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# Comments on the Prehistory of Far Northeastern Chihuahua, the La Junta District, and the Cielo Complex*

*by Robert J. Mallouf*

*Examination of private artifact collections in northeastern Chihuahua has aided in the recognition of tentative patterns in the distributions of stone projectile points and in the development of a preliminary regional chronology based upon projectile point styles. An overview of the Late Prehistoric Cielo complex is provided, along with previously unpublished chronometric data on the Cielo complex and the La Junta phase. Interpretive issues centering on sociocultural relationships of the Cielo complex to contemporary La Junta, Toyah, and Infierno phases of northeastern Chihuahua and Texas are explored. In contrast to past interpretations, La Junta phase peoples are suggested here as having origins that may be separate and distinct from peoples of the Jornada Branch of the Mogollon.*

## Introduction

The far northeastern region of Chihuahua is defined arbitrarily as a rectangular area bound on the north by the Rio Grande (Río Bravo del Norte), on the west by the lower reaches of the Río Conchos, on the east by the Chihuahua-Coahuila border, and on the south by a line extending approximately from Cuchillo Parado on the lower Río Conchos to the Sierra Altares on the Chihuahua-Coahuila boundary (Figure 1). This roughly 12,000-km$^2$ region is located within the basin and range environment of the Chihuahuan Desert (Schmidt 1979). In addition to having rugged northwest-to-southeast-trending mountain ranges, this arid region contains some of the lowest elevations (as low as ca. 800 m above mean sea level) to be found in the state of Chihuahua.

Included among the larger mountain ranges of the study area are the eastern portion of the Sierra Grande, the Sierra del Mulato,

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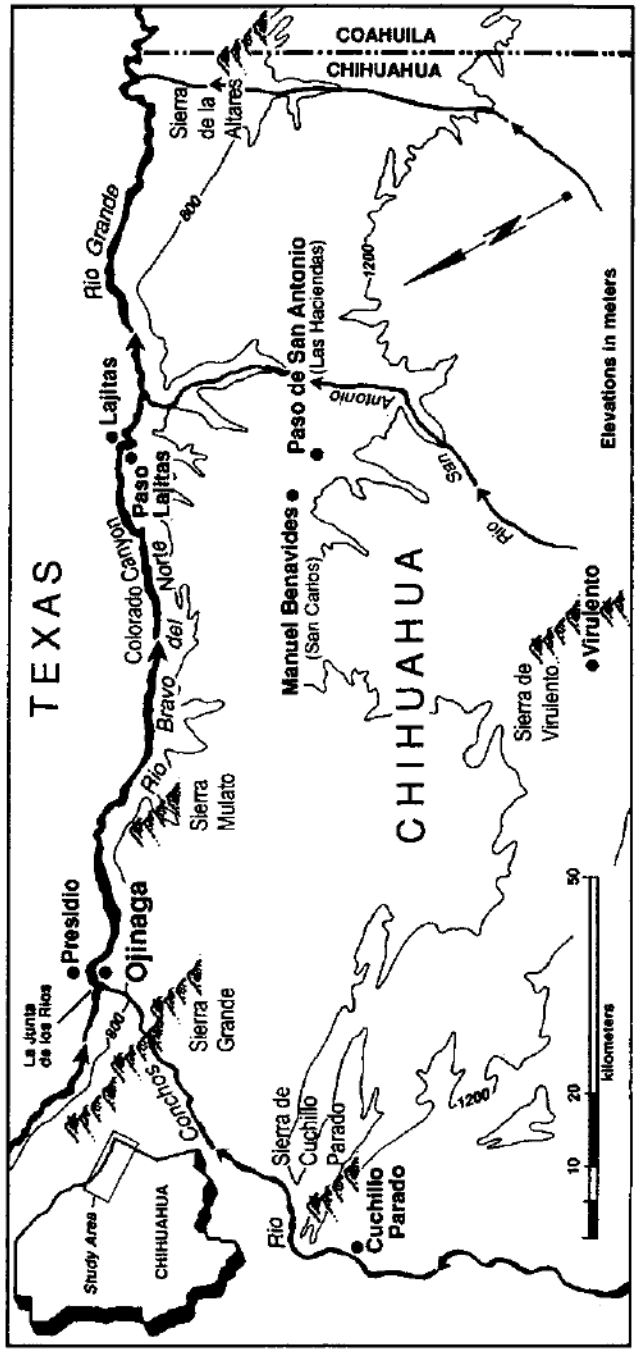


*Figure 1. The study area in far northeastern Chihuahua.*



Sierra Matasaguas, Sierra Cuchillo Parado, Sierra Rica, Sierra Azul (S. de San Carlos), Sierra el Virulento, and Sierra Altares. These ranges comprise a mosaic of sedimentary (lower and upper Cretaceous) and igneous (Cenozoic) rock. The general vegetation zones found in the higher elevations are grassland and oak-juniper savannas, and in the foothills are more diverse plant assemblages, including lechuguilla, sotol, yucca, ocotillo, and various cacti. Broad, arid basins between the mountains are dominated by creosote bush, tarbush, and mesquite (Lesueur 1945; Schmidt 1973). A good grasp of the actual complexities encountered in vegetational classifications of the Chihuahuan Desert, including the study area, can be gained by a perusal of Johnston (1977) and Henrickson and Johnston (1986). A wide variety of fauna, including white-tailed and mule deer, gray and kit fox, mountain lion, bobcat, black bear, badger, skunk, ring-tail, raccoon, black-tailed jackrabbit, audubon cottontail, mourning and white-wing dove, quail, buzzard, hawk, and turkey, occur in diverse habitats throughout the region.

The study area is drained on the west and north by the two largest perennial streams to be found in Chihuahua—the Río Conchos and the Rio Grande, respectively. The valleys of these rivers, in the vicinity of their confluence near Ojinaga, are known historically as La Junta de los Ríos and archeologically as the La Junta district (Figure 2). While other significant water sources are scarce, there are numerous springs located along faultlines in the foothills of the mountains, one of the most notable being that of Ojo de San Carlos near Manuel Benavides (San Carlos). Much of the drainage is internal and provides important recharge to local groundwater aquifers. The broad basins are dissected by innumerable arroyos that are typically dry except during the monsoonal months of summer, when thunderstorms may cause abrupt and severe flooding along these drainage systems. This area of Chihuahua receives an average of only 250 mm of precipitation annually, and summer temperatures may rise as high as 118 degrees F (as of 1973, Cuchillo Parado held the state record high at 118.4 degrees F [48 degrees C]; Schmidt 1973).

A wide range of needed resources and raw materials were available to prehistoric populations of northeastern Chihuahua. These included potable water supplies, abundant sources of high-quality cryptocrystalline stone, diverse biotic communities, and

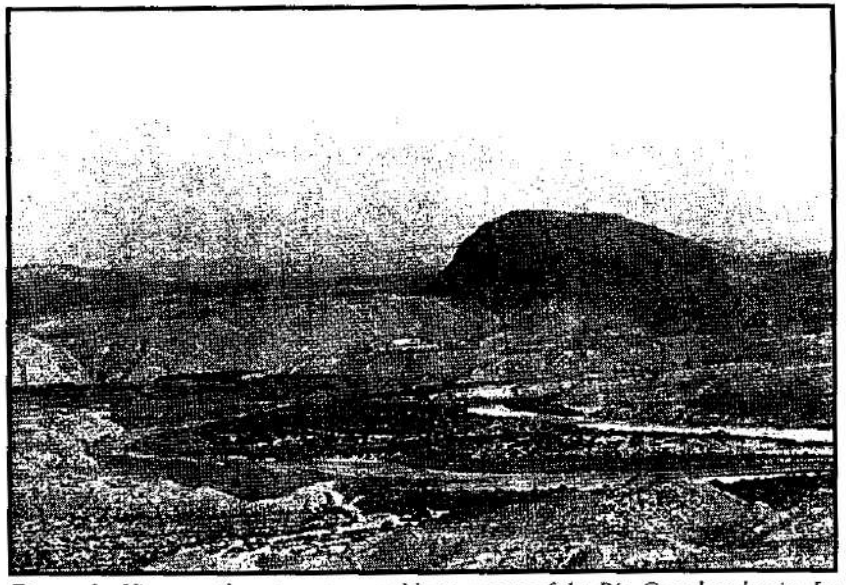

*Figure 2. View northeast across arable terraces of the Rio Conchos basin, La Junta district, from foothills of the Sierra Grande near El Peguis, Chihuahua.*

appropriate habitation areas. Among the latter were well-elevated terraces and pediments, colluvial benches, and rockshelters. Future work in this region can be expected to yield information that will strongly influence archeological interpretations in surrounding areas, including Trans-Pecos Texas.

## Past and Recent Research

With the exception of the La Junta district, past archeological investigations in northeastern Chihuahua can best be described as intermittent and spasmodic. The little research that has been accomplished has typically been related, but ancillary, to larger scale projects being conducted in adjoining regions or has come about as a reaction to site destruction from agricultural practices or looting.

Certainly, one of the more substantive projects to be undertaken in the region—and one of the earliest—was an archeological reconnaissance and testing program initiated by J. Charles Kelley along the Río Conchos in 1949 (Kelley 1990) that resulted in the formal recording of about 60 sites. Kelley's work included the excavation of a roughly square pithouse with internal firepit,



altar, and possible roof entrance at the Loma Seca site, located several kilometers upstream from Ojinaga. This structure was assigned to his previously defined (Kelley et al. 1940) La Junta focus (A.D. 1200–1400) on the basis of architectural style and associated ceramics (Kelley 1951). Through excavation of this house feature, Kelley conclusively demonstrated the presence of La Junta focus (now called La Junta phase) agricultural village sites on both sides of the Rio Grande and extending up the Río Conchos. As far as I am aware, this remains the only scientific excavation of a prehistoric site in far northeastern Chihuahua. A number of rather extensive excavations had previously been carried out by Kelley at related La Junta phase villages on the Texas side of the Rio Grande (Kelley et al. 1940; Kelley 1939, 1949, 1985, 1986). Excellent overviews of his findings, all of which are pertinent to the study area and address both prehistory and early history, appear in seven publications (Kelley et al. 1940; Kelley 1952a, 1952b, 1953, 1986, 1990; Foster and Kelley 1987).

Until recently, most other information concerning the northeastern Chihuahuan borderlands has been drawn from reconnaissances and surveys conducted on the northern periphery of the region—most notably by T. N. Campbell (1970) in Big Bend National Park. A very early reconnaissance by E. B. Sayles (1936) of various parts of Chihuahua barely touched on the study area.

From 1970–1995 the Office of the State Archeologist (OSA), Texas Historical Commission, at intervals conducted research at prehistoric and historic sites along the Rio Grande from Presidio, Texas, downstream through Big Bend National Park and the Lower Canyons. Much of this work consisted of noncollecting surveys. More recent investigations of the OSA have included work at the Cielo Bravo and Arroyo de las Burras sites of the Cielo complex; as well as the Polvo site in La Junta de los Ríos. During the course of the work at La Junta, we examined and photo documented private collections from some areas of far northeastern Chihuahua. In another project important to archeological interpretation on both sides of the Rio Grande, intensive documentation was carried out of a stone arrow point assemblage that had been looted from a Late Prehistoric cairn burial near Las Haciendas (Paso de San Antonio), Chihuahua, some 27 km south of the Rio Grande (Mallouf 1987). This undertaking represents the first intensive study conducted of a lithic assemblage from northeast-

ern Chihuahua. In addition, during a boat survey through Colorado Canyon on the Rio Grande in 1977, we were fortunate to find a buried hearth eroding from a cutbank in a high, silt terrace system on the river. This feature, which had a dart point in direct association, has provided the first radiocarbon assay for the study area (discussed below).

In sum, the archeology of the far northeastern corner of Chihuahua, with the notable exception of its northern periphery at La Junta, remains poorly known. Kelley's early work at La Junta provided a solid foundation of information concerning the lifeways of interacting Late Prehistoric and early Historic farming and nomadic peoples for subsequent researchers to build upon, but interested researchers have appeared on the scene only after a long hiatus of work in the area. As is the case for many places in northern Mexico and the southwestern United States, earlier prehistory in the study area, including Paleoindian and Archaic periods, remains virtually unknown. In succeeding sections of this paper I will provide a preliminary summary of new information for the northeastern Chihuahua area that has been derived primarily from the examination of pertinent private collections, and I will conclude with some observations concerning the La Junta phase and the Cielo complex.

The private collections discussed below are from sites in the vicinity of four localities within the study area: the Mexican village of Paso Lajitas, on the south side of the Rio Grande a few kilometers upstream from the Chihuahua-Coahuila border; Manuel Benavides (San Carlos), about 20 km south of the Rio Grande at the base of the Sierra Azul; Paso de San Antonio (Las Haciendas), 16 km southeast of Manuel Benavides on the Río San Antonio; and the Sierra el Virulento, a small range along the arbitrary southern edge of the study area some 65 km south of the Rio Grande. Like their counterparts to the north of the Rio Grande, local collectors tend to focus their efforts on the acquisition of projectile points. The first half of this discussion, then, is largely dependent upon this class of artifact for the extraction of meaningful data. The preliminary chronological periods discussed below are extrapolated from surrounding regions having similar projectile point styles in better know contexts. And they are, of course, subject to revision.



**Paleoindian Period, 10,000 B.C.–6500 B.C.**

Surprisingly little evidence of Paleoindian tool forms has been forthcoming from examination of collections in northeastern Chihuahua. One Plainview and a few Golondrina dart points, as well as two rather crude Angostura-like specimens, are noted in collections from sites near Paso Lajitas and from Manuel Benavides. While evidence currently is scarce, such finds do suggest the presence of nomadic Paleoindian bands in the study area at least during the latter half of the Paleoindian period, or roughly from 8000 to 6500 B.C.

Supporting evidence for the presence of Plainview components in northeastern Chihuahua, and earlier Clovis and Folsom components as well, is forthcoming from northwest of the study area on both sides of the Rio Grande. To the northwest of the Ojinaga/Presidio area is a broad, north-south-trending basin system that extends northward across Trans-Pecos Texas into southeastern New Mexico. In Texas this important natural feature is called Salt Basin in the vicinity of the Delaware and Guadalupe Mountains, and is known as Lobo Valley from the vicinity of Van Horn, Texas, southward to the Sierra Vieja. During the terminal Pleistocene epoch, this broad valley contained a series of extensive, interconnected pluvial lakes that provided excellent habitat for biotic resources highly sought after by Paleoindian bands—who camped along the lake shores. The Chispa site, a large Folsom encampment south of Van Horn, occupies a position adjacent to one of these relict basin lake beds (Lindsay 1969; Joe Ben Wheat, personal communication 1987). A number of surface finds of Folsom and Plainview points also have been made in the general area (Hedrick 1968, 1975, 1988; Mallouf 1985). This long, uninterrupted basin system provided an attractive natural corridor between mountain ranges for the north-south movements of Paleoindian and later occupants of these regions. But even more importantly, there is good evidence to suggest that this basin system has, at intervals in the past, served as a physiographic and cultural demarcation between distinct cultural traditions to the east and west.

In northern Chihuahua just a few kilometers to the south and southwest of Ciudad Juárez lies the ancient pluvial lake system of the Samalayuca region. A number of finds of Clovis, Folsom, and Plainview points are known to have been made here in the general vicinity of the Laguna de Guzman, and there are indications that

relatively intact Paleoindian components may be present in the region (Alan Phelps, personal communication 1990; John A. Hedrick, personal communication 1989; George A. Agogino, personal communication 1989).

Ancient relict lake basins like those of Lobo Valley and Samalayuca are found in areas of far northeastern Chihuahua as well, particularly to the immediate south of our study area, where they have yet to be investigated by archeologists. Knowledge of where Paleoindian encampments *should* be, however, does not necessarily mean that they are easily located. There is good evidence from the north side of the Rio Grande to indicate that such ancient deposits may be very deeply buried within basin drainage systems and relict lake beds. For instance, at the Adobe Walls Draw site (41BS751) near Terlingua, Texas, a radiocarbon assay obtained for a series of hearths buried 6.0 m below ground surface in an arroyo cut proved to be only Late Archaic in age (Figure 3). Even allowing for the fact that alluvium can accumulate quite rapidly—and admittedly having been fooled about the ages of such deposits before—I still was surprised at obtaining an assay of only A.D. 648 for this deeply buried component (TX-5861; one sigma correction based on Stuiver and Becker 1986, Method A). Other Big Bend examples of relatively recent cultural components in deeply buried contexts have been discussed by Kelley et al. (1940).

Suffice to say that while we suspect the presence of Paleoindian components in the study area, it is likely that they will, in many cases, be deeply buried and virtually inaccessible—often requiring use of heavy machinery to facilitate both their discovery and their exploration. Our best chances for discovery during the normal course of archeological reconnaissance and survey are in deep erosional cuts or blowouts adjacent to relict basin lake beds, and in the upper reaches and headwaters of arroyo systems that emanate from the foothills of the mountain ranges where the lateral migration of arroyo systems is relatively constricted.

### Archaic Period, 6500 B.C.–A.D. 900

While evidence for the presence of Archaic components across the study area is quite strong, a dearth of both survey and excavation data severely limits our reconstruction of Archaic period lifeways. For this reason, it would seem premature to attempt



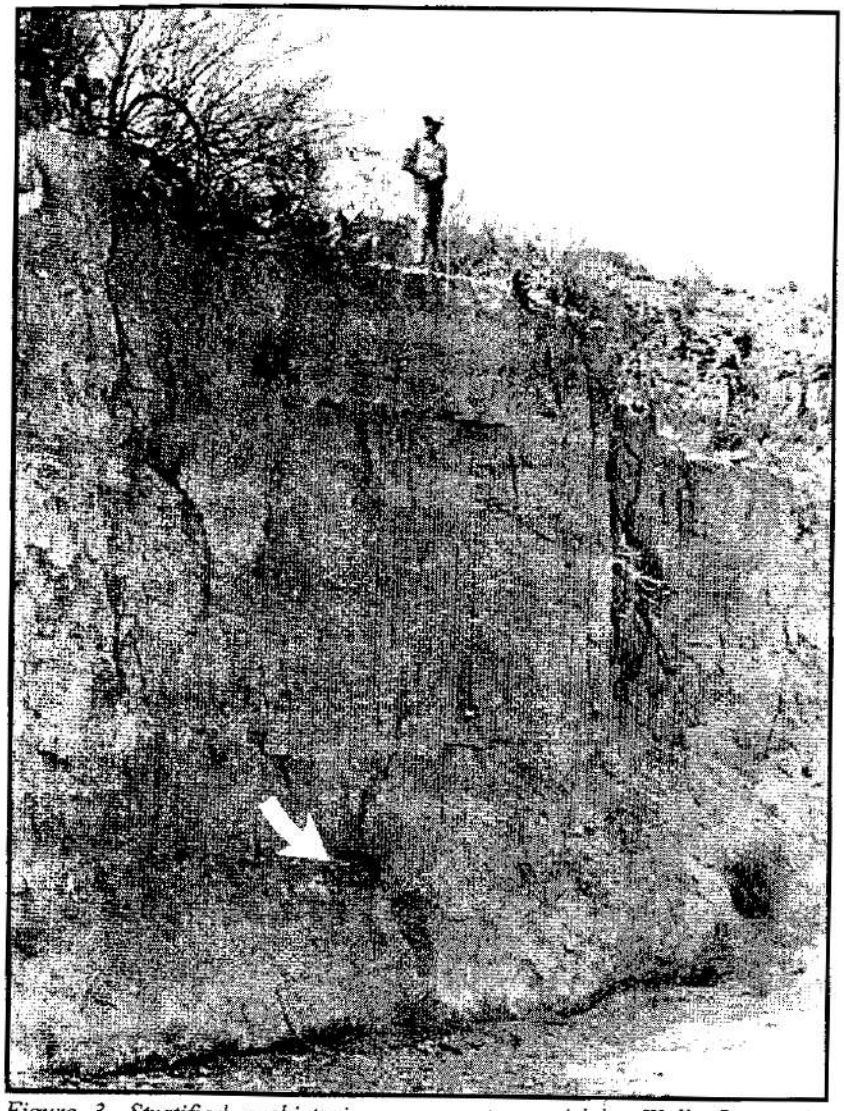

*Figure 3. Stratified prehistoric components at Adobe Walls Draw site (41BS751) in southern Brewster County, Texas. Arrow indicates zone of buried hearths from which radiocarbon assay (TX-5861) was obtained.*

an overview of Archaic lifeways that must draw exclusively upon information from better-studied adjoining regions. Instead, the intent here is to provide an initial set of empirical data that can be used as a springboard for subsequent studies. For summaries of

what is known concerning the lifeways of Archaic hunter-gatherers in adjacent regions, the interested reader is referred to Kelley et al. (1940), Lehmer (1958), Taylor (1966), Campbell (1970), O'Laughlin (1980), Mallouf (1981, 1985, 1986), Gonzalez (1986a, 1986b), and Foster and Kelley (1987).

With the exception of the Las Haciendas assemblage, which is from a Late Prehistoric burial context, all examined private collections in northeastern Chihuahua are easily dominated by Archaic period projectile points. Examples of Early Archaic (ca. 6500–3000 B.C.) point types—as might be expected—are far less common than those of the Middle and Late Archaic periods. In fact, only 12 out of several hundred specimens are positively identified as having Early Archaic affinities—and these are from the Manuel Benavides and Sierra Virulento areas. Six of these points are of the Baker-Bandy series (Turner and Hester 1985). The remaining specimens are classed as Bajada and Zorra points (Figure 4). Examples of what Taylor (1966) has termed Jora and Gobernadora points—from his Early and Middle Coahuila complex—also are present in the Manuel Benavides collections, but they appear on the basis of technological considerations to have stronger Middle Archaic than Early Archaic affinities. Because of our poor state of knowledge concerning the Early Archaic period, it is quite conceivable that additional early forms of projectile points are present but remain unrecognized in these collections. For the time being, we can only assume that the study area is part of—or peripheral to—a geographically broad-based Early Archaic tradition extending, at least, to more northerly and easterly regions. Like Paleoindian components, many Early Archaic components in far northeastern Chihuahua may prove to be deeply buried and difficult to detect.

Middle Archaic (ca. 3000–1000 B.C.) dart points tend to be much more common in study area collections. Distinguishable point types include Langtry (both classic and pointed-stem variants), Jora, Almagre, and Gobernadora, along with a few specimens having similarities to Val Verde, Pedernales, and Bulverde types (Figure 4). Interestingly, Jora points tend to be most common, while Gobernadora points are quite rare. Regrettably, we do not yet have Jora points from a well-dated context anywhere in northern Mexico, and their assignment here to the Middle Archaic is on the basis of style only (Editor's note: see Zubieta, this vol-



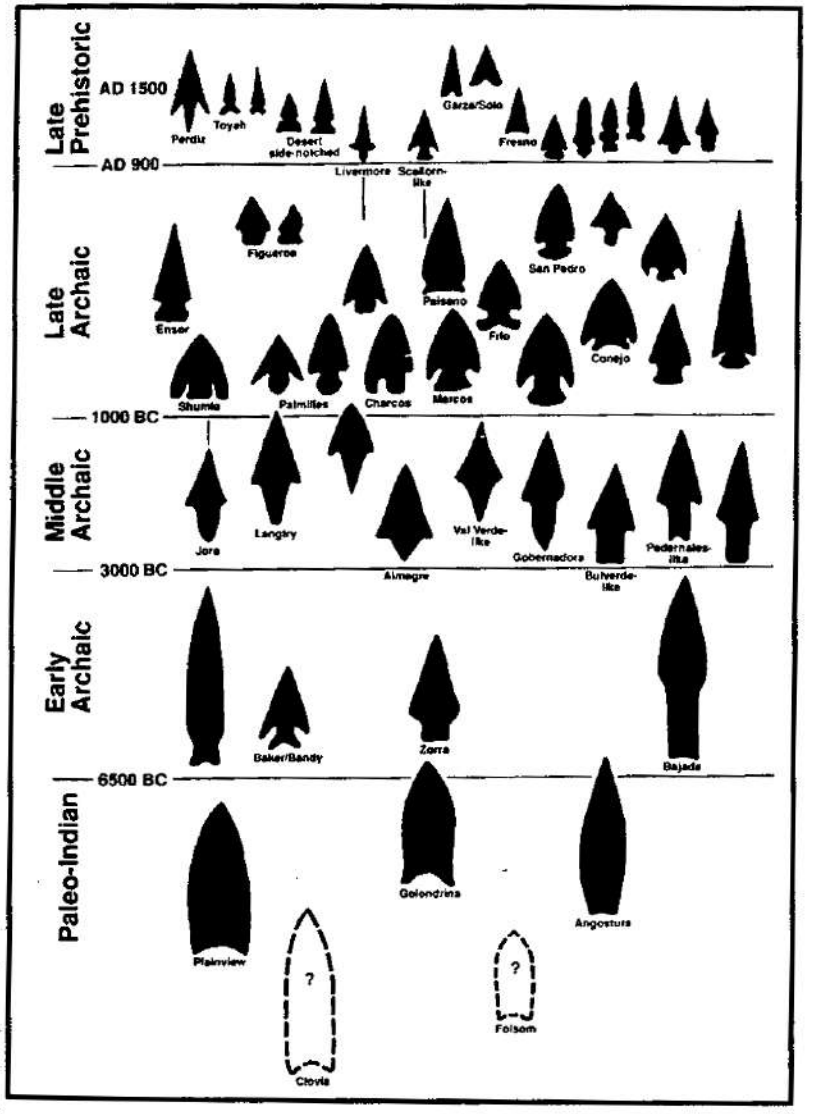


*Figure 4. A preliminary projectile point sequence for far northeastern Chihuahua.*

ume). They may prove to be temporally later than originally believed by Taylor (1966). Like those of adjoining regions to the north and east, Middle Archaic projectile points in far northeast-

ern Chihuahua tend to have straight-to-contracting stems with convex, concave, straight, or pointed basal edges. A higher density of Middle than Early Archaic points in local collections can probably be attributed to more frequent exposure of these components along arroyo systems, differing settlement systems, or larger human populations than in preceding periods. Although tentative, current evidence would seem to indicate stronger affiliations during this period with cultures to the southeast, east, and northeast than with those west and north.

There is a striking dominance of Late Archaic (ca. 1000 B.C.–A.D. 900) projectile points in private collections of the study area. In the approximate order of their frequency of occurrence, the definable types include Shumla, Palmillas, Ensor, San Pedro, Figueroa, Frio, Marcos, Paisano, Conejo, and Charcos. There also are a multitude of variant styles, many of which seem to have resulted from the aboriginal refurbishing of broken points. And there are numerous unrecognized styles that probably represent distinctive types of points as well. Particularly noteworthy are the very late dart points (such as the highly variable Figueroa) that, because of their technology and diminutive size, seem to represent the transition from use of the atlatl to the bow and arrow (Figure 4). The sheer numbers of Late Archaic points present in the northeastern Chihuahuan collections is reminiscent of collections one encounters in the adjoining Big Bend region of Texas. In the Big Bend, archeological surveys have located Late Archaic components in virtually every available ecological niche, from the tops of mountain peaks to basin arroyo systems (e.g., Mallouf and Wulfkuhle 1989). While greater erosional exposure of these components, with concomitant accessibility to artifact collectors, is one explanation, all evidence currently points to the fact that there were significant population increases during the Late Archaic period. The increase seems to correspond to a short-lived interval of more mesic environmental conditions (Mallouf 1985).

Several tentative patterns emerge from the Late Archaic point-type frequencies. As an example, there is an abrupt drop in frequency of Paisano points as one moves south from the Rio Grande, where they are fairly common, to Manuel Benavides, where they form only a tiny percentage of large collections, to the Sierra Virulento, where they are absent altogether from examined collections. While this may simply be a matter of sampling error,



past experience has shown that local private collections tend to reflect the realities of local archeological situations. This pattern may reflect a definable southern edge to the distribution of Paisano points within 30 to 50 km of the Rio Grande. Whether or not a cultural boundary also is indicated remains to be determined. While the Paisano point has in the past been characterized as being indigenous to the Trans-Pecos (e.g., Marmaduke 1978:125–126), the possibility of more westerly origins also needs to be explored. Incidentally, the only radiocarbon assay for Paisano points west of the Lower Pecos River region comes from a buried, eroding hearth (Fiero site) in Colorado Canyon (Rio Grande) in the study area. The hearth, which had a Paisano point in direct association, yielded a date of A.D. 560±335 (TX-4638; Mallouf 1985), which roughly corresponds to Lower Pecos region estimates.

The Paisano point was thought by Kelley et al. (1940) to be a dominant type of the Chisos focus of the Texas Big Bend. As originally defined, the Chisos focus was considered to be indicative of hunter-gatherer bands who practiced an early form of rudimentary agriculture and were possibly ancestral to certain Historic groups in the region. At the time of its formulation, the Chisos focus was considered to be a tentative cultural construct in need of much additional work and clarification. In recent years the Chisos focus has generally been subsumed under the terms "Chisos Archaic" (Campbell 1970) and "Late Archaic" (Mallouf 1985), both of which reflect developmental stages—rather than a specific cultural entity—in regional prehistory. Use of the term "Late Archaic" seems most appropriate to the northeastern Chihuahua region considering our present state of knowledge.

**Late Prehistoric Period, ca. A.D. 900–1550**

Although not as common as Late Archaic dart points, Late Prehistoric arrow points constitute a large percentage of projectile points in the private collections of far northeastern Chihuahua. Most of the common arrow point styles of the adjoining Big Bend and Coahuila regions are represented in local collections, including Toyah, Perdiz, Fresno, Garza/Soto, Scallorn, side-notched triangular (Desert Side-notched), and Livermore. Several of these styles, including Toyah, Fresno, Soto, and Desert Side-notched, also occur to the northwest at least as far as Casas Grandes. In addition, numerous distinctive untyped styles are present in the collections (Figure 4).

The Livermore point, a diagnostic type of the Livermore focus (ca. A.D. 900–1300) in the Texas Big Bend (Kelley et al. 1940; Kelley 1957), appears to have a restricted distribution in northeastern Chihuahua. Livermore points are present—but not common—in sites along both the Chihuahua and Texas sides of the Rio Grande, but they occur only rarely as far south as Manuel Benavides and Sierra Azul (Figure 5). As near as can be ascertained, their occurrence in Coahuila is also restricted to the northern periphery. A tentative southern boundary of Livermore point distribution, then, consists of a line roughly parallel to, and 30 to 40 km south of the Rio Grande from the vicinity of Cuchillo Parado on the west to Amistad Reservoir on the east. Interestingly, the western boundary of Livermore points in Trans-Pecos Texas seems to roughly correspond with the Sierra Vieja, Van Horn, and Sierra Diablo mountain ranges on the west side of Lobo Valley and Salt Basin (alluded to earlier as a possible cultural boundary at various times in the past). The densest known occurrences of Livermore points are in the Davis Mountains and Lobo Valley areas of the central Trans-Pecos, while more northerly occurrences are in the Guadalupe Mountains of Texas and New Mexico. Although by no means common, Livermore points are found occasionally in sites as far northeast as the Midland-Odessa and San Angelo areas in Texas.

An estimate of the overall distribution of Livermore points is provided in Figure 5. Livermore points are characterized by an unusually high degree of stylistic variability—a fact that may account for the past reluctance of some researchers to recognize them as a formal type. Livermore points are, however, quite distinctive—both technologically and morphologically. Unfortunately, the archeological components in which they are found remain poorly studied, and Kelley's (Kelley et al. 1940) original conceptualization of the Livermore focus as a Plains Indian migration into Trans-Pecos Texas remains basically unexplored to this day. The possibility that Livermore focus populations were indigenous to the Trans-Pecos also is in need of serious investigation. For more meaningful exploration of the nature and origins of the Livermore phenomenon, it will be necessary to identify and excavate isolated or relatively pure Livermore point-bearing components. Given the tendency for mixing of Late Prehistoric components in regional rockshelters, we may want to look more closely at the possibility of locating such components in protected



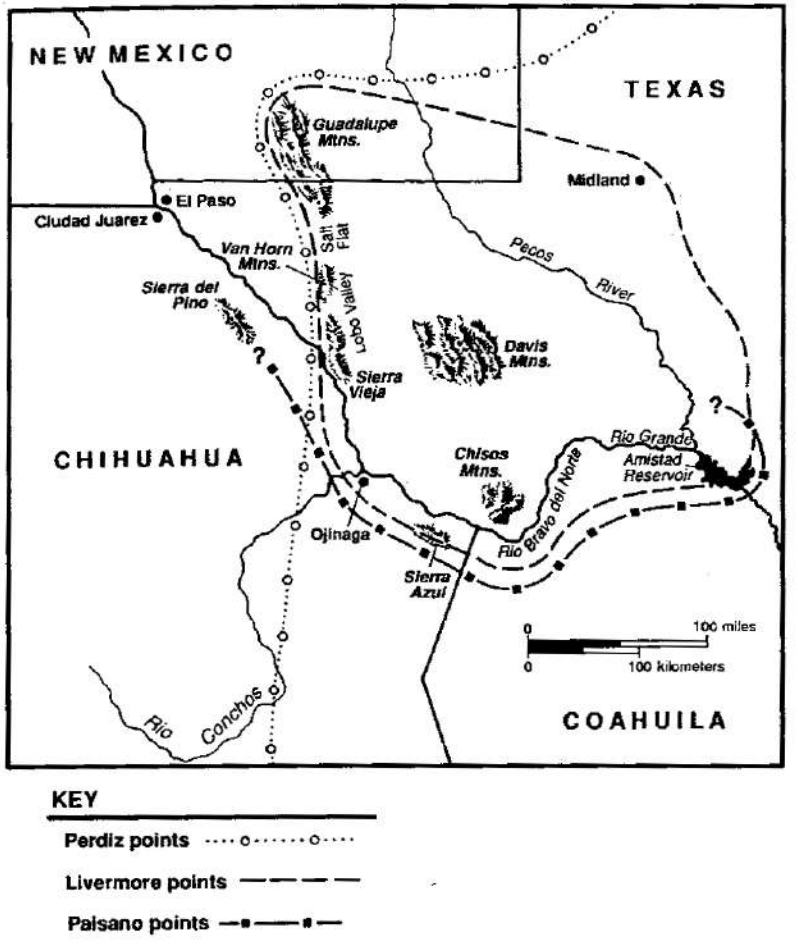


*Figure 5. Distribution of Perdiz, Livermore, and Paisano projectile points in the study area and adjacent regions.*

terrace systems on both the Chihuahua and Texas sides of the Rio Grande or along basin drainage systems of the Lobo Valley.

Perdiz points are one of the more common arrow point styles in eastern Chihuahua, as well as in much or all of Coahuila, the Texas Big Bend, and Central and South Texas. With the notable exception of a few areas (such as the northern Texas Panhandle), they are found throughout much of Texas. As is typically the case,

Perdiz points in the study area come in a wide range of morphological varieties and stone types, as attested by the 180 Perdiz specimens in the Las Haciendas cairn burial at Paso de San Antonio (Mallouf 1987). Radiocarbon dating of Perdiz-bearing components at five sites in the Texas Big Bend indicates a range beginning as early as A.D. 1250 and possibly extending into the Protohistoric period for this point style. Like Livermore points, the westward distribution of Perdiz points essentially terminates along a physical—and postulated cultural—boundary formed by the Sierra Vieja, Van Horn, and Sierra Diablo mountain ranges that form the west side of the Lobo-Salt Flat basin system in Trans-Pecos Texas (Figure 5). Perdiz points are an important element of La Junta phase and Cielo complex lithic assemblages in the La Junta district and Texas Big Bend.

Also of considerable interest is the distribution of arrow points that are triangular, basal-notched, and basally indented—specifically the Garza, Soto, and Lott types. All three styles occur throughout the far northeastern Chihuahua study area, where they seem particularly abundant in Late Prehistoric and/or Contact period assemblages of the La Junta district. The Garza/Soto style occurs at least as far south as southwestern Coahuila and possibly as far west as Casas Grandes and beyond (e.g., Phelps 1987). Basal-notched Garza points are found as far north as Lubbock and Post in the southern Texas Plains, where associated features have been radiocarbon dated to A.D. 1540–1665 (Johnson et al. 1977). The presence of basal-notched and basally indented styles in the La Junta area is of particular interest because of the possible linkage of these styles to Apachean occupation to the north in the Southern Plains (as in the case of Garza points; Johnson et al. 1977), and to possible Piman or Apachean occupation of the northwestern Chihuahua-southern Arizona regions (as in the case of Soto points; Fritz 1989). Like Perdiz points, these point styles also figure importantly in assemblages of both the agriculturalist villages of the La Junta phase and in base camps of the hunter-gatherer Cielo complex—a fact discussed at greater length below.

## The Cielo Complex and the La Junta Phase

The findings from recent work on the Cielo complex (Mallouf n.d.a) are expected to be directly relevant to future interpretations of La Junta district and northeastern Chihuahua archeology. As such, a brief description of the Cielo complex, as currently understood, follows.



Two seasons of excavations have been conducted at the Cielo Bravo site (41PS52), one of two essentially pure Cielo complex type sites situated on high pediments overlooking the downstream end of the La Junta district near Colorado Canyon on the Texas side of the Rio Grande. Test excavations have also been conducted at two Cielo complex components—Equipaje Spring (41BS674) and Alamo Spring (41BS673)—in the Rosillos Mountains of Big Bend National Park. In addition, many sites believed to be attributable to the Cielo complex have been recorded and instrument-mapped by the author during surveys throughout much of the Big Bend.

In a broad sense, the Cielo complex is a Late Prehistoric to Contact period (ca. A.D. 1250–1680) aceramic manifestation that is found across most of the Texas Big Bend and for an undetermined distance southward into northeastern Chihuahua and northwestern Coahuila (Mallouf 1985, 1986). As currently defined, the complex consists of a range of individual site types that, taken as a whole, may be attributable to a single regional culture. From a functional standpoint, the complex includes base camps (short-lived residential sites ) and specialized resource-procurement sites (such as hunting stations, observation posts, stone quarries, cache sites, and resource collecting and processing stations), as well as locales of ritual or other significance (rock art and mortuary sites, and possibly ritual cache sites). Among the archeological features that are attributable to the Cielo complex are rather substantial stone-based dwellings (below and Figure 6b, e), a variety of temporary constructions (Figure 6a, c, d) related to special function (e.g., shade ramadas) and special-purpose sites (e.g., hunting and collecting camp shelters), stacked-stone hunting blinds (both circular and linear), small circular and oval hearths (with and without stone linings; Figure 6h, i), small ash pits, simple middens and ring middens, stone cairns (Figure 6g) of varying size, configuration, and function (including burial and caching), linear stone alignments (Figure 6f), stone-lined cysts, stone storage platforms, and basin-shaped refuse and storage pits.

Also believed to be related to the Cielo complex, but lacking the distinctive stone-based dwellings, are a wide variety of temporary encampments located at lower elevations along basin arroyos

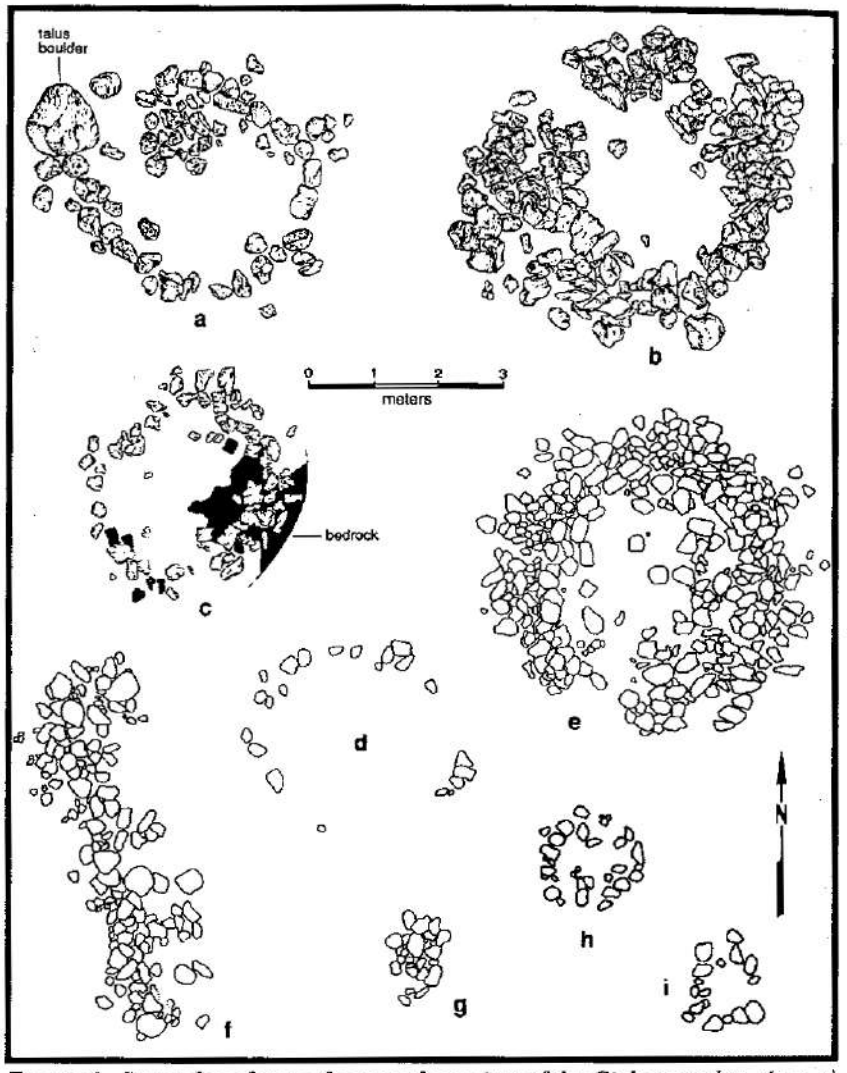


*Figure 6. Examples of stone features from sites of the Cielo complex. (a-c, e) stone-based wickiups and (d) temporary shade structure. (a) Equipaje Spring (41BS674); (b) Paint Gap (41BS111); (c) Rough Mountain (41BS291); (d–e) Cielo Bravo (41PS52). Other stone features from Cielo Bravo: (f) linear alignment; (g) cairn; (h–i) hearths.*

near foothills. These encampments often appear to be related to the hunting, collecting, and processing of specific kinds of plant and animal resources, such as sotol and deer. Such sites are characterized by the presence of multiple hearths, ring middens, and other subsistence-related features. While it is likely that some form of cursory shelter also was being used in these low-elevation camps, such features tend to be difficult to discern archeologically.



Base camps of Cielo complex peoples are characterized by distinctive, sometimes substantial, above-ground stone-based dwellings that are circular to oval in shape and have internal diameters of ca. 2.7 to 3.4 m. The construction of dwellings on sloping surfaces sometimes entailed the leveling of floors by digging out upslope areas of colluvium prior to placing the wall rock. House walls in base camps typically consist of from two to five tiers of various-sized cobbles and boulders that are uninterrupted except for narrow entranceway gaps (Figures 6b, e). Combinations of multiple-tier and single-tier structures may occur within individual sites. Superstructures probably consisted of beehive-like arrangements of large ocotillo stalks thatched with grasses and brush or covered with deer and/or bison skins—essentially forming circular-to-oval, stone-based wickiups (Mallouf 1985).

Sites of the Cielo complex having residential or special function stone wickiups are almost invariably located on strategic, well-elevated landforms that provide panoramic views of desert basins and canyon drainage systems. On the Rio Grande at La Junta, Cielo complex sites occur on elevated pediments that overlook the river basin terraces that were used for farming and habitation by coeval La Junta phase agriculturalists. Single, isolated dwellings are occasionally found in Cielo complex sites, but base camps typically contain from two to nine discreet wickiups dispersed across the landscape. The wickiups are usually spaced from 3 to 10 m apart and occur in irregular linear or loosely clustered layouts. Dwelling entranceways at individual sites tend to open to a common direction—often west, northwest, or south. Large village sites that overlook the Rio Grande may contain up to 50 or more wickiups (Figure 7), suggesting occasional—or seasonal—gathering of small bands. Not infrequently, two structures within a site may be contiguous, suggesting use by an extended family. On very rare occasions more than two houses may be tightly clustered together, as in the case of the Cielo Bravo type site (41PS52) near La Junta, where 12 dwellings coalesce to form

*Figure 7. The Arroyo de las Burras site (41PS194), a type site of the Cielo complex, contains 36 circular wickiups in both linear and loosely clustered arrangements across the surface of a high pediment.*



a crescentic village pattern (an intra-site pattern thus far unique to this site).

The Cielo Bravo site is one of four type sites recognized for the Cielo complex (Figure 8). In addition to having a unique clustered patterning of wickiups, this site has been found to contain a substantial rectangular structure—probably a ramada-like affair—that was constructed inside a shallow pit. This pit feature has similarities with some La Junta phase architectural remains found by Kelley (1985) at the Millington site a few kilometers upstream at Presidio. It was probably not unlike the freestanding, open-sided shade ramadas one sees adjacent to Mexican adobes in the area today. Significantly, both artifact assemblages and radiocarbon assays suggest rough contemporaneity of the ramada with the initial construction phase of above-ground circular house wickiups (Figure 9) at the site, sometime between A.D. 1335 and 1375.

Excavations have yielded stratigraphic and radiometric data indicative of at least four discreet occupations of the Cielo Bravo site during the period from A.D. 1335 to 1690. Two of the occupations were rather substantial. These include an initial site occupation and wickiup-ramada construction phase between A.D. 1335 and 1375, and a final occupation sometime between A.D. 1650 and 1690. Two intermediate and less substantive occupations occurred at roughly A.D. 1440 to 1450, and somewhat later. Some minor reconstruction of dwellings, and possibly the addition of two to three new dwellings, occurred during these reoccupations. Other minor reoccupations are likely to have occurred as well, but are not yet distinguishable archeologically.

The earlier occupations at Cielo Bravo appear, on the basis of common material assemblages, features, and intrasite patterning, to represent socially identical bands. Artifact assemblages are characterized by Perdiz arrow points (Figures 10 and 11) and preforms, flake drills, unifacial end scrapers and side scrapers, occasional fragments of beveled bifacial knives (Figure 12), a host of expediency tools fashioned on both flakes and blades, occasional oval pestles, a variety of manos, end-notched sinker stones, fragments of bone rasps, fragments of deer-ulna awls, small bone and stone beads, tiny turquoise beads, and a few *Olivella* shell beads. All in all, these early Cielo Bravo material assemblages are remarkably similar to those recovered from agriculturalist La Junta

*Figure 8. Aerial view of the Cielo Bravo site (41PS52) during 1987 excavation season. Stone-based wickiups are tightly clustered at this base camp of the Cielo complex.*



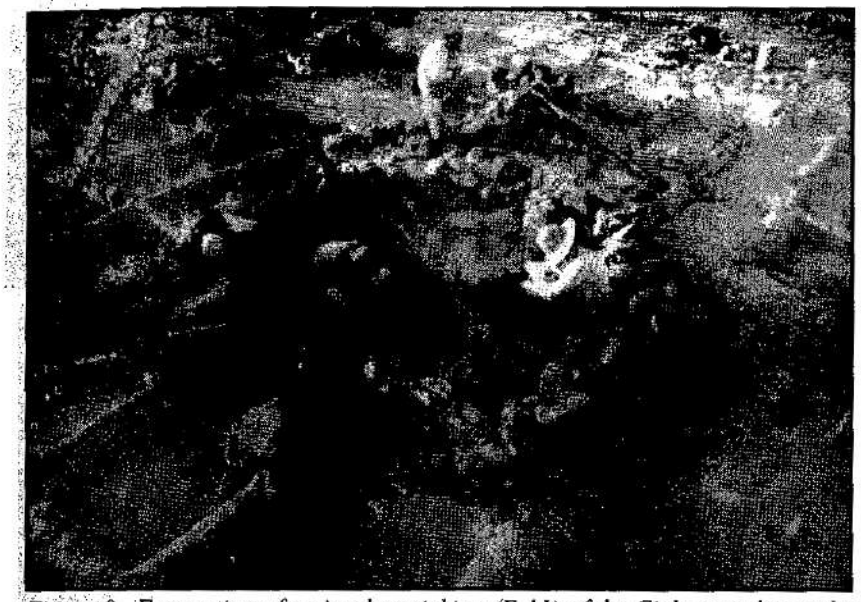

*Figure 9. Excavation of a circular wickiup (E-11) of the Cielo complex at the Cielo Bravo site (41PS52).*

phase components explored by J. Charles Kelley from the 1930s through the 1950s at the Millington, San Juan Evangelista, and Polvo sites. Importantly, unlike the La Junta phase villages, the Cielo Bravo assemblages are entirely lacking in ceramics (Mallouf n.d.b).

While the material assemblage of the fourth and final occupation at the Cielo Bravo site (between A.D. 1650 and 1690) is in many respects similar to earlier assemblages, there are some notable differences as well. One major and possibly significant difference is the addition of triangular, basal-notched Garza-like arrow points (Figure 12a, b) to the tool inventory. In addition, there seems to be a lower incidence of ground stone, a lack of end-notched sinker stones, and a higher incidence of triangular end scrapers and beveled knife fragments. Also present are several tiny trianguloid pendants, fashioned from small freshwater shells, that are virtually identical to one found in the Garza component of the Lott site in the Southern Plains (see Runkles and Dorchester 1986:100). It is possible that these late changes appearing in the material culture at the Cielo Bravo site reflect an initial intru-

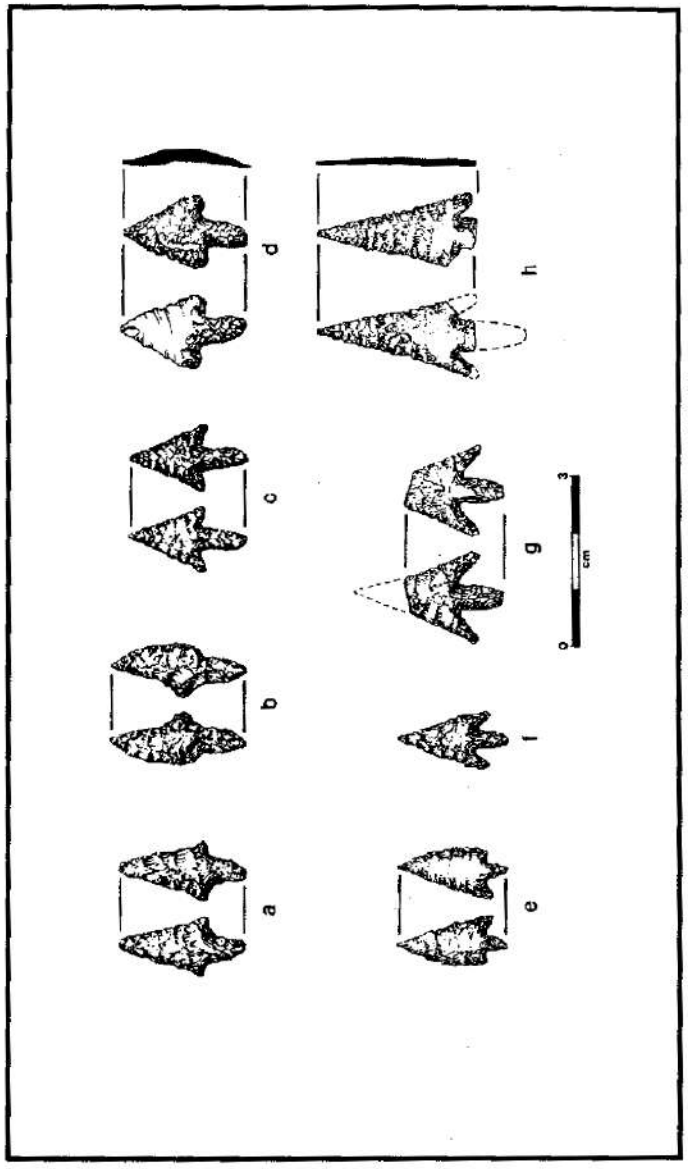


*Figure 10. Examples of Perdiz points from the Cielo Bravo site (41PS52).*



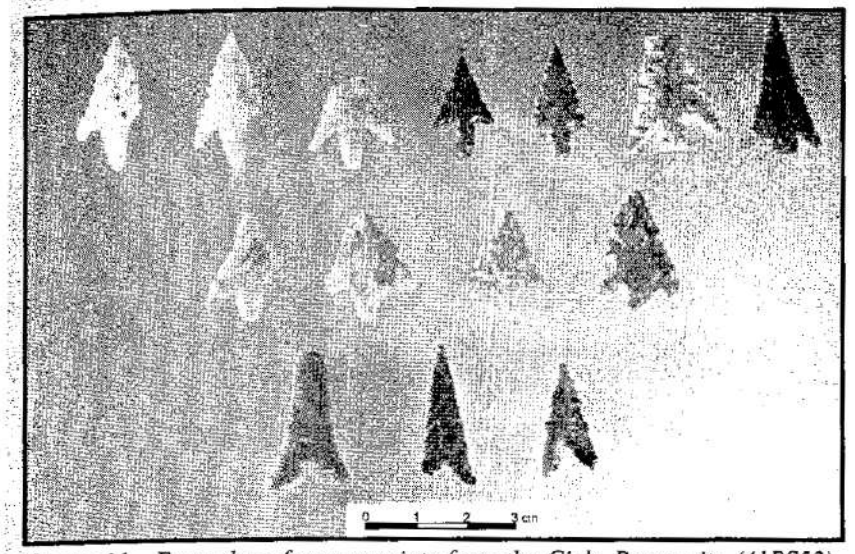


*Figure 11. Examples of arrow points from the Cielo Bravo site (41PS52). Perdiz points, top and middle rows; Garza and Soto points, bottom row.*

sion—or possibly a new wave—of Plains Apache into the Big Bend and northeastern Chihuahua regions around A.D. 1650.

## Four Hypotheses Concerning Cielo Complex–La Junta Phase Relationships

To those familiar with the archeology of the Texas Big Bend and the La Junta district, the interpretive labyrinth posed by the Cielo complex is immediately apparent. For example, what is the cultural affiliation of hunting-gathering Cielo complex peoples and what is their relationship, if any, to coeval agriculturalists of the La Junta phase as defined by Kelley et al. (1940)? What is the relationship of the Cielo complex to the Perdiz-bearing Toyah and Infierno phases in regions to the east, and to wickiup-using people of the Greater Southwest, northern Mexico, and the Great Plains? Patently obvious questions such as these are not easily answered. However, the development of a series of archeologically testable hypotheses might prove useful in addressing such questions. Four such hypotheses are presented here.

HYPOTHESIS 1): *The strong similarities of Cielo complex material assemblages—particularly those from base camps overlooking the La Junta district—to contemporary assemblages of the La*

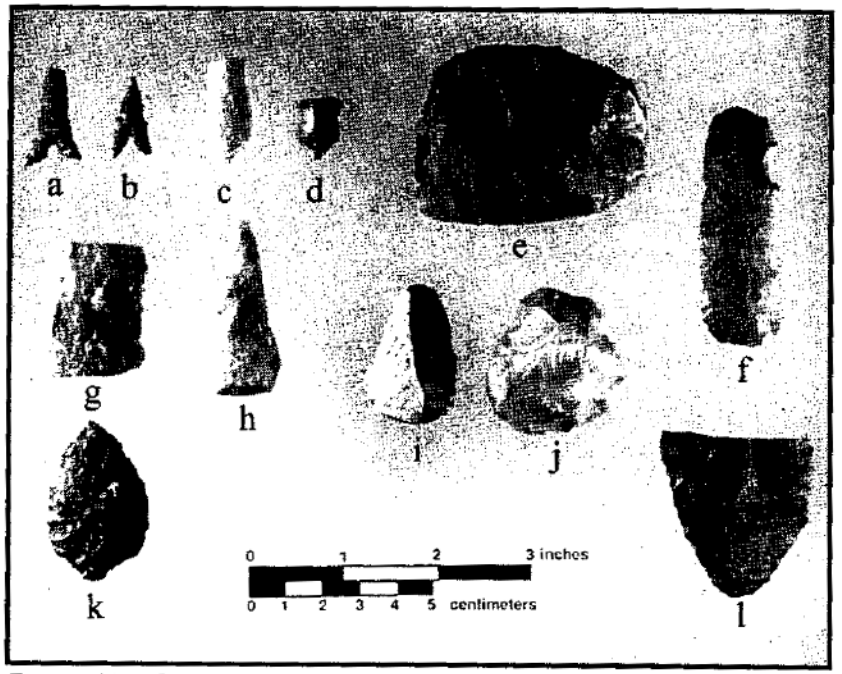


*Figure 12. Examples of various stone tools from the Cielo Bravo site (41PS52): (a–b) Garza or Soto points; (c) bifacial drill; (d) flake drill; (e) unifacial end and side scraper; (f) unifacial scraper or knife; (g–h) fragments of beveled knives; (i–j) end scrapers; (k) Perdiz point preform; (l) bifacial knife fragment.*

*Junta agriculturalists indicate that the two assemblages have origins in the same ethnic and social group.* This hypothesis suggests that pithouse-constructing agriculturalists of the La Junta phase and wickiup-constructing hunter-gatherers of the Cielo complex were ethnically and socially the same people, and the differences in architecture and settlement systems simply reflect shifts in economic behavior at intervals. This would imply a highly flexible and rather loosely knit social fabric that allowed easy movement of individuals between related bands and between varying adaptations as the need arose. The need to modify adaptations could arise from crop failure, population pressures, or hostilities. Or, the Cielo complex sites might simply reflect seasonal activities by La Junta phase agriculturalists to directly procure wild foods to supplement their stores of cultigens. In this model, the distinctive dwellings of the Cielo complex, rather than



indicating the presence of a different ethnic or social group, would instead reflect temporary or seasonal behavioral shifts to a hunting-gathering lifeway. Going a step further, one could suggest that the Cielo complex represents the remains of La Junta phase villagers who, upon the collapse of the Casas Grandes–Jornada Mogollon interaction sphere in the fifteenth century, shifted from semisedentarism to a full-blown hunting-gathering existence. However, chronometric data indicating contemporaneity of the La Junta phase (c.a. A.D. 1200–1400) and the Cielo complex (c.a. A.D. 1250–1700) currently seems to contradict this latter possibility.

HYPOTHESIS 2): *Peoples of the Cielo complex were ethnically and linguistically related to the La Junta agriculturalists but led a distinctive hunting-gathering, rather than agricultural-based, lifeway.* This "kissing cousin" model assumes that similarities in material assemblages are due to symbiotic interaction through time between socially distinct, but ethnically related, peoples. Possible ethnographic parallels can be drawn between the nomadic Chisos and the farming Conchos Indians, who are suspected by some researchers (e.g., Griffen 1969) to have had common linguistic and social roots. In this model, the pit ramada at the Cielo Bravo site is considered as possibly representing an initial occupation by La Junta agriculturalists that slightly predated occupation by wickiup-constructing hunter-gatherers. New radiocarbon data from the nearby Polvo site (41PS21) indicate that La Junta agriculturalists were constructing pithouses there at least as early as A.D. 1280–1320 (Table 1 and Figure 13), predating the earliest dates from circular dwellings at the Cielo Bravo site by 15 to 20 years. As a result, the hunter-gatherer occupation could be superimposed immediately over—or mixed with—that of the agriculturalists, and could represent either socially related or socially distinctive bands of hunter-gatherers.

HYPOTHESIS 3): *The hunter-gatherers of the Cielo complex were ethnically and socially distinct from the La Junta farmers, and similarities in material assemblages are attributed to a long-standing symbiotic relationship between the respective cultures.* This model draws heavily from early Spanish accounts that are interpreted by Kelley (1986) as indicating socially separate but symbiotically dependent cultural groups at La Junta—the Patarabueye (agriculturalists) and the Jumano

(hunter-gatherers). Because of its strategic location relative to La Junta, and the presence there of both material and architectural (e.g., a pit ramada) similarities, the Cielo Bravo site is seen as a possible interaction node of the two cultures. In this scenario, a well-documented Contact period trade of such items as deer and bison hides for cultigens is seen as having strong prehistoric antecedents. In addition, there exists a potential ancestral linkage of the Cielo complex to the Jumano, Cibolo, or Chisos Indians of sixteenth- and seventeenth-century Spanish accounts, as well as to a Jumano-Apache presence of the seventeenth and eighteenth centuries.

HYPOTHESIS 4): *All components having stone-based, circular dwellings in the Texas Big Bend and northeastern Chihuahua may not be attributable to identical social or ethnic groups.* Stone-based dwellings both within and between sites sometimes reflect variability in construction techniques that, rather than reflecting functional differences as postulated earlier, may indicate occupations by contemporary but socially distinct bands of hunter-gatherers having similar material assemblages. This author's preference for continued use of the archeologically flexible construct Cielo "complex," rather than Cielo "phase," is predicated on the foregoing possibility. Although not yet demonstrable archeologically, some forms of dwellings could ultimately prove attributable to earlier peoples of the Late Prehistoric period, or even to Archaic period inhabitants of the region.

**Discussion**

Similar models have been developed that address the pressing problem of prehistoric relationships between the Cielo complex and hunting-gathering peoples of the Infierno and Toyah phases of regions east and northeast. The Infierno phase (Dibble 1978; Turpin 1982) of the Lower Pecos River region and, possibly, northern Coahuila, remains poorly known, but it has been characterized on the basis of surface evidence as having high-elevation enclosure-bearing sites with probable associations of ceramics, end scrapers, flake and blade industries, and a variety of arrow point styles including Perdiz. It has been hypothesized that the Infierno phase represents an intrusion of Athapaskans or other Plains Indians into the Lower Pecos region very late in prehistory (Turpin 1982). Comparison of the Infierno phase with the Cielo



complex is presently rendered difficult in the absence of controlled excavations at Infierno sites that might clarify artifact associations and temporal-cultural affiliations. However, significant differences in Infierno enclosure-construction techniques, along with a presumed association of ceramics and very late arrival into the region, suggests that different social groups are indicated. The key to understanding the origins of the Infierno phase may well hinge upon determination of the origins of its associated ceramics.

The Toyah phase or "horizon" of Central and South Texas and portions of northeastern Mexico is, on the other hand, reasonably well defined (e.g., Jelks 1962; Prewitt 1983; Black 1986), and it bears resemblance to the contemporaneous Cielo complex primarily in terms of the make-up of associated lithic assemblages, as well as in some characteristics of subsistence practices (deer and bison hunting) and postulated band sizes. Both Toyah phase and Cielo complex contain lithic assemblages characterized by Perdiz points, beveled knives, triangular end scrapers, flake perforators, core-hammerstones, sequence-flake and blade-core reduction strategies, and conical cores—in other words, assemblages that seem indicative of a Plains bison-hunter technology and tool kit. On the other hand, the Toyah phase as currently defined lacks the distinctive stone-based wickiups and special function enclosures, cache and burial cairns, ring-middens, and other features attributable to the Cielo complex. Moreover, Cielo complex material assemblages north of the Rio Grande are lacking in ceramics, while Toyah phase assemblages are typified by various styles of ceramics. Other differences in material and feature assemblages exist as well. For example, alternately beveled knives and triangular end scrapers, although present, tend to be much less common in Cielo complex tool assemblages than in assemblages of the Toyah phase.

In sum, material similarities and temporal contemporaneity between the Cielo complex and the Toyah phase may be deemed strong enough to argue for a common Southern Plains, bison-hunter origin for both. If one adheres to this most obvious, and what will almost certainly prove most popular, interpretation, the next logical step is to explain apparent differences in settlement, subsistence, material assemblages, and social systems primarily in terms of human adaptive responses to significantly disparate environmental circumstances and to diverse external cultural in-

fluences (e.g., the lack of ceramics in Cielo complex assemblages may be due to the difficulty of avoiding breakage in such rough, rocky terrain). Having thus compensated for differences in physical remains, and following the traditional logic among Texas archeologists with respect to the creation of sociocultural units, the Cielo complex might then be conveniently pigeonholed as simply representing a western expression—a division or even a subphase—of a redefined Toyah phase.

In my opinion, such a categorization would be premature and possibly detrimental to our eventual understanding of the cultural dynamics involved. This is in part due to the fact that archeological constructs such as phases, even when appropriately applied (e.g., Johnson 1987), inexorably tie interpretative efforts into a rigid temporal framework based on similarities in artifact styles, while masking our understanding of the very cultural processes and causal factors that we hope to detect. This significant problem, which is much too involved to address properly in this paper, is most succinctly stated by Flannery (1986:507).

> We are therefore confronted with a paradox: the processes we wish to document proceed as a series of logistic curves, while our chronologies are composed of linear phases based on stylistic changes in artifacts that may have little or nothing to do with those processes.

Suffice it to say that, while there is artifactual and temporal evidence of a linkage between the Cielo complex and the Toyah phase, the nature of this linkage has yet to be resolved. Some common denominators probably existed in the realms of language, subsistence patterns (e.g., bison hunting), and other factors. And while there is a very real likelihood of a common ancestry, we should exercise caution in attributing origins of both cultural constructs to the Southern Plains, Piney Woods of Texas, or upper coastal regions. Radiocarbon assays from Perdiz-bearing components of La Junta and the Big Bend (Table 1 and Figure 13) are roughly comparable to the earliest accepted ages from other regions of Texas, and the origins of both the Toyah phase and Cielo complex might instead lie in the vast, archeologically unexplored reaches of northern Mexico.



*Table 1*
*Radiocarbon Assays from Perdiz-bearing Components in the Texas Big Bend*

| Site Name | Site Number | Cultural Affiliation | Sample No. | Sample Context | Kind of Sample | Uncorrected Age (B.P.) | $C^{13}$ Adjusted Age (B.P.) | Calibrated Age Range | Highest Confidence Level (93%) | References |
|---|---|---|---|---|---|---|---|---|---|---|
| Polvo | 41PS21 | La Junta Phase | Beta-29991 | Charred beam from pit-house | Wood charcoal | 680±60 | 620±60 | *A.D. 1282–1405 | *A.D. 1315 | Mallouf n.d.a Kelley 1990 |
| Polvo | 41PS21 | La Junta Phase | Beta-29992 | Charred beam from pit-house | Wood charcoal | 750±70 | 690±70 | *A.D. 1262–1387 | *A.D. 1281 | Mallouf n.d.a Kelley 1990 |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-21790 | Wickiup (E-10) living floor | Wood charcoal | 620±130 | 580±130 | *A.D. 1280–1440 | *A.D. 1330 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-21791 | Posthole outside wickiup (E-11) | Wood charcoal | 450±70 | 430±70 | *A.D. 1421–1491 | *A.D. 1441 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-21793 | Posthole outside wickiup (E-11) | Wood charcoal | 880±90 | 820±90 | *A.D. 1068–1278 | *A.D. 1219 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-21794 | Living surface outside wickiup (E-10) | Wood charcoal | 210±60 | 200±60 | *A.D. 1647–1955 | *A.D. 1665 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-21795 (AMS) | Pit ramada posthole | Wood charcoal | | 555±80 | *A.D. 1301–1431 | *A.D. 1335 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-21796 | Outside living surface (ash pit) | Bulk carbon | 100±60 | 150±60 | *A.D. 1662–1955 | *A.D. 1681 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-21797 | Hearth inside wickiup (E-10) | Bulk carbon | 350±80 | 410±80 | *A.D. 1425–1623 | *A.D. 1446 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-26707 | Pit ramada posthole | Wood charcoal | 520±40 | 480±40 | *A.D. 1414–1440 | *A.D. 1429 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-26709 | Pit ramada posthole | Wood charcoal | 310±40 | 260±40 | *A.D. 1532–1659 | *A.D. 1648 | Mallouf n.d.a |
| Cielo Bravo | 41PS52 | Cielo Complex | Beta-26711 | Hearth outside wickiup (H-1) | Bulk carbon | 100±50 | 150±50 | *A.D. 1665–1955 | *A.D. 1681 | Mallouf n.d.a |
| Alamo Spring | 41BS673 | Cielo Complex | TX-4383 | Wickiup living surface | Wood charcoal | 545±75 | | †A.D. 1335–1480 | | Mallouf 1985, 1987 |
| Persimmon Gap | 41BS609 | Cielo Complex (?) | TX-2869 | Burned rock feature | Wood charcoal | 460±70 | | †A.D. 1385–1500 | | Baskin 1978 Mallouf 1985, 1987 |
| | 41BS706-B | Cielo Complex (?) | DIC-1 | Hearth (F-1) | Wood charcoal | 240±45 | | †A.D. 1640–1950 | | Clifton 1986 Mallouf 1987 |
| | 41BS706-B | Cielo Complex (?) | DIC-2 | Hearth (F-9) | Wood charcoal | 210±45 | | †A.D. 1515–1810 | | Clifton 1986 Mallouf 1987 |
| | 41BS706-B | Cielo Complex (?) | DIC-3 | Hearth (F-6a) | Wood charcoal | 170±45 | | †A.D. 1500–1675 | | Clifton 1986 Mallouf 1987 |

*Age correction based on Stuiver and Becker (1986), Method A.
†Age correction based on Klein et al. (1982).

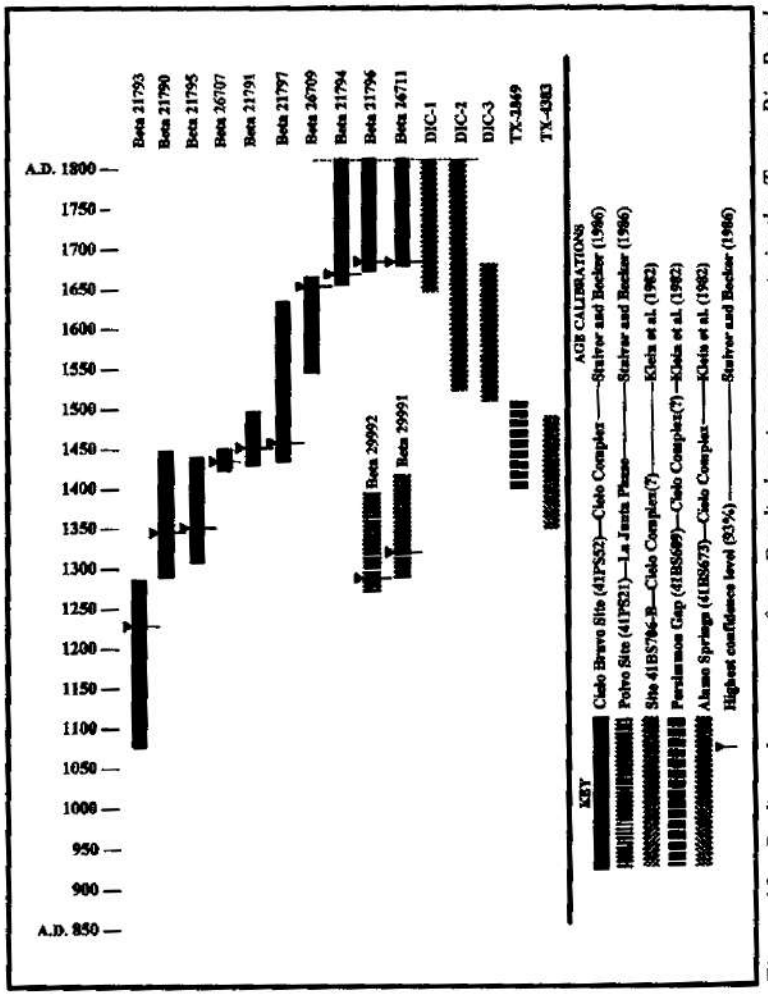


*Figure 13. Radiocarbon assays from Perdiz-bearing components in the Texas Big Bend, including the Cielo complex and the La Junta phase.*



A hypothetical schematic showing two of the most likely source areas for origins of the La Junta and Toyah phases and the Cielo complex is offered in Figure 14. The Southern Plains hypothesis is predicated on cross-cutting similarities in material assemblages that reflect a Plains bison-hunting orientation and on archeological and ethnographic analogies that suggest successive southward waves through time of Plains-oriented Indians into adjacent physiographic regions.

The north-central Mexico hypothesis bears resemblance to a much earlier Jumano model proposed by Kelley (1955). In this case, however, the hypothesis centers on anthropologically recognized tendencies of human groups to adapt their lifeways and technologies to take advantage of major shifts in resource availability. Similarities of tool assemblages, rather than indicating a single wide-ranging social group, may instead reflect common subsistence patterns among socially distinctive peoples, or a loose conglomeration of socially and linguistically affiliated bands (Mallouf 1987). The many distinctive bison hunting cultures having similar material assemblages across the Great Plains of North America are a case in point. The reentry of large bison herds into the Southern Plains and adjacent areas in the thirteenth century, along with the development of new trade potential based in part upon bison products, would have provided an impetus for the diffusion of material traits.

## Conclusions

Viewed collectively, the highly varied site types and features attributable to the Cielo complex reflect a complex, dynamic, and flexible social system that was well adapted to the rugged desert-mountain environment of the Texas Big Bend and northeastern Chihuahua. The ability to gain real insight into the lifeways of Cielo complex peoples, however, will require long-term intensive studies that explore the full range of archeological variability, including adaptational, behavioral, and site abandonment processes, within the social system. Preliminary inferences such as those offered above can and must be tested archeologically through extensive survey and large-scale, carefully controlled excavations that crosscut the full range of site variability.

In conjunction with expanded study of the Cielo complex, I believe that we should reevaluate past interpretations (e.g., Kelley

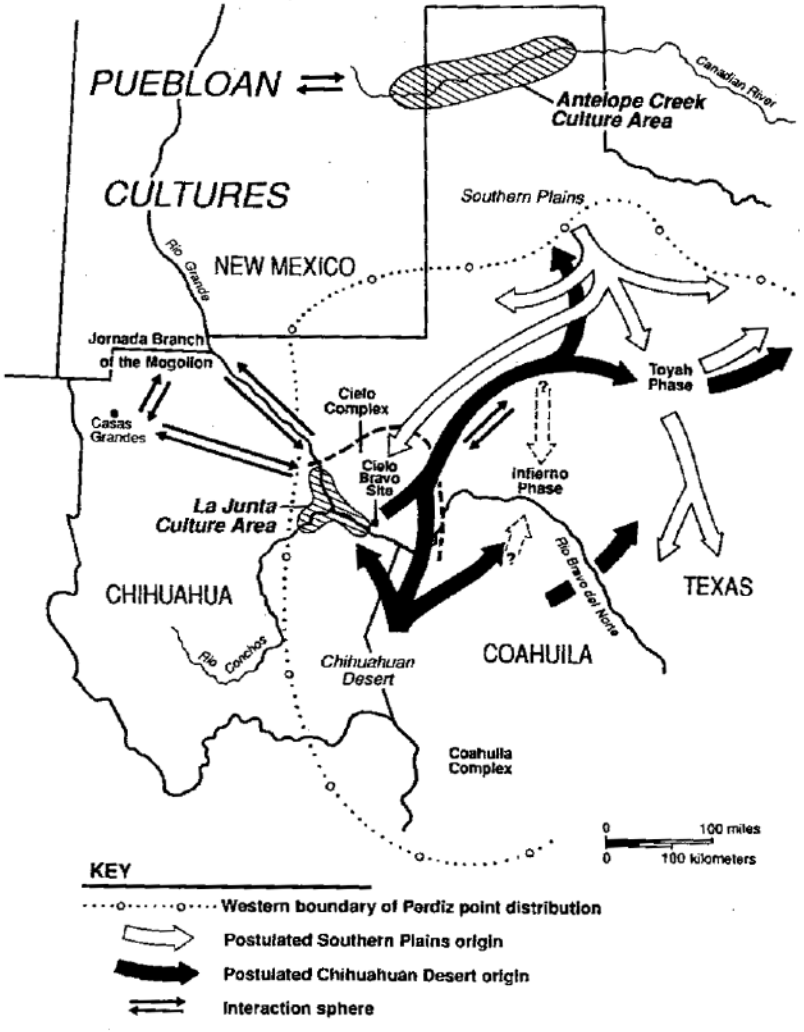


*Figure 14. Postulated origins and interaction spheres of the La Junta phase and the Cielo complex.*

et al. 1940; Lehmer 1958; Kelley 1986, 1990) that imply an ethnic and social linkage of La Junta phase semisedentary agriculturalists to sedentary peoples of the Jornada Branch of the Mogollon. To the contrary, La Junta phase peoples may originally have been a hunting-gathering society indigenous to the Chihuahuan Desert



region (or intrusive into the Trans-Pecos from the Southern Plains) that, through social interaction, merely adopted certain architectural, agricultural, and other traits of Jornada Mogollon peoples of the El Paso region. This interpretation would account for differences noted by Kelley in aspects of La Junta phase architecture, and for significant differences in material culture as well.

I see strong parallels to the La Junta culture area in the contemporary Antelope Creek phase of the Canadian River of the Texas Panhandle (Figure 14). Semisedentary peoples of the Antelope Creek phase were almost certainly indigenous to the Southern Plains and not of Puebloan origin, yet they adopted architectural, agricultural, and other aspects of Puebloan culture to the west. As was probably the case with La Junta, such influences were originally spawned among Antelope Creek hunter-gatherers as a result of their entry into symbiotic trade relationships, based in large part upon bison products, with sedentary Puebloan peoples. In the cases of both the Antelope Creek and La Junta cultures, differences in ethnic roots and socioeconomic systems are reflected archeologically in their respective bastardization of Puebloan architectural styles, and, even more significantly, in their retention of hunter-gatherer material assemblages. The use of ceramics by both cultures, rather than supporting ethnic affiliations with sedentary Puebloan cultures, in my opinion, also supports the argument for distinct ethnic roots. Although they obtained minor amounts of Puebloan wares through trade, Antelope Creek peoples relied heavily on a distinctive Plains style of utilitarian ware (Borger Cordmarked) that they themselves manufactured. La Junta phase peoples, on the other hand, rather than manufacturing their own pottery, obtained their wares almost exclusively through trade with sedentary peoples of the Río Conchos and Casas Grandes in northern Chihuahua, and with the Jornada Mogollon of the El Paso region. In contrast to sedentary Puebloan cultures, La Junta and Antelope Creek phase peoples never fully made the transition to a sedentary, agricultural-based existence. Instead, their material assemblages reflect semisedentary lifeways with continued strong reliance on hunting and gathering as a means of supplementing their agricultural stores.

In closing, I must express a mixed reaction to Kelley's (1990) most recent reinterpretation of La Junta district archeology. Like Kelley, I feel that our concept of the "Bravo Valley aspect" (in-

cluding La Junta, Concepcion, and Conchos phases), as originally defined (Kelley et al. 1940), should be subjected to careful revision. In light of new data from the region, it is unlikely that Kelley's original pivotal concept of a cultural continuum throughout the three phases will stand the test of time. It is to this exceptional scholar's credit that he was actively involved in the revision of his original long-standing interpretations.

For reasons stated earlier, I do question Kelley's (1990) latest interpretation of the La Junta phase as being an ethnic satellite of Casas Grandes or the Jornada Mogollon and having the primary purpose of supplying raw materials to the parent redistribution center in northwestern Chihuahua. Instead, I propose that the relationship was based upon the symbiotic exchange of goods by semisedentary, non-Puebloan La Junta villagers with sedentary Puebloan groups to the west, as was the case with the Antelope Creek culture far to the north. Both cultural systems flourished as a result of the healthy flow of raw materials and products.

With the eventual collapse of the Casas Grandes interaction sphere around A.D. 1450 (Ravesloot 1988), the eastward flow of trade goods to La Junta dried up. Kelley (1990:39) suggests that, as a result of the collapse of Casas Grandes, the Puebloan La Junta villagers subsequently abandoned the area:

> leaving the area occupied only by semi-sedentary hunters and gatherers living in simple structures. Around ca. 1550 cultural influences from the south, following the Río Conchos, may have combined with others introduced by the arrival of the Jumano (as early Apacheans?) at La Junta to form the protohistoric Concepcion phase.

In contrast to Kelley's interpretation, I would offer—based upon examination of their material assemblages—that La Junta phase peoples were practicing a semisedentary, rather than sedentary, existence to begin with (as discussed earlier). Rather than abandoning the area upon the collapse of the Casas Grandes interaction sphere, they reverted to a largely hunting-gathering lifeway—a lifeway that is in part archeologically manifested, both prior and subsequent to the fall of Casas Grandes, in what I have termed the Cielo complex.



Contrary to Kelley's suggested arrival of the Jumano (as possible Apacheans) into the La Junta area around A.D. 1550, I would offer the possibility that both the La Junta phase and the Cielo complex are in fact ancestral manifestations of the sixteenth-century "Jumano" dating back to at least A.D. 1250 in the area, and that both have ethnic origins among non-Athapaskan hunter-gatherers of either the Southern Plains or the northwestern Chihuahuan Desert region. Based upon data from the Cielo Bravo site, a Jumano-Apache or Apachean presence is not materially manifested in the La Junta area until about A.D. 1650, but I would agree with Kelley that a somewhat earlier arrival date for the Apache is a possibility. I also agree with Kelley (1990) that the Protohistoric Concepcion phase, if revised and retained, should reflect an Apachean presence, or at least a strong Apachean influence, at La Junta.

While space does not permit further discussion, there are other characteristics of La Junta phase villagers that suggest they were a people distinct from Puebloan culture who—through influence and trade—merely adopted certain material aspects of Jornada Mogollon and Casas Grandes culture without ever really assuming full-blown sedentism. If this assessment is accurate, then the case for a common ethnic, linguistic, and socioeconomic linkage between the La Junta phase and the Cielo complex can be reasonably argued.

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