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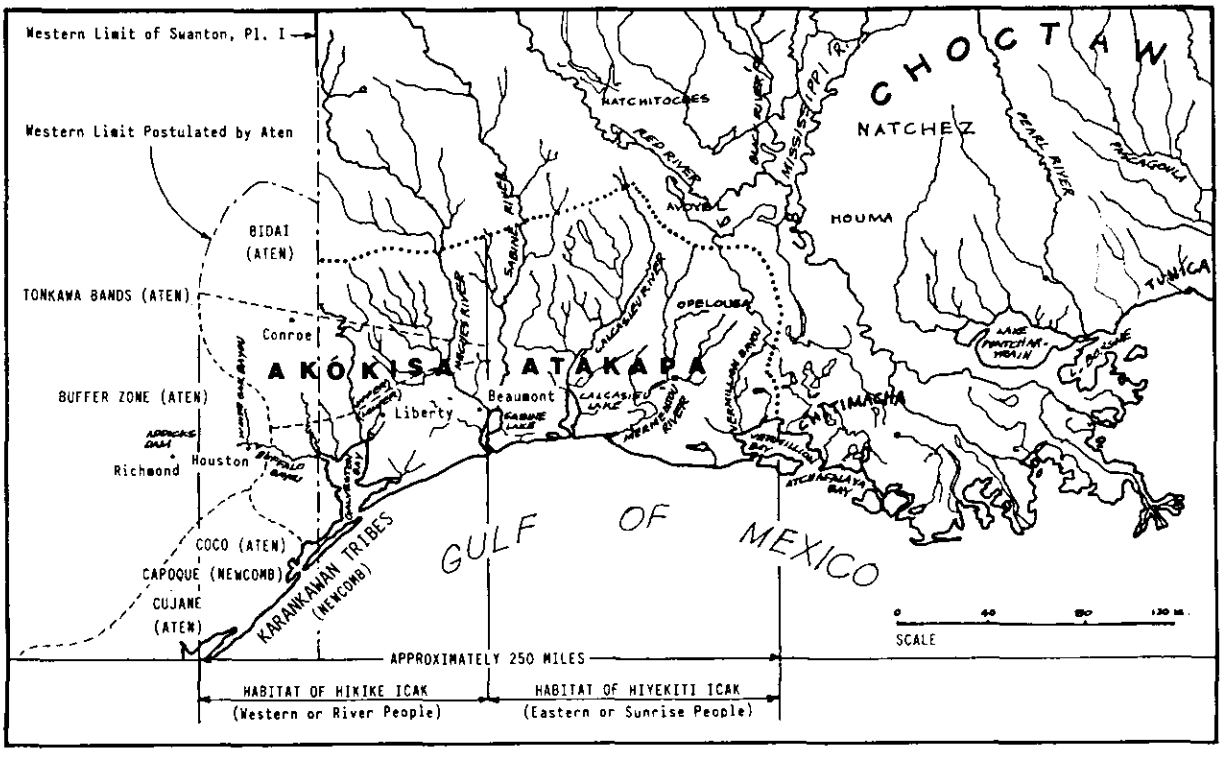

Range of Atakapan Linguistic Stock

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A Review of the Culture and Language of the Inhabitants of Southeast Texas at the Opening of the Historic Period

James L. Glass

Abstract

This report traces the history of bibliographic references to the people and language of Harris County and southeastern Texas from circa 1528 to circa 1722, and subsequent studies through 1932. Included are phonetic, lexical, and etymological examples.

Introduction

The available information concerning the inhabitants of this area at the opening of the Historic period is focused, but insufficient in detail. The material revolves around the dual cultural and linguistic histories of the Atakapans and Akokisas (Orcoquisas). The cultural, or ethnological, history comes from the writings of Alvar Nuñez Cabeza de Vaca (1528) and Simars de Bellisle[1] (1722). Subsequent writings by others (Bossu 1768; Du Pratz 1774; Margry 1879; Vater 1821) were based largely upon de Bellisle's account.

The linguistic and lexical history comes from the *Mémoire* of Jean Béranger[2] (1697-1722), and the work of John R. Swanton and Albert S. Gatschet for the Bureau of American Ethnology of the Smithsonian Institution (BAE) in the 20th century. For a concise history of the BAE, its authors, and an index of its publications (1877-1964), see Judd (1967).

Definitions

To refresh perspectives, the following definitions shall obtain:

1. ATAKAPA: An ambiguous term referring to a group, its language, and its habitat.

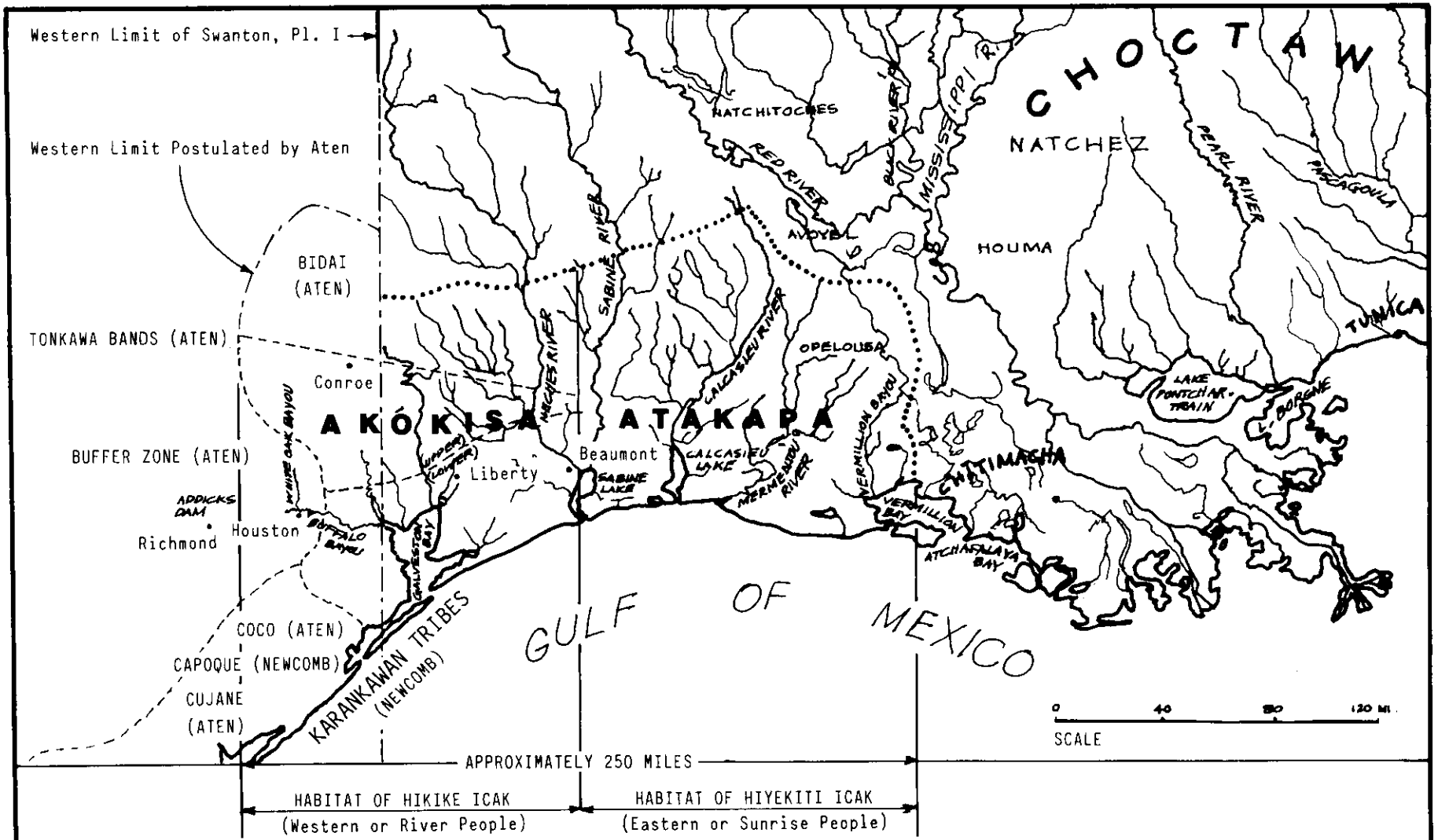
The group received its name from the Choctaws of upper Louisiana and Mississippi: *hatak-apa* (*hatak* = man + *apa* = eats), or "man-eaters." This derogatory epithet originally referred to the people and may have had some basis in fact (Gatschet and Swanton 1932:1; Bossu 1768/Feiler 1962:189). It gradually came to also refer to the language.

The Atakapan language was spoken over an area of some 31,000 square miles (Swanton 1911: Pl. I), with a zone of influence extending beyond its cartographic confinement. As part of the gulf phylum of languages it was, in turn, subjected to outside influences. Swanton found favorable comparisons to the Tunican (Vicksburg, MI) and Chitimachan (Atchafalaya Bay) dialects and declared all three to be variations of the same linguistic stock (Swanton 1919:7,10,56). See Table 1.

The habitat (see Figure 1) was split between two main groups embracing four or five principal bands and smaller subbands. The habitat of the eastern group stretched from Vermillion Bay, Louisiana, to the lower Neches River area, with "very open borders" (Aten 1983:39; Swanton 1911: Pl. I). This area was identified as "the Attakapas" on 19th century maps; as "Attakapas, Louisiana"

[1]This is the correct, modernized spelling adopted by du Terrage and Rivet (1919) and Folmer (1940). Bossu (1768)/Feiler (1962:185) and Swanton (1911:362) adopted "de Belle-Isle." Du Terrage and Rivet (1919: 417, n.2) asserted that it was also spelled "Seymars de Bellile" and "Beslile" in Béranger's manuscript.

[2]This spelling was transcribed from Béranger's *Mémoire* by du Terrage and Rivet (1919). Swanton spelled it this way, but also as "Bérenger."



Base map, rivers and names, except where indicated, after Swanton 1911: Plate I

------ Geographic limits after Aten 1983: Figure 3.1 - Reconstructed territories of native groups in the early eighteenth century

····· Geographic limits of the Atakapan linguistic stock after Swanton 1911: Plate I

For (Newcomb) references see Newcomb 1961: 35, Map 1 - Texas Tribes of the Western Gulf Culture Area

Figure 1. Range of Atakapan Linguistic Stock

in narratives; and modern Franklin was known as "Attakapas Post" (Hunter 1860:5,6,7; Gatschet and Swanton 1932:3). The overlapping habitat of the western group reached from the Neches to Galveston Bay and beyond, including the "whole" of Galveston Bay and extending up the Trinity River on both sides to a point beyond Bedai [present Bidias] Creek (Swanton 1919:8). Swanton pointed out that, though the name "Atakapa" was used in a general, indefinite sense, the term "is never known to have been applied to any Indians except those between Vermillion and Galveston bays, i.e., to those constituting what is now called the Atakapan linguistic stock." (Swanton 1911:360-63)

2. AKOKISA: Despite the opprobrious Choctaw name, the Atakapans called themselves "the people" (icak [ishak]). The eastern people in Louisiana, who came to bear the name "Atakapa," called themselves *hiyekiti icak*, "eastern people" or "sunrise people." The western group in Texas, who came to bear the name "Akokisa," called themselves *hikike icak*, "western people" or "river people" (Gatschet and Swanton 1932:1). It is this name that was corrupted by the French to "Akokisa." (See "Phonetics.")

3. ORCOQUISAC: This is the Spanish corruption of *hikike icak* that now refers only to the site of the fort and mission settlement founded on the Trinity River delta in 1756.

The Cultural History

The archeological record of native groups in this area dates to about 10,000 years ago, to Early Paleo-Indian times (Patterson 1986:15), but the historic record dates only to the early 16th century. The two primary sources for the social and cultural history of the Akokisas are well known and require only a brief summary.

In 1528 Alvar Nuñez, at the age of 38, was shipwrecked on a Texas coastal barrier island and spent more than eight years finding his way back to civilization. He published his *Relación* of his adventures in 1542. He named his landfall the "Island of Ill Fate" ("Mal Fondo," now corrected to "Mal Hado" or "Malhado"), where he found two tribes, the Capoques and the Hans. Scholars have identified the Capoques as the Cocos, related to the Karankawas and Cujanes (Barker 1904:304; Davenport and Wells 1919:133-34; Nuñez 1542/Bandelier 1905:65). The Hans have been identified as the Akokisas, the name being derived from an^3 or a^n, the Atakapan word for "house" (Aten 1983:34-35; Gatschet and Swanton 1932:2; Newcomb 1961:317). Nuñez described the social customs and day-to-day living conditions of the Akokisas in respectable detail.

In 1719 Simars de Bellisle, at the age of 24, was similarly abandoned on the island of Galveston by the impatient captain of the *Marechal d'Estrée*, watched his four companions die, and became a slave of the Akokisas for fifteen months, until he contrived an escape through Natchitoches in 1721 (Wheat 1953:159; Folmer 1940:204-223). He identified the Indians as the "Caux," who were later identified as the Akokisas by Folmer and Swanton. De Bellisle described his daily life and customs in the same manner as Nuñez. Both accounts lack sufficient data for ethnological reconstruction. For a comprehensive overview see Wheat (1953:157-164).

The Linguistic History

The collections and studies of Béranger, Swanton, and Gatschet are not as well known and require some explanation. After de Bellisle returned safely to Louisiana in 1721, he was named interpreter for a return expedition led by Bénard de la Harpe to explore Galveston Bay (Baie St. Bernard) and, incidentally, to recover the cannons of the La Salle penetration in 1684-87. The party sailed

[3]Pronounced "ang" (see "Phonetics"), not like the Spanish *tilde* sound.

from Biloxi on 17 August 1721 aboard the *Subtile* under the command of Jean Béranger and his second, Valadon. In addition to the crew and several supernumeraries there were also 15 soldiers. Béranger was an old sea wolf (*vieux loup de mer*, du Terrage and Rivet 1919:408) who had sailed the Bahamas Passage seven times and had made ten crossings of the Gulf of Mexico and the Caribbean from Louisiana to Cuba and Santo Domingo prior to 1718. In that year he was captain of the *Neptune* on the Mississippi River and, still in the same year, led an expedition to take possession of St. Joseph's Bay (Aransas Bay). He had first-hand knowledge of the coastal natives and was surprised to find that those in the vicinity of Galveston Bay understood Spanish (Du Terrage and Rivet 1919:409, citing a journal entry of 25 August 1720). The *Subtile* arrived at Galveston Island on 27 August 1721 (Folmer 1940:227), where de la Harpe captured nine Akokisas, some of whom were identified by de Bellisle as his former tormentors. On the return voyage Béranger collected a vocabulary of either 45 words, according to Swanton, or 107 words, according to du Terrage and Rivet. He also provided rudimentary guides to articulatory phonetics and brief examples showing the Spanish influence on Atakapan words. See Table 2. The only Akokisan proper names recorded were "Quaquidelant"[4] and "Anjelica," who was the surrogate "wife" of de Bellisle. These names are not consistent with pure Atakapan tribal names for women, as "Kic'Tōt" or "Yoyo't," showing an already prevalent European influence (Gatschet and Swanton 1932:15). Béranger's manuscript was at last resurrected by du Terrage and Rivet in 1919, 198 years later. A copy also found its way into the Newberry Library in Chicago.

Of course, there are no prehistoric linguistic records, but one can postulate a rather long period of development to the stage at which Atakapan was recorded in 1721-22. At that time there was a high degree of phonetic refinement encompassing objective prenomial affixes (both singular and plural), dental silibants, prepalatal and palatal sibilants, and a bilabial *f* (*v*) (Swanton 1919:11). Later, between 1885 and 1932, Gatschet would develop a vocabulary of 839 word stems forming hundreds of words (Gatschet and Swanton 1932).

Phonetics

The Atakapan language had accented syllables. They were not indicated by Béranger or du Terrage and Rivet, who preferred to transliterate Atakapan words and sounds into unaccented French equivalents, rather than to make an attempt at phonetic transcription. Gatschet and Swanton, however, tried to reproduce Atakapan sounds as closely to the original as possible. In order to accomplish that, they adopted a system for the "Phonetic transcription of Indian languages" published in the report of the committee of the American Anthropological Association charged with unifying the work of American philologists.[5] They further selected the committee's second method of recording vowels, viz. *a* as in father, *ä* as in fare, *á* as in final, *ă* as in hat, *ē* as *a* in fate, *e* as in met, *ī* as in pique, *ō* as in note, *o* almost as in not, *ū* as in rule, and *u* as in put. In addition, *ñ* was pronounced like *ng* in sing, not like the Spanish *ñ*; *f* was pronounced like the Spanish *v*; and *c* was pronounced *sh*. The use of this method of recording sounds provides unfamiliar pronunciations that are closer to the original tongue of Harris County:

Atakapa: Texts collected by Gatschet in Lake Charles in 1885 recorded the articulation of the name as "Ta'kapo" or "Ta'kapa," dropping the first "A" (Gatschet and Swanton 1932:16,17). In modern usage the accent should be on the second syllable, and the name should be written as "Atákapa."

[4] Quaquidelant was the oldest member of the tribe and was questioned about La Salle's cannons, which were not found.

[5] Smithsonian Miscellaneous Collections 66(6) (Swanton 1919:11)

Hikike icak: Gatschet and Swanton (1932:6,7) provide a complete list of Atakapan phonetic inscriptions. The phonetic spelling of the original name was given as "hikī'ke i'cak" (Gatschet and Swanton 1932:40), meaning that it was pronounced to Gatschet and Swanton as "hikee'kuk i'shock." Rapidly delivered, the words merge to become "hikee'kuhshock." By 1885 the last syllable had evolved into a longer *ā* sound to become "hikee'kuhshake."

Akokisa: As previously mentioned, this name is the French corruption of ***hikike icak***, analyzed above. In modern language, if one is to speak true to the spirit of the original language, an accent should be on the second syllable to correspond to that on the same syllable of "hikī'ke," and written as "Akókisa," in the same manner as "Karan'kawa." With evidence that *c* was pronounced as "sh," a purist might insist upon a spelling of "Akókisha."

Population

There do not seem to have been very many Akókisans. While neither Nuñez nor de Bellisle gave any numbers, de Bellisle wandered around for about three weeks before stumbling onto three Akókisans looking for birds' eggs at the beginning of summer. Two days later he saw "five or six pirogues" coming down from the Trinity, accounting for perhaps another dozen men (Folmer 1940:216). The following year (1720) he wrote that "all the men" went to hunt bison and killed 15 or 16 out of a herd of from 80 to 100 animals, not a large number (Folmer 1940:218-19).

David Dickson, U. S. Consul to Mexico, took a census of all Texas Indian males in 1827. He counted 40 "Cockes" (Cocos) and 30 "Coronquewas" at the "Seacoast and Bay Matagorda," but did not mention Akókisas or Atákapans or any name even remotely similar (Dickson 1827).

In 1865 Dr. John Sibley, of Natchitoches, counted 80 Atákapan men, including 30 Tunicas and Houmas who had settled among them (Swanton 1911:362). In 1907 and 1908 Swanton found only nine in Beaumont, Texas, and in West Lake and Lake Charles, Louisiana, who still spoke Atákapan. By way of contrast, Dickson counted 8000 Comanches on the Cow Bayou tributary of the Brazos River.

The Eastern Dialect

While not germane to this report, the lexical collection of the ***hiyekiti icak*** rests solely upon an 1802 manuscript of Martín Duralde. He gathered a vocabulary of 287 words from a man named Murray and from his interviews at "Attackapas Post." On 23 March 1802 he compiled them into a letter/manuscript entitled "Two vocabularies of the Indian nations, the Chetimaches and Attacapas, being a letter written to Sir William Dunbar [of Natchez], respecting some of the curiosities of the country, to be communicated to the Society of the North [The American Philosophical Society, Philadelphia]." A translation was made by Dr. W. M. Carpenter and dated 23 August 1848 (Gatschet and Swanton 1932:3,4). Interested readers are referred to Gallatin (1836).

Summary

This report has presented a review of primary source historic records of the native American inhabitants of present Chambers, Galveston, and Harris counties. It has briefly traced the ethnological history. In more detail, it has also traced the linguistic history, and has suggested revisionist pronunciations of "Akókisha" and "Atákapa" based upon the evidence. In addition to references cited, a bibliography is furnished for further research into both histories.

Table 1. A comparative vocabulary (excerpts) of the Tunican, Chitimachan, and Atákapan languages (Swanton 1919:46-56)

TUNICAN	CHITIMACHAN	ATAKAPAN
păxka, flat	pak′, flat; păc, narrow or thin	pax, thin, flat pac, slim or lean
cūrū, to smoke	cip, to smoke tobacco	tsīct, tobacco pipe
cī, a male human being	asi, male person or animal	ca, icak, a person or human being
cixpu, to prick or to sting	cekutci, to wound	caki, to wound
ciki or hiki, skunk or badger	Kīctă-ă, skunk (?)	cikitic, skunk
tcal, to split or break lengthwise; a branch	cap, to split; atcu, fork of a tree	tca(l), to break lengthwise, to crack
huxtci, woman	kitca, woman	kic, woman

Table 2. Lexical and articulatory comparisons

English	French	Fr. Pronunciation of Béranger's Atákapan (du Terrage & Rivet)	Spanish	Atákapan (Béranger: 8/25/1720)	Atákapan (Gatschet & Swanton)	Karankawan (du Terrage and Rivet)
Hatchet	Hache		Acha, machete	Matchita	Pa-i	
Needle	Aguile		Aguja			Aguíya
Knife	Couteau		Cuchillo	Kusila	Kuts	
Biscuit	Biscuit	Couejam	Panecillo redondo; bizcocho	Kuezam (kuecham)	Cu′kwāk hidso′m (little bread)	Kwiamoya (kwiam = corn)*

*Possibly indicating familiarity with intergroup agriculture.

Table 3. Bibliographic variations of the names of coastal tribes

AKOKISA	ATAKAPA	COCO	CUJANE	KARANKAWA	COPANO
Acconcesawa	Atákapa	Coaco	Chomani	Caranahua	Coapite
Akansissa	Atac-Apa	Coaque	Choumani	Carancaguaca	Copan
Arkokisa	Attacapa	Cocke	Cohani	Carancaguase	Copane
Caux	Attakapa		Culia	Carancahua	Kopano
Charruco			Quoan	Carancuhua	Quapaw
Coquiza			Xoumane	Carancawa	
Han				Carencaguas	
Horcaquisa				Carancahuese	
Occokesaw				Coronquewa	
Ocosaus				Craunk, Kronk	
Orcoquisa				Craunkaway	
Orcoquiza				Karankaway	
Orquisaco				Taracahuese	
1827 Census Figures (Dickson)					
-0-	-0-	40	-0-	30	120

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The Status of Research on the Prehistory of Southeast Texas

Leland W. Patterson

Introduction

Although there is no long history of archeological research in Southeast Texas, the prehistory of this region has become fairly well developed over the last 20 years. An extensive data base now exists that includes state site records and over 400 published reports and articles (Patterson 1986a). Data is now available for this region on all prehistoric time periods of human habitation; it covers a wide variety of subjects such as chronology, technology, settlement patterns, and faunal subsistence patterns. Several thousand archeological sites are now recorded in this region, with over 500 in Harris County alone. Non-specialists may not appreciate the amount of data available for this region.

Southeast Texas as defined here covers an area from the Sabine River on the east to the Colorado River on the west, and inland from the coastal margin for approximately 100 miles. This area involves 21 counties.

The entire prehistory of Southeast Texas is characterized by a broad-based hunting and gathering lifeway. There are some intraregional differences in the details of lifeways, especially between the coastal margin and the inland coastal plain in the ceramic period. Technological changes occurred over time, but did not seem to greatly affect overall lifeway patterns.

This paper briefly reviews the current status of knowledge of the prehistory of Southeast Texas, and suggests areas for future research. Some comments are also given on the relative importance of various research topics.

History of research

Detailed archeological research in this region begins with Wheat's (1953) excavations west of Houston in the early 1950s for the River Basin Survey program. This was followed by Texas Archeological Salvage Project work in the Lake Conroe (Shafer 1968) and Lake Livingston (McClurkan 1968) areas, and an excavation project by the Houston Archeological Society in Liberty County (Aten 1967) in the 1960s. Also, several projects were done on the coastal margin in the 1960s and early 1970s (Shafer 1966; Aten 1971; Ambler 1967), and Aten (1983) eventually published a book summarizing research on the coastal margin of Southeast Texas. In the early 1970s, the Houston Archeological Society became active in publishing results of research projects by its members, and HAS publications now constitute a substantial portion of the archeological literature of this region, including two more recent major excavation projects (Patterson 1980; Patterson et al. 1987). The HAS field research program is continuing, with several research and survey projects completed each year. Texas A&M and Prewitt and Associates have been the most active professional groups in this region in the 1980s.

Chronology

As with many regions of the United States, the details of the Early Paleo-Indian period of 12,000 to 10,000 years ago are not well known for Southeast Texas. There are some scattered finds of Clovis points (Hester 1980; Huebner 1988; Long 1977; Patterson 1986b; Suhm and Jelks 1962:177; Wheat 1953), and only one confirmed find of a Folsom point in this region (Patterson et al. 1987). It should be noted that there appears to be an overlap in time between Folsom and side-notched

projectile point types at one site, at a radiocarbon date of 9920 ±530 B.P. (Patterson et al. 1987). Side-notched points seem to start at some undetermined time in the Early Paleo-Indian period.

While few details are available for narrow time intervals, a fairly good summary can now be given for broad time periods for prehistoric occupations after 10,000 years ago. A large number of sites are now identified with complete occupation sequences for the Late Paleo-Indian, Archaic, Early Ceramic and Late Prehistoric periods (Patterson 1983). There are now some radiocarbon dates from excavated sites for all time periods in this region, including the Paleo-Indian and Early Archaic periods. Many radiocarbon dates for the coastal margin are after 1900 years ago (Aten 1983:Table 14.1). It should be noted that time period names are related to time intervals only, and not to any specific differences in lifestyles.

Settlement patterns and demography

Prehistoric campsites are located mainly near water sources on the inland coastal plain and near shellfish resources on the coastal margin. Few inland sites are found more than a few hundred feet from streams or lake shores in the inland area. Even though prehistoric Indians in Southeast Texas were nomadic, stable repetitive settlement patterns are demonstrated for at least 10,000 years by the large number of prehistoric sites that have occupation sequences from the Paleo-Indian period through the Late Prehistoric (Patterson 1983).

Inland Indians seem to have become more mobile in the Late Prehistoric (Patterson 1976). The same areas near water sources were used for campsites by these later Indians, but they moved more frequently than Indians of earlier periods. After a population peak in the Early Ceramic period, there seems to have been a population decline for inland Indians in the Late Prehistoric, which might be related to higher mobility (Patterson 1986c). These changes possibly indicate scarcer food resources and/or changes in food resource scheduling patterns.

Indians on the coastal margin practiced a more sedentary lifestyle than their inland counterparts, spending several months per year at coastal shell midden sites in warmer months, and moving only slightly inland to harvest other food resources in colder months (Story 1985:48). Unlike the inland area, there was a continuous population increase on the coastal margin during both the Early Ceramic and Late Prehistoric periods (Aten 1983; Patterson 1986c), possibly related to higher availability of local food resources.

Subsistence patterns

While few floral remains are preserved at archeological sites in this region, studies are now available for several sites that give a detailed picture of faunal subsistence patterns, for both inland and coastal areas (Dillehay 1975; Hall 1981; McClure 1986; Patterson et al. 1987; Wheat 1953). There is no evidence of a megafauna hunting tradition in the Paleo-Indian period, as on the Great Plains. A broad-based hunting and gathering lifeway was practiced from the earliest occupation of the region, as shown by excavation results at sites with long occupation sequences (Patterson 1980; Patterson et al. 1987).

Indians in this region were somewhat omnivorous, eating everything from small animals such as rat, turtle and snake to large animals such as deer and bison. Indians on the coastal margin used terrestrial faunal resources similar to those of the inland Indians, but also used a significant amount of marine food resources such as fish and shellfish. Rangia and oyster shell middens are prominent features of many prehistoric sites on the coastal margin. Some aquatic food resources, such as alligator and fish, were also used by inland Indians. Seasonal rounds for subsistence activities by

inland Indians are still not well defined. Significant use of freshwater shellfish on the inland coastal plain was confined to certain local areas.

External relationships

External relationships can be discussed in terms of trade and other interactions between regions (Patterson 1988). No data for well-defined trade patterns exists for Southeast Texas, but there is evidence of occasional trade. Small amounts of Edwards Plateau flint are found at many sites in the central and western inland areas of this region. A few boatstones made of material from Arkansas have been found at Late Archaic period sites (Hall 1981). Marine shell ornaments from the coastal margin are occasionally found in inland Southeast Texas and in Central Texas.

Southeast Texas shares many projectile point types with the adjacent area of Louisiana (Patterson 1975). The western portion of Southeast Texas shares several projectile point types with Central Texas (Patterson 1983:Table 1), with interregional contacts apparently through the Colorado and Brazos River systems. Since the Perdiz arrow point is found in Southeast Texas about 600 years earlier than in Central Texas, there is a possibility that the Perdiz point type diffused to Central and Northeast Texas at the start of the Toyah phase (Patterson 1988).

Technology

Lithic technology is now well defined in this region for all time periods. Lithic raw materials were obtained from fairly local sources, usually within 20 to 50 miles of campsites. Flake blanks were brought to campsites and often heat treated before use in the manufacturing of projectile points. Although some formal heavy unifacial stone tool types can be found in the Paleo-Indian period (Patterson et al. 1987), the entire prehistoric period in this region is dominated by use of utilized flake tools, often casually selected from bifacial thinning debitage. Lithic technology was much more important for the inland than for the coastal area.

Projectile point sequences are now defined in this region for broad time periods (Patterson 1983:Table 1). Future data may allow narrower time sequences to be defined, but several projectile point types are known to have been made for long time periods. There are some intraregional differences in projectile point type distributions in various time periods, especially from east to west (Patterson 1983:Table 1, 1988).

A ceramic sequence, starting at A.D. 100, has been defined by Aten (1983:Figure 14.1) for the Galveston Bay area, but ceramic sequences for other subregions are not well defined. Use of pottery was less important for inland Indians than for coastal Indians, and the use of pottery declined at inland sites in the Late Prehistoric (Patterson 1976:Figure 3).

Bone tools have been recovered from sites throughout this region. Shell tools and compound fishhooks were used at coastal sites. Fired clayball hearths are prominent features at many inland sites in all time periods (Patterson 1986d). Because of the perishable nature of materials used, little is known for this region concerning clothing, shelter and complete weapon systems.

Mortuary practices and nonutilitarian artifacts

Formal mortuary practices were used only during some time periods and in only some subregions, with isolated burials being more common. There are a number of formal burial sites associated with the coastal margin in ceramic time (Aten et al. 1976), possibly due to a more sedentary lifeway in this subregion. There are two large inland burial complexes in Wharton (unpublished) and Austin (Hall 1981) Counties on the west side of this region. The use of nonutilitarian items, such as bone

and shell ornaments, is known mainly from grave goods at mortuary sites. Nonutilitarian items do not seem to have been of general importance to the nomadic hunter-gatherers of this region.

Research suggestions

Because of the rapid destruction of archeological sites by erosion and modern human activities, the highest priority should be given to increasing the regional data base by doing more uniform regional surveys and by obtaining more representative samples of all types of cultural resources present in the region. In regard to research on specific subjects, priority should be given to subjects where suitable data are available, instead of simply using a "laundry list" of topics. Some suggested subjects include refinement of artifact type sequences, definition of seasonal subsistence rounds, more details on interregional interactions and explanation of Late Prehistoric population decline in the inland area. Excavation and dating of more well-stratified sites is especially needed.

Summary

This brief paper can do little more than note the large body of data now available on the prehistory of Southeast Texas. More detailed general syntheses are now possible for various time periods and subregions, and it will be increasingly possible to do more explicit problem-oriented research. Discovery and preservation of more archeological data remains the most important activity in this region.

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The Vertebrates of 41FB32

W. L. McClure

Introduction

The Houston Archeological Society conducted test excavations at Site 41FB32 in November 1986. Some results of that effort were reported earlier (Patterson and Hudgins 1987). The artifact assemblege indicates that the site had been occupied during the Middle to Late Archaic periods. The invertebrate remains will be analysed by Raymond Neck. The vertebrate and floral materials that were recovered are reported here.

The site is on a ridge that projects from the main high terrace on the east bank of the San Bernard River in Fort Bend County, Texas. This buried clam shell midden was discovered when chert chips and fragments of shell were noticed on the surface. The activity of pocket gophers is the apparent cause of the materials being at the surface.

Methods

Soils from the excavations were washed through 1/4-inch mesh screens. In addition, approximately 1% of the matrix from Pit F was segregated and washed through finer-mesh screens under laboratory conditions. The bones were identified by using the comparative collections of the Houston Archeological Society and of the author. Dr. Walter W. Dalquest of Midwestern University confirmed the identity of the *Microtus* and *Perognathus*.

Results

Charred seeds of hackberry (*Celtis* sp.) were recovered at all levels above 90 cm EL in the fine-screen samples and in only one other pit. A charred bur of coast sandbur (*Cenchrus incertus*) was recovered in Pit E at 40–50 cm EL. Several unidentified seeds, only one of which is charred, were recovered in the upper level in the fine-screen sample. Vertebrate remains that were recovered comprise more than 4600 bones, fragments and scales with a total weight of nearly 3 kg. Condition of the bones is fair. Excluding the fine-screen material, 28% of the bones had been burned. Of all the bones examined, 88% were too fragmentary to identify.

Six varieties of fishes, 3 amphibians, 15 reptiles, 1 bird and 11 mammals were identified. Six species that were not represented in the 1/4-inch mesh materials were identified from the fine-screen sample. Fish bones comprise 10%, reptile 20% and mammal 70% of the number of recovered vertebrate items. Amphibian and bird bones are less than 1% each.

Vertebrate species list

Fishes:	
Gar	Lepisosteidae
Bowfin	*Amia calva*
Catfish	*Ictalurus* sp.
Buffalo	*Ictiobus* sp.
Freshwater drum	*Aplodinotus grunniens*
Sunfish	*Lepomis* sp.
Unidentified fishes	genera unknown

Amphibians:	
Lesser siren	*Siren intermedia*
Bullfrog	*Rana catesbeiana*
Frog	*Rana* sp.
Reptiles:	
American alligator	*Alligator mississippiensis*
Mud turtle	*Kinosternon* sp.
Stinkpot	*Sternotherus odoratus*
Box turtle	*Terrapene* sp.
Red-eared slider	*Trachemys scripta*
Softshell	*Trionyx* sp.
Unidentified turtles	genera unknown
Racer	*Coluber constrictor*
Rat snake	*Elaphe* sp.
Mud snake	*Farancia abacura*
Kingsnake	*Lampropeltis* sp.
Coachwhip	*Masticophis flagellum*
Water snake	*Nerodia* sp.
Brown snake	*Storeria dekayi*
Western diamondback rattlesnake	*Crotalus atrox*
Cottonmouth	*Agkistrodon piscivorus*
Unidentified snakes	genera unknown
Birds:	
Bobwhite	*Colinus virginianus*
Unidentified birds	genera unknown
Mammals:	
Eastern mole	*Scalopus aquaticus*
Eastern cottontail	*Sylvilagus floridanus*
Black-tailed jack rabbit	*Lepus californicus*
Attwater's pocket gopher	*Geomys attwateri*
Hispid pocket mouse	*Perognathus hispidus*
North American beaver	*Castor canadensis*
Hispid cotton rat	*Sigmodon hispidus*
Vole	*Microtus* sp.
Probable coyote	cf. *Canis latrans*
White-tailed deer	*Odocoileus virginianus*
Human	*Homo sapiens*
Unidentified mammals	genera unknown

Species accounts

Fishes

Fish remains comprise 10% of the recovered vertebrate material. Fish bones were recovered in all pits and at all levels that included vertebrate remains. At least six varieties of fish are represented

and all are common in Fort Bend County today.

Gar, *Atractosteus* sp. or *Lepisosteus* sp.

Gar are represented by 144 scales, 23 vertebrae, 7 sculptured head bone fragments and a tooth. Large vertebrae and scales are probably of the alligator gar (*Atractosteus spatula*) and smaller elements are either of that species or of the genus *Lepisosteus.*

Bowfin, *Amia calva.*

Two vertebrae of the bowfin were recovered.

Catfish, *Ictalurus* sp.

Five fragments of pectoral spine of catfish were recovered.

Buffalo, *Ictiobus* sp.

An opercular of the buffalo was recovered.

Freshwater drum, *Aplodinotus grunniens*

An otolith of the freshwater drum was recovered.

Sunfish, *Lepomis* sp.

Two pelvic spines of sunfish were recovered.

Unidentified fishes

Fish bones that were not identified to generic level include 201 vertebrae, 71 spines, 1 dentary fragment and 2 other fragments. These are probably of the above varieties other than gar or bowfin. Most of them could be from sunfish of about 10 cm length.

Amphibians

Seven bones of amphibians were recovered. Three varieties are included and all are common in Fort Bend County today.

Lesser siren, *Siren intermedia*

One vertebra of the aquatic salamander was recovered.

Bullfrog, *Rana catesbeiana*

Two vertebrae, an ilium and a urostyle of bullfrog were recovered from three different pits.

Frog, *Rana* sp.

Two frog vertebrae were recovered in the fine-screen sample. They match the southern leopard frog (*Rana sphenocephala*) but could be of another species of the genus.

Reptiles

Reptile bones comprise 20% of the recovered vertebrate material. This includes one crocodilian, five turtle species and nine snake species. Snake and turtle bones were recovered in all pits and at all levels that included vertebrate remains. All are common in Fort Bend County today.

Crocodilian:

American alligator, *Alligator mississippiensis*

Alligator bones were recovered from all but one of the pits and include 8 dermal bone fragments and a fragment of a mandible.

Turtles:

Mud turtle, *Kinosternon* sp.

A total of 39 fragments of carapace and plastron of mud turtle were recovered from all pits. Based on current ranges, the variety represented is probably the Mississippi mud turtle (*Kinosternon subrubrum hippocrepis*).

Stinkpot, *Sternotherus odoratus*

Four fragments of carapace and plastron of this species were found in two pits.

Box turtle, *Terrapene* sp.

Fragments of carapace and plastron of box turtle were recovered from all but one pit. These 35 bones could be of either *Terrapene ornata* or *T. carolina.*

Red-eared slider, *Trachemys scripta*

A total of 42 fragments of carapace and plastron of this turtle were recovered from all of the pits. It is possible that some of these bones could be of *Pseudemys texana.*

Softshell, *Trionyx* sp.

Eight fragments of bone of this genus were recovered in four of the pits. Based on current relative numbers in the local population, it is probable that *T. spiniferus* is represented.

Unidentified turtles

Numerous fragments of carapace and plastron and two scapulae of turtle were not assigned to species. They probably do not represent any variety other than the above. (664 bones).

Snakes:

Racer, *Coluber constrictor*

One vertebra of this species was recovered.

Rat snake, *Elaphe* sp.

Ten vertebrae of this genus were recovered from four pits.

Mud snake, *Farancia abacura*

Two vertebrae of this species were recovered from one pit.

Kingsnake, *Lampropeltis* sp.

Two vertebrae of this genus were recovered from one pit.

Coachwhip, *Masticophis flagellum*

Eleven vertebrae of this species were recovered from four pits.

Water snake, *Nerodia* sp.

Eight vertebrae of this genus were recovered from four pits.

Brown snake, *Storeria dekayi*

Three vertebrae of this small species were recovered from the fine-screen material.

Western diamondback rattlesnake, *Crotalus atrox*

Three vertebrae of this species were recovered from three pits.

Cottonmouth, *Agkistrodon piscivorus*

Seven vertebrae of this species were recovered from three pits.

Unidentified snakes

A total of 59 vertebrae that were too fragmentary to assign to variety of snake were recovered from all pits.

Birds

Nine bones of bird were recovered.

Bobwhite, *Colinus virginianus*

The right humerus of a bobwhite was recovered.

Unidentified birds

Eight bones of several varieties of bird were recovered but were too fragmentary to identify. These include fragments of a premaxilla, 2 cervical vertebrae, a coracoid, 2 sternums, a carpometacarpus and a femur. Recovery was from three pits at various levels.

Mammals

Mammal bones comprise 70% of the recovered vertebrate material. Only 5% of these were identified as to the kind of animal. At least 11 varieties of mammal are included. Unless indicated below, the species are common in Fort Bend County today.

Eastern mole, *Scalopus aquaticus*

The humerus of a mole was recovered below 40 cm EL.

Eastern cottontail, *Sylvilagus floridanus*

The left mandible with 4 cheek teeth was recovered.

Black-tailed jack rabbit, *Lepus californicus*

A burned astragalus and a metacarpal of the jack rabbit were recovered.

Attwater's pocket gopher, *Geomys attwateri*

Gopher bones were recovered in four of the six pits between 20 and 90 cm EL. This includes 3 right mandibles, a skull fragment, a scapula, 2 humeri, a radius, an ulna, 2 tibiae and 2 upper incisors.

Hispid pocket mouse, *Perognathus hispidus*

The distinctive upper incisor of this mouse was recovered from the fine-screen test column below 20 cm EL. Although this species has not been recorded from Fort Bend County, it has been collected a few times in adjoining counties to the north and further west (Schmidly 1983:340).

North American beaver, *Castor canadensis*

The left mandible of a beaver was recovered below 50 cm EL. Once common throughout Texas, this species was exterminated during modern times but has now been reintroduced into the area.

Hispid cotton rat, *Sigmodon hispidus*

Bones of this ubiquitous rat were recovered between 10 and 50 cm EL. This includes 3 mandibles, an upper incisor, a tibia and an astragalus.

Vole, *Microtus* sp.

A lower M3 of a vole was recovered from the fine-screen test column below 30 cm EL. This particular tooth is not diagnostic for separating the prairie vole, *Microtus ochrogaster*, from the woodland vole, *M. pinetorum*. The nearest present range of the genus is no closer than 250 km to the north of the site (Schmidly 1983:207,305). Because of the probable prairie environment at the time of the deposit, it is most likely that the prairie vole is represented.

Probable coyote, cf. *Canis latrans*

The collection includes 3 worn lower incisors, a fragment of a canine and 6 phalanges that match those bones of a coyote.

White-tailed deer, *Odocoileus virginianus*

Nearly 150 bones of deer were recovered from all pits and at all levels that included bones. These include a maxilla, 5 mandibles, 28 teeth, petrous bone, atlas, cervical vertebra, scapula, 5 humeri, 7 radii, ulna, 2 metacarpals, 12 carpals, 4 ribs, sacrum, pelvis, femur, patella, 7 tibiae, malleolus, 7 metatarsals, 5 calcanei, 3 astragali, 4 centroquartals, 6 metapodial condyles, 3 phalanges and 4 sesamoids. The small, compact bones are the only ones that are not fragmentary. The humeri, radii, tibiae and metapodials are represented by distal and proximal ends. If the entire assemblage is considered as a unit, then, based on the most common element, the right metatarsal, no fewer than 4 deer were butchered at the site.

Human, *Homo sapiens*

A human patella was recovered from Pit E below 50 cm EL, and 2 phalanges of a human hand were recovered from Pit F below 80 cm EL.

Unidentified mammals

The collection includes more than 3000 fragments of bone that were unidentifiable. Most of the fragments could be of deer bone.

Discussion

All of the animals in the assemblage would have been available from the river, wooded area adjacent to the river and the nearby prairie. The clams, fish, turtles, snakes and deer were recovered in all pits and at all depths with no apparent differences either horizontally or vertically. They must have been regular parts of the diet of the people during the entire occupancy of the site. The amphibians, birds and small mammals are in much smaller numbers and, although edible, some of them may not have been food items of the humans. Some of them may have been within the

digestive tracts of the alligators, snakes or coyote at the times that those animals were killed. At least one of the gophers probably died in its tunnel.

Catching the small fish would have required special techniques since they were too small to take a hook. Nets may have been used or they could have been caught by hand in ponds or old channels that were drying up after high water.

Most of the burned bones do not have the appearance of having been burned during roasting of the meat. The large number of burned bones suggests that they may have been thrown into a fire or had been on the ground where fires were built. Some of the turtles may have been cooked in their shells.

The variety of deer bones indicates that the entire animals were being butchered at the site. Butchering marks are on three deer bones. Cut marks from a sharp-edged knife are on a phalanx #2 and a right astragalus. A hack mark from a stone tool is on the distal half of a right humerus. Several of the bones had been gnawed by small rodents.

A few human bones from two separate pits indicates that burials may have been badly disturbed at some time in the past. They could also represent human remains that had been left on the surface and scattered by scavenging animals.

Recovery of a vole from this site at a level that dates from the Archaic period is significant for reasons other than possible indications of the diet of the people. The only modern records of the genus from the Gulf Coastal Prairie are 26 specimens collected by Vernon Bailey in Calcasieu Parish, Louisiana in 1899 (Lowery 1974:262) and one collected in Hardin County, Texas, in 1902 (Schmidly 1983:305). Subsequent attempts to obtain voles in the same localities and elsewhere have been unsuccessful (Lowery 1974:262) and the vole is considered to be extinct in the Gulf Coastal Prairies.

The faunal analysis by L. M. Flynn in the report by D. O. Brown (1983) of a site on Coleto Creek in Goliad County, Texas, includes the vole (*Pitymys* cf. *pinetorum*) in strata that Brown dates to the early part of the time between A.D. 700 and A.D. 1528. At that same site, K. M. Brown (1987) reported the vole (*Microtus* sp.) from a stratum that has been dated to 11,550 ±800 B.P. Slaughter and McClure (1965) recorded the vole (*Microtus* cf. *ludovicianus*) from the late Pleistocene Epoch at Sims Bayou in Harris County, Texas. The deposits were dated between 25,000 and 50,000 B.P. Based on the varieties of extinct and extant mammals, other than voles, Slaughter and McClure proposed that the ecology of the site at the time of the deposits was similar to the current ecology of the lower Texas coast.

Based on geography, it is probable that all of these specimens are the prairie vole (*Microtus ochrogaster*) and the species had a range throughout the coastal prairies from west of the San Antonio River to east of the Sabine River. Thus the present specimen from Fort Bend County closes the hiatus in the prehistoric range of the animal and these archeological records have added support to the hypothesis of Slaughter and McClure.

However, there is an unanswered question about the prairie vole. Why did the vole become extinct during the last 100 years after having survived the period of extinction of other animals at the end of the Pleistocene Epoch?

Lowery (1974:263) indicates one possible reason for the extinction was the drastic changes in the ecology due to more than a century of extensive grazing and rice culture in the prairies. He also suggested the possibility that the hispid cotton rat and other species may have completely replaced the prairie vole. Bailey (1905) may have given a clue when he reported that he had collected the voles soon after the prairie had burned. Apparently the vole's living habits were such that fires were not adverse to their survival. Perhaps fire was the element that controlled the population levels of the cotton rat. It is probable that fires, whether started by humans or by natural causes, were once common on the prairies. When Europeans settled the country, fires were no longer able

to sweep across vast areas as had been the earlier situation. Thus, the control of grass fires may have been the activity that, combined with other environmental factors, led to the extinction of the vole.

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Another Paleo-Indian Site (41HR332) in Harris Co., Texas

W. L. McClure and L. W. Patterson

Introduction

In 1977, site 41HR332 was located by The Texas Archeological Survey during a survey on behalf of the U. S. Army Corps of Engineers. The site is at a slight rise on the east terrace overlooking Cypress Creek in Harris County, Texas. No diagnostic materials were recovered (Hale 1978). Later, McClure relocated the site and noted lithic materials eroding from the steep, silty-sand bluff. He reported the site to the Texas Archeological Research Laboratory and proposed that the site be named the "T. I. Site" in recognition of the owner, Texas Instruments. During subsequent visits to the site over a period of several years, McClure collected lithics as they were exposed and displaced by erosion. No ceramics or bones were revealed.

No concentration of artifacts was exposed during the period of observation. Perhaps the majority of the site has already been lost to erosion, although it is also possible that a large portion of the site may still exist farther from the creek.

Some of the recovered artifacts can now be identified as being from the Late Paleo-Indian period. No other time periods seem to be involved. It is more common for sites with a Late Paleo-Indian component also to have later occupations (Patterson 1983). Data from the Late Paleo-Indian period in Southeast Texas is increasing at a significant rate. This time period can be no longer regarded as largely unknown in this region. The Late Paleo-Indian period has a time range of approximately 10,000 to 7000 years before present (Patterson 1979:106).

Lithic artifacts

Early Notched dart points have been related to the Late Paleo-Indian period in both Texas (Patterson and Hudgins 1985; Patterson et al. 1987) and Louisiana (Webb et al. 1971). An Early Notched point found at site 41HR332 (Figure 1A) is similar to a specimen found with San Patrice points at a site in Louisiana (Webb et al. 1971:Figure 5h). The specimen from site 41HR332 has ground basal edges. Three dart point preform fragments were also found.

Several unifacial flake tools found at site 41HR332 are typical of stone tools from the Paleo-Indian period. These include a large scraper (Figure 1B), two tools made on large prismatic blades (Figures 1C,D), a combination scraper-graver (Figure 1E) and a large miscellaneous flake tool (Figure 1F). Stone tools from the Paleo-Indian period tend to be made on large flakes and prismatic blades (Patterson 1977; Patterson et al. 1987). Combination tools are also typical of Paleo-Indian lithic assemblages (Patterson et al. 1987; Webb et al. 1971). Large prismatic blades such as the specimens illustrated here for site 41HR332 do not occur frequently in Southeast Texas because suitable sizes of raw material do not occur locally. Large prismatic blades are more typical of Paleo-Indian assemblages in Central Texas where large pieces of chert are generally available. The closest source of large-size chert cobbles is about 50 miles westerly from this site.

Nine prismatic blades were found, including the two shown in Figure 1. Maximum widths of these blades are: 9, 13, 16, 16, 18, 21, 22, 30 and 40 mm. A total of 34 chert flakes were found, some of very large sizes, as shown in Table 1. Some of the largest flakes may have been intended for use as blanks in the manufacture of dart points. All artifacts appear to be made from flakes from large chert cobbles. The remaining cortex on the flakes is similar to that of chert cobbles from the Brazos and Colorado River drainages.

Summary

Lithic artifacts collected from the eroded surface of site 41HR332 indicate that this site was occupied during the Late Paleo-Indian period, probably by nomadic hunter-gatherers. Indians in Southeast Texas followed a broad-based hunting and gathering lifeway from the earliest occupations through the Late Prehistoric.

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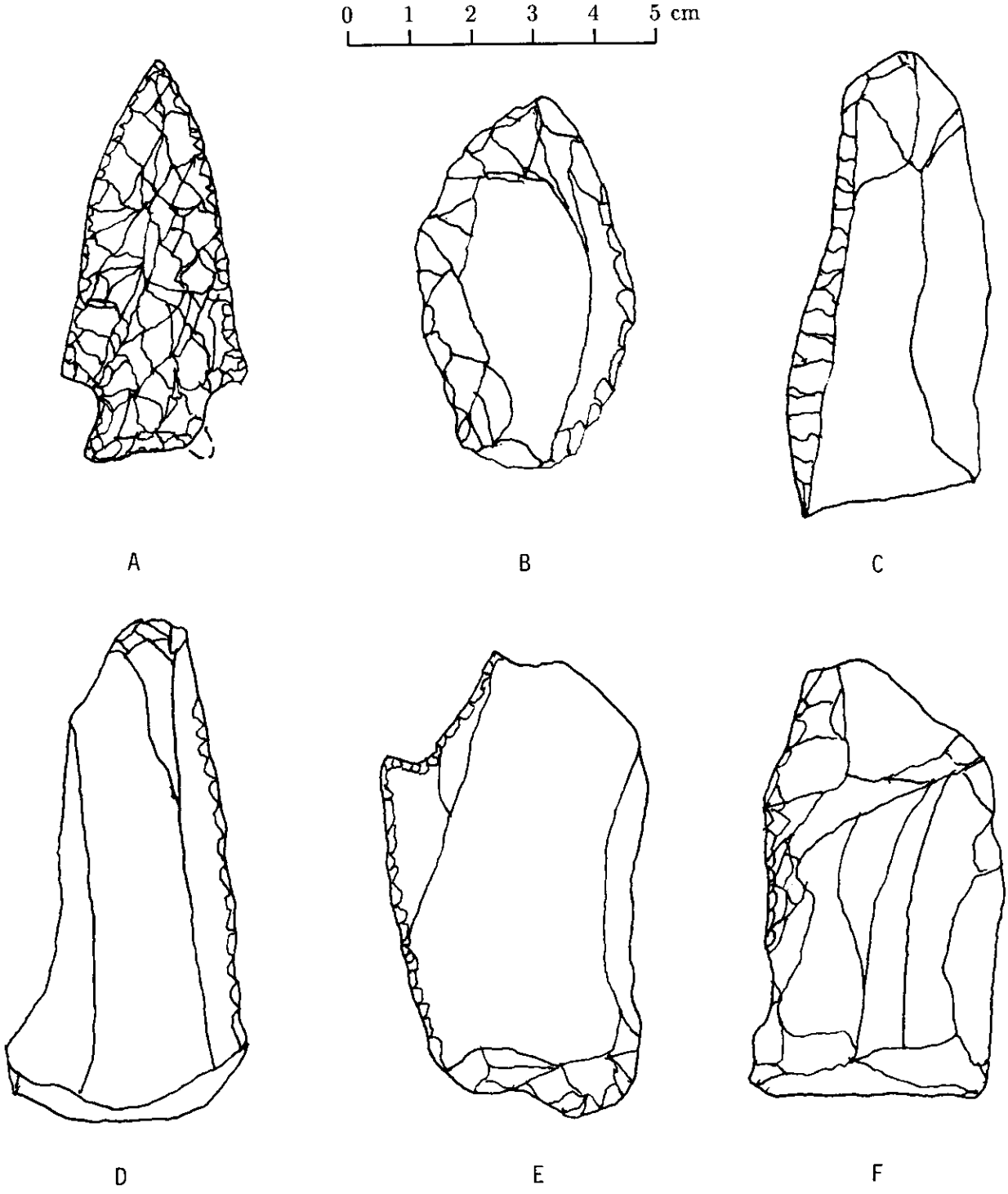
Table 1. Flake Size Distribution

Size, mm sq.	Number
under 15	2
15-20	13
20-25	5
25-30	3
30-35	2
35-40	3
40-50	3
50-60	3



A – Early Notched point, B – scraper, C,D – large blade tools, E – scraper-graver, F – large flake tool

Figure 1. Site 41HR332 Lithic Artifacts

A Late Prehistoric Site (41FB43), Fort Bend Co., Texas

L. W. Patterson and J. D. Hudgins

Introduction

This article presents the results of testing archeological site 41FB43 in Fort Bend County, Texas to obtain a better idea of the nature of this site. Site 41FB43 was originally found and recorded by Joe Hudgins on the basis of finding a dart point preform and a potsherd on the surface at an armadillo hole. The exact nature of this site could not be determined from this small amount of data.

Further testing has determined that this site probably represents occupation for a short time interval in the Late Prehistoric time period. This is an explicit addition to the prehistoric data base of the western end of Southeast Texas.

This site is located in a wooded area in the San Bernard River drainage basin. The location is on a ridge near an inactive stream bed. The stream bed represents either an old channel of the San Bernard River or a tributary stream that has filled with silt. The stream was probably active at the time of prehisoric occupation. The location is several hundred yards from coastal prairie. The general area is a mixture of woodlands and coastal prairie, which is a productive type of setting for natural food resources.

Testing procedures

A total of nine small test pits were made, each about 30 cm square. Four of these pits were located close together in the area of maximum artifact concentration. Other test pits were located randomly over an area of about 20 meters diameter. Judged by the test results, the area tested represents the main occupation area.

Stratigraphy

One test pit was taken to a depth of 60 cm to determine the general site stratigraphy. The top 30 cm consisted of dark sandy silt. The 30-60 cm level had brown sand with a lower silt content and a significant quantity of caliche chunks. At 60 cm the material changed to almost all caliche chunks.

Test pits were made at 0-15 cm and 15-30 cm levels. Most of the artifacts found occurred at depths of 10 to 20 cm.

Excavation results

Nine chert flakes were found in the 0-15 cm level and 8 flakes were found in the 15-30 cm level. Seven flakes were under 15 mm square and the others were larger. A single chert core (Figure 1A) was found in the 0-15 cm level. Light lithic manufacturing activities are indicated by these materials. One chert pebble (30 mm diameter) was found in the 0-15 cm level.

A fairly small dart point preform (Figure 1B) was found on the surface; it could occur in any prehistoric time period. A Perdiz arrow point (Figure 1C) and an unclassified arrow point tip (Figure 1E) were found in the 0-15 cm level. Perdiz arrow points represent the Late Prehistoric period (Turner and Hester 1985:187). A bifacial perforator ("drill," Figure 1D) was also found at the 0-15 cm level.

Some caliche and freshwater clam shell were found at both the 0-15 cm and 15-30 cm levels. Nine fired clayballs were found in the 0-15 cm level, and 15 fired clayballs were found in the 15-30 cm level. Some caliche chunks may have been used along with fired clayballs for cooking functions.

All pottery found is of the Goose Creek Plain sandy paste type. A total of 25 sherds were found. Thicknesses ranged from 5 to 10 mm, with an average thickness of 7 mm. Fourteen sherds were found in the 0-15 cm level and 11 sherds were in the 15-30 cm level. One specimen had a notched rim.

Two small pieces of bone were recovered in the 15-30 cm level. Four pieces of bone were found in the 0-15 cm level, with two of these pieces possibly representing bison. A tooth fragment was found that also may be bison.

Summary

Results of the brief testing of site 41FB43 indicate that this site was occupied only in the Late Prehistoric period, as shown by arrow points and pottery. The single dart point preform does not alter this conclusion. The main level of occupation is only about 10 cm thick and the artifact density is not high. Occupations of this site apparently occurred for only a short time interval during the Late Prehistoric period. Light occupation seems to be characteristic of the Late Prehistoric, where the lifestyle appears to be more mobile than in the preceding Early Ceramic time period (Patterson 1976).

References cited

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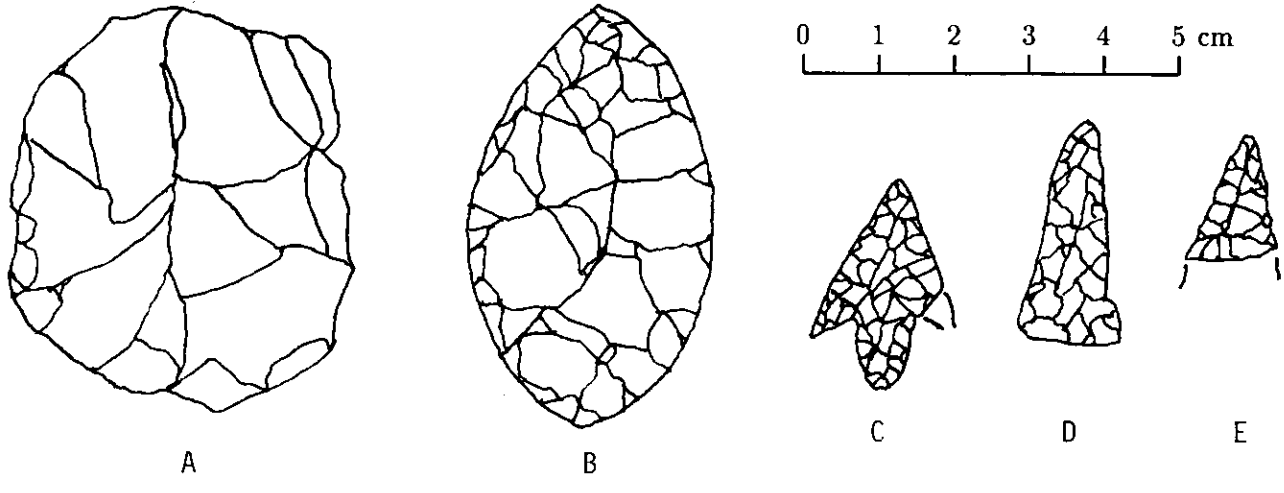

A – core, B – dart point preform, C – Perdiz point, D – bifacial perforator, E – arrow point tip

Figure 1. Site 41FB43 Artifacts