A counter argument could be made that some small points were being used as dart points with small diameter foreshafts. However, in terms of actual function, there are advantages for lightweight arrowheads but not for lightweight dart points. The bow and arrow system uses a lightweight projectile to achieve higher velocity, which gives a longer range, flatter trajectory, and a higher impact force. In contrast, the atlatl system uses a relatively heavy, lower velocity projectile, which depends more on weight for impact force.

The use of very light arrowheads requires that stabilizing feathers be used for best performance, to achieve stable arrow flight with minimum of wobble. Although archeological evidence would be difficult to obtain on this subject, it could be argued that the evolved forms of late prehistoric arrowheads, usually weighing about 1 gram,

were preceded by heavier arrow points. The final standardized light arrowhead technology might have been dependent on development of improved stabilizing systems (feathered shafts).

Pope (1974:44) shows Indian arrows weighing about 20 grams. With lightweight arrows such as this, there would be a real advantage in using very lightweight points to maintain the center of gravity near the arrow midpoint for more level flight.

## UNEVEN DIFFUSION

As mentioned before here, possible uneven diffusion of the bow and arrow creates a study problem. It would be possible for pockets of bow and arrow use to exist within general areas of only atlatl use. In these cases, use of the bow and arrow might not even be considered by investigators. In reference to earlier dates farther south, Kehoe's (1978:82) statement of arrival of the bow and arrow at A.D. 100 in the northwestern Plains might be an example of uneven diffusion. It might simply represent a change in point types, however, after previous introduction of the bow and arrow, as some lightweight points are known to occur earlier in this area.

## UNIFACIAL POINT TECHNOLOGY

Recognition of forms of lithic technology associated with early use of the bow and arrow in southern North America is a major problem in my opinion. There are several indications that in at least some parts of southern North America the bow and arrow was introduced using arrowheads made from unifacially retouched flake elements. Both unifacial points and inset blades may have been used, similar to the Eurasian Mesolithic. These arrowhead elements were made from small flakes and microblades. I have previously proposed (Patterson 1973b) that the bow and arrow diffused to southern North America from the far north concurrent with the diffusion of small prismatic blade technology. Borden (1969), Sanger (1968) and Patterson (1973b:Figure 6) have discussed movement of small blade technology with progressively later dates to the south. There are indications of associated use of the bow and arrow. Small blade segments are useful as inset blades for arrowhead barbs. Small blades can also be easily retouched to form unifacial points. Retouch to form unifacial arrowhead elements is generally of steep shallow variety. One experimentally demonstrated method to accomplish this type of retouch is to use another flint flake as a pressure tool and for raking of margins to easily form uniform edges (Patterson and Sollberger 1974). The problem in recognizing unifacial arrowhead elements is that many archeologists do not routinely examine small flakes with a 10x magnifier to distinguish purposeful retouch from fortuitous flake shapes.

Another problem in recognizing unifacial arrowhead elements in early time context is that investigators are not prepared to recognize unifacial artifacts as associated with use of the bow and arrow. Most of the literature states that arrowheads are small bifacial points. For example, Irwin and Irwin (1959:34) state that small unifacial points found earlier than conventional bifacial arrow points might be "children's toys," at the Lo Dais Ka site in Colorado. MacNeish (1958:Figure 28) refers to small unifacial points in northern Mexico as "pointed end scrapers."

Data indicating early use of the bow and arrow with unifacial arrowhead elements is available for several of the southern U. S. States. In Colorado, in addition to the Lo Dais Ka site, Irwin-Williams and Irwin (1966:Figure 42) show small unifacial points made from small prismatic blades dated to approximately 3,500 B.C. that could easily have functioned as arrowheads. Some of the unifacial artifacts referred to as "perforators" in the Archaic period in the southeast and south-central states could have had use as crude arrowheads, such as those illustrated by Watson (1974:Figure 4) for Florida. Gibson (1976) has made a functional comparison of "Jaketown perforators" and ethnographic examples of unifacial arrow points of the Lacandon Mayan Indians. Patterson and Sollberger (1980) have also published on this subject. In southern

California, Singer (1979) reports microblades in use over a long time span that could have been used as inset blades for light projectile points, such as arrowheads. David T. Hughes (personal communication) of the Oklahoma Archaeological Survey has noted examples of small unifacial and bifacial points suitable for arrowheads from site 34 JN 28 in Johnston County, Oklahoma, with many of these specimens coming from the early ceramic level of excavation and some possibly coming from as early as the Middle Archaic at several thousand years B.C.

There is a logical case for microblade production being associated with the bow and arrow. Indians did not produce microblades in a prepared core industry without a purpose. Microblades are too small for most generalized tool uses, but they are ideal for making small unifacial points and inset blades for arrowheads. There could, of course, be other functional uses for microblades, such as small drills for bead manufacture, as at Poverty Point and Cahokia. However, on many Texas sites, microblades occur in a rather austere Archaic type hunting and gathering context with practically no non-utilitarian artifacts and only in association with Archaic dart point types.

In previous publications, I have given examples of small unifacial points and microblades in surface collections of Archaic period context for south-central Texas (Patterson 1974) and the upper Texas coast (Patterson 1973b, 1976). There are also examples in good excavated context from site 41 HR 315 in Harris County, Texas (Patterson 1980). Here, crude forms of unifacial arrow points start in the Middle Archaic period, and these are rather distinct from unifacial arrow points that are simply variants of late bifacial arrow point types. This site also has two examples of crude bifacial arrow point forms in early context, of the same general shapes as the unifacial specimens. Typical unifacial arrow point examples from Harris County, Texas, are shown in Figure 1, all made from thin flakes of 2 to 4 mm thicknesses.

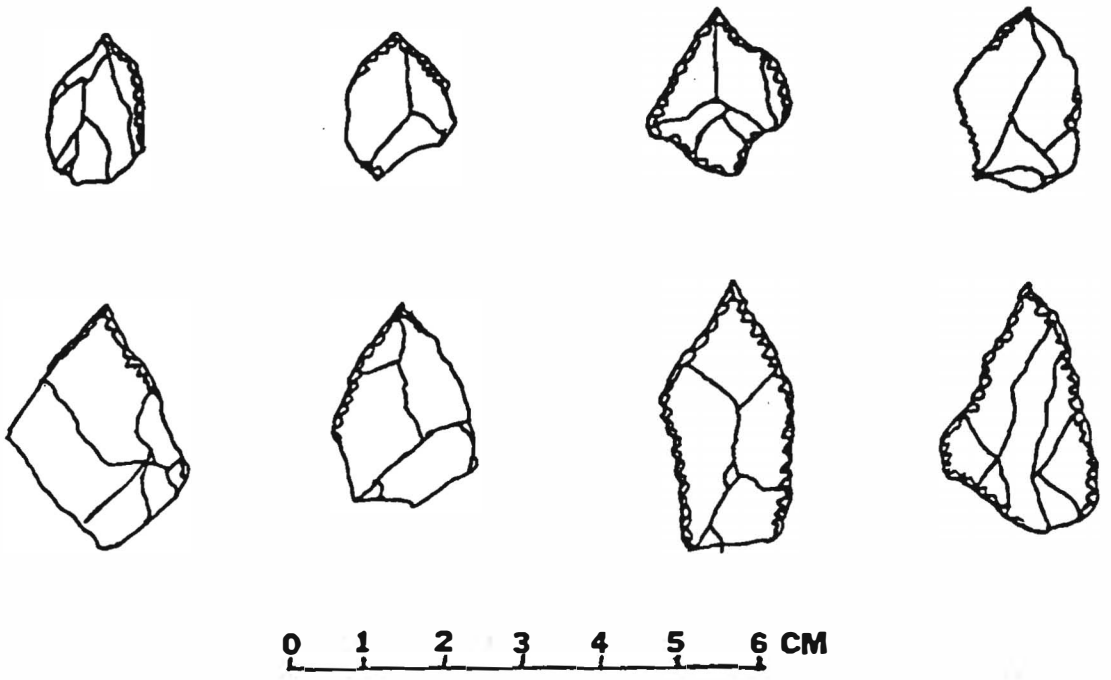


Figure 1. Typical unifacial points, Site 41 HR 182 and 41 HR 184, Harris County, Texas.

SUMMARY

This article is aimed at promoting more interest in studies of introduction of the bow and arrow into southern North America. I feel that there is considerable evidence to show that the bow and arrow did not suddenly arrive with arrowhead technology in a fully developed standardized form. It is proposed that arrowhead technology arrived with the bow and arrow earlier than now generally accepted in rather elementary forms and that refinements in technology included an extended process of miniaturization of some dart point forms for use as arrowheads.

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## PUBLICATION NOTICE

The *Bibliography of the Prehistory of the Upper Texas Coast, No. 5*, April, 1982 by L. W. Patterson is now available.

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# AN OX SHOE AND METAL SCRAPING TOOL FROM THE MONTGOMERY SITE

Wayne Parker

■

An ox shoe and a metal scraping tool have been excavated from the Montgomery site (41 FL 17) located down in Blanco Canyon, northwest of Crosbyton, Texas by Lonnie Wallace.

The occupation of the Montgomery site extended from the late Neo-Indian period into the Historic period (Word 1965:100). The two metal specimens uncovered came from the Historic period on the upper layers of the refuse deposit. Both stratigraphic evidence and the nature of the metal objects themselves point to the post-Columbian origin of the material.

The Historic occupation on the Montgomery site could have been both Lipan Apache and Comanche. Apaches on the Llano Estacado may have had horses as early as the mid-1600s through trade in New Mexico. The Lipan Apache may have lived in this area of Texas from 1525 to 1675. The two dates of A.D. 1635 and A.D. 1665 secured by the Lubbock Lake Project suggest that *Garza* points continued at least into the mid-1600s; *Garza* points appear to be contemporaneous with the Apache occupation of this area (Johnson 1977:104-105). The Montgomery site has produced several *Garza* points.

It is known that the Comanche, a people originating from the Wyoming and Montana area, invaded the domain of the Apache. The Comanche first appeared about the year A.D. 1700 and adapted themselves readily from a mountain-based life to a nomadic Plains life. Taking over the horse, they steadily expanded their range at the expense of the Apache. It can be presumed that early in the eighteenth century the South Plains of Texas and in particular the immediate area of the Montgomery site was in complete control of the Comanche (Word 1965:101).

The ox shoe and metal scraping tool could have come from either the Lipan Apache or Comanche occupation on this site.

Both metal artifacts could have been acquired from several sources by either trade or theft. The early Spanish explorers, Mexican Ciboleros, or even U. S. Army expeditions could have been the contributors of the metal specimens to the Indians. However, the most likely transaction was made from the Comancheros who were in this area during the 1850s. It is a well-known fact that the Comancheros used oxen to pull their two-wheeled carts over the Llano Estacado of Texas. The Comanche were trading stolen goods from East Texas to the Comancheros during the early and mid-1800s near Blanco Canyon.

The curved ox shoe is 18 cm long by 3.4 cm wide and narrows to 1.2 cm wide at one end. Four perforated nail holes are located near the center section of the shoe which has a diameter of 5 mm. The distance between each nail hole is 1 cm. Because an ox has a split hoof, two shoes for each foot were required.

The metal scraping tool is 2.6 cm long by 2.3 cm wide with one notch on each side. The distance between the two notches (used for hafting on a handle) is 1 cm. The flat cutting edge seems to have been beveled or sharpened from continuous use. The so-called metal scraping tool was fashioned from a similar ox shoe as the one shown in the illustration. Notice that the nail holes in the ox shoe are the same dimensions as the distance between the two notches in the metal scraping tool. It has crude hack marks made when the specimen was separated from a similar shoe. The two metal artifacts are badly eaten by rust and oxidation. Both specimens are about 3 mm thick.

Was it the Lipan Apache or the later Comanche who utilized the two metal objects from the Montgomery site? It is a known fact that the Kwahadi Comanche under Quanah Parker (in late Historic times) hunted and lived in Blanco Canyon. Mackenzie's first encounter with the Kwahadi, in 1871, was just a few miles down the canyon from the


Figure 1. Ox Shoe and Metal Scraper made from a similar Ox Shoe from the Montgomery Site, Floyd County, Texas. (Photo courtesy of the author.)

Montgomery site (Parker 1977, 1978, 1979). After several conflicts with the 4th U. S. Cavalry, the Comanche were still camped in Blanco Canyon at the late date of spring, 1875. Quanah later signed a treaty on June 2, 1875 in Fort Sill, Oklahoma. It is a reasonable assumption that the ox shoe and the metal scraping tool, excavated some eight inches deep, on the Montgomery site, could have been left by the superb Comanche Indians.

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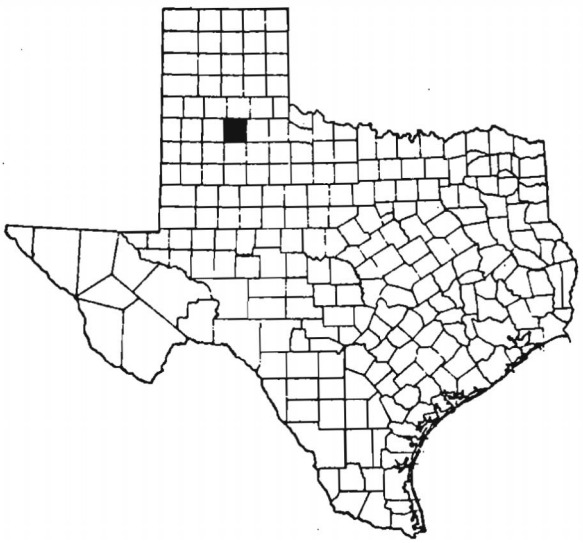

# AN IRON PROJECTILE FROM GILLESPIE COUNTY, TEXAS

Richard L. McReynolds

This brief report is submitted to record a metal projectile point found near Doss, Gillespie County, Texas and to supply background data for its possible deposition.

## BACKGROUND

Gillespie and its surrounding counties are particularly well known as having been popular living and raiding areas for historic Indian groups, but previous to this Archaic groups had favored the area for thousands of years (see Figure 1). European and subsequent Indian encroachment in the Northern and Central Plains areas displaced buffalo followers such as the various sub-groups of Apache, Wichita and Comanche. Buffalo were still fairly plentiful in Texas and so was the horse. These factors soon brought the Comanche to dominance as traders in the early 1800s, a status they retained through German settlement beginning in 1845. By 1850, Fredericksburg had become an Indian trade center. The European population of Texas doubled within a three year period (1847-1850) but due to the now-declining buffalo herds and various diseases, the Indian population was diminishing. There had been sporatic hostilities from President Lamar's tenure onward, but the German settlers had gotten along remarkably well with the Indian population. As a lifestyle, though, the Indian was doomed, and by the year 1875 the Indians of Texas were pretty much a thing of the past (Greene 1972; Newcomb 1978).

## SITE

The James V. Baethge Ranch is in the heart of this historic Indian land. The ranch is nestled in a small valley formed by a southern fork of Treadgill Creek. It lies a few miles south of Doss, Gillespie County, Texas. Within this valley are all the necessities for prolonged Indian habitation. Flint outcrops, water, gathering foods, game, timber and shelter are readily available. The ranch house is situated in the center of an extensive, predominantly Archaic midden. The midden is approximately one hundred and forty feet long and eighty feet wide. Between the house and Treadgill Creek the midden is bisected by a farm road known locally as Manor Road. It

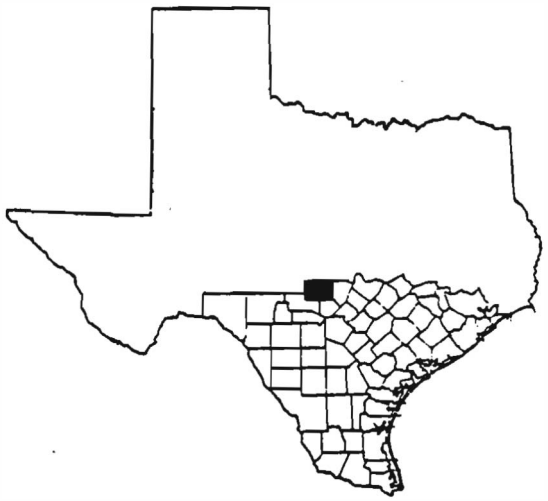

Figure 1. Map of Southern Texas with Gillespie County indicated in black.

is this road and maintenance activities on it which have produced so many of the artifacts in James' collection, including an iron projectile point. It was found in 1978 after road grading activities preparatory to paving had exposed it along with several Archaic dart points.

ARTIFACT DESCRIPTION

The point is made from thin sheet iron which is now pitted and rusty from oxidation. Even so, it is remarkably well preserved. It is stemmed and shouldered rather than barbed. The blade is triangular in shape with straight sides (see Figure 2). The distal point is missing. The base is straight although cut at an angle. It has a straight stem with three serrations cut into one side and four on the other. Its cross section is plano convex for most of its length but lenticular towards the point. The convex side retains a cut mark from stem shaping, and the plano face has two pitted areas which may be from bend creases.

| | | |
|---|---|---|
| Overall length (incomplete) | = | 47.0 mm |
| Stem length | = | 8.5 mm |
| Stem width | = | 4.5 mm |
| Maximum width at shoulder | = | 13.5 mm |
| Maximum thickness | = | 1.3 mm |
| Weight | = | 2.11 gm |

DISCUSSION

Within the Baethge collection it is now hard to determine which specific points were found on this midden as none were catalogued. Most were surface finds after being displaced by erosion, construction, farming, and road maintenance activities. Archaic points include *Pedernales*, *Montell*, *Nolan*, *Frio*, *Bulverde*, *Martindale* and *Marcos*. Prehistoric points include *Edwards* and *Perdiz*. The historic is represented by only the one iron arrow point.

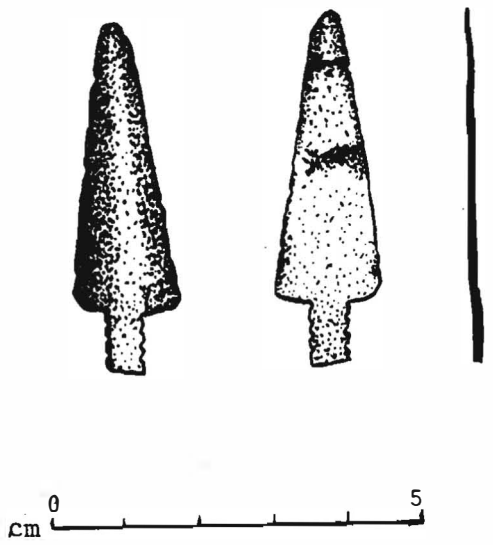


Figure 2. Metal arrow point found in Gillespie County, Texas.

The metal point in some ways resembles other metal points found in southern and southwest Texas (Hester 1968, 1970, 1980; Mitchell 1974, 1980; Mitchell and Highley 1982). However, none of the metal points recovered to date can yet be considered unequivocally diagnostic of any particular tribal group (Hester 1968; Mitchell and Highley 1982). As noted above, a number of groups including Apache, Comanche, and Wichita groups were in the area during historic times, in addition to resident local groups.

It is evident that this historic point was once on, in, or near the midden and that there was ample opportunity for its deposition. It may have been a single projectile shot in hunting or hostile activity and its landing on the midden mere chance. It is also possible that the midden was again occupied by some historic band, and this single item is not the only evidence thereof.

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BOOK REVIEW

Grant D. Hall - Allens Creek: A Study in the Cultural Prehistory of the Lower Brazos River Valley, Texas. *The University of Texas at Austin, Texas Archeological Survey Report* 61. 445 pages; multiple photographs, maps, and illustrations. 1981. $25.00 plus mailing.

The recently published Allens Creek report is an extremely comprehensive and professional volume which represents a major contribution to Texas archaeology by Grant Hall and the Texas Archeological Survey of the Balcones Research Center of UT-Austin (Dave Dibble - principal investigator). It reports intensive excavations at the Ernest Witte (41 AU 36), Leonard K. (41 AU 37), and Little Bethlehem (41 AU 38) sites during 1974-1975, near the site of the Allens Creek Nuclear Generating Station of the Houston Lighting and Power Company in Austin County on the Lower Brazos. The excavation and report were sponsored by H. L. and P. and are a real credit to the civil mindedness of the company. Such progressive support for archaeological investigations and reports should serve as an exemplary model for all other Texas companies!

This major work by Grant Hall summarizes eight years of excellent research both in the field and in the laboratory. I have seen a number of doctoral dissertations which were much less thorough in terms of research design and reporting. Grant has thus demonstrated a research and writing capability which has fully established his credibility as a major new face in Texas archaeology. He was assisted in the Allens Creek project by a number of very talented people; the names of these individuals and their contributions are acknowledged in the preface of the report.

The Allens Creek report demonstrates the prehistoric presence on the Lower Brazos of Early Archaic (pre-2600 B.C.), Middle Archaic (2600-1600 B.C.), Late Archaic (650 B.C. to A.D. 500), Transitional Archaic or early Late Prehistoric (A.D. 550-950), and at least two Late Prehistoric (A.D. 800+) components (circa A.D. 920 and A.D. 1480). Major contributions include the analysis of a cemetery with at least 238 individual burials (perhaps as many as 337 by physical anthropologists' estimates). Also identified is a ground stone phenomena involving boatstones (see Figure 1) and gorgets as well as whelk shell ornaments (pendants and gorgets: see Figure 2) which were associated with the Late Archaic burials (520 B.C. to A.D. 360). Associated with these Group 2 burials were corner tang knives and worked bone objects. Hall hypothesizes an Import-Export sphere involving Southwest Arkansas boatstones being traded into the Allens Creek area, possibly in return for Central Texas corner tang knives. He plots the distribution of these various types of artifacts based on the 1937 distributional studies of J. T. Patterson. In addition, Hall feels that the extensive number of shell ornaments recovered at the Allens Creek sites may represent trade with the Florida area, based on the seeming absence of shell ornaments along the Central Texas Coast where whelk shells are found (utilitarian shell tools made of whelk shell are found in the Coastal Bend area of the Central Texas Coast).

Further, the absence of ground stone and shell ornaments in the later (Groups 3 and 4) burials leads Hall to hypothesize a contraction of the trade network at A.D. 400-800 (see Figure 3, which reproduces Hall's Figure 56). The sites are occupied after that time by coastal-related groups based on the presence of sandy paste (Goose Creek) and grog-tempered (San Jacinto) pottery. *Scallorn* arrow points and the sandy paste ware at 41 AU 37 are associated with a C-14 date of A.D. 920±70 (corrected) while a later zone at the same site with mixed *Perdiz* and *Scallorn* points and both types of pottery dated A.D. 1480±80.

Hall attempts to associate burial headward orientation to astronomical phenomena (such as summer or winter solstice, etc.) but failed to find any consistent pattern. He does, however, identify a group of five burials at the end of the Late Archaic burial

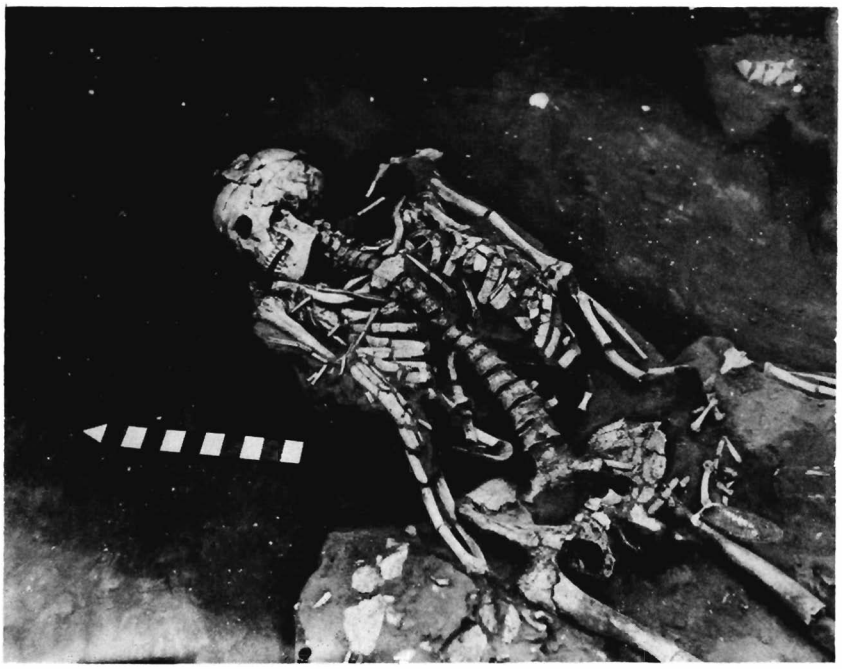

Figure 1. Photograph of Burial 89 at the Ernest Witte Site, 41 AU 36; note the boatstone (specimen No. 4) above the right pelvis of the burial. This burial was radiocarbon dated to A.D. 360±80 (corrected). This boatstone is made of an igneous rock with a very fine crystalline structure; the probable source for the material is the Oachita Mountain region of western Arkansas and eastern Oklahoma (see Figure 3). (Photograph courtesy of the Texas Archeological Survey, Austin, and the News and Information Office of the University of Texas at San Antonio.)

Figure 2. Burial 111 at the Ernest Witte Site, 41 AU 36; note the shell pendants, gorgats, and beads, and the worked bone artifacts around the neck area of the burial. (Photograph courtesy of the Texas Archeological Survey, Austin, and the News and Information Office, the University of Texas at San Antonio.)

sequence (Group 2) who died violent deaths as a result of embedded dart points; this along with similar Late Archaic deaths reported in the literature (Mather Farm site, 41 WM 7; Archery Range site, 41 TV 128; and the Rodd Field site, 41 NU 29) suggests that hostilities were on a region-wide increase at the end of the Late Archaic. Hall makes no inferences as to whether this increase in hostilities might be related to the contraction of the trade net, although the two events may have occurred in the same general time frame. His identification of this Group 2 late subgroup also infers that Group 2 burials (the largest grouping) perhaps should be analyzed further to isolate other meaningful subgroups.

Grant Hall's Allens Creek report is not one to be read casually - rather it is a volume which must be carefully studied. With close reading, a number of editorial errors and procedural inconsistencies can be found which are irritating in a volume which is otherwise so professional. For example, on page 46, the Ernest Witte Site is mislabeled as 41 AU 35 rather than 41 AU 36. In Table 1 on the same page, the zones and data are shown inverted with Zone 2 given as surface when in fact Zone 2 is the lowest level (pre-2600 B.C.). The level numbering system at the Leonard K. site is a different system (levels instead of zones; Level 1 is the most recent--see Table 4, p. 110). No reason is given for the use of different systems at the two sites.

While each site is discussed separately and extremely well portrayed with maps and tables, the artifacts from the three sites are reported together with all specimens of one artifact type reported for each of the three sites before the next artifact type is considered. While this helps in the comparison across sites, the lack of bold face type, underlining, or variable indentures makes it difficult to get a comprehensive picture of the artifacts belonging to any one site. The data displays for each artifact type are excellent with specific measurements for each specimen reported - this is a model of good reporting. Some typing or proofing errors are awkward; for example, on page 147, "Dart - 2 Specimens" should read "*Darl* - 2 Specimens," an error which would have been obvious had Hall used the term "Late Darl" (Prewitt has recently used "Mahomet" as the designation for this type).

These types of errors are actually rather trivial when considering the exceptional quality of the report, its maps, photos, and graphs. And Hall's synthesis of the Allens Creek data into the mainstream of Texas archaeology is generally quite convincing, with perhaps one exception. I remain unconvinced that the ornamental shell gorgets and pendants originated as whelk shell from Florida. In the first place, the distribution of shell artifacts (Figure 49) is incomplete; it is based on only 80 Southeastern Texas counties, where data on corner tang artifacts and boatstones covers all of Texas and beyond. Indeed, the same logic which leads Hall to locate corner tang manufacturing in the Waco area of Central Texas and boatstone manufacture in Southwest Arkansas would almost compel one to say that whelk shell for ornaments originated in the Coastal Bend of Texas, most likely in Nueces and San Patricio Counties. Hall cites a personal communication with Ed Mokry to the effect that most shell artifacts in the Coastal Bend are utilitarian (adzes or other tools), yet he neglects to comment on Winters' observation (quoted on page 221) that imported shell was not used in the Indian Knoll Culture for utilitarian artifacts (with the exception of atlatl weights) "quite unlike sites of the Florida area adjacent to the sources of much of the marine shell" (Winters 1968:182-183). This statement strongly suggests that the utilitarian use of shell in the Texas Coastal Bend area where whelk shell occurs closely parallels the situation in Florida. Apparently the value of shell as an export item made it too valuable to use locally for ornaments in Florida. Thus, the utilitarian use of shell could be considered as evidence <u>for</u> the Texas Coastal Bend area as a source of whelk shell for ornaments rather than <u>against</u> it!

Hall also consistently refers to shell ornaments which are gorget-like as "pendants" although he is aware of the "sandal sole gorgets" of the Ohio Valley Glacial Kame Culture of 1500-1000 B.C. (see page 220). James B. Griffin believed the Glacial Kame shell gorgets to originate in Florida; he based his opinion on the prevalence of the Lightning Whelk along the Florida Coast, particularly south of Tampa. This very authoritative opinion leads most writers to suggest trade with Florida. Yet

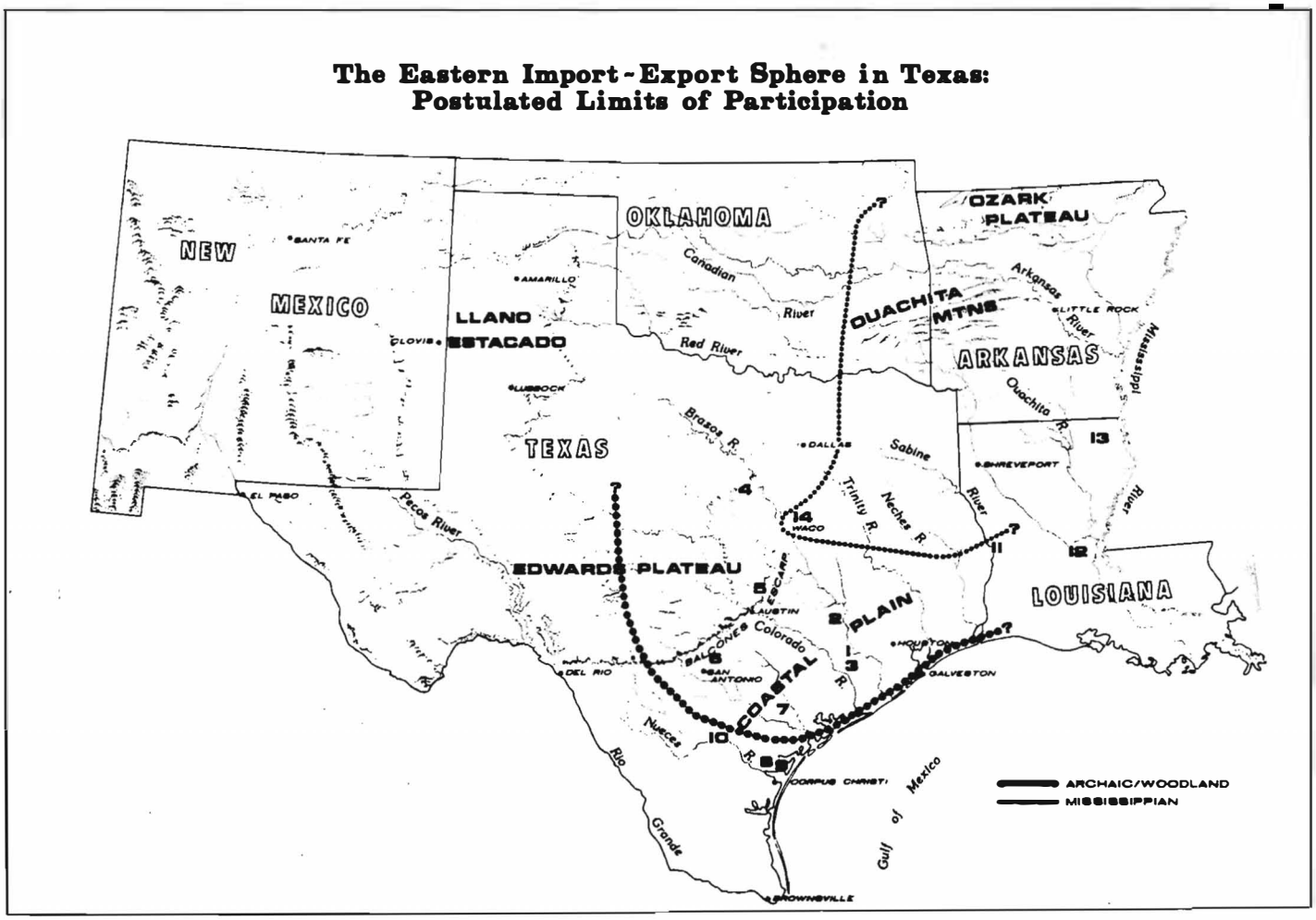


Figure 3. Hypothesized Import-Export Sphere during Archaic and Late Prehistoric Periods. (Reproduced from Hall 1981: Figure 56, p. 301. Courtesy of the author and the Texas Archeological Survey.)

Key to sites shown in Figure 3 above:

1 - Ernest Witte, 41 AU 36

2 - Goebel, 41 AU 1

3 - Albert George, 41 FB 13

4 - Brawley's Cave, 41 BQ 20

5 - Loeve-Fox, 41 WM 230

6 - Locke Farm, 41 CM 25

7 - Morhiss, 41 VT 1

8 - Johnson, 41 AS 1

9 - Kent-Crane, 41 AS 2

10 - Loma Sandia, 41 LK 28

11 - Coral Snake, 16 SA 48

12 - Marksville, 16 AV 1

13 - Poverty Point, 16 WC 5

14 - Chupik, 41 ML 44

Hall has demonstrated not only the presence of the Lightning Whelk on the Texas Coastal Bend but has also elucidated a trade network (or sphere) which moved trade goods north into Arkansas and presumably up the Mississippi Valley. Thus, one could hypothesize that whelk shell may have been one of the Texas products (or raw materials) being fed into the trade network. It might be most informative to analyze the relative levels of Allens Creek sandal sole gorgets (versus other shell ornaments) to see if they can be matched with the 1500-1000 B.C. dating of the Glacial Kame Culture.

Three such shell gorgets (Type 2) were recovered from Burial 126 (see page 198). Data from Appendix II (p. 370, bottom) locates this burial at elevation 97.33 with neck grid coordinates of 100.00 N, 92.33 W; it is a child burial with the lower body destroyed by machinery and is placed in Burial Group 2.

Burial 127 is a young adult female at elevation 96.82 with neck grid coordinates of 100.39 N, 89.20 W, and is placed in Burial Group 1 (see p. 370). This burial was the source of a radiocarbon assay (TX 2127) which yielded a corrected date of 1530±90 B.C. (see Table 2, p. 49).

Since the child burial (126) is somewhat higher in elevation (.51 meters), it (and the associated gorgets) probably post-date 1500 B.C. Burial 14 (elev. + 97.55, grid coordinates 100.28 N, 90.61 W - see p. 366) is at a still higher level than Burial 126 (by .22 meter) and yielded a C-14 date (TX 2451) of 520±130 B.C. (see Table 2, p. 49). Burial 14 also had three sandal sole gorgets made of whelk shell associated (see p. 197).

These data would seem to imply a Middle Archaic date for the sandal sole gorgets at Allens Creek. The dates seem to encompass at least part of both the Round Rock (1450-650 B.C.) and San Marcos (650-300 B.C.) Phases in Prewitt's chronology of Central Texas. Prewitt has noted the presence of marine shell ornaments in Central Texas as one of the characteristics of the San Marcos Phase (Prewitt 1981 *BTAS*).

Hall's distribution of Marine Shell (Figure 55, p. 297) is rather restricted with very limited occurrances noted in Central Texas (see Figure 4). A recent report of several Shell Pendants in West Texas (see Parsons, Hill, & Parker, The Old Tom Burial, Dickens County Texas, *BTAS* 1979: pp. 69-87) seems to invalidate Hall's limited distribution. One of the Dickens County pendants bears an inverted T design which is virtually identical to decorative elements on a pendant from the Ernest Witte Site, and the authors date their site based on this similarity to Allens Creek material. Parsons, et al., also note marine shell artifacts from Shackelford County, Garza County, and another specimen possibly from Dickens County, as well as materials reported by Kidder from Pecos, New Mexico. These data would suggest the possibility of a rather wide distribution of ornamental marine shell ornaments in Texas.

Hall bases his analysis of corner tang and boatstone distributions mainly on the 1937 Patterson data.* Recent reports document such materials in South Texas (for example, Hester's report of a boatstone from LaSalle County, my report of South Texas ground stone materials, or the recent report of a bannerstone from Padre Island in *La Tierra*).

The plotted distribution of corner tang artifacts (Hall's Figure 55) could be interpreted as evidence against his hypothesis of import-export exchange of corner tang artifacts for Arkansas boatstones (see Figure 4). Only one corner tang is shown from the "boatstone manufacturing area" of Southwest Arkansas, and only a total of two for the whole state. None were reported from Louisiana, which would have to be involved

* The pioneering distributional studies of Patterson, Poteet and others during the 1930s provided exceptional insights into cultural areas and relationships. Such early reports were admittedly somewhat biased by lack of respondents from some areas. Unfortunately, the great promise of such seminal distributional studies has not been developed by later research.

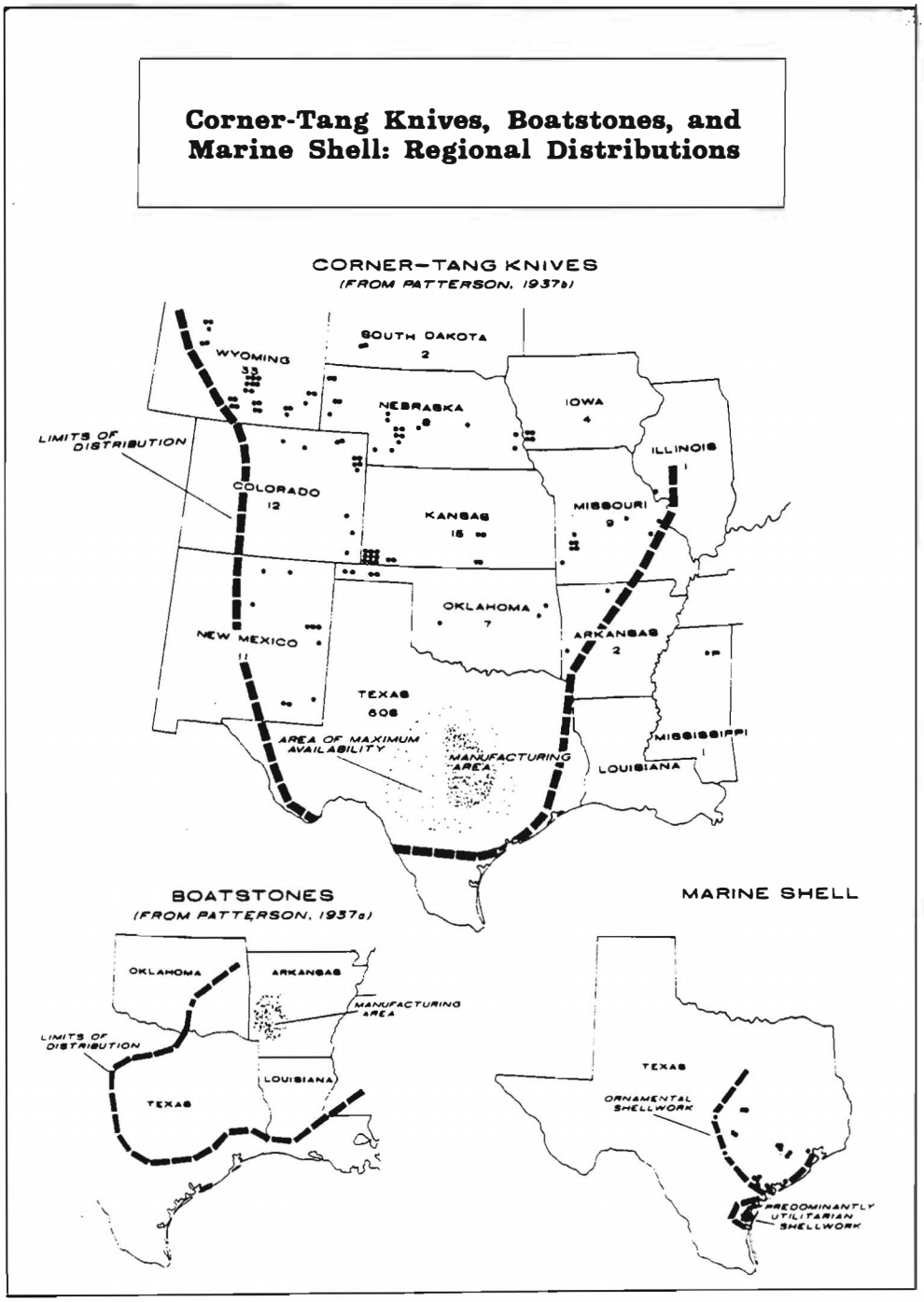


Figure 4. Late Archaic Distributions of Various Artifact Types. (Reproduced from Hall 1981:Figure 55, page 291; Courtesy of the author and the Texas Archeological Survey). For a more complete distribution of marine shell in the Southeastern Counties of Texas, see also Hall's Figure 49.

in any Texas-Florida exchange of corner tangs for Florida shell. Rather, viewing the distribution of corner tang artifacts, one gets the impression that corner tang artifacts are mainly a Plains-related phenomena, with some involvement of the western edge of the Eastern Woodlands. A distribution plot of corner tang artifacts within Texas, particularly an updated distribution which included recent work in all areas of the state, might help to clarify the situation. We also really need a comprehensive distributional study of all ground stone artifacts in Texas, since the presence of such artifacts is not well enough understood.

I have no quibble with Hall's main conclusion of a retraction of the trade interaction during the Archaic-Late Prehistoric transition (A.D. 400-800) from Central Texas and the Coastal Plain into Northeast Texas as the Caddoan Cultural Climax developed. We know, however, that some trade continued into the Late Prehistoric period because of the occasional East Texas ceramic sherd found on the coast and interior of Central and South Texas. Other exotic materials found in these areas hint at trade with New Mexico (Puebloan pottery and obsidian) and Mexico proper (Huastecan pottery, jade figurines, and obsidian). What emerges as an overall pattern is perhaps a shifting trade orientation over time; this phenomena needs a great deal more study before it can be fully understood.

In addition to its wealth of information about shell and other artifacts, the Allens Creek report also has a great deal of information on the general analysis of burials, but it lacks specific osteometric and cranial data which would permit better comparisons with other prehistoric skeletal materials. Appendix I by Malina and Bramblett does make some comparisons with burial populations from other sites, but these are limited to demographic data (age, sex) and long bone length, stature, and skeletal pathologies which are interesting but which do not permit adequate quantitative assessment of biological distance relationships. The lack of cranial measurements, cephalic index, and other data is a significant omission.

Also disturbing are the unanalyzed and discarded materials (pp. 264-266), where time or funds were not available to accomplish the needed work. Likewise, C-14 dating was apparently somewhat restricted due to funds limitations, which is unfortunate considering the considerable significance of the Allens Creek sites.

I must reiterate my admiration and respect for Grant Hall's very excellent work in this Allens Creek Report. While I may not agree with all his conclusions, he is to be commended on his comprehensive reporting and discussion. He has accomplished a great deal with this one report; only extensive additional regional work will be able to establish whether his hypotheses are most probable. I highly recommend his report to you for careful study.

The Editor

# A POTTERY VESSEL FROM 41 MC 320, THE NICHOLS I SITE, MCMULLEN COUNTY, TEXAS

Curtis Dusek

A large accumulation of pottery, totaling over 150 sherds, was recovered from a small site overlooking the Nueces River in southwestern McMullen County. All of the sherds came from one small area within the site, and appear to be the remains of one large vessel. Several sections of the vessel have been recreated by matching up some of the sherds. The sherds range in size from small fragments to sherds over 7 cm in length by 5 cm in width.

The site the sherds came from is located on the Nichols Ranch, and lies slightly over eight miles south of Tilden (see Figure 1). Temporarily designated as Nichols I, and later assigned the permanent number of 41 MC 320, the site sits atop the southern end and slope of a low ridge which overlooks the Nueces River floodplain to the south. Elevation of the site ranges from 220 to 250 feet above sea leavel. The present channel of the Nueces River approaches closest to the site about 1.3 miles to the southeast of the site. The floodplain of the river in this area is very wide, with numerous cutoff channels present. In the area south of the site the modern channel of the river runs along the southern margin of the floodplain. Numerous old channels lie between the river and the site, many of which hold water for long periods of time following heavy rains and during and following periods of flooding along the river.

The sherds were recovered by Johnny Nichols after he observed them eroding from the southern slope of the site. A leaf-shaped biface approximately 5 cm in length by 2.3 cm in width was also recovered in the immediate area with the sherds, although its exact association with the pottery is undetermined. [Ed. note: This may be an original unbeveled knife form commonly found throughout Texas (see Sollberger 1971, Figure 3a:214). Ken Brown has recently demonstrated the Late Prehistoric presence of a two-beveled knife form at Choke Canyon, which could be a resharpened version of the Nichols I specimen.]

*Scallorn* points are predominant on the site itself, several of which collected by Johnny Nichols exhibit very fine workmanship (see Figure 2). Flaking debris, burnt sandstone, mussels and land snails are also common on the site. The presence of an

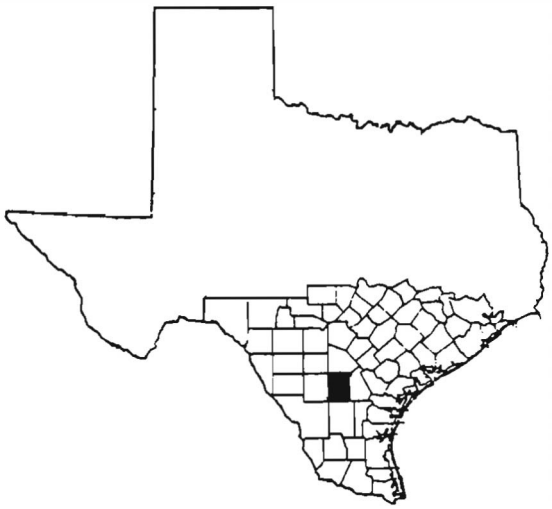

Figure 1. Map of Southern Texas with McMullen indicated in black.

*Ensor* point from the site, along with the *Scallorn* points and pottery, would appear to indicate a Late Archaic to Late Prehistoric habitation on the site. [Ed. note: If the site is a single component site, the presence of *Scallorn* arrow points, an *Ensor* point, and pottery would date it to the Initial Late Prehistoric which probably dates around A.D. 950-1050 in this part of Southern Texas.]

The pottery sherds recovered from the site are by no means unusual in themselves. They are the basic bone-tempered, Leon Plain type of pottery common on many Late Prehistoric sites in South Texas. Enough of the sherds, however, were matched together to recreate several sections of the vessel, making several generalizations possible.

One interesting section was recreated from 12 sherds, six of which are rim sherds. Approximately 14 linear centimeters of the rim are present, with approximately seven cm of the vessel present below the rim. Color of this section varies from light reddish-brown to gray. The rim is slightly uneven with seven small notches present along a two-cm section of the rim lip. The small notches could probably have been applied by using the fingernail or some other sharp-edged object on the clay while it was still wet. Rim notching has been noted for Goliad ware (Hester 1980), but aside from this none of the other decorative techniques characteristic of Goliad ware are evidenced on any of the fragments of the vessel. The upper 1.5 cm of the rim section on the interior of the vessel is slightly beveled outward to form the rim lip, with no inward beveling of the exterior upper section present. By extending the arc created from this portion of rim section, and assuming that the mouth of the vessel was generally circular in shape, the estimated interior diameter for the mouth of the vessel is approximately 24.5 cm.

A total of five sections of the vessel were recreated. No appendages or decoration, aside from the small rim notches, were present on any of the sections or sherds of the vessel. Coloration varies among the sherds recovered, ranging from light-gray to reddish-brown. Such variation probably results from uneven firing temperatures and differential weathering. One portion of the vessel exhibits evidence of burnishing (Steve Black, personal communication). None of the recreated sections is complete enough to provide a good estimation of vessel height. Recreated portions that appear to be from the base, however, indicate a gently rounded base with very thick basal sherds ranging up to one cm in thickness. The overall shape of the vessel would appear to be what might be termed a "wide-mouthed *olla*" (see Figure 3).

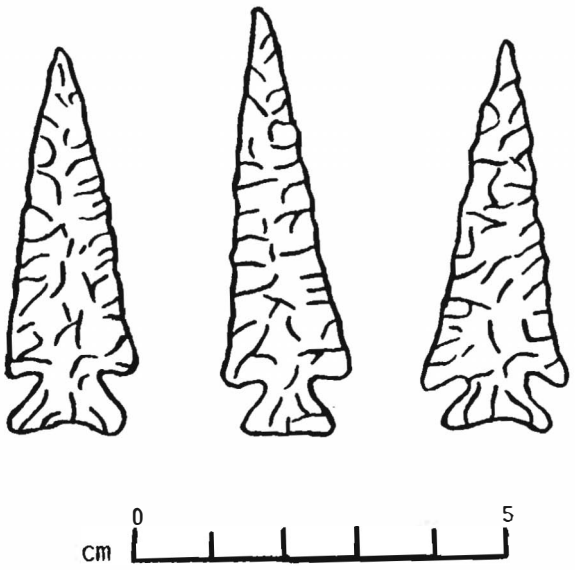


Figure 2. *Scallorn* Points Recovered by Johnny Nichols from 41 MC 320.

One can only guess as to the use the inhabitants of the site made of this vessel. The large size of the vessel and the distance of the site from water might indicate its use as a water container. Small fragments of charcoal observed with the pottery could indicate that the vessel was also utilized for boiling or cooking.

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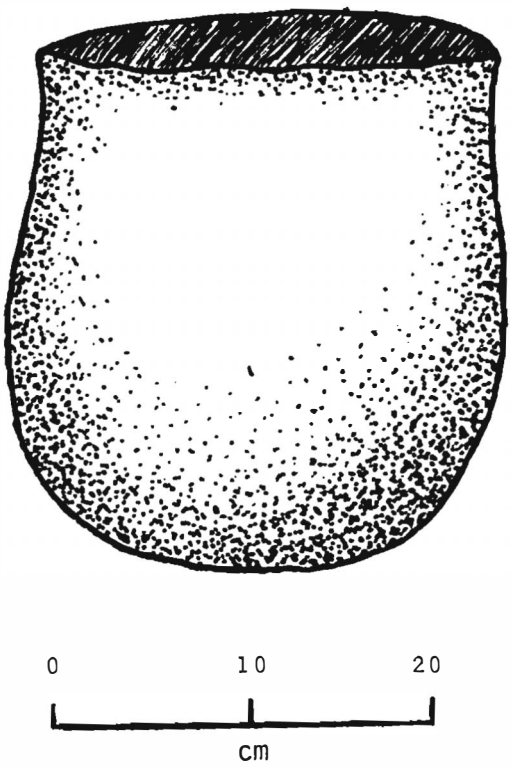


Figure 3. Hypothesized reconstruction of the pottery vessel recovered from the Nichols I Site (41 MC 320), based on several recreated sections. (Scale based on estimates of the interior diameter of vessel mouth; actual height may vary.)

# REFLECTIONS

ABSTRACT

This brief note reflects on past and future directions in Archaeology.

## INTRODUCTION

February 10th, 1982. It's still a cold winter, which allows the mind to stray - in idleness. I have been looking through old issues of *La Tierra*. I'm asking myself - where have I been in Archaeology and where am I going? I remember looking for new sites in a Model T Ford, from mostly dirt and graveled roads. I'm thinking of a time when almost no lakes were in our river drainage systems. I'm now seeing the dozens of lakes which cover essentially all of the major sites we found - apparently lost forever to all archaeologists. I am recalling the great numbers of sites in this Dallas, Texas, area that have been lost to new roads, superhighways, housing developments - and whole new towns! Alas, River Basin Survey days came and went - to be replaced recently with Contract Archaeology.

## REFLECTIONS

What does one do with the dozens of cigar boxes - all marked by site names, and gathering dust in dark closets and storage rooms? Well, we made Trait Lists and learned typologies. Now that typology business was something else! First, we had the Strong System where $N^2 = R - M$ might have spelled type *Gary*. Boy, it was a relief to just spell out *Gary*. *Taylor Thinned Base* was okay - just fine - until the 1954 Handbook came out. Then, despite the lumping and/or too many types, J. C. Kelly's works were shortened: *Perdiz Pointed Stem* became just *Perdiz*, and so forth. Just in time, too - because every one had jumped on the "let's name a new type" bandwagon.

When typology gained full flower in the early 60s, the New World bible (*American Antiquity*) could no longer handle the load; so enter New Archaeology and Theory. Just as well; new ideas bring brand new bandwagons to climb aboard. Progress is hard to obtain just standing still. I suppose we are still in the era of New Perspectives. About the same time, Semenov rocked the archaeological world with Use Wear Studies, and here we go; a brand new bandwagon.

About now, the raging question for some has become, Who was the First American? And when did he arrive? That beginning has now been pushed 'way back (by some). A house floor in Chile in South America has been dated 12,000 years ago. C-14 dates in South America have always been suspect. In fact, all C-14 dates are suspect when they do not fit the thinking of those who drive our bandwagons.

Crabtree designed a new wagon (lithic technology) - it was so different, so new, I had to climb aboard. At first, it was so crowded, and moved so slowly. Over time, however, the crowd thinned out; people naturally trade off older wagons in favor of newer, shinier ones. This seems to occur whenever the going gets rough - let George answer the difficult questions!

So, now I've had some 42 years of interest in archaeology and what do I see? Emphatically - a great progress has been made. On the coin's other face, I see too many sightseers who abandon the search before their wagons are loaded to full potential. It's like planting a crop and abandoning it before the Harvest.

J. B. Sollberger

P.S. - I think STAA has the best wagon available - I like the way its "wheels" turn.

AUTHORS

D. WILLIAM DAY was one of the investigators involved in the UTSA-CAR research on the El Orcoquisac Historic District which is highlighted in this issue. Mr. Day and his wife, Jane Laurens-Day, have more recently been involved in a major cultural resources survey of Hidalgo and Willacy Counties, in far southern Texas. They have recently coauthored (with Elton R. Prewitt) a major report of this work (Prewitt & Associates, Reports of Investigations Number 15, 1981). Mr. Day lives in Austin, Texas.

CURTIS DUSEK is a student of anthropology at UTSA who formerly resided near Calliham, Texas in McMullen County. Curtis published a previous article in *La Tierra* in 1980, and was very active in the Choke Canyon Reservoir project of UTSA-CAR.

ANNE A. FOX is well known to everyone involved in Texas and South Texas archaeology. She is the immediate past president of the Texas Archeological Society and a former STAA chairman, as well as director of the laboratory at the UTSA-CAR. Anne is a recognized authority in the area of historic archaeology with very special skills in pottery identification. She was editor of this journal in 1976-1977, and has contributed a variety of papers to the archaeological literature.

LYNN HIGHLEY is a graduate student at UTSA, has been a mainstay in the UTSA-CAR laboratory (and the 1981 TAS Field School Lab), and has written a variety of significant papers on South Texas archaeology. She coedited (with Tom Hester) a definitive volume on the archaeology of the lower Texas coast. Lynn is a former chairperson of STAA, and has held many of the major STAA offices through the years. She is currently a master's degree candidate with UTSA and is working on her thesis.

RICHARD McREYNOLDS is a frequent contributor to this journal, noted for his interest in Paleo-Indian materials, and for his very excellent illustrations. In this issue, he changes pace a bit to provide us with information on a historic metal point from Gillespie County. Richard is a government employee at Kelly AFB, Texas, and resides in San Antonio.

J. B. SOLLBERGER is well known to STAA members as a pioneer in the study of South Texas archaeology. In his brief note in this issue, he reminisces about his 42 years of involvement with the archaeological addiction. Mr. Sollberger was honored by STAA through a special issue of this journal in October 1978 (Volume 5, Number 4) where several of his pioneering articles were reprinted. He resides in Dallas, Texas.

WAYNE PARKER lives in Ralls, Texas, where he is a very active member of the Crosby County Historical Commission. He has recently authored a major report "Archeology at the Bridwell Site" which was published this spring by the Crosby County Pioneer Memorial Museum in Crosbyton, Texas. In his article in this issue, you may note his favorable attitude toward the Comanche; Wayne is related to the famous Comanche Leader Quanah Parker.

LELAND PATTERSON is another well known contributor to this journal, and a prolific author in almost every area of archaeology. Lee is a resident of Houston and an active member of the Houston Archeological Society. HAS has recently published a revised version of Lee's Bibliography of the Upper Texas Coast (see advertisement elsewhere in this issue).

# THE SOUTHERN TEXAS ARCHAEOLOGICAL ASSOCIATION

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

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