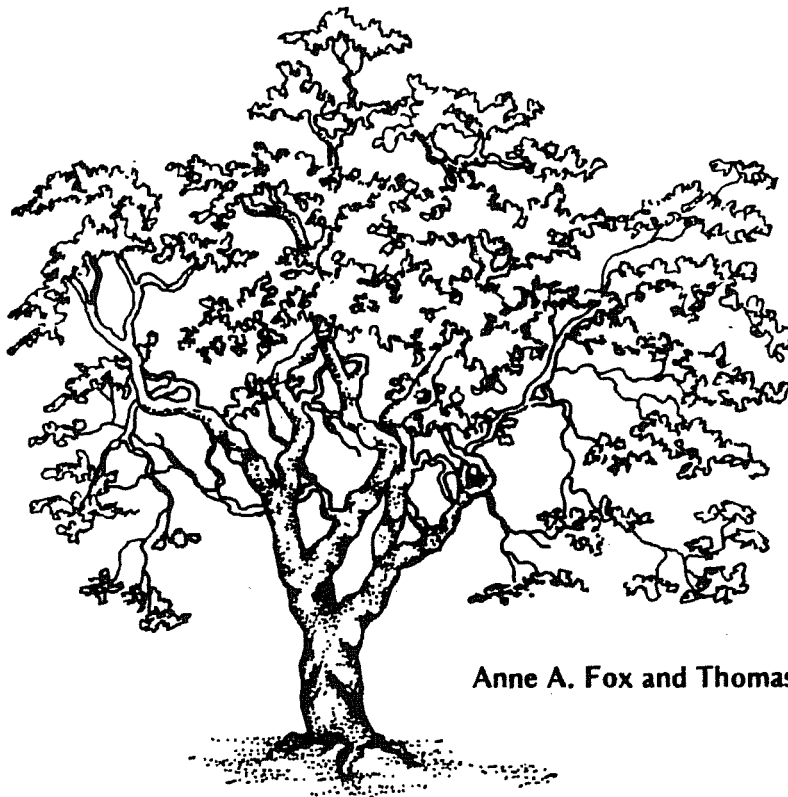


An Archaeological Survey of Coletto Creek, Victoria and Goliad Counties, Texas



Anne A. Fox and Thomas R. Hester

Center for Archaeological Research
The University of Texas at San Antonio
Archaeological Survey Report, No. 18

1976

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cooperation. Approximately 25% of the total area to be affected by the reservoir was thoroughly examined. The power plant site was surveyed and found to contain no archaeological sites which would be threatened by plant construction or operation. It was not possible to examine the entire dam site due to landowner resistance; we are especially concerned about the Victoria County side of Coletto Creek near the dam and recommend that this be examined by archaeologists whenever access can be arranged. We documented several sites in the vicinity of the dam on the Goliad County side of Coletto Creek. Several of these are located in areas slated for use as borrow pits and should thus receive further attention before they are destroyed during the construction process (see Recommendations section).

As each site was located, it was assigned a field number, which was subsequently converted to a permanent trinomial number assigned by the Texas Archeological Research Laboratory at The University of Texas at Austin (e.g., 41 GD 23, which signifies that this is the 23rd site recorded in Goliad County, in Texas, the 41st state). Sites were plotted on U.S.G.S. 7.5 minute quadrangle maps.

Detailed field notes were maintained by the fieldworkers throughout the survey, and sites were recorded on standard survey forms (these include all data on location, size, elevation, and general description). Over 100 black and white photographs and color slides were taken of individual sites and of their natural surroundings. Artifact sampling procedure was determined by the type of site and the amount of material observed by the surveyor. On buried sites where the only evidence was, for example, in the back dirt of gopher holes, all visible materials were collected. Sites exposed on the surface or in cut banks were sampled for a representative collection. Where deemed advisable, 15 cm square shovel tests were dug to determine density of artifactual materials and vertical extent of the deposit.

All materials were collected and processed according to standard archaeological procedures. The analyses presented in this report were done after careful study of the artifacts, photographs, survey forms, and field notes.

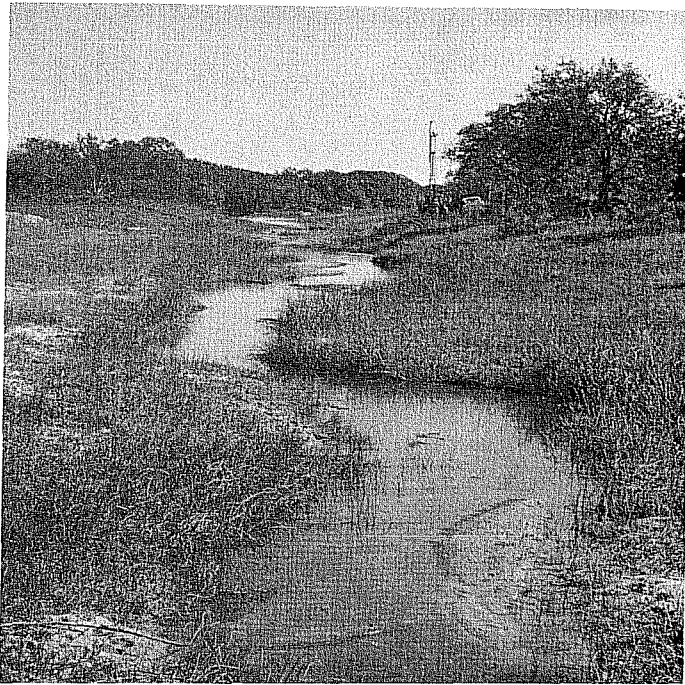
PHYSICAL ENVIRONMENT

Physiography and Location

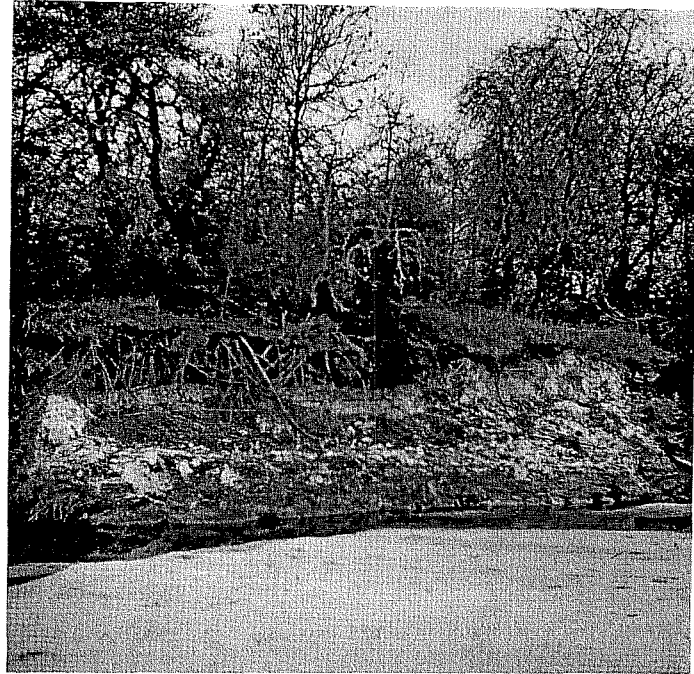
The proposed reservoir site is located on Coletto Creek and its major tributary, Perdido Creek, approximately 10 miles upstream from the Coletto's confluence with the Guadalupe River. The area is a gently rolling, coastal prairie with elevations ranging from 60 feet msl at Coletto Creek to 240 feet msl in upland areas. A number of small, intermittent creeks flow into the Coletto from the west.

Climate

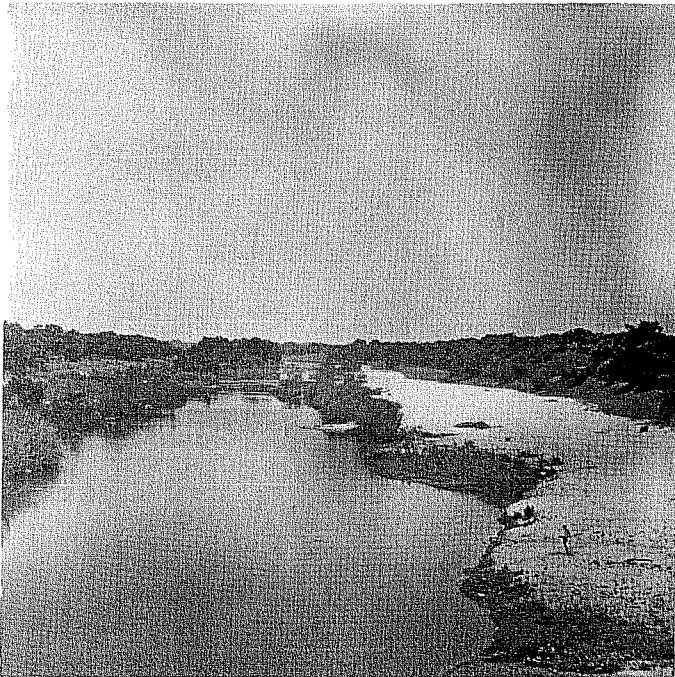
The climate of the area could be described as humid subtropical.



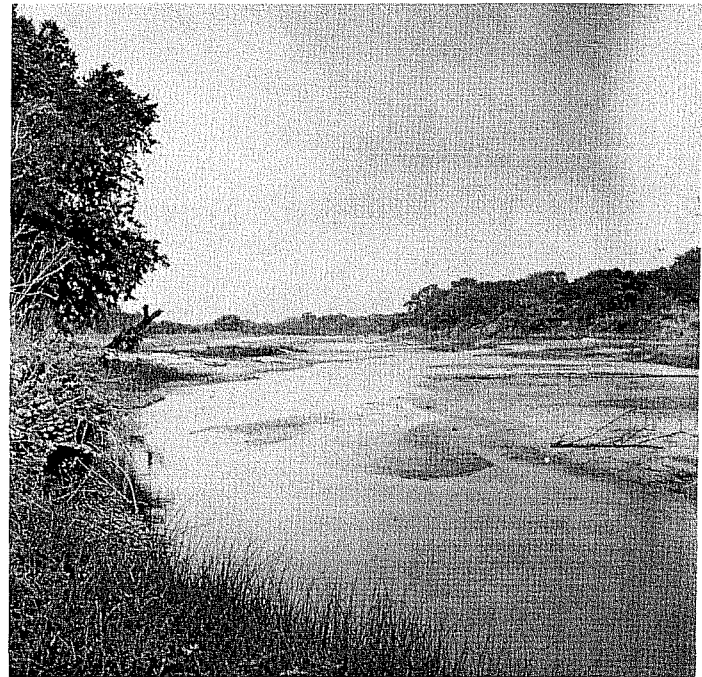
a



b



c



d

Figure 1. *The Coletto Creek Project Area: Various Views.* a, Perdido Creek looking south from Schroeder Road bridge; b, eroded bank of Turkey Creek; c, Coletto Creek looking south from Highway 622 bridge; d, Coletto Creek looking northwest toward site 41VT 16 from Arnold Road bridge.

Summers are hot, and spring, summer, and fall are dominated by tropical maritime air masses. Winter weather is influenced by occasional polar air masses, which bring about large temperature fluctuations. Precipitation is in the form of light rain or drizzle, with occasional thunderstorms, especially in the late spring and early summer, and again in the fall (Fox *et al.* 1974:10).

Other than occasional flooding associated with severe thunderstorms, the major potentially destructive force in the area has been the hurricane. These storms have periodically created havoc on the Texas coast from the time of the early settlements, occasionally resulting in the total destruction of towns. The most recently recorded hurricane in the reservoir study area was Beulah in September of 1967, bringing 13 inches of precipitation to Victoria and 20.8 inches to Goliad. As a result of this storm, Coletto Creek recorded a maximum flow of 122,000 feet per second at Schroeder Road, washing out bridges and undercutting bluffs the entire length of the stream (Environment Consultants 1975).

Soils and Geology

Soils in the proposed reservoir area consist of brownish-gray sandy loam over a predominantly red-brown or yellow-brown clay base, derived from marine and deltaic sediments, stream alluvium, and outwash sediments. These sediments accumulated during the Tertiary and Quarternary Ages of the Cenozoic Era. During the Tertiary, the sea oscillated between Gulf of Mexico encroachment and heavy stream deposition, resulting in deposition of many hundreds of feet of clastic sediments. During the late Pliocene or early Pleistocene times, streams deposited gravel, sand and silt over much of the area, which was subsequently lowered through erosion. Resulting remnants of ancient stream terraces remain today, capping the stream divides. These terraces contain flint gravels which were later used for raw materials by the aboriginal inhabitants (Environment Consultants 1975).

Biology

Coletto Creek lies in a zone of transition between the thorny brush and cacti of the Tamaulipan Biotic Province to the southwest and the prairies and deciduous forests of the Texan Biotic Province to the northeast. The terrain could be most accurately described as Coastal Prairie--a nearly level plain dissected by streams which flow to the Gulf. The climax vegetation is post oak and grassland, although there has been an invasion of mesquite, oaks, acacias, and prickly pear cactus (Blair 1950).

Because of its location in a transitional zone between biotic provinces, the area has a rich diversity of fauna both from the more moist, easterly province and from the more xeric westerly province. Typical mammals present include the opossum, several types of bats, armadillo, cottontail rabbit, fox squirrel, plains pocket gopher, various mice, bobcat, and white-tailed deer. Also present are numerous species of reptiles, fish and birds (Environment Consultants 1975).

CHRONOLOGY OF PREHISTORIC HABITATION

Until comparatively recently, very little was known of the archaeology of the transitional area between the coast and the Edwards Plateau. A tentative chronology is suggested, divided into four periods and based upon those suggested by Suhm for Central Texas (Suhm 1960)--the *Paleo-Indian* (covering roughly the period from 7000 to 5000 B.C.), the *Archaic* (5000 B.C. to 1000 A.D.), the *Neo-American* (1000 A.D. to first European contact), and the *Historic* (1600 to the present). These periods are represented by distinctive artifacts which are tentatively dated in the Coleta area through comparison with assemblages from other Texas sites which have firm dates, established through stratigraphic excavation and radiocarbon dating.

Lanceolate and stemmed projectile points of the Paleo-Indian period are found occasionally. At the Morhiss site, south of Victoria, they have been tentatively associated with bones of Late Pleistocene mammoth, horse, camel, sloth, and bison (see Appendix).

The Archaic period in the project area is represented by stemmed and triangular dart points, forms such as the *Guadalupe* tool and unifacially worked *Clear Fork* tools, large, thin bifacially flaked bifaces, milling stones and bone and shell artifacts (Calhoun 1965:5-7). All evidence points to a hunting and gathering lifeway covering a considerable period of time. Some campsites of this period have buried deposits up to 12 feet or more in thickness (see Appendix; see also the description of 41 VT 16 and 41 GD 30 in this report).

The Neo-American period is represented by arrow points indicating a change from the use of darts propelled by a spear-thrower (or *atlatl*) to the use of the bow and arrow. This is a technological change which occurred late in this part of Texas, probably after 1000 A.D. Also present are sherds of pottery, including types found on the coast and types found further to the north and west (see Appendix; Birmingham and Schmiedlin, personal communication). At the time of Historic contact, there were regional groups with distinct linguistic and cultural differences in the area, as reported by early French and Spanish explorers, such as La Salle (Joutel 1962) and Cabeza de Vaca (Baskett 1907).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

In the lower Guadalupe River-Coleta Creek area a number of sites have been tested, but only one professional archaeological excavation has been carried out. In 1939 the Morhiss Site (41 VT 1), known for years as an "Indian mound" on the Guadalupe, six or seven miles south of Victoria (Rose 1883:9), was totally excavated under the direction of W. A. Duffen for the University of Texas-W.P.A. Unfortunately, no written report has been prepared on this excavation, but a summary by Dr. Thomas N. Campbell (see Appendix) indicates the types of features and artifacts found. Remains of occupations of the Paleo-Indian, Archaic

and Neo-American periods allowed an excellent view of the archaeology of this part of Texas. A unique local complex lasting throughout the Middle and Late Archaic period (Calhoun 1965:4) was first isolated at this site, and since then has been called the Morhiss focus or complex.

The Johnston-Heller site (4i VT 15) on the Guadalupe River north of Victoria was recorded and tested by W. W. Birmingham and E. H. Schmiedlin. It contains besides materials of the Archaic and the Neo-American periods, a Paleo-Indian stratum with points and tools dating from 7000 B.C. and earlier (Birmingham and Hester, in press). A very short distance upstream from the Johnston-Heller site is the Jackson site. This large occupation site was trenched by a WPA crew under the direction of W. A. Duffen in 1940 (manuscript on file, Texas Archeological Research Laboratory, Austin) and a number of Archaic materials were found.

Farther north on the Guadalupe River drainage and on the northern boundary of the Morhiss area, a survey of the Cuero I Reservoir in 1972-1973 by the Texas Historical Commission revealed a total of 352 sites in an area of 58,000 acres (Fox *et al* 1974). All time periods from the Paleo-Indian to the Historic were represented.

Also on the coastal plain, but east of the study area, the Keeran Site, location of LaSalle's Fort Saint Louis and the Spanish presidio Nuestra Senora de Loreto, was tested by the Texas Memorial Museum in 1950 and later restudied by Kathleen Gilmore (Gilmore 1973).

Amateur archaeologists working in the Victoria area have recorded numerous sites on the Guadalupe River and Coletto Creek, and the Victoria Archaeological Society has carried out a number of excavations at local sites, results of which have generously been shared with the authors. These tests and surveys shed further light upon the geographical extent of the Morhiss complex and upon settlement patterns in the area. C. A. Calhoun has summarized this information as follows:

"(Morhiss complex sites) stretch from San Antonio Bay on the coast at the delta of the Guadalupe River, up the Guadalupe to somewhere between Cuero and Gonzales, and up the San Antonio River to about Goliad. A few sites, of course, are found along the main tributary streams of those two rivers, and it may have reached over to the lower Lavaca and Navidad Rivers.....The sites occur as middens on low knolls in the bottomlands of the Guadalupe and San Antonio Rivers and along the edges of the terraces overlooking the bottomlands of these two rivers. A large site is inevitably found wherever the river meanders close to a high bluff." (Calhoun 1965:4).

Amateur archaeologists W. W. Birmingham and E. H. Schmiedlin have recorded a number of sites within the proposed reservoir area. The artifacts from some of these sites are illustrated in this publication. Birmingham and Schmiedlin have greatly helped in our evaluation of the archaeology of the reservoir.

RECORDED HISTORY

It is not the function of this report to trace the entire history of Indian tribes and European settlement in this part of south Texas. The subject has been thoroughly covered by others (see Rose 1883, O'Connor 1966, Oberste 1953, Newcomb 1961, Berlandier 1969, to name a few). This section is an attempt to pull together those events which directly affected the Coleta Creek area, and more specifically the area within the proposed reservoir, to show what types of cultural resources might be predicted and to provide background for further research for those planning interpretive displays.

The Indians

Very little is known as yet about the peoples who occupied the Coleta Creek in Late Prehistoric and early Historic times. Early explorers observed and described groups which appear to have been living for some time in the coastal area, but it is impossible at present to link archaeological assemblages with specific historic tribes.

The coastal bays and islands were inhabited by the Karankawa, who migrated seasonally between the coast and the more sheltered areas along the shore and the lower river courses (Schaedel 1949:121). They lived upon fish, shellfish and turtles, as well as various species of game animals, nuts and berries. Large villages of these people were encamped at the mouth of the Guadalupe River in the late 18th century (Bolton 1916:402-403), and it was at Kemper's Bluff on the lower Guadalupe that they were last seen before they fled into Mexico in 1842 (Linn 1883:335-336).

The Indians most likely to have lived in or near the Coleta Creek valley were known to the Spanish as the Xaraname or Aranama, a mobile hunting and gathering group which has been lumped together with other similar south Texas bands under the name Coahuiltecan (Campbell 1975:1; Newcomb 1961:31). The fact that these people were living on the Guadalupe just north of present-day Victoria at the time the Spanish came, tempts one to suspect that they may have been the descendants of the people who had inhabited the same general area for several thousand years. However, no archaeological and/or ethnohistorical evidence can yet support such a link. If one can believe the descriptions by Cabeza de Vaca of the Mariames as referring to this group, the Aranama were living much the same way and in the same area in the early 1500's as they were when Mission Espiritu Santo was established among them in 1726 (Krieger 1956:52).

Although they are primarily associated with central Texas (Sjoberg 1953:282), a portion of the Tonkawa tribe evidently ventured into south Texas as early as the mid-18th century. Stephen F. Austin encountered them about 50 miles south of San Antonio in 1821 (Austin 1904:297). John Linn (1883:334) mentions a Tonkawa village which

existed in the 18th century north of Victoria, according to local tradition.

Beginning in the early 19th century, raids into south Texas were begun by tribes such as the Comanche, Waco, and Tawakoni (Linn 1883: 61). Berlandier (1969:143-144) complained in 1830 that these Indians joined together on "wintertime excursions for murder and horse stealing around the Texas presidios". The only documented instance where such intrusive groups entered the Coletto Creek area was the famous Comanche raid of August, 1840, in which the entire settlement of Linnville was ransacked and burned. Part of this group approached the Coletto and San Antonio settlements, but was driven back by Captain Carlos de la Garza and local residents (Oberste 1953:235).

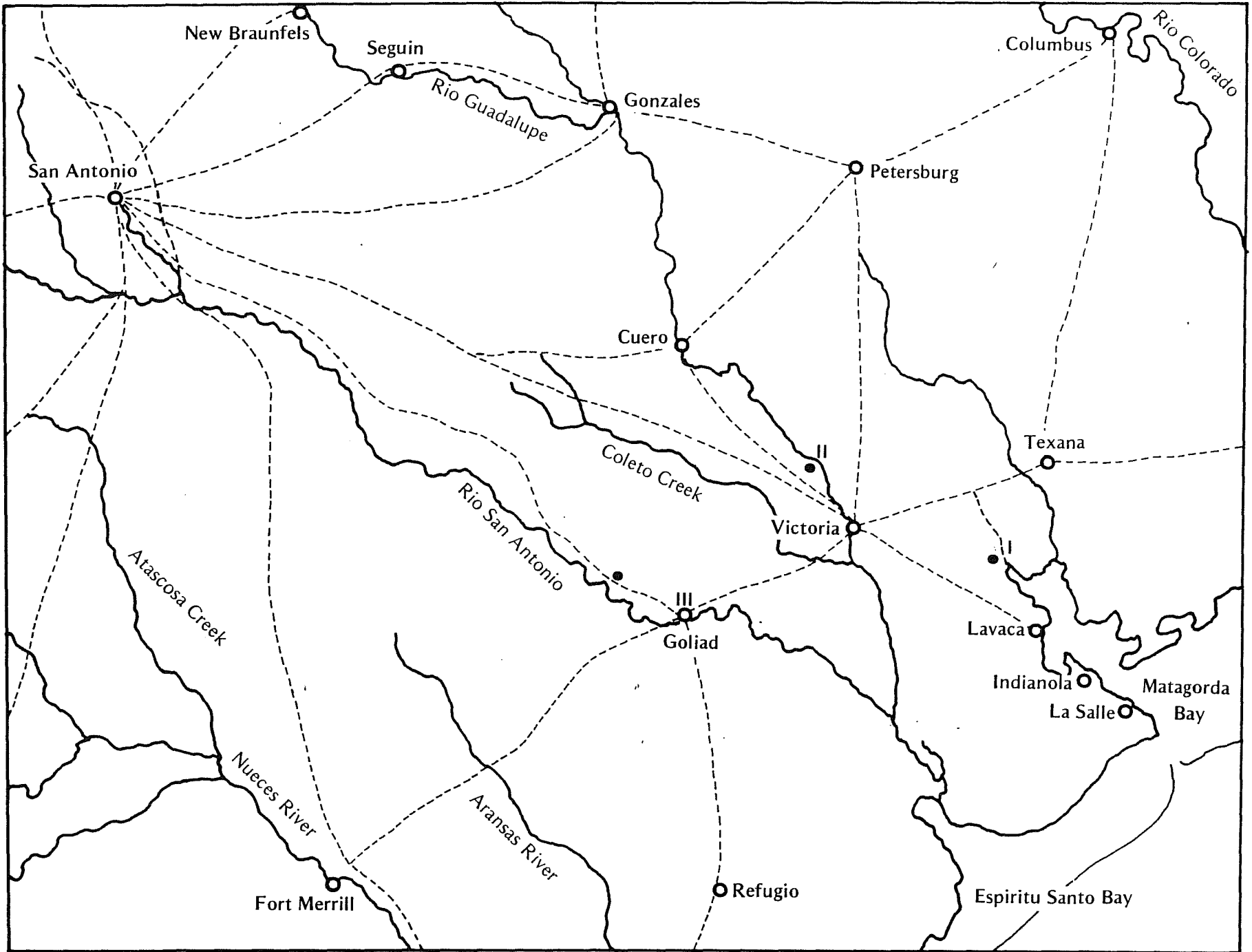
The Europeans

The period of European influence in the south Texas area began in earnest in the 18th century. Groups of Europeans had been in and out of the coastal plain from the time of Cabeza de Vaca's wanderings in the early 1500's and La Salle's ill-fated colony on Garcetas Creek in 1685. Groups of Spaniards probably crossed the upper reaches of the Coletto numerous times on the way from San Juan Bautista del Rio Grande to Espiritu Santo Bay. However, the founding of Presidio Nuestra Senora de Loreto in 1721 on the site of La Salle's fort (Bolton 1916:400-404), and Mission Espiritu Santo de Zuniga nearby, brought direct Spanish influence to bear on the coastal Indians for the first time. When it soon became apparent that the choice of site (and of Indians) was a mistake, the presidio and mission were moved inland in 1726 to a spot on the Guadalupe River north of present-day Victoria (Castañeda 1935: 168-169). Evidently from prehistoric times a center of considerable activity, in the 18th century this was the home of the Aranama tribe (O'Connor 1966:14). No archaeological or documentary evidence has been found so far to indicate that the mission Indians frequented Coletto Creek, but the old Spanish road from La Bahia to San Antonio ran parallel to Coletto Creek just above the reservoir survey area (Fig. 2).

Captain Joaquin Orobio y Basterra would have crossed Coletto Creek in 1746 during his explorations of the lower San Antonio River valley. On his recommendations, in 1749, Mission Espiritu Santo and Presidio Loreto were relocated on the San Antonio River on a spot later to become the town of Goliad. This was done in order to better guard the main road from Mexico to east Texas (Castañeda 1935:79-113). The land between the San Antonio and Guadalupe Rivers at this time was the property of Mission Espiritu Santo (O'Connor 1966:58).

The first documented historic military action known to have taken place within the reservoir area was a battle which led to the death of Henry Perry in 1817, at the end of one of the last filibustering expeditions which attempted to overthrow Spanish rule in Texas. The precise location of the battle is not known but the terrain was described as being on a

Figure 2. *Texas Coastal Plain in 1857*. Adapted from a map entitled "Map of Texas and Part of New Mexico", Bureau of Topographical Engineers, 1857. Note the locations of the City of Victoria and Coleto Creek.



I. Old site of Fort St. Louis and Mission Espiritu Santo
 II. Second site of Mission Espiritu Santo
 III. Present site of Mission Espiritu Santo

hill over Perdido Creek, near a place called Los Corrales (Hatcher 1935:232), and it was probably not far from the present Schroeder Road crossing, just north of Fannin.

It is not presently known when the first settler built a home within the reservoir area. From the time that the La Bahia settlement was established there was a surprising amount of traffic from San Antonio to the coast and through La Bahia to east Texas. Apparently, there were numerous "squatters" who moved onto the land, and by 1815 there may well have been a number of "unofficial" ranchers on Coletto Creek (see Huson 1974:75).

In 1824 Empresario Don Martin de Leon arrived on the banks of the Guadalupe River to found the town of Victoria (Rose 1883:10) and Coletto Creek became the western boundary of his grant (Hammett 1971:46). Of the 41 original families in de Leon's colony, apparently none settled on the Coletto, but in 1835 Jose Maria Hernandez and John Cheevers received grants on the east bank, at the south end of the proposed reservoir (Walsh 1879). All of the land between the west bank of Coletto Creek and the San Antonio River had been reserved for the Aranama Indians of Mission Espiritu Santo during the long, drawn-out battle over secularization of the mission (Oberste 1953:38), but was finally opened up to colonization in 1831 (Walters 1951:300) as part of the Power and Hewetson Grant (Wood 1971:1).

The Coletto Creek project area was not directly involved in the battle for Texas independence in 1835-1836. The battle in which Fannin and his men were captured, while called the Battle of Coletto, took place a few miles south of the Perdido and six or seven miles west of Coletto Creek. It appears from a number of accounts, however, that survivors of the resulting massacre of Fannin's army spent many anguished days and nights hiding in the woods along Perdido and Coletto Creek trying to escape the Mexican soldiers sent to hunt them down (see particularly Linn 1883:191, which reference also indicates the presence of small Mexican *jacales* along the Coletto in 1836).

By this time the road between Victoria and Goliad was well traveled. The road paralleled Perdido Creek and travelers undoubtedly camped under the trees on the creek bank. A number of accounts of military activities at this time refer to a camp at Coletto Creek (Peña 1975:174; Pierce 1969:32; Jenkins 1973:229). The place mentioned was not far from the present route of Highway 59, just south of the proposed reservoir.

As a result of Santa Anna's atrocities during the Texas Revolution, feeling was aroused against all people of Mexican origin in south Texas. The majority of the Mexican citizens of the region fled to Mexico, leaving the Victoria area nearly deserted (Wood 1971:31). Anglo-American volunteers from the battles of the revolution soon moved in and took over the vacant lands, causing an abrupt change from Spanish to Anglo-American culture in the area (O'Connor 1966:243). In the

1840's a wave of German immigrants landed in Texas and a group settled on Coletto Creek (Rose 1883:71).

By this time, a number of seaports had opened on the coast to supply the interior settlements and roads were worn by caravans of ox carts carrying new settlers with their possessions and loads of supplies for the merchants of Victoria, Goliad and San Antonio. Routes of these roads have long since grown over and disappeared in the brush, except where modern roads have followed the original trail. However, we pick up hints of them in stories handed down to families whose land they crossed. Thus we can trace a segment of such a trail from Indianola to San Antonio which once ran up the east side of Coletto Creek. It crossed the Victor Weber place near the creek (Harper 1974:133) and further south, Nelson Pantel remembers the area along the creek bank where he was told the trail ran on his property (see description of 41 VT 58). According to Linn (1883:353) a trail in this vicinity was opened by Mexican cartmen in order to avoid Goliad during the cart war in 1857.

Little trace can be expected to remain on the ground today from the time of the great cattle drives of pre- and post-Civil War times. Many of these originated south of Victoria and may well have crossed Coletto Creek near the reservoir area on their way up to San Antonio, Fort Griffin, and points north (see Dobie 1929). Immediately after the Civil War, the hide and tallow trade became a booming business in the coastal area, with many local ranchers setting up their own processing plants and shipping hides and tallow to the coastal towns for export. One such operation was located on the O'Connor ranch just south of Perdido Creek (Katherine McDowell, personal communication).

By 1900 the Coletto Creek area had taken on much the appearance which it has today. Numerous farms and ranches lined the banks, with ranch houses set on high points along the streams. The main emphasis was, as today, on stock raising--a tradition continued without interruption since the arrival of the Spanish in the 18th century.

SURVEY RESULTS

Site Descriptions

Site descriptions in this section maintain the following format, using the information recorded on the site survey forms. For convenience they progress upstream, following first Perdido Creek and then Coletto Creek. All measurements are recorded in the metric system, except for elevations (see below).

The site designation is a trinomial one, in which the number 41 represents Texas, the following two letters indicate the county (Victoria or Goliad), and the last number is the one officially assigned to the site.

Location: Indicates the location in respect to known geographical features, roads, bridges, etc.

Elevation: Approximate elevation above mean sea level as determined by location on U.S.G.S. topographic maps. Elevations are given in feet in order to correspond with U.S.G.S. and GBRA project maps.

Environment: Includes a description of soil, local flora, and location in respect to the creek.

Description: The archaeological site itself, what evidence is visible and its approximate depth and extent.

Materials recovered: A list of the articles collected by the survey, plus artifacts collected by Birmingham and Schmiedlin on specific sites.

Remarks: The probable effect of the reservoir on the site and specific recommendations for future investigation. Sites have been categorized as follows: (1) slated for inundation or located at the waterline and subject to disturbance through increased erosion and wave action; (2) to be affected due to increased availability to vandalism (i.e., presence of the lake will make the site more accessible either by foot or by boat); (3) out of the affected area, and no significant impact anticipated.

Our primary concern is with those sites in Category 1. A number of these appear to us to be of minor importance and we have recommended in the following pages that no further work is necessary in these cases. However, several Category 1 sites are of particular significance, or may hold, in our best judgement, the potential for yielding valuable archaeological information. For these we have provided, in the descriptions that follow, brief statements outlining our reasons regarding the necessity for further study.

Terminology

Certain terms used in the following sections perhaps require some basic definition, particularly those used in artifact descriptions:

A *core* is a chert cobble from which a flake or flakes have been removed.

In central Texas chert also occurs in outcroppings of ledge stone, but near the coast (as in the Coletto Creek area) it is primarily found in gravels eroding from the river banks. A *core tool* is a core which has subsequently been used as a tool, often for chopping or cutting purposes.

A *flake* is a fragment which has been struck from a chert cobble by percussion, or removed by pressure in more advanced stages of artifact manufacture. Detailed study of flake forms can yield much information on the activities that took place on a site. A *utilized flake* is one which has been used as a casual tool, with slight modification of the working edge.

A *biface* is a piece of chert which has had flakes removed from two faces. For purposes of this study, these have been divided into thick bifaces (over 1.3 cm) and thin bifaces (under 1.3 cm). The former may be either rough preforms created in preparation for further reduction, or they may be tools abandoned in various stages of manufacture and use. *Unifaces* are lithic implements that have been modified only on one face. Such artifacts are quite rare in the area of the Coletto Creek drainage that we examined, and few are present in the collections briefly noted here.

A *projectile point* is an artifact created for specific use on a shaft which is to be propelled in some manner. Projectile points recorded in this survey are all of the size and type generally supposed to have been used on a dart which was propelled by a spear-thrower or *atlatl*. Their shape, size, and technique of manufacture have changed through time so that they have become the most frequently used means of dating archaeological deposits in many parts of Texas.

Quartzite cobbles were used for grinding plant foods and as hammerstones for flaking chert. In the reservoir area such cobbles are present in the same gravels as those producing chert for artifact manufacture (see Chadderdon 1976 for a study of quartzite cobble tools from Victoria County sites).

Guadalupe and Clear Fork tools are specialized types of chipped stone implements whose use has not as yet been positively determined (studies of *Clear Fork* functions have been done by Hester, Gilbow and Albee 1973; Howard 1973; Chandler 1974; and Shiner 1975). Their presence is an aid to dating sites, as certain forms are now known to have been used during specific time periods.

Baked clay balls and lumps are often found on sites on or near the Texas coast. A number of theories have been suggested for their presence, but none have been substantiated (Hester 1971b:15-17).

THE SITES

41 GD 23

Location: On the south side of Perdido Creek .5 km west of its confluence with Coletto Creek.

Figure 3. *Locations of Archaeological Sites, Coleta Creek Project.* This map shows the locations of archaeological sites in Victoria (VT) and Goliad (GD) Counties. Also indicated are the proposed locations of the dam and power plant areas. The 105' and 125' contour intervals are also indicated. Maximum pool level is estimated to be at the 105' contour.

This page has been redacted because it contains restricted information.

Elevation: 86-102 feet

Environment: Sandy soil with medium grass cover; open field with occasional live oaks.

Description: Situated on a knoll overlooking the creek, just north of a deserted frame farmhouse; steep slope to creek which is 50 m to the northeast. Only evidence of site is chert flakes in gopher tailings; 15 cm square shovel test indicated flakes still present as deep as 100 cm. Site is approximately 50 m in diameter.

Materials recovered:

46 chert flakes and fragments

1 sherd *Rockport* ware (Suhm and Jelks 1962:131) (Fig. 4,b)

Remarks: This site, slated for destruction in borrow activities, yielded the only ceramic evidence in the entire survey area. We believe that its buried deposits may yield additional significant data on the Late Prehistoric occupations of Coletto Creek. As we discuss below (see Conclusions section), there is very meagre evidence of aboriginal utilization of the drainage prior to European contact. Our surface sample is insufficient for meaningful analysis, and we believe that testing at this Category 1 site will tell us whether or not the site could provide data on the Late Prehistoric period along Coletto Creek.

41 GD 33

Location: On the south side of Perdido Creek .625 km west of its confluence with the Coletto Creek.

Elevation: 80-85 feet

Environment: Sandy soil with medium grass cover; large live oaks in the vicinity.

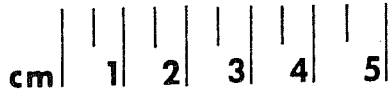
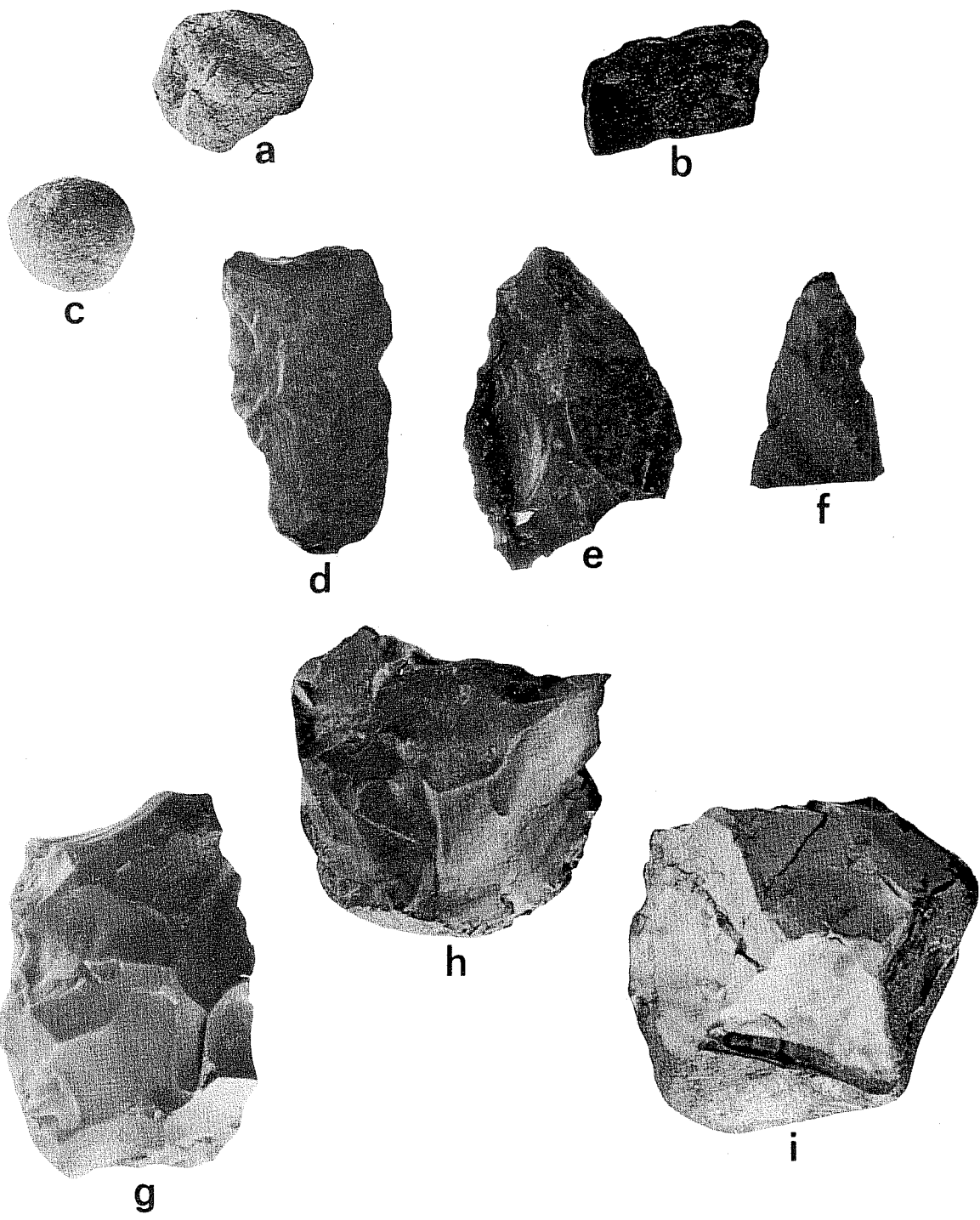
Description: Situated on a knoll near the top of the slope overlooking the creek, northeast of a ranch road which crosses the creek. Site is approximately 20 m in diameter. Evidence consists of chert flakes in gopher-hole tailings. A shovel test 15 cm square indicated flakes still present at 100 cm depth.

Materials recovered:

44 chert flakes and fragments

Remarks: Our shovel test indicated considerable depth to the buried deposits at this site. Because of insufficient surface evidence, we are unable to satisfactorily assess the potential of this Category 1 site. We strongly recommend that testing be carried out in order that a proper evaluation can be made.

Figure 4. *Artifacts from 41 GD 14, 41 GD 20, 41 GD 22, 41 GD 23 and 41 GD 34.* a, baked clay ball, 41 GD 20; b, sherd, *Rockport Plain*, 41 GD 23; c, baked clay ball, 41 GD 14; d, bifacial *Clear Fork* tool, 41 GD 22; e, thick biface fragment, 41 GD 22; f, thin biface tip, 41 GD 34; g, thick biface, 41 GD 14; h, core, 41 GD 14; i, core, 41 GD 34.



41 GD 20

Location: On the north side of Perdido Creek, 350 m northeast of its confluence with Sulphur Creek (Fig. 11,a).

Elevation: 95-100 feet

Environment: Sandy soil with medium grass cover under scattered live oaks.

Description: At the top of a slope toward the creek, which is 100 m to the south. Evidence consists of chert flakes in back-dirt of gopher holes over an area 6 to 8 m in diameter. Two shovel tests 15 cm square revealed chert fragments down to a clay stratum at 20 cm.

Materials recovered:

- 10 chert flakes and fragments
- 1 fragment of purple quartzite cobble
- 1 baked sandy clay ball (Fig. 4,a)

Remarks: The surface evidence and the data obtained through brief shovel tests indicate a possibly significant occupation buried at a depth of ca. 20 cm. The site area appears to be small, and a program of intensive survey (including limited testing) will provide a better assessment of the site's potential. It is in our Category 1.

41 GD 13

Location: 100 m southeast of the confluence of Sulphur Creek with Perdido Creek.

Elevation: 81-93 feet

Environment: Sandy grey loam with heavy grass cover in sloping field.

Description: Site is exposed primarily in ranch road bed and cow trails; covers an area approximately 100 m in diameter.

Materials recovered:

- 72 chert flakes and fragments

Remarks: This site is in Category 1. With a program of intensive survey and limited testing, we will be able to make a final decision as to the site's potential. It appears to be an occupation site, and our recommended follow-up work ought to provide more information on the age and nature of the site.

41 GD 14

Location: North of Perdido Creek 500 m due south of confluence with Sulphur Creek.

Elevation: 100-103 feet

Environment: In gray sand over red to tan clay on top of 8 m bluff over creek, eroding rapidly through stream action and weathering. Medium grass cover and large oaks.

Description: Materials such as chert and burned rock exposed in face of bluff to a depth of 25 cm; horizontal extent unknown.

Materials recovered:

- 55 chert flakes and fragments
- 1 core (Fig. 4,h)
- 1 thick biface (Fig. 4,g)
- 4 fragments of bone
- 3 baked clay balls (Fig. 4,c)

Remarks: Already nearly totally destroyed through erosion, the site will rapidly disappear when water reaches this level during flood stage. It is a Category 1 site and we recommend intensive survey. The considerable amount of surface material suggests that an intensive survey would provide information on the age and significance of the site.

41 GD 22

Location: On the north side of Perdido Creek, 8 km southwest of its confluence with Sulphur Creek.

Elevation: 105-110 feet

Environment: Sandy soil with light grass cover.

Description: The site is in an area rapidly eroding into a gully 100 m back from an 8 m bluff. It is roughly 25 m in diameter, with scattered flakes and artifacts visible on the surface.

Materials recovered:

- 34 chert flakes and fragments
- 1 core
- 1 thick biface fragment (Fig. 4,e)
- 1 bifacial *Clear Fork* tool (Fig. 4,d)

Remarks: Site is disappearing with headward erosion of the gully; it will not be completely inundated but will probably be washed away during flooding once reservoir is filled. The site is of Category 1 status. We recommend intensive survey in order to ascertain the significance of the site. The occurrence of the bifacial *Clear Fork* tool suggests considerable antiquity (cf. Birmingham and Hester 1976).

41 GD 34

Location: On north side of Perdido Creek, 1.3 km east of Schroeder Road crossing.

Elevation: 100-105 feet

Environment: Reddish, sandy soil with little or no grass cover; open field with occasional post oak.

Description: Located on top of 6.5 m bluff which is being under cut and rapidly falling into the creek. The site presently covers 3 m by 30 m along the bluff; it once was much larger. Face of bluff indicates no depth to site.

Materials recovered:

- 70 chert flakes and fragments
- 1 core (Fig. 4,i)
- 1 thin biface fragment (Fig. 4,f)
- 3 thick biface fragments

Remarks: Site will not be inundated, but future flooding will cause it to completely erode into the creek. This Category 2 site should receive intensive survey.

41 GD 35

Location: On north side of Perdido Creek, 12 km east of Schroeder Road crossing.

Elevation: 100-105 feet

Environment: Reddish, sandy soil with light or no grass cover; open field with occasional post oak.

Description: See 41 GD 34. The site presently covers 10 m along the bluff; may be a continuation of 41 GD 34.

Materials recovered:

- 14 chert flakes and fragments
- 1 utilized flake
- 2 complete thin bifaces,
- 1 fragment (Fig. 5,a,e,f)

Remarks: Category 2; intensive survey should lead to a better evaluation of the site. We would like to determine if 41 GD 34 and 41 GD 35 are indeed a single site. Further studies might enable us to place chronologically not only the site, but also the specialized "corner-tang" tool form.

41 GD 21

Location: On west bank of Sulphur Creek, 1.5 km from confluence with Perdido Creek.

Elevation: 90-95 feet

Environment: Black, sandy loam over grey to orange clay with medium grass cover, under open live oak forest.

Description: Exposed in the side of a cow trail to the creek, site covers an area approximately 15 m by 20 m at the top of the creek bank. Flakes and shell extend into the clay level (Fig. 11,b).

Materials recovered:

- 25 chert flakes and fragments
- 1 core (Fig. 5,h)
- 1 fragmentary quartzite cobble
- 1 fragmentary turtle carapace
- 2 fragments of river mussel shell

Remarks: A limited testing program at this Category 1 site can provide us with an assessment of the site's potential. The surface evidence suggests it is a small occupation site. The testing program could ascertain site function, the age of the site, and perhaps give some hint as to the relationship of sites on tributaries (like Sulphur Creek) to those located on the main Coleta channel.

41 VT 42

Location: On south side of Coleta Creek, 1 km downstream from the confluence with Perdido Creek.

Elevation: 75-95 feet

Environment: Sandy loam with medium to heavy grass cover, clumps of dense underbrush; sheer drop of 10 m to creek.

Description: Bluff top site which extends 300 m by approximately 10 m wide. Chert flakes litter the surface.

Materials recovered:

- 29 chert flakes and fragments
- 1 quartzite mano (Fig. 5,g)
- 1 thin biface fragment (Fig. 5,d)

Remarks: Below the dam site; Category 3: no further work is recommended.

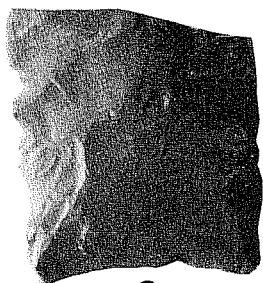
Figure 5. *Artifacts from 41 GD 21, 41 GD 35, 41 VT 42 and 41 VT 56.* a, thin biface fragment, 41 GD 35; b, *Darl*, 41 VT 56; c, thin biface fragment, 41 VT 56; d, thin biface fragment, 41 VT 42; e, thin biface, 41 GD 35; f, thin biface, 41 GD 35; g, mano, 41 VT 42; h, core, 41 GD 21.



a



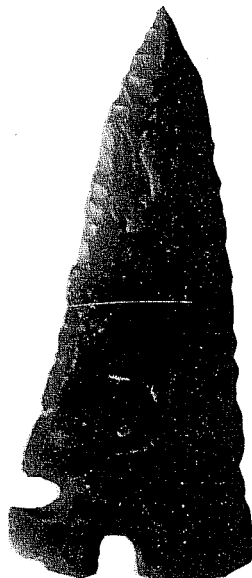
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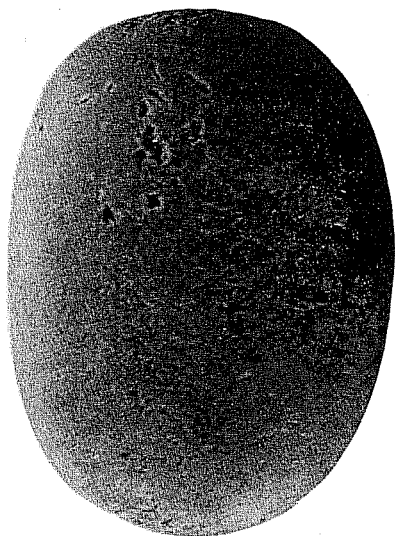
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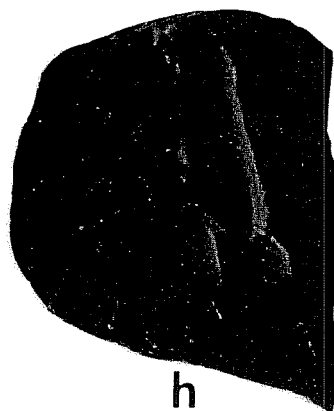
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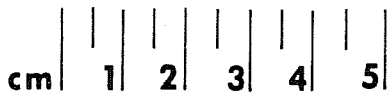
f



g



h



cm

1

2

3

4

5

41 VT 41

Location: On south side of Coletto Creek, .75 km downstream from its confluence with Perdido Creek.

Elevation: 75-90 feet

Environment: Dark grey sandy loam under large live oaks, medium grass cover.

Description: Located on hillside overlooking a sharp bend of the creek, approximately 11 m above the creek bed. Site covers an area 100 m in diameter and is exposed in a cut bank, where materials go as deep as 2.5 m.

Materials recovered:

52 chert flakes and fragments
5 fragments of mussl shell

Remarks: The site lies downstream from the dam and around and under a residence. The site will apparently not be further disturbed by dam construction. Category 3; no further work is recommended.

41 GD 24

Location: West of Coletto Creek, 400 m south-southeast of its confluence with Perdido Creek; between two minor tributaries.

Elevation: 85-90 feet

Environment: Sandy loam with medium grass cover, live oaks and underbrush.

Description: Situated on a slope overlooking the creek. Evidence of occupation consists of a scattering of chert flakes in gopher tailings; size of site undetermined.

Materials recovered:

12 chert flakes and fragments

Remarks: This Category 1 site does not appear to be significant enough to warrant further work.

41 VT 52

Location: On southeast side of Coletto Creek, 600 m due south of its confluence with Perdido Creek.

Elevation: 90-100 feet

Environment: Sandy loam with medium grass cover under live oaks.

Description: Located on a hillside 100 m from the creek bank. Only evidence is flakes in gopher tailings over an area 20 by 30 m.

Materials recovered:

28 chert flakes and fragments

Remarks: This Category 1 site will be eliminated by dam construction. While it does not appear to be of significance, we suggest that a brief testing program be conducted in order to clarify the nature of the site.

41 VT 54

Location: On the east side of Coletto Creek, .25 km downstream from its confluence with Turkey Creek.

Elevation: ca. 100 feet

Environment: Fine sand with medium grass cover; large live oaks.

Description: On a knoll overlooking the creek; evidence is confined to chert flakes found in gopher back-dirt in an area of undetermined size. A shovel test 15 cm square yielded flakes (in sand) still present at 130 cm.

Materials recovered:

55 chert flakes and fragments

Remarks: Limited testing is recommended for this Category 1 site. A better assessment of site potential will result from this work; of particular possible depth of 130 cm. Borrow fill will probably be taken from the site locality, making it absolutely essential that a firm evaluation of the site is obtained.

41 VT 55

Location: On the east side of Coletto Creek, opposite its confluence with Turkey Creek.

Elevation: 90-100 feet

Environment: Sand and small gravels with medium grass cover; occasional live oaks and persimmons.

Description: On a knoll over the creek near its confluence with an arroyo; evidence was widely scattered flakes in gopher back-dirt over an undetermined area.

Materials recovered:

11 chert flakes and fragments

Remarks: 41 VT 55 is a Category 1 site lying in an area slated for

borrow pits. The limited surface collection does not provide sufficient data for evaluation. The only way to properly assess this site is through a program of limited testing.

41 VT 56

Location: On east side of Coletto Creek, opposite its confluence with Turkey Creek.

Elevation: 100-105 feet

Environment: Sandy clay with light grass cover under live oaks and persimmons.

Description: Located on the edge of an arroyo, exposed in ranch road and extending 5 m to the north and south.

Materials recovered:

- 41 chert flakes and fragments
- 1 thin biface base (Fig. 5,c)
- 1 *Dart* (Fig. 5,b)
- 1 faceted quartzite artifact with hammerstone wear (cf. Chadderdon 1976)

Remarks: We feel that 41 VT 56 (Category 1) may be one of the potentially most valuable sites in that area of the reservoir slated for borrow fill removal. It has yielded from surface contexts artifacts suggestive of late Archaic (or transitional Archaic) age. A testing program would provide important information on the nature of the buried deposits, the chronology and function of the site, and, hopefully, information on the manner in which the specialized faceted quartzite cobble tool form was used.

41 VT 53

Location: On east side of Coletto Creek, opposite its confluence with Turkey Creek.

Elevation: 105 feet

Environment: Sandy clay with light grass cover; occasional live oaks.

Description: Located on top of knoll over creek; scattered flakes in gopher tailings over an undetermined area.

Materials recovered:

- 12 chert flakes and fragments
- 1 core fragment

Remarks: No further work appears warranted at this Category 1 site.

41 GD 15

Location: On the west side of Coletto Creek, near its confluence with Turkey Creek.

Elevation: 102-107 feet

Environment: Sandy loam with thin grass cover, heavy cover of dead leaves, under large live oak forest.

Description: Located on hillside over Turkey Creek, 300 m northwest of its confluence with Coletto Creek. Only evidence of site is scattered flakes in back-dirt of gopher holes over undetermined area.

Materials recovered:

15 chert flakes and fragments

Remarks: This Category 1 site does not appear significant enough to justify further work.

41 GD 27

Location: On the west bank of Coletto Creek, 1 km upstream from its confluence with Turkey Creek.

Elevation: 100-113 feet

Environment: Sandy loam with thick cover of leaves, under live oak forest.

Description: Located on hillside over creek. The only evidence of occupation is flakes in gopher back-dirt. Shovel test 20 cm square yielded flakes to 40 cm. Area is undetermined.

Materials recovered:

7 chert flakes and fragments

Remarks: This site, which we have included in Category 1, is apparently not significant enough to warrant further work.

41 GD 18

Location: On west side of Coletto Creek, 700 m downstream from the Schroeder Road crossing.

Elevation: 96-102 feet

Environment: Sandy loam with heavy leaf cover, grass, live oak forest.

Description: Located on hillside at confluence of a dry arroyo with the creek. Only visible evidence is flakes and shell in gopher tailings over an area 30 m in diameter. Two shovel tests 20 cm square yielded flakes to 40 cm, with the majority at 35 cm.

Materials recovered:

- 80 chert flakes and fragments
- 1 thick biface (Fig. 6,e)
- 1 projectile point (*Matamoros*; Fig. 6,c)
- 2 fragments of mussel shell

Remarks: This Category 1 site will apparently lie partially within the permanent pool once the reservoir is filled. The surface and shovel test collections indicate that the site is large, has extensive buried deposits, and has not suffered previous erosion. We believe it is an occupation site, but have no secure information on the actual extent and age of the habitation. It is one of many occupation sites along the main Coleta Creek channel. These sites apparently represent use of preferred camping sites at various times during the prehistoric period. A testing program at the site will enable us to judge whether or not this site has the potential for helping to solve many of the problems, including site function and chronology, involving these sites.

41 GD 17

Location: On west side of Coleta Creek, 750 m southwest of the Schroeder Road crossing.

Elevation: ca. 100 feet

Environment: Clay and sandy loam; post oak and scrub brush.

Description: Location of actual site unknown. Evidence consists of chert flakes, cores and fragments in the sides and bottom of a rapidly eroding arroyo.

Materials recovered:

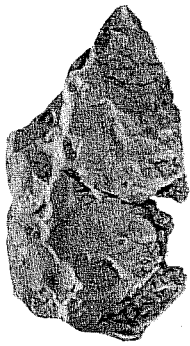
- 9 chert flakes and fragments
- 4 cores

Remarks: Since materials are out of context at this Category 2 site, no further work is recommended.

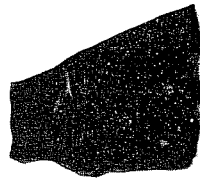
41 GD 16

Location: On west side of Coleta Creek, 600 m downstream from the Schroeder Road crossing.

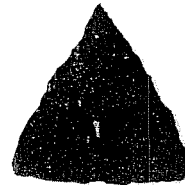
Figure 6. *Artifacts from 41 GD 16, 41 GD 18, 41 VT 39, and 41 VT 40.* a, thin biface fragment, 41 VT 40; b, thin biface fragment, 41 VT 40; c, *Matamoros*, 41 GD 18; d, core tool, 41 GD 16; e, thick biface, 41 GD 18; f, quartzite artifact, 41 GD 16; g, core tool, 41 VT 39; h, quartzite artifact, 41 GD 16.



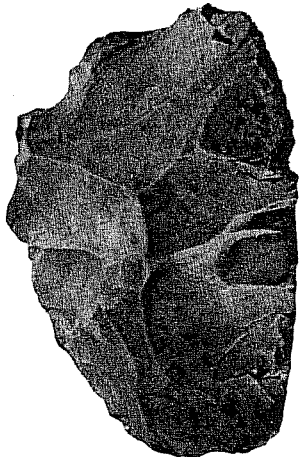
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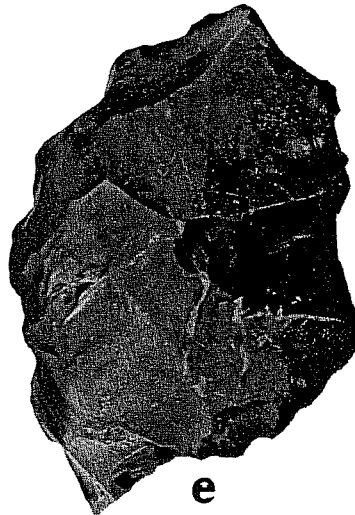
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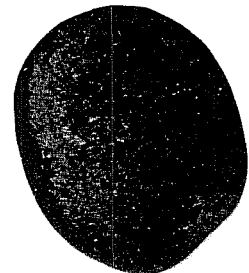
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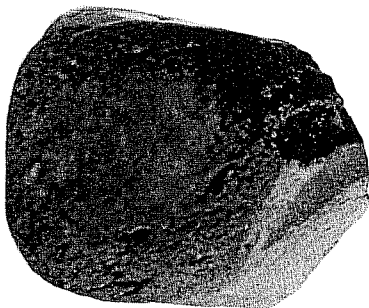
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e



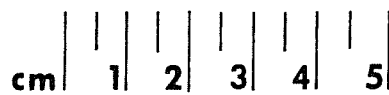
f



g



h



Elevation: 100 feet

Environment: Sandy loam with light grass cover. Thick leaf cover; live oak forest.

Description: Located on point of land north of the confluence of a dry arroyo with the creek. Evidence visible consists of chert flakes in gopher back-dirt over an area 6 by 10 m. A shovel test 15 cm square revealed gravel at 30 cm, but flakes continuing to sterile caliche at 35 cm.

Materials recovered:

- 15 chert flakes and fragments
- 1 quartzite cobble (Fig. 6,f)
- 1 mano (Fig. 6,h)
- 1 core tool (Fig. 6,d)
- 9 fragments of mussel shell

Remarks: We recommend a limited testing program at this site. The varied, but meagre, surface assemblage suggests that testing could yield data on the aboriginal utilization of the site.

41 GD 25

Location: On north bank of Turkey Creek, 1.1 km west of Coleta Creek.

Elevation: 100-105 feet

Environment: Sand under thick carpet of leaves and occasional clumps of grass in oak forest.

Description: Located on top of a rise between arroyos; occasional flakes show up in gopher tailings. Extent is undetermined. Shovel test 15 cm square yielded one flake; red clay at 30 cm.

Materials recovered:

- 5 chert flakes and fragments

Remarks: This Category 1 site requires no further investigation.

41 GD 26

Location: On north bank of Turkey Creek, 1.5 km west of Coleta Creek.

Elevation: 100-105 feet

Environment: Sand under thick carpet of leaves and grass in oak forest.

Description: Located on top of bluff over the creek, between two arroyos; occasional flakes show up in gopher tailings. Extent is undetermined.

Materials recovered:

5 chert flakes and fragments

Remarks: This Category 1 site does not warrant further investigation.

41 GD 19

Location: On west side of Coletto Creek, 150 m south of Coletoville Crossing.

Elevation: 81-82 feet

Environment: Sand and gravel on eroding slope with medium grass cover, under clump of live oaks.

Description: Located on bank of creek. Evidence is flakes and shell in gopher tailings and on the surface, over an area 30 m in diameter.

Materials recovered:

13 chert flakes and fragments
2 cores
4 fragments of mussel shell

Remarks: The site (in Category 1) is too badly eroded to warrant further investigation.

41 VT 39

Location: On east side of Coletto Creek 1.3 km north of the Coletoville Crossing.

Elevation: 80-106 feet

Environment: Sand and gravel with medium grass cover; live oak motts.

Description: Situated on steep slope 5 m above the creek bed; flakes exposed in cow trails and gopher tailings; extent of site undetermined.

Materials recovered:

29 chert flakes and fragments
4 cores
1 core tool (possibly a chopper; Fig. 6,g)

Remarks: We do not recommend further work at this Category 1 site.

41 VT 40

Location: On east side of Coletto Creek, 1.6 km north of the Coletoville Crossing.

Elevation: 110-120 feet

Environment: Sandy loam with medium grass cover; open live oak forest.

Description: Spread over a sloping hillside, site is exposed in the road bed and on eroded surfaces; covers an area 20 m in diameter.

Materials recovered:

161 chert flakes and fragments
 1 core
 2 biface fragments (Fig. 6,a,b)

Remarks: No further work seems warranted at this eroded Category 1 site.

41 GD 31

Location: On west side of Coletto Creek, 3.4 km upstream from Coletoville Crossing.

Elevation: ca. 95 feet

Environment: Sandy clay bluff; open meadow above.

Description: Eroding from face of bluff 3-4 m beneath the surface; deposit is approximately .5 m thick.

Materials recovered:

32 chert flakes and fragments
 1 core
 2 core tools
 1 thick biface (Fig. 9,k)
 4 fragments of quartzite cobbles (Fig. 9,h)

Remarks: We recommend test excavations at this site (Category 1; within permanent pool). The buried zone noted above apparently contains a sealed, uneroded archaeological deposit. Such a context would be ideal for determining site function and chronological placement, and shed further light on changing settlement patterns through time along the Coletto Creek channel. For an evaluation of the site potential, we strongly recommend a testing program.

41 GD 30

Location: On west side of Coletto Creek, 3.6 km upstream from Coletoville Crossing (Fig. 8,a,b)

Elevation: 100-115 feet

Environment: Sandy loam on top of bluff with heavy grass cover; clumps

of anaqua, hackberry, oaks; sandy clay exposed in face of bluff.

Description: Located on top of steep bluff with material eroding into creek from surface to 6.5 m deep in the bluff; site extends over 100 m square area between two arroyos (Fig. 8,a).

Materials recovered:

173 chert flakes and fragments	Birmingham collection:
4 cores (Fig. 7,g)	2 projectile points (Fig. 7,a,b)
1 thin biface (Fig. 7,i)	
4 thin biface fragments (Fig. 7,c-f)	
1 thick biface (Fig. 7,h)	
10 fragments of animal bone	
20 mussel shells	
11 snail shells	

Remarks: A large part of this Category 1 site has already eroded into the creek. A local resident recalls human skeletal materials washing out after floods approximately 45 years ago and reports that the bluff at that time extended considerably farther to the east. We recommend testing in order to determine more about site utilization (e.g., are there additional aboriginal cemetery areas) and the age of the deposits.

41 GD 29

Location: On west side of Coletto Creek, 3.9 km upstream from Coletoville Crossing.

Elevation: 125-130 feet

Environment: Sandy loam with medium grass cover; open meadow.

Description: Located on hillside near creek, extent of site is undetermined, occasional flakes are found in back-dirt of gopher holes.

Materials recovered:

- 22 chert flakes and fragments
- 1 core
- 2 thick bifaces (Fig. 9,j)

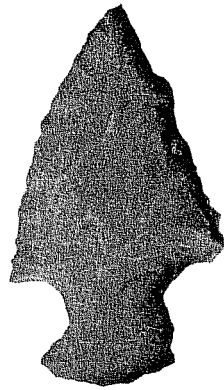
Remarks: No further work is warranted at this Category 2 site.

41 GD 28

Location: On west side of Coletto Creek, 4 km upstream from Coletoville Crossing.

Elevation: 120-140 feet

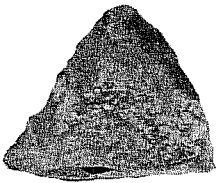
Figure 7. *Artifacts from 41 GD 30.* a, *Palmillas*; b, *Pedernales*; c, thin biface fragment; d, thin biface fragment; e, thin biface fragment; f, thin biface fragment; g, core; h, thick biface; i, thin biface. Specimens a and b, are in the W. W. Birmingham collection.



a



b



c



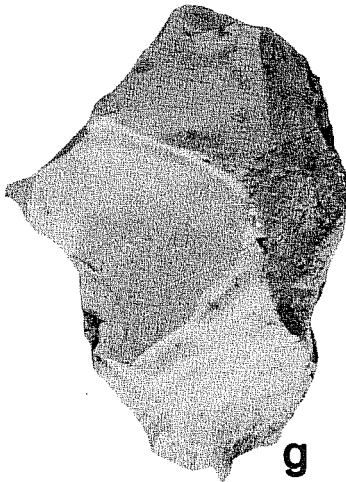
d



e



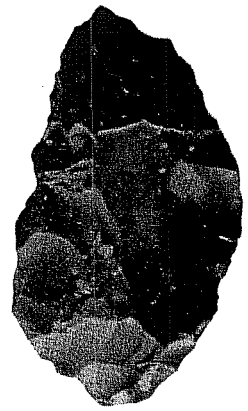
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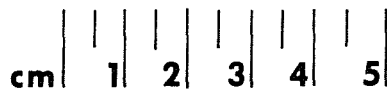
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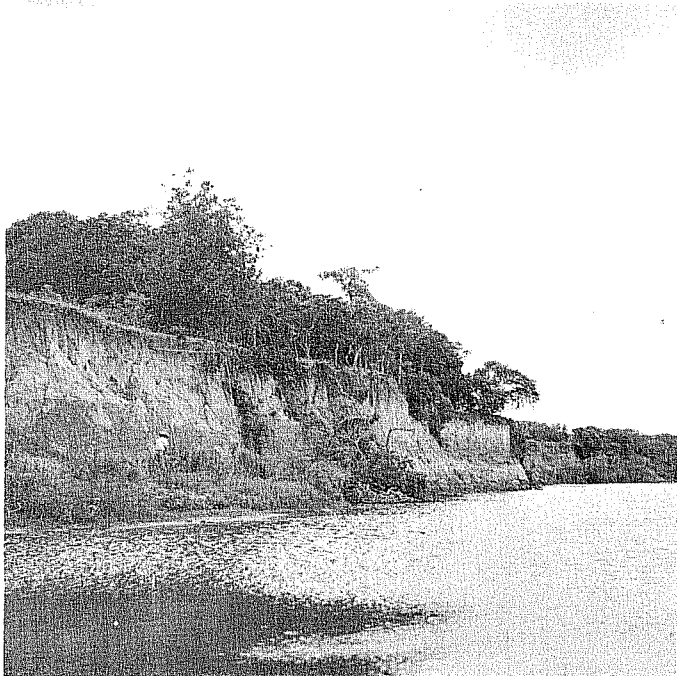
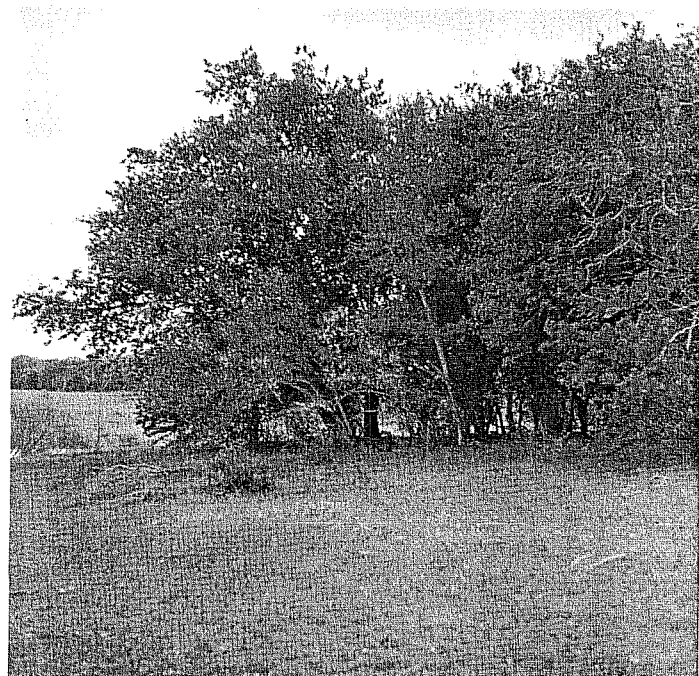
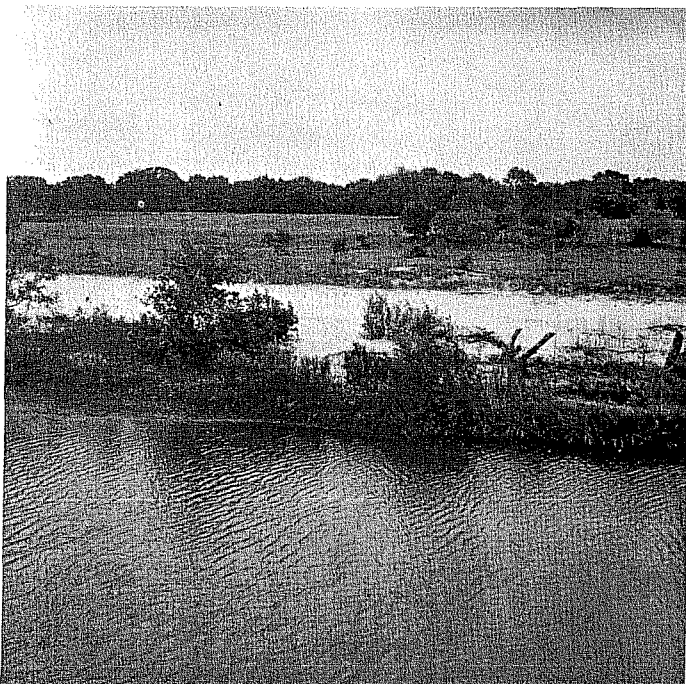
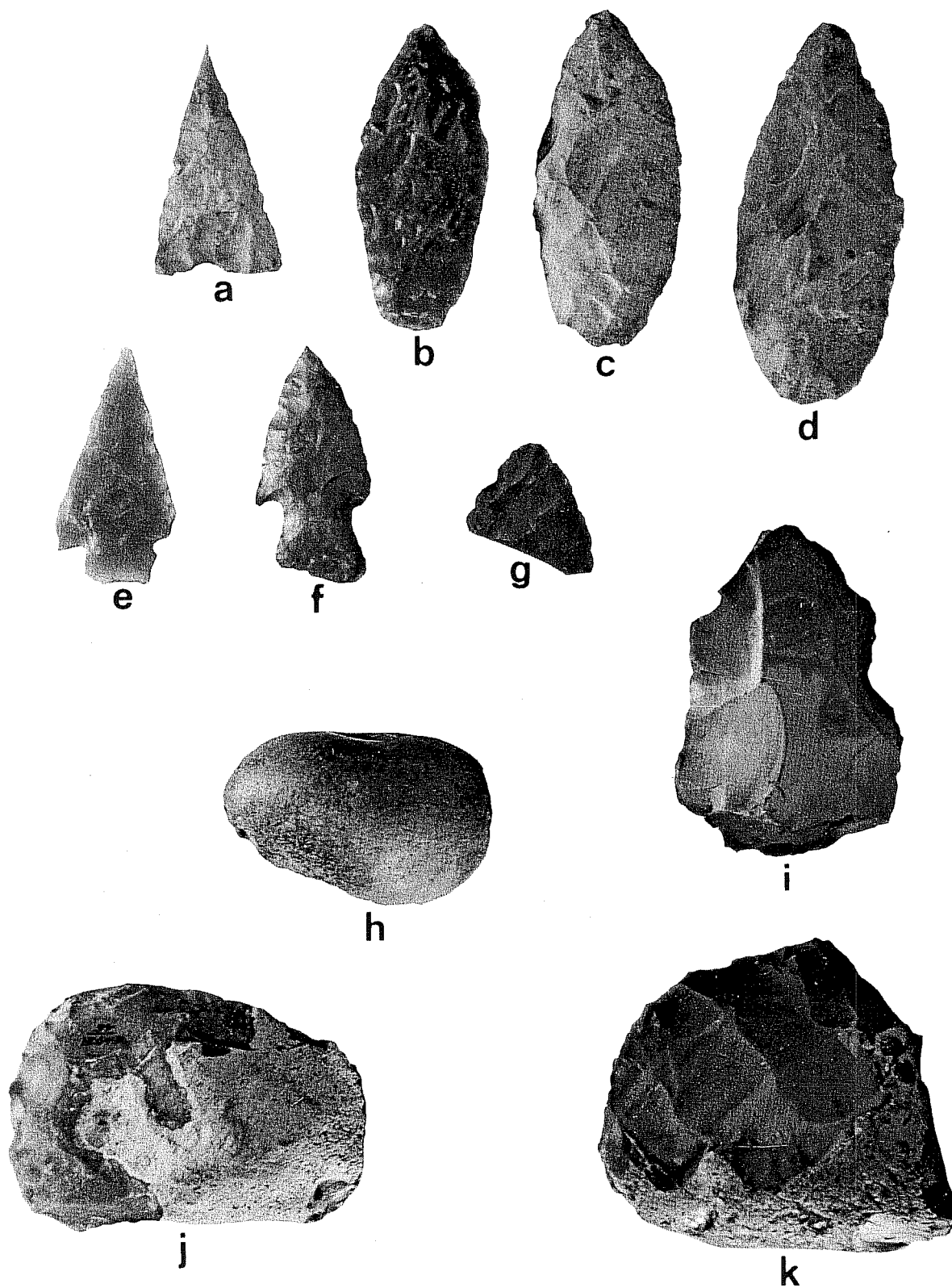
**a****b****c****d**

Figure 8. Views of Sites 41 GD 30 and 41 VT 58. a, 41 GD 30 from southeast; b, 41 GD 30 from northeast; c, 41 VT 58 from 41 GD 30, across Coletto Creek; d, 41 VT 58 from south.

Figure 9. *Artifacts from 41 GD 28, 41 GD 29, and 41 GD 31.*
a, *Tortugas*, 41 GD 28; b, thin biface, 41 GD 28; c, thin biface, 41 GD 28; d, thin biface (with dulled basal edges), 41 GD 28; e, stemmed dart point, 41 GD 28; f, stemmed dart point, 41 GD 28; g, thin biface fragment, 41 GD 28; h, quartzite cobble fragment-mano, 41 GD 31; i, thick biface, 41 GD 28; j, thick biface, 41 GD 29; k, thick biface, 41 GD 31. Specimens a - f are in the W. W. Birmingham collection.



cm | 1 | 2 | 3 | 4 | 5

Environment: Sandy loam with medium grass cover; open meadow.

Description: Located on a knoll over the Creek, the only evidence is occasional flakes in gopher tailings over an area roughly 10 by 15 m.

Materials recovered:

25 chert flakes and fragments	Birmingham collection:
1 thick biface (Fig. 9,i)	<i>Tortugas</i> (Fig. 9,a)
1 thin biface tip (Fig. 9,g)	2 stemmed dart points (Fig. 9,e,f)
	3 thin bifaces (preforms) (Fig.9,b-d)

Remarks: Because of the possible impacts of reservoir development noted in our Category 2, we believe that intensive survey at this site would be advisable.

41 VT 51

Location: About .5 km north of Coletto Creek from a point 3 km upstream from the Coletoville Crossing.

Elevation: ca. 96 feet

Environment: Sand with medium grass cover in an open meadow with scattered motts of live oak.

Description: Located on a rise near the edge of an old lake bed. A shovel test 15 cm square yielded nothing; surface indications are flakes scattered in gopher tailings over an undetermined area.

Materials recovered:

15 chert flakes and fragments

Remarks: This Category 1 site does not appear to warrant further work.

41 VT 50

Location: About .6 km north of Coletto Creek from a point 3 km upstream from the Coletoville Crossing.

Elevation: ca. 80 feet

Environment: Grey-brown sandy loam with medium grass cover; nearby mott of oaks, underbrush, grape vines.

Description: Located on an island in an old lake bed, now silted-in and cultivated. Area is approximately 10 m in diameter. A shovel test 15 cm square yielded patinated flakes to grey clay at 60 cm with flakes going down another 20 cm into the clay.

Material recovered:

- 65 chert flakes and fragments
- 1 core tool
- 1 quartzite cobble fragment

Remarks: This Category 1 site will be inundated by the reservoir. Limited testing should be conducted as shovel tests revealed substantial buried deposits. Because of the geological situation in which the site is situated, it may be of considerable antiquity. Testing will provide information on the geological context, age and nature of the deposits.

41 VT 49

Location: About 1 km north of Coletto Creek from a point 3 km upstream from the Coletoville Crossing.

Elevation: 93 feet

Environment: Grey-brown sandy loam with heavy grass cover in open meadow.

Description: On knoll with windmill on the edge of an old lake bed; flakes and shell show up in gopher tailings over an area approximately 30 m in diameter. A shovel test 15 cm square yielded shell and flakes to 60 cm and below.

Material recovered:

- 21 chert flakes and fragments
- 7 fragments of mussel shell
- 2 fragments of bone

Remarks: The landowner reports that this Category 1 site was dynamited a number of years ago; no further work is warranted.

41 VT 57

Location: About .8 km north of Coletto Creek from a point 3.5 km from Coletoville Crossing.

Elevation: ca. 100 feet

Environment: Sandy loam with heavy grass cover; clumps of oaks; persimmon.

Description: On the edge of a clearing, on slope overlooking the valley. No structural remains of small house or cabin which landowner reports was here many years ago. Several mulberry trees mark the spot and some trash was found in a gully to the east.

Materials recovered:

- fragments of a cast-iron stove
- 1 sherd, ironstone cup (Fig. 10,a)
- 1 sherd, yellow earthenware bowl (Fig. 10,b)
- 1 fragment, brown glass bottle (Fig. 10,e)
- fragments of clear and aqua glass containers (Fig. 10,c,d)
- 1 fragment, strap hinge (Fig. 10,f)

Remarks: This is a Category 3 site. Judging from artifacts, this probably represents a late 19th century Anglo-European occupation. No further work is warranted.

41 VT 58

Location: About .5 km north of Coletto Creek from a point 3.5 km above Coletoville Crossing (Fig. 8,c,d).

Elevation: ca. 105 feet

Environment: Sand with medium grass cover under giant live oaks.

Description: Landowner says this was a camping site at the old road up this side of the creek. As a young man he recalls seeing wagon parts and other debris, although nothing was observed to be present today.

Materials recovered:

None

Remarks: No further work warranted at this Category 1 site.

41 GD 32

Location: .35 km east of Coletto Creek at a point 5.8 km upstream from Coletoville Crossing.

Elevation: ca. 110-120 feet

Environment: Sandy loam under clump of large hackberry trees with anaqua, persimmons and grape vines.

Description: Site shows up in armadillo burrows and gopher tailings over an area 20 m in diameter. It lies on a slope overlooking the confluence of an unnamed tributary with Coletto Creek. A 15 cm square shovel test revealed snails, chert flakes and mussel shell still present at 82 cm.

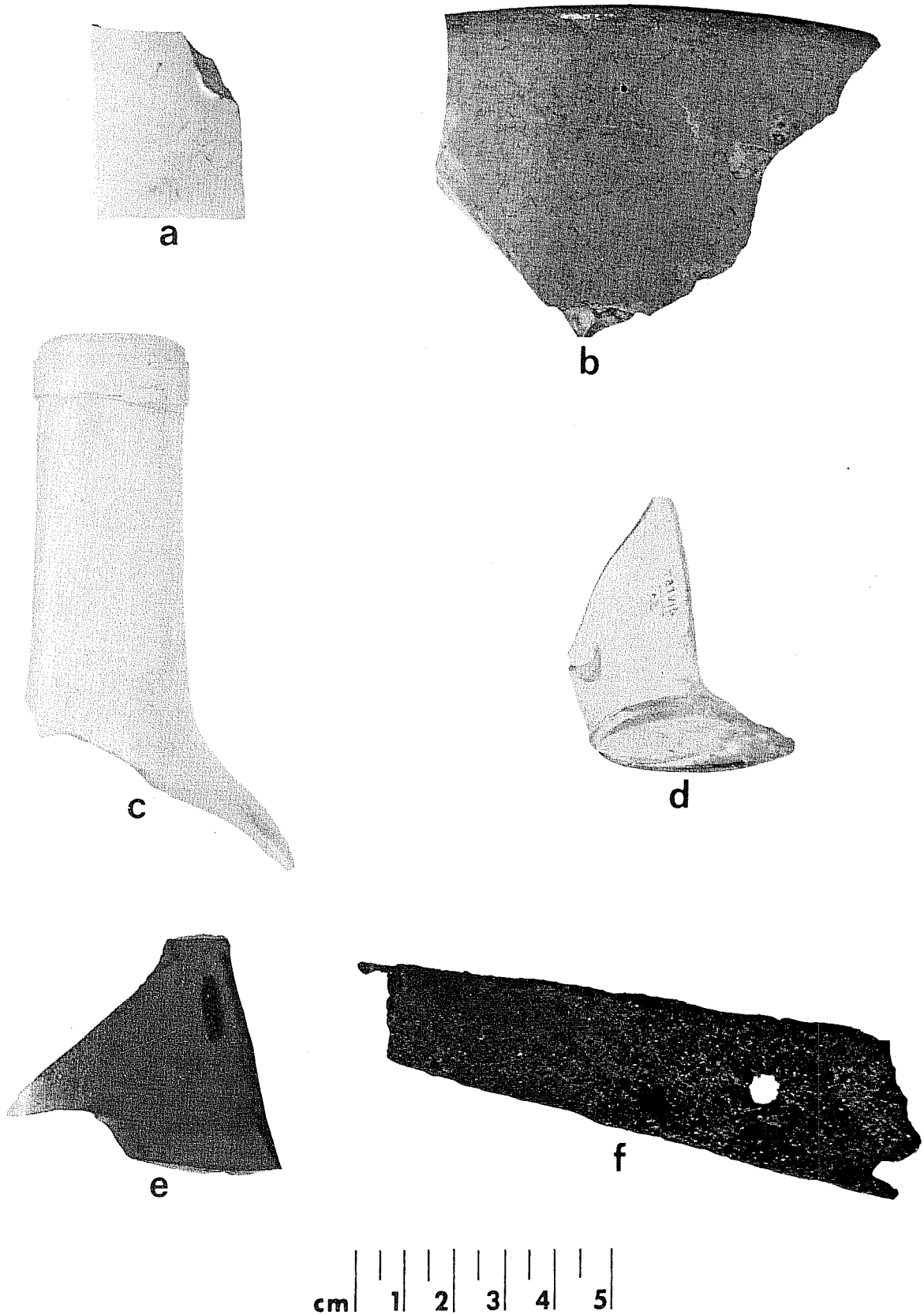


Figure 10. *Artifacts from 41 VT 57.* a, "ironstone" cup; b, yellow earthenware bowl; c, aqua bottle; d, clear glass bottle; e, brown glass bottle; f, strap hinge.

Materials recovered:

15 chert flakes and fragments
 2 cores
 10 fragments of mussel shell
 5 fragments of animal bone

Remarks: This is a Category 2 site. No further work is recommended.

41 VT 43

Location: Just north of Highway 622 bridge on the east side of Coleta Creek (Fig. 11,c).

Elevation: 130-142 feet

Environment: Brown, sandy loam under thick brush and live oaks; steep drop to the creek on the southwest.

Description: Materials are eroding from the bluff and present in the back-dirt of numerous holes dug by relic collectors. The site occupies the entire bluff top between the highway and an arroyo to the north, an area perhaps 50 m in diameter.

Materials recovered:

53 chert flakes and fragments
 2 utilized flakes (Fig. 12,i)
 1 thin biface fragment (Fig. 12,j)
 3 fragments quartzite cobbles
 1 fragment bone

Remarks: This Category 2 site has been partially destroyed by local relic-hunters. It will be above the flood pool of the reservoir but increased public access will make it vulnerable to further vandalism. We suggest limited testing in conjunction with 41 VT 44 (see below).

41 VT 44

Location: .25 km north of Highway 622 bridge, on the east bank of Coleta Creek.

Elevation: 118-120 feet

Environment: Brown, sandy loam under thick brush and live oaks, steep drop to the creek on the southwest.

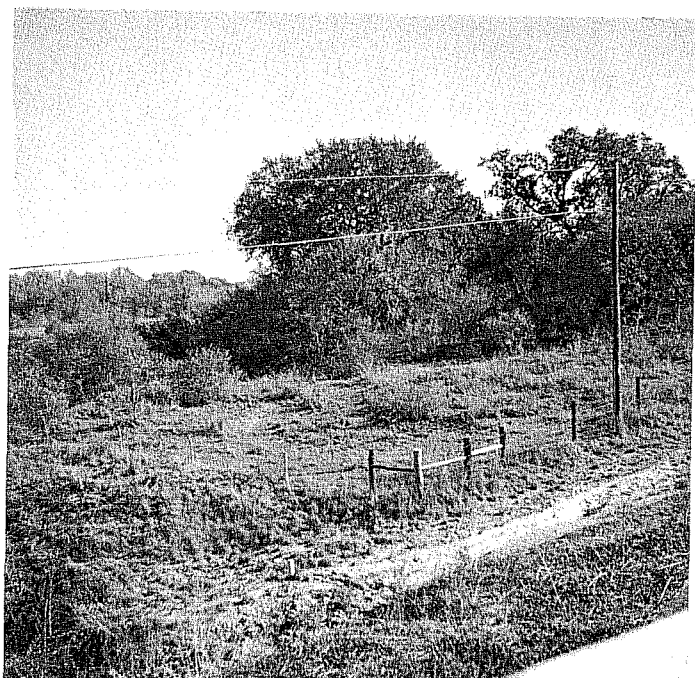
Description: Materials eroding from back-dirt of relic-collecting pits, some of which go as deep as 1 m without reaching sterile soil. Covers an area approximately 50 m by 20 m. May be an extension of 41 VT 43.



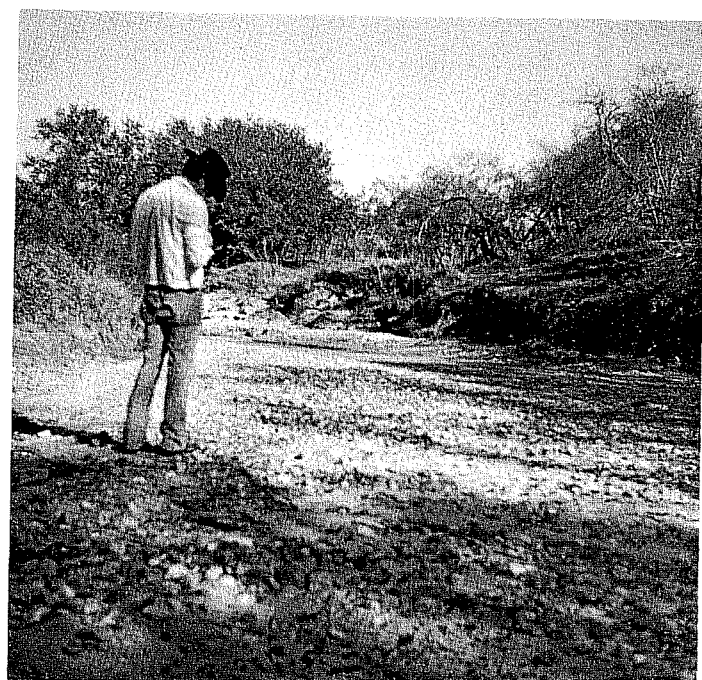
a



b



c



d

Figure 11. *Archaeological Sites in the Coleta Creek Area.* a, 41 GD 20 looking south across site; b, Profile of 41 GD 21 exposed in side of cattle trail; c, 41 VT 43 looking northeast from Highway 622 bridge; d, Gravel deposit southeast of 41 VT 47.

Figure 12. *Artifacts from 41 VT 43.* a, stemmed dart point; b, *Morhiss*; c, stemmed dart point (heavily patinated); d, perforator made on Late Paleo-Indian dart point; e, thin biface; f, thin biface; g, thin biface; h, unidentified dart point (quartzite); i, utilized flake; j, thin biface fragment. All artifacts are in the W. W. Birmingham collection.



a



b



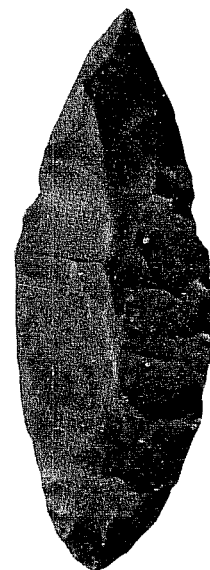
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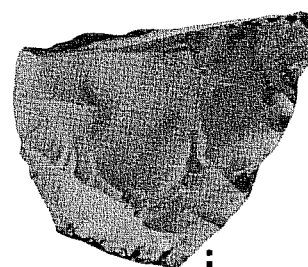
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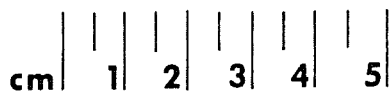
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i



j



Materials recovered:

19 chert flakes and fragments	Birmingham collection:
1 core	15 projectile points (Archaic
10 fragments of river mussel	Figs. 12 and 13)
	3 thin bifaces

Remarks: The Category 2 site has been partially destroyed by local relic-hunters; will not be inundated but will be more vulnerable to vandalism as a result of reservoir construction. We recommend limited testing in conjunction with 41 VT 43.

41 VT 45

Location: 3.5 km upstream from Highway 622 bridge, on the east bank of Coleto Creek.

Elevation: 118-125 feet

Environment: 75 cm of sand over dark brown clay with medium grass cover; on bluff over creek to the southwest.

Description: Spread over an open field, the evidence of the site is in gopher back-dirt in an area 30 m by 50 m. A 15 cm square shovel test revealed chert flakes extending to the clay at 75 cm.

Materials recovered:

8 chert flakes and fragments
1 core
1 utilized flake

Remarks: Intensive survey is recommended for the Category 2 site, since it apparently contains substantial buried deposits.

41 VT 46

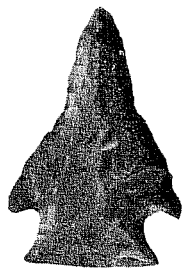
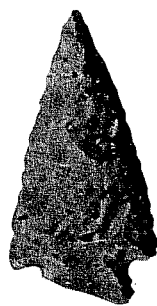
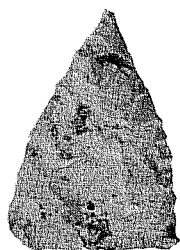
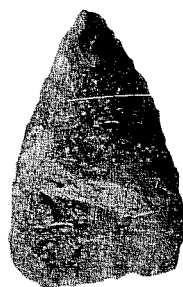
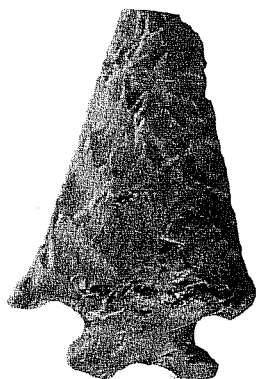
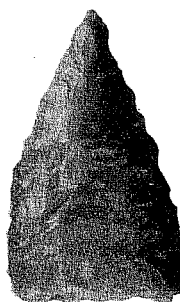
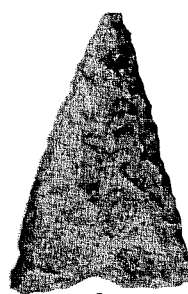
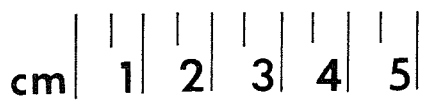
Location: .5 km upstream from Highway 622 bridge, on the east bank of Coleto Creek.

Elevation: 110-125 feet

Environment: Sand and sandy loam with medium grass cover; on bluff over creek to the southwest.

Description: In an open field; materials are visible in gopher tailings and on the eroded surface of a ranch road; area is 50 m in diameter.

Figure 13. *Dart Points from 41 VT 43.* a, side-notched dart point; b, corner-notched dart point; c, corner-notched dart point; d, stemmed dart point (dulled stem edges); e, *Tortugas*; f, *Tortugas*; g, *Tortugas*; h, *Matamoros*; i, *Frio*; j, *Tortugas*; k, *Tortugas*. All artifacts are in the W. W. Birmingham collection.

**a****b****c****d****e****f****g****h****i****j****k**

cm

1

2

3

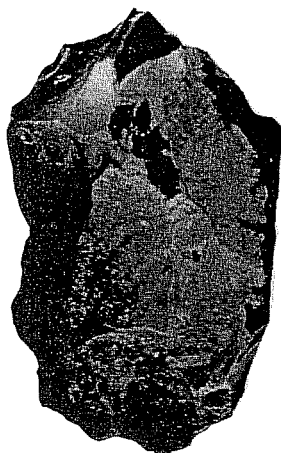
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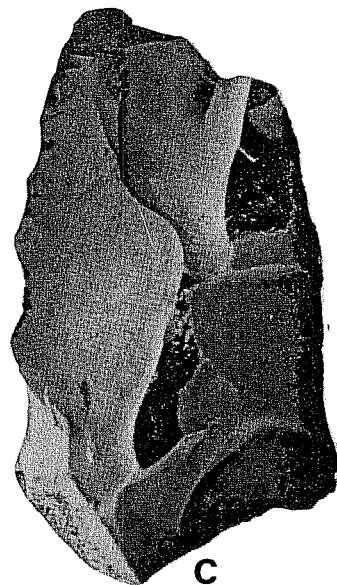
Figure 14. *Artifacts from 41 VT 46 and 41 VT 47. a - e, 41 VT 47; f, g, 41 VT 46; a, core; b, core; c, thick biface fragment; d, core; e, thick biface; f, thick biface fragment; g, core tool.*



a



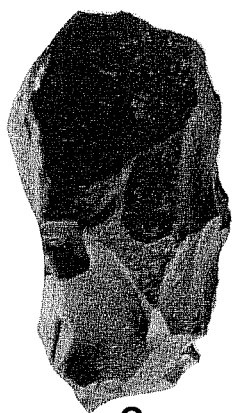
b



c



d



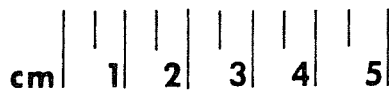
e



f



g



Materials recovered:

- 23 chert flakes and fragments
- 1 core
- 1 biface fragment (Fig. 14,f)
- 1 utilized flake
- 1 core tool (Fig. 14,g)

Remarks: A limited testing program would be useful at this Category 2 site. It would be within the flood pool in this upper portion of the project area. Research here, as at nearby VT 43, 44, 45 and 47, would give archaeologists more information on the reason for this clustering of sites. We cannot tell, from our initial assessment, the particular functions of these sites; further, until we get data on the relative chronology of this site cluster, we will be unable to determine whether they were used more or less contemporaneously, or at various periods of prehistory.

41 VT 47

Location: .75 km upstream from Highway 622 bridge, on the east bank of Coletto Creek.

Elevation: 122-130 feet

Environment: Gravel and sandy loam with medium grass cover; on hilltop at confluence of small tributary with the creek.

Description: Materials are visible on the surface and eroding from the hillside, over an area 30 m in diameter. The tributary is filled with stream-rolled chert cobbles (Fig. 11,d).

Materials recovered:

- 16 chert flakes and fragments
- 6 cores (Fig. 14,a,b,d)
- 1 thick biface (Fig. 14,3)
- 2 thick biface fragments (Fig. 14,c)
- 4 utilized flakes

Remarks: At this Category 2 site, we believe that limited test excavations would be desirable. It may represent a functionally specific site, perhaps a lithic workshop, given the proximity of raw materials in the tributary nearby.

41 VT 18

Location: .7 km downstream from Arnold Road Crossing, on the east bank of Coletto Creek. A windmill stands on the east side of the site.

Elevation: 130-145 feet

Environment: Thin layer of sandy loam over bedrock with thin grass cover, on bluff over creek, mesquites and brush thickets.

Description: Eroding surface is littered with chert debris and mussel shell, particularly numerous in the road which crosses the site. The area covered is approximately 40 m wide and extends 200 m along the bluff.

Materials recovered:

158 chert flakes and fragments	Birmingham collection:
1 core fragment	5 projectile points
5 utilized flakes	(<i>Pedernales, Palmillas,</i>
1 point fragment (Fig. 15,a)	<i>Tortugas, Ensor; Fig. 15,b-f)</i>
7 fragments of mussel shell	1 thin biface (preform; Fig. 15,g)

Remarks: This Category 2 site lies in the upper reaches of the project area. We would urge intensive testing, as the site appears to have the potential for yielding useful information on local cultural history, especially what may be the Middle and Late Archaic periods.

41 VT 48

Location: .5 km downstream from Arnold Road Crossing, on the east bank of Coletto Creek.

Elevation: 120-125 feet

Environment: Brown, sandy loam with medium grass cover; mesquites and brush; located on top of a small rise back from the edge of the bluff.

Description: Materials are found in gopher tailings and on the surface over an area 20 m in diameter. A 15 cm square shovel test to 70 cm yielded a large chert flake and numerous mussel shells.

Materials recovered:

- 6 chert flakes and fragments
- 2 large cores
- 12 fragments of mussel shell

Remarks: We recommend no further work at this Category 2 site.

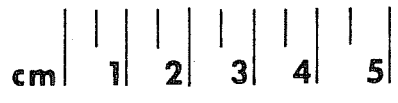
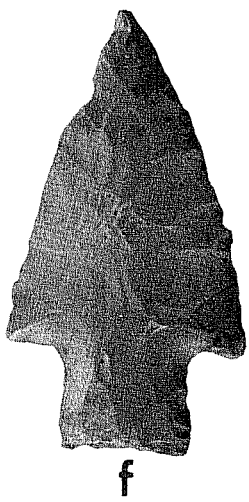
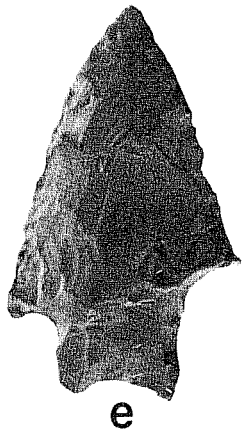
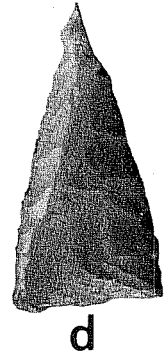
41 VT 19

Location: Just east of the Arnold Road Crossing, on the east bank of Coletto Creek.

Elevation: 115-180 feet

Environment: Thin, sandy gravels and numerous eroding chert nodules under thick, thorny brush cover on hillside over creek.

Figure 15. *Artifacts from 41 VT 18. a, barb from Bell (?); b, Palmillas; c, Ensor; d, Tortugas; e, Pedernales; f, Pedernales (?); g, thin biface (preform). Artifacts b - g are in the W. W. Birmingham collection.*



Description: Site consists of a litter of chert nodules and flaking debris, along with scattered mussel shell eroding from the hillside in an area approximately 40 by 120 m.

Materials recovered:

18 chert flakes and fragments	Birmingham collection:
2 core tools	2 projectile points (<i>Ensor?</i> ;
1 unifacial scraper (Fig. 16,f)	<i>Morhiss</i> ; Fig. 16,a,b)
1 core fragment (Fig. 16,i)	
6 fragments of mussel shell	

Remarks: A program of intensive survey and testing at this Category 2 site would contribute to the development of the local chronology; especially the cultural content and temporal niche of the postulated Morhiss complex.

41 VT 21

Location: .5 km upstream from Arnold Road Crossing, on the east bank of Coletto Creek.

Elevation: ca. 140 feet

Environment: Sandy loam over caliche with medium grass cover and some thorny brush; an open field on the bluff over the creek.

Description: Just down-slope from a farmhouse, the site has been disturbed by a shallow borrow pit, exposing the fact that the deposit is probably not over 5 cm deep. Materials are scattered on the surface over an area about 100 m in diameter.

Materials recovered:

136 chert flakes and fragments	Birmingham collection:
2 cores	2 projectile points (<i>Fairland</i> ,
2 core tools	stemmed fragments; Fig. 16,c,d)
2 thick bifaces (Fig. 16,h)	1 thin biface (Fig. 16,e)
1 thin biface fragment (Fig. 16,g)	
1 utilized flake	
4 quartzite hammerstones (Fig. 16,j)	
3 fragments of mussel shell	

Remarks: This Category 2 site requires no further investigation.

41 VT 17

Location: .55 km west of the intersection of Arnold and Ohrt Roads, .5 km north of Coletto Creek.

Elevation: 160-170 feet

Figure 16. *Artifacts from 41 VT 19 and 41 VT 21.* a, *Enson*, 41 VT 19; b, *Morhiss*, 41 VT 19; c, stemmed dart point fragment, 41 VT 21; d, *Fairland*, 41 VT 21; e, thin biface, 41 VT 21; f, unifacial scraper, 41 VT 19; g, thin biface fragment, 41 VT 21; h, thick biface, 41 VT 21; i, core fragment, 41 VT 19; j, quartzite hammerstone, 41 VT 21. Specimens shown in a - e are in the W. W. Birmingham collection.



a



b



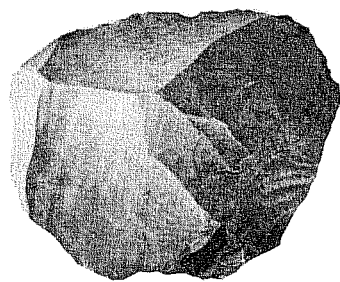
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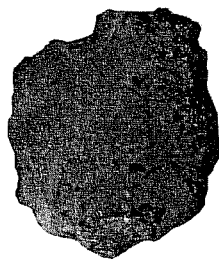
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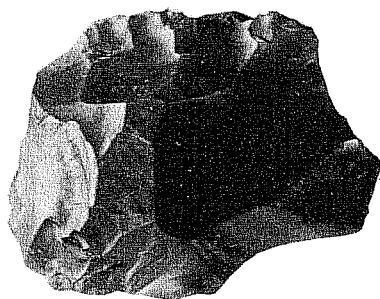
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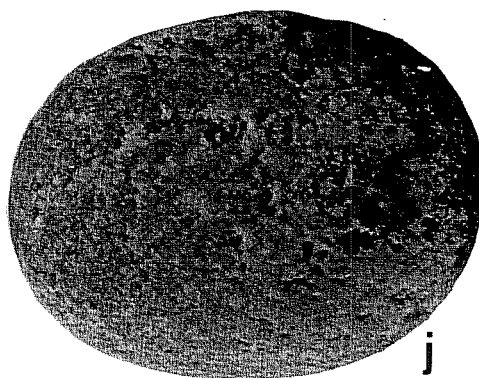
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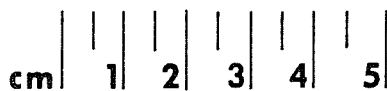
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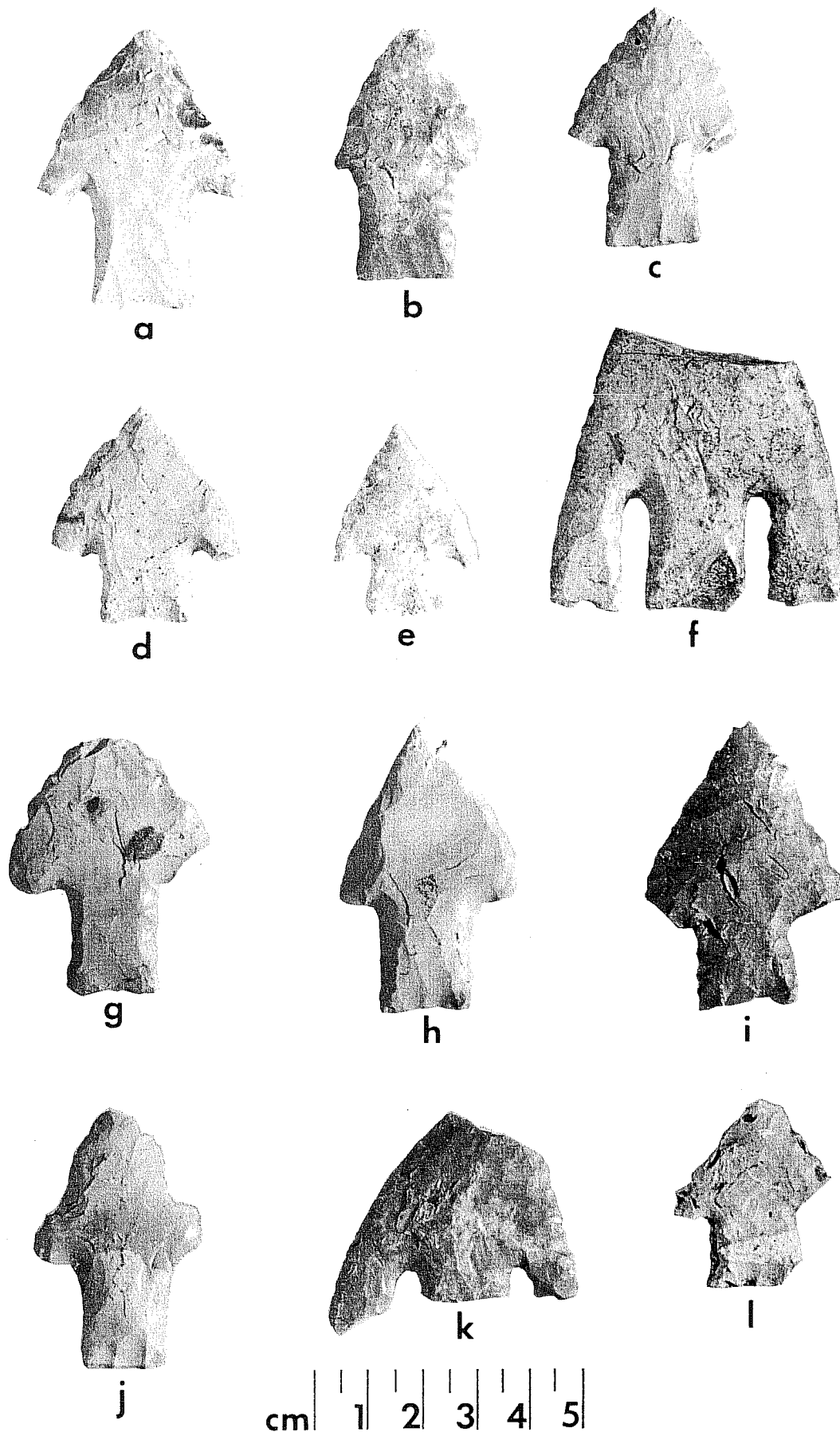


Figure 17. *Artifacts from 41 VT 17. Bell-like points from the W. W. Birmingham collection.*

Environment: Sandy loam; cultivated field over the hill from the creek.

Description: Materials are scattered in an open field, exposed by plowing and erosion, over an area approximately 50 m in diameter.

Materials recovered:

43 chert flakes and fragments	Birmingham and Schmiedlin collections:
1 core	17 projectile points and fragments
1 thin biface fragment	(<i>Bell</i> -like points; Fig. 17)
2 thick biface fragments	
1 broken quartzite pebble	

Remarks: This site (Category 3) lies above the reservoir area. We recommend no further work.

41 VT 20

Location: Top of hill overlooking Coletto Creek, .7 km upstream on the east bank.

Elevation: 175 feet

Environment: Sandy loam with medium grass cover; highest point in the immediate area.

Description: Most of the site is presently occupied by a farmhouse with flower beds, fences and out-buildings. Material has been observed in the past in the garden and eroding out of roads and other disturbances over an area 100 m in diameter.

Materials recovered:

No collection made	Birmingham collection:
	4 projectile points
	(2 <i>Gower</i> -like, <i>Bell</i> -like, lanceolate; Fig. 18,a-c)

Remarks: No further work is recommended at this Category 3 site.

41 VT 16

Location: .3 km downstream from mouth of Twelvemile Creek, on the east bank of Coletto Creek (Fig. 20,a).

Elevation: 110-150 feet

Environment: Stratified black loam over clay, with hackberry, anaqua, and thorny brush; bluff eroding into the creek (Fig. 20,b).

Description: Very deep site eroding out of bluff face to a depth of 6 m or more, and extending over 50 m along the bluff. In excavations

conducted by the Victoria Archeological Society in 1962, a 2.5 by 5 foot square was dug to a depth of 14 feet. Stratigraphy was as follows: two feet of dark midden soil at the top (this held much of the artifactual material); color changed at that point to light sandy clay with artifacts sparse but still present, and continuing at 14 feet. The cultural remains mostly Morhiss complex materials (Cecil Calhoun, personal communication). At the base of the site, artifacts (*Golondrina*, *Gower* points) dating to ca. 7000-5000 B.C. were found.

Materials recovered:

44 chert flakes and fragments
 4 cores
 1 thick biface
 1 thin biface
 1 *Guadalupe* tool (Fig. 18,j)
 1 quartzite hammerstone

Birmingham collection:
 1 bifacial *Clear Fork* tool (Fig. 18,i)
 1 antler tool (Fig. 18,h)
 3 thin bifaces (Fig. 18,d-f)
 1 thin biface fragment (Fig. 18,g)
 14 Archaic projectile points (Fig. 19)

Other collection:
Golondrina fragment (Fig. 19,b)
Gower projectile point (Fig. 19,c)

Remarks: This is a Category 2 site located at the uppermost end of the project area. A combination of vandalism and increased erosion will soon eliminate this extremely significant site. We recommend a major excavation program to recover as much information as possible; the site apparently extends back 9000 years in time, and could be the key to establishing a local chronological framework. Significant environmental information could also be recovered. This site will be nominated to the National Register of Historic Places and will be recommended as a State Archaeological landmark.

Figure 18. *Artifacts from 41 VT 16 and 41 VT 20.* a, *Gower* (heavily patinated), 41 VT 20; b, *Gower* (heavily patinated), 41 VT 20; c, *Bell* (?), 41 VT 20; d, thin biface, 41 VT 16; e, thin biface, 41 VT 16; f, thin biface, 41 VT 16; g, thin biface fragment, 41 VT 16; h, antler tool (flaker ?), 41 VT 16; i, bifacial *Clear Fork* tool, 41 VT 16; j, *Guadalupe* tool, 41 VT 16. Specimens a - i are in the W. W. Birmingham collection.



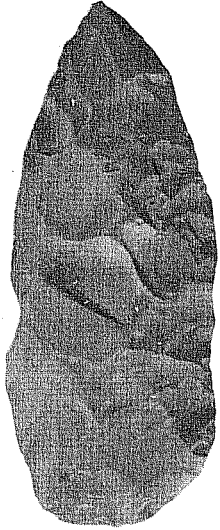
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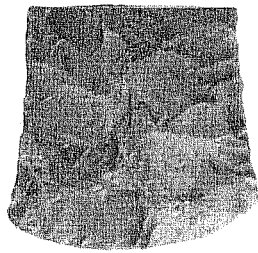
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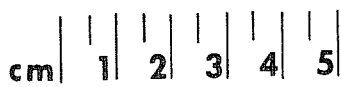
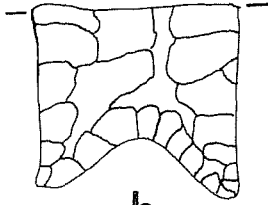


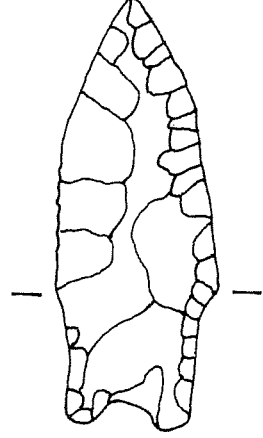
Figure 19. *Artifacts from 41 VT 16.* a, corner-notched point (dulled stem edges; patinated); b, *Golondrina* basal fragment; c, *Gower*; d, *Morhiss*; e, *Morhiss* (asphaltum on stem); f, *Morhiss*; g, contracting stem dart point; h, *Lange* (?); i, *Lange* (?) (asphaltum on stem); j, side-notched point; k, lanceolate biface (*Angostura* ?). Artifacts a, d - k are in the W. W. Birmingham collection.



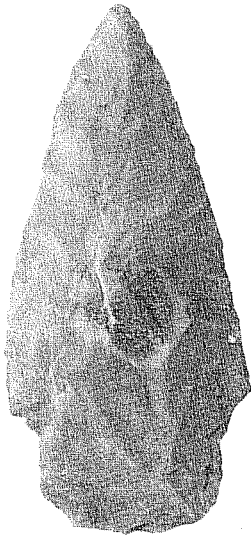
a



b



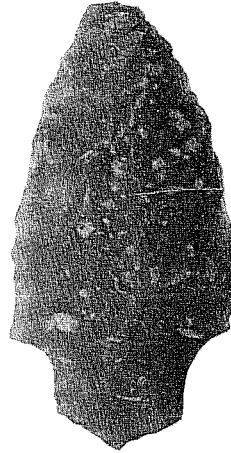
c



d



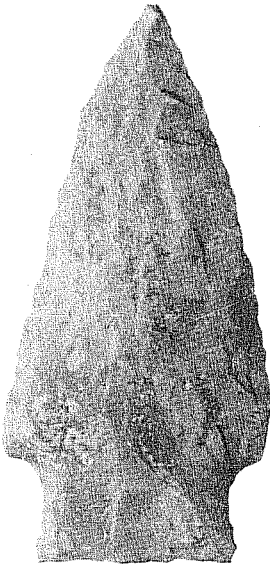
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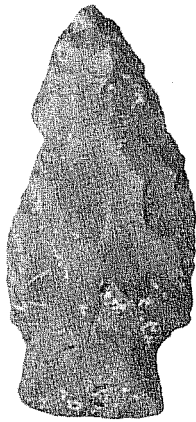
f



g



h



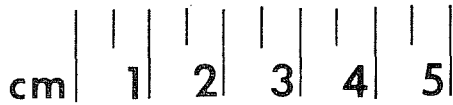
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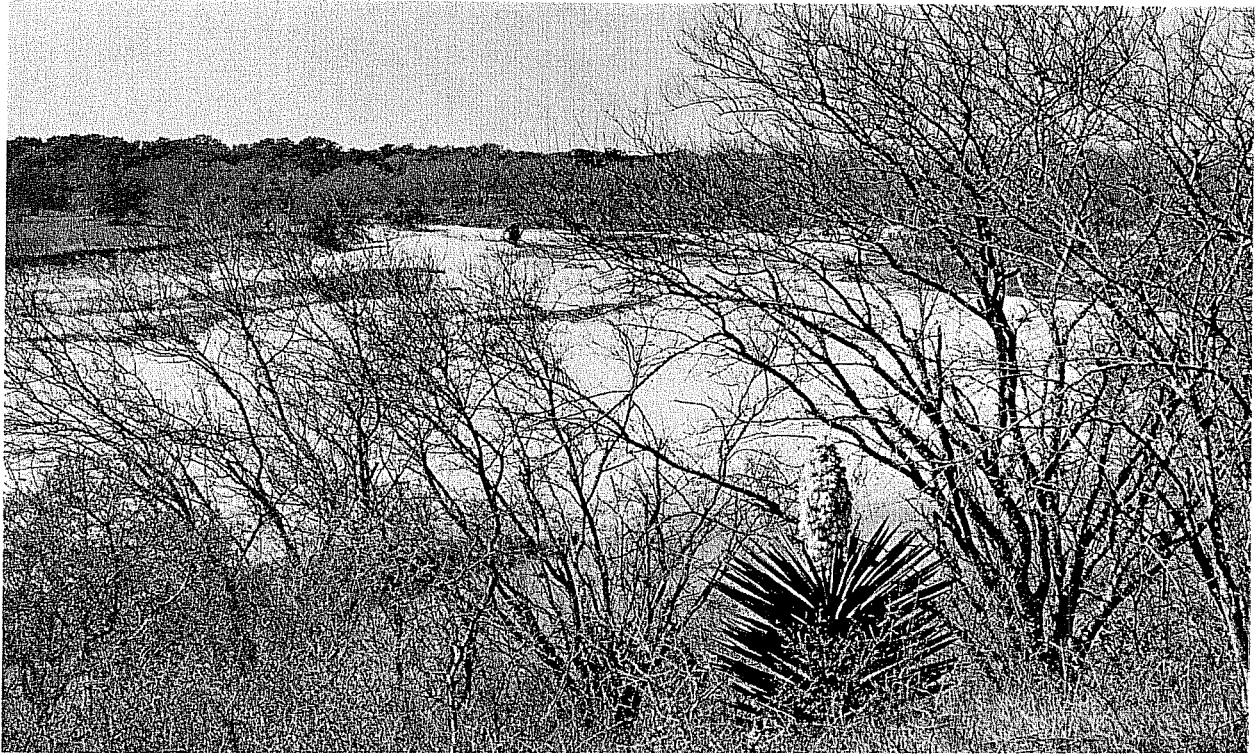


j



k





a



b

Figure 20. *Site 41 VT 16.* a, View from the site toward Coleta Creek; b, Eroding face of site (E. H. Schmiedlin at right).

CONCLUSIONS

The present report constitutes an assessment of archaeological and historical resources within the proposed Coletto Creek Project. As a result of our field work, an inventory of these previously unknown resources is now available and can be utilized during the continuing planning of this project. Although time has not been available for a comprehensive analysis of the survey data, we would like to provide in this section a series of brief observations which summarize our present concepts of the archaeology of the project area.

A survey of a proposed reservoir basin presents an excellent opportunity to examine the archaeological history of a stream drainage and its surroundings. However, it is obvious that the limitations imposed by staying within the boundaries of the project area can create an artificial picture of the settlement distribution in the region as a whole. In the case of Coletto Creek, local amateur archaeologists presently believe that there are not any appreciable numbers of occupation or special activity sites in the higher, upland areas away from the stream; this has yet to be confirmed by any intensive survey. Site locations on Coletto Creek and its tributaries compare closely to what is known of the lower Guadalupe River valley, as outlined by Calhoun in his description of the Morhiss complex (see above). Sites are predominantly on knolls and bluffs overlooking permanent streams, with occasional sites located on the major tributaries. As we have indicated previously, we have few data on which to base meaningful functional interpretations of most sites. Major and minor occupation sites, temporary campsites, chipping stations, and sites related to special, but as yet undetermined, activities have been recorded.

The fact that relatively few artifacts were recovered by the survey can be explained by the number and tenacity of the local collectors who, until very recently, freely walked the creek banks on weekends. If it were not for the careful record-keeping of amateur archaeologists like Birmingham, Schmiedlin, and a few others, there would be little evidence to study. With the aid of documented collections, however, it is possible to observe that the majority of the sites appear to be consistent with Campbell's and Calhoun's descriptions of the Archaic Morhiss complex. There are, however, occasional deep sites such as 41 VT 16 which contain materials from both the Archaic and the Paleo-Indian periods. There is also an interesting component present in the larger sites containing materials similar to those described by Shafer (1963:64) and Sorrow *et al* (1967:12-13), and tentatively termed Transitional or Pre-Archaic by Sollberger and Hester (1972:338-339). The occurrence of *Bell* and *Gower* projectile points with *Guadalupe* tools is indicative of this period (Hester and Kohnitz 1975: 22-23).

Another interesting observation that can be made from the survey evidence is the total absence of artifacts representing occupations in the Neo-American (Late Prehistoric) period, with the exception of a single sherd of *Rockport* ware on 41 GD 23. This has also been the observation of

local collectors. Why there was so little occupation on this particular drainage during this time period (approximately 1000 A.D. to historic contact) is a question which can only be answered in relation to what was happening in the entire area of the lower Guadalupe-San Antonio Rivers valley. A great deal more in the way of archaeological and historical research will have to be done before such comparisons are possible.

RECOMMENDATIONS

Project Impact on Cultural Resources

Whenever significant archaeological or historical cultural resources are endangered by proposed land modifications undertaken by (1) public agencies (or agencies conducting work licensed by or under permit from state or federal authorities), (2) on public lands, or (3) with the use of public monies, a number of legal statutes now exist to aid in the protection of these resources. These include, at the federal level, the National Environmental Policy Act of 1969, the Archaeological Conservation Act of 1966, the Historic Preservation Act of 1966, and Executive Order 11593; within the State of Texas, such important resources are protected under the provisions of the Antiquities Code of Texas, as administered by the Texas Antiquities Committee (Office of the State Archeologist). All of these laws strive to insure that irreplaceable archaeological and historical resources are not damaged or destroyed prior to proper study.

The focus of the present report has been on a portion of the Coleta Creek drainage (Victoria and Goliad Counties, Texas) within which the Guadalupe-Blanco River Authority and the Central Power and Light Company intend to construct a dam, reservoir, and associated power plant. We believe that the Coleta Creek drainage system encompasses a culturally significant area of southern Texas, lying near the confluence of two major rivers and within the transition between two biotic provinces (cf. Blair 1950). Almost no previous scientific archaeological work has been done in Victoria and Goliad Counties, and in particular, along Coleta Creek. We thus have a lacunae of information on the cultural history, lifeways, intercultural contacts, and other facets of aboriginal existence in this region. For these reasons alone, the cultural resources of Coleta Creek and its tributaries are of vital significance in understanding human activities during the prehistoric and historic periods in this section of the south Texas coastal plain. When the proposed Coleta Creek Project is complete, a large reservoir will inundate, and therefore eliminate, many of these resources. In the construction phases, we have reason to believe that several sites, some of them of possible significance, will be destroyed during the excavation of borrow fill (see Table 1). When the proposed reservoir is complete, it is our judgement that a sizable percentage of the identified sites will either be heavily damaged or destroyed by wave action of the reservoir, since many of these sites are located at or near the proposed permanent pool level (sites in similar environments on the fringes of recently created

lakes in eastern Texas have suffered such fates; Harry J. Shafer, personal communication). Those sites not inundated or threatened by wave action will be exposed, once the reservoir is complete, to increasing vandalism and relic-collecting as a result of intensified public access.

A total of 49 archaeological and historical sites was recorded during this survey. Of these, 28 (57%) are considered to be within our Category 1, slated for destruction either through inundation or construction activities, and to increased damage through erosive wave action. In Table 1, these sites have been listed. As can be seen in that table, several of these sites do not warrant any further attention. However, there are a number of sites of significance (or possible significance) and we believe further research is warranted at these. The general recommendations for this research are found in Table 1, and additional comments are provided later in this section.

We have tentatively included 41 VT 16 in our Category 1 status, because of what we fear might be increased erosion during periods of high water following reservoir completion. In order to clarify this situation, we suggest that the project engineers determine the backwater curve for the locality and assess the possible erosive effects, if any. Our concern for 41 VT 16 lies in the fact that it is potentially the most significant site in the reservoir district.

Many of the sites in Category 1 will be inundated by the permanent reservoir pool. In the past, it was often thought that inundation led to "preservation" of sites (i.e., vandals could not get to them, or they became covered with lakebed silts and could be, theoretically, excavated by archaeologists of future generations once the lake lifespan had concluded). However, archaeologists are reassessing this notion, and a recent study by Garrison (1975) has pointed out the destructive effects of reservoir impoundment on inundated archaeological sites. He has found that sites submerged at various depths in reservoir pools are subject to damage or destruction through the actions of not only surface wave action, but underwater currents and water movements as well. While studies like Garrison's are by no means complete, it is our assumption that inundation of sites will lead to damage in one form or another.

There are 16 sites in our Category 2. These sites will not be directly affected by construction or by reservoir impoundment. However, once the reservoir is opened to boating and other recreational uses, these sites will be subject to increased public access. We fear they will suffer from relic-collecting, uncontrolled digging for relics, and other forms of vandalism. Such public access is particularly difficult to regulate. In the area of the Amistad Reservoir in southwestern Texas, numerous sites not previously accessible to the public are being ravaged by relic-collectors as these sites are now easily reached by boat. Because of this indirect threat, brought about as a direct result of reservoir construction, to a number of significant resources, we have recommended either testing or intensive survey at several Category 2 sites in order to better assess their archaeological potential.

Category 3 sites are also listed in Table 1. These include five sites found incidental to the field work, and lie outside the areas of direct or indirect impact discussed above. No further work is recommended at these sites.

In Table 1, all sites are listed as to category, and recommendations are provided for further work. At many sites, "testing" is recommended. A testing program is designed to provide additional information on the archaeological content and potential of a site. Such data thus aids in determining whether or not a site is of the significance to warrant a full-scale program of investigation. Testing is essential at many of these sites, since many of them are buried under a heavy mantle of silt or sand in certain sections of the proposed reservoir area. At some sites recommended for testing, one or two excavation units (2 x 2 meters in size) will be sufficient to assess the nature of the site. At others, where the known deposits are quite thick (such as 41 VT 16), we believe that a more extensive testing program would be necessary.

"Intensive survey" is the second of the recommended avenues for further investigation. This would involve a return to the site for a controlled surface collection, mapping of the site, and, in some cases, the excavation of one or two small excavation units (1 x 1 meter squares).

We believe that such a program will lead to a better evaluation of those sites recommended for this type of follow-up research.

Taking into consideration the recommendations discussed above, we strongly urge the Guadalupe-Blanco River Authority and the Central Power and Light Company to implement these further investigations. The initial assessment which led to the identification of 49 archaeological sites, can be thought of as "Phase I" in an overall program of cultural resources evaluation in the project area. The testing and intensive survey recommended here would constitute "Phase II". While we would like to see our recommendations carried out at sites of both Categories 1 and 2, we realize that those sites in Category 1 are most likely to be damaged or destroyed via the construction of the project. We thus recommend that 15 sites in Category 1 be investigated in Phase II (see Table 1). Final mitigation involving significant resources, if any, would be incorporated in a subsequent Phase III.

In closing, we would like to express our appreciation to the Guadalupe-Blanco River Authority and the Central Power and Light Company for their continuing involvement following our initial evaluation process. We value their cooperation in these endeavors. One example of this cooperation came after the initial survey had concluded. The GBRA contracted with the Center to examine the proposed route of a pipeline between a pumping station on the Guadalupe River to a point on Coleta Creek. This survey was conducted by the senior author, and several archaeological sites were recorded. The original pipeline design proposed to cut through a major site (41 VT 15) near the Guadalupe, but after consultation with the GBRA and its engineers, it was decided that the pipeline route could be shifted in order to avoid damage to this significant resource.

TABLE 1.

ARCHAEOLOGICAL SITES, COLETO CREEK PROJECT

ASSESSMENT OF PROJECT IMPACT AND RECOMMENDATIONS FOR FURTHER WORK

<u>Site</u>	<u>Category</u>	<u>Recommendation</u>	<u>Site</u>	<u>Category</u>	<u>Recommendation</u>
*41 GD 23	(1)	T	41 VT 39	(1)	-
*41 GD 33	(1)	T	41 VT 40	(1)	-
41 GD 20	(1)	S	41 GD 31	(1)	T
41 GD 13	(1)	S & T	41 GD 30	(1)	T
41 GD 14	(1)	S	41 GD 29	(2)	-
41 GD 22	(1)	S	41 GD 28	(2)	S
41 GD 34	(2)	S	41 VT 51	(1)	-
41 GD 35	(2)	S	41 VT 50	(1)	T
41 GD 21	(1)	T	41 VT 49	(1)	-
41 VT 42	(3)	-	41 VT 57	(3)	-
41 VT 41	(3)	-	41 VT 58	(1)	-
*41 GD 24	(1)	-	41 GD 32	(2)	-
*41 VT 52	(1)	T	41 VT 43	(2)	T
*41 VT 54	(1)	T	41 VT 44	(2)	T
41 VT 55	(1)	T	41 VT 45	(2)	S
*41 VT 56	(1)	S	41 VT 46	(2)	T
41 VT 53	(1)	-	41 VT 47	(2)	T
41 GD 15	(1)	-	41 VT 18	(2)	T
41 GD 27	(1)	-	41 VT 48	(2)	-
41 GD 18	(1)	T	41 VT 19	(2)	S & T
41 GD 17	(2)	-	41 VT 21	(2)	-
41 GD 16	(1)	T	41 VT 17	(3)	-
41 GD 25	(1)	-	41 VT 20	(3)	-
41 GD 26	(1)	-	41 VT 16	(2)	T
41 GD 19	(1)	-			

KEY

Site Categories

Category 1: to be destroyed or damaged by inundation, construction, wave action, etc.

Category 2: secondary effects

Category 3: outside the project area

*: Sites likely to be destroyed by dam construction (borrow pits).

Recommended Action

T: testing

S: intensive survey

-: no further work recommended

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The authors wish to express their gratitude to a number of people who have made this survey possible. The Guadalupe-Blanco River Authority (John Specht, General Manager) provided funding for the survey. David Welsch and Fred Blumberg of the Guadalupe-Blanco River Authority have been most helpful in providing maps and information and in contacting landowners for permission to survey. Roy Rogers of the Victoria office of the USDA Soil Conservation Service provided information on soils in the area. Local amateur archaeologists W. W. Birmingham, E. H. Schmiedlin and Cecil Calhoun were most helpful in providing information on local sites and on the archaeology of the region, and Birmingham and Schmiedlin put in many hours guiding the survey team to known sites.

Local residents who were particularly interested in the project and kind enough to allow survey teams onto their property include Mr. and Mrs. A. Walker Boyd, Mr. Ed Berger, Mr. Leslie Berger, Mr. and Mrs. Albert Billo, Mr. and Mrs. Hanley, Mr. Nelson Pantel, Mr. F. F. Post, Jr., Mr. Louis Willeke and Mr. and Mrs. Mike Wright.

We are also grateful to Dr. T. N. Campbell for allowing us to print his paper on the Morhiss site. Historical research was tremendously aided by Katherine McDowell of the Daughters of the Republic of Texas Library in San Antonio, Virginia Taylor of the General Land Office in Austin, Kemper Williams of the Sons of the Republic Archives in Goliad, Hobart Huson of Refugio, and Roland Beard and Mrs. Hugh Lowery of Victoria.

M. F. Chadderdon, Nancy Clayton, Leo C. Fletcher and Shirley Van der Veer, all employees of the UTSA Center for Archaeological Research, helped with the field work during various portions of the survey.

Last, but certainly not least, no archaeological survey in south Texas should neglect to acknowledge the ubiquitous Southern Pocket Gopher, *Geomys personatus*, without whose help numerous buried sites would probably never be located.

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Appendix

ARCHAEOLOGICAL INVESTIGATIONS AT THE MORHISS SITE,

VICTORIA COUNTY, TEXAS, 1932-1940*

T. N. Campbell

The Morhiss site, which is on the lower Guadalupe River some six to seven miles south of Victoria, Texas, is one of many archaeological sites that were excavated by American universities in the 1930's with funds supplied by a federal agency known as the WPA (Works Progress Administration). The funds were appropriated by the U. S. Congress primarily to provide jobs for unemployed citizens during an economic depression. Since trained archaeologists were in short supply and the agency was terminated rather suddenly, the results of excavation at some sites were not published. The Morhiss site, excavated by The University of Texas at Austin, was one of these. The following statements, which are mainly descriptive and impressionistic, are based on a study of the various field reports and on a cursory examination of the artifacts that have been sorted according to class and are now stored in trays and boxes at the Balcones Research Center in Austin.

The Morhiss site is undoubtedly one of the key sites in the Victoria area, or will prove to be when the results of excavation have been published. It represents a long human occupation, mainly during the Archaic stage. Some indication of Paleo-Indian occupation appears in its lowest levels, and limited evidence of a late prehistoric or Neo-American occupation appears in its uppermost levels. Few early historic European artifacts were found. Before excavation it was commonly thought that the site was a mound that had been intentionally constructed by man and was of significance to the diffusion of certain complex cultural traits from Mesoamerica into the lower Mississippi Valley. This idea was not supported by evidence acquired through excavation. The Morhiss site represents an ordinary midden accumulation on a river-terrace remnant.

The site is on the eastern bank of the Guadalupe River, a stream which flows southeastward across the Gulf Coastal Plain. From the Morhiss site to the northernmost part of San Antonio Bay the distance is about 20 miles, but to the strand line of the Gulf of Mexico on Matagorda Island the distance is approximately 40 miles. Excavation indicated that the occupational debris covered an oval area with dimensions of 300 and 475 feet. Prior to its removal the site surface rose to a height of some 20 feet above the surrounding lowland, which is subject to flooding

*The statements presented here are derived from the transcribed magnetic tape record of a talk given by request at the annual meeting of the Texas Archeological Society, Victoria, Texas, November 3, 1962. Although stylistically edited, the statements remain essentially the same as those recorded on tape.

when the river overflows its banks. However, local residents reported that to their knowledge the site had never been completely submerged by flood waters.

Morhiss first came to the attention of University of Texas archaeologists in 1930. Two test excavations were made, the first in January, 1932, by A. T. Jackson and two assistants, who dug two closely parallel trenches in the central portion of the site. Excavation records indicate that only a few artifacts were recovered, but Jackson was convinced that the site was a midden and not an artificial mound. Later, in June of the same year, A. M. Woolsey and a small group of students spent three weeks at the Morhiss site. They dug a trench 4 feet wide and 160 feet long across one end of the site. This trench cut through 11 feet of cultural deposit in some places. Several burials were encountered and numerous artifacts were recovered. Again the field notes record the same conclusion: this site was definitely not an artificial mound.

Six years later came the final excavation, a complete effort that removed all of the human occupational debris from the knoll-like terrace remnant. This was done during the period October, 1938-January, 1940, under the direction of W. A. Duffen, and it involved WPA-paid field crews whose number at times ranged from 10 to 40 or more. The grid-system records show that over 5,000 five-foot squares were excavated to varying depths.

The stratigraphic records indicate two major zones with a thin transitional zone separating them. The top zone is the midden itself, a dark soil rich in humus and carbon that ranges in thickness from a few inches on the site periphery to 11 or 12 feet near its center. Most of the artifacts and a large number of human burials were found in this zone. The transitional zone below consists of eroded terrace debris with a maximum thickness of one foot. This represents the terrace surface upon which the earliest inhabitants lived. The eroded terrace zone yielded bones of modern as well as extinct animal forms and a few artifacts. Below this is the undisturbed terrace deposit, a zone that yielded bones of extinct animals but no artifacts or any other evidence of man.

The transitional zone contained bones of two kinds of mammoth, several species of horse, camel, sloth, bison, deer, alligator, and wolf. These bones were found scattered and never in anatomical order. Some show the effects of slight rolling, which suggests that they were transported by water from some nearby source. The projectile points found in the transitional zone include Archaic as well as Paleo-Indian types. The most common type of Paleo-Indian points is *Angostura*. Some points are recognizable as *Plainview* variants, and one specimen is a *Meserve* point. It seems probable that these Paleo-Indian points came from the same nearby source as the bones of extinct animals.

The midden deposit and its contents will be difficult to interpret because of so much disturbance by man and by burrowing animals. At

least 250 burials were dug into this deposit from various levels, as well as a number of cache pits. Some 30 to 40 hearths were found still in place, and scattered hearthstones throughout the midden constituted evidence of countless fires and the human trampling that goes on around them. The midden deposit was also riddled with pocket gopher burrows, both filled and unfilled, and in the upper part of the midden there were numerous small pits representing shallow excavations made by artifact collectors.

As has been noted, some 250 burials had been made in the midden. Duffen's excavations revealed 219 burials still in place. Most of these were single burials, but sometimes two or more individuals were included in the same burial pit. A few burials were represented by isolated skulls. Several types of burial are represented. About 55% were flexed burials whose skeletons ranged from semiflexed to fully flexed. About 30% were bundle burials, and some 6% were extended burials. The rest are not classified in the field records. No analysis of burial depths has been made, but random checking suggests that the extended burials came late in the history of this site. Directional orientation of the articulated skeletons was haphazard, although a southerly direction seems to have been favored. Artifacts found in burials were mainly ornaments, principally shell beads, with *Marginella* dominant. A few ornaments of conch shell were also included.

A preliminary study of the skeletal material by T. W. McKern revealed that 63 measurable individuals are represented in the Morhiss series. Of these, 27 are male and 36 are female. The average age at death of adult males was 43.8 years; the average age of adult females was 37.5 years. McKern made a comparison of Morhiss males with males from the Caplen site near Galveston Bay and also with males from several sites of the Edwards Plateau Archaic. He found that the Morhiss males resembled the Caplen males. This is of some interest because the Archaic artifacts from the Morhiss site indicate a technological orientation similar to that of the Edwards Plateau Archaic.

Over 40 recognizable site features were recorded by Duffen, and most of these were either hearths or remnants of hearths. Some hearth building units were rock, but many were merely hand-sized lumps of clay. Most hearths involved the use of both rock and clay lumps, which may reflect the scarcity of stone in the vicinity. A few caches were also recorded -- unworked flint (stream-bed cobbles), lumps of asphaltum, and small clusters of bone and stone artifacts.

Most of the artifacts from the midden are clearly Archaic forms. The most common types of dart points are *Morhiss*, *Lerma*, and *Tortugas*. Fairly common, but not so common as the three just named, are *Refugio*, *Kinney*, *Pandora*, *Nolan*, *Travis*, and *Darl*. Among those that are relatively rare are *Abasolo*, *Catan*, *Matamoros*, *Kent*, *Palmillas*, *Marcos*, *Lange*, *Uvalde*, *Bulverde*, *Pedernales*, and *Enson*. It is evident that the Morhiss site shares many dart point styles with other Archaic sites of central and southern Texas.

Knife forms include the expectable ranges of ovate, trianguloid, and lanceolate forms. Several corner-tang knives were recovered. End scrapers and side scrapers occur in the usual forms, but relatively few of these are well made. Drills with prepared bases are represented, mainly by T-shaped and paddle-shaped forms, and some gravers are included in the laboratory collection. Gouges are particularly numerous and occur in a variety of forms. Many of these are of *Clear Fork* type, both unifacially and bifacially chipped. Others are elongated, pick-like specimens with the cutting bit formed by a single transverse fracture, a form sometimes referred to as the *Guadalupe* gouge (or adz) because of its common occurrence in Archaic sites along the valley of the Guadalupe River. Heavy bifaces and hammerstones are also numerous. Manos and metates are represented, and there are a few stone pestles. Other forms of stone artifacts are rare, although some, such as bannerstones and plummets, are of special interest because they suggest connections with Archaic cultures of the eastern United States.

Bone and antler artifacts occur in some quantity, particularly flaking tools, awls (some of these bear incised designs), and beads. Most bone beads are tubular, but one burial yielded snake vertebra beads.

The shell tools and ornaments from the Morhiss site link it with the coastal Archaic culture known as Aransas. Large, heavy conch shells show extensive battering and presumably were used as hammers. Conch columella gouges and triangular or quadrangular sections of conch whorl with beveled edges, both of which are diagnostic forms of the Aransas Archaic, occur in considerable numbers. There are also tubular beads and circular gorgets of conch shell, and some of the latter bear designs formed by rows of shallowly drilled pits. Some marine bivalve shells were marginally chipped for use as scrapers or knives.

Materials from the Morhiss midden assignable to the late prehistoric Neo-American stage are not abundant. *Fresno*, *Perdiz*, and *Scallorn* arrowpoints occur in small numbers. Potsherds were found, but these have not been examined. One receives the impression that Neo-American occupation of the Morhiss site was both light and sporadic.

Of some interest is evidence of the use of asphaltum as an adhesive in hafting artifacts. Some dart points bear black stains and bits of asphaltum on their stems, and a few *Clear Fork* gouges show similar discolorations at their proximal or pointed ends. From this it may be inferred that the gouges were set into some sort of socketed or cleft handle.

In conclusion, it may be said that intensive excavation at the Morhiss site has yielded abundant evidence of a long occupation, mainly during the Archaic stage. Paleo-Indian groups were obviously the earliest inhabitants, but excavation failed to reveal their artifacts in unquestionable primary positions. The occupation during the Archaic stage was long enough or frequent enough for the accumulation of some 12 feet of midden deposit, and the range of dart point styles suggests that the

entire Archaic sequence may be represented. The Archaic populations at the Morhiss site seem to have had contacts with Archaic groups farther inland, both in central and southern Texas, and contacts with nearby coastal Archaic groups also seems to be indicated. It is difficult to interpret the relationships with the coastal Archaic groups. Face-to-face trade may have been involved, or the Morhiss site may at times have been occupied exclusively by coastal Archaic groups. The abundance of cutting tools suitable for manufacture of dugout canoes suggests that the coastal peoples may have been interested in the large trees that grew along the lower Guadalupe River. Since Neo-American occupation of the Morhiss site was so limited, it is doubtful if the artifact sample recovered will throw much light on the Late Prehistoric period of the Lower Guadalupe Valley.