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## An Archaeological and Historical Assessment of the Tule Lake Tract, Nueces County, Texas

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# An Archaeological and Historical Assessment of the Tule Lake Tract, Nueces County, Texas

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**AN ARCHAEOLOGICAL AND HISTORICAL ASSESSMENT OF  
THE TULE LAKE TRACT, NUECES COUNTY, TEXAS**

Lynn Highley, Andrea Gerstle,  
and Thomas R. Hester

Center for Archaeological Research  
The University of Texas at San Antonio  
Archaeological Survey Report, No. 27

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## SECTION I

### HISTORY OF THE TULE LAKE AREA

Lynn Highley

The area comprising Nueces County was inhabited at the time of European contact by Karankawa and Coahuiltecan Indian groups. In 1519 the area was claimed for Spain by Alonso Alvarez de Piñeda and named Corpus Christi. An early settlement, Villa de Vedoya, proved futile and plans for a mission, Nuestra Señora del Soto, were abandoned (Webb 1952). Prior to the Texas Revolution, the area was occupied by ranchers who received land grants from the King of Spain or who were deeded lands by the State of Tamaulipas between 1829 and 1836 (Webb 1952; Nueces County Historical Society 1972).

In 1810 Enrique Villareal received the Rincon del Oso grant from Spain which included the area later known as Corpus Christi. The papers were lost in a flood in 1812; in 1831 Villareal received title to the area from the Mexican government (Nueces County Historical Society 1972). On July 16, 1842 Henry L. Kinney (founder of Corpus Christi) purchased ten leagues of land between the Nueces River and Oso Creek from Enrique Villareal. Tule Lake is included in this area. The deed records in the Nueces County Courthouse include a map of the land purchased by Kinney. The map also shows the Edward Ohler Rancho located east of Tule Lake. A search of the deed records indicated that Ohler purchased the land from Kinney on October 8, 1849 (County Clerk's Office, Book D:216).

The Spanish name for Tule Lake is Charco de Tule (Lake of the Grass). It is a salt lake but old-timers claim it was once a freshwater lake (Dan Kilgore, personal communication). Located west of the city of Corpus Christi, it is bounded by Upriver Road. Also known as Shell Road, Upriver Road was

the original road between Corpus Christi and San Antonio (Dan Kilgore and Atlee Cunningham, personal communication).

In 1887 S. H. Page and Jim Sedwick donated land just west of Tule Lake for the first Tuloso School (Nueces County Historical Society 1972). The school is located on the 1896 "Map of the Vicinity of Corpus Christi, Texas." Between 1910 and 1912 Tule Lake was seriously considered as a site for a pumping station, treatment plant, and reservoir (Atlee Cunningham, personal communication). During the 1919 hurricane approximately 200 bodies were washed into the lake from Nueces Bay (Nueces County Historical Society 1972). In 1955 construction of a new dock area for the Port of Corpus Christi was begun. The channel extended to what is now the Tule Lake Turning Basin (*ibid.*).

A search of historical references and contacts with local historians revealed little else of the history of Tule Lake. A 1945 map (Blucher's "Directory Map of Corpus Christi and Road Map of Nueces County, Texas") shows Tule Lake but terms it "Salt Lake." The 1976 National Register of Historic Places in Texas lists the King Ranch as the only National Register property in Nueces County. The 1974 Texas Family Land Heritage Registry lists only the Gallagher Farm which is located two miles southwest of Clarkwood.

#### ACKNOWLEDGEMENTS

Local historians Dan Kilgore and Dr. Richard Moore of Del Mar Junior College provided historical information on the area. Mr. Atlee Cunningham's family has lived in the Tule Lake area for several generations and his personal insights were appreciated. Ed Mokry, Jr. helped with research at the Nueces County Courthouse and the Corpus Christi Public Library.

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SECTION II  
THE ARCHAEOLOGY OF THE TULE LAKE TRACT  
Andrea Gerstle and Thomas R. Hester

INTRODUCTION

On March 2 and 3, 1977, an archaeological survey of the area surrounding Tule Lake, in Corpus Christi, Texas, was conducted by the Center for Archaeological Research, The University of Texas at San Antonio. The reconnaissance was authorized by the U. S. Army Corps of Engineers, Galveston District, prior to disposal of fill resulting from harbor dredging activities. Mr. William Sky Eagle of the Corpus Christi office of the Corps provided us with detailed locational information, and Mr. David Espy, a Corpus Christi resident and avocational archaeologist, informed us of local activities and discoveries, as well as opening his own collections of artifacts from the area.

Dr. Thomas Hester, Center for Archaeological Research, was Principal Investigator. Field work was supervised by Stephen Black, with the aid of Andrea Gerstle. Laboratory analysis of artifacts was performed by Andrea Gerstle.

LOCATION AND ENVIRONMENT

The Tule Lake Tract is located in Nueces County, south of the Corpus Christi Ship Channel between the Tule Lake Turning Basin and the Viola Turning Basin. The area under consideration is bounded to the north and east by the Missouri-Pacific Railroad tracks, on the west by Suntide Road, and by Upriver Road on the south (Fig. 1). This tract varies in elevation from sea level to 15 m (50'), the latter being reached at two points at the west end of the tract. It lies within the erosional and depositional plane of the Nueces River valley.

Figure 1. *Location of Archaeological Sites in the Tule Lake Tract Area.* The location and approximate horizontal extent of sites 41 NU 157 and 41 NU 158 are shown. Drawn from the USGS Annville and Corpus Christi 7.5' quadrangles (scale 1:24,000).

This page has been redacted because it contains restricted information.

The lake itself is at low water level and the large exposed expanses of mud flat are barren of both vegetation and cultural material. Approximately one-third of the entire tract is above the high water mark and has full vegetative growth. Along the north boundary at the west end of the tract is a gravel bar with scrubby grasses but little bushy growth. This is possibly an artificial levee. The southwest and southeast corners and segments along the southern boundary are at a higher elevation (7.5 m to 15 m; 25' to 50') and a ridge extending to the lake from the southeast corner is between 4.5 m and 6 m (15' to 20') high. These higher areas were most intensively surveyed (Fig. 1).

The general soil types for the area include noncalcerous and calcerous, cracking clayey and calcerous loamy soils and strongly acid clayey and loamy soils (General Land Office of Texas 1975: Plate 5B). All are bottom land soils.

Terrestrial biologic resources include grasses and scrub vegetation and cactus. Local fauna are rabbit, rodents, raccoon, muskrat, waterfowl, and upland fowl. Aquatic resources are limited as to species diversity, but include *Rangia*, juvenile shrimp, and blue crabs (*ibid.*: Plate 6B).

#### ARCHAEOLOGICAL BACKGROUND

Summaries of the archaeology of the southern Texas coast have been published by Campbell (1960), Briggs (1971), Scurlock, Lynn, and Ray (1974), Corbin (1974), and Hester (1976). Major chronological divisions of the regional prehistory include:

*The Paleo-Indian period:* End of the Pleistocene and beginning of the Holocene; ca. 9200-6000 B.C. Represented in the Nueces County area by the occasional discovery of distinctive fluted and lanceolate points (cf.



Hester 1970; Stanton and Hester 1968). In the Oso Creek area, several localities with elephant remains (mammoth, mastodon) have been documented (W. Armstrong Price, personal communication).

*The Archaic period:* Probably lasted from ca. 6000 B.C. to A.D. 1200.

Internal divisions within the Archaic are not well known. The Aransas Phase, dating from ca. 2000-3000 B.C. to A.D. 1200 (Corbin 1974) is the only clearly defined Archaic cultural unit in the area.

*The Late Prehistoric period:* Begins after A.D. 1200 and lasts until historic contact. Represented in the area by the Rockport phase (see Corbin 1974), with diagnostic arrow points and a sandy-paste ceramic tradition.

*The Historic period:* Represented in aboriginal sites by the appearance of European materials, such as glass trade beads and arrow points made of bottle glass. There is also archaeological evidence in the Corpus Christi area of early Spanish, Mexican, and Anglo-American settlement.

The Nueces Bay area, in the vicinity of Tule Lake, is not well known. Little in the way of archaeological reconnaissance has been done by either professional or avocational archaeologists. Site documentation, survey work, and limited excavation has been done in the general vicinity by Martin and Potter (n.d.), Corbin (1963), Story (1968), Hester (1972, 1975), and Dibble (1972).

In 1974, an important archaeological site (41 NU 60) was found immediately adjacent to the western border of the Tule Lake Tract. This site was discovered by workers digging a trench for a new pipeline at the Suntide Refinery. About five feet below the surface, the workmen exposed several human skeletons. This discovery was investigated by personnel of the Corpus Christi Museum, and by James Warren, Dave Espy, Rex Wayland, Sam Fitzpatrick, and other members

of the Coastal Bend Archeological Society. They describe the site as being buried under modern fill, and containing multiple human burials, along with occupational debris in the form of animal bone refuse, charcoal, shell, and burned clay. Because of the interest and concern of the Coastal Bend Archeological Society, the management of the Suntide Refinery agreed to forbid any unauthorized excavation in the site area and to halt any further construction in the site vicinity (Dave Espy, personal communication). Notes on 41 NU 60 are on file at the Texas Archeological Research Laboratory (The University of Texas at Austin) and the Center for Archaeological Research.

## FIELD INVESTIGATIONS

### Methods

Reconnaissance activities were carried out over a two-day period. Those high elevations that appeared most likely to reveal evidence of prehistoric and/or historic occupation were surveyed first, with some forays onto the exposed lake bottom where the sediments were firm enough to walk on. Whenever a flake or other artifact was found, an immediate intensive survey of the surrounding area was carried out to determine if a site was present, and if so, the nature and extent of the site. Each site discovered was fully documented and the exposed artifacts collected for laboratory analysis. In one case, an *in situ* deposit of buried material was located in a cut bank. A one meter square test pit was excavated in 15 cm levels and passed through a 1/4-inch mesh screen. The material recovered from the screen was bagged and labeled by level.

### Archaeological Sites

Two sites were located during the survey; one at either end of the tract

(Fig. 1). They differ according to content and condition and are discussed individually below.

#### 41 NU 157

Site 41 NU 157, a buried *Rangia cuneata* shell midden, is located on a knoll overlooking the Nueces River to the north (Fig. 1). It is bisected by the boundary fence of a recently constructed refinery facility which was built on the north side of the knoll. Construction activities included leveling of the building site. In the process, part of the knoll (and site) was cut and cleared, leaving a 3 to 4 m sloping bank, along the top of which the boundary chain link fence was erected. Exactly along this fence line, a high concentration of midden material was observed washing out onto the slope. To the south of the fence, the midden remains were buried by 10 to 15 cm of overburden, with only scattered shell visible on the surface. Just how much of the site was removed during construction is undetermined; the remaining portion measures approximately 50 m along the fence (east to west) and 15 to 20 m from the fence south to the top of the knoll. Lumps of burned clay and burned bone fragments were also observed on the cut bank surface.

Artifacts collected from the eroding cut include flakes, a chert scraper, and several pottery sherds. More are probably exposed on the refinery property, which was not a part of the survey area. The shell layer at the cut is 15 to 20 cm below the present ground surface and is at least 60 cm thick. The fence prevented examination of the profile along the cut.

A test pit was placed 3.5 m south of the fence to determine the extent of the site and the nature of the midden contents. Apparently the midden begins to thin at that distance from the cut bank; the density of shell on

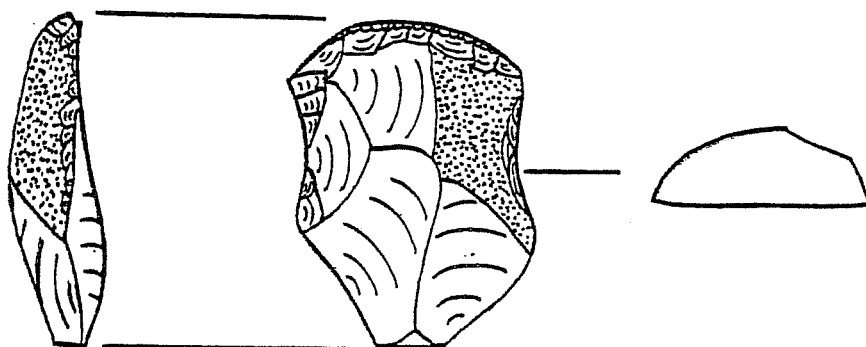


Figure 2. *Artifact from 41 NU 157. End and side scraper (left to right: longitudinal view, dorsal view, and transverse cross section). Stippling represents cortex. Illustrated actual size.*

the surface and in the midden layer itself is much lower. The midden extends to a depth of at least 65 cm below present ground surface. The content of the midden material recovered from the test pit consisted exclusively of shell, primarily *Rangia cuneata*, with small quantities of oyster shell and snail (*Rabdotus* sp. and *Polygyra texasiana*). None of these exhibit evidence of modification and no artifacts were recovered from the test pit.

The soil above and in the midden is a dark brown loamy clay with light sand inclusions. The midden soil is slightly darker gray than the top soil and contains occasional flecks of charcoal.

#### Material Culture

*Chipped Stone.* All of the chipped stone was recovered from the erosion surface. The most distinctive of these is a chert end and side scraper (Fig. 2). It is made on a secondary flake exhibiting water-worn cortex. Retouch is unifacial and limited to the distal end, extending halfway up the lateral edges. The distal edge has an angle of 70° to 90° and forms a smoothly convex edge. The lateral edges are symmetrically concave, with angles of 45° to 60°.

Use wear is evident on all retouched edges. Use as a scraper is indicated by unifacial step-flaking. It is heavy on the concave lateral edges and so extreme on the distal edge that undercutting is evident. The scraper was apparently worn out and not resharpened.

Four flakes were also recovered. The material ranges from a dark pink to yellow chert. Only one flake is complete; the other three include a proximal fragment, a flake midsection, and a distal fragment. Two of these likely represent thinning flakes; both are fragmentary. Two are final trimming flakes, but not resharpening flakes. The platforms on these are prepared by moderate

crushing. Average width of the thinning flakes is 13.5 mm and average thickness is 2 mm. The final trimming flakes average 5 mm wide and 1 mm thick.

The presence of these flakes indicates final tool manufacturing activities. Except for the scraper, no cortex flakes (or cores) were recovered. The characteristics of this admittedly small assemblage suggest the importation of nearly finished tools made of river cobbles. Final thinning and trimming were carried out at the site.

*Ceramics.* Six sherds were recovered from the cut bank. Four of these may be definitely classified as *Rockport* ware (Suhm and Jelks 1962:131-136). They are characterized by asphaltum coating on either the interior (3) or exterior (1) surface. One sherd has a line of thicker asphaltum along one broken edge and may result from an aboriginal repair. The sherds are too small to determine if the asphaltum was a solid coating or part of a decoration. Two sherds have no asphaltum on them.

The temper in three sherds is a moderately fine sand, one has sand and shell temper, one has a crushed sand or grit temper, and one has no visible temper. The color of the sherd varies from pinkish to yellowish buff, and the texture is fine, compact, homogeneous, and hard. The surfaces are moderately to very well smoothed. The interior surface of one sherd exhibits striations likely resulting from scraping.

No rims or bases are present in the small sample. However, the three sherds with an interior asphaltum paint coating are only slightly curved and probably derive from bowl-shaped vessels. One sherd describes a tight arc and is coated with asphaltum on the exterior surface. This fragment probably is part of a narrow-necked jar or bottle. The other two undecorated sherds

are from undetermined vessel shapes. The thickness of the sherds is consistently 4 mm except for one sherd which is 6 mm thick.

#### Site Significance

41 NU 157 extends the southern limit of recorded *Rangia cuneata* shell middens. This is of major significance with regard to both paleo-environmental reconstructions and subsistence adaptations of the Rockport culture group(s), dating to the Late Prehistoric period between ca. A.D. 1250 and A.D. 1600 (Corbin 1974:45).

Although shell middens are commonly found along bay shores and the coastline in this region and to the north, they are for the most part oyster accumulations (cf. Campbell 1960:151). The proportion of oyster in the 41 NU 157 shell midden is almost negligible.

A survey by T. R. Hester along the Corpus Christi Ship Channel east of Donnell Point yielded a Rockport Focus site with shell midden deposits. This site contained no *Rangia* shell (Hester 1975:5).

Another more limited survey by Hester in 1972 (notes on file at the Center for Archaeological Research) resulted in the discovery of two sites in the Calallen section of Corpus Christi overlooking the Nueces River, upstream from Tule Lake. One of these is a shell midden containing scattered *Rangia* shell. The other, located on a bluff, contains almost exclusively *Rangia flexuosa* shell. This particular subspecies of *Rangia* has a fairly restricted suitable habitat and the presence of the midden indicates selective exploitation by the prehistoric inhabitants of the region.

#### 41 NU 158

Site 41 NU 158 is located in the southeast corner of the Tule Lake Tract.

This area of land is characterized by a dense covering of scrubby thorn bushes including mesquite, allthorn, prickly pear, Spanish dagger, and some grasses. Survey was necessarily limited to cleared areas including a grassy road cut through the thorn forest, shoreline boundaries, and occasional areas of less dense vegetation. On the north side of the ridge, severe arroyo cutting has occurred, exposing a large area of eroded ground surface approximately 200 x 300 m in size. The soil consisted of dark gray clay eroding through to the underlying light gray caliche. Shell, including *Rangia cuneata*, oyster, and land snail, was scattered over the surface of the entire area and washed into the erosion cuts. No distinct shell stratum could be identified by profiling the arroyo banks. Burned clay nodules and burned bone were observed scattered across the area. Artifactual material collected includes utilized and debitage flakes, found in a widely scattered distribution. No ceramics were found.

#### Material Culture

*Chipped Stone.* A total of 11 flakes was found in the area; 10 came from the eroded gullies on the north side, and one from the grassy roadway across the center of the rise. All are made of fine-grain chert, with color variations including pink, red, yellow, brown, and white. Five of these are secondary flakes, all with water-worn cortex. The remainder are interior flakes and blades (a blade is defined as a specialized flake twice as long as it is wide, with parallel lateral edges). Six specimens are complete, two are distal fragments, and three are proximal fragments. The presence of three carefully manufactured blades is interesting, as it is generally considered a specialized method of core reduction. Hester and Shafer (1975) have previously documented a blade technology on the coast, including the Nueces County region. They link



this technology to late prehistoric times.

Two of the three blades exhibit platform preparation in the form of moderate to heavy grinding and crushing to remove platform overhangs. Two other secondary flakes also have prepared platforms; one by light crushing and facetting, one by minute retouch. The remaining five flakes with intact platforms were produced without special platform preparation.

Only two specimens, both secondary flakes, exhibit intentional shaping retouch. One is flaked both unifacially and bifacially along one lateral and the distal edge. The resulting convex edge has an average angle of  $75^{\circ}$ . The second example is unifacially retouched around the entire periphery. Three edges were flaked onto the dorsal surface and one edge is flaked onto the ventral surface. The edges are irregular in outline and the edge angle varies from  $45^{\circ}$  to  $90^{\circ}$ .

Both of the retouched flakes and one unmodified interior blade show evidence of utilization. Care was taken to distinguish use wear from natural erosive battering. The two retouched flakes appear to have functioned as scrapers. Use wear is characterized by crushing, unifacial step-flaking, and edge blunting. The interior blade has use wear in the form of moderate unifacial minute flake removals along both lateral edges. The angle of these straight edges is  $45^{\circ}$  to  $50^{\circ}$ . This blade was probably used as a knife (cf. Hester and Shafer 1975).

Flake length averages 28 mm; the single complete blade is 40 mm long. Mean flake width is 34 mm and average blade width is 18 mm. Flake thickness averages 5.3 mm and average blade thickness is 2.7 mm.

Although the number of flakes recovered is small, they are fairly uniform in size and probably derive from early to intermediate stages of core reduc-

tion. It is possible that the flakes were imported or were produced on location to function as tools, rather than representing debitage from tool manufacturing activities. The presence of specialized blades and the lack of extensively modified core or flake tools supports this hypothesis.

#### Site Significance

It is impossible to date this site from the materials recovered on survey (the presence of the blade technology may indicate a late prehistoric age for the site). Indeed, it is highly probable that the principal concentration of cultural material is located higher up in the thorny vegetation and the flakes recovered on the survey result from slopewash. The absence of pottery in our collection may or may not be significant; it may be simply the result of sampling bias. It is undetermined if the site represents only a short-term occupation or perhaps an area of prolonged intensive shell-fish exploitation. Further intensive survey should help clarify these important points.

#### RECOMMENDATIONS

The two sites located during the Tule Lake Tract survey are potentially significant sites. 41 NU 157, a *Rangia* shell midden of possible Rockport Phase affiliation, represents the southernmost location as yet recorded of this type of site. As such, it might provide much new information on local subsistence strategies and paleo-environments, especially if studies were conducted to determine the season during which *Rangia* was harvested. It is recommended that the site be excluded from the area to be used as a dredging dump. Its location on a knoll adjacent to the refinery facility would seem to make it an unlikely dumping area. If, however, the area is eventually covered, the knoll and cut bank should be subjected to controlled survey and collection, and the site should be intensively tested for further evaluation. Based on the

present evidence, meager as it is, this site should probably be nominated to the National Register of Historic Places. Only further investigations could confirm or negate this recommendation.

41 NU 158, a scattering of flakes, burned clay nodules, and a high density of shell, is indicative of prehistoric human activity. This area will probably be destroyed, as bulldozing has already been initiated in this section of the Tule Lake Tract. It is recommended that the entire vegetated area be thoroughly surveyed. The thorny bush vegetation is too dense for penetration at present, and some brush clearing (with minimal soil disturbance) may be required. If an undisturbed area is located within the site, it should be collected and test-pitted in order to evaluate its potential information yield.

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