

## XII. A TOYAH CAMPSITE IN SOUTHERN TEXAS

The Clemente and Herminia Hinojosa site, 41 JW 8, is seen, as a result of this research, as a major campsite of Late Prehistoric, Toyah horizon peoples who repeatedly revisited the location during the 14th century A.D. Some of the major interpretations derived from the analyses are summarized. These interpretations are organized by topics the author believes to be the most important in understanding the site.

### OCCUPATION PERIOD OF THE SITE

The question of when the site was occupied is a bothersome one. The radiocarbon assays can be interpreted in several ways as discussed in Section VII (Radiocarbon Assays). It is clear that most of the assays indicate a occupation during the 14th century A.D. The calibrated dates overlap best between A.D. 1350 and 1400. This time interval is assumed to be the major period of occupation at the site, although we have little means of determining over what length of time the site was revisited. A comparison with the dates from other Toyah horizon sites in southern Texas (Section XI) shows that 41 JW 8 is the earliest Toyah horizon site yet documented in the region. Site 41 MC 55, from Choke Canyon, may also have a contemporaneous occupation as one assay (Assay 30 in Table 32) appears early. Sites 41 MC 296 and 41 LK 201 clearly date later than 41 JW 8. As has been noted, the probability of a 14th-century Toyah horizon occupation in deep south Texas is somewhat early according to Prewitt's estimation of the spread of the Toyah.

The dating of Feature 6 definitely represents a problem in interpretation. Three consistently early assays from this feature suggest a date before A.D. 1150, perhaps as early as A.D. 950. There is no physical evidence to link these older dates with pre-Toyah horizon cultural materials. These assays are clearly too early for the Toyah horizon. All of the Toyah assays for central Texas cited by Prewitt (1985) are after A.D. 1200. Based on our current knowledge, it seems unlikely that the early dates actually indicate a very early Toyah horizon occupation at the Hinojosa site. In lieu of a readily acceptable explanation, the early dates from Feature 6 will remain enigmatic.

### SUBSISTENCE AT 41 JW 8

Prior to the faunal study of the 1981 season materials, the Hinojosa site, like many Toyah horizon sites, was thought to be a bison hunters' camp (Hester 1977; Hester, Eaton, and Black 1980). Deer are now known to have been the most numerous species killed by the site occupants. Bison and pronghorn were the next most important species followed by small mammals such as rodents and rabbits. One of the remarkable aspects of subsistence at 41 JW 8 is the diversity of the faunal assemblage; 44 faunal taxa representing over 31 genera were recovered (Section VII: Analysis of Vertebrate Faunal Remains). Large and small mammals, rodents, turtles, snakes, birds, and fish were all identified. Studies of other Toyah horizon sites such as 41 LK 201 (Steele 1986) and 41 MC 296 (Steele and Hunter 1986) have shown similarly diverse faunal assemblages. This is also true of

several of the non-Toyah Late Prehistoric sites in Zavala County (Hester and Hill 1975).

The importance of hunting and animal processing at the Hinojosa site is documented by the large amount of animal bone, the numerous projectile points and end scrapers, and the bone cluster features. The Wagon Trail Area, in particular, suggests a repeated pattern of bone processing and disposal. Most of the major lithic tools, Perdiz points, end scrapers, and beveled knives have wear patterns that are consistent with meat and hide processing. Taken together and contrasted with the scarce evidence for plant processing, it is obvious that the inhabitants of 41 JW 8 were, first and foremost, hunters.

There is some significant evidence of other subsistence activities. *Rabdotus* snail collecting seems to have been a very important activity at 41 JW 8. In fact, *Rabdotus* snail shells were the most numerous item recovered from the site. Based on the densities of *Rabdotus* recovered from the site, it can be estimated that somewhere between a quarter and a third of a million of these land snails were collected during the occupations at the site. The WTA distributional studies showed considerable clustering of the *Rabdotus* snails, with the largest concentrations associated with the living surface, Feature 11. Freshwater mussels played a decidedly smaller subsistence role. Low densities of mussel shells were recovered in all areas of the site except one. The strong concentration of mussel shells in Unit N125 E92 probably suggests an activity area. The relative scarcity and the extremely small size of most of the mussel shells from the site suggest they were not a major item in the diet.

Evidence of plant collecting and processing was also present at the Hinojosa site. Charred hackberry seeds were recovered from many contexts at the site, and probably represent a food resource. Uncharred hackberry seeds were very numerous; however, these may be of recent origin, perhaps introduced into the deposits via rodent burrowing. Charred *Chenopodium* fruits were recovered from several contexts, including several feature matrices. *Chenopodium* and other charred plant seeds, persimmon and *Helianthus*, probably represent food items. Grinding stones were recovered in very low numbers from the site. Most grinding stones from the site are represented by small sandstone fragments recovered from the surface of the plowed field. Several factors may cause the importance of plant collecting to be underestimated. First, plant remains are notoriously poorly preserved in southern Texas, unlike animal bone. Second, ground stone tools represent more invested labor and may have been more difficult to replace than chipped stone tools; hence more likely to have been removed from the site. Wooden mortars may also have been used at the site, similar to specimens found in northeastern Mexico and southwestern Texas (cf. Prewitt 1981b). Thus, while plant gathering seems to have been less important than hunting at 41 JW 8, it was no doubt a significant subsistence activity.

#### ENVIRONMENTAL CONDITIONS DURING THE SITE OCCUPATION

The author believes that the spread of the Toyah horizon into south Texas and specifically to 41 JW 8 occurred during a period of increased rainfall in the

region. This interpretation is not shared by some and can neither be convincingly substantiated nor refuted given our present knowledge. The arguments for and against this interpretation will be briefly reviewed. It is hoped that such a discussion will encourage others to conduct the careful studies necessary to confirm or deny this interpretation.

Climatic studies of the region have not yet achieved the resolution needed to understand the environmental conditions for the period. For example, Bryant and Shafer (1977) present a model of gradual dessication over the last 7000 years. Story (1980) suggests a steplike model with a general drying trend punctuated by several drought periods and intervals of increased moisture. Gunn *et al.* (1982) use a rather varied array of climatological indicators (from atmospheric radiocarbon, to Arctic glacial chronology, to a "south Texas climatic threshold") to predict a series of expected long-term wet and dry periods in south Texas. In truth, we do not have enough data to understand past climatic fluctuations in south Texas.

One possible indication of climatic conditions is the identification of charred botanical remains from archaeological sites in south Texas. Dering (1982), Holloway (1986) and Jones (Section VII: Analysis of Macrobotanical Materials) have identified most of the charred materials from the archaeological sites they have studied as common species present in the area today, such as acacia, mesquite, persimmon, hackberry, elm, and others. Holloway and Jones interpret this as indicating a stable environment. This author would strongly disagree. The fact that the wood species present several thousand or several hundred years ago are the dominant species today only provides evidence that no dramatic changes have occurred. For example, while a major climatic shift would no doubt bring new species into south Texas, a long drought or an extended period of moist conditions would probably change only the species abundance, not the occurrence. In particular, the major trees present in the area, acacia and mesquite, will both thrive under more moist conditions (witness the lake shore concentrations of these trees in south Texas!). Thus, environmental stability cannot be inferred by the presence or absence of hardy, prolific species. What is needed is data on climatically sensitive species such as grass species.

In lieu of pollen preservation in southern Texas (cf. Hester 1977; Holloway, Section VII: Pollen Analysis), phytoliths seem to hold the most promise for environmental reconstruction (Brown 1984). Unfortunately, only a few preliminary studies of phytoliths in south Texas have been published to date (Robinson 1979, 1982). Robinson has studied samples from 41 JW 8 (Section VII). He believes that the samples from the occupation zone in the WTA (Col. 1) show a large number of grass phytoliths (Pooideae) which are characteristic of cooler seasons and winter rainfall. The increase in this type of phytolith has been found at several other sites; Robinson (1979, 1982) suggests that this indicates cooler/wetter conditions. Samples from above and below the occupation zone apparently have smaller amounts of the Pooideae phytoliths. Unfortunately, Robinson has not done the final step of his analysis, the quantification of the biosilica assemblage. Final interpretation of the phytolith data awaits publication of the completed studies of 41 JW 8 and other sites.

Another type of data that may provide environmental data is faunal material. In the Choke Canyon area, Steele (1986) used the presence of diverse species (characteristic of western and eastern biotic provinces) in Late Prehistoric and Late Archaic contexts to argue that the Tamaulipan Biotic Province has been established in the region for several thousand years. Furthermore, Steele suggested that the greater diversity during the Late Prehistoric may indicate a more temperate climate with milder summers and winters. Particularly significant to the present argument, is Steele's identification of a number of species in Late Prehistoric contexts which are no longer present in the region.

Steele identifies several species from 41 JW 8 that may indicate a wetter environment, including the least shrew (*Cryptotis parva*), the eastern mole (*Scalopus aquaticus*), the muskrat (*Ondatra zibethicus*), and possibly the pine vole (*Microtus* cf. *M. pinetorum*). The Hinojosa site is on the southwestern or southern margin of all of these species ranges. The least shrew and the muskrat have not been previously documented in the area. Taken together these species indicate that the local environmental conditions were much wetter/cooler during the occupation of the site than today. However, it should be noted that the presence of a running stream may have been responsible for the local occurrence of most of these species.

Other probable indications of a perennial stream include mussel shells, and the bones of fish, water turtle, aquatic bird, water snake, and raccoon. There seems to be little doubt that Chiltipin Creek was a permanent stream during the site occupation. The mussel species that were recovered (Section VII: Freshwater Bivalves) suggest a shallow stream with a muddy bottom and possibly an artesian source. This confirms Brune's (1981) suggestion that the Amargosa Springs, upstream from the site, was formerly (prior to the recent historic era) active on a year-round basis.

Numerous animal species also suggest an extensive grassland habitat in the site vicinity. Bison, pronghorn, least shrew, cotton rat, and pine vole are all primarily grassland species. The presence of bison in deep south Texas is considered particularly significant by this author. Dillehay (1974) presented a model of long-term fluctuations of bison on the Southern Plains. He suggested three general periods of bison presence separated by two periods of bison absence. Of interest here are Dillehay's Absence Period II (A.D. 500-1200-1300) and Presence Period III (A.D. 1200-1300-1550). Dillehay suggested that climatic shifts between wetter and drier conditions were responsible for shifts in the bison range. He cites a large number of sites in the Southern Plains that show a major increase in bison around A.D. 1200-1300. He also cites evidence from the southwest that suggests that bison were moving south and east away from areas suffering from a major drought at about this time.

This author would suggest that the combined evidence at 41 JW 8 indicates a wetter environment in the vicinity of the site. Much of this evidence can be attributed to a reliable spring-fed stream. However, a substantial grassland can also be inferred in the site vicinity. It is suggested that during the 14th century, much of south Texas (as well as much of the Southern Plains) had increased rainfall (or at least more consistent rainfall) that allowed a short-term improvement of the grasslands. The inferred climatic shift to a

slightly wetter environment encouraged both the movement of bison and, perhaps, of people into the area.

### SITE FUNCTION

The Hinojosa site is interpreted as a major campsite, or base camp. The site obviously served as a focus for activities that often involved travel to adjacent areas in search of various animal, plant, and mineral resources. At 41 JW 8, we see evidence of chert collecting and hunting trips that involved travel to within 50 km away. The immediate site vicinity was the scene of many different activities. Most of these have been discussed elsewhere in this report: cooking; animal butchering, processing, and disposal; land snail and mussel collecting; plant gathering and processing; tool making and resharpening; fire building; shell ornament manufacturing; basketry weaving; and leather working to name only the more obvious. The breadth of these activities and the concentrated nature of the deposits suggest that the site may have been occupied for extended periods (perhaps several weeks or months) at a time.

### TOYAH HORIZON PEOPLES

One question which seems pertinent is "who were the people who lived at 41 JW 8 and other Toyah horizon sites in southern Texas?" Were they central Texas peoples moving into south Texas as some have argued? Or were they native south Texans who merely adopted certain technologies of central Texas peoples?

Of course, we may never know the answer to this question. The earliest descriptions of the Indians in the area were provided by Cabeza de Vaca (Campbell and Campbell 1981). The Campbells believe that Cabeza de Vaca passed through south Texas very near Jim Wells County in the 1530s. The Indian groups he described for the area, the Mariames, the Avavares, and possibly several others, appear to have been most interested in harvesting the prickly pear cactus fruit as discussed in Section V. The problem is that although some known behavioral aspects of these groups (like snail collecting) are evidenced at 41 JW 8, no conclusive links can be made. We did not find any obvious evidence of cactus fruit collecting. Cabeza de Vaca did not, of course, describe Perdiz arrow points, and he did not even mention pottery. Hence it is very difficult to say whether the group that inhabited the Hinojosa site survived in the area until the 16th century.

The alternative possibility is that the Hinojosa site was occupied by central Texas peoples. Prewitt (ms.) believes that the Rowe Valley site in Williamson County was occupied by Wichita-speaking Tonkawa groups long after Cabeza de Vaca had passed through southern Texas. The Toyah phase has also been tentatively linked to the Tonkawa by Suhm (1959). Does the fact that the 41 JW 8 assemblage strongly resembles the Toyah phase materials from central Texas suggest that the Tonkawa camped in Jim Wells County? Hester and Parker (1970) posed the same question for the Berclair site in Goliad County. As they note, some early historic accounts do mention the presence of Tonkawa bands in various portions of the South Texas Gulf Coastal Plains. At the

present time we simply cannot link the Toyah horizon to the Tonkawa or any other group, no matter how tempting it may be. We lack the data necessary to make a direct link between the prehistoric assemblage and the historic peoples.

There is considerable evidence at the Hinojosa site that, whoever the peoples who camped there were, they were very familiar with south Texas. For example, the lithic materials at the site suggest that at least two source areas were used, the Nueces River east of the site and the hilltop gravels to the west and northwest of the site in Duval County or beyond. The Hinojosa site collection does not contain a single artifact made of a material that suggests a central Texas origin; all the raw materials are found in south Texas. Other indications of southern Texas familiarity are the 2-beveled knife, the Olmos biface, and the asphaltum and fugitive red decorated pottery. There are also indications of coastal contact. The marine shell ornaments, tools, and fragments, as well as the asphaltum pebble and decoration on the pottery and stone pipe, evidence at least trade with coastal peoples. Toyah horizon sites have been documented in San Patricio County (Chandler, personal communication) and Nueces County (Mokry, personal communication). Hence it is likely that the peoples who camped at 41 JW 8 also visited the coast at times.

Thus, the question of who were the peoples that camped at the Hinojosa site, cannot yet be answered. They did have an artifact assemblage dominated by tool forms that originated far to the north in central Texas. However, they also used tool types found only in southern Texas. Whoever they were, the peoples who lived at the Hinojosa site and many other Toyah horizon sites in southern Texas, left behind some of the more distinctive archaeological remains yet documented in the region.