The Lower Pecos River Region of Texas and Northern Mexico

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The Lower Pecos region, the smallest of the defined cultural areas in Texas, encompasses an elliptical area that centers on the mouth of the Pecos River and extends perhaps 150 km north and south of the Rio Grande, from the vicinity of modern-day Sheffield to the Arroyo de la Babia in Coahuila, Mexico (Fig. 8.1). The southern limits remain vague pending more systematic research in Mexico, but at present the most southerly of the known sites are on the north face of the Sierra Santa Rosa, northwest of Múzquiz, the former Spanish colony Santa Rosa Sacramento, and southeast of Boquillas del Carmen, the crossing of the Rio Grande. The east-west axis roughly follows the Rio Grande from Del Río—Ciudad Acuña to beyond the historically famous hamlet of Langtry, and extending onto the Stockton Plateau north of Dryden.

Traditionally, the geographical boundaries of the region have been defined by the extent of the most distinctive of four prehistoric rock art styles (the Pecos River style) and by a commonality in material culture recovered from dry rockshelters, the latter partly a product of exceptional preservation of wood and plant artifacts. The concept of a Lower Pecos cultural area is in fact a construct based on the florescence of regionally specific characteristics, such as the distinctive Pecos River style pictographs and projectile points that bear local names—Langtry, Val Verde, and Pandale—that date between five thousand and three thousand years ago, during the Middle Archaic period. Before and after the Middle Archaic, the Lower Pecos shares many of its traits with adjacent regions, apparently being affected by cultural influences radiating from Texas and northern Mexico. Thus, the Lower Pecos cultural trajectory can be visualized as elliptical with its apogee reached during the Middle Archaic period.

Typically, hunter-gatherer adaptations are strongly correlated to environmental factors, and the Lower Pecos is no exception. The climatic sequence has been reconstructed from fauna (Dibble and Lorrain 1968; Lundelius 1984), pollen (Bryant 1966, 1969; Bryant and Shafer 1977; Story and Bryant 1966), macroflora (Dering 1979, 1999b), coprolites (Sobolik 1988, 1994, 1996; Stock 1983; Williams Dean 1978), flood sequences (Patton and Dibble 1982), sediments (Robinson 1997a), and ethnohistory (Turpin 1987b). The cool mesic Late Pleistocene savanna, capable of supporting herds of now-extinct megafauna, succumbed to increasing aridity some nine thousand years ago. Semidesert conditions prevailed, reaching their peak about five thousand years ago and relaxing around 3000 B.P. during a short but influential mesic interlude that permitted the expansion of the Great Plains grasslands and their characteristic fauna at least as far south as the Rio Grande. Then, the trend toward aridity resumed and perhaps even accelerated until late in the Prehistoric or early Historic periods, when early accounts again describe extensive grasslands capable of supporting large herd animals (Turpin 1987b). Sometime late in the 1800s, the resurgence of the drying trend coincided with the introduction of domestic livestock, tipping the fragile balance of nature in favor of the thorny unpalatable scrub that persists despite moisture deficits, the thin rocky soils, and the insatiable appetite of sheep and goats. Thus, although the desert succulents that were the staple of prehistoric diet over the millennia still grow in the region today, much of their relative abundance has been lost to invader species.

The northern half of the Lower Pecos region is flat to rolling rangeland dissected by entrenched tributaries to the three major rivers—the Devils, the Pecos, and the Rio Grande—whose confluences now inundated by Amistad Reservoir. Although all were (and are) important sources of water, and by extension harboring important faunal and floral resources, the three differ in potability. The saline Pecos (originally called the Salado), the muddy Rio Grande, and the clear, spring-fed Devils were undoubtedly the nucleus of prehistoric occupation, but springs, seeps, and tinajas (potholes) permitted exploitation of upland and tributary resources that apparently waxed and waned in-
many depending upon climatic conditions. The impermanence of upland water sources is reflected in the settlement pattern, where scheduling depended upon a thorough understanding of weather, topography, and local water retention capacity (Turpin 1996).

The poorly known southern half of the Lower Pecos region, between the Rio Grande and the Sierra del Carmen, is deficient in permanent water sources, forcing its inhabitants to develop a different adaptive strategy. The Rio Grande plains is flat and featureless except where dissected by entrenched tributary canyons that have been inundated to some degree by the impoundment of Amistad Reservoir. The Sierra Pecos rise steeply, presenting a barrier to southward movement, and access, now as in the past, is limited to the broad valleys east and west of the mountains. Springs rising high in the mountain defiles are the only permanent source of water, and many of these have gone dry in the modern era. Survey has generally been limited to the specific search for cave paintings, so little is known about the domestic side of prehistoric lifeways, especially in the mountainous zone. Recent pictograph recordings, and shelter excavations in the Encantada Mountains, west of the Arroyo de la Bahia, illustrates both similarities and differences between the material culture (Turpin 1979a) and the rock art of south and north (Turpin and Eling 2002), but it is clear that the entire area was united by a shared belief system during the Middle Archaic period even if differences in topography, hydrology, and natural resources encouraged variability in aboriginal technology and economy.

Other geographic factors that influenced prehistoric occupation include the numerous rock shelters hollowed from the sheer limestone cliffs (Fig. 8.2), the copious quantities of littic raw material available as grava bed or eroding chert beds, and the strictures imposed on accessibility between upland and riverine resources. The prehistoric settlement patterns reflect the high incidence of rockshelters on the Pecos River and the Rio Grande and their lesser presence on the Devils River, where instead huge spring-fed caves are found at the mouths of every tributary. By far the majority of the sites recorded south of the Rio Grande are also rockshelters, but the emphasis on rock art recording has undoubtedly introduced this bias. Early settlers describe an environment quite different from that of today, before cotton, exacerbated by overgrazing and modern droughts, reduced the soil cover in historic times. The disastrous result is evident in the sitiation of Amistad Reservoir, the definition of stone features once perched on deeper soils but now sitting on exposed bedrock (Turpin 1982; Turpin and Bement 1989), the burial of the Lewis Canyon petroglyphs under redeposited sediments (Turpin and Bass 1997), and the higher incidence of flood damage to rockshelters and rock art (Parson and Dibble 1982). The modern flora and fauna are similarly a product of livestock husbandry, but the vegetational communities retain the basic components will lived through much of prehistory.

Archaeological research in the lower Pecos region can be divided into three eras: the antiquarian search for museum specimens that prevailed in the 1930s, the salvage program in anticipation of the construction of Amistad Reservoir (then Diablo Reservoir) between 1958 and 1965, and the current resurgence of individual and privately funded research. The last fifteen years of the twentieth century saw rockshelter excavations and broad area surveys, but the most recent trend is a phenomenal interest in the diverse body of Native American rock art preserved in the dry shelters and overhangs. The published and unpublished information generated by sixty years of research is so
The intrusive powers, whether Native American or European, was the most evident ethnographically (Turpin 1989).

The culture history of the Lower Pecos is a microcosm of hunting and gathering societies throughout the world, alternating between an emphasis on a hunting economy to one dominated by gathering. The stamp of arid lands adaptation is seen in the aspects of prehistoric lifeways that are most influenced by environment and economics, such as material culture, technology, and settlement patterns. The excellent preservation of normally perishable items, and the diverse and elaborate body of art, both mural and mobile, transcend the mundane, opening vistas into the political, social, and religious spheres of hunter and gathering lifeways.

Two competing models of prehistoric adaptation have been generated from two different perspectives on the material record. One school postulates a static Archaic continuum that endured for nine thousand years (Kirkland and Newcomb 1967; Shaffer 1975, 1981a, 1986, Shaffer and Bryant 1977; and to some degree, also Dearing 1999b and Taylor 1976); my perceptions are of both abrupt and gradual changes within the parameters imposed by small-scale social organization (Turpin 1996b). Those diachronically opposed viewpoints are part of a function of research focus. The first perspective is derived from the natural environment, as well as from such material classes as food, fiber, coprolites, and stone tools, and it can be theoretically described as an ecological, functional, or adaptive model. The second perspective is conditioned by an emphasis on less tangible items and processes, including rock art, mortuary customs, and settlement patterns.

### Paleoindian Period

<table>
<thead>
<tr>
<th>Subperiod</th>
<th>Radiocarbon Years B.P.</th>
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<tr>
<td>Aurora</td>
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<td>Bootsfe</td>
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<td>Oriente</td>
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<td>Viejo</td>
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<td>Eagle Nest</td>
<td>6000–3200</td>
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<td>San Felipe</td>
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<td>Cibola</td>
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<td>Flanders</td>
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<td>Blue Hills</td>
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The first inhabitants of the Lower Pecos region apparently arrived on the banks of the Rio Grande sometime between twelve thousand and fourteen thousand years ago, bearing a fully developed cultural system that centered on the procurement of big game. Scattered and burned horse, camel, bison, and bear bones in the small site of Cueva Quebrada are the first radiocarbon-dated evidence of Paleoindian occupation of the
region (Lundelius 1984). Bone beds of equivalent age at Bonfire Shelter (Fig. 8.3) undoubtedly represent the intermittent slaughter and butchering of elephants, camels, horse, and bison, but the absence of stone tools weakens the case (Bement 1986, Dibble and Lorrain 1968). Although the perspective afforded by these two sites is perform limited, and perhaps biased, both are compatible with the widely held concept of Paleoindian peoples as big game hunters exploiting the specialized environment of the terminal Pleistocene.

Bonfire Subperiod (10,700 to 9800 B.P.)

More definitive is the massive accumulation of now-extinct bison associated with Folsom and Plainview dart points in Bone Bed 2 at Bonfire Shelter (Dibble and Lorrain 1968). On at least three occasions, herds totaling an estimated 120 animals were driven over the cliff above the shelter, tumbling into the interior, where they were butchered and processed. Radiocarbon dates confirm an age range of over 10,000 B.P., concurrent with a wet period that Vaughn M. Brown, Jr. (1966), called the Medina stage. The faunal and floral evidence is corroborated by the flood sequence at Arenosa Shelter, near the mouth of the Pecos River, where a series of fine-grained sedimentary layers also suggest a humid interlude predating 9500 B.P. (Pattin and Dibble 1982).

Bone Bed 2 at Bonfire Shelter is the oldest known example of the jump technique of killing bison, and this presumably implies organizational skills consistent with coordinated group hunting strategies. More importantly, the big game hunting strategies and the characteristic projectile point styles incinerate the Lower Pecos into the Paleoindian sphere as it was expressed across North America just prior to the extinction of many of these species.

Oriente Subperiod (9400 to 8800 B.P.)

Although commonly called the Late Paleoindian period because of communities in lithic technology, the Oriente subperiod sees the first tentative beginnings of the Archaic adaptation that was to become the hallmark of the Lower Pecos region. J. Roy Johnson (1964) first noticed the mixture of Archaic and Paleoindian cultural traits at Devils Mounds, where the economy was not noticeably oriented toward big game hunting. Broad resource procurement was evidenced at Baker Cave in deposits of this age (Heister 1983), and the fiber industry was apparently well under way (Andrews and Adovasio 1980), at least in northern Mexico. These technological and economic shifts are appropriate responses to the onset of the long drying trend that Bryant (1966) called the Stockton stage.

Archaic Period

Viejo Subperiod (8800 to 5500 B.P.)

The Early Archaic period, or Viejo subperiod, as currently defined, is far too long and amorphous to be considered a meaningful cultural unit. Spanning some thirty-four hundred years, during this period one sees the entrenchment of many of the traits that are attributed to the Archaic tradition that defines the Lower Pecos region. The Viejo subperiod occupied the latter half of Bryant's (1966) Stockton stage, the five-thousand-yearlong trend to aridity that presumably conditioned the adaptive strategies of Lower Pecos people. In Black Cave, the cultural deposits were completely scoured, exposing Pleistocene eolianis (Turpin 1982, 76); at Seminole Sink, the shaft leading to the subterranean chamber was opened for the first time (Turpin 1985, 68). These localized phenomena suggest intermittent periods of erosional intensity sometime prior to 6800 B.P., perhaps connected to the onset of the drying trend (Turpin 1991b, 28).

During the Viejo subperiod, the preference for rockshelter habitation emerged, with sites such as Hinds Cave yielding evidence of segmented spaces; that is, the rockshelter has activity areas defined by interior burned rock middens, prickly pear roots, lattices, and perishable items (Ledd 1984). Small shelters such as the Wose Ranch site in Terrell County, were occupied on an intermittent basis, probably by small foraging or collecting groups who sought expedient housing (Turpin 1997b). Dietary information gained from coprolite analysis implies an extremely successful adaptation to an increasingly arid environment (Williams Dean 1978), presumably through a reliance on desert succulents. Kenneth M. Brown (1991, 118) has summarized the evidence for the introduction of corn and agave (most likely tehuacilla) into rockshelter deposits during the Early Archaic period.
These same plants are the basis of the Lower Pecos fiber industry and the source of raw materials for clothing, matting, basketry, sandals, and twine (Andrews and Adovasio 1980; McGregor 1992; Schwetz 1956, 1963). Commonalities with the northern Mexican fiber assemblages, and continuity over time, led James Adovasio (Andrews and Adovasio 1980) to postulate a Coahuilan origin or affiliation for the Lower Pecos industry. The most durable fiber artifacts, the sandals, illustrate the broad appeal of the common plaited forms throughout northern Coahuila and the Lower Pecos, but the techniques are mature enough to have encouraged local and regional variations by the middle of the Early Archaic period (W. Taylor 1988; Tuzin 1997d).

The projectile points considered characteristic of this subperiod, although they bear localized names such as Baker and Bandy, are widespread throughout central Texas, where they are known as Uvalde and Martiniside (E. Turner and Hester 1993). A number of other generic projectile point types, called by descriptive terms such as early barbed, early stemmed, and early corner-notched, remain amorphously defined. A regionally specific variation on the ubiquitous unstemmed triangular tools of southern Texas and northeastern Mexico, the Devil's Elbow dart point dates to about 6000 B.P. during the transition between the Vizcaya and Eagle Nest periods, reaffirming the multiplicity of possible external relationships during the Early Archaic (Tuzin and Bemont 1992).

The one mortuary site of this age that has been excavated (Tuzin 1988) has cultural analogs in Coahuila (Avelzyra et al. 1964) and the karst regions of Texas (Bement 1994). A skeletal population of twenty-one individuals recovered from a vertical shaft cave, Seminole Sink, indicates that the people experienced only temporary, perhaps seasonal, dietary stress and little trauma (Marks et al. 1988). However, dental pathologies were common and were accompanied by early tooth loss that probably resulted from a high intake of sugar and carbohydrates (see also Hartnady 1988; Tuzin et al. 1986).

The mixture of young and old, male and female, in this one site hints at an egalitarian society where all ages and both genders were accorded the same treatment after death. Apparently, the dead were dropped or lowered through the narrow vertical shaft at Seminole Sink, a process that curiously seems unique, but that in fact has great psychological ramifications. The broad distribution of this mortuary practice can be attributed to both the physical convenience afforded by a natural tomb and the emotional satisfaction of returning the dead to the earth in a symbolic reversal of parturition (Tuzin 1988).

Little else is known about the social structure and world view of these Early Archaic people. Two forms of portable art that characterize the Archaic period as a whole may have their beginnings at this time: painted pebbles and unbaked or poorly fired clay figurines. Neither art form is well dated, but pebbles painted with simple geometric designs have been recovered from Early Archaic deposits (Tuzin and Middleton 1998). A larger inventory of painted pebbles has been stylistically sequenced and placed within an Archaic context that spans all the Lower Pecos temporal subdivisions (Parsons 1986; see also Moch 1987). These flat, smooth river rocks are systematically decorated with a limited number of motifs that often portray human attributes (Moch 1987; Parsons 1986). In fact, the pebble often reflects the organization of the human body, with eyes in the upper, narrower end and identifiable genitalia, usually female, in the lower, wider end. It has been suggested that the pebble served as a substitute for real people in curing and fertility rites or as personal, as opposed to public, ritual paraphernalia. Clay figurines are less common, but they too are miniature humans, with pronounced female sexual characteristics, but headless (Chandler et al. 1994; Shafer 1975b). They are even more poorly dated than the painted pebbles, in part due to their rarity and in part due to poor preservation. They are only included here because they, like the painted pebbles, are Archaic phenomena of ambiguous age.

Eagle Nest Subperiod (5500 to 4100 B.P.)

About 5500 B.P., the beginnings of an insularity that reaches its peak in the subsequent San Felipe subperiod are signaled by the appearance of Pandale projectile points, a distinctly beveled style with a limited regional distribution. This shift in lithic technology coincided with the culmination of Bryant's 1966 Stockton stage in an extremely hot, dry interlude he called the Oroena Erosional after erosional features in strata at Arenosa Shelter (Ebbel 1967) and the Devils Mouth site (L. Johnson 1964). At about the same time, Black Cave suffered another massive erosional event that flushed the deposits, leaving only a few remnants of former living surfaces cemented to the walls (Tuzin 1997c).

At Baker Cave, Kenneth Brown (1991, 1923) observed a shift to the labor-intensive processing of Icheguilla, sotol, and yucca around 5000 B.C., resulting in what he called an "economy of scale." Brown (1991, 1923) suggested that considerable energy was invested in food production as a least-risk response to environmental deterioration. Implanted in this characterization are increased diet breadths, group mobility, and community size. Phil Der- ing (1999b) attributed small group size and residential mobility in part to the depletion of local food sources, which forced relocation in search of untapped resources.

San Felipe Subperiod (4100 to 3200 B.C.)

Signs of increasing regionalization during the San Felipe subperiod include the further refinement of local projectile point styles, such as Langtry, Val Verde, and Arenosa dart points, and the emergence of the first and most complex of four prehistoric pictograph styles, the Pecos River style (Fig. 8.4). This monotypic polychrome pictograph rank among the oldest yet most elaborate religious art forms in the New World (Kirkland and Newcomb 1967; Tuzin 1994, 1994c). W. Newcomb, Jr. (Kirkland and Newcomb 1967) recognized that the central characters were portrayals of shamans, the religious practitioners of hunting and gathering societies through out the world. Anthropomorphific figures with animal characteristics such as feathers, wings, claws, fur, and talons are equipped with arfats, darts, fending sticks, and enigmatic pouches that hang from their elbows. The mountain lion, colloquially called panther, figures prominently in the Pecos River style bestiary, which also includes deer, birds, fish, and fantastic insects.
At least three primary sets of shamanism are expressed in the art: the power of magical flight (Turpin 1994a); the ability to assume the form of an animal familiar (Turpin 1994c); and the concept of parallel supernatural and natural worlds accessible through a central axis (Turpin 1994a) or hiatus in the earth (Turpin 1992a, 1992c). The size, complexity, and accessibility of the paintings indicate they were produced through group effort for public consumption; their consistency in theme and style demonstrates that a unified belief system prevailed over the entire Lower Pecos area as currently defined; and their redundancy is evidence of their ritualistic mode of production. Thomas N. Campbell (1988) was the first to suggest that the paintings were the product of visionary experiences induced by ingesting mesnal beans (Cy- phora acuminata). This hypothesis has recently been revived and expanded to include a number of hallucinogenic substances (Boyd 1998b). More importantly, Newcomb was quick to recognize the similarities to ethnographically documented medicine societies and their implications for ranked social organization within the overall hunting-gathering framework. Syntactic variations between the classic paintings in the Rio Grande core area and those on the southern periphery seem to show the diffusion of a religious ideology rather than the actual movement of people, whether on nomadic rounds or following migratory routes. This impression is bolstered by the relative percentages of the characteristic point styles in shelter deposits. Jera (Taylor 1967) or Arenosa (Bement 1993) dart points are the dominant style in Coahula at this time, but they form only a minor component of the Middle Archaic lithic assemblage at many sites in the Lower Pecos, where they have often been considered a variant of the Langtry type. Conversely, the percentage of Langtry and Val Verde specimens declines with distance from the Rio Grande, although they are still found in low frequency in the same stratigraphic contexts as Jera points as far south as the Engenamera Valley (Zubiena 1999). Thus, regional preferences are expressed while adhering to the same technological template.

Regionalization and intensified ritual activity are unlikely correlates to increased flooding of the Pecos River (Put- ton and Dibble 1982), an environmental phenomenon probably related to the degradation of the landscape during this hot, dry, climatic interval (Fig. 8.5).
number of archeological components at sites (Marmaduke 1978b) and the relative frequencies of projectile point styles in se-
tected rockshelters (Turpin 1990c, 1997b) indicate two shifts in the settlement pat-
tern: increases in population density along the rivers and in the number of up-
land sites presumably devoted to exploita-
tion of food resources.

Such a conjunction of events can be
simply explained as a result of people
adapting their economic and social strat-
tegies to the desertification of the natural
environment. As upland water sources
wilted, the general population concen-
trated along the three major rivers, occu-
pymg rockshelters and open camps where their domestic debris accumulated rap-
idly. Desert succulents, the mainstay of
dirt, may well have increased at the
expense of grasses and trees, but the man-
ner in which they were obtained changed
from band foraging to task-oriented col-
lecting. Small groups spread out across
the landscape, gathering foodstuffs and
returning to the home base, thus
increasing the number of upland work
stations and temporary camps. The de-
mand for more rigorous scheduling, the
division of labor, and the dispensation of
the proceeds placed a premium on orga-
nizational skills and processes, mandating
the institution of social controls that had
been previously unnecessary (Turpin 1990c).

Two useful models of the emergence of
social complexity may be applicable to the
Lower Pecos Middle Archaic. Robert
L. Carneiro (1967) recognized that cir-
cumscription, usually by hostile neigh-
bors or impassable natural barriers, was a
factor in the rise of complex societies. Ap-
p lied to simpler societies, some forms of
circumscriptive warfare would inhibit the
normal hunter-gatherer tendency to resolve fric-
tion by fission. During the Lower Pecos
Middle Archaic, the evacuation of up-
land water sources in effect acted as a cir-
cumscriptive force, creating a densely
populated linear enclave along the major
rivers and providing the impetus for so-
cial change. The forced concentration
of people was in many ways equivalent to
population growth in that it generated
conflict while mandating a different ap-
proach to dispute resolution.

Gregory A. Johnson (1982) suggested
that population density creates informa-
tion overload, on what he called scalar
stress, which can be managed by institut-
ing rudimentary, perhaps sequential, hier-
archies, such as the medicine societies of
the Great Plains of New Mexico (Kirk-
land and Newcomb 1967) invoked as a
possible analog for the social units that
produced the Pecos River style picto-
graphs. Such structural changes are often
reflected by ritual performances, in this case
one that produced an art style character-
ized by repetition, redundancy, and exo-
teric knowledge. Thus, the increase in
population density, but not numbers of
people, presented social challenges that
were met by the institution of ritual com-
mandments that was manifested in the rock art.

An alternative to this model has been
presented by Dering (1999b), who, based
on his analysis of burned rock features,
proposed that the energy imbalance cre-
ated by processing labor-intensive, low-
yield plant foods affected group size and
mobility throughout most of the Archaic
period. Depletion of food and fuel sources
was cited as the factor that mandated mo-
bility, thus limiting the size of population
units. Although much useful information
is generated by the ecological approach to
Lower Pecos culture history, more sophis-
ticated models are needed to account for
the elaboration of ritual and the diversity
that is apparent in those aspects of culture
not determined by the environment
(Turpin 1990b).

Cibola Subperiod (3150 to 2300 B.C.)
The beginning of the Late Archaic pe-
riod, aptly named the Cibola subperiod,
is signaled by abrupt economic, technolo-
gical, and site distribution changes that
in turn coincide with an apparent break
in the climatic trend toward aridity that
transpired some three thousand years ago.
The rapid spread of cultural traits that
demonstrate spatial continuities meets
Gordon R. Willey and Philip Phillips’
(1958) definition of a horizon. In Bryan’s
(1966) original climatic reconstruction,
this interval was called the Frio Interval
to recognize the resurgence of pollen
types typical of cooler, more mesic condi-
tions. The faunal evidence from Bonfire
Shelter is incontrovertible. The upper-
most bone bed produced the remains of
approximately eight hundred modern bison,
accompanied by broad-bladed dart
points usually considered to be central
Texas types and securely radiocarbon
dated to around twenty-six hundred years
ago (Dibble and Lorrain 1968). Bison
bones have also been recovered from lesser
amounts at Eagle Cave, Castle Canyon,
Arenosa Shelter, and Skyline Shelter
in deposits of approximately the same
age. A tentative shift in settlement patterning
is suggested by the distribution of charac-
teristic projectile point styles such as
Marshall, Castroviejo, and Montell. Rela-
tive percentages of these styles decrease
in stratified rockshelters (Turpin 1980,
1997b) but increase at the Devils Mouth
site, an open terrace camp, a trend that
is consistent with expectations for an ex-
onomic strategy that centered on mobile
food sources.

David S. Dibble (Dibble and Lorrain
1968) provided both environmental and
cultural explanations for the archeological
and faunal evidence from Bonfire Shelter.
In his model, cooler, wetter climatic con-
ditions permitted the grasslands of the
Great Plains to recolonize the Lower
Pecos, bringing large herds of migratory
game animals and their attendant hunters
bearing their characteristic arms. Ethno-
graphic sources of much later date de-
scribe coordinated winter bison hunts
near the mouth of the Pecos and along the
Devils River (Turpin 1987b), so per-
haps the in-migration of the Late Archaic
were seasonally scheduled events as well.

Based on the depiction of bison hunts
and artifacts in the miniature Red Linear
pictographs, I have tentatively correlated
the paintings to the Late Archaic intru-
sion of the bison hunters (Turpin 1984,
1990a). Using a much smaller sample of
pictographs, Newcomb (Kirkland and
Newcomb 1967) also attributed them to
the Archaic period, although David Geb-
hard (1965) thought they were more re-
cent (ca. A.D. 900–1400) and perhaps
related to Kokopelli, the hump-backed
flute player of the American Southwest.
The one experimental radiocarbon assay,
run on pigment samples from one of the
presumed bison painted at Cueva Que-
brada, produced a date of 1280 B.P. or
A.D. 670 (Iger et al. 1994), placing it
within the closing centuries of the Late
Archaic period but well beyond the end
of the Cibola subperiod.

Other favored themes in this style
are processions of head-dressed warriors
Fig. 8.8. Forrest Kirkland’s rendition of the Red Linear rock art type site (4/YY201) in Seminole Canyon State Historical Park. Postures of head-dressed warriors are a key characteristic of this style. The group at lower right apparently depicts a ritual connected with childbirth, an activity common Red Linear rock art themes. Frost weathering has seriously damaged this panel, eliminating whole figures and their context. Figures average less than 15 cm tall. Reproduced courtesy of the Texas Memorial Museum, the University of Texas at Austin.

sometimes apparently involved in conflict with other males (Fig. 8.6), and deer hunting scenes that incorporate geometric designs that may imply traps or nets. Several secluded sites are devoted to scenes of sexual intercourse, pregnancy, and birth, perhaps hinting that the paintings were part of puberty rites that prepared the initiates for adult life. The Red Linear artists were capable of endowing these tiny crude stick figures with animation and vivacity not found in any of the other Lower Pecos pictograph styles. This artistic skill and the consistency in theme, style, and minor details, displayed from the Devils River to the Rio Grande west of the Pecos, suggest that the conventions were developed in another more mobile medium and brought into the Lower Pecos in fully developed form. Whether this introduction coincided with the demonstrated movement of people off the Plains in Cibola times remains hypothetical.

To date, however, all of the recorded Red Linear sites are in the heartland of the Lower Pecos and none have been reported south of the Rio Grande.

Although little research attention has been devoted to the issue, the changes in resource distribution and the influx of new people must have had a fragmenting effect on the resident population whether they coexisted, migrated, or were absorbed. When the grasslands retreated, the vacuum was filled by desert-adapted people, apparently with affiliations to northern Mexican groups.

Flandram Subperiod (cc. 2300 B.C.)

The Flandram subperiod of the Late Archaic is the most elusive time period in the regional chronology for the Lower Pecos. The hallmark of the period, the Shumla dart point style, has antecedents in Nuevo León and Coahuila, where it is found in deposits dating from 3,100 to 1,850 years ago, reaching its peak popularity about 2300 B.C. (Turpin 1991b). The many rockshelter excavations north of the Rio Grande have failed to fix the Shumla type in its place, in part because the dates recently obtained from an open site on the eastern periphery of the Lower Pecos also are consistent with the postulated age of cc. 2300 B.C. (Mehalchick et al. 1999, 158). Bryant (1966) recognized a return to aridity that he called the Juno Interval, so presumably the Flanders subperiod peoples were practitioners of the ancient occupation strategies that characterized the Early and Middle Archaic periods. There can be little doubt that people using Shumla dart points left a substantial material record in many sites stratigraphically above the Cibola deposits. North of the Rio Grande, however, the most prolific sites have been the most poorly excavated. There has been a tendency to attribute the earliest glyphs at the large open bedrock petroglyph site, Lewis Canyon, to the makers of Shumla points because one of the designs resembles this dart point style. Named the Serpentine style for its sinuosity of line (Turpin and Bass 1997), the dart point repertoire is dominated by atlatl motifs, confirming their Archaic attribution, but it is not clear that the projectile point is a face a replica of the Shumla type. The most interesting composition at Lewis Canyon is a pair of bear prints that flank a tabbed line and are encircled by atlatls of differing configuration (Fig. 8.7). A disproportionate emphasis on bannertones or atlatl weights indicates that the weapons, and by extension, their portraiture, were of more than practical importance. This depiction is one of the few of bears in any Lower Pecos art style, although bears are still common in the Sierra del Burro on the southern fringes of the region. Tabbed lines appear in both pictographs and petroglyphs in far southern Coahuila. Only one other petroglyph in the Serpentine style has been recorded anywhere near the Lower Pecos, and that is far to the west near Rankin, Texas (Turpin 1993; Turpin and Bass 1997), but so little survey has been done on the southern margins of the Rio Grande that conclusions based on the presumption of absence are premature. Although the lines of evidence are extremely weak, a reasonable hypothesis is
that northern Mexican people were able to expand into the Lower Pecos region once environmental conditions stabilized to their liking. Little more can be said until excavations concentrate on deposits of this age.

Blue Hills Subperiod (1300 to 1300 a.d.)

Compared to the regional insularity of the Middle Archaic period and the distinctive spread of the Cibola horizon, the Blue Hills subperiod is diffuse. The characteristic projectile points, primarily Exmor and Frio, are shared across broad expanses of Texas (see Hewitt 1999). The fiber industry becomes somewhat more elaborate by the appearance of more ornate painted masts as part of a mortuary complex that is dominated by bundled burial. Although some evidence suggests that bundled burials are a generalized Archaic trait, most of the datable examples are of Blue Hills age (Turpin et al. 1986). Flexed corpses, sometimes placed in a fetal position, were wrapped in mats and tied into a compact package that was then interred in dry rockshelter deposits. Occasionally, cremated remains are buried in pouches or bags, but no gender or age criteria seem to dictate any special method of mortuary treatment. Ornaments and items of clothing are sometimes preserved in the dry rockshelter graves, and, on rare occasions, tissue, skin, hair, and flesh are naturally mummified (Hubbeze 1995; Turpin et al. 1986). Contrary to expectations voiced by a number of anthropologists, infants were apparently accorded special treatment, their tiny bodies wrapped in rabbit skin robes, deerskin, and mats and placed on grass beds, often with broken cradle boards. Otherwise, grave goods are relatively rare and usually consist of items used by the deceased in everyday life, such as clothing or personal jewelry. On occasion, an individual may be buried with an abundance of mortuary offerings, but overall the impression is one of an egalitarian approach to death without gender or age discrimination beyond that accorded to infants.

Based on a single experimental radiocarbon date (Fliiger et al. 1994), it is possible that the Red Linear pictographs, described in a preceding section, are attributable to Blue Hills times. A response to the cyclical return to aridity may be mirrored in yet another peak in the number of components at archeological sites (Marraduke 1978b) and in the projectile point frequencies (Turpin 1996b) attributable to this period. The number of Upper Plains burials of Late Archaic points coupled with an increase in the proportionate number of uniface, usually considered vegetal material processing tools, has led to the speculation that there was an escalating reliance on desert plants. Based on the several preserved fiber features at the Wreck Ranch site, small the occupancy appears to have intensified—emphasized the procurement and processing of vegetal material. A higher recovery of fish bones and scales in some shelter deposits also suggests the exploitation of previously less important food sources, but at other sites, such as Skyline Shelter riverine resources were always a significant component of the diet. The composite picture is one that suggested by Kenneth Brown (1991) for the Middle Archaic period: a broad resource procurement strategy characterized by increases in mobility, diversified diet, and the exploitation of a wide range of environmental niches, probably on a seasonal basis.

Late Prehistoric Period

Flecha Subperiod (1320 to 450 a.d.)

The Late Prehistoric period is marked by changes in artifact types, site types, settlement patterns, exploitation strategies, rock art styles, and mortuary customs. The temptation to credit these in innovations to an influx of a singular people is dampened by the lack of stratified or well-dated single component sites that might coordinate or sequence these even. Sometime between A.D. 600 and 900, the bow and arrow were adopted in the Lower Pecos region, signaling the advent of the Flecha subperiod (Turpin 1991b, table 1.12). Unfortunately, the upper levels of most rockshelters are highly disturbed, so it is difficult to distinguish component based solely on arrow point styles (none of which is unique to the Lower Pecos region) and their relative radiocarbon dates to specific artifact types.

Although the Late Prehistoric period continued to take advantage of the natural shelter offered by caves and overhangs, they apparently began processing desert succulents in a manner that left a distinctive feature on open sites. Ring middens—crenestic accumulations of burned rock—consistently date to the Late Prehistoric period, although some caution is introduced by the mixture of projectile point styles on these open sites and the common sense recognition that charcoal is less likely to survive in older features. Kenneth Brown (1991, 127) suggests that pit-baking ovens were relocated, being
moved from rockshelters to open sites situated near stands of plants and firewood, where a temporary surplus of foods could be produced.

The technological and economic changes are accompanied by the introduction of foreign burial customs and fully developed art styles. Although interments in rockshelter deposits continue, the practice of bundling may have fallen into disuse over time (Turpin 1991b, 35). Two mummies exhumed from small shelters by relic hunters date to this period, the earliest, an adult male buried about 1,150 years ago, was accorded the typical Archaic mortuary treatment: flexed, wrapped in mats, and tied into a package with a long human hair rope (Turpin et al. 1986). Analysis of the preserved intestinal contents showed that this individual had consumed a more eclectic diet during his last days, including such items as fledging birds, minnows, mice, geckos, and snakes, but the bulk was preeminently grasshopper parts. Despite the fact that the deceased had suffered from severe dental abscesses that would have prohibited his chewing his food, the components of the desiccated bolus were well macerated, indicating that someone processed his last meals for him. Care is also expressed in the more recent burial, a prepubescent child who was laid, flexed, in a rockshelter grave outlined by stone stalks, cushioned by a grass and prickly pear bed, and covered with an antelope skin robe some 600 years ago. Through analysis of the mummified tissue, Hurbner (1995) was able to demonstrate that the child suffered from severe malnutrition, verging on starvation, which could also account for some developmental anomalies apparent in the skeletal material. The death of this child is a reminder that successful adaptation is a long-term process that tends to mask the impact of short-term stress and individual morality.

A more drastic change in mortuary customs is evidenced by the appearance of cairn burials, oblong piles of rocks usually built on high promontories or points overlooking the canyon. Similar features are much more common north and west of the Lower Pecos, where their function has been confirmed by excavation. In the Lower Pecos, only one cairn has been excavated (Turpin 1982); it produced two dart points and two arrow points, mirroring the overlap of the two artifact forms so often seen in rockshelter deposits. No skeletal material was recovered, but the purposeful construction methods, the artifacts, and high phosphate levels in the interior matrix are consistent with the prevailing interpretation of these features as grave markers. The presumed recent age of these features is substantiated by their codistribution with tipi rings, a house style clearly attributable to the Inferno phase (see below).

The latest mortuary practice documented by radiocarbon dates is cremation and disposal in a vertical shaft cave. The incinerated remains of an adult male were gathered into a pouch and dropped down the shaft at Seminole Sink, where they lay atop the talus cone for some four hundred years (Turpin 1988). Technically, this event falls within the Inferno phase time frame, but there is no evidence to link the two beyond age.

The care for the migration of new people into the Lower Pecos is furthered by the appearance of two fully developed pictograph styles—both shared with western and southern desert areas—and a different set of petroglyph motifs related to a series of sites that extend northwest across the El Dorado Divide (Turpin 1993; Turpin and Bass 1997). All are dated to the Late Prehistoric period by stylistic criteria: one experimental radiocarbon date narrows the time frame of one style, the Red Monochrome, to about a.d. 800.

The Red Monochrome style (Fig. 8.8) consists of intrinsically painted, static, life-size human figures and realistic animals—such as dogs, turkeys, catfish, deer, mountain lions, rabbits, and turtles—painted, as the name suggests, in red pigment (Turpin 1986a). A variation on the human figure is nicknamed “liased man” for the bent knees and elbows. A most curious attribute is the common depiction of potbelly or “bums” on the side of the head. Single feather headaddresses are common. Opankally female figures wear long skirts, but the males are often naked with pronounced genitalia. Some are armed with bows; others are impaled by arrows—an emphasis on conflict that carries over into Historic period pictographs that show clear antecedents in the Red Monochrome style (41V295, Missionary Shelter (Turpin 1987c), 1989, fig. 18-5). The two largest panels in this style line the walls of low-lying shelters, above standing pools of water, leading Kirkland (Kirkland and Newcomb 1967) to name it the Flooded Shelter style. The larger inventory of smaller sites known to date shows a clear preference for isolated, often high shallow overhangs with little or no cultural debris, as though the artists were avoiding the long-occupied shelters.

Fig. 8.8. Forrest Kirkland’s rendition of the Red Monochrome rock art type site (41V978), which he called the Flooded Shelter style. Note bow and arrow, protruberance over the ears of two figures, and the realistic animals. Reproduced courtesy of the Texas Memorial Museum, the University of Texas at Austin.
with their ornate Pecos River style paintings. Most of the Red Monochrome sites are near the mouth of the Pecos River, but some examples are found on the Devil's River, as far north as the mouth of the Dry Devils. The only example yet recorded in Mexico was in Páidja Canyon, across from the mouth of the Pecos, and it is now inundated by Amistad Reservoir.

Several Red Monochrome sites, including at least one painted in black pigment, have been reported in the Big Bend area. Miriam Lowrance (1982) attributed them to Jumano artists, citing ethnographic descriptions of clothing and hairstyles that could be artistically rendered as "hurra." The Jumano, and their allies, the Cibolos, were placed along the Rio Grande, from La Junta to south of modern-day Del Rio, by seventeenth-century Spanish chroniclers, so Lowrance's (1982) hypothesis is not without merit.

Another intrusive art style, Bold Line Geometrics, is less securely dated to the Late Prehistoric period because its abstract iconography provides few temporal clues (Turpin 1986a). Design motifs are variations on straight lines and blank spaces that are combined into nested zigzags, herringbones, cross-hatches, and blanket patterns (Fig. 8.9a, b). In the last, diamond-shaped cells are linked, forming a spider web design that uses blank space as a design element. Many of the geometric pictographs are associated in some way with water, painted surrounding serpents in the shelter walls or, in the case of Patriza Cave, above interior springs. Again, most of the sites are found near the mouth of the Pecos River, with a few aberrant examples recorded on the Devils River and Red Bluff Creek. The Bold Line Geometrics are most clearly affiliated with the generic Desert Abstract styles of northern Mexico (Turpin et al. 1998) and the American Southwest (Schachner 1992), perhaps identifying one source of the intrusive traits of the Lower Pecos Late Prehistoric period. However, abstract rock art is ubiquitous worldwide and is more indicative of commonality in thought and response to specific stimuli than contact or diffusion.

Although petroglyphs are rare in the Lower Pecos, the largest and most famous site, Lewis Canyon, also shows an iconographic shift from carvilinear designs associated with free-floating afflatus to abstract geometrics (Turpin and Bass 1997), dominated by what Newcomb (Kirkland and Newcomb 1967) called the line-and-circle motif. Although difficult to date, one of the later petroglyphs appears to be an arrow point, suggesting a Flute period age. A series of similar but smaller petroglyph sites are found north of Lewis Canyon, on the Eldorado Divide, but geometric petroglyphs are also one of the most common artistic expressions in northern Mexico, as well as the rest of the world.

Inferno Phase (Estimated 450 to 250 B.C.)

The Inferno phase inventory consists of less than a score of sites characterized by circles of paired stones that were presumably pole supports for brush- or hide-covered structure (Fig. 8.10) and a tool kit that is dominated by four artifact types: small triangular stemmed arrow points, steeply beveled end scrapers (Beonet and Turpin 1987), four-beveled knives, and plain ceramics (Turpin and Robinson 1998). The type site, Inferno Camp, contains more than one hundred
rings; the lesser sites have as few as one and as many as eight stone rings. In one locale, a single ring site sits beside eight oblong cairns, presumably burial mounds, indicating their contemporaneity. The Inferno people exhibited a distinct preference for high promontories, usually overlooking springs or semipermanent water holes. These locations are usually reduced to bedrock, so the chances of recovering stratified or datable materials are greatly reduced.

Only one tiwi ring has been excavated (Turpin and Bement 1989), and it produced no materials suitable for radiocarbon dating. The site was selected because it overlooked an early Plains Indian rock art site that presumably dated to about 1700. Among the surface artifacts whose ages spanned the entire spectrum of Lower Pecos prehistory were a plano-convex blade and a Guerrero arrow point, both indicative of Protohistoric or early Historic occupation. It is important to note that not one of the Inferno phase single component sites has yielded a single European-derived historic artifact.

The rare ceramic sherds collected from Inferno phase sites are poorly fired bone- and calcite-tempered plainwares of uncertain origin (Turpin and Robinson 1998). A Late Prehistoric/Protohistoric age was predicated on the resemblance to sherds of native pottery recorded at the Apache mission of San Lorenzo de la Santa Cruz, abandoned in 1771 (Tunnell and Newcomb 1969). One sherd of dubious affiliation was recovered from the Sotol site in Crockett County from a stratum that dated to the range between 460 and 340 years ago (Lorrain 1968), the only radiocarbon date ever remotely attributable to Inferno phase materials. Affinities with bone-tempered ceramics from the eastern periphery of the Lower Pecos region suggest that the Inferno phase is somehow related to the earlier Toyah complex of central and south Texas (Mehalchick et al. 1999).

The Inferno people clearly came into the Lower Pecos region late in the prehistoric era. Seventeenth-century Spanish documents describe native northern Mexican people traveling en masse to the mouth of the Pecos River for annual bird hunts, perhaps including a cyclical round that predates European contact. Ethnohistoric references to bison hunting in and around the region suggest that the Lower Pecos was again part of the great seas of grass that characterized the American frontier (Turpin 1987b), reverting to semisedentary only after the introduction of livestock in the late 1880s.

The Inferno phase is the only archeological unit in the Lower Pecos region that meets Willey and Phillips's (1958) criteria for phases. It is spatially and temporally limited, and its tool kit and site features clearly distinguish it from generic Late Prehistoric assemblages, although some overlap with the better known Toyah Complex seen in central and south Texas has been suggested (Mehalchick et al. 1999; see M. Collins, chapter 3, Hess, chapter 4, and Rudek, chapter 5, all in this volume).

**Historic Period**

(350 A.D. to Present)

Technically, the Historic period began in the Lower Pecos region in 1590 when Gaspar Castañeda de Soña, then lieutenant governor in Nuevo León, and a contingent of some 160 to 170 souls crossed the Río Grande, somewhere near Ciudad Acuña, en route from Villa Almadén (Monclova) to the Pecos Pueblo (Harnmond and Rey 1966; Schroeter and Mans 1965). Undoubtedly, however, the native people had already experienced the repercussions of the Spanish movement north, if only through the ripple effect as indigenous northern Mexican groups migrated to avoid slavery and disease (Hackert 1926, 1931; Seick 1932). Castañeda, like the many Spaniards that followed, found little but hardship in the Lower Pecos region. Expeditions sent to explore the Río Grande as a prelude to settlement and the establishment of viable trade routes brought back such discouraging reports (Bolton 1908; Castañeda 1938, 1946; Daniel 1955; Weddel 1938) that colonizing missions were abandoned, and forays across the river often became largely military maneuvers in retaliation for raids on communities in Coahuila and Nuevo Vizcaya (Bolton 1915; Weddel 1968).

The closest the Spanish ever came to establishing a physical presence in the Lower Pecos region was an abortive attemp to found a presidio, Sacramento, on the San Diego River south of Ciudad Acuña in 1737. Prior to its completion, the presidio was removed to the Santa Rosa valley, near modern-day Múzquiz. Returned to the San Diego in 1773, the presidio, renamed Agua Verde, lapsed only eight years before the troops were removed to San Fernando de Austria (Zaráagoza) in 1781 (Moerbeek 1975, 226). An abortive attempt to reestablish Agua Verde...
in the mid-nineteenth century failed, and the presidio relapsed into ruins. After their first experiences with the arid mountainous reaches of northern Mexico, including the Rio Grande region, the Spanish movement north bifurcated, heading east through the gateway mission of San Juan Bautista and west through La Junta, the confluence of the Mexican Conchos River and the Rio Grande. The vast intervening area became known as the despoilado, or unpopulated zone (Daniel 1955), despite the fact that it sheltered refuge and renegade native populations for three centuries. Spanish government and military reports provide an inventory of native people (Bolton 1908; Grifffen 1969; Hackett 1926) and chronicle the immense changes that took place as population movements quickened and warfare intensified. In the late seventeenth century, the Jumano and Cibolos are often mentioned as allies of the Spanish in the general area of the Lower Pecos. By 1729, indigenous people and intrusive northern Mexico groups alike were overrun by the Apaches, who were reported in complete control of the Rio Grande (Weddel 1968, 200). Their supremacy was short-lived, since the Comanches and their allies, the Kiowas, came down out of the north, forcing the Apaches into political and military limbo in the mountains of northern Mexico. By the turn of the century, beset by revolution and engaged in wars on both continents, the Spanish empire was forced to abandon its frontier, leaving its colonial population unfortified.

With the coming of Anglo-American sovereignty in the mid-thirties of the nineteenth century, linking east and west became a priority that depended upon the extermination of the Plains Indians that controlled much of the desert west. Mapping expeditions were followed by stage and mail routes, trade caravans, freighters, cattle drovers, and mineral exploration (Turpin 1989). Fort Clark was established in 1852, squarely athwart one of the well-traveled Comanche traces. In 1857, Camp Hudson was built to protect a forlorn of the Devils River that later came to be called Balzer's Crossing for one of the early settlers. After a hiatus imposed by the Civil War, the U.S. military resumed its attempt to eradicate the Native American frontier once again extended to and below the Rio Grande (Turpin 1987b). The modern environment is a product of a historic land use exacerbated by natural phenomena, such as the famous droughts of the 1950s and the floods of 1954 and 1974.

Historic Period Archaeology

The historic Native American period is represented archaeologically by one rock shelter, reported in the 1940s (Kirkland 1942), a few scattered metal arrow points, and seventeen rock art sites that incorporate Euro-American elements (Fig. 8.11) or bear strong affinities to defined Plains Indian styles (Labadie 1997; Turpin 1989; Turpin and Davis 1993). Tipi rings found adjacent to some of the historic pictographs may represent the living sites of the artists, but proof awaits the recovery of more temporally diagnostic artifacts and radiocarbon assays (Turpin and Bement 1989). An internal chronology signaled by theme, style, and iconographic details sequences the paintings and elucidates a trend from initial curiosity to bitter enmity between Native Americans and Euro-Americans (Turpin 1989). A change in site distributional pat-
terms, shifting from deeply entrenched canyons to open areas near accessible wa-
ter sources. Can be attributed to the de-
mands of horse husbandry. The overall
scarcity of sites is the legacy of a period of
social unrest wherein mobility often
meant survival.

The historic Euro-American period
has attracted little scholarly attention.
The city of Del Rio has fared somewhat
better than the countryside, given the
development of Del Rio (Dering 1998; Me-
halick et al. 1999), although rumors that
a Spanish mission had been estab-
lished at San Felipe persist despite all evi-
dence to the contrary. The construction of
the Southern Pacific Railroad left an
archaeological trail that includes aban-
donned tracks and tunnels, depots, graves,
and work camps with domestic, commer-
cial, and industrial features (Briggs 1974;
Turpin 1995). The ranching era is poorly
represented by site survey data that record
rockshelter habitations (Turpin 1987a)
and a few early ranch headquarters (Tur-
pin 1990d).

Summary

The cultural trajectory of Lower Pecos
prehistory originates in stereotypic Paleo-
indian big game hunters who apparently
entered the region some twelve thousand
to fourteen thousand years ago. Based on
the two known sites of this age, the econ-
omy was oriented toward the procure-
ment of megafauna such as elephant,
camels, horses, and bison. The earliest
killed pairs were probably individuals or
pairs of animals that were trapped and
slain (Bement 1986). The later Foshom
and Plainview hunters had apparently
perfected the jump technique of bison
hunting, suggesting organizational skills
consistent with group procurement
strategies that centered upon migratory
herd animals (Dibble 1970).

The distinction of the large game herds
and the onset of a trend toward aridity
triggered a transition to Archaic lifeways
about ninety-four hundred years ago. The
people apparently exploited a broader re-
source base, developing a reliance on
plant products, both as food and as raw
material for the burgeoning fiber indus-
tory, while retaining established lifisc tra-
ditions. The transition culminated in a
robust adaptation that gives the outward
but perhaps misleading impression of
great stability for a period of some four
thousand years. Rockshelters became the
cornerstone of the settlement pattern, show-
ing differentiated activity areas of a do-
nomestic nature where fiber, wood, bone,
and hide were worked, as was the ever-
present stone. Domesticated faunas included
disposal of the dead in consistent vertical
shaft caves regardless of age or gender.

Then, about fifty-five hundred years
ago, the cultural system began a series of
internal adjustments, presumably in re-
sponse to an increasingly arid environ-
ment. The end result was the consolida-
tion of towns into the full-blown Archaic
expression that defines the Lower Pecos as
a distinct cultural entity. A model that
parsimoniously explicates this development
was formulated by analogy to emerging
complex societies documented ethnohis-
torically and archeologically in arid lands
around the world.

In this model, changes in the distribu-
tion of essential resources, most promi-
nently potable water, triggered responses
in the settlement pattern and procurement
strategies leading to a disproportionate
increase of the settlement pattern along
the rivers. Aridity does not imply a shortage
of food, especially if desert succulents in-
crease at the expense of grasslands, but
gathering and processing of thorny plant
foods and small mammals requires spe-
cialized techniques and knowledge.

The responsibility for food procurement,
especially wild plant foods and small mam-
als, would have been delegated to mo-
tile task groups who operated from their
bases on the rivers. Diversification broad-
ened the diet to include labor-intensive
processing of a wider range of foodstuffs,
activities that took place in open
and rockshelters as well.

New methods of social control were
manipulated by the redistribution of human
populations, who were in effect circum-
scribed by the availability of water. The
inevitable tensions introduced by prostitu-
ity elicited a restructuring of society that
was accompanied by the intensification of
ritual that was, in turn, manifested by the
florae and flora of publicly produced mural
art. A common belief system, rooted in
the principles of shamanism and expressed
in cave paintings, held sway over the area

that is now defined as the Lower Pecos
regional cultural region. This period of time is
the apogee of the Lower Pecos cultural tra-
jectory; the consolidation of an ethnic iden-
tity that fractured on the verge of societal
complexity that was never achieved, pos-
sibly for lack of the ability to generate an
adequate surplus—the necessary and suf-
fi cient condition for sedentism.

Sometime around three thousand
years ago, the insular Lower Pecos cul-
tural persona relaxed, perhaps disrupted
by the severs of new people with a differ-
et economic strategy and social struc-
ture. A mesic interlude permitted the
graslands of the Great Plains to expand to
the Rio Grandes, drawing herds of bo-
vis and their attendant hunters. Even
episodic, perhaps seasonal, influxes of
people bearing a fully developed cultural
system of their own must have had a per-
ceptible effect on the resident population;

at present it can only be discerned in
settlement patterns, tool types, and pos-
sibly art styles.

The return to aridity and the retreat of
the grasslands created a vacuum filled by
desert-adapted people who came north
across the Rio Grande from northern
Mexico. Soon, the archaic cultural
affinities of Lower Pecos found affinities with that of
central Texas, sharing in the generalized
Late Archaic ethich assemblage while per-
fecting in fiber industry, retaining its
characteristic burial customs, and keeping a
balance between rockshelters and open-
camp site occupations. Measures of popu-
lation density again rise, reaching and ex-
ceeding the heights achieved during the
Middle Archaic peak, but the processes
behind the increase are less clear.

The Late Holocene period experi-
enced a cultural upheaval, including
changes in settlement patterns, site types,
mortuary customs, art styles, and artifact
types. Pictograph styles show affinities
with northern Mexico and the Big Bend
region of Texas. Lithic tool types are shared
with the rest of Texas, and mortuary cus-
toms appear to be introduced from the
north and northwest. Clearly, people,
rather than ideas, were on the move.

Late in prehistory, one intrusive group
is identified by a distinctive artifact as-
ssemblage, including small arrow points
and ceramics, a preference for prominent-
rices with sweeping views, and residences
that used paired stones as pole supports for a thatch or hide cover. The people of the Inferno phase may be precursors to ethnohistorically described bison hunters with their annual seasonal congregation at the mouth of the Pecos River during yet another mesic interlude.

The Spanish found little of value in the Lower Pecos, isolating it as part of the great uninhabitable desert of their northern frontier, but native peoples found refuge in the rugged terrain. Indigenous groups were soon replaced by Apaches who, in turn, were driven south by the Comanches where they sometimes joined the Kickapoos, staunch allies of the Mexicans, in resisting their common enemy. Under American hegemony, a concerted effort to clear the way west resulted in the extinction of native people by the time the second transcontinental railroad was completed in 1882.