THE ARCHAEOLOGY AND EARLY HISTORY
OF THE HEAD OF THE SAN ANTONIO RIVER

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COVER: A portion of the map of the Presidio of San Antonio de Bexar and its missions made by Capitán Don Luis Antonio Menchaca in 1764, showing the head of the San Antonio River (to the left of the map) north of the city (Drawing by Frances Meskill; adapted from the original in the Library of the Daughters of the Republic of Texas at the Alamo).

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Jimmy L. Mitchell, STAA Special Publications Editor
This Report is Dedicated to the Memory of

Charles David Orchard

C. D. (Dave) Orchard enthusiastically collected evidence of the prehistoric and historic inhabitants of the Olmos Basin for over 50 years, systematically documented his discoveries, and recorded his meetings with transient Indian groups who were still camping there in the late 1920s. Dave was a graduate of Texas A&M, a civil engineer, and one of the surveyors working in the basin area when the Olmos Dam was constructed. Later in his career he worked throughout Texas and in the Far East, particularly Japan. He was also a registered malacologist (malacology is the study of sea shells), an entomologist (collector of insects), and a very dedicated avocational archaeologist. He donated his butterfly collection to the Smithsonian; his other insects were given to Ft. Sam Houston. He was a long-time member of the Texas Archeological Society, the Oklahoma Anthropological Society, and was one of the founding members of the Southern Texas Archaeological Association. Dave and his wife, Winifred, made their home at Treasure Island in Lake McQueeney on the Guadalupe River. Dave was always willing to share his knowledge of the archaeology of southern Texas and the Olmos Basin with archaeologists interested in these areas. Some of his archaeological and ethnohistoric presentations and written reports (including his collaborations with Dr. Thomas N. Campbell of the University of Texas at Austin) are listed in the References Cited section at the end of this volume.
ABSTRACT

This report provides a summary of the archaeology and history of the Olmos Basin which contains the Blue Hole, a spring considered to be the origin of the San Antonio River. This area has apparently been a favored campsite and residence area for perhaps the last 10,000 years, by prehistoric Indian groups and subsequently by Spanish missionaries and other European settlers. There is clear evidence that the Olmos Basin was occupied by Paleo-Indian, Archaic, and Late Prehistoric Indian groups, but there is very little archaeological evidence of the known Historic period Indians. Today, the area includes the Olmos Dam, Olmos Park, and the Incarnate Word College campus areas of San Antonio, as well as part of the city of Alamo Heights. This volume examines some of the evidence for prehistoric occupations, notes some of the more important sites, considers the ethnohistoric groups who were probably using the basin, and briefly summarizes the later history and development of the headwaters area of the San Antonio River.
ACKNOWLEDGEMENTS

This monograph is based in part on published and unpublished archaeological data generated by Susanna and Paul Katz while they were on the faculty of Incarnate Word College. I wish to thank them for their generous support of this project. Also I have dipped liberally into the reports of colleagues at the Center for Archaeological Research of The University of Texas at San Antonio (UTSA), particularly Anne Fox, whom I thank for her many contributions. The historical portion of this paper depends heavily on an unpublished manuscript written by the late Betty Dunn while she was in the Development Office of Incarnate Word College. I have also included sections from the unpublished manuscript of the late C. D. Orchard, for whom the prehistory of the Olmos Basin was a lifelong interest.

I want to thank the following people for reading and making helpful suggestions on this manuscript: Thomas R. Hester; Bernice Strong; Richard McCracken; Anne Fox; Neil Maurer; William Simons; Thomas Guderjan; and most especially Jimmy Mitchell and Susanna Katz.

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"... [T]o know only one's own tribe is to be a primitive, and to know only one's own generation is mentally to remain always a child. We all need perspective in historic time and in ethnic space in order to assess, indeed even to sense, the naive quiddity of our own day. Imprisonment in the contemporary is the worst of all intellectual tyrannies."

Weston La Barre (1975:xi)
ENVIRONMENTAL SETTING

The San Antonio River rises out of the Blue Hole, a deep spring located in the southern Olmos Basin on the campus of Incarnate Word College (IWC) just north of downtown San Antonio in Bexar County, Texas. In order to visit the Blue Hole today, people travel along a major highway and then exit onto local city streets, proceeding toward the corner of Hildebrand and Broadway where the campus is located. In fact, most San Antonians conceive of the local environment as an abstract web of freeways and highways as shown in Figure 1.

For most of the last 10,000 years other people have related to this local environment in a dramatically different way. The significant features of their world are shown in Figure 2. This abstract pattern is formed by the major rivers that drain the Edwards Plateau of northern Bexar County. These rivers cross the Balcones Fault zone which is marked by escarpments and natural springs, such as the Blue Hole (or San Antonio

Figure 1. Configuration of major highways in and around modern San Antonio, Bexar County [inset], Texas (Illustration by Frances Meskill).
Figure 2. Principal creeks and rivers of Bexar County which flow southeast to the Gulf. (Solid dot indicates the Blue Hole, which is the head of the San Antonio River; the crosshatched line is the Balcones Escarpment; Map by Frances Meskill).

Spring), Worth's Spring and the San Pedro Springs in San Pedro Park. These rivers and springs attracted people for many millennia because their waters supported abundant plant and animal communities that were together the basis for human life in Texas. The early European settlers came to exploit these very resources which continued to inspire both poets and businessmen into the nineteenth century. Today few people value the resources that were so attractive in the past, and few people would be able to orient themselves using our Figure 2. Still, San Antonians are interested in their history and prehistory as a source of our unique identity. The following is a brief account of the natural history, archaeology and early history of the southern Olmos Basin.

Through the efforts of Incarnate Word College (also known as "The College") some of the archaeological sites around the San Antonio Springs and in the Olmos Basin have been designated Texas State Archaeological Landmark sites, and much of the property belonging to the Sisters of Charity and to the College has been designated the "Head of the River National Historic District." Recently faculty and students of IWC and
other archaeologists from UTSA have been involved in recovering evidence of the earlier occupants of the Basin whose tenure spanned some 10,000 years. The results of their various works are the basis for this chapter of local history. In reconstructing the past in this small section of South Central Texas, we catch glimpses of the history which gives the San Antonio area its special identity.

Olmos Creek originates on the edge of the Edwards Plateau in northern Bexar County (Figure 3) and its watershed includes about 34 square miles lying between the Salado drainage to the northeast and Leon Creek to the southwest (Lukowski 1988:1). About 12 miles downstream from its source, Olmos Creek crosses the Balcones Fault, an area noted for its many springs. One of these, the Blue Hole, is one of the few permanently flowing sources of fresh water in the area. This spring, also known as the San Antonio Spring, is said to be the source of the San Antonio River. It is a narrow, limestone shaft through which rise waters from the Edwards Aquifer. In certain lights, the gray-green limestone makes the water look blue, giving the spring its name. The area immediately around this spring is called the Head of the River. A few meters downstream the waters from the Blue Hole mix with those of the Olmos Creek and they become the San Antonio River which then travels through the city, out on to the Gulf Coastal Plain, and eventually into the Gulf of Mexico.

The Olmos Basin lies in a Transitional Zone between the oak-juniper-hickory woods common northern Bexar County and the Texas Hill Country, and the mesquite and dry brush country characteristic of southern Bexar County, the coastal plain, and the Rio Grande plain (Pawcett 1972: 23-25). Because San Antonio lies near the intersection of several important biotic provinces (Figure 4), it was, in its undisturbed state, characterized by a particularly wide variety of plants and animals (Blair 1950; Lukowski 1988:4-5). Blair (1975:5) notes that such rich diversity makes this area of Texas "the biological hub" of the northern half of this hemisphere. It was especially attractive to native peoples who relied on hunting and gathering for their livelihood. Throughout the Spanish Colonial Period and up until the early 20th century both forests and grasslands characterized this local area, and the small rivers that crossed the Balcones Fault in Bexar County ran deep with clear water. Native game including bison, peccary, deer, fish, birds, reptiles and small mammals, as well as various wild roots, pods, fruits, greens, and nut-bearing trees, all "provided an unusually favorable environment" for prehistoric man (Suhm et al. 1954:99).

Science has rejected the general concept of "environmental determinism" yet natural environments present certain possibilities and history records how human beings have taken opportunities to exploit the potential of their environments according to their needs, values, and given the available technology. The earliest inhabitants of the Olmos Basin were hunters and gatherers who exploited only what nature produced. Beginning some 10,000 years ago, they took advantage of the unusual juxtaposition of desirable food and other resources found there, particularly the abundance of resources around the perennial springs. Millennia later in history, people became responsible for the production of food (agriculture), and they no longer relied solely on nature's production.

While most of the historical accounts of the Olmos Basin extol the beauty of the basin in terms of its trees and crystalline springs, modern
Figure 3. Watershed of Olmos Creek (within dotted line) above Olmos Dam. The Blue Hole is shown as a large dot southeast of the dam (Adapted from Hensley-Schmidt 1974: Figure A; drawing by Frances Meskill).
Figure 4. Map of Geographic Regions of South Central and southern Texas. The Olmos Basin (black square) is located in the transition zone between the Edwards Plateau (light stipled area around Kerrville) and the Blackland Prairie (diagonal lines). The Post Oak Belt (darker stipling) is south of the Medina River and the city of San Antonio (Adapted from "Texas Geographic Regions," Bureau of Business Research, the University of Texas at Austin, 1976, with permission; drawing by Frances Meskill).

man (since colonization by Europeans) has looked at land with a different eye. Today we, like the first Spanish soldiers and missionaries, view the land as valuable to the extent that it can be modified to suit our needs: Can it be farmed? Can it be developed? Today the northern part of the Olmos Basin is occupied by housing developments. Moving down stream, there is a public golf course, Olmos Park and the Olmos Basin athletic facilities, the dam, a high-rise building, and in the southernmost part the facilities of the Convent of the Sisters of Charity and the College.

In order to talk about the historical use of the area and about the aboriginal adaptation to the local environment, it is necessary to have a
knowledge of the existing resources in each prehistoric period, however, the historical documents covering the last few centuries have incompletely recorded the resources of the basin, and good evidence for reconstructing the changing environments of the prehistoric period (say 10,000 to 500 years ago) only now is being gathered in archaeological sites in Texas.

To appreciate the relationship between people and the environment in the past, archaeologists seek to reconstruct both cultural systems and natural systems. We know that South Central Texas and the Edwards Plateau were very different in the distant past. During the Ice Age, until about 10,000 years ago, the Edwards Plateau was probably a luxurious grassland where giant horse, bison and elephant (extinct mastodons) made their home; forests were confined to the stream margins. In the post-Pleistocene period modern vegetation was established, although local flora and fauna have varied with periodic climate changes during the past 8,000 years.

CULTURAL SEQUENCE IN THE OLMOS BASIN

One of the goals of historic and prehistoric research is to show how human lifeways changed through time. Scientists may be able to reconstruct sequences of events and processes of change if they can organize evidence in chronological order. In the following discussion of the prehistory and history of the Olmos Basin area, the evidence is treated in a series of periods, beginning with the Paleo-Indian period which began about 12,000 years ago in Texas (Figure 5), and ending with the early 20th century. In general, the prehistoric periods have been dated on the basis of the radiocarbon ages of a number of sites excavated in Texas, and the dates of the historic events are known from written documents and records.

Paleo-Indian Period

The earliest occupants of South Central Texas, the Paleo-Indians, were big game hunters—the people who hunted mastodons and the great extinct bison of North America. We recognize them by their hallmarks: distinctive artifacts such as Clovis, Folsom and Plainview projectile points. These named types, which differ from each other in form, are found in sites all over the Great Plains and Central Texas; they are associated with radiocarbon dates between 9200 and 6000 B.C (11,000 - 8,000 years B.P. or "Before Present"). These types of artifacts are large, lanceolate-shaped, and sharp-edged; they were used as spear tips for hunting large animals. They have been found at kill sites where animals were butchered. They are also found at habitation sites; places where groups of people camped and performed domestic tasks. Some of the tasks included the manufacture and repair of hunting equipment, with the result that tools (our diagnostic artifacts) were sometimes deposited in the campsite debris.

Early Sites in the Olmos Basin

No Paleo-Indian site in the Olmos Basin has been explored scientifically, but many points, identified by their style as Paleo-Indian artifacts, have been collected (see Figure 6). We know that the early American Indians were attracted to the areas around springs, which are like oases in semi-arid landscapes (Shiner 1983). The heart of the Paleo-Indian camping area was probably in the zone of active springs, where the dam is
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**Figure 5.** Chronological chart showing the cultural chronology in South Central Texas. (Adapted in part from Turner and Hester 1985: Figure 19, and Lukowski 1988: Table 1).
today. This site was destroyed by the construction of the Olmos Dam, finished in 1926. C. D. Orchard, a civil engineer who worked on the dam project, was also an avocational archaeologist. He reported finding, in the area of the dam, a number of Paleo-Indian artifacts, actual hearths and disturbed bone beds, including the remains of extinct animals such as mastodon and horse, as well as bison, deer, peccary, rodents, birds, turtle and fish (Orchard and Campbell 1954:458; see also Fawcett 1972:28).

Mr. A. S. Collier (San Antonio) also surface-collected some Paleo-Indian artifacts along the hillsides of the southern Olmos Basin in the 1950s and 1960s. His collection has been documented by Hester (1975); it includes a Clovis point, fluted on both faces, a Plainview point, the basal fragment of a Golondrina specimen, and two Angostura points (see Fox 1975: Figure 3). Hester notes "the presence of these artifacts would indicate occupations in the Basin as early as 9,200 B.C." (Hester 1975:19).

The area where these Paleo-Indian artifacts were found lies near or within the McAllister Freeway (Highway 281) right-of-way (Collier, personal communication, May 19, 1989) and may have been completely destroyed in the development of the freeway. An archaeological survey of the highway route prior to construction did not identify any in situ Paleo-Indian sites which would require further investigation or mitigation (Luke 1974).
When the remnants of the Olmos Dam site (41 BX 1) were re-excavated recently, only a few Paleo-Indian artifacts (including one Angostura projectile point) were recovered but no hearths nor living floors were identified (Assad 1978, 1979; Kelly and Eaton 1979; Łukowski 1988). Thus, we need to look to other excavated sites in the region to develop a more complete picture of Early Man's activities in the basin.

St. Mary's Hall Site (41 BX 229).

Several Paleo-Indian sites which have materials comparable to those found in the Olmos Basin, have been found in adjacent watersheds. One, located on a hill overlooking nearby Salado Creek (see Figure 2), is the St. Mary's Hall site (41 BX 229). This ancient campsite was damaged extensively by pothunting (that is, vandalism by indiscriminate artifact collectors), but was subsequently excavated scientifically by avocational and professional archaeologists of the Southern Texas Archaeological Association (STAA) and the Center for Archaeological Research (CAR) of the University of Texas at San Antonio (UTSA).

The research at St. Mary's Hall suggested that the overlook had been occupied by early Americans at various times in prehistory, but that the earliest people who lived there were Paleo-Indians. They made and used Plainview and Angostura style projectile points known to have been common in Central Texas between 8200 and 8000 B.C. (Hester 1978:7-11; 1979). At a depth of about 60 centimeters under the present ground surface, the archaeologists found artifacts and other refuse distributed over an area about 8 meters long and 6 meters wide. This corresponds to an old ground surface, now covered by the accumulation of newer soils. The camping area was characterized by scatters of chips of chert or flint broken from nodules during the process of stone tool manufacture. In the center of the area was a concentration of finished projectile points, and off to one side was a concentration of cores, stone debris, and preforms indicative of the early stages of tool manufacture. [In the earlier STAA excavations at the site, a Folsom point was found some 10 to 15 meters downslope from the Plainview area, near the edge of the dropoff to Salado Creek. Unfortunately, there were no other artifacts recovered with this specimen, and there appears to be no association with the Plainview occupation (Tom Kelly, personal communication, 23 May 1989)].

In addition to manufacturing projectile points, the people who camped there apparently carried out a wide variety of activities. This is clear because of the artifacts found on this living floor. These included worn tools such as end scrapers; choppers; thinned bifaces (artifacts trimmed on both sides or "faces") which are projectile point-like tools, perhaps used as knives; other large bifaces; and tools in various stages of manufacture. Some scattered deer and bison bones and burned hearth stones show that during a short period of time people cooked and ate there.

A great number of hackberry seeds was found at this site, reminding us that "hunters" all over the world also depend heavily on gathered plant foods for their subsistence. Snail shells were also associated with the other remains, suggesting that these ancient people ate a variety of undramatic things including small rodents, birds, lizards, snakes, insects and mollusks—all of which are important in the diets of hunters and gatherers everywhere.
Pavo Real Site (41 BX 52)

The Pavo Real site is located under the intersection of highways IH-10 and FM-1604, in the drainage of Leon Creek (Figure 2). It was excavated by the State Department of Highways and Public Transportation during the construction of a large interchange which now covers the site. A detailed description of this site has not yet been published, but it has been reported that Clovis and Folsom materials (including diagnostic projectile points and other associated tools) were recovered in good archaeological contexts (Henderson 1980, cited in Lukowski 1988 and Chandler 1989). The site was apparently a campsite and there is some evidence of lithic (stone material) workshops. The Paleo-Indians were exploiting local outcrops of chert for the manufacture of projectile points and other lithic tools.

Dan Baker Site (41 CM 104)

Since 1977, the STAA has been conducting excavations at the Dan Baker site in Comal County near the Guadalupe River north of San Antonio. This continuing excavation is used as a teaching laboratory for new STAA members and others. The site is primarily an Archaic period burned rock midden, but it has produced several Paleo-Indian artifacts including a Clovis projectile point associated with a bifacial gouge and two Plainview projectile points. Chandler (1989:12) has pointed out that the diagnostic Paleo-Indian artifacts were extensively modified, which may indicate that they had been recovered and reused by later Archaic period people.

Paleo-Indian Summary

The Paleo-Indians of South Central Texas may have moved their camps frequently, following the game and searching for plant foods in seasons, but alternatively some groups might have settled semi-permanently in favorable environments. They probably camped in the Olmos Basin, on the cliff edges where the McAllister Highway now runs, and where some lithic artifacts from this period were identified (Luke 1974), but they may have preferred to dwell along the lower river terraces near the springs where plant and animal life was most abundant. Judging from the artifacts collected in the wake of the earth-moving in the 1920s (Orchard and Campbell 1954), it is likely that the spot where the Olmos Dam stands today was the center of a significant Paleo-Indian campsite. Recently one Angostura point, which is a late Paleo-Indian or very early Archaic artifact type, was recovered in excavations made at 41 BX 1 during the remodeling of the Olmos Dam (Lukowski 1988).

While the existing evidence is extremely suggestive of an important Paleo-Indian occupation along the Olmos Creek, we will have to find an intact, undisturbed Paleo-Indian site, like the St. Mary's Hall (41 BX 229) or Pavo Real (41 BX 52) sites, preserved underground in the Olmos Basin if we hope to reconstruct the variety of economic and ceremonial activities that took place in the early campsites there. Since such early components might be deeply buried, and given Orchard's testimony (recorded in Fawcett 1972) that extinct faunal remains (animal bones) were recovered during the initial dam construction, there is a reasonable probability that some Paleo-Indian remains may lie buried and as yet undisturbed somewhere within the Olmos Basin. This possibility represents a significant challenge for future archaeological research in this area.
Archaic Period

All over America we recognize another cultural stage or characteristic way of life which developed among the descendants of the Paleo-Indian big game hunters as they adjusted to new conditions in the period between 7000 and 6000 B.C. In this period modern environments were established in North America; with climatic amelioration vast forests developed where there had been grassy steppes and many of the giant game animals of the Ice Age became extinct. Human populations, with their natural tendency to increase, had grown significantly. This post-Ice Age period was characterized by what anthropologists called "re-adaptation," which means that people everywhere were developing new modes of existence through technological and economic change, social innovations, and changes in ideology.

In general terms, people became more efficient at gathering plant foods, and they placed greater emphasis on a wider variety of animal food, including shellfish, fish, small game, and modern deer which had been of relatively less interest to their Paleo-Indian ancestors. These early Americans were seasonally migratory or semi-sedentary hunters and gatherers. The contents of the Archaic period archaeological sites illustrate the inventiveness of these people as they developed tools, equipment, and facilities for efficiently exploiting a wide variety of resources. Non-utilitarian items are both manifestations of their aesthetic sense and measures of an apparent social intensification early in that period.

In Texas, conditions favored the continuation of a hunting and gathering way of life; population growth did not outstrip the available wild resources, and the tremendously efficient and flexible Archaic culture persisted for longer than almost anywhere in North America. The ancient Lower Pecos Indians of southwestern Texas are well-known representatives of this way of life, and their culture is featured in an extensive permanent exhibit at the Witte Museum in San Antonio (also see Shafer 1986).

Panther Springs Creek Site (Site 41 EX 228)

In the local area, the Panther Springs Creek Site, located in the Salado Creek drainage (see Figure 2) north of Olmos Basin, is of particular interest because it is an undisturbed Archaic site that has been intensively studied. This is one of many sites in South Central Texas where extensive accumulations of burned limestone and other debris, called burned rock middens, have been dated to the Archaic Period.

The report of the Panther Springs site presents an extended discussion of burned rock middens, a hallmark of the Archaic period in Central and South Texas. Such middens range from about 5 meters in diameter to several acres in area, and they may be from a few centimeters to two and one half meters thick! Some burned rock middens contain abundant cultural materials, while others do not. A site may have a single one or as many as 52 discrete ones (Black and McGraw 1985:290)!

When archaeologists find burned rock middens associated with pits, they are interpreted as earth ovens for processing plant materials, perhaps
cactus or acorns. When the pits are absent, archaeologists tend to believe, nevertheless, that some fire and food preparation activity was still involved. The accumulation of stones could come from the practice of making stone-lined hearths, or it could result from "stone boiling." Many historic Indian groups that did not use pottery boiled stews, porridges, gruels, and soups in receptacles that were not fireproof, such as skin bags or tightly woven baskets. By heating stones and dropping them with tongs into the receptacles along with water and the food, the Indians could boil the water and cook the food. Experiments (Jones 1961; Black and McGraw 1985:293; also Witkind 1977) have shown that limestone can maintain water at a boil for 35-40 minutes before the fist-sized cobbles disintegrate, and it has been shown that boiling acorn gruel for 15 minutes reduces its acidity by some 100 fold.

It is generally believed that the middens are dumps rather than primary activity areas. One interpretation of these middens suggests that they accumulated quickly when large groups of people got together for communal acorn processing (Turner 1989) or vegetable baking. A large midden might also accumulate slowly, as the result of the activities of a small group of people over a longer period. After discussing several possible interpretations, Black and McGraw (1985:290-293) conclude that the burned rock middens characteristic of the Archaic sites here in Central Texas are probably the result of "several different processes rather than any one specific activity."

An analysis in the Panther Springs report (Figure 7; Black and McGraw 1985:Fig. 53) showed the distribution of burned rock midden along the bluff edge "close to the probable source of limestone rock, the creek bed" (Black and McGraw 1985:300). Near middens 3 and 4 at the northern edge of the site, flint knapping areas (where stone tools were manufactured) were identified. We might still be able to document a similar pattern of midden along the western terrace of the Olmos Creek, as more of the areas within the State Landmark area are excavated carefully. Burned rock middens commonly are located near water, suggesting that water was a significant element in the plant-processing activities of the ancient people. The archaeologists believe that acorn processing may have been a principal activity at Panther Springs, combined, of course, with deer hunting, since deer browse acorns. This interpretation is supported by descriptions of acorn processing among California Indians and Texas Indians such as the Caddoans (Black and McGraw 1985:301; Turner 1989).

The Panther Springs Creek site was occupied intermittently from the Early Archaic period on, and must have served many groups of people as a base camp. Ten kilometers north along Salado Creek, near the modern intersection of Judson Road and FM 1604, is site 41 BX 300, which was a hunting camp located next to a spring-fed pool called Elm Waterhole. There Middle Archaic people (as well as some Late Archaic and Late Prehistoric people) manufactured and maintained stone tools and processed animals including antelope, deer, rabbit, armadillo, raccoon, javelina, rat, turtle, birds and snakes (Katz 1987:89-96). The environment in the past seems to have been a semiarid, wooded grassland, much like it is today. The prehistoric remains found at this site have been carefully described (Katz 1987), and the published evidence alerts us to the probability that similar Archaic habitation areas and other special use camps once existed along Olmos Creek, the San Antonio River, and other area streams.
Figure 7. The Panther Springs Creek Site (41 BX 228), showing test trenches and excavations squares on and adjacent to a series of burned rock middens (stippled areas). Adapted from Black and McGraw 1985: Figure 53, courtesy UTSA-CAR (Drawing by Frances Meskill).
Archaic Sites in the Olmos Basin

Most of the Basin's 34 square miles of area has not been surveyed by archaeologists, but luckily C. D. Orchard did reconnaissance here in the 1920s and 30s. According to Orchard, there were 7 places in what is today Olmos Park where prehistoric remains were found (Orchard and Campbell 1960:7; Orchard 1974), but most attention has been given to the big sites in the immediate vicinity of the Olmos Dam.

Throughout prehistory settlements were located on low rises, terraces or natural levees, just outside the normal floodplain of Olmos Creek (Figure 8). This complex occupation area took the form of a long mound which followed the west bank of the creek in the vicinity of the modern dam. This mound was still intact in the 1920s and 1930s (Orchard and Campbell 1960:457-458; Woolford 1935). While several different site numbers have been used to designate various parts of this occupation area, most scholars believe that there is only one site in this part of the Olmos Basin, and that this was "repeatedly and continuously occupied since Paleo-Indian times" (Katz and Katz 1982:4).

North of the dam, which artificially divides the Olmos Basin today, a few remnants of Site 41 BX 1 have been scientifically excavated. South of the dam are several other parts of the site: Site 41 BX 290 is a low mound some 50 meters in diameter with a scatter of lithic cores and flakes, which are the remains of stone tool manufacture; 41 BX 288 is a small knoll about 60 meters in diameter where Fox (1975:7-8) found burned rock, snail shells and stone chipping debris; 41 BX 509 and 510 are small lithic scatters; and 41 BX 24 and 41 BX 291 which will be described in detail below.

Other portions of this perennial habitation area may be found on the east side of the San Antonio River. Chipping debris, which is evidence of the manufacture of stone tools, and other stone artifacts have been found in an area north of the College property, and north of the only major eastern tributary of the Olmos Creek (Figure 8; see also Fox 1975:5,10); and Site 41 BX 292 (now destroyed) was another scatter of lithic artifacts on a high river terrace, which also may have been the site of one or more 19th century military encampments (Fox 1975:8-10). During the construction of the more recent college buildings, Archaic materials were observed (Fox 1975:10 and Fig. 1) which suggests that the main campus area was once an Indian habitation area. You may still see chipping debris or even a Pedernales points when a hole is dug among the college buildings.

Thus, we know that Archaic people did camp on the west bank of Olmos Creek in the vicinity of the modern dam and on the east side of the San Antonio River which is several meters above the flood plain of the river, but we do not know if they also camped west of the river further south in the area of active springs where the College athletic fields are now. There may be undiscovered sites underground in that area, but the stone chipping debris and artifacts found today on the surface in this area are not in their original positions: those archaeological materials were redeposited in the area of the springs during the construction of IWC buildings across the river.
Figure 8. Southern portion of the Olmos Basin showing archaeological sites located near Olmos Dam and on property belonging to Incarnate Word College and the Congregation of the Sisters of Charity. Stippled areas indicate archaeological sites; large black dots indicate formerly active springs (Map by Frances Meskill).
In the course of survey in the southern Olmos Basin, A. S. Collier made extensive surface collections of lithic artifacts. The preponderance of remains in the collection indicate that the area was occupied most heavily in the Early, Middle and Late Archaic periods. Hester (1975:19-20), who studied part of the Collier Collection, has drawn attention to the "noticeable mixture of stemmed Central Texas dart point styles and the unstemmed forms more characteristic of southern Texas," which reinforces our idea that there was considerable movement of people and interchange in prehistory.

Archaic period archaeological materials have been found also along the San Antonio River in Brackenridge Park (Figure 9) and in San Pedro Park around the San Pedro Springs, so we know that the Archaic Indians camped at many well-watered locations which now are in urban San Antonio. Most of the sites are superficial scatters of lithic artifacts, often eroded and disturbed. Only limited testing has been conducted in any of these sites, known as "collecting localities," in Brackenridge or San Pedro parks (Katz and Fox 1979).

There has been development everywhere along the upper San Antonio River, which is why we only find light scatters of chipping debris today. Still, this evidence does indicate that both sides of the river were occupied in prehistory. The few relatively undisturbed sites still left in the southern Olmos Basin have been designated State Archaeological Landmarks and listed in the National Register of Historical places because they are the only remaining evidence of an important prehistoric occupation along the river.

Most of these sites and collecting localities are on public land, and it is now illegal to collect artifacts from them without a permit from the State of Texas (Office of the State Archeologist). The Texas Antiquities Code was enacted to protect such sites from destruction by collectors. The reader should be reminded that cultural remains are our common heritage and thus merit the protection of the law. All these remains may one day be studied in their original contexts, then properly interpreted, and eventually curated in facilities such as the Witte Museum or the Institute of Texan Cultures where the remains and the fruits of the research can be shared with the public.

Olmos Dam Site (41 BX 1)

When the original Olmos Dam was built in the 1920s the major portion of the large and tremendously important Olmos Dam site (41 BX 1) was destroyed, but avocational archaeologists and collectors observed and collected materials from this site (Orchard and Campbell 1954; Woolford 1935). Prior to the recent renovation of the dam, an archaeological project designed to salvage some of the cultural resources in the vicinity was carried out by personnel of CAR-UTSA (Assad 1978, 1979; Brown 1977; Kelly and Eaton 1979; Lukowski 1988), working under contract with the San Antonio River Authority (SARA). While the extensive destruction and modification of land surfaces in the vicinity of the dam since the 1920s made the interpretation of the original site and its setting impossible, the new excavations found small segments of the site which were still intact. These contained vestiges of Early, Middle, and Late Archaic period occupations, as well as a Late Archaic cemetery.
Figure 9. Adaptation of an 1890 Map of the area which is now Brackenridge Park and Golf Course showing archaeological sites identified by collectors early in this century. (Map by Frances Meskill; adapted from Office of the City Engineer, Index No. 3267, File D, No. 3, Section No. 6418, and additional information drawn from Katz and Fox 1979; Figures 1 and 4).
When prehistoric human burials are bulldozed, the scattered bones may be recovered, but nothing is learned about the customs of these ancient people. Carefully excavating burials, however, results in an amazing amount of cultural information. For instance, at 41 BX 1, Lukowski (1988) reports that the burial area was located adjacent to habitation areas or camp sites where the Late Archaic people lived. Thirteen burials, including the remains of four adult men, two adult women, two other unidentified adults and five children, were carefully excavated and documented.

The people practiced simple, single inhumations, burying the corpse in a reclining position on his or her left side with legs bent and drawn up toward the body. In the 13 burials found by Lukowski and the CAR team, the position of the arms of the skeletons was variable. The heads tended to be oriented toward the east or southeast. Judging by the position of the skeletons, it is thought that burials were made in round or oval pits, but the outlines of these could not be traced by the archaeologists. Of great interest are the grave offerings found associated with the burials.

Figure 10 shows the skeleton of a young woman (Burial 10) who was buried with considerable care and ceremony. She was wearing a number of shell ornaments at her wrist, ankle, and around her neck, and covered with deer antlers. Figure 11 is a detail of the burial after the layer of antlers had been removed, showing two conch shell pendants at the base of the skull. Another woman wore a bone pin in her hair. Most of the burials were found covered by a layer of deer antlers; this was apparently an important part of the funerary practices of these people. Other offerings included worked and unmodified chert (flint), ground stone artifacts, freshwater mussel shell, marine shell, or worked bone, as well as pulverized red ochre, a red mineral oxide often used medicinally and found with burials all over the world. One infant was covered with three large chert cobbles, an apparent gesture of protection found in early burial sites elsewhere in America. An analysis of the health of these individuals appears in the report on this investigation (Shoup 1988).

While the excavated burials provide fascinating details about these early inhabitants, including their personal ornaments, other evidence about their daily activities comes from excavations in two occupational areas at this site. "Midden" refers to an accumulation of refuse, which in the Archaic period was frequently characterized by considerable quantities of burned rock, the apparent result of cooking food.

The burned rock midden of 41 BX 1 was a treasure trove of information. A wide variety of tools were recovered, including diagnostic projectile points, scraping and cutting tools, grinding slabs, and other ground and pecked stone artifacts, which suggest food processing activities. Food remains were also recovered, such as snail and mussel shells, and the bones of animals including several species of turtle, water snake, fish, birds, rodents, wood rats, cottontail rabbit, jack rabbit, a dog, raccoon, badger, white-tailed deer, antelope and bison (Scott 1988: 128). Because these animals existed in the Olmos Basin until the Historic period, we suspect that there was also continuity in the plant communities that lived there. The Archaic hunters and gatherers no doubt enjoyed an environment characterized by elm, hackberry, oak, pecan, persimmon, mesquite and acacia trees, cacti, grasses, forbs and herbs (Lukowski 1988:10), which together would have been exploited for fuel, raw materials, protection, and food.
Figure 10. Burial 10, Site 41 BX 1; the skeleton of a young woman, covered with a layer of deer antlers. Photo by Paul Lukowski, courtesy of the Center for Archaeological Research, University of Texas at San Antonio.
Figure 11. Detail of Burial 10 after the layer of deer antlers was removed, showing skull and associated shell ornaments. Photo by Paul Lukowski, courtesy of the Center for Archaeological Research, University of Texas at San Antonio.
Figures 12-14 show a few of the representative projectile points recovered from the excavations at 41 BX 1. Many of these belong to types which have been securely dated in other sites in central and southern Texas; thus, they are considered diagnostic of occupation during certain time periods (see Figure 5).

The single Angostura point (Figure 12a) may represent the Paleo-Indian period, but one artifact is insufficient evidence to indicate a Paleo-Indian occupation in the part of the site excavated by Lukowski (1988; also Chandler 1989). A Bell [or Andice] point (Figure 12b), two Early Corner Notched points (Figure 12g, h), and a Bulverde point (Figure 12c) reflect an Early Archaic occupation at the site. Two Castroville points (Figure 12d, e) signal a late Archaic period occupation; and the Darl,Ensor, and Fairland points (Figure 12f, i-j, and k-m) lead us to believe that the site was occupied by people in the Transitional Archaic period.

The great diversity of additional point types from 41 BX 1 shown in Figures 13 and 14 are evidence that suggests that the site was a campsites throughout most of prehistory.

The excavations produced a goodly sample of thick bifaces which were not projectile points, but rather tools that might have been used for heavy scraping tasks. These included at least one Clear Fork gouge (Lukowski 1988: Figure 23c) and an intact Guadalupe tool (ibid: Figure 23a) which may have functioned as a wood-working tool (Brown 1985). This is a distinctive Early Archaic artifact commonly found in sites occupying the middle and lower watersheds of the San Antonio and Guadalupe rivers (Hester and Kohlnitz 1975:22). At the Granberg site (41 BX 271) in the Salado Creek drainage, Guadalupe and Clear Fork tools were found in association with Early Archaic dart points (Bell, Early Corner Notched, and Early Triangular), and other lithic artifacts and debris, all isolated together in a good stratigraphic context (Hester and Kohlnitz 1975:22). Judging by the distribution of these distinctive tools, it is likely that the same Early Archaic people who occupied the Granberg site camped in the southern Olmos Basin, but the remains of their activities there have been found only mixed with later Archaic debris in the archaeological record.

Other types of artifacts from the Olmos Dam site are shown in Figure 15. These include conch shell pendants which are decorated with a pattern of small drilled pits that form designs (Lukowski 1988:73-78). The designs are very similar to those on shell pendants recovered from an Archaic cemetery on Allens Creek near the lower Brazos River (Lukowski 1988:73; Hall 1981:203, Fig. 47). These marine shell ornaments are evidence of a trade network (Hall 1981) that extended from the coast at least as far inland as the Olmos Basin in the Late Archaic period.

The great value of the careful excavation of Site 41 BX 1 is that we have at last a significant sample of remains from an Olmos Basin site. Because Archaic tools and debris, including animal bones, were found in close association, we have an opportunity to reconstruct and visualize what the environment, the people, and their activities were like in the Archaic Period. It is particularly illuminating to have discovered evidence of the burial practices of the late Archaic people. All this evidence stands as important data for comparisons with other sites, all of which must be taken together as we try to piece together the prehistory of South Central Texas.
Figure 12. Projectile Points from 41 BX 1 recovered during the UTSA-CAR excavations: a, Angostura; b, Bell [or Andice]; c, Bulverde; d,e, Castroville; f, Darl; g, h, Early Corner Notched; i,j, Ensor; k – m, Fairland (Reproduced from Lukowski 1988: Figure 15, courtesy of the Center for Archaeological Reasearch, University of Texas at San Antonio).
Figure 13. Additional Projectile Points from 41 EX 1: a - c, Frio; d,e, Kinney; f, La Jita; g, Langtry; h, Lange; i,j, Marshall; k,l, Montell; m,n, Nolan (Reproduced from Lukowski 1988: Figure 16, courtesy of the Center for Archaeological Research, University of Texas at San Antonio).
Site 41 BX 291

In 1976 the College began a series of summer archaeology. This project was designed to investigate and extent of prehistoric and historic occupation in the Basin. Site 41 BX 291 was the first of five sites College staff, students, and volunteers between 1976 and 1979.

This site lies about 100 meters west of the modern dam. It is characterized by chert flakes and burned over a minimum of 1800 square meters (Assad 1978). The larger habitation (41 BX 1) area described above, biological areas are now separated by a disturbed zone. Archaeological testing carried out along the fence Archaeological Landmark zone (Assad 1978).

The excavations at Site 41 BX 291 were undertaken. Artifacts were heavily concentrated on the surface, and grass. Since the entire vicinity was covered with debris, the extent of the site could not be determined from surface. Systematic excavation was carried out for a month, and all the materials were processed in the laboratory at IWC (Katz 1982).

First, two trenches were dug in the periphery of the site. These trenches were excavated to a depth of 30 cm. These trenches were excavated using a backhoe. These showed that there were four soil layers on the surface of the site (Figure 16). This series of layers or zones can be seen in the sequence, called the stratigraphy of the site. The modern ground surface (Zone 1) is the youngest zone, built up by modern plowing. A series of squares, each 2 x 2 meters, were excavated within the area to be excavated. Nine squares were excavated in a fashion in order to record the location of each find. Artifacts, animal bone, stained in the soil or concentration. As excavators worked with trowels and shovels, they recovered in each soil zone, took soil samples for analysis, screened all their dirt through 1/4-inch hardware cloth. Additional materials which were sorted in the laboratory.

The artifacts found show that different peoples occupied the site at different times. For example, the excavations yielded a large variety of materials and ceramic sherds, which are fragments from pottery. Seven modern metal objects, including bits of wire, were found, also confined to the top 30 cm. Eleven sherds were found, and these were confined to the uppermost 20 cm.

According to the excavators of Site 41 BX 291, "burned limestone pieces were in the uppermost 40 cm units" (Katz and Katz 1982:38). The diversity of story to large, and the absence of associated burned earth suggests that food was not actually cooked on this site. It is likely that the midden was an accumulation of discarded stones which tend to disintegrate in the laboratory. Most of the remains recovered during excavation included tools and "waste flakes" generated during flintknapping.

Figure 14. Additional P. Travis; g, h, Triangul Lukowski 1988: Figur Reasearch, University of
stone artifacts, there were 9 complete and broken projectile points (Figure 17) which were recovered from Zones 1 and 2 in 7 different excavation squares (Katz and Katz 1982:17-21). Five are dart points which include two classified as Darl, two Encor, one Ellis, one Castroville and one unidentified. These types all belong to the Late Archaic and Transitional or Terminal Archaic periods, and were presumably used to tip darts which
Figure 17. Artifacts recovered from the excavations of Site 41 BX 291: a,b, Possible Darl; c,d, Ensor; e, Possible Ellis; f, Castroville fragment; g, unidentified dart point; h, Scallorn arrowpoint; i, Perdiz arrowpoint (Drawings adapted from Katz and Katz 1982).
were propelled using spearthrowers (Turner and Hester 1985:61-161). These
were not as carefully made as two smaller arrow points, one classified as
Perdiz and the other as Scallorn, which are hallmarks of the Late Pre-
historic period when the Indians of South Central Texas were using bows and
arrows for hunting (Turner and Hester 1985: 162-197). These distinctive
projectile point types indicate that the site was occupied during two dis-
tinct periods: the Terminal Archaic Period, dated between AD 200 and 700,
and the Late Prehistoric Period dated between AD 700 and 1750 (Figure 5).

In general the Late Prehistoric arrowpoints and pottery occurred in the
upper 20 cm of the site, in soil zones 1 and 2, along with historic glass
and metal fragments. Although one Darl point, an Archaic diagnostic,
showed up 10 cm below the surface, most of the Terminal Archaic projectile
points were found in soil zones 3 and 4, in the 20-40 cm levels.

While the stratigraphy of the site does not show a clear separation
between the two prehistoric occupations, it is clear that late Archaic,
Late Prehistoric and historic remains accumulated there. The remains of
these three occupations became mixed, probably because of slow soil
accumulation or soil movement, because of the mixing caused by the
prehistoric people themselves, or by subsequent processes such as flooding
and plowing. Some mixing is always identified in archaeological sites where
activities as trivial as the burrowing of rodents can account for the
movement of individual artifacts from one soil zone to another.

The complete projectile points found in archaeological sites in our
region are most helpful in identifying the prehistoric periods during which
a place was occupied by prehistoric people. Other objects, such as 15
other bifaces recovered at Site 41 BX 291 were less helpful in this
respect. This group of artifacts includes unfinished and broken projectile
points, and point-like artifacts used as knives. These artifacts exhibit
flaking all over both faces of the artifact--hence the name "biface." Seven specimens came from Zone 1, only one from Zone 2, and 7 from Zone 3,
which suggests greater antiquity for some of these artifacts than for the
projectile point type mentioned above. Another group of three artifacts is
called "Bifacial Blanks," and these are apparently unfinished artifacts
which were found in Zone 3 in the northern portion of the site. These
artifacts may date to a still earlier occupation at this site, perhaps in
the Early or Middle Archaic period.

Among the other artifacts found during the excavations were
"Perforating Tools" which included worked stone objects used for drilling
and puncturing. Another reworked flake of stone has been called a gague,
because its chipped and shaped edge might have served to work wood—like a
modern gague. Other tools, called "Scrappers," included 3 flakes of stone
with steeply chipped edges suitable for scraping wood or animal hide. This
chipping, called retouch, changes a sharp cutting edge into a more obtuse
scraping edge. Other "Retouched Flakes" include eight items which have
some intentional chipping along one edge, but which were not modified as
consistently as those flakes classified as scrapers.

The bulk of the lithic tools excavated were unretouched flakes. These
include 4,000 thin objects, with naturally razor-sharp edges, which were
produced when they were struck from chunks or nodules of flint or siliceous
(glassy) material with a hammerstone in a calculated manner. It is
difficult to tell which of these 4,000 flakes were actually used for cutting, scraping, planing, gouging, engraving, skinning, whittling, surgery, or umbilical-cord-cutting since use does not necessarily leave visible wear on the artifacts. Through most of human history, men and women have produced large quantities of flakes, from among which they selected the size and shape flake suitable for the task to be performed. The Katzes also have noticed that many specimens show evidence of thermal alteration, that is, the stone material was intentionally heat treated to improve its chipability before it was worked.

Flintworking (also called knapping) was carried out at the site as part of the ordinary economic activities of the inhabitants. In addition to the flakes and retouched tools mentioned above, two cores were discovered. Cores are cobbles of lithic material that have flake scars covering at least 60% of their surfaces. The scars indicate that the ancient flintworkers struck flake from the cores. These objects were found only in the uppermost 10 cm of the site, however, leaving us in doubt about the nature of cores during the earlier occupation of the site.

Nodular blanks are irregularly shaped chunks of lithic material which show a few flake scars on their surfaces. Six specimens were found, one of which had been heat treated. These are called blanks because they might have been turned into large tools or used to generate small flake tools at any time. Their maximum and minimum dimensions are both greater than those of the cores that were found, supporting the idea that they represent early stages in the manufacturing process.

One other object found is a hammerstone made from a quartzite cobbles with damage on its surfaces which is evidence of its use in pounding food or raw materials such as flint or chert. Another, a grinding slab, is a large, flat stone with smooth and slightly concave upper surfaces suitable for grinding seeds, nuts or other foods. A handstone is a cobbles with one flattened face and striations apparently caused by use against a grinding slab (Katz and Katz 1982).

These objects are clues to the technology, economy, and subsistence patterns of the ancient people, but regrettably the remains of two distinct human groups are mixed and spread throughout the soil. This site presented the excavators with very few good associations. However two features, which are defined as "significant associations among various kinds of remains," were found in this site, and they present better opportunities for interpreting prehistoric behavior.

In one particular place a hammerstone, a core, some unworked chert nodules, and chert flakes were all located in close proximity to each other (Katz and Katz 1982:15). This was called Feature 1 and the association of the artifacts has been interpreted as indicating their use together as a tool kit for manufacturing stone tools. The hammerstone is a spherical stone cobbles showing indications that it was used to strike a "core," or pre-shaped piece of stone, which, through calculated blows, can be reduced to splinters or flakes which have sharp cutting edges that have long served human beings as a basic cutting edge. The unworked chert nodules would be raw material, destined to be shaped into useful tools. In fact this group of objects is what one would expect to find where a flintknapper (stone tool maker) was working.
Near Feature 1 was a concentration of fire cracked limestone, complete with ash, burned earth and pieces of charcoal. There was evidence that the ancient people had excavated a small pit into the earth in the middle of the burned area. This grouping was called Feature 2, and it has been interpreted as the remains of a hearth measuring about a meter in diameter and located between 10 and 20 cm below the surface of the ground. Feature 1 was located at about the same horizontal level as the top of the hearth, presenting the possibility that the hearth was built in a slight depression in the ground, that the pit was dug in the middle of it, and that the flint knapper arranged his materials on the ground nearby. The function of the small pit cannot be determined, but "it is postulated that it was used for the heating of chert (flint-like stone) nodules. Heating increases the elasticity of silica materials, thus making them easier to work.... As most of the chert at the site showed evidence of heating..., a chert roasting pit seems a likely function within the larger hearth context" (Katz and Katz 1982:15).

The excavators were lucky to find an intact hearth in their excavations, since this area had been plowed, grazed, flooded and so forth. But the earliest investigators of the Olmos Basin recorded hundreds of hearths destroyed during earth moving behind the Olmos Dam in 1923 (Orchard and Campbell 1954:457). The hearths reported by these researchers were assigned to the Archaic Period, whereas Katz and Katz believe that the discovery of Feature 2 in Zone 1 soil, and in association with certain diagnostic stone tools including a Perdiz projectile point, suggest that the feature belongs to the Late Prehistoric period, dating between AD 1000 and AD 1600.

The excavators state that this site was occupied repeatedly for short-term hunting and gathering activities, by both late Archaic and Late Prehistoric peoples. The tool types and the quantity of debris that accumulated in this site support that conclusion (Katz and Katz 1982:42). The tool types described above are functionally related to hunting and the processing of food, wood and skins. Flakes indicate that tools were both manufactured and maintained there. No agricultural tools were present. There is no significant difference in the tool types represented in the Terminal Archaic and the Late Prehistoric remains, suggesting that the two groups of people customarily carried out similar activities.

Bone and other environmental indicators were not well preserved in this shallow archaeological deposit, but some bone fragments, tentatively identified as deer, were found in association with Feature 2. It can be assumed, however, that the people were exploiting the same set of resources reconstructed from evidence found at Site 41 BX 1, a few hundred meters north. In addition, material suitable for making stone tools was locally available in the form of naturally occurring cobbles. For instance, Site 41 BX 286, located nearby, is an outcrop of chert cobbles which was exploited as a quarry at various times in the past. Fox (1975:5) points out that this is probably a large outcrop, but she only visited the part of the site which is located today on Incarnate Word property.

Site 41 BX 291 is interesting because it apparently conserves the history of two or more distinct periods of occupation that were not observed during the excavation of the portion of the site which lies north of the dam, probably because the more superficial levels there were
destroyed during the construction of the dam. On the other hand, Site 291 lacks the earlier components present at Site 41 BX 1. This might indicate that this portion of the valley was not occupied, or that the earlier occupations were eroded away, and that only more recent soils and materials have accumulated there. The soil above the caliche (natural limestone) is much shallower at Site 291 than upstream at Site 41 BX 1.

Other Archaic Artifacts From the Olmos Basin

C. D. Orchard's collections of artifacts from the Olmos Basin included three corner tang artifacts (Figure 18) which may have been hafted and used as bison or deer skinning knives, or, in one case, as a drill (Mitchell and Orchard 1984). Corner tang artifacts appear to date to the Late Archaic, and are possibly associated with Marcos (and possibly Castroville) projectile points (Mitchell, Chandler, and Kelly 1984). Corner tang arti-

Figure 18. Corner Tang Artifacts from the Olmos Basin, C. D. Orchard Collection (Illustration by Richard McReynolds; Figure 2 in Mitchell and Orchard 1984; courtesy of La Tierra).
facts are widely distributed in Texas and north along the western edge of the Plains to Wyoming and western Nebraska (Hall 1981:Fig. 55; see also Mitchell 1982). San Antonio falls within the "area of maximum availability" of these artifacts (Hall 1981:Fig. 55), but their greatest concentration is in North Central Texas (around Waco). It is possible that corner tang artifacts were manufactured in the Waco district and traded to other regions as part of the exchange network postulated by Hall.

The shell ornaments (discussed earlier) and "boatstones" may have also been distributed in this network. Boatstones are pecked and ground artifacts variously interpreted as spearthrower weights, charm stones or ceremonial objects which are made of local or exotic lithic materials (Turner and Hester 1985:241-243). They are typically Archaic or Late Prehistoric in age. One fragment found by A. S. Collier in the Olmos Basin has been illustrated (Fox 1975:Fig. 3L; Hester 1975:20) but there is no contextual information for the specimen.

A small portion of the Orchard Collection of Olmos Basin materials (loaned to IWC for study) contained a number of additional ground stone artifacts including those illustrated in Figure 19. They include several pieces of slate or schist which have been shaped and ground; these typically have multiple overlapping striations on one or both faces suggestive of use to sharpen or shape bone or chert artifacts. Two ground stone, biconically-drilled gorgets are also shown in Figure 19; these were used as ornaments and are found throughout the eastern United States.

Also shown in Figure 19 are examples of additional lithic artifacts in the Orchard Collection. The finely made dart point at the lower left appears to be an Ensor point, which is considered diagnostic of the Late or Transitional Archaic (Turner and Hester 1985:94). The two snub-nosed artifacts shown on the lower right have similar notching and may date from the same period. They appear to have been used as hafted scrapers.

Figure 20 illustrates additional materials from the Orchard Olmos Basin Collection. The shaped shell artifact at the upper left is called a "shell spoon" in Orchard's card catalogue, and was recovered near the Olmos Dam. The artifact at the upper right of the illustration is a shell adze with the bit shown at the top. This shell piece was cut and ground into shape but the bit edge appears to have been flaked as with lithic tools.

At the lower left in Figure 20 is a bone awl or punch. Tiny notches at the base of this bone piece suggest that it may have been hafted; it could also have been used as a projectile point. The tabular stone piece shown at the lower right shows marked coloration on its working face, suggesting it may have been used to grind pigment. Other tabular pieces in the collection are of various textures and colors which reinforces the impression of pigment processing. The illustrated specimen (and most others in the collection) also have numerous overlapping striations which may suggest they were also used to sharpen other bone or lithic tools.

The Orchard Collection contains a wide variety of other Archaic materials; there are too many specimens to fully document here. The intent here is to provide a variety of examples to illustrate the range of materials recovered from this vicinity in Orchard's more than 50 years of artifact collecting in the Olmos Basin.
Figure 19. Ground stone and lithic artifacts from the Olmos Basin in the C. D. Orchard Collection: upper left, Shist or slate pallet or tablet; upper and middle right, Ground stone gorget fragments; lower left, Ensor dart point; lower right, Possible hafted snub-nosed scrapers (Illustrations by Richard McReynolds).
Figure 20. Ground shell and bone artifacts from the Olmos Basin in the C. D. Orchard Collection: upper left, Shell spoon; upper right, Cut and ground shell adze; lower left, Bone awl or projectile point; lower right, Possible stone paint pallet (Illustrations by Richard McReynolds).
Summary of the Archaic Occupation

For thousands of years bands of Native Americans, living an Archaic way of life, occupied the middle courses of all the rivers that cross the Balcones Fault. In addition to the evidence found along the Olmos and Salado creeks, abundant Archaic Period remains have been recovered in the past throughout Brackenridge Park, further south along the San Antonio River, near the San Pedro Springs, along Leon Creek, and along the Guadalupe and Medina Rivers. Further afield, many sites are known on the Edwards Plateau, along the Lower Pecos River (see displays at the Witte Museum), in the Big Bend region, and along the Gulf Coast as well as in the Rio Grande Valley and, indeed, throughout South Texas. The number and distribution of Archaic sites gives evidence of a highly mobile way of life, but also the evidence bespeaks the fact that this way of life supported a substantial population of ancient Texans for up to 8,000 years. We have to admire a way of life that was so successful in satisfying human needs and avoiding negative environmental effects that it lasted with little change for so long.

Late Prehistoric Period

The Late Prehistoric period, which began in southern Texas about AD 700, is characterized by the adoption of the bow and arrow and, not necessarily at the same time, the appearance of ceramic vessels in the material inventory of the local people. Despite these innovations, lifeways did not change very much, and the people continued to hunt and gather wild foods for their living, in the style of their ancestors (Hester 1980:154-160). The Late Prehistoric period ends with the arrival of Europeans, and the aboriginal way of life was eventually abandoned.

Elsewhere in Texas and other parts of North America, agriculture already had gained a central position in the subsistence systems of many peoples who earlier had basically Archaic lifeways. In the Mississippi Valley, for instance, the Late Prehistoric Indians were intensive agriculturists whose monumental earthworks, temple complexes, elaborate ceremonial behavior, well-developed ceramic technology, warfare and stratified social organization were recorded by early Europeans and have been documented by archaeologists.

What accounts for the "rise of civilization" in some areas and not in others? In the Mississippi and Ohio valleys, in the Caddoan area of East Texas, and in parts of the Southwest, under different conditions perhaps involving local population growth and greater agricultural potential, some people undertook cultural intensification and economic change in order to meet their culturally defined needs. Some of the Late Prehistoric peoples in the Panhandle, in north-central Texas, and in East Texas adopted domestic plants (corn, beans, squash, peppers, and sunflowers to name a few), and practiced food production on a small scale.

In contrast, the sparsely scattered people of semi-arid Central and South Texas, in the absence of some of the stressful or facilitating factors present in other geographical areas, did not substantially modify their Archaic, hunting and gathering life style. They were, of course, aware of other lifestyles because they had contact with, for instance, the
agricultural peoples of East Texas who periodically traveled west into Central Texas to hunt bison (cf. Campbell 1983). There appears to have been lively exchange of information, artifacts, and exotic materials over a wide area. The idea of pottery and the bow and arrow no doubt diffused into southern Central Texas. However, only one corn cob has been recovered from Late Prehistoric contexts in our region. This was discovered at the Timmeron Rock Shelter (Site 41 HY 95) near San Marcos during the 1975 STAA excavations (Harris 1985). The single specimen has been interpreted as evidence of trade between the prehistoric people of Central Texas and those of East Texas who grew maize.

Late Prehistoric Artifacts from the Olmos Basin

A number of Late Prehistoric artifacts have been recovered by early collectors in the Olmos Basin area. Several types of arrow points from the A.S. Collier Collection (Fox 1975:Fig. 4; Hester 1975) are shown in Figure 21. These include Perdiz, Scallorn, and Edwards arrow points, a Late Prehistoric drill, and a triangular artifact known as a Guerrero or Mission arrow point. These finds document the presence of Late Prehistoric people in the Basin and they illustrate the diversity of artifact types in the late period.

The Orchard Collection also contains a number of Late Prehistoric artifacts, including the arrow point forms mentioned above. In addition, Orchard recovered a number of large bifaces and drills or awls which probably date to the Late Prehistoric. Figure 22 provides examples of these types of artifacts. The bipointed form shown in the upper left is probably a Plains knife (Mitchell 1977:3); the upper third of the biface shows reworking. Sollberger (1971) has suggested that such resharpening of leaf-shaped knives resulted in the alternately beveled knives commonly found on Late Prehistoric sites of the Southern Plains and Central Texas.

![Image of arrow points](image)

Figure 21. Late Prehistoric Artifacts from Olmos Basin, Collier Collection: a,b, Perdiz; c,d, Scallorn; e, Edwards; f, hafted drill; g, Guerrero or Mission arrow point (Reproduced from Fox 1975: Figure 4; courtesy of the Center for Archaeological Research, University of Texas at San Antonio).
Figure 22. Other Late Prehistoric Artifacts from the Olmos Basin, Orchard Collection: upper left, Plains knife; upper right, Large biface used as trade materials with the Texas Coast and other areas; lower row, drills or awls make on bladelettes (Illustration by Richard McReynolds).
The large biface illustrated in the upper right panel of Figure 22 is somewhat thicker than most knife forms, although the fine flaking along the left edge is suggestive of a completed and utilized artifact. It may have been made to be a trade item; larger lithic pieces were highly valued in areas where lithic raw materials were scarce, such as on the Texas coast, where they were used as ceremonial knives (Johnson 1986). Several such large knives are in the George Martin Collection from the central Texas Coast (now in the Witte Museum; ibid.).

The small pointed forms shown in the lower row of Figure 22 are probably awls, perforators, or perhaps drills. Note that both of these specimens are made on small blades, with a typical triangular cross section. Such utilization of blade or bladelettes is typical of Late Prehistoric lithic technology (Hester, 1980).

The Orchard Collection of Olmos Basin materials contain many other artifacts which may be of Late Prehistoric origin. Most such materials are indicated in Orchard’s card catalogue as coming from the vicinity of Olmos Dam, although a few are marked Olmos Park. Orchard’s records are somewhat terse, and often have no other information other that the general location where the specimen was recovered and his classification of it. The lack of contextual information makes interpretation of such materials difficult and dating is mainly supposition. The volume of materials in his collection, however, suggests that there was considerable occupation of this area during most prehistoric periods.

There were probably many Late Prehistoric Indian campsites located along Olmos Creek and the San Antonio River at one time, but these were often temporary habitation spots which left very little evidence. Recent plowing and other disturbances in the Olmos Basin have obliterated most of these shallow archaeological deposits. In the Olmos Basin there are no known remaining discrete Late Prehistoric archaeological sites suitable for excavation, but some artifacts dating to that period have been collected in recent surveys, and several shallow sites south of the present Olmos Dam known to be occupied during the Late Prehistoric period have been tested. These sites will be described briefly here.

Site 41 BX 291 (Late Components)

This site, described in detail above, is characterized by an accumulation of rather shallow debris dating to both the Archaic and Late Prehistoric periods. The two components are mixed over the entire area of the site, and there is very little difference in the artifact inventories of the earlier and later archaeological levels. According to Katz and Katz (1982:42) this evidence indicates that peoples with very similar life styles repeatedly made short-term visits to the site.

The Uppermost soil zones, 1 and 2, contained ll tiny ceramic sherds belonging to the Leon Plain tradition. This ware, known throughout Central and interior South Texas, is characterized by simple, undecorated, bowls, jars and cooking pots, and the paste is tempered with crushed animal bone. Leon Plain ceramics are characteristic of archaeological sites occupied as early as AD 1200, but these ceramics continued to be made until the 17th century (Hester 1980:124).
The appearance of ceramic vessels is a diagnostic characteristic of the Late Prehistoric period in South Central Texas. It is not known if this change in technology was related to some innovation in food habits. The Katzes have noted that the addition of a few grinding implements to the Late Prehistoric tool kit suggests a "greater reliance on gathering and vegetal processing than was associated with the Terminal Archaic occupation" (Katz and Katz 1982:42).

The superficial levels of Site 41 BX 291 yielded a Perdiz and a Scallorn point (illustrated earlier). Both of these are small and well made, and they normally are interpreted as arrow points, being smaller than early points which are thought to have been functioned as dart or spear tips. The bow and arrow is, of course, the other diagnostic technical innovation indicative of the Late Prehistoric period.

Sites 41 BX 509 and 510

These are two sparse scatters (see Figure 8) of stone artifacts which were tested by small excavations in 1980 by members of the IWC Field School (Katz and Katz 1982:3). The test pits showed shallow underground deposits similar to those found in nearby sites, and the recovered material included chert flakes (but no diagnostic stone tools), burned rock, charcoal, deer bone, snail shells, a few ceramic sherds and some historic artifacts.

The Orchard Site (41 BX 24)

In 1982 the IWC Field School focussed on Site 24, the C. D. Orchard site, which is part of the southern portion of the big Olmos Dam site, and which forms the heart of the State Archaeological Landmark area. The site is an area some 250 meters in diameter, elevated about a meter above the flood plain, which is characterized by burned rock and chert (flint-like stone) over its surface. The Director of the Field School, Susanna R. Katz, has not yet formally reported the results of the excavations, so the site will be described only briefly here.

A series of square excavations were opened in a line across the part of the midden where artifacts were scattered most densely on the surface. Excavation showed that the top layer of soil was disturbed by plowing; the Sisters of Charity used to plant corn there, and the land had been turned by a horse or mule-drawn plow which disturbed the upper 10 cm of deposit (S. Katz, Field Notes, 1982; Black 1982:1).

Deeper down, student excavators recovered burned rock refuse deposit and four kinds of snail shells, chert flakes, a few retouched stone flakes, a few fragments of bifacially worked artifacts, animal bones (one identified as Sylvilagus floridanus, or Eastern cottontail rabbit), and some concentrations of charcoal that may indicate ancient hearths. Historic artifacts (bottle glass, nails, barbed wire, nails and bullets) were mixed with ancient artifacts near the surface of the site. The only diagnostic prehistoric artifact was a Scallorn point which was associated with mixed historical material, but which indicates that Late Prehistoric Indians may have lived there. All of these sites south of the dam are quite similar to each other, and were, in fact, part of the same campsite, re-occupied many times during the prehistoric period and in the historic period as well.
Pottery and Trade

A few Late Prehistoric pottery sherds have been reported from the Olmos Basin, including the Leon Plain sherds found in the IWC excavations at Site BX 291. A collection of about 150 sherds, collected from 41 BX 1 by C. D. Orchard and donated to the Witte Museum, have been described by Fawcett (1972:37). Collectors reported to Fox (personal communication) that pottery was found in the swampy and very disturbed area where the athletic fields are now located, but the presence or absence of a significant Late Prehistoric occupation in that very disturbed part of the Basin has not been verified by excavations. It should be noted that this area was not necessarily always swampy, since the patterns of drainage there have been changed radically by human activities since the 19th century.

While Leon Plain pottery is neither well made nor attractive to look at, some decorated pottery originating in the Southwestern cultural area (Arizona and New Mexico) or in other areas of Texas also occurs in South Central Texas. Orchard recovered sherds of several Southwestern types from the Olmos Basin, in San Pedro Park, and in other Central Texas counties, often in association with Leon Plain pottery (Orchard and Campbell 1960).

Several of the non-local sherds from the Olmos Basin were recently located in the collection of materials which Orchard had loaned to IWC for study and analysis; three of these specimens are shown in Figure 23. Two of the sherds appear to be corrugated wares. One of these pieces might be the specimen which Orchard and Campbell reported as "a sherd of ribbed coil ware with sand temper which Stubbs thinks is related to Los Lunas Smudged" (Orchard and Campbell 1960:7 [citing Mr. Stanley Stubbs, Laboratory of Anthropology, Santa Fe, New Mexico]). The third sherd appears to be asphaltum-decorated, probably Rockport pottery typically found in sites along the central Texas coast. Such exotic pottery being recovered in the Olmos Basin clearly suggests trade with other distant areas.

There were well-developed trade routes in the Late Prehistoric Period. A variety of goods moved, perhaps from hand to hand, into South and Central Texas from the north, west, south, and east. These goods included: obsidian from Idaho (Hester 1986) and western New Mexico (Hester and Mitchell 1974; Hester, Mitchell, et al., 1980); obsidian, spindle whorls and other objects from Mexico (Hester 1988); ceramics from West Texas and New Mexico (Orchard and Campbell 1960); and shell tools and ornaments as well as ceramics from the Texas coast (Hester 1980:154-160; Hester and Hill 1975:23). While such materials are relatively rare, their presence in the local area suggests that local groups were active participants in a general trade network which extended over wide areas of the country during the Late Prehistoric period.

Haase Site (41 BX 338)

In Bexar County, one of the better known Late Prehistoric camp sites is located in the Salado Creek drainage (see Figure 2) at the Haase Site. CAR-UTSA archaeologists have conducted some preliminary testing and excavations at the Haase site since it is located only 300 to 400 yards from the Panther Springs site (41 BX 228) mentioned earlier. Relic collectors have removed hundreds of sherds, including some types that may be non-local (Black and McGraw 1985:328).
Frequently Late Prehistoric sites are found adjacent to Archaic period burned rock middens, but not on the midden itself (Mitchell and Van der Veer 1983). Black and McGraw have drawn attention to the shift in camping location between the Late Archaic and the Late Prehistoric periods in the Panther Springs vicinity:

The relocation of extensive occupational activities during this [the Late Prehistoric] time cannot be clearly explained; both locations have overlapping zones of exploitation. It is speculated that the extensive ceramic deposits at 41 BX 338 may provide a clue: the raw materials for pottery making may have been more easily accessible from soils of the more clayey Tarrant-associated soils...surrounding 41 BX 338 than from the alluvium-associated Patrick soils at 41 BX 228 [occupied earlier]...(Black and McGraw 1985:330).

Regrettably the Haase Site, like other sites of this period, is difficult to study and understand because it has not been deeply buried by any accumulation of humus, and it has been subject to terrible damage by pot hunters. Nevertheless, 41 BX 338 was probably a base camp located, like many Late Prehistoric sites in this region, along a major water course. Bone and other organic materials are not preserved well in these types of sites. For information on faunal materials and possible dietary preferences, we can examine drier, more protected sites further west.

Tortugas Creek Sites

We know more about the Late Prehistoric sites along Tortugas Creek, a tributary of the Nueces River in Zavala County, southwest of San Antonio, because of better preservation of materials. This area is semi-arid brushland today, but before recent human disturbance there was grassland and savannah-type vegetation (Hester and Hill 1973:34–35). This natural area was never as well-watered as the Olmos Basin; nevertheless, the finds at the Tortugas Creek sites help to illuminate what life was like all over the region shortly before the European entrance into South Texas.
The Late Prehistoric people who occupied Tortugas Creek preferred to camp along the banks of major streams, where plant and animal resources were concentrated. They may have used smaller hunting and foraging camps located in upland environments as well, but archaeologists have noted that most of the smaller camps, isolated hearths and chipping stations in these upland areas date primarily to the Paleo-Indian and Archaic periods (Hester and Hill 1973:36-37; 1975:20).

In the larger camps along the creeks, like the Tortuga Flat and Holdsworth sites, activities seem to have been focussed in a small area, and dense refuse accumulated. Excavations suggested that there are many overlapping "occupational zones," indicating repeated occupations rather than a single, long-term occupation (Hester and Hill 1975:20; Hester 1980). The researchers believe that a wide range of activities took place at these sites because, in contrast with earlier sites, the Late Prehistoric middens along Tortugas Creek contained a greater variety of objects associated with hunting, tool manufacture, processing raw materials and food preparation (Hester and Hill 1973:40-56, 60-61; 1975).

One of these sites, called the Tortuga Flat site (41 ZV 155), was occupied off and on during a short period around AD 1540. The artifact inventory at this site includes plainware pottery, with ground bone in the clay which probably belongs to the Leon Plain tradition; baked clay lamps; bone implements and beads; stone tools such as Perdiz and Scallorn arrowpoints, lithic scrapers, bipointed knives (bifacially worked), chipping debris, other retouched tools, many simple flake tools, manos (hand-held grinding tools), and a fragment of a metate (milling stone) which is a kitchen aid characteristic of the Late Prehistoric period. At the Holdsworth site the archaeologists found an engraved sandstone pipe which may have been used during ceremonies (Hester and Hill 1975:22).

Archaeologists believe that the Late Prehistoric people of South Texas exploited a "wide variety of potential vegetal foods" available along river courses. Hester and Hill [1973:59-60] note that plant foods were probably very important to the prehistoric people as they also were to the historic Indians that we know from historical records.

Animal bone remains, collected from the archaeological soil by fine screening, showed that the inhabitants of the Tortuga Flat site preyed upon antelope (the most important prey species), whitetailed deer, coyote, jackrabbit, cottontail rabbit, prairie dog, pocket gopher, gopher, packrat, cotton rat, white footed mouse, raccoon, gray fox, box turtle, bullsnake, ratsnake, small birds and duck, other rabbits, fish and turtle. Mussel shells and abundant land snails represented other food resources exploited at the site, and scattered elsewhere in the living area were the bones of bison which used to range into South Texas (Hester and Hill 1975:22 and Tables 1 and 2; Hill and Hester 1973:11). Judging from the large quantities of bones identified as rodent and small animals such as rabbit, the people were often small game scroungers rather than big game hunters.

In conclusion, we can describe few details of the cultures of the Late Prehistoric people of South Texas because only a small number of sites have been scientifically excavated. The available evidence suggests that the Late Prehistoric people of this area were very similar to the Coahuiltecs who are known to have been in the region during the Historic period.

43
HISTORIC NATIVE AMERICANS OF TEXAS

Archaeologists use both historical descriptions of native Americans and archaeological evidence in reconstructing the aboriginal lifeways of Texas. The first written descriptions were made by Spanish explorers at the same time the native American way of life in South Central Texas was being impacted by Europeans and by hostile Indians from the north and west. Nevertheless, those early descriptions give us our best view of what life was like at the time of the European invasion.

W. W. Newcomb's book, *The Indians of Texas* (1961), is an entertaining and thorough summary of what is known about the original natives of Texas, based primarily on early historical accounts and on ethnographic accounts. Also, a good short description of the Indians of South Texas is found in Thomas R. Hester's book *Digging into South Texas Prehistory* (1980: 38-56). Hester points out that the famous Comanche and Apache were latecomers, and that the original inhabitants included three groups of hunters and gatherers: (1) the bison-hunting Tonkawa (centered on the Edwards Plateau north of San Antonio); (2) the Karankawa of the coastal area; and (3) a diverse group known as the Coahuiltecans of southern Texas and northern Mexico.

The so-called Coahuiltecans (because they all spoke dialects of a language called Coahuilteco) included many different peoples who were commonly removed to the missions in the Spanish Colonial period. One local group associated with the vicinity of San Antonio was the Payaya, and the Siupam were said to have used the San Pedro Springs and lived along the San Antonio River in the 1700s (Hester 1980:44). While many scholars believe that the Late Prehistoric remains in and around Bexar County were left by Coahuiltecans, there is no necessary correlation between the groups present there in the 17th and 18th centuries and those that occupied the Olmos Basin in the Late Prehistoric period (Campbell and Campbell 1985).

**Coahuiltecans**

Hester (1980:39-40) writes that the Coahuiltecans lived in small family groups of less than 100, with no permanent leaders or "chiefs." Each had its own name and a territory, which might overlap with the territories of other groups. They were semi-nomadic, exploiting a wide variety of plant and animal species in season. The Coahuiltecans probably depended on the same species utilized by the Archaic period peoples at Panther Springs and at sites in the Olmos Basin. Like the prehistoric people described above, they liked to camp near rivers or creeks, where they made small brush, mat, and hide-covered shelters. The Coahuiltecans wore little clothing except capes and blankets made of animal skins, and marked life crises such as birth, puberty, marriage, and death by performing rituals.

The historical record also indicates that the Indians of South Texas had artifacts made of stone, bone, and shell as well as a variety of items made of perishable materials such as skin, wood, and plant fibers. These items included the bow and arrow, the latter tipped with small, finely flaked flint (or chert) points, used primarily in hunting; hammerstones and bone flaking tools for manufacturing the projectile points; stone abraders for straightening arrow shafts; a wide variety of flaked lithic tools; wooden digging sticks useful in collecting both wild plants and small animals,
which must have been one of the most important items of daily use; curved sticks for hunting rabbits, mortars and pestles made of wood (Hester and Hill 1973:60); ceramic vessels, smoking pipes, nets and baskets made of plant fibers, and dry gourds for containers.

Food gives us great insights into how people live. Margaret Mead once remarked that it is difficult to like people who eat things that you do not eat, so we have to make a considerable effort to understand such people. The truth is that the Coahuiltecans survived by eating a wide variety of things that we would not be willing to eat (at least under our present circumstances of affluence!). We ought to understand, however, that these original South Central Texans were able to support themselves in the local environment because they defined such a wide range of bio-matter as food. Because they defined so many species as food, a place like the Olmos Basin was, in its natural condition, rich in exploitable resources.

The historic Coahuiltecans used prickly pear fruit, agave (sotol) roots and leaves, grass seed, gourds, flowering weeds and other green plants. Bison and pecans were particularly important food sources for them (Hester 1980:38-56). In addition, they used medicinal and narcotic plants such as mountain laurel seeds and peyote, which probably also were used by their Archaic period ancestors.

Cabeza de Vaca and the Indians of Southern Texas

The best early eyewitness account of the Indians of southern Texas was the journal of Alvar Núñez Cabeza de Vaca, whose fortune took him walking across Texas between 1528 and 1535 (Cabeza de Vaca 1907). It is useful to read Cabeza de Vaca carefully for the rich details, even though he "travelled through so many sorts of people, of such diverse languages, the memory fails to recall them" (p. 97). Cabeza de Vaca focussed on many aspects of Indian culture, but he is particularly informative on the subject of food (summarized also by Krieger 1956:47-56), which is what I will emphasize here.

Cabeza de Vaca's (1907:12-126) descriptions are wonderful, but his remarks may not apply specifically to the Coahuiltecans. It is frequently not possible to say where Cabeza de Vaca was at any particular moment in his narrative [see Campbell and Campbell 1981, and Johnson 1985, for discussions of his route across Texas]. He does note that the Indians who lived away from the coast, probably along the Balcones Escarpment, were "in better condition" and "more populace and better provisioned" than his poor Karankawans along the Texas coast (Cabeza de Vaca 1907:93). Despite this lack of precise identification, we may take his comments to represent the general lifeway characteristic of Indians both along the coast and inland in late prehistory.

Cabeza de Vaca's words are the best eye-witness accounts that we have:

Occasionally they kill deer, and at times take fish; but the quantity is so small and the famine so great, that they eat spiders and the eggs of ants, worms, lizards, salamanders, snakes, and vipers that kill whom they strike; and they eat earth and wood, and all that there
is, the dung of deer [probably only undigested seeds were sought], and other things that I omit to mention.... They save the bones of the fishes they consume, of snakes and other animals, that they may afterwards beat them together and eat the powder (Cabeza de Vaca 1907:65).

Cabeza de Vaca's accounts emphasize the variety of things that the Indians considered edible. He explained how the Karankawans fished, gathered oysters and crabs, harvested kelp (sea weed), and dug roots from shoal water (Cabeza de Vaca 1907:45, 50, 61). He himself ate dog on at least one occasion (p. 82), and he remarked that because of the difficulty of feeding people, children were allowed to nurse until they are 12 years old and able to fend for themselves (p. 83)! In scientific terms, these Indians maximized the amount of food available to them by defining most things as edible.

Pounding is a technique used to make a variety of foods more edible or more digestible or generally more useful to people. Cabeza de Vaca's remarks would suggest that many foods were prepared by pounding or grinding. For example, flour made from the seeds of the mesquite was pounded together with earth and consumed (Cabeza de Vaca 1907:98). Cabeza de Vaca describes this food processing in detail:

The fruit [of the mesquite tree] while hanging on the tree, is very bitter and like unto the carob; when eaten with earth it is sweet and wholesome. The method they have of preparing it is this: they make a hole of requisite depth in the ground, and throwing in the fruit, pound it with a club the size of the leg, a fathom and a half in length, until it is well mashed. Besides the earth that comes from the hole, they bring and add some handfuls, then returning to beat it a little while longer. Afterward it is thrown into a jar, like a basket, upon which water is poured until it rises above and covers the mixture. He that beats it tastes it, and if it appears to him not sweet, he asks for earth to stir in, which is added until he finds it sweet. Then all sit round, and each putting in a hand, takes out as much as he can. The pits and hulls are thrown upon a skin, whence they are taken by him who does the pounding, and put into the jar whereon water is poured as at first, whence having expressed the froth and juice, again the pits and husks are thrown upon the skin. This they do three or four times to each pounding. Those present, for whom this is a great banquet, have their stomachs greatly distended by the earth and water they swallow. The Indians made a protracted festival of this sort on our account...(Cabeza de Vaca 1907:89).

In one village the Spaniard was given a present of "a basket of pounded prickly pears" (Cabeza de Vaca 1907:77), and in another place, inland from the coast, Cabeza de Vaca was with Indians who were eating nuts (walnuts or pecans):
These are ground with a kind of small grain, and this is the subsistence of the people two months of the year without any other thing; but even the nuts they do not have every season, as the tree produces in alternate years (Cabeza de Vacá 1907:59-60).

This emphasis on pounding and grinding food helps to explain the presence of stone grinding equipment in prehistoric habitation sites.

Cooking is another important area of technology which makes food more accessible to human beings. While Cabeza de Vacá and the Indians ate many things raw, including meat, other foods needed cooking to be nutritious or tasty. Many roots, which were difficult to dig, "required roasting for two days" (Cabeza de Vacá 1907:65). This cooking probably required the kind of stone-lined earth ovens sometimes found in archaeological sites. Prickly pear leaves (Opuntia cactus leaves) were roasted all night and eaten (Cabeza de Vacá 1907:82): "We pulled many leaves of prickly pear, which we put at night in a oven we made, and giving them much heat, by the morning they were in readiness."

It is also plain from Cabeza de Vacá's statements that the Indians ate in accordance with the seasonal availability of foods. They gorged on blackberries or mulberries in their season, on nuts (walnuts or pecans) when they were available, on prickly pear fruits in the fall, and on some roots which were only edible in the winter.

There were days in which there was nothing to eat, and Cabeza de Vacá observed that the Indians were apparently more tolerant of temporary privations than the Europeans:

It occurred to us many times while we were among this people, and there was no food, to be three or four days without eating, when they, to revive our spirits, would tell us not to be sad, that soon there would be prickly pears when we should eat a plenty and drink of the juice, when our bellies would be very big and we should be content and joyful, having no hunger (Cabeza de Vacá 1907: 66).

According to Cabeza de Vacá, the Indians moved their camps frequently to seek food, the women dismantling the huts and carrying them on their backs. The size of the encampments reflected the abundance of foods, such as nuts or prickly pears, with large gatherings of closely related peoples occurring several times a year when a principal resource was harvested in abundance.

Some foods were preserved for eating at a later time. Cabeza de Vacá mentions various techniques of food preparation and storage:

To them the happiest part of the year is the season of eating prickly pears; they have hunger then no longer, pass all the time in dancing, and eat day and night. While these last, they squeeze out the juice, open and set them to dry, and when dry they are put in hampers like figs. These they keep to eat on their way back. The peel is beaten to powder (Cabeza de Vacá 1907:66).
Cabeza de Vaca does not give the impression that hunting was as important a subsistence activity as was plant gathering. He does say that the Yguazes (who lived somewhat inland from the coast) were so "accustomed to running, that without rest or fatigue they follow a deer from morning to night. In this way they kill many. They pursue them until tired down and sometimes overtake them in the race" (Cabeza de Vaca 1907:66). He also recorded this hunting technique used two or three time a year during a communal deer hunt: "They are accustomed also to kill deer by encircling them with fires. The pasturage is taken from the cattle [the deer] by burning, that necessity may drive them to seek it in places where it is desired they should go" (Cabeza de Vaca 1907:67).

Cabeza de Vaca (1907:68) also very much enjoyed bison meat when among the inland Indian groups. That species apparently was not preyed upon habitually, but he says: "[t]hroughout the whole region over which they run, the people who inhabit near, descend and live upon them, distributing ... many hides into the interior country". In addition to big game, he mentions that the Indians also fired "the plains and forests within their reach, that the mosquitos may fly away and at the same time to drive out lizards and other like things from the earth for them to eat" (Cabeza de Vaca 1907:67). Fire drives are part of an old and successful hunting and gathering technology. One secret of the success of the hunting and gathering way of life is maintaining access to a large and stable supply of food. When people define a relatively broad variety of things as food, including lizards, snakes, insects, rats, frogs, grubs of the land, sea weed, lichen and other plants, then they increase their ability to survive in a given environment.

Cabeza de Vaca ingratiated himself to the various Indian groups of the Texas coast by becoming a trader. The goods that he dealt with give us a good idea of what probably was traded in the Late Prehistoric period:

I set to trafficking, and strove to make my employment pro-fit able in the ways I could best contrive, and by that means I got food and good treatment. The Indians would beg me to go from one quarter to another for things of which they have need; for in consequence of incessant hostili-ties, they cannot traverse the country, nor make many exchanges. With my merchandise and trade I went into the interior as far as I pleased, and travelled along the coast forty or fifty leagues. The principal wares were cones and other pieces of sea-snail, conchs used for cutting, and fruit like a bean [likely mescal beans, Sophora secundiflora] of the highest value among them, which they use as a medicine and employ in their dances and festivities. Among other matters were seabeads. Such were what I carried into the interior; and in barter I got and brought back skins, ochre with which they rub and color the face, hard canes of which to make arrows, sinews, cement and flint for the heads, and tassels of the hair of deer that by dyeing they make red (Cabeza de Vaca 1907:56).

Trade is a mechanism for circulating desirable resources (natural and manufactured) that are scarce or unequally distributed in the environment. Cabeza de Vaca mentions other items of trade in the early Historic period.
which are of great interest to us because many are things that probably circulated also in the Late Prehistoric period. For example, the Indians described by Cabeza de Vaca traded sea shells that served as ornaments and cutting tools; beads made from shell; and "little bags of silver" [pearlmica, or margarite, which is the pulverized nacreous or pearly material from some shellfish] (Cabeza de Vaca 1907:92). They were also interested in ochre, which is a mineral pigment used widely for body painting, medicine and in mortuary ceremonies; animal skins (particularly deer and bison); gourds and gourd rattles which are from domestic plants not grown by the Indians in south Texas (Cabeza de Vaca 1907:90,95); galena (pulverized lead ore; 1907:96); copper bells (probably made in Mexico or in Arizona/New Mexico; 1907:95); flint for making arrowheads and cutting tools which, says Cabeza de Vaca, were very highly valued (1907:78); other valuable raw materials such as cement (natural asphaltum or pitch?), sinews and reeds for arrow shafts; and mescal beans (the seed of the Texas mountain laurel) which are medicinal and hallucinogenic.

Payaya

In order to learn more about the Coahuiltecans that inhabited the vicinity of San Antonio region, we turn to T. N. Campbell's detailed short monograph on The Payaya Indians of Southern Texas (STAA Special Publication No. 1). He notes that there is no record of the Payaya Indians before the early Colonial period (prior to 1688), but that they were living in the San Antonio region in the late 17th century. They were numerous at Mission San Antonio de Valero (later the Alamo) after 1718. Campbell writes that "[s]uch successes as the San Antonio missions had after 1718 were largely due to the territorial encroachments of the Apaches. In 1727 the missionary Vergara...wrote that the Payaya and other Indians who came to the first two San Antonio missions 'were converted for fear of the Apaches'" (Campbell 1975:2).

By the time the Payaya show up in the historical documents, they were under pressure from the Apache invading from the north and the Spaniards expanding up from the south (under competitive pressure from the French, expanding from the northeast). The Payaya were already suffering from "what most hunting and gathering peoples of the world have had to face: population decline, territorial displacement, segregation and ideological pressure, loss of ethnic identity, and absorption by invading populations" (Campbell 1975:2).

The documents described by Campbell were poor in ethnographic details, but do provide a small insight into the lifeways of the Payaya. Today their language is extinct and there are no written records of it, but it can be determined that they spoke a dialect of Coahuilteco spoken by many groups occupying the zone between Cibolo Creek (north of San Antonio) and northern Coahulla, Mexico (Campbell 1975:15).

At the end of the 17th century, the Payaya were still living in temporary camps in wooded areas near rivers along the western and southwestern margins of the Edwards Plateau. The Europeans never bothered to describe their shelters (rancherias), perhaps because they were so insubstantial. The Payaya and other overlapping ethnic groups exploited a wide range of ecological zones, including a strip of Blackland Prairie along the northeastern part of the South Texas Plateau (flanking the margin
of the Edwards Plateau), and the Post Oak Belt which parallels the Blackland Prairie (Figure 4). This zone cuts across the Medina and San Antonio Rivers and Cibolo Creek in eastern Bexar County, and follows the borders with Comal and Medina counties. Bison were abundant in the grassland areas in those days, and it was recorded by the Spaniards that pecans were an important food resource for the Indians. Neither gardening nor farming has been mentioned as part of their subsistence practices in this period. Their temporary camps were sometimes ethnically mixed, perhaps reflecting pressure from outsiders.

Before the end of the 18th century, the Indians of southern Texas lost their traditional way of life, which was no longer practiced, and also their ethnic identities. Those whose names were recorded in mission records were described as simply indios (Campbell 1975:12).

EARLY EUROPEAN EXPLORERS

There is a hiatus in the archaeological record in the Olmos Basin between the occupation by the Late Prehistoric Indians and more recent historical activity. Anne Fox, who in 1975 surveyed the entire Incarnate Word property for the purpose of identifying prehistoric and historic sites, found no known remains of early Spanish settlements there. However, Susanna and Paul Katz (personal communication) have examined some Spanish Colonial artifacts in the C. D. Orchard Collection which Orchard stated were recovered in the Olmos Basin.

Two artifacts from the Orchard Collection which probably date from this early Historic Period are shown in Figure 24 below. The metal point is made of iron and is in a remarkable state of preservation; it has previously been reported in an earlier survey of metal points in South Texas (Mitchell 1974). The gunflint shown to the right in Figure 24 was in a separate box of materials Orchard had loaned someone else for analysis which was recently recovered [and probably was not seen or evaluated by the

Figure 24. Early Historic artifacts from the Olmos Basin, C. D. Orchard Collection (Metal point drawing adapted from Mitchell, 1974; Gunflint illustration by Richard McReynolds).
The gunflint is marked as from Olmos Park, Specimen 74, and is so listed in Orchard's card catalogue. It appears to be made of Central Texas chert and thus may have been manufactured locally (imported European gunflints are generally distinctively different in color and workmanship).

Orchard (1974:1) also reported that a possible "Spanish outpost was just north of Olmos Dam [referring to the original dam], between Worth Springs and San Antonio Springs. The last structural remnant was razed for public park improvements sometime ago."

Spanish colonization, which began seriously at the beginning of the 18th century, had its focus of activity further down the San Antonio River. Archaeological research on the mission sites has illuminated for us life in San Antonio in the Mission period, and the memoirs and diaries of the earliest Spanish explorers are interesting to read in this context.

Don Domingo Terán de los Ríos and Father Damian Massanet

While we very little archaeological evidence of what was happening in the Olmos Basin for several hundred years in the early Historic period, it was surely a camping place, subject to visits by Indians and European travelers as well. In 1691, Don Domingo Terán de los Ríos was the first Spaniard known to have visited the Head of the River, on his way from the Rio Grande to visit the Texas Nation (Tejas Indians) in East Texas. Here are his words:

[travelling from the Medina River] On the 13th [of June], our royal standard and camp moved forward in the aforesaid easterly direction. We marched five leagues over a fine country with broad plains—the most beautiful in New Spain. We camped on the banks of an arroyo, adorned by a great number of trees, cedars, willows, cypresses, osiers, oaks, and many other kinds. This I called San Antonio de Padua, because we had reached it on his day. Here we found [probably at San Pedro Springs] certain rancherías in which the Peyaye [Payaya] nation live. We observed their actions, and I discovered that they were docile and affectionate, were naturally friendly, and were decidedly agreeable toward us. I saw the possibility of using them to form reducciones [to be evangelized]—the first on the Rio Grande, at the presidio, and another at this point. Different nations in between could be thereby influenced. We did not travel on the 14th because it was Corpus Christi day.

On the 15th, we marched towards the east five leagues, across a country much like the preceding, with buffaloes [bison] and a great many oak trees. It is suited for all kinds of agriculture. We set up our camp that night upon the banks of a certain arroyo, where there is a considerable quantity of water. This I named San Ignacio de Loyola. This night we had a terrible storm. [And they prococed cast to the Guadalupe River.] (Don Domingo Terán de los Ríos, in Hatcher 1932:14-15).
Don Domingo was accompanied by Father Damian Massanet (or Mazanet) who recorded the following in his diary on the same days:

Wednesday, 13. We left San Basilio after having said mass. We continued northeast, a quarter east, until we passed through some low hills covered with oaks and mesquites. The country is very beautiful. We entered a stretch which was easy for travel and advanced on our easterly course. Before reaching the river there are other small hills with large oaks. The river is bordered with many trees, cottonwoods, oaks, cedars, mulberries, and many vines. There are a great many fish and upon the highlands a great number of wild chickens.

On this day, there were so many buffaloes that the horses stampeded and forty head ran away. These were collected with the rest of the horses by hard work on the part of the soldiers. We found at this place the rancharias of the Indians of the Payaya nation. This is a very large nation and the country where they live is very fine. I called this place San Antonio de Pádua, because it was his day. In the language of the Indians it is called Yanaguana. We traveled five leagues.

Thursday, 14 and Corpus Christi Day. We did not continue our journey because of the presence of the said Indians. I ordered a large cross set up, and in front of it built an arbor of cottonwood trees, where the altar was placed. All the priests said mass. High mass was attended by Governor Don Domingo Terán de los Ríos, Captain Don Francisco Martínez, and the rest of the soldiers, all of whom fired a great many salutes. When the host was elevated, a salute was fired by all the guns. The Indians were present during these ceremonies. After Mass the Indians were given to understand through the captain of the Pacpul nation, that the Mass and the salutes fired by the Spaniards were all for the honor, worship, and adoration we owed to God, our Lord, in acknowledgment of the benefits and great blessings that His Divine Majesty bestows upon us; that it was to Him that we had just offered sacrifice [of His Body and Blood] in the form of the bread and wine which had just been elevated in the Mass.

Then I distributed among them rosaries, pocket knives, cutlery, beads, and tobacco. I gave a horse to the captain. In the midst of their rancharias, i.e. their pueblo, they had a tall wooden cross. They said that they knew the Christians put up crosses in their houses and settlements and had great reverence for them, because it was a thing that was very pleasing to Him Who was God and Lord of all. On the day we left, and said Payaya captain, as an expression of thanks and appreciation, declared that he wished to go with us and guide us as far as the rancharias of the Chomanes. He also ordered four
Indians of this tribe to help the Spaniards round up the stock and do whatever else might be needed.

Wednesday [sic], 15. We left San Antonio de Pádua and traveled east, a quarter northeast, over level lands without woods. Along the road were many ranges of low hills covered with oaks. We continued the whole day in the same direction.

After going five leagues, we halted upon an intermittent arroyo. There were a great many buffaloes, and in the lagoons there were alligators and fish in abundance. I named this spot Santa Crecencia because it was her day. In the Indian language it is called Ymatiniquiapacomicaen [Smatiniquiapacomisem] which means river where there are colors for painting shields (Father Massanet, in Hatcher 1932:55-56).

Several days later, before reaching the Guadalupe River, Father Massanet wrote about a place he called San Marcelino, but which is called Xoloton [or Xaloton] which means black nuts in one Indian language and Bataconiquyque in the idiom of the other nations to the east. Here, he remarked, was a linguistic frontier: all the Indians from the Rio Grande to this point spoke only one language [presumably Coahuilteco] and that:

From this place to the Tejas country different languages are spoken. One encounters the following nations in the order named: Catqueza, Cantona, Emet, Cavas, Sana, Tojo, Toaa, and others. Here is the border region of various Indian nations.

They speak several tongues (but they understand each other) because they are all friends and have no wars... (Father Massanet, in Hatcher 1932:56).

Father Massanet’s account of this journey is very illuminating because of his interest in the Indians. The details he recorded show the tremendous ethnic diversity in South Central Texas at that time (1690s), as well as the mobility of the Indian groups. Near the Guadalupe River he mentions an encampment (the late spring season) of about 3,000 Indians, indicating that all settlements were not small. He describes the Chomas, who in New Mexico were known as the Jumanes, who

Every year...come to the headwaters of the Guadalupe River and sometimes as far as the Tejas country [East Texas]. They come to kill buffaloes and carry away the skins because in their country, there are no buffaloes. When it gets cold they return to their own country" (in Hatcher 1932:58-59).

Capitán Domingo Ramón

While missionaries and soldiers traversed South Central Texas in the 17th century, serious Spanish colonization around San Antonio did not begin until the next century. In 1716:
...Capitán Domingo Ramón crossed the Rio Grande River near the site of present-day Eagle Pass, Texas, with a company of 65 men, following the same long trail to the east that had been taken 25 years earlier by Terán—this time to re-establish missions [in East Texas] since abandoned (Dunn 1975:2).

On May 14, 1716, Ramón arrived in the San Antonio area and he wrote:

On this day I marched to the northeast seven leagues through mesquite bush with plenty of pasturage. Crossing two dry creeks we reached a water spring on level land, which we named San Pedro. There was sufficient water here for a city of one-quarter league, and the scenery along the San Antonio River is very beautiful, for there are pecan trees, grape vines, willows, elms and other timbers. We crossed said stream; the water, which was not very deep, reached to our stirrups. We went up the river looking for a camping place and we found a very fine location. There were beautiful shade trees and good pasturage, as we explored the head of the river. Here we found, in the estimate of twelve ultramarines, hemp nine feet high and flax two feet high. Fish was caught in abundance for everyone, and nets were used in the river with facility.

Governor Martín de Alarcón

The next important Spanish entrada was in April and May 1718 when another expedition crossed the Rio Grande:

...this one counting seven families among the 72-member force, and also including six droves of provisioned mules, cattle, sheep, chickens and 548 horses. This entrada was headed by Governor Martín de Alarcón. On May 5, 1718, Alarcón took formal possession of 'the place called San Antonio' at San Pedro Springs, 'about three-fourths of a league from the principal river.' (A league is 2.6 miles.) The chaplain and diarist of the Alarcón expedition Fray Francisco Celiz, noted that water was easier to secure at this point than down at the lower end of San Pedro creek, "where the ...creek joins the river...because the river flows in a very deep channel." The site was named Villa de Bejar and it was "henceforth destined for the civil settlement," while the Mission of San Antonio de Valero, which had been established a few days earlier, on May 1, was located "about three-fourths of a league down the creek." The villa (or village, later fortified as a presidio) and mission of San Antonio from this date, the founding date of the city, became the most important settlement in the frontier territory known as the Province of Texas or New Philippines (Dunn 1975:3, summarizing Hoffmann 1935:10, 29, 40, 43 48 49).
Father Antonio Margil de Jesús

Other famous soldiers and missionaries stopped at the campsite at the Head of the River.

According to this legend, a part of conquistadores were learning a lesson of the dry lands south of modern San Antonio; that a simple thing like water may be as important as life. Beasts and riders were famishing of thirst. This thirst was likened to the sharp thorns of the chaparral. It threatened to destroy them.

And then they saw, like a vision, some green foliage. They rode toward it. They found grass and shade but no water. Desperately, almost dying, the cavaliers listened while some priests in their party prayed for water. He who led them in their praying was Venerable Father Antonio Margil de Jesús, the "Blessed Margil" [founder of Mission San José y San Miguel de Aguayo]. In humility he called himself "Nothingness Itself"--la Misma Nada.

And, the story goes, so fervently did they pray that when Father Margil had finished he pulled at the roots of a mustang grapevine and, "to their great marvel, there came a bold flow of pure water."

Thus in legend began the spring that gave birth to the San Antonio River (Woolford and Woolford 1950:23; retold by Dunn 1975:6).

[Recently IWC had a similar experience with gushing springs as it undertook the development of new athletic facilities on the ancient camping spot by the head of the San Antonio River!]

Capitán Luis Antonio Menchaca's Map

We have no archaeological evidence of these specific visits by Spanish explorers and missionaries. Down through the centuries, however, the preferred route in and out of San Antonio was apparently via the headwaters of the San Antonio River. A segment of the Old Nacogdoches Road passed through the area north of the present dam; and according to later writers the Camino Real, the long road from Monclova in Nueva España (Mexico), through Eagle Pass, to East Texas, entered San Antonio near the "head of the river" (Woolford and Woolford 1950:15; cited in Dunn 1975:5). In sketch maps made by Dave Orchard, the deeply worn old buffalo trail descends into the Olmos Basin from the east just north of the big spring (Worth's Spring, marked by a dot in Figure 8) at the east end of the original Olmos Dam.

The earliest roads and the geography of San Antonio in the 18th century can be appreciated in Capitán Menchaca's famous map drawn in 1764 (Figure 25). In this sketch map the Blue Hole or San Antonio Spring is labeled ojo de agua; the asequia (sic) or irrigation ditch that can still be seen near the modern Witte Museum was already completed; and the limestone cliffs that today lie along Hildebrand Avenue and in the San Antonio Zoo were recognized as quarries (La Canteria) in the mid-18th century.
Figure 25. Map of the Presidio of San Antonio de Bexar and missions of the Province of Texas drawn as seen on the 24th of March 1764 for Capitán Don Luis Antonio Manchaca. The Blue Hole or San Antonio Spring (Ojo de Agua) is seen at the left margin of the map (North of Mission San Antonio and the Presidio de San Antonio de Bexar); it was clearly perceived to be the headwaters of the San Antonio River (Reproduced from a copy in the Alamo Library, courtesy of the Daughters of the Republic of Texas; Drawing by Frances Meskill).
XAR. 1

SUS MISIONES DE LA PROVINCIA DE TEXAS FUE EN 24.

DON LUIS ANTONIO MENCHACA Y LOESD D'HIO PRESIDIO.
Historical records tell us that from the early days of European settlement in San Antonio, "the Head of the River and San Pedro Springs supplied drinking water and water for irrigation and household use to the growing number of missions and the growing civil settlement in the Town of San Fernando, which developed around the Presidio de Bejar..." (later moved from its original location at San Pedro Springs; Dunn 1975:6).

It has been calculated that in 1744 there were perhaps 1,500 Europeans and Coahuiltecan Indians in the settlement. These people were supplied with water by open ditches (acequias) which tapped the San Antonio River at points below Incarnate Word property (Dunn 1975:6; Fox 1979; Frkuska 1981; Katz and Fox 1979). Water was distributed in open ditches (Figures 9 and 26), such as the one still visible crossing the northern edge of the polo field in Brackenridge Park, until "San Antonio's first closed-distribution system, utilizing water from the Head of the River, was established in 1878" (Dunn 1975:7-8).

Figure 26. Late Nineteenth Century (1886) Map of the Head of the River showing a dirt access road crossing the Brackenridge property (now Incarnate Word College) and going to the site of the "Old Mill" 41 BX 284 (Map adapted from City Engineer's Office, Index No. 1462, 1886; drawing by Frances Meskill).
DEVELOPMENT IN THE 19TH CENTURY

In the late 18th and early 19th centuries, the Olmos Basin was surveyed and records show how the tracts of land passed from hand to hand—from Spanish to Anglo owners. By the 1830s the Anglos were the dominant element among the settlers of Texas.

However, in 1839 the headwaters area of the San Antonio River was apparently still wild and uninhabited. In Mary Maverick's memoir we read a record of the adventure of some foolish young married couples:

...ladies and all [were] armed with pistols and Bowie knives. I rode with this party and some others around the Head of the San Antonio River. We galloped up the west side, and paused at and above the head of the river [in Alamo Heights!] long enough to view and admire the lovely valley of the San Antonio. The leaves had mostly fallen from the trees, and left the view open to the Missions below...town.... We galloped home, down the east side, and doubted not that Indians watched us from the heavy timber of the river bottom (Green 1921:25-26).

In this period of the Republic of Texas there was considerable fear of Indians in San Antonio. In 1838 a band of Comanche raided the town, and in 1840 thirty-two Comanche warriors were killed during a peace conference in Main Plaza [San Antonio]. This also is described graphically in the Maverick memoirs (Green 1921).

San Antonio has been a military post of one government or another for most of its history, and the Head of the River area was a preferred camping spot for troops, including men, horses and mules, as it was relatively uninhabited and well-watered. Dunn summarizes the military events of this period:

These events brought soldiers and volunteers to San Antonio to assist the ragged Texas Army troops posted here, and some of the newcomers camped in the Head-of-the-River area. On Oct. 3, 1839, Sheriff William F. Wilson of Galveston County arrived and camped with his men "at the San Antonio Springs (just north of present day Brackenridge Park)" [Pierce 1969:136, 138].

In the summer of 1840 other regulars and volunteers moved into town, and some stayed at "Camp Cooke (named after William C. Cooke, quartermaster general and soon to be commandant of the [Texas] army) at San Antonio Springs" (Pierce 1969:140). Fear of a Mexican invasion followed upon Indian fears, bringing an estimated 1,200 men to town in October and November, 1842, some of whom possibly camped at the Head of the River (Dunn 1975:8-9).

...Another military camp was located in the mid-1840s in Olmos Basin, the area drained by Olmos Creek and including acreage owned by Incarnate Word. This was Camp Olmos. Camped here at one time were local mounted militia of the
minuteman organization, the Texas Rangers, that was formed after the Texas Army of the Republic was disbanded in 1841. The Bexar County Rangers were attached to the U.S. Army when "General Zachary Taylor's American Army of Occupation moved into Texas in July and August, 1845," ready for the war with Mexico that began in early 1846. "The final station of the defenders of the San Antonio of independent Texas [the Bexar County rangers] was Camp Olmos, probably on Olmos Creek a short distance upstream from San Antonio Springs..." (Dunn 1975:9-10).

In the spring of 1849 some of the troops that had fought with General William Jenkins Worth in Mexico camped around the San Antonio springs during a cholera epidemic. General Worth and 600 other residents of San Antonio died. Later the campsite of the troops was known as "Worth's Spring" (Huff 1946: May 9), or Camp Worth, located by the late Col. M. L. Crimmins, on Incarnate Word grounds (Dunn 1975:9). [Today, many people believe that Worth's Spring is the large spring located north of the east end of the Olmos Dam (Milligan 1986:1-G)]. Somewhat later, the 33rd Texas Infantry, mobilized in San Antonio for service in the Spanish-American War, camped on the grounds of the Old Jockey Club, where Lions Field now is located (Huff 1946: June 13).

Fox, in her survey of the Olmos Basin, attempted to locate early 19th century military encampments described by Pierce (1969: 138-140, 148) and Orchard (1974), but she found no archaeological evidence of these encampments. Like the Late Prehistoric sites, superficial remains of camp fires, temporary buildings, animal corrals, and refuse dumps are quickly erased by farming activities, bulldozing and land filling, which has substantially modified the surface of the entire basin in this century (Fox 1975:4).

Dunn describes the important surveys done in the mid-19th century, which laid the basis for land development in the modern period:

According to William Corner (1890:39), the surveying that took place during the Texas Republic era (1836-46) formed the basis for City Engineer Francis Giraud's 1852 survey of city lands—the first survey following the incorporation of the town after Texas became a state (1846). About this time the large spring on Incarnate Word property had come to be known variously as "the San Antonio Spring at the head of the San Antonio River," the "North Springs" and "Worth's Spring at the head of the San Antonio River." All three names appear in the Abstract of Title prepared on Incarnate Word property in 1936 (Dunn 1975:9).

Lost Vale of Avoca

Sweet vale of Avoca! How calm could I rest
In thy bosom of shade, with the friends I love best,
Where the storms that we feel in this cold world should cease,
And our hearts, like thy waters, be mingled in peace.

(Thomas Moore, quoted by Purman 1978)
Furnan speculates that this poem, called "The Meeting of the Waters" (referring to the Avon and Avoca rivers in Ireland, but quite applicable to the San Antonio River), may have been the original inspiration for the name City of Avoca. Just as subdivisions and housing projects today receive romantic names and are advertised as paradises on earth, so the land development schemes of the early 19th century were promoted! It was written, in an immigrants' guide to the new Republic of Texas (written in 1840) that "Avoca is the name of a new town, laid out at the head springs of the San Antonio River. The position of the town, the chrysaline and cool waters and the scenery, are declared to be beautiful beyond anything known, even in Texas" (Press 1973 [1840]:221, quoted in Furnan 1978:1).

According to historical research carried out at Incarnate Word College (Furnan 1978), Avoca was the dream of William E. Howth. He settled in Texas territory in the 1830s and got two-thirds of a league of land at the headwaters of the San Antonio River as his "headright" from the President of the Republic of Texas in 1838. Later, as an active San Antonio businessman, Howth acquired other pieces of property, including land adjoining the Head of the River to the west which had belonged to Pedro Camarillo. Mr. Howth apparently owned many properties in Bexar County which he subdivided and sold as town developments. In June 1838, Howth joined with other prominent San Antonians (Henry Dangerfield, Anderson M. Berry, and Nathaniel Lewis) as partners in the development of Avoca. Howth and Lewis each owned three-eighths interest in the enterprise, while Berry and Dangerfield owned one-eighth interest each. They apparently agreed to divide the property into 48 sections for the purpose of laying out a town. This agreement was nullified and revoked on June 10, 1839, and on June 12 Howth and Lewis became partners again; Lewis transferred the ownership of his headright for half interest in Howth's property.

On June 18, 1839 Howth conveyed to John L. Simpson a lot in the Town of Avoca. This lot fronted west on Milam Avenue and was bounded in the north by Eleventh Street. It was designated Lot Number Three in Block Forty-Two, according to the Survey done in 1838 by William Lindsey, County Surveyor. Simpson bought adjacent properties as well. The plot later became part of the estate of Col. Lysander Wells, but no record of the sale has been discovered. Other lots within "Avoca" were transferred in 1839. The largest was sale of property in Avoca to Larkin B. Smith which included twelve lots fronting on Milam and Travis Avenues on the east side of the "Courthouse Square" (which we assume to have been in the heart of what later became Alamo Heights). Obviously a two-thirds league of property covered a great distance, including the area of "chrysaline springs" around what we now call the Head of the River, and many lots along the river in what is now downtown San Antonio. Avoca apparently covered a large area.

There is considerable controversy among avocational historians about the origin and disappearance of Avoca. In one newspaper account it was reported that "According to Judge Joseph D. Ryan of the Supreme Court Commission of Appeals, the town of Avoca was founded by a small band of American settlers who found life in San Antonio burdened with the older Spanish settlers here at that time..." The article adds that "...possibly W. E. Howth led the exodus to what is now Alamo Heights, and established the first residence there. He was soon followed by half a dozen American families" ("Alamo Heights Forerunner Was Started in 1830," San Antonio Express Tuesday Morning, June 9, 1936, and reprinted in shorter version
Dec. 10, 1951). This settlement apparently dated to the 1830s. According to tradition, the town was "a very select residential neighborhood, that also had a clubhouse, where historic persons frequently visited"; this was located at the present site of the Argyle Club. The article adds that "elaborate hunting parties were said to have been organized here for excursions up the valley of the Olmos."

Later, an article in The North San Antonio Times (Thursday Oct 19, 1972) summarizes more recent opinion that Avoca wholly post-dates the Battle of the Alamo. Huff (1946: May 16, p. 5) writes that our "vale of Avoca, Texas version, seems not to have been in Alamo Heights, but to have lain south and west of our present city. Apparently only its northeast tip projected into our bounds, just south and a little east of the present charming residence of Mr. Godcheau A. C. Halff at Patterson Avenue and Torcido Drive. ...The main body of Avoca lay south of the Olmos and west of the San Antonio [River]." This interpretation suggests that present-day College property, and especially the new complex west of the river, is squarely in what was once Avoca. According to local legend (Huff 1946:May 28, p. 2), the old stone ruins on Crescent Avenue (presently Alamo Heights) on the bluffs above Olmos Dam, and other walls found at the actual dam site (in 1926) may have been remains of the earliest houses of Avoca. Some of these old walls appear in a turn-of-the-century photograph which shows two military cadets, Willard and Guy Simpson, climbing on ruins once claimed to be Davy Crockett's house and abandoned by 1900 (Figure 27).

Whether or not Avoca was actually occupied by a small group of Anglo families has not been determined. The last transaction in which Howth proclaimed himself from Avoca was recorded in September 1842, but after that Avoca fades from the records. It is known that Howth was a resident in Austin County when he died some years later. According to Furman,

The last and most unusual sale of lots in Avoca occurred May 22, 1875. Miles Skaggs and Mary E. Skaggs sold to Marcus Keoninghelm, Block One Hundred Five, lying in the City of Avoca. The sale was for one dollar and one hundred fifty horses. This was the exact property that was sold [previously] to Larkin B. Smith in 1839, and there are no transactions to indicate how the Skaggs obtained this property (Furman 1978:4).

In the middle of the 19th century the City of San Antonio declared that its boundaries encompassed as far as the headwaters of the San Antonio River. Despite legal suits, the property was repossessed by the City and Howth's headright was revoked. Avoca was lost and development took a different direction.

Old Mill Site (41 BX 284)

The early historic remains in the southern Olmos Basin date to the late 19th and early 20th centuries. On Incarnate Word property there are some old quarries, the old metal bridge located presumably on an old dirt access road, some fragmentary limestone walls, and trash heaps. Dave Orchard observed various limestone houses of unknown age, now dismantled, which were located along the west side of the southern Basin below the Olmos Dam earlier in this century. In Brackenridge Park there are more rock quar-
Figure 27. Early 20th century photo of military cadets Willard and Guy Simpson climbing on some ruins near the Olmos Dam which may be remains of one of the earliest houses of Avoca.
ries, first exploited in Spanish Colonial times and made famous by German masons from the 1840s on; segments of Alamo Madre Acequia and Upper Labor Acequia dating to the 18th century (see Figure 9); two Water Works building and canals; the Alamo Portland and Roman Cement Plant buildings; the Old Lime Kiln; the ruins of the Kompman house; the possible site of the Garza mill; the site of a Confederate Period tannery; and possibly an old dam (Fox 1975, 1979; Katz and Fox 1979). Most of these remains have not been investigated in depth, either archaeologically or historically.

The "Old Mill Site" (Site 41 BX 284) on IWC property has attracted considerable attention, and it illustrates how the interpretation of old buildings can be a problem. This ruin consists of some broken walls (Figure 28), the remains of a foundation situated across a now-intermittent stream which is a tributary of the San Antonio River. The ruin was interpreted in various ways: as a 19th century grist mill, as a guard house, and as a tannery. The ruin is located close to the probable site of the dam mentioned in a letter of agreement between R. Giraud and G. W. Brackenridge dated 30 September 1874: it speaks of a "dam erected during the Civil War—for the purpose of supplying the Confederate Tannery" (Fox 1975:4-5). This same tannery is described in The Centennial Record of the San Antonio Army Services Forces Depot, San Antonio, Texas, 1845-1945 (Porter 1945:60).

Katz and Fox (1979:18) locate the tannery in the area of the present San Antonio Zoo, making it doubtful that Site 41 BX 284 was its original site. Other people believe that the stone ruin on the Incarnate Word College campus (Site 41 BX 284) was occupied by a watchman employed by the Sisters of Charity in the early 20th century to prevent trespass from adjacent Brackenridge Park. Dunn, in conversation with Sister Francis Xavier, former librarian of the Texana Collection at IWC, learned that during Prohibition bootleg whisky was frequently sold at the end of Hildebrand Lane where it dead-ended on the east bank of the San Antonio River (Dunn 1975: footnote 59).

Supporting the hypothesis that the ruin was a mill is the fact that it is located across a stream bed and that this drainage carried more water in the late 19th century, as judged by maps made in that period. In one of these maps (see Figure 26), made in 1886, a secondary road or track leaves North New Braunfels Street, crosses above the Blue Hole (or San Antonio Spring), makes a beeline for Site 41 BX 284, crossing the stream above the building, and approaching it from the south side. This would suggest that the structure had some importance and that it was in use before 1886. Any number of possible functions could be imagined for such a building, however. A 19th century newspaper advertisement (San Antonio Herald 1858) for a corn and grist mill located in the Olmos Basin is evidence that such an operation did take place there (Fox 1975:5).

In 1978 during the IWC summer field school in archaeology, Site 41 BX 284 was excavated. Students and faculty under the direction of Susanna and Paul Katz partially uncovered the fragmentary stone walls composed of large, rough-cut limestone blocks, but only a few courses of stone remained (Katz and Katz 1976). The walls were part of the foundation of a building which once extended beyond the actual site and which ran across the bed of a small stream (Figures 29 & 30). Some wooden posts had been sunk into the ground outside the building. In the earth around the foundations they found square head nails, a metal implement, bullets, old hairpins, bone,
Figure 28. Plan of the ruins found at Site 41 BX 284, the "Old Mill" Site. Large squares show the two principal excavations, but stippled areas were not excavated. Stone walls are indicated by aligned limestone blocks (hatching) and dashed outlines. (Map by Frances Meskill, adapted from field diagrams by Paul Katz).
Figure 29. South Bay of the limestone foundation located at the Old Mill Site, 41 BX 284 during excavation. (Photo by Paul and Susanna Katz, 1987 IWC Field School).
Figure 30. North bay and central buttress of the structure which may have dammed the stream and provided a foundation for a building at the Old Mill Site, 41 BX 284 (Photo by Paul and Susanna Katz, 1978 IWC Field School).
teeth, barbwire fragments and little bits of other things (The Northeast Light, Thursday, June 29, 1978; and Express-News, Sunday, July 2, 1978).

Regrettably the excavations yielded insufficient evidence to suggest the original function of the structure or adequately date it; the excavators concluded that "the building's specific function is still not completely understood," but it is now thought to have been built in 1850s or 1860s by the Aylesbury family (Susanna R. Katz, personal communication).

Near Site 41 BX 284 is 41 BX 285, which consists of more historic remains. Fox reports that "[p]rojecting from beneath a trash dump behind St. Joseph's Convent are the ruins of old stone walls which are probably the remains of buildings constructed here in the middle to late 19th century" (Fox 1975:5). Site 41 BX 287 and several other locations under the new athletic complex were characterized by 19th century and early 20th century pottery sherds, china, bottle glass and bricks, indicating either earlier structures or the locations of historic trash dumps.

Land Transactions in the Later 19th Century

In 1852 the city fathers of San Antonio encountered financial difficulties and sold the source of San Antonio's water to a private individual, J. R. Sweet, himself a city alderman (Huff 1946: May 9). The transactions have been described as follows by Corner (1890) and Dunn (1975):

...the City of San Antonio at public auction sold a quantity of land that had been marked off in lots on the Giraud survey map of the same year. Lots 30 and 31 at the Head of the River (in Range 1, District 2) went to Alderman James R. Sweet. City Engineer Giraud urged the city not to sell this property, since Lot 31 allegedly embraced "the North Springs," the main source of San Antonio's water supply. Two years later Sweet was reimbursed $85 of his purchase price (totaling $1,475) because Lot 31 did not contain the springs. In the meantime, however, in 1853 Sweet had purchased Lot 32 on the north side of his property, apparently acquiring the springs in this transaction. When he mortgaged the three lots in 1858 they were described as "Situated at the San Antonio Spring at the head of the San Antonio River" (Dunn 1975:10).

The stone house that Alderman Sweet (later Mayor Sweet) built in 1852 on Lot 31, and still in use today on Incarnate Word grounds, was possibly designed by Jules Poinnard, the builder a year earlier of another stone dwelling farther downriver that housed the fledgling Ursuline Academy [now the Southwest Craft Center]. The "Old Sweet Place" as it was still called in William Corner's day [Corner 1890], is "without doubt one of the most beautiful, if not the most beautiful, places in Texas, its woodland grace and parklike beauty so heightened by the perpetual mystery of its profound and noble springs" (Corner 1890:51-53, as cited in Dunn 1975:10).
Dunn continues:

The "Old Sweet Place" had grown to encompass 108 acres when it was acquired in 1869 by George W. Brackenridge, wealthy San Antonio banker, businessman, philanthropist and civic leader, who purchased the house and property in his mother's name for $4,500.

In 1886 Brackenridge completed a large, three-story addition to the Sweet house, linking the two with a "wood Tudor style glazed breezeway" (Dunn 1975:11).

A detailed account of the much-acclaimed Brackenridge Villa, which once stood on the estate called Fern Ridge and which still stands elegantly on Incarnate Word College property, has been written by Richard McCracken (1981 [1969]).

Ownership of the Head of the River---"the birthright of the city," in William Corner's words (1890:52)---became an emotional question shortly after Brackenridge acquired the Sweet place. The headwater springs on Incarnate Word property issue from a natural opening in the water-bearing underground limestone formation, the Edwards limestone, that is fed by rainfall as far as 175 miles away. The Edwards Aquifer is still the only source of San Antonio's water supply (Dunn 1975:11).

Agreeing that the city should own the springs, Brackenridge offered the Sweet property and adjoining acreage that he owned---a total of 217 acres---for a price of $50,000, providing the city would "never again sell the headwaters." The sale was negotiated from January, 1872, till November, 1874, when it was cancelled as a result of irreconcilable differences over the sale price (Dunn 1975:12).

When a waterworks was finally built on the river in 1877-78, Brackenridge leased additional riverfront property that he owned to the private waterworks company and then, between 1878 and 1883, acquired the waterworks. His land holdings on the river had increased considerably by this time. The property he sold in 1897 for $100,000 [really $120,000] to the Sisters of Charity of the Incarnate Word included 283 acres, "more or less." Two years later Brackenridge gave the city of San Antonio 320 acres for Brackenridge Park, situated on the river below Incarnate Word property.

The pumping station [eventually two buildings, see Katz and Fox 1979] for the waterworks was built in what is now Brackenridge Park, and apparently no part of the system of reservoirs and raceways was ever built on IWC property.

As late as 1908 the virtues of the "spring water" supplied by the San Antonio Waterworks, issuing "but a short
distance below the 'head of the river,'" were still being extolled, although artesian wells by then had been the
source of the city's water for a decade. By 1895 the
issue of the ownership of the headwaters, and the
companion question of who should own the waterworks, the
city or private owners, had been resolved by technology.
After that date "the waterworks depended on wells rather
than the river for water" (Dunn 1975:12).

In 1890 development in north San Antonio began in earnest when the
Chamberlin Investment Company of Denver chartered a corporation called the
Alamo Heights Land and Improvement Co. In 1893 there were electric lights
and a water system for the few houses located on the hills of Alamo Heights
(in the vicinity of the Argyle Hotel founded in 1891). Alamo Heights was
clearly a suburban area, with no churches, no schools, no markets or
stores; most of social and economic life took place five miles south on
Broadway (River Avenue) in San Antonio village (Huff 1946:June 20).

The Sisters of Charity of the Incarnate Word took possession of the
Head of the River estate in 1897, and occupied George Brackenridge's home
as their convent (see Figure 31). In 1899 ground was broken for a new
building designed to serve as convent, novitiate, and academy. A newspaper
advertisement announcing the opening session of the academy describes it as
"A Select Boarding School for Young Ladies and Little Girls" (Dunn
1975:13).

In the "Gay 90s" the neighborhood around the Convent of the Sisters of
Charity was best known as a park:

The gayest memories of Alamo Heights in the 90s and the
early 1900s seem to be associated with the park and lake
at the Head of the River [see Figure 32]. A small rock
dam had been thrown across the stream, which made a lake
where the Halff barns now [1946] are. It reached from the
'big spring' to a point above the present dam, and was a
hundred or so feet wide, and two or three feet in depth.
Boating and picnicking--especially by moonlight--were
favorite sports. It is interesting by the way to see
pictures of lovely young girls capably negotiating the
steep drop to the lakeside park in their frilly summer
dresses ... The 'Head of the River' was San Antonio's
Sunday-afternoon vacation land, and the street-car company
provided a band to add to the gayety--and their receipts
(Huff 1946:June 20).

There was also continuing economic activity near the Head of the
River. At the end of the 19th century sites like 41 EX 283 were being used
as a limestone quarries, thus continuing an activity begun early in the
Spanish colonial period. Brackenridge Park also contains abandoned
quarries from the same period (Katz and Fox 1979:Fig. 4), and some of these
now serve as part of the San Antonio Zoo. Site 41 BX 283 was abandoned
sometime before 1938. According to Fox, the old metal bridge which still
provides access to the wooded southwest corner of IWC property is a
structure dating to this period which should be preserved (Fox 1975: 4).
Figure 31. The Brackenridge Villa (41 BX 289) in use as the Sisters of Charity Convent House around the turn of the century (Photo courtesy of The Incarnate Word College).
Figure 32. Metal Bridge across the San Antonio River just south of its confluence with Olmos Creek. This bridge still exists just below the Grotto on the IWC campus (Photo courtesy of the Incarnate Word College).
INDIAN RITUALS IN THE 20TH CENTURY

During the Spanish Colonial period the aboriginal way of life of the Native Americans of southern Texas was drastically altered, and by the 1830s the only unacculturated Indians were the hostile Comanches, not the original, peaceful, hunters and gatherers of Bexar County and vicinity. However, we are fortunate to have a record of the continued use of the Olmos Basin and its resources by Indians during our own century.

Ponca Indians on the Road

The following colorful story was told by the late C. D. Orchard (1966, 1976, 1983) who, during his reconnaissances in the Olmos Basin in the 1920s, chanced to meet some Indian visitors, and he recorded his experiences and interpretations in several accounts:

During the 1920s, an old Mexican used to show me "good spots" [for collecting artifacts] in this area [where the Olmos Dam is today]. According to him, his grandfather or great-grandfather "lived with the Indians at Olmos No. 1 [Site 41 BX 1]." The Olmos Creek was "wide and deep for miles, and there were only a few fords." One of these fords, called by the old man "the Buffalo Road" was (part of) this sterile strip [which separated the upper and lower parts of the huge Site 41 BX 1 from each other]. No Indian would camp or loiter in this "roadway" except when "the buffalo they come..." According to the old man "...when time for buffalo, Indians make gifts at spring, then move south a short distance, leaving hunters behind." A large spring was located just below the present parking space at the east end of the dam...several beautiful specimens were dug out of this spring...an iron point and a bone point (?) were found in a small crevice above the spring....

The preceding data are essential to an interpretation of [my] contacts with, and observations of some Indians from Ponca City, Oklahoma (Orchard 1966:5).

[It is intriguing to note that the iron arrowpoint mentioned here may be the one in Figure 24, which is the only metal point reported in the Orchard artifact collection (Mitchell 1974). A bone awl or possible hafted projectile point is shown in Figure 20 (it is marked as specimen 464, and in Orchard's card catalogue is indicated to be from Site 41 BX 2). Could these be the two artifacts dug out of the spring at the east end of the dam? Orchard's card catalogue entries for these two specimens only indicates that they are from the Olmos Dam area.]

Orchard continues:

On Incarnate Word property, near the center of, and just south of [the old] Olmos Dam was a large group of live-oaks (Quercus virginiana). This group of oaks was dominated by a huge tree at the southern edge of the group. About six or seven feet above ground, and on the
south side of this oak, was a large burl. Many series of square-headed nails were in this burl. Each series was, either nails in a row, or four nails in rectangles. About four feet south of the tree was an elevated, crescentic ridge of ashy earth. Between the crescent and the tree was evidence of many fires.

Early in April, 1924, I was camped near the spring. I was making a pot of coffee when five Indians came by. I offered them coffee. They said they were from Ponca City. They left—went to the spring—sat down—rolled a cigarette, smoked, took a drink—then went to the group of oak trees, where they sat down on the south side of the large tree. Only four Indians sat close to the tree, the [other] sat some distance south of the tree. The four rolled and smoked one cigarette. Then, between the crescentic ridge and the tree, a small area was scooped out and a small fire was lit. This fire burned awhile, and was extinguished with green oak leaves. After extinguishing the fire, each of the four Indians pounded on the burl. The Indians then left as they had come. As they passed, I asked what they were doing. I understood [them say] something about "the old peoples road."

I went to the tree—dug around the fireplace—and found item No. 262 [a large, bifacially worked stone artifact, 7 to 8 inches long, made of flint from Duck River, East Tennessee, showing considerable use polish] and several other artifacts.... On the burl were four new nails, and a Bull Durham sack was on the ground.

I located the old Mexican and was told that almost every year, in April or May, the Indians did the same things. He added that they collected laurel [mescal beans, from the Texas Mountain Laurel, Sophora secundiflora] and chilipetins (a hot native pepper) here, and peyote [Lophophora williamsii] west of here.

Second contact was early in May, 1925. This time I had five sacks of Bull Durham, some laurel (mescal) beans, some chilipetins, and a handful of peyote buttons. (I missed the arrival of the Indians, but spotted them near the oak grove.) Ages of the four old men was estimated at over fifty, the fifth at sixteen or seventeen. The older Indians wrapped their tobacco in pieces of red cloth and placed the bundles in a shirt pocket. The young one merely rolled and smoked a cigarette. The oldest Indian said they were going west of Laredo to gather something.

No English or Mexican word was used for this something, but the young Indian said (pointing at the cactus): "They crazy—go to Del Rio—look for crazy plant." The oldest Indian asked me to show the "no-good hell-raiser" where to find more laurel beans. While collecting beans and chilipetins, the young Indian said that they stopped at four
places on the "sacred road," and that he was considered a "no-good hell-raiser, good only for driving their car."

Upon our return with a quantity of mescal beans and chilipetins, the oldest Indian removed a string of beads and gave me one-fourth of it [donated to the University of Texas and acknowledged by A. T. Jackson in a letter dated 5 December 1940]. I asked about the nails and the artifact which had been buried the year before. He said that four old "whiteman's" nails must be placed in the "bump," and that something from the "old" people before his tribe must be buried [sic]. Item 263 was found [same as 262 described above].

Third contact, April 1928. Missed actual contact, but found fire evidence and item No. 265 [same as 262 and 263 described above]. This was the last evidence of Indian visits to my knowledge (Orchard 1966).

In a later interview, Orchard (1976) claimed to have participated in the rites of the Indians after the second contact in 1925. First he helped collect laurel [mescal] beans and chilipetines in a lot across the street to the east of the Argyle Hotel, where he thinks these plants were deliberately planted.

Orchard writes about the beginning of the purification ceremony:

...after the fire was lit, allowed to burn out, and the green oak leaves put on it, ...they pointed their cigarettes, took a puff at each of the cardinal directions. Not knowing any of the Indian language, I was not able to understand their chant or prayer, whatever it was. Then they made a horrible concoction of Bull Durham tobacco, chilipetines, and one or two native plants. Then each person swallowed a tablespoon full of this concoction. It definitely purifies you! You have an immediate reaction in thirty or forty or fifty seconds. You vomit, have a bowel movement, and gasp for air. After which they danced around for a few minutes, waved a piece of red flannel cloth, buried an artifact. I asked them what they were doing and they said they had to pound some nails into the tree made of the steel of the white man, and that the artifact was always something from the old people, not from the post-Columbian Indians. Then they spread out the crescent (mound) and they left (Orchard 1976:2).

Orchard believed that he had witnessed a ritual purification ceremony that was part of a peyote collecting expedition. Some of the important ceremonial elements that Orchard has drawn attention to are that four elder Indians stopped at four places (shrines?) along the ancient or "sacred" road (known also as the "buffalo road") where their rituals included smoking; making a gift to the spring; building a fire within a crescentic mound; banging four nails into the ancient burl; collecting medicinal and/or hallucinogenic plants; taking a powerful emetic; and the use of
ritual items including stone artifacts and tobacco wrapped in red cloth. Two items, a deer dewclaw and a quartz crystal, were added to the list in a later publication (Orchard 1983:41).

The ceremony he saw was very similar to Ponca peyote ceremonies (La Barre 1975; Secrist 1976) in the importance of the number four, the idea of a sacred road or path, the use of fire and tobacco, an emetic, etc. This is not surprising, since the Indians were headed toward the Rio Grande valley to gather peyote. But they were also interested in mescal beans, which were collected in the Olmos Basin, and which may be the basis of an older form of drug ceremonialism. Communal dancing, hunting rituals, and the use of intoxicating mescal beans among the historic Coahuilteca and Tonkawa are discussed in detail by Troike (1962).

Hallucinogenic Mescal Beans

In an attempt to interpret his data, Orchard, in his various papers, referred to several articles on drugs and Indian ceremonialism. He noted that mescal beans—the seeds of Sophora secundiflora which are hallucinogenic if taken with care, and deadly poisonous if abused—were of ceremonial importance to a number of tribes including the Tonkawa, Caddo, Wichita, Pawnee and Osage.

Ceremonial drug-taking, in order to purify the individual and produce intoxication and visions, was a significant part of the religious life of the Coahuiltecs and Tonkawa in South and South Central Texas. In a recent article Furst discussed the mescal bean cult in Texas, claiming that the oldest documented archaeological evidence of hallucinogenic plant use in the world comes from Bonfire shelter in west Texas. Some archaeologists believe that animals transported the mescal beans into the caves, but other interpretations suggest that Native Americans in Texas have been using mescal beans for some 10,000 years!

Some authorities believe that the pictographs found in caves and rockshelters along the Pecos River are associated with mescalism and the ancient rituals that eventually gave rise to the shamanistic medicine societies known among ethnographic Indian groups in this century (Campbell 1958:156-60; Furst 1986:213, 223; Newcomb 1961:75; and Troike 1962: 946-963).

As noted above, the Spanish explorer Alvar Núñez Cabeza de Vaca was the first European to take note, in 1539, of the importance of Sophora beans among Texas Indians (see also Furst 1986:213), and in the 19th century mescalism became popular among Southern Plains Indians who used Sophora in the initiation rituals of their "ecstatic-visionary medicine societies" (Furst 1986:213). In the 20th century the less dangerous drug peyote (Lophophora williamsi) replaced Sophora as the principal hallucinogenic plant of the evolving Native American Church (La Barre 1975), but Orchard's information from the Olmos Basin would indicate that mescal beans were still being sought into the 1920s. Orchard probably witnessed rituals related to collecting both peyote and mescal beans.

A rich body of ethnographic data on drug ceremonialism supports Orchard's interpretation of the Indians' activities in the Olmos Basin and helps us understand what they were doing. For example, in an article on
"Kiowa-Apache Peyotism," Hill and Beals report that peyotism is identified with past traditions (1966:9) and that the Kiowa peyote ceremonies "make use of ritual items, and these items have an ancestral and supernatural aura to them; in addition, the ownership and uses of these objects serve also as status symbols (1966:10). Orchard believed that the well-worn flint points or celts buried under the tree, the deer dewclaw and the rock crystal were such items. The Kiowa-Apache had the "practice of banking a crescent around the fire," and that in former times, ritual objects were buried with dead owners or hung in trees (Hill and Beals 1966:17).

Also, when peyote is gathered in the field, a ritual accompanies the collection, and Bull Durham is used: "one of the searchers will roll a cigarette out of Bull Durham tobacco with corn-shucks or black-jack (oak) leaves" (Hill and Beals 1966:1-2). In another article, Furst (1986:224) has noted that tobacco frequently is an element associated with fasting, other rituals and drug-taking in many Indian groups.

Orchard emphasized that the collecting parties he witnessed consisted of four "chiefs," and similarly Hill and Beals (1966:3) state that the elders involved in rituals have an average age of 57 years, while younger men (like Orchard's "hell-raiser") were excluded.

Orchard apparently met a group of Ponca who are Plains Indians that lived originally on the eastern border of the plains and were closely related to the Omaha, Osage, Kansa, Iowa, Dakota, Assiniboin, Oto, and Missouris, all of whom spoke Siouan family languages (Owen et al. 1971:489, 29). The Osage, Ponca, and some related groups migrated into northeastern Oklahoma in the early 1700s, a period of great disruption among most Indian groups.

One wonders about the origin and history of these long, yearly journeys made by the Indians from Ponca City, Oklahoma. Did they begin to make the journeys after the disruption of traditional trading networks in the Historic period? How did these Plains Indians learn about the sacred route in South Central Texas? I wonder if they might have been instructed by some Tonkawa people whose ancestors roamed southern Texas previous to their forced removal in 1859, some 60 years before, and whose mescal ceremonialism was well developed much earlier in the 18th century (Troike 1962)?

The Tonkawa were a group of Indians formerly living around Austin, Texas. Hester (1980 pp. 51-52) reports that the Tonkawa lived off bison principally, and they ranged over much of central and south Texas. However, the Tonkawa were moved to Oklahoma Indian Territory in 1859. By 1964 there were only 91 left, and only 4 were full-blooded. In 1967 it was reported that the Tonkawa language was spoken by only 10 people, all of whom lived in Tonkawa, Oklahoma, a small city located just southwest of Ponca City (Owen et al. 1971: 85).

We may hypothesize that the visitors from Ponca City were following an ancient route into South Central Texas for the purpose of collecting a native seed, the mescal bean, not found in the plains to the north. It seems reasonable to suppose that the Ponca Indians described by Dave Orchard were following routes formerly used by the Tonkawa whose elders once sought mescal beans, peyote buttons and even chiltepines that were part of their ceremonial and culinary customs before the removal from Texas.

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to Oklahoma (and perhaps beyond).

The continuing interest of Texas Indians such as the Tonkawa in Sophora after their removal to the north helps to explain the development of mescal bean medicine societies in the Plains area (among the Ponca for example) and the growth in the popularity of drug-induced, ecstatic experiences as part of the rituals of the Native American Church in the late 19th and 20th centuries.

THE HEAD OF THE RIVER IN THE 20TH CENTURY

In this century north San Antonio, the neighborhood around the College, and Alamo Heights changed gradually from a rural to an urban area. This involved the transformation of the natural area which we earlier described in terms of soil types, plant communities and wild food resources, into farms, then later parks, roadways, and developed real estate.

The early 20th century Giles building described above was the home of Incarnate Word Academy from 1904 until 1921 (see Figure 33). It became known later as the Mother House and was demolished in 1968. The Grotto of Our Lady near Brackenridge Villa, which may still be visited, was built shortly after 1904. A stone barn, formerly located behind the Giles building, was constructed in 1922. Nearby were some frame stables, originally part of the Brackenridge estate, which the Sisters used as a laundry, bathhouse, and dormitory.

The brick chapel adjoining the original convent, finished in 1907, recently has been restored. The buildings that presently make up Incarnate Word College were erected between 1920 and the present, all lie within the city limits of San Antonio, while the magnificently restored Brackenridge Villa and new convent buildings are located in Alamo Heights (Dunn 1975:14).

Dunn paints a picture of campus life earlier in this century:

The Incarnate Word Sisters and pupils who lived and studied at the Head of the River in the early part of the twentieth century remember a fence and iron gate that separated Incarnate Word property from Brackenridge Park on the south, before Hildebrand Avenue was cut through in 1929. "The daily recreation hour from five to six was spent in flat-bottomed boats which were rowed up and down the San Antonio River from its source to the rapids," according to the author of a book on the Congregation, Sister Mary Helena Finck. Part of the land was cleared for farming and farming activities continued until the 1950s. A stone ruin now standing in a creek paralleling Hildebrand may be the remains of a watchman's home and out-buildings (Dunn 1975:14-15).

The original 283-acre tract purchased by the Congregation in 1897 was diminished by the sale of acreage to the City of San Antonio on several occasions, notably for the
Figure 33. Young Ladies of the Academy of the Incarnate Word at Tennis on the lawn, circa 1909.
construction of Olmos Dam, completed in 1926, and for
right-of-way for highway construction..., and through the
sale of other parcels.

The land now consists of 155 acres, "more or less," with
most of the property lying within the city limits of San
Antonio and about 25 acres lying within the corporate
limits of Alamo Heights. At the heart of the property are
Lots 31 and 32 of the "old Sweet place," the nucleus of
the historic area known as the Head of the River... (Dunn
1975:15).

THE FUTURE OF THE CULTURAL RESOURCES

Only limited scientific excavation has been carried out in some of the
important sites near the Olmos Dam, and much research remains to be done.
We need more extensive excavations in existing sites with the goal of
isolating unmixed archaeological contexts, that is, living floors and
strata that contain remains of a single episode of occupation which allow
archaeologists to describe the activities of one group of people at one
point in time. The investigators should analyze and interpret their finds,
and publish the data including a careful description of the distribution of
artifacts and underground features in the Basin.

A complete understanding of the prehistory of the Olmos Basin is
impossible because of the loss of so much of the archaeological record.
Since 1975 much of the land between Hildebrand Avenue and the boundary of
the State Archaeological Landmark #108 (Figure 34), and the area east of
the Olmos Creek have both been developed and are no longer available for
research. Nevertheless, we can still heed some of the recommendations that
Fox (1975:14-15) made after her evaluation of the archaeological resources
of the southern Basin; there is still a need for historical research in
archives and deed records in order to clarify the 18th and 19th century
history of the Basin. The major artifact collections made by avocational
archaeologists in the Olmos Basin still require documenting and there are
still informants, including elderly people who knew the Basin early in this
century, whose oral histories should be collected. The most exciting
prospect of all is that future archaeological excavation in the intact
prehistoric and historic sites will improve and enliven our understanding
of San Antonio's past.

The College and the Congregation of the Sisters of Charity are
concerned about the preservation of the important archaeological sites
which make up the Source of the River Archaeological District and the State
Archaeological Landmark. It is hoped that the College and other persons
and institutions in San Antonio will pursue and foster research—in
archives, records, libraries and in the remaining archaeological site—that
will contribute to our awareness and understanding of the prehistory and
history of the people who inhabited the Olmos Basin and the area called the
Head of the River.
Figure 34. The southern Olmos Basin showing the State Archaeological Landmark (area within triangle) and the Source of the River Archaeological District, San Antonio, Bexar County, Texas (enclosed by broken line) which is entered in the National Register of Historic Places. Site 41 BX 282 is the Blue Hole, head of the San Antonio River (Map by Frances Meskill, adapted from maps prepared by Susanna and Paul Katz for IWC).
Source of the River Archaeological District

On July 31, 1978 the "Source of the River Archaeological District, San Antonio, Bexar County, Texas" was entered in the National Register of Historic Places, meaning that the cultural resources are under the protection of the Historic Preservation Act of 1966. This district is bounded by "the Olmos Dam on the northwest, the Olmos Creek on the northeast with an eastern extension permitting inclusion of the San Antonio Spring and the Brackenridge Villa; the San Antonio River from below the spring to Hildebrand Avenue; and the bluffs on the southwest edge of the floodplain" (National Register of Historic Places Inventory--Nomination Form p. 2). There are 13 recorded sites, both prehistoric and historic, included in the district (see Figure 34):

- Brackenridge Villa (41 BX 289)
- San Antonio Spring, or the Blue Hole (41 BX 282)
- Historic Quarry (41 BX 283)
- "Old Mill" Site (41 BX 284)
- Historic structures (41 BX 285)
- Prehistoric quarry/workshop (41 BX 286)
- Prehistoric site and mott of liveoak trees (41 BX 291)
- 1880's refuse dump and prehistoric site (41 BX 261)
- Prehistoric artifact collecting area (41 BX 292)
- Prehistoric mound (41 BX 24)
- 19th century refuse heap (41 BX 287)
- Late Prehistoric mound (41 BX 288)
- Prehistoric mound (41 BX 290)

State Archaeological Landmark

The following sites are registered as a State Archaeological Landmark #108 under the Antiquities Code of Texas:

- 41 BX 24
- 41 BX 287
- 41 BX 288
- 41 BX 290
- 41 BX 291
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