

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 Rio—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 entrenching tributaries to the three major rivers—the Devils, the Pecos, and the Rio Grande—their confluences now inundated by Amistad Reservoir. Although all were (and are) important sources of water, and by extension harbor 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-

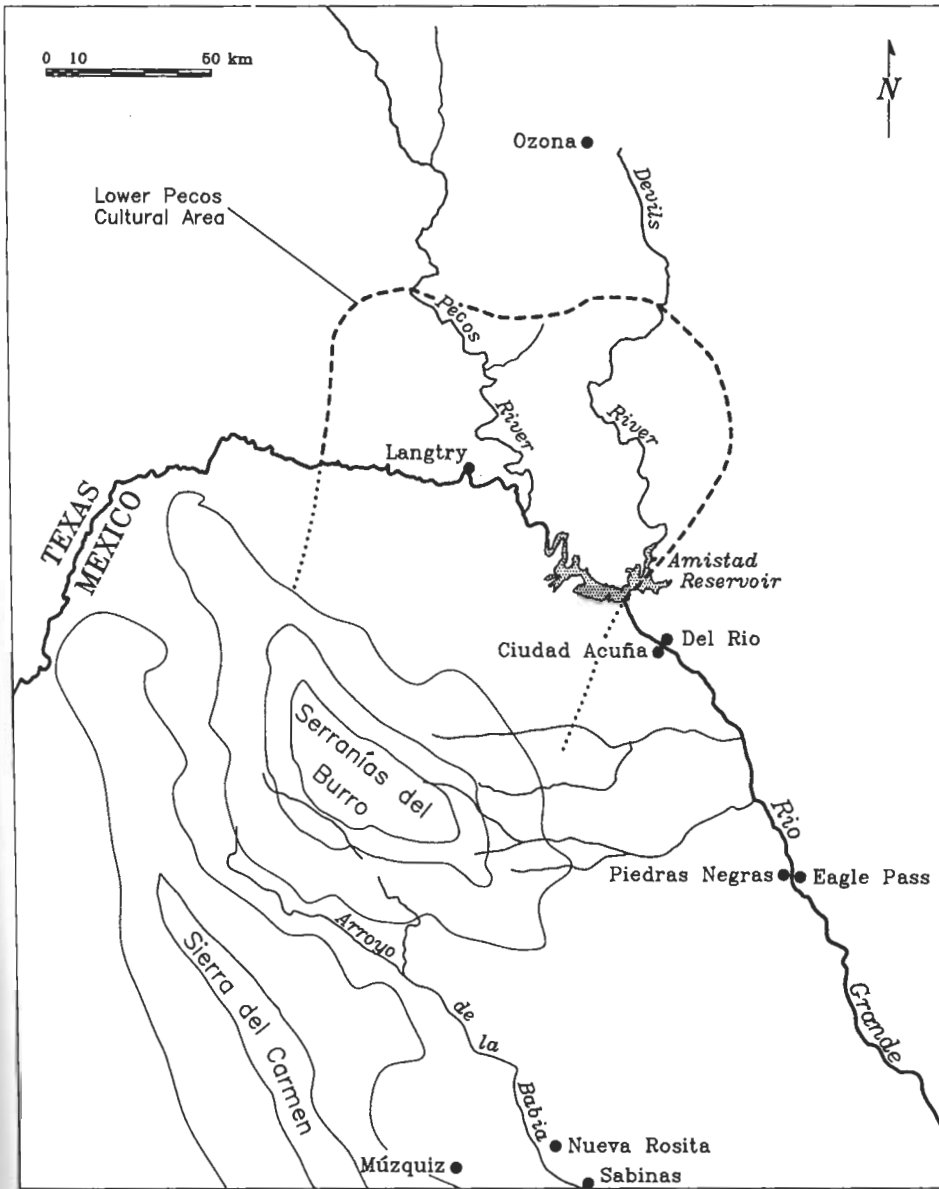


Fig. 8.1. Map of the Lower Pecos cultural area with its southern limits undefined.

tensity depending upon climatic conditions. The impermanence of upland water sources is reflected in the settlement patterns, 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 plain is flat and featureless except where dissected by entrenching tributary canyons that have been inundated to some degree by the impoundment of Amistad Reservoir. The Serranías del Burro rise abruptly, presenting a barrier to south-

ward 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 those 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 Babia, illustrate both similarities and differences between the material culture (Turpin 1997a) 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 geologic factors that influenced prehistoric occupation include the numerous rock shelters hollowed from the sheer limestone cliffs (Fig. 8.2), the copious quantities of lithic raw material available as gravels 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 open camps 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 erosion, exacerbated by overgrazing and modern droughts, reduced the soil cover in historic times. The disastrous result is evident in the siltation of Amistad Reservoir, the deflation 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 (Patton and Dibble 1982). The modern flora and fauna are similarly a product of livestock husbandry, but the vegetational communities retain the basic components utilized during much of prehistory.

Archeological 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 1969, 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



Fig. 8.2. A typical rockshelter overlooking the Rio Grande (41VV656).

abundant that the reader is often directed to summary articles rather than primary sources, a lamentable practice that may lead to bibliographic drift, but one mandated by the number of citable resources.

More than three hundred radiocarbon dates contribute to one of the most precise regional chronologies in Texas (Table 8.1), although several nomenclatures have been suggested (see Turpin 1991b). The one used to guide this

overview was first proposed by Dibble (in Prewitt 1983) and later refined as more radiocarbon assays were generated. The traditional quadripartite division into Paleoindian, Archaic, Late Prehistoric, and Historic periods is expanded into eleven prehistoric subperiods (including one phase and one probable horizon), leaving the Historic period intact. The Historic period can be further subdivided into four parts, depending upon which of

the intrusive powers, whether Native American or European, was the most evident ethnohistorically (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 mobiliary, transcends the mundane, opening vistas into the political, social, and religious spheres of hunter and gatherer 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; Shafer 1976, 1981a, 1986; Shafer and Bryant 1977; and to some degree, also Dering 1999b and Taylor 1967); my perceptions are of both abrupt and gradual changes within the parameters imposed by small-scale social organization (Turpin 1990b). These diametrically opposed viewpoints are in part 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

Aurora Subperiod (pre-12,000 B.P.)

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

Table 8.1. Periods in the Chronology of the Lower Pecos Region

Period	Subperiod	Radiocarbon Years B.P.
Paleoindian		<12,000–9800
	Aurora	14,500–11,900
	Bonfire	10,700–9800
Late Paleoindian		9400–9000
	Oriente	9400–8800
Early Archaic		9000–6000
	Viejo	8900–5500
Middle Archaic		6000–3000
	Eagle Nest	5500–4100
	San Felipe	4100–3200
Late Archaic		3000–1000
	Cibola	3150–2300
	Flanders	2300–?
	Blue Hills	2300–1300
Late Prehistoric		1000–350
	Flecha	1320–450
	Infierno	450–250
Historic		350–1



Fig. 8.3. Excavation in the lowest bone beds at Bonfire Shelter (41VV218).

region (Lundelius 1984). Bone beds of equivalent age at Bonfire Shelter (Fig. 8.3) undoubtedly represent the intermittent slaughter and butchering of elephant, camel, 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 perforce 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 centering on 10,000 B.P., concurrent with a mesic period that Vaughn M. Bryant, 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 that a humid interlude predated 9500 B.P. (Patton and Dibble 1982).

Bone Bed 2 at Bonfire Shelter is the oldest known example of the jump technique of killing herd animals, 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 incorporate 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 continuities 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. LeRoy Johnson (1964) first noticed the mixture of Archaic and Paleoindian cultural traits at Devils Mouth, where the economy was not noticeably oriented toward big game hunting. Broad resource procurement was evidenced at Baker Cave

in deposits of this age (Hester 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 (8900 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 occupies the latter half of Bryant's (1966) Stockton stage, the five-thousand-year-long trend to aridity that presumably conditioned the adaptive strategies of Lower Pecos people. In Black Cave, the cultural deposits were completely scoured, exposing Pleistocene ebbolis (Turpin 1982, 76); at Seminole Sink, the shaft leading to the subterranean chamber was opened for the first time (Turpin 1988, 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 space; that is, the rockshelter has activity areas defined by interior burned rock middens, prickly pear floors, latrines, and perishable items (Lord 1984). Small shelters, such as the Wroe 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 sotol and agave (most likely lechuguilla) 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; Schuetz 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 form 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; Turpin 1997b).

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 Martindale (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 ambiguously defined. A regionally specific variation on the ubiquitous unstemmed triangular tools of southern Texas and northeastern Mexico, the Devils Triangular dart point dates to about 6000 B.P. during the transition between the Viejo and Eagle Nest periods, reaffirming the multiplicity of possible external relationships during the Early Archaic (Turpin and Bement 1992).

The one mortuary site of this age that has been excavated (Turpin 1988) has cultural analogs in Coahuila (Aveleyra 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; Turpin 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 outwardly seems casual 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 (Turpin 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 (Turpin 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 Mock 1987). These flat, smooth river rocks are systematically decorated with a limited number of motifs that often portray human attributes (Mock 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 provenience. 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 Ozona Erosional after disconformities in strata at Arenosa Shelter (Dibble 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 (Turpin 1982, 76).

At Baker Cave, Kenneth Brown (1991, 123) observed a shift to the labor-intensive processing of lechuguilla, sotol, and yucca around 5000 B.P., resulting in what he called an "economy of scale." Brown (1991, 123) suggested that considerable energy was invested in food production as a least-risk response to environmental deterioration. Implied in this characterization are increased diet breadth, group mobility, and community size. Phil Dering (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.P.)

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). These monumental polychrome pictographs rank among the oldest yet most elaborate religious art forms in the New World (Kirkland and Newcomb 1967; Turpin 1994a, 1994c). W. W. Newcomb, Jr. (Kirkland and Newcomb 1967) recognized that the central characters were portrayals of shamans, the religious practitioners of hunting and gathering societies throughout the world. Anthropomorphic figures with animal characteristics such as feathers, wings, claws, fur, and horns are equipped with atlatls, 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.

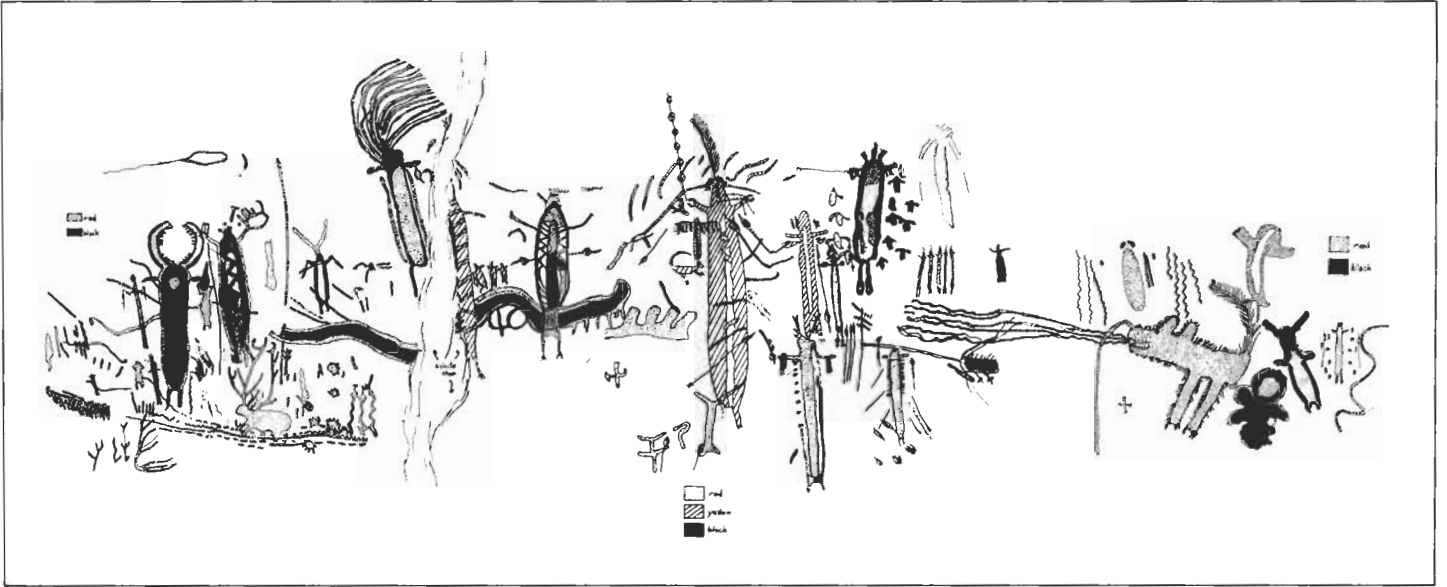


Fig. 8.4. Pecos River style rock art. This panel (41VV1230) was recorded in 1990 during a survey along the Devils River and redrawn in pen and ink by David G. Robinson. The tallest shaman figure is approximately 1.25 m tall.

At least three primary tenets 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 holes 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 mescal beans (*Sophora secundiflora*). 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 ethnohistorically documented medicine societies and their implications for ranked social organization within the overall hunting-gathering framework.

Stylistic variations between the classic paintings in the Rio Grande core area and those on the southern periphery seem to favor the diffusion of a religious ideal 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. Jora (Taylor 1967) or Arenosa (Bement 1991) dart points are the dominant style in Coahuila 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 Jora points as far south as the Encantada Valley (Zubieta 1999). Thus, regional preferences are expressed while adhering to the same technological template.

Regionalization and intensified ritual activity are an unlikely correlate to increased flooding of the Pecos River (Patton and Dibble 1982), an environmental phenomenon probably related to the denudation of the landscape during this hot, dry, climatic interval (Fig. 8.5). The



Fig. 8.5. Intermittent flooding of the Pecos River left a detailed stratigraphic record at Arenosa Shelter (41VV99), excavated prior to the filling of Amistad Reservoir.

number of archeological components at sites (Marmaduke 1978b) and the relative frequencies of projectile point styles in selected rockshelters (Turpin 1990c, 1997b) indicate two shifts in the settlement pattern: increases in population density along the rivers and in the number of upland sites presumably devoted to exploitation of food resources.

Such a conjunction of events can be simply explained as a result of people adapting their economic and social strategies to the desertification of the natural environment. As upland water sources dwindled, the general population concentrated along the three major rivers, occupying rockshelters and open camps where their domestic debris accumulated rapidly. Desert succulents, the mainstay of the diet, may well have increased at the expense of grasses and trees, but the manner in which they were obtained changed from band foraging to task-oriented collecting. Small groups spread out across the landscape, gathering foodstuffs and returning them to the home base, thus increasing the number of upland work stations and temporary camps. The demand for more rigorous scheduling, the division of labor, and the dispensation of the proceeds placed a premium on organizational 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 circumscription, usually by hostile neighbors or impassable natural barriers, was a factor in the rise of complex societies. Applied to simpler societies, some forms of circumscription would inhibit the normal hunter-gatherer tendency to resolve friction by fission. During the Lower Pecos Middle Archaic, the evaporation of upland water sources in effect acted as a circumscriptive force, creating a densely populated linear enclave along the major rivers and providing the impetus for social change. The forced concentration of people was in many ways equivalent to population growth in that it generated conflict while mandating a different approach to dispute resolution.

Gregory A. Johnson (1982) suggested that population density creates informa-

tion overload, or what he called scalar stress, which can be managed by instituting rudimentary, perhaps sequential, hierarchies, such as the medicine societies of the Great Plains that Newcomb (Kirkland and Newcomb 1967) invoked as a possible analog for the social units that produced the Pecos River style pictographs. Such structural changes are often reified by ritual performances, in this case one that produced an art style characterized by repetition, redundancy, and esoteric knowledge. Thus, the increase in population density, but not numbers of people, presented social challenges that were met by the institution of ritual communication 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 created 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 mobility, thus limiting the size of population units. Although much useful information is generated by the ecological approach to Lower Pecos culture history, more sophisticated 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.P.)

The beginning of the Late Archaic period, aptly named the Cibola subperiod, is signaled by abrupt economic, technological, 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's (1958) definition of a horizon. In Bryant's (1966) original climatic reconstruction, this interlude was called the Frio Interval to recognize the resurgence of pollen types typical of cooler, more mesic conditions. The faunal evidence from Bonfire Shelter is incontrovertible. The uppermost 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 in 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 characteristic projectile point styles such as Marshall, Castroville, and Montell. Relative percentages of these styles decrease in stratified rockshelters (Turpin 1989, 1997b) but increase at the Devils Mouth site, an open terrace camp, a trend that is consistent with expectations for an economic 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 conditions 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. Ethnographic sources of much later date describe coordinated winter bison hunts near the mouth of the Pecos and along the Devils River (Turpin 1987b), so perhaps the in-migrations of the Late Archaic were seasonally scheduled events as well.

Based on the depiction of bison hunts and atlatls in the miniature Red Linear pictographs, I have tentatively correlated the paintings to the Late Archaic intrusion 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 Gebhard (1965) thought they were more recent (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 Quebrada, produced a date of 1280 B.P. or A.D. 670 (Ilger 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

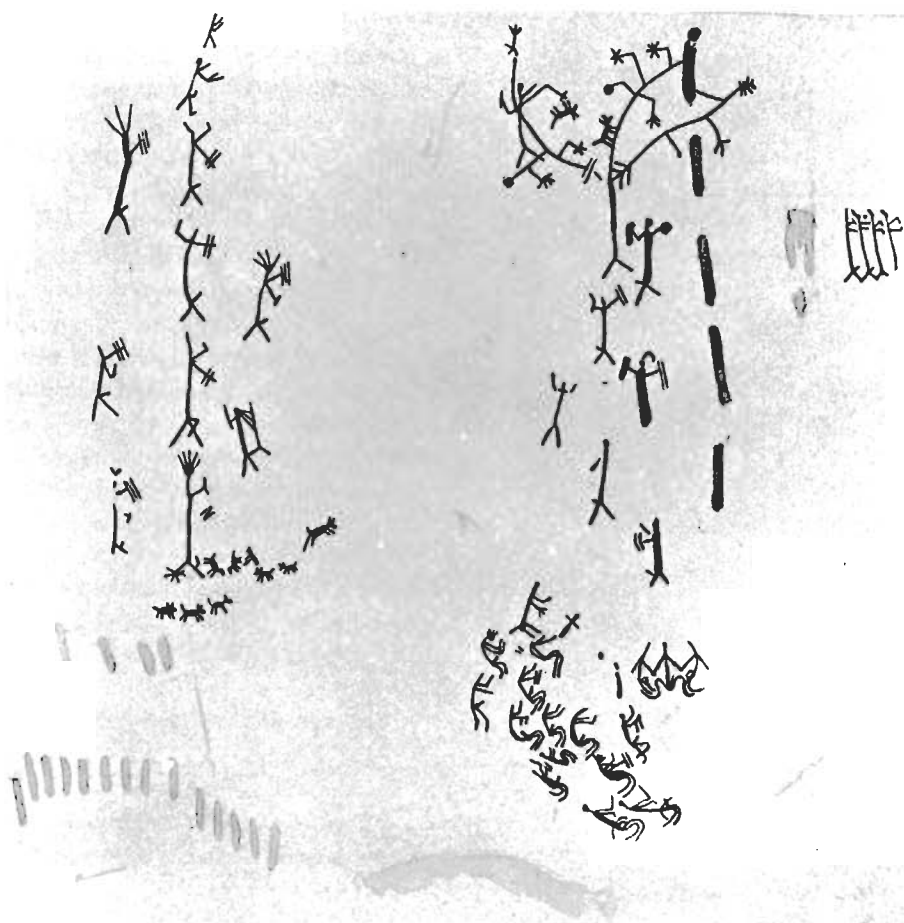


Fig. 8.6. Forrest Kirkland's rendition of the Red Linear rock art type site (41VV201) in Seminole Canyon State Historical Park. Processions of headdressed warriors are a key characteristic of this style. The group at lower right apparently depicts a ritual connected with childbirth, another common Red Linear rock art theme. Frost wedging has seriously damaged this panel, eliminating whole figures and their context. Figures average less than 10 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 that introduction coincided with the demonstrated movement of people off the Plains in Cibola times remains hypotheti-

cal. 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.

Flanders Subperiod (ca. 2300 B.P.)

The Flanders 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.P. (Turpin 1991b). The many rockshelter excavations north of the Rio Grande have failed to fix the Shumla's style in time, but radiocarbon dates recently obtained from an open site on the eastern periphery of the Lower Pecos also are consistent with the postulated age of ca. 2300 B.P. (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 exploitation 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 design repertoire is dominated by atlatl motifs, confirming their Archaic attribution, but it is not clear that the projectile point is in fact 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 bannerstones 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 Serranías 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



Fig. 8.7. The bear tracks petroglyph at Lewis Canyon showing the serpentine lines for which the style was named. The bear walks erect on two feet, human-like. The tabbed line is a motif found in southern Coahuila, and its meaning is uncertain. The swirl of atlatls illustrates some of the variations on the ways that bannerstones are depicted.

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 (2300 to 1300 B.P.)

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 Enson and Frio, are shared across broad expanses of Texas (see Prewitt 1995). The fiber industry becomes somewhat more elaborate by the appearance of more ornate painted mats as part of a mortuary complex that is dominated by bundled burials. 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 lashed into 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 (Huebner 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 rabbitskin robes, deerskins, and mats and placed on grass beds, often with their 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 (Ilger et al. 1994), it is possible that the Red Linear pictographs, described in a preceding section, are attributable to Blue Hills artists. A response to the cyclical return to aridity may be mirrored in yet another peak in the number of components at archeological sites (Marmaduke 1978a) and in the projectile point frequencies (Turpin 1990b) attributable to this period. The number of upland sites bearing Late Archaic points coupled with an increase in the proportionate number of unifaces, 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 Wroe Ranch site, small shell occupancy appears to have intensified and 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 mirrors that suggested by Kenneth Brown (1991) for the Middle Archaic period: a broad resource procurement strategy characterized by increased 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 B.P.)

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 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 events.

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 components based solely on arrow point styles (none of which is unique to the Lower Pecos region) and/or to relate radiocarbon dates to specific artifact types.

Although the Late Prehistoric people 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—crescentic 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 earlier, 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 most eclectic diet during his last days, including such items as fledgling birds, minnows, mice, gophers, and snakes, but the bulk was predominantly 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 sotol 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, Huebner (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 mortality.

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 canyons. 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 *Infierno* 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 *Infierno* phase time frame, but there is no evidence to link the two beyond age.

The case 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 Eldorado 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 frontally posed, 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 “lizard man” for the bent knees and elbows. A most curious attribute is the common depiction of protuberances or “buns” on the side of the head. Single feather headdresses are common. Presumably 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 (41VV205, 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 (41VV78), which he called the Flooded Shelter style. Note bow and arrow, protuberances 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 Devils River, as far north as the mouth of the Dry Devils. The only example yet recorded in Mexico was in Parida 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 ethnohistoric descriptions of clothing and hairstyles that could be artistically rendered as "buns." The Jumanos, 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 1986b). 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 seeps in the shelter walls or, in the case of Parida 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 (Schaafsma 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 curvilinear designs associated with free-floating atlatls to ab-

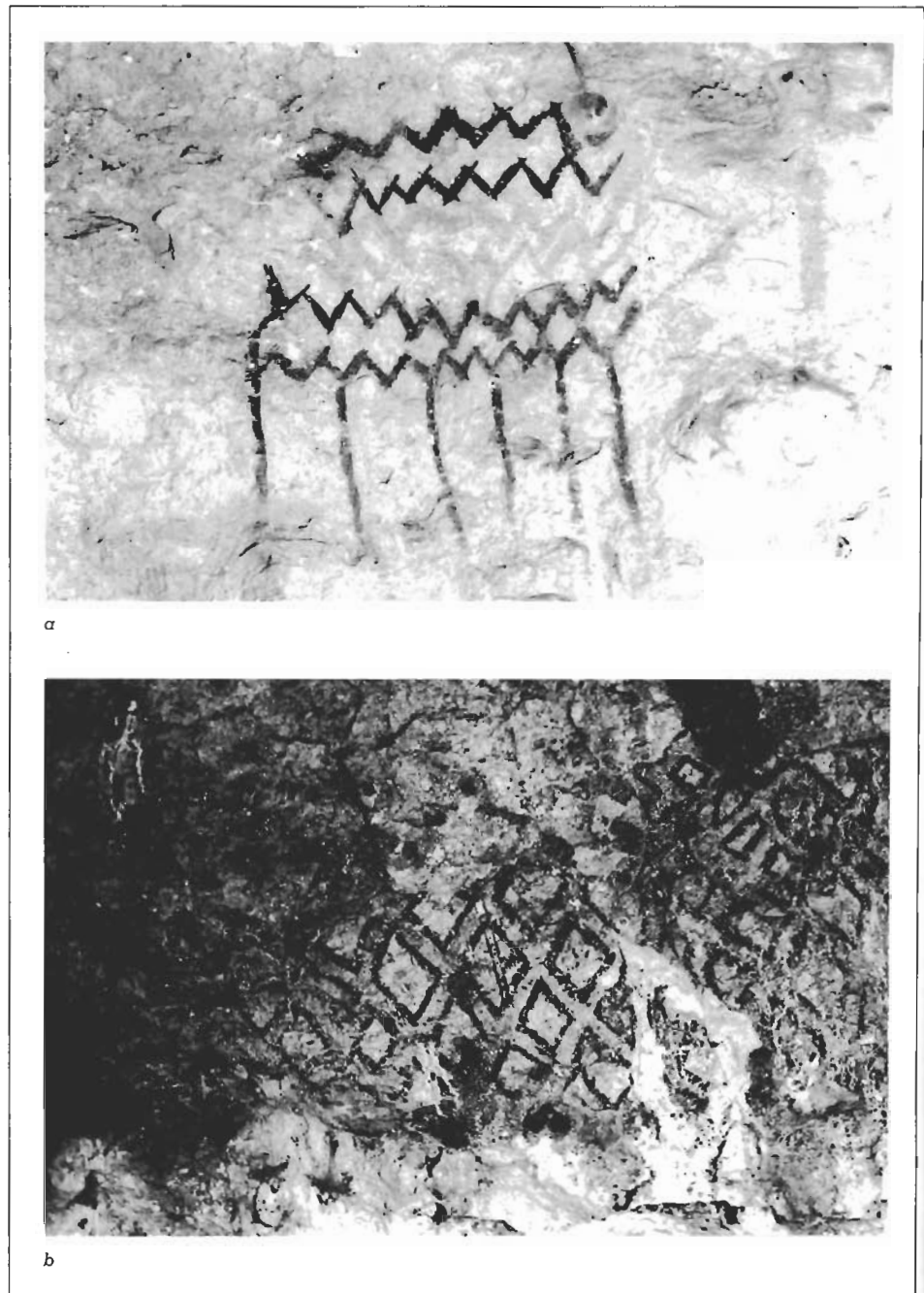


Fig. 8.9 Examples of the Bold Line Geometrics style pictographs: a, nested zigzag lines (41VV138); b, blanket pattern (41VV187). No scale.

stract 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 Flecha 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.

Infierno Phase (Estimated 450 to 250 B.P.)

The Infierno 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 structures (Fig. 8.10) and by a tool kit that is dominated by four artifact types: small triangular stemmed arrow points, steeply beveled end scrapers (Bement and Turpin 1987), four-beveled knives, and plain ceramics (Turpin and Robinson 1998). The type site, Infierno Camp, contains more than one hundred

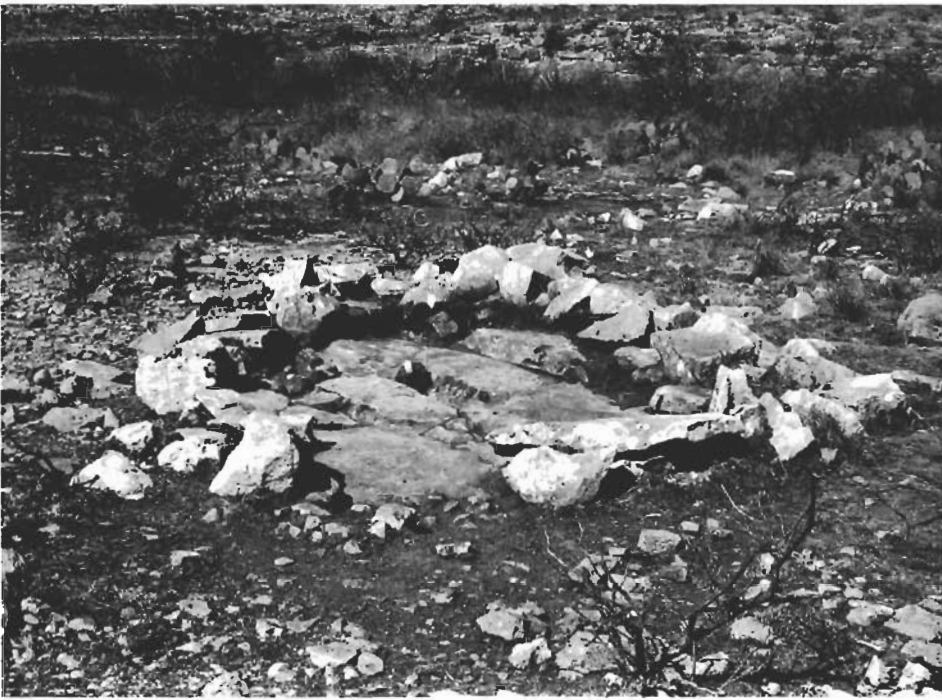


Fig. 8.10. Excavated tipi ring at the Live Oak Creek Site (41VV828). The diameter of the stone ring is approximately 2.5 m.

rings; the lesser sites have as few as one and as many as eight stone rings. In one locale, a single ring sits beside eight oblong cairns, presumably burial mounds, indicating their contemporaneity. The Infierno 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 tipi 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 plainware sherd and a Guerrero arrow point, both indicative of Protohistoric or early Historic occupation. It is important to note that not one of the Infierno phase single component sites has yielded a single European-derived historic artifact.

The rare ceramic sherds collected from Infierno 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 even remotely attributable to Infierno phase materials. Affinities with bone-tempered ceramics from the eastern periphery of the Lower Pecos region suggest that the Infierno phase is somehow related to the earlier Toyah complex of central and south Texas (Mehalchick et al. 1999).

The Infierno 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 bison hunts, perhaps recording 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 sea of grass that characterized the American frontier (Turpin 1987b), reverting to semidesert only after the introduction of livestock in the late 1880s.

The Infierno phase is the only archaeological 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; Hester, chapter 4; and Ricklis, chapter 5, all in this volume).

Historic Period (350 B.P. to Present)

Technically, the Historic period began in the Lower Pecos region in 1590 when Gaspar Castaño de Sosa, then lieutenant governor in Nuevo León, and a contingent of some 160 to 170 souls crossed the Rio Grande, somewhere near Ciudad Acuña, en route from Villa Almadén (Monclova) to the Pecos Pueblo (Hammond and Rey 1966; Schroeder and Matson 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 (Hackett 1926, 1931; Steck 1932). Castaño, like the many Spaniards that followed, found little but hardship in the Lower Pecos region. Expeditions sent to explore the Rio 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; Weddle 1968) that colonizing missions were abandoned, and forays across the river often became largely military maneuvers in retaliation for raids on communities in Coahuila and Nueva Vizcaya (Bolton 1915; Weddle 1968).

The closest the Spanish ever came to establishing a physical presence in the Lower Pecos region was an abortive attempt 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, lasted only eight years before the troops were removed to San Fernando de Austria (Zaragoza) in 1781 (Moorhead 1975, 226). An abortive attempt to recolonize 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 Lower Pecos 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 *despoblado*, or unpopulated zone (Daniel 1955), despite the fact that it sheltered refugee and renegade native populations for three centuries. Spanish government and military reports provide an inventory of native people (Bolton 1908; Griffen 1969; Hackett 1926) and chronicle the immense changes that took place as population movements quickened and warfare intensified. In the late seventeenth century, the Jumanos 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 reportedly in complete control of the Rio Grande (Weddle 1968, 200). Their supremacy was short lived, for 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 undefended.

With the coming of Anglo-American sovereignty in the middle 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 ford of the Devils River that later came to be called Bakers 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 Ameri-

can presence along the Rio Grande. Comanches and Kiowas annually rode south to raid the settled communities of northern Mexico, causing the Mexican government to complain bitterly to Washington. Kickapoos carried on their undeclared war against Texans from their secure base in the mountains near Santa Rosa (Múzquiz) until 1874, when U.S. troops illegally raided their villages in a clear case of boundary transgression. Driven from the American side, renegade Apaches took refuge in the vast arid reaches of the Bolsón de Mapimí, south of the Big Bend, where they were pursued by Mexican troops as late as 1881.

The completion of the southern transcontinental railroad in 1882 opened the Lower Pecos to markets in the East and West. Small towns sprang up around depots at sites that later gave their names to projectile point styles: Langtry and Shumla. Pioneer ranchers with their herds of sheep and cattle colonized the marginal rangeland and forever changed the face of the countryside. The very fact that substantial herds of cattle found sufficient graze agrees with the ethnohistoric record of bison hunting in, and south of, the Lower Pecos region, suggesting that the great sea of grass that charac-

terized the American frontier once again extended to and below the Rio Grande (Turpin 1987b). The modern environment is a product of historic land use exacerbated by natural phenomena, such as the famous droughts of the 1950s and the floods of 1954 and 1974.

Historic Period Archeology

The historic Native American period is represented archeologically 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-



Fig. 8.11. Forrest Kirkland's copy of historic pictographs at the Meyers Springs site (4ITE9) in Terrell County. Typical themes are the thunderbird, horned/headdressed figures, horses, and weapons. The group scene in the left center shows a horse in battle armor, placing it early in the Historic period, before the development of the "finest light cavalry in the world," the mounted Plains warriors. The central rider is about 20 cm in length.

terns, shifting from deeply entrenched canyons to open areas near accessible water sources, can be attributed to the demands 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 pace of development (Dering 1998; Mehalchick et al. 1999), although rumors that a Spanish mission had been established at San Felipe persist despite all evidence to the contrary. The construction of the Southern Pacific Railroad left an archeological trail that includes abandoned tracks and tunnels, depots, graves, and work camps with domestic, commercial, 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 (Turpin 1990d).

Summary

The cultural trajectory of Lower Pecos prehistory originates in stereotypic Paleoindian 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 economy was oriented toward the procurement of megafauna such as elephants, camels, horses, and bison, although the earliest kills were probably individuals or pairs of animals that were trapped and slain (Bement 1986). The later Folsom 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 extinction 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 resource base, developing a reliance on plant products, both as food and as raw material for the burgeoning fiber industry, while retaining established lithic traditions. 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 nucleus of the settlement pattern, showing differentiated activity areas of a domestic nature where fiber, wood, bone, and hide were worked, as was the ever-present stone. Mortuary customs included disposal of the dead in convenient 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 response to an increasingly arid environment. The end result was the consolidation of traits into the full-blown Archaic expression that defines the Lower Pecos as a distinct cultural entity. A model that parsimoniously explains this development was formulated by analogy to emerging complex societies documented ethnohistorically and archeologically in arid lands around the world.

In this model, changes in the distribution of essential resources, most prominently potable water, triggered responses in the settlement pattern and procurement strategies leading to a disproportionate concentration of people along the major rivers. Aridity does not imply a shortage of food, especially if desert succulents increase at the expense of grasslands, but gathering and processing of thorny plant foods and small mammals requires specialized techniques and knowledge. The responsibility for food procurement, especially hunting and gathering in the uplands, would have been delegated to mobile task groups who operated from their bases on the rivers. Diversification broadened the diet to include labor-intensive processing of a wider range of foodstuffs, activities that took place in open camps and rockshelters as well.

New methods of social control were mandated by the redistribution of human populations, who were in effect circumscribed by the availability of water. The inevitable tensions introduced by proximity elicited a restructuring of society that was accompanied by the intensification of ritual that was, in turn, manifested by the florescence 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 cultural region. This period of time is the apogee of the Lower Pecos cultural trajectory: the consolidation of an ethnic identity that trembled on the verge of societal complexity that was never achieved, possibly for lack of the ability to generate an adequate surplus—the necessary and sufficient condition for sedentism.

Sometime around three thousand years ago, the insular Lower Pecos cultural persona relaxed, perhaps disrupted by the advent of new people with a different economic strategy and social structure. A mesic interlude permitted the grasslands of the Great Plains to expand to the Rio Grande, drawing herds of bison and their attendant hunters. Even episodic, perhaps seasonal, influxes of people bearing a fully developed cultural system of their own must have had a perceptible effect on the resident population; at present it can only be discerned in settlement patterns, tool types, and possibly 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 archeology of the Lower Pecos found affinities with that of central Texas, sharing in the generalized Late Archaic lithic assemblage while perfecting its fiber industry, retaining its characteristic burial customs, and keeping a balance between rockshelters and open camp site occupations. Measures of population density again rise, reaching and exceeding the heights achieved during the Middle Archaic peak, but the processes behind the increase are less clear.

The Late Prehistoric period experienced 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 customs 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 assemblage, including small arrow points and ceramics, a preference for promontories with sweeping views, and residences

that used paired stones as pole supports for a thatch or hide cover. The people of the Infierno phase may be precursors to ethnohistorically described bison hunters who again seasonally congregated 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 Mexi-

cans, in resisting their common enemy. Under American hegemony, a concerted effort to clear the way west resulted in the extirpation of native people by the time the second transcontinental railroad was completed in 1882.