

Promise Beheld and the Limits of Place



A Historic Resource Study of Carlsbad Caverns and Guadalupe
Mountains National Parks and the Surrounding Areas

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Hal Rothman
Dan Holder
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Executive Summary

Located on the great Permian Uplift, the Guadalupe Mountains and Carlsbad Caverns national parks area is rich in prehistory and history. It is a stark landscape, one that is hard for humans. The plentiful resources of humid climates, the riverine environments that elsewhere in the semi-arid world sustain human endeavor are conspicuously limited in southeastern New Mexico and trans-Pecos Texas. From prehistory through the Mexican era, the region was sparsely inhabited and typically overlooked. A subregion defined by the transience of its human population well into the nineteenth century resulted; only with the advent of industrial systems of transportation and a national and eventually global market did this region become integrated into larger economic and social superstructures.

After the Treaty of Guadalupe Hidalgo in 1848, Americans traversed the region and began to seek to harness it, creating conflict with the Native American peoples who had their histories in the region. A more than thirty-year period of conflict followed, pitting the U.S. Army against the Mescalero Apaches, the Confederacy against the U.S. Army, and again the Army against Native Americans. The Buffalo Soldiers, African-American cavalymen, played a role in this conflict, the culmination of which occurred in the Victorio War that ended with the death of the great Apache leader in 1880. After 1880, the reservation system largely contained Native American people in the region, opening land and resources to the desires of the expanding American nation.

After the containment of the Mescalero, the region opened to Anglo-American settlement. Prior to 1880, cattlemen ruled the area; the famed Lincoln County War, which gave rise to the story of Billy the Kid, took place on the edge of this region. By the mid-1880s, the beginning of a settled regime took hold, enhanced after 1890 with the coming of the railroad and the commencement of widespread private irrigation. The result was a regional economy that followed the dictates of the agricultural parts of the nation in a marginal semi-arid locale. The private irrigation companies failed, and after the Reclamation Act of 1902, federal dollars sustained regional irrigation, and with it, regional life. The federal presence became the most powerful regional force during the twentieth century. Irrigation and federally funded dams, national park areas, the Civilian Conservation Corps, war-time development, a second national park, and later the development of a federally supported waste storage location. The deep caves beneath the Permian Uplift held great mystique; the most famous of these, now known as Carlsbad Caverns, became first a regional then a national sensation after a local cowboy, James L. (Jim) White, began the process of turning it into a wonder for the traveling public. From White's endeavor came first a national monument, then in 1930 a national park. A generation later, the establishment of Guadalupe Mountains National Park as one of the last traditional national parks in the lower forty-eight states cemented the significance of federal activity in southeastern New Mexico and the trans-Pecos. The federal economy served as a spine, with some parts such as tourism often locally regarded as a shadow economy, underpinning private endeavor in the region.

After 1900, a series of extractive regimes paralleled federal activity. Irrigated agriculture

and ranching served as mainstays. Guano, a widely used fertilizer before 1900, was found in the same caves that White developed for tourism. From early in the century until the 1920s, guano was a major export of the region. Following the demise of the guano industry and the rise of recreation, potash mining in the immediate Carlsbad area and oil and gas development throughout the greater region drove the private sector. After the decline of potash mining in the 1960s and 1970s, the region became the province of “retirees and rest homes,” as one local observer recounted. In this the region anticipated the shift the service economy that the rest nation wrestled with a decade later.

In the 1990s, the two parks face an array of issues that are typical of popular national park areas throughout the nation. Both face the impact of visitation on their resources and grapple with the changes in the expectations of the public. Both face questions of resource management and funding, challenges to the mission of the parks, and the complications of managing national parks in an era during which the role of the government is often in question. The situation offers promise and peril, opportunities and threat, all of which stem from and reflect the histories of both parks and the subregion they inhabit.

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Introduction

The history of southeastern New Mexico and the far west Texas area remains one of the great untold stories of the American West. Despite its vast historical importance, the region has been poorly represented in historical literature. No champion or storyteller has emerged to defend it against claims of marginality, to carry its tales to an enthusiastic public, or to give the region an identity as has the Gold Rush Country of California, the vaunted buttes of the northern plains, or the once-deep grasses of the Great Plains.

In the history of New Mexico, the southeastern part of the state is often slighted in favor of the Rio Grande corridor and the Rio Abajo and the Rio Arriba regions to the north, where the Spanish *conquistadores* came, where the Pueblo peoples rose against them, where trappers came across the mountains to first scandalize and then mix into *Nuevo Mexicano* culture. Texas history focuses on the plains of west Texas, famed as the *Llano Estacado*, the Staked Plains of ranching lore. That dominates the stories of the western portion of the state, as most of Texas remains taken with the image of the Alamo and the Texas War of Independence. Such events provide the inspiration that drives Texas mythology. In most histories of Texas, the trans-Pecos region is portrayed as marginal. Texans regard the Alamo, the massacre at Goliad, the Battle of San Jacinto, the gusher at Spindletop, and dozens of other places and events as central to their heritage, but the drama of the trans-Pecos is not among them.

Yet this region of far west Texas and far southeastern New Mexico has a valuable and important history that mirrors the vectors of Texas and New Mexico history but tells an independent story. It is a story more typical than mythic, one involving the perseverance of people in a harsh physical environment, of transience by native peoples and early immigrants, and of settled permanence only following the introduction of post-industrial technologies. The dimensions of American history — both good and bad, laudatory and shameful — are present within its story. So are the universal dimensions of people in any place. This long-forgotten region, remembered usually only for the Lincoln County War that happened on the very edge of the ecological bioregion that is southeast New Mexico and far west Texas, remains outside the primary trajectories of conventional history and myth making.

The story of this region, however, is both instructive and important. The powerful moments of southwestern regional history — the Alamos and the Pueblo Revolts, are rare. Far more indicative of most people's lives in the American West and Southwest is the ongoing struggle to survive in harsh, dry climates, where the values of the humid climes east of the Mississippi River, of the land where irrigation is unnecessary to agriculture, simply do not apply. There on the peripheries of North American settlement, on those marginal spaces that could not support more than a hunting and gathering regime without very powerful trade networks and ties, lies a story of overcoming adversity more powerful and potent than in wetter places, than in locations where fruit trees grow, where strong rivers bless the lands in their immediate vicinity, where life remains a struggle for certain, but not such an endeavor that the very life of its inhabitants and passers-through depends entirely on the vagaries of climate and indeed fate.

At its core, this is a history of a subregion, a peripheral area bounded by the constraints

of life in the arid and semi-arid world and defined by the placement of Carlsbad Caverns National Park, first established as a national monument in 1923, and Guadalupe Mountains National Park, authorized in 1966 and established in 1972. Located east of El Paso and the Rio Grande — the Spanish and Mexican gateway to the north — and west of the Pecos River in one of the most remote sections of Texas and southeastern New Mexico, this subregion was often traversed and rarely settled. People skirted by it or simply passed through, more interested in their passage than in this place that offered so little to eye of Native American, Spanish conquistador, and Anglo-American settlers. The region never contained bounty; what it offered sprang from the hope of human beings of all kinds who envisioned it as more than the scrub desert they beheld, more than the lack of rain and the weak, pale soil that crumbled between their fingers. This place was on the border of the oft-told stories of the past, a part of the dominant currents in the history of pre-contact, Spanish, Mexican, territorial New Mexico, and Texas, but rarely central to the primary historical activities of those times. El Paso to the west, Roswell to the north, Hobbs to the northeast, and Midland-Odessa to the southeast overshadowed the Carlsbad-Guadalupe Mountains region for much of its modern history; these communities and their economic development helped define the Carlsbad Caverns-Guadalupe Mountains region in the era before the development of the tourism industry.

As did many places without the natural resource base to sustain agriculture and ranching in the nineteenth century, the Carlsbad Caverns-Guadalupe Mountains region first needed ties to the munificent bounty of the industrial revolution and then a strategy to bring those advantages to the region. The railroad provided the means, and for a while agriculture and ranching played a significant role in the economic health of the region. Yet the benefits the region could offer were few. Even the natural resources that lay beneath the ground — primarily bat guano for fertilizer, oil, natural gas, and potash — were sufficient to sustain individuals, families, and companies, but not enough for the region to develop an Albuquerque or even a Midland-Odessa. Like many similar places before and since, the Carlsbad Caverns-Guadalupe Mountains region turned to the “sink” of tourism, the place to which communities fall when they find that their existing strategies and the values that underpin them are exhausted. That the Carlsbad Caverns-Guadalupe Mountains region had spectacular hidden caves that became an American icon for a period, that the Guadalupe Mountains — the result of a great Permian uplift millennia ago — proved a remarkably scenic and sufficiently desolate area to be protected in the federal system as well only served to underscore the area’s marginality of other strategies over the long term.

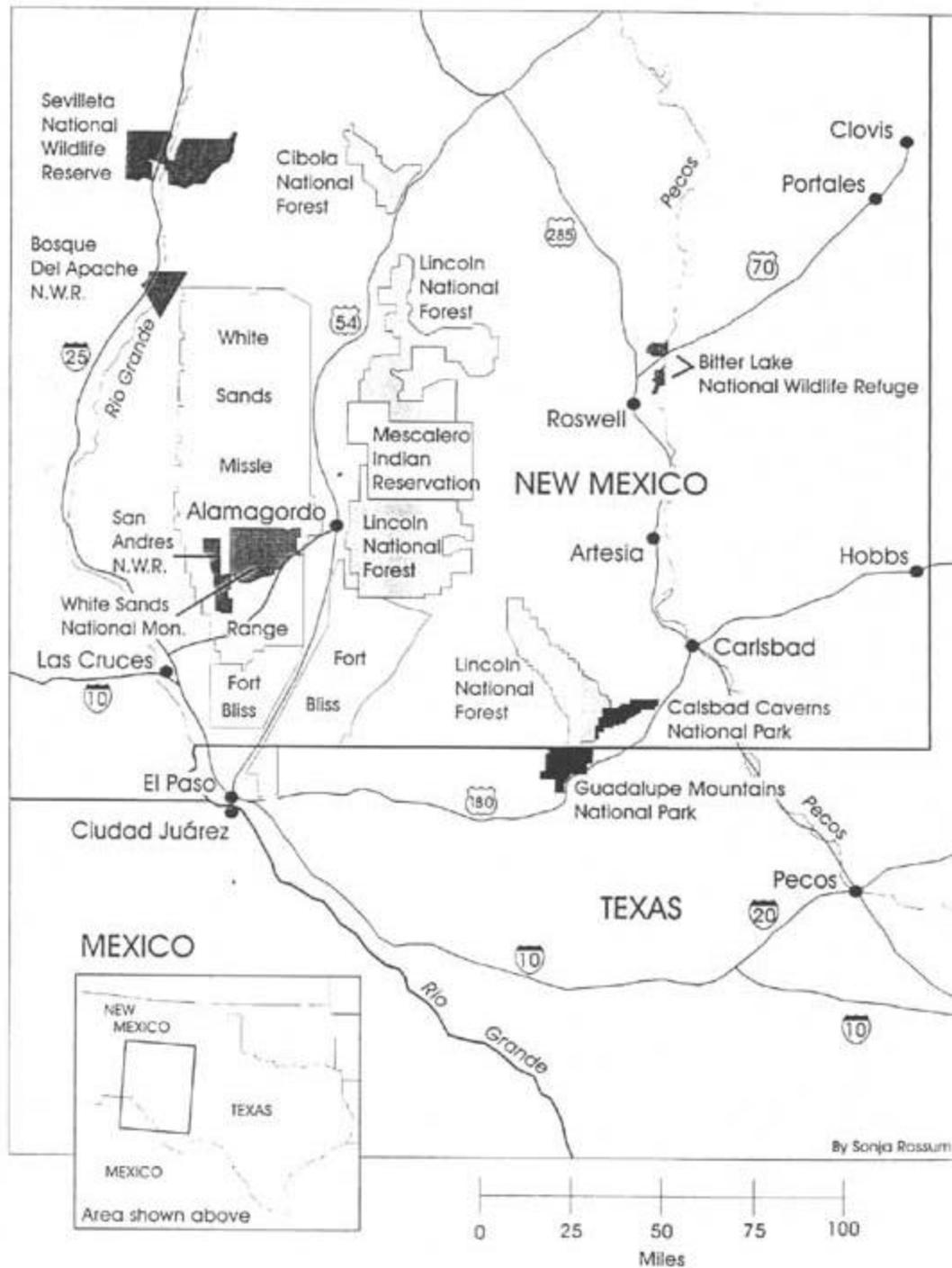
In this context, tourism in the guise of the two national parks became a shadow economy, one on which the region relied but its people often chose to regard as ephemeral, marginal, and sometimes even inconsequential. As elsewhere in the West, people tried to distance themselves from their dependence on tourism; it seemed inherently less substantial than growing crops, raising animals or even mining guano or potash or extracting natural gas and oil. Americans, especially rural Americans, believed that there had to be some tangible output for their work to have both substance and meaning. The malleable “experience” of tourism did not seem to suit that concept. This deep-seeded feeling meant the National Park Service and other federal agencies had to struggle to establish their place in the town of Carlsbad and in the region as a whole. It was not enough to provide important support for the regional economic spine; the

form that the support required also had to square with local values.

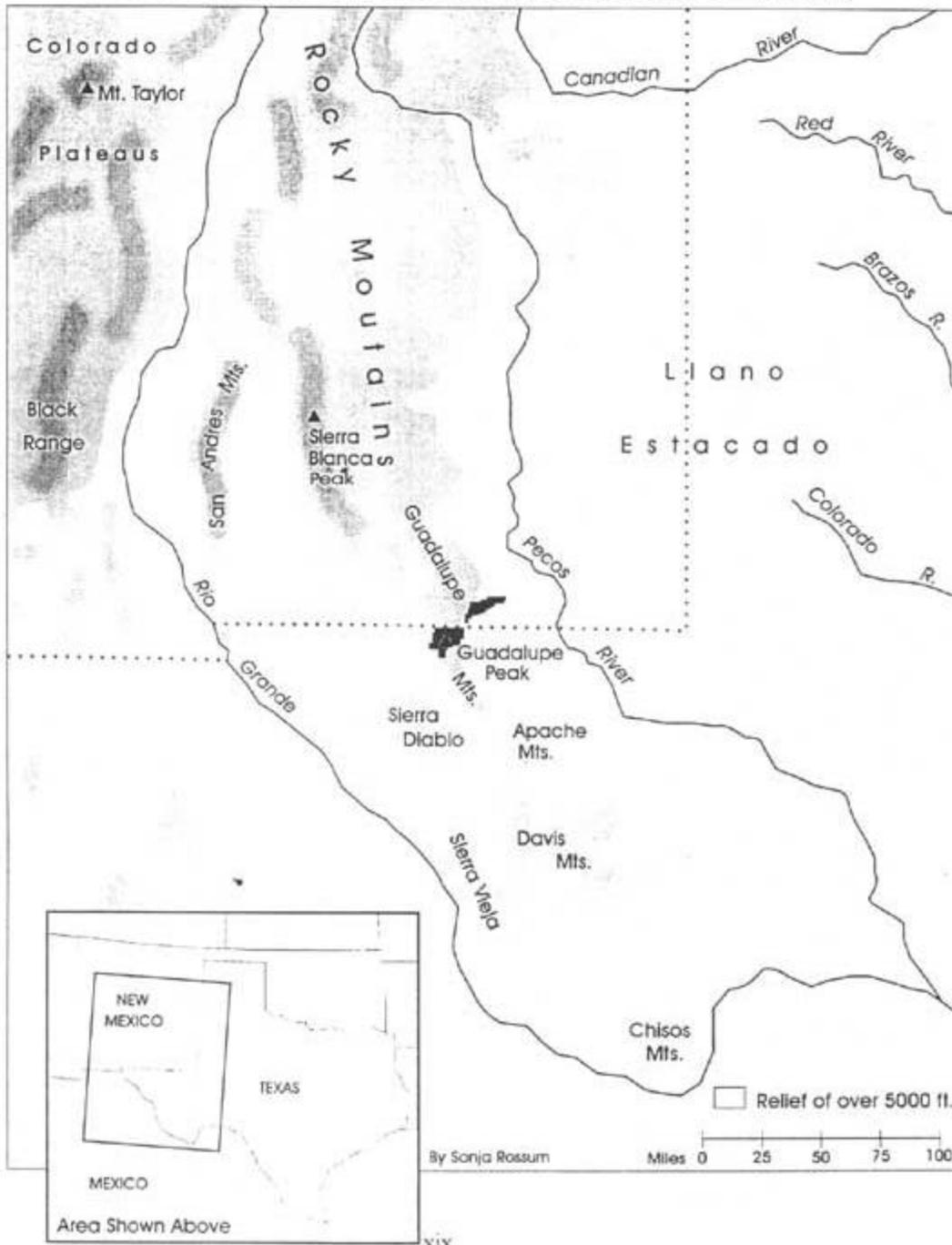
This paradoxical arrangement, in which people depend heavily on an industry they seek to deny, has come to characterize the Carlsbad Caverns-Guadalupe Mountains region. Here in this region that so many traveled through, where entire generations of historical experience could be framed within the saying “they passed through here,” is a story so typical in many ways as to become archetypal. Here Native Americans were replaced less because of their threat to Spanish, Mexican, or Anglo society, but because it could be done. Here industries such as irrigation, guano and potash mining, and others rose and fell, sustaining the community and its sense of self, while federal dollars — in the form of National Park Service money; during World War II, military money; and finally in the recent past, money for the Waste Isolation Pilot Project (WIPP), a low-level nuclear waste storage facility financed by the Department of Energy — played a tremendous but largely masked role in sustaining the region.

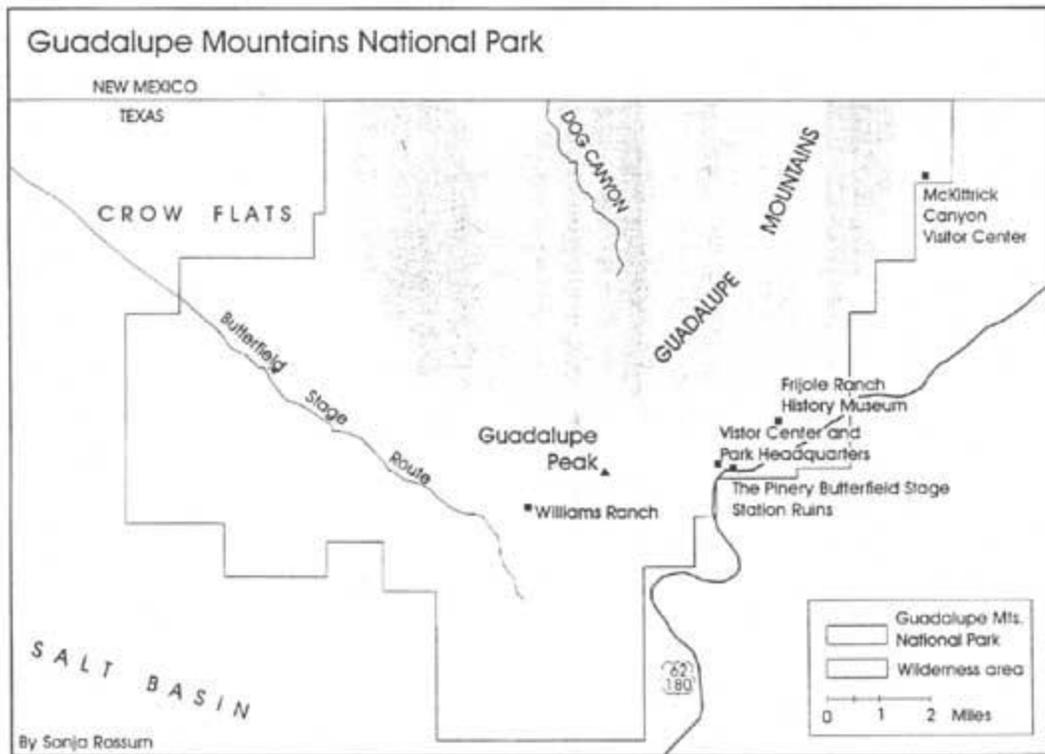
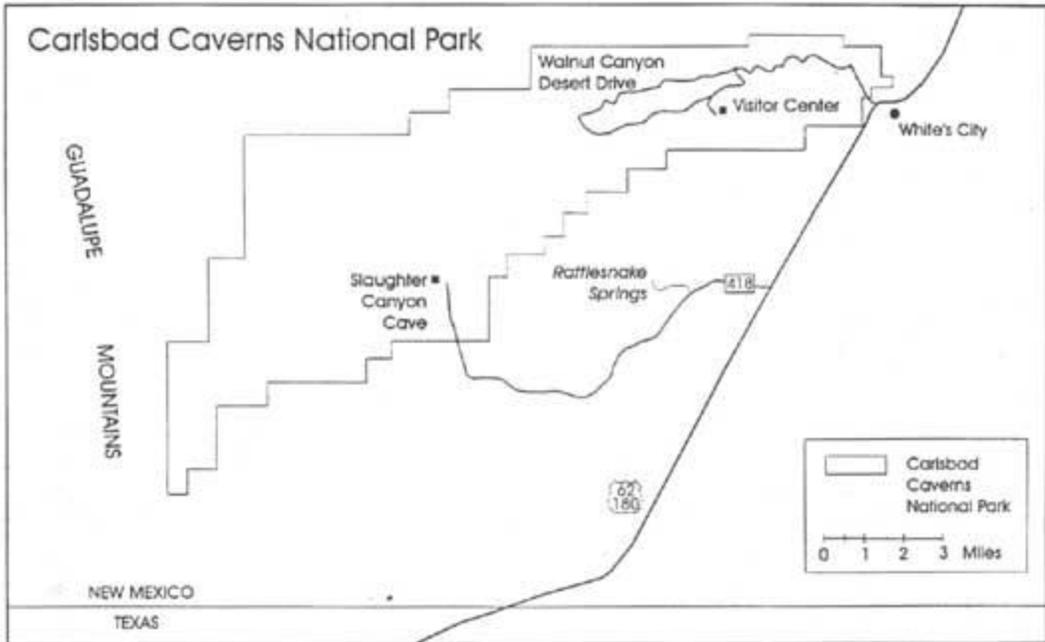
It is this pattern, in this reliance on cornerstones such as Carlsbad Caverns and Guadalupe Mountains national parks, that the Carlsbad Caverns-Guadalupe Mountains region reveals its importance. This often bereft and largely ignored region has more in common with the rest of the West than most who live elsewhere in the region would care to admit. In the combination of its peripheral nature and its typicality, the Carlsbad Caverns-Guadalupe Mountains region reveals how closely it is part of the mainstream of the American West’s history. It too is dependent; it too seeks to mask that characteristic need with the rhetoric of individuality and independence. The pattern of the history of the Carlsbad Caverns-Guadalupe Mountains region, so long ignored in place of more glamorous tales of romantic places and events, shows a meaning and significance that belies its peripheral status.

Carlsbad Caverns and Guadalupe Mountains National Parks and Surrounding Areas



Geographic Features Near Carlsbad Caverns and Guadalupe Mountains National Parks





Chapter 1: From Prehistory to European Contact

The area that is the Guadalupe Mountains-Carlsbad Caverns region has not always been the stunning combination of desert, high elevation mountains, mesas, and range country that is pervasive there today. Almost 250 million years ago, during the Permian Period of the Paleozoic Era, which lasted from about 280 million to 225 million years ago, the portion of southeastern New Mexico and trans-Pecos Texas that would later become the Guadalupe Mountains-Carlsbad Caverns region stood partially under water. It was just off the edge of the supercontinent of Panagea, which began to split into the seven continents of today about 180 million years ago. Part of the vast Permian Sea and located much closer to the equator than today, the region was covered by three basins — the Marfa, Delaware, and Midland — and was connected to the great Permian Ocean by the Hovey Channel, a narrow inlet. The middle of the three arms of water that jutted to the edge of land, the Delaware was a basin about seventy-five miles wide and 150 miles long. A reef emerged along its edge later in the Permian Period. Known as the Capitan Reef, now one of the premier aboveground fossil reefs in the world, it traced the edge of the Delaware Basin for almost 400 miles. The reef is most visible today as what we call the Guadalupe Mountains.¹

Behind this uplift was a formation called a backreef that geologists regard as the completion of the Guadalupe Series. The backreef consisted of a warm shallow lagoon tens of miles wide that served as a vast evaporating pan. The heat of the tropical sun concentrated the minerals as the water evaporated, and gypsum and other materials precipitated on the floor of the lagoon. Closer to the shore, the gypsum mixed with sediment that was eroding off the continent. This combination of mud, silt, sand, and gypsum formed tidal flats that stood about four feet deep at high tide. When the tide receded, channels winding through slippery mud and tidal pools became visible.²

Ocean currents and waves battered the face of the Capitan Reef facing the water, breaking off chunks that slid down the front of the reef. A forereef formed — a talus slope of loose rock and other materials that extended downward into the basin and comprised the debris

¹Robert J. Dunham. *Capitan Reef, New Mexico and Texas: Facts and Questions to aid Interpretation and Group Discussion*. Permian Basin Section. Publication 72-14, Society of Economic Paleontologists and Mineralogists. Midland, Texas: May, 1972; for a concise description, see Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900 A.D.* (Cambridge: Cambridge University Press, 1986), 9.

²David H. Jagnow and Rebecca Rowher Jagnow, *Stories From Stones: The Geology of the Guadalupe Mountains* (Carlsbad, NM: Carlsbad-Guadalupe Mountains Association, 1992), 6-13.

from the reef itself. As a result, the reef grew wider as it expanded on top of its own debris. Inverted and resembling an upside-down pyramid, the reef could not support itself and large boulders, some as big as a modern house, toppled off the reef and rolled down its side to the basin below.

The proximity of the forereef and the main reef created fissures that played an important role much later in the development of the complex of caves that characterize the region. The forereef did not become as solid as the reef from which it fell, and the immense weight of the overlying reef cracked the forereef. The talus, debris that had previously fallen, shifted, and fissures in the reef opened. Marine sediments washed off the continent and became trapped in these cracks. The cracks provided a route for water and hydrogen sulfide gas that migrated upward from oil reservoirs deep beneath the reef, over millions of years initiating and then expanding the cave creation process.³

The oil and natural gas that formed beneath the region also stemmed from these same geological processes. In the nearly one-half mile deep Delaware Basin in front of the reef, the sediments that washed into the water later turned into thin black limestone beds separated by thicker beds of fine sandstone and siltstones. The black limestone contained organic-rich remains of plants and animals that settled deeper in the basin than other materials. As they decomposed, they used up all of the available oxygen, stopping the decomposition process. Most of the organic matter was buried or preserved. Over millions of years, heat and pressure changed this organic matter into oil and gas. These deposits today attract the attention of the industrial world, which craves fossil fuels to power its machinery.⁴

When the growth of the Capitan Reef ended near the end of the Permian Period, it closed a period in the region's geological history. As ocean access became restricted, the Delaware Sea shrank and it began to evaporate more rapidly than it could be replenished, concentrating its dense minerals until the water could no longer hold them. The minerals precipitated out, drifting to the sea floor crystal by crystal and forming thin bands of sediment, which geologists today call the Castile Formation, the gypsum desert area stretching south of Guadalupe Mountains National Park across the Delaware Basin. Thin layers of white gypsum and even finer layers of grey limestone alternated, reflecting seasonal climatic fluctuations in a typical evaporation sequence in the same manner as tree rings mark wet and dry years.⁵

At the very end of the Permian Period, the Delaware Sea had become a very shallow evaporation basin and the geological processes that created the salt and potash that would later be mined accelerated. Two salts, sodium chloride (table salt) and potassium chloride (potash), began to precipitate out. Combined with sediments that eroded from the reef, they formed bands of sandstones, siltstones, and redbed shales. Over millions of years, these became the Rustler and Salado formations,

³Rachel Wood, J.A.D. Dickson and Brenda Kirkland. "New Observations on the Ecology of the Permian Capital Reef, Texas and New Mexico" *Paleontology* Vol. 39, Part 3 (August 1, 1996): 733-762.

⁴Jagnow and Jagnow, *Stories from Stones*, 14-15.

⁵Jagnow and Jagnow, *Stories from Stones*, 14.

where much later in time human beings from pre-Columbian people through United States citizens mined salt and potash. The most evident expanse of salt flats — a seventy-mile-long and five- to fifteen-mile-wide area west of today's Guadalupe Mountains National Park — is what geologists call a graben, a downthrown or sunken block filled with sediments from adjacent uplifts. These salt deposits and the accompanying alkali flats — locally called salt lakes — were a crucial resource for generations of people. For a time in the late nineteenth and early twentieth centuries, these minerals were crucial to the region's economic identity.

The gypsum plains that stretch east from the Delaware Mountains, southeast of the Guadalupe Mountains, toward the Rustler Hills, also stem from the erosion of the Permian Period's geological features. This more than fifty-mile stretch of gypsum owes its origins to the erosion of the thin bands of the Castile Formation. In it, thicker bands of gypsum alternated with thinner bands of limestone. As the sediments were buried, the water in the minerals was squeezed out and the gypsum changed to anhydrite. Over millions of years, the Castile Formation entirely eroded and the water that reached the anhydrite on the surface turned it back into gypsum, hundreds of feet in thickness. Torrential thunderstorms molded the soft and easily eroded gypsum, creating the sometimes eerie-looking landscape of the gypsum plains. Rugged draws, caves, and asymmetrical formations typify the gypsum plains.

By the time human beings came into the area more than 12,000 years ago, the geological formations begun in the Permian Period had become the region's physical realities. The entire area, and the Southwest, that surrounded it had slowly become hotter and drier, as a long-term post-Pleistocene Era trend made the area more arid and generally warmer, but the full brunt of this climatic change still lay in the future. When humans arrived, the area was more temperate than it is today. Its mountains were covered with vast Pinyon-juniper complex forests and the lowlands sported abundant grassland savannah and some trees. There is some evidence of chipped stone that lacked projectile points that seem to predate Paleo-Indian habitation in the larger region, but scant evidence leaves this prospect as the topic of heated debate among archaeologists. People labeled Paleo-Indians by archaeologists did inhabit the region by about 10000 B.C., hunting bison, mammoths, and other now-extinct large mammals as well as smaller game. Living near water sources at lower elevations, these Paleo-Indian people roamed the high country in search of large mammals for game. They also collected plants in a fashion typical of nomadic groups around the globe.⁶

⁶ Susana R. Katz and Paul Katz, "Pecos Past: The Prehistory and History of the Brantley Project Locality," (unpublished report, Bureau of Reclamation, Southwest Regional office, 1985), 26; Susana R. Katz, "Late Prehistoric Period Environment and Economy of the Southern Guadalupe Mountains, Texas," (Ph.D. diss., University of Kansas, 1978), 14; Susan R. Katz and Paul Katz, "The Prehistory of the Carlsbad Basin, Southeastern New Mexico: Technical Report of Prehistoric Archaeological Investigations in the Brantley Project Locality," (unpublished report, Bureau of Reclamation, Southwest Regional Office, 1985), copy in Artesia Historical Museum, Artesia, New Mexico, 31; Michael S. Foster and J. Charles Kelley, "Archaeological Investigations in the Three-Mile and Sulphur Draw Watershed, Culberson County, Texas," *The Artifact* 27 3 (1989), 9-14; Bob Parvin, "In Search of the First Texans," *Texas Parks and Wildlife*, October 1983, 3-7; Alan H. Simmons, Ann Lucy Weiner Stodder, Douglas D. Dykeman, and Patricia A.

Paleo-Indian people initially found an abundance of big game to hunt. Now-extinct species of mammoths offered a primary target for hunters, along with the ancient bison, two species of now-extinct horse, a rare four-horned antelope, the California condor, dire wolf, brush ox, and some camel-like creatures. They hunted with different kinds of spear points that have since been labeled Clovis, Folsom, and Plano types, suggesting that a variety of cultural groups and subgroups thrived throughout eastern New Mexico and west Texas. Blackwater Draw, to the north and east of the Guadalupe Mountains and the lower Pecos River Valley, contains an important Paleo-Indian site. Burnet Cave, west of Carlsbad, contained vegetal remains, charred logs, fossilized mammals, and spear points, offering a prime example of Paleo-Indian ways of life. In Burnet Cave, archaeologists found a Clovis-fluted projectile point, with extinct animal bones that could be 10,000 years old. Near Hueco Tanks and at sites near Van Horn, Texas, archaeologists uncovered Folsom points that also attest to the presence of slightly later Paleo-Indian peoples. Warm from the heat of their fires and satiated with meat from the kill, these people must have seen the region as a paradise.¹

These Paleo-Indian peoples and generations of their descendants were the first humans to fall into the trap that higher elevations and the areas that surround them could be in the Southwest. To their eyes — as to the eyes of generations of Native Americans, Spaniards, Mexicans, Anglo-Americans, and others who came to the region — the place at which they arrived appeared to offer them more than the necessities their culture demanded. If the region did not always appear abundant, it at least looked as if it could provide subsistence for these Paleo-Indian peoples. Yet the Guadalupe Mountains-Carlsbad Caverns region was a trap, similar to those waiting elsewhere in the Southwest and West. The land looked abundant, and it was — for a while. But its stock of game, lush upland forests, and high grasses were living relics of an earlier epoch, one that was wetter and cooler. These resources would not replenish easily, and they certainly could not be replaced. While small nomadic groups such as the Paleo-Indians did not face this reality head-on, for each successive generation of descendants the issue became more vexing. They too were in a trap, a difference between what they saw and the ability of the land to provide it over time. They did not know that, even as they arrived in the region, climatic changes were under way that would significantly alter the realities of human life in the region.²

Hicks, "Human Adaptation and Cultural Change in the Greater Southwest," Arkansas Archaeological Survey Research Series no. 32, (Wrightsville, AR: U.S. Army Corp of Engineers Southwestern Division, 1989) 21-29, 35.

¹ Sunny Leigh Brockmoller, "The Identification and Classification of Projectile Points from the Plateau Complex, Van Horn, Texas," *The Artifact* Vol. 25 No. 1 (1987). Dixie L. Dominguez, "Hueco Tanks: A Vital Resource in Southwestern History." *Password* Vol. 31, No. 3 (Fall 1986): 123-136.

² Hal Rothman, "The Perceptual Trap? Climate and Perception in the Nineteenth-Century American West," *Halcyon: A Journal of the Humanities* 17 (1995): 127-144; Robert Caro, *The Years of Lyndon Johnson, Volume I: The Path to Power* (NY: Alfred A. Knopf, 1983): 32-60, shows one example of this phenomenon; Martin Rose, in *Donner Pass*, illustrates the perceptual problem in the instance of the Donner Party; Elliott West, *The Way to the West: Essays on the Central Plains* (Albuquerque: University of New Mexico Press, 1995), brilliantly described this process for both Cheyenne and westward-bound Anglo-

Beginning about the sixth millennium B.C., the region's climate became noticeably drier. With the general lack of water in the area already pronounced, a shift in the nature of available resources took place. Even at high elevations, forests began to shrink, depriving Paleo-Indians of sources of material as well as warmth. Drier xeric plants began to climb in elevation, taking over from the declining woodland trees and shrubs. The game became more scarce, slowly at first, but more rapidly as the animals that remained reproduced more slowly and less efficiently; the environment that sustained them became far less tolerable, and the mobile species that could migrate to more suitable places such as the Plains did so. In a typical example, the ancient bison gave way to a much closer forerunner of the modern American Bison, which was already migrating to become the Plains species that Spaniards found during Vázquez de Coronado's 1542 Plains journey and that the French found in what is now Tennessee and Alabama at the beginning of the eighteenth century. The American Bison spread from the trans-Mississippi into an ecological niche that became open as European disease, brought by the Spanish explorer Hernán de Soto during the 1530s, demolished the elaborate Indian cultures of northern Alabama and southern Tennessee. In the early 1700s, the French came to the Southeast and found it sparsely inhabited, its culture left in mounds. People nearby appeared to possess little of the sophistication and social organization that de Soto witnessed 150 years before. At about the same time, Spaniards saw significant numbers of bison close to the Gulf of Mexico along the Florida panhandle and in southern Georgia and Alabama, a remarkable journey for a species that history typically associates with the Great Plains.

The bison were fine prey for the successors of the Paleo-Indians, the Archaic people, a hunting and gathering adaptation that became evident between about 6000 and 5000 B.C. The people of the Archaic period fashioned their existence around the changing conditions of their time as well as to a different set of cultural imperatives than the Paleo-Indian peoples. The bison became coveted prey for Archaic people; the animals congregated closely together, unlike the mammoth, a relative of the elephant that roamed in smaller groups over a much wider range. Bison became more attractive prey as Archaic people hunted in larger groups. They needed to band together; the shaggy, mobile animals were hard to catch and dangerous because of their size and speed. Life became harder for Archaic people as a result of climatic change, and over time, they became adept at supplementing the plants they gathered with the meat they hunted. In the space of a few thousand years, a mere wink in geologic time, the temperate traits of the region were replaced by a more semiarid to arid ecological regime resembling that of today.³

American settlers in the mid-nineteenth century.

³ Katz and Katz, "Pecos Past," 26, 29; Clifton, "An Archaeological Survey of 26 Miles of the Boundary of Guadalupe Mountains National Park, Culbertson and Hudspeth Counties, Texas," 9; Simmons, Stodder, Dykeman, and Hicks, "Human Adaptation and Cultural Change in the Greater Southwest, 39, 69;" see also Alfred Crosby, *Ecological Imperialism*: 1986), 210-20, for an account of the range of the American Bison at a later date; see also Dan Flores, "Bison Ecology and Bison Diplomacy: The Southern Plains from 1800 to 1850," *Journal of American History* 87 2 (September 1991): 465-85 and Elliott West, *The Way to the West: Essays on the Central Plains* (Albuquerque: University of New Mexico Press, 1995), 51-85, offer

The change to this new regime came rapidly by the standards of geological time. Five thousand years ago, the environment became remarkably similar to that of today; no later than 3,000 years ago, the climate and environment changed so it almost directly mirrored the modern environment. Drier, hotter conditions forced the people who remained in the region to adapt. They had to replace older food sources with new ones that required different strategies than did hunting the large animals of the Paleo-historic era. These Archaic people — whom archaeologists suspect were the forerunners of the Jornada Branch of the much later Mogollon Culture of 1000 A.D. era — increasingly emphasized the hunting of small game over large; large animals became a scarce and unreliable resource in their world. Archaeological evidence indicates that Archaic people adapted rapidly to the new environment. If something moved, Archaic people found it edible. The color green in plant life indicated the same thing to them. Often their diets consisted of rodents and a variety of cacti species. The climate change also altered their patterns of mobility. As resources became more scarce, the mobile hunting parties declined. They had little guarantee of finding game or even of being able to forage for their sustenance as they traveled. Instead, Archaic people stayed in an area that could sustain them and learned it well. Their survival depended on finding sustenance from the area immediately around them, a significant difference between them and both their Archaic ancestors and the Paleo people who preceded them. Archaic people utilized a smaller range to the utmost of their ability. With some exceptions, they did not plant food or keep animals. Instead they knew a small area intimately and used that understanding to fashion a varied diet from what it offered. This tendency to range closely but to maximize the opportunities of the region kept Archaic populations in small areas in which they were comfortable, and some scholars attribute growing population throughout the Archaic Period to this adaptability. As the people of the Archaic narrowed their reach, they considerably extended the depth of their knowledge. They continued to trade among themselves, revealed by the preponderance of similar artifacts at a wide variety of sites. Although they initially did not adopt sedentary ways, they moved closer to the rhythm of settled people.⁴

Archaeologists have divided Archaic life into four distinct phases distinguished by the traits of these peoples. The initial phase, labeled Early Archaic, lasted from roughly 6000 to 3000 B.C. and revealed the rapidly changing environmental conditions and shifting human responses to the new

outstanding analysis of the patterns of mobility, demography, and social and reproduction characteristics of the American Bison; for a general summary of the Archaic Period, see Cordell, *Prehistory of the Southwest*, 153-80.

⁴ Katz, "Late Prehistoric Period Environment and Economy of the Southern Guadalupe Mountains, Texas," 14; Clifton, "An Archaeological Survey of 26 Miles of the Boundary of Guadalupe Mountains National Park, Culbertson and Hudspeth Counties, Texas, 9;" Katz and Katz, "The Prehistory of the Carlsbad Basin, Southeastern New Mexico," 31-32; Michael E. Whalen, "Moving Out of the Archaic on the Edge of the Southwest," *American Antiquity* 59, No. 4 (Oct., 1994): 627, offers a different view of the larger trends in this period. Whalen persuasively conflates the Terminal Archaic and Late Prehistoric periods, arguing for a localized interpretation that suggests that the Terminal Archaic phase lasts far longer in the deserts of the Southwest.

situation. The Middle Archaic period, also known as the Avalon Phase, began in around 3000 B.C. and lasted about 2,000 years. During this phase, Avalon people adapted to their new circumstances in a changing environment. Some became semi-sedentary, locating their camping places along major watercourses; the increasing use of river shellfish demonstrated the broader range of food-gathering strategies in which they engaged. The subsequent era, the Late Archaic, also known as the McMillan Phase, lasted from approximately 1000 B.C. to A.D. 100. It remains difficult to differentiate it from the predecessor Avalon Phase. Most practices and locations seem very similar, but a range of more specialized features, especially tools and structures, testify to a small but significant cultural distinction between the two eras.⁵

Cultural materials from a range of caves within the Guadalupe Mountains have offered much insight to Archaic life before 1 A.D. Dark Canyon Cave, Honest Injun Cave, Burnet Cave, Cremation Cave, Hermit's Cave, Williams Cave, Goat Cave, Anderson Canyon Cave, Wild Horse Cave North Three Forks Cave, Burial Cave, and Pratt Cave have yielded chipped stone tools including large corner-notched projectile points, various styles of scrapers, drills, choppers, and cores. Wooden fire drills, digging sticks, atlatls, darts, combs, storage tubes and wands, bone awls, basin metates and one-hand manos, woven articles of high quality such as yucca mats, coiled and twined basketry in differing colors, woven bags, fiber cordage, cloth netting, braided hair rope, woven sandals of at least four different kinds, jewelry made from shell beads, shell seeds, reed and bone segment beads, fresh water mussel shell — almost certainly from the Pecos River — turtle or tortoise shell, and bracelets made from *glycimeris* shell, originating in the Gulf of California. Structures include storage cisterns, some unlined, others constructed with stone grass, bark, twigs or some combination of these materials. This broad complement of materials offers a full picture of Archaic life.⁶

The final phase identified by archaeologists, the Terminal Archaic, shows how completely these peoples adapted to their surroundings in the course of the previous 5,000 years. In this era, the differences between the Guadalupe Mountains and the riverine environments along the Pecos River created different chronologies of inhabitation within a very small geographic area. Called the Hueco Phase in the Guadalupe Mountains, where it ended by about 200 A.D. and the Brantley Phase on the Pecos River, where it lasted until about 750 A.D., this era revealed that by this time, population had begun to grow in size and become even more localized. Pithouses flourished on the region's peripheries; archaeological evidence from the area around El Paso shows both pithouses, depressions that housed prehistoric structures, and plain brownware ceramics being used by the very end of the period.⁷

⁵ Whalen, "Moving Out of the Archaic on the Edge of the Southwest," 622-38; Katz and Katz, "Pecos Past," 35-41; for the best summary of this era in prehistory, see Cordell, *Prehistory of the Southwest*, 181-244.

⁶ James E. Bradford, *Upper Dog Canyon Archaeology: Guadalupe Mountains National Park* (Santa Fe: National Park Service, Southwest Cultural Resources Center, 1980), 6-7.

⁷ Whalen, "Moving Out of the Archaic on the Edge of the Southwest," 624-28; Katz and Katz, "Pecos Past," 41-42; Clifton, "An Archaeological survey of 26 Miles of the Boundary of Guadalupe

In the subsequent time period, labeled the Mesilla Phase by archaeologists, the patterns of the Terminal Archaic period become the dominant ways of living in southeastern New Mexico and far west Texas. Mesilla Phase sites closely resembled their Terminal Archaic predecessors, except that they grew in size and became more complex. The first appearance of burned rock rings, often called ring middens or mesal pits in the archaeological record, occurred in this era. The rings functioned as ovens for roasting plants, sometimes repeatedly, suggesting, repeated seasonal use of the same locale, a ceremonial sequence, and perhaps longer stays in numerous places. As new rocks were added to a rock ring to replace rocks that no longer held heat, the ring middens grew larger. When discovered by archaeologists, some middens were as tall as six feet. Typically, Mesilla Phase people roasted the three indigenous types of agave as well as datil and sotol in their middens. After mature agave plants, the most pleasing and nutritious ones, were harvested in late spring and early summer, the roasting took place. The people dug pits and started fires within them, then placing the agave close to the coals. The roasting area was filled with vegetation, rocks, and other materials to hold the heat, while not extinguishing the coals. When the agave was thoroughly cooked — which sometimes took days — it was taken from the pit and ground into a flour. This was a prime source of nourishment for the Jornada people, whom most archaeologists describe as the Late Prehistoric people of the Mesilla Phase.⁸

Despite the addition of foods such as agave to their regime, these late prehistoric Jornada people followed the patterns of most southwestern prehistoric peoples as they moved from preceramic hunting and gathering to agriculture. Like their predecessors in earlier phases of Archaic life, they lived along the rivers and the flood plains, even though agave was a higher-elevation plant that required that they leave the river valleys to seek. Yet compared with their predecessors, the late prehistoric Jornada appear to have chosen sedentary living — with all the intensification of economic strategies that it required — over the mobility that meant relying on hunting and gathering. They undertook a greater number of activities at a significantly larger number of locations on an evidently more consistent and recurrent basis.⁹

The Archaic people of southeastern New Mexico and trans-Pecos Texas did not acquire agriculture, which had swept north from what is now Mexico in most places by 1 A.D., until much later than others in surrounding areas. Since the end of Paleo era, the region had not looked promising for agriculture, and only specific circumstances could have propelled Archaic people to this new strategy. Some scholars believe that agriculture became a significant addition to the lifestyle of these people only around 900 A.D., when environmental circumstances in the region matched a long-standing need of its

Mountains National Park, Culbertson and Hudspeth Counties, Texas,” 9.

⁸ Whalen, “Moving Out of the Archaic on the Edge of the Southwest,” 624-28; Katz and Katz, “Pecos Past,” 41-42; Clifton, “An Archaeological survey of 26 Miles of the Boundary of Guadalupe Mountains National Park, Culbertson and Hudspeth Counties, Texas,” 9.

⁹ Whalen, “Moving Out of the Archaic on the Edge of the Southwest,” 625; Katz and Katz, “Pecos Past,” 42-43.

people. Declining options made agriculture a necessity. The late adaptation to agriculture underscored the marginality of the east side of Guadalupe Mountains and the Pecos River region.¹⁰

The greatest difference between the peoples of the Mesilla Phase and their predecessors was the way they responded to winter's demands. The Mesilla Phase winter sites show a wider variety and a far greater number of tools and accouterments; its structures are larger and sunk deeper into the ground than prior sites. As the population grew throughout the early stages of the Mesilla Phase, the need for more substantive provisioning forced groups to plan for the longer term. The pattern of intensive occupation that the Mesilla Phase sites display revealed their adaptation to the needs of a greater number of people. By 500 A.D., the people of the lowlands show the traits archaeologists ascribe to the Jornada as well as significantly increased quantities of materials they stored. Using camps built during the spring and summer, the best times of the year for hunting and gathering, they stored some of their bounty within individual dwellings and even more in larger storage pits outside. The increased storage suggested that they had more mouths to feed and for longer durations.¹¹

Between about A.D. 750 and 1150, during an extended period of great and rapid cultural transformation, the cultural characteristics of the people of southeastern New Mexico and far west Texas continued to follow the regional pattern. Population grew considerably, although no estimate of actual growth has yet been made. Before 750 A.D., the people of the region acquired a number of new strategies that had an important impact on the way they lived. After 900 A.D., people whom archaeologists clearly identify as Jornada Mogollon, a Late Prehistoric Mogollon culture, flourished in the area, using their characteristic brownware pottery on this very extreme eastern end of the range of Mogollon culture, which stretched into southern Arizona. Their outstanding variety and quantity of stone tools, many of which paradoxically were poorly fashioned in the rough Cochise tradition — an earlier and more basic southwestern prehistoric culture — attested to their technical sophistication in relationship to other groups of the same time. Agriculture became much more intensive; the use of cultivated plants increased as did the number of plants farmed; the large outside storage pits became more common; and the winter sites had more provisions than ever. Pithouses and pueblos, aboveground multiple dwellings, appeared within the larger region, especially to the west near the Rio Grande in what is now El Paso, providing evidence of a trend that led to sedentary living and river-basin agriculture. The bow and arrow, an acquired weapon, became part of the Jornada arsenal. Trade goods, especially ceramics such as brownware, entered the area. Some were made locally, but more typically they originated in the El Paso and Pecos areas, following a pattern of trade and cultural blending that accompanied pottery north from its origins in what is now Mexico. The pottery suggested more than local ties as well as a possibility of links to greater trade networks emerging in the Southwest and Mexico. Living on the periphery of the Mogollon realm, the Jornada people participated in this

¹⁰ Simmons, Stodder, Dykeman, and Hicks, "Human Adaptation and Cultural Change in the Greater Southwest," 69-70; Whalen, "Moving Out of the Archaic on the Edge of the Southwest," 627.

¹¹ Whalen, "Moving Out of the Archaic on the Edge of the Southwest," 633.

exchange, refreshing cultural ties that could become slack with distance and acquiring new goods, rituals and traits, and sometimes food. The trade in brownware ceramics expanded until about 1150 A.D., and soon encompassed exchange with areas such as Sierra Blanca to the northeast and the Roswell area to the north. Trade relationships, nearly absent during even the last phases of the Archaic period, grew in importance as goods helped make regional life easier, qualitatively better, and culturally more consistent.¹²

Social changes accompanied these more intensive Jornada regimes that increased their ability to provide for a growing population. The creation of social structures that divided the world into people entitled to the bounty and people who were not, the figurative “us” and “them,” became typical of such transformations from Australia to the Great Basin of the intermountain American West. Scholars anticipate that a formalization of rules characterized this transformation, and the discovery of communal structures as well as the rising population and the increased intensity of agriculture offers strong supporting evidence. By the end of this phase, about 1100 A.D., population pressure, more intensive subsistence activity, and more highly organized social forms and possibly decision-making processes suggested that winter camps verged on becoming semi-permanent. After more than two thousand years of wandering in southeast New Mexico and far west Texas, the Jornada people began to settle in specific places. These settlements became the precursors of the region’s Pueblo Period communities.¹³

Trade and cultural interaction with the Anasazi to the north had an important impact on Mogollon culture. As they adapted to the mountainous areas they came to prefer, Mogollon people became woven into a larger network of peoples in the Southwest through trade, ritual, and other formal and semiformal relationships. These relationships accelerated their transformation from hunting and gathering roots to the agricultural base common among other southwestern prehistoric peoples and came to sustain the Jornada. It also gave them an advantage in the range of cultural and territorial disputes that cropped up with hunting and gathering peoples. While the hunters and gatherers depended almost completely on their foraging, the semi-sedentary Jornada could rely on their store of crops and their trade relationships to sustain them through crises. The realities suggested a longevity for Jornada people that hunting and gathering classes could not hope to match.¹⁴

Better equipped and better fed, Jornada people could experiment with new strategies of existence. As their interest grew in agriculture, particularly in the Pecos River and Rio Grande drainages and to a considerably lesser degree in the smaller river basins, it created a steady if sometimes meager bounty that could be used to support adventures aimed at new, more diverse, and even better sources

¹² Katz, “Pecos Past,” 46-47; Martin, “Prehistory: Mogollon,” 61-66; Whalen, “Moving out of the Archaic on the Edge of the Southwest,” 633-34.

¹³ R. L. Hunter-Anderson, *Prehistoric Adaptation in the American Southwest*, (NY: Cambridge University Press, 1986), 43; Whalen, “Moving out of the Archaic on the Edge of the Southwest,” 635.

¹⁴ Martin, “Prehistory: Mogollon,” 71-74.

of food. The Jornada Mogollon peoples also ventured to the uplands for their dwellings as had the Paleo people of more than 6,000 years before, favoring ridges, high mesas, and bluffs that were far from main travel routes. Leaving the rivers and the flood plains, they initiated occupation of higher elevation sites at a much more rapid pace than any of their predecessors since the end of the Paleo-Indian period. Many of the upland sites where archaeologists have discovered initial habitation date from the Mogollon era; only rarely do such places show evidence of prior occupation.¹⁵

Agriculture offered the greatest change in patterns of living adopted by the Jornada Mogollon. As they gained knowledge, farmers exerted much greater control over their environment than could the roaming hunters who preceded them. In response to population growth and environmental conditions, by about 1100 A.D., most of the Jornada people became agriculturalists; the rest remained hunters and gatherers. The practice of semi-sedentary agriculture also may have created conflict over resources with hunting and gathering groups, even when the peoples who practiced these two different styles were closely related. Over just a very few generations, systems of living took precedence over rapidly diminishing blood or kinship ties. Agriculturalists limited the opportunities of hunters by growing crops in river valleys and by aggressive pursuit of game in localized areas, and made gathering more difficult. The river valleys favored by sedentary people were prime locations for nomads in search of plant life in a semiarid region. Simultaneously, agriculturalists engaged in forays against hunters and gatherers, presumably to protect their resources. It was a new form of the earlier division between “us” and “them.” Hunters struck back, raiding the granaries and other stores of food that soon became the most heavily guarded and hardily constructed structures that the sedentary Jornada Mogollon possessed. But the agriculturalists enjoyed a distinct advantage that resulted from their crops; the ability to store food for extended periods allowed greater attention to other activities. Over time, hunting and gathering groups faced a dramatic choice: either become farmers, remain hunters and gatherers and leave the areas where sedentary people dominated the resource base, or stay and risk extinction.¹⁶

Agriculture came late to this periphery of the pre-Columbian world. In the Southwest, the transformation to agriculture began before 2000 B.C., and developed first throughout the core areas of the three main culture groups — the Anasazi, Hohokam, and Mogollon. Agriculture on the peripheries of these cultural groups, in places such as southeastern New Mexico and far west Texas, developed more slowly and much later in time. The Gila and Salt river basins to the west showed the earliest examples of significant reliance on agriculture, dating from as early as 300 A.D. At least one community

¹⁵ Katz and Katz, “Pecos Past,” 47; Katz, “Late Prehistoric Period Environment and Economy of the Southern Guadalupe Mountains, Texas,” 16-17.

¹⁶ Martin, “Prehistory: Mogollon,” 61-66; Whalen, “Moving out of the Archaic on the Edge of the Southwest,” 635; Simmons, Stodder, Dykeman, and Hicks, “Human Adaptation and Cultural Change in the Greater Southwest,” 70; for a more general discussion, see Katherine A. Spielman, “Coercion or Cooperation? Plains-Pueblo Interaction in the Protohistoric Period,” in Katherine A. Spielman, ed., *Farmers, Hunters, and Colonists: Interaction Between the Southwest and the Southern Plains* (Tucson: University of Arizona Press, 1991), 36-50.

from that era, Snaketown, about twenty-five miles from what is now Phoenix, Arizona, revealed occupation throughout the year instead of seasonally. After 500 A.D., the role of agriculture throughout the region rapidly grew in significance, transforming the lives of the people with whom it came in contact. The southeastern New Mexico and far west Texas area lagged behind these regional developments by as much as 200 years.¹⁷

Despite the great changes that took place, the people of this time of new technologies and strategies continued to share many characteristics with those who had preceded them. Agave remained a staple of their diet and the use of rock rings continued. An increasing quantity and diversity of projectile points illustrated the ongoing importance of hunting and perhaps point to a diversity of weapons such as spears used in pursuit of game. While cultural, social, and economic changes affected life, a significant number of factors in the lives of the Jornada remained constant. People from earlier eras would have recognized the lives of these Mogollon people and might very well have envied them the abundance of agriculture, trade, and hunting techniques.

By 1150 A.D., the appearance of painted ceramics, categorized by archaeologists as the El Paso Polychrome and Three Rivers Red-on-Terracotta, suggested a more integrated but also predominantly localized network of trade for the region's Jornada people. Elsewhere in the Southwest, painted ceramics were part of a growing trade network that became central to the future of the region; at Mesa Verde, Chaco Canyon and throughout northern New Mexico, an array of painted pottery representing various cultures and points of origin became common. In the far reaches of Jornada Mogollon culture, near the Guadalupe Mountains, painted pottery mixed with the traditional brownware of the region, suggesting that the people of the region had little to offer in trade in comparison with the Mogollon culture's core areas.¹⁸

The realities of the region have encouraged archaeologists to speculate that Archaic-style culture endured much later in this peripheral southeastern New Mexico and trans-Pecos area — perhaps until European contact. Advocates of this idea point to the common features of late Archaic life, the ways in which the practices of people in the region did not change. Those who argue against this premise point to the new adaptations of the period — agriculture, trade and local production of ceramics, and other features that suggest broader commonality with the sedentary world along the Rio Grande and in western New Mexico. Current evidence supports both perspectives, and the safest supposition is that throughout southeastern New Mexico agriculture existed in close proximity with hunting and gathering.¹⁹

¹⁷ Woodbury and Zubrow, "Agricultural Beginnings: 2,000 B.C.-500 A.D.," ; Simmons, Stodder, Dykeman, and Hicks, "Human Adaptation and Cultural Change in the Greater Southwest," 69; David E. Stuart and Rory P. Gauthier, *Prehistoric New Mexico: Background for Survey* 2nd ed., (Albuquerque: New Mexico Archaeological Council, 1984), 268.

¹⁸ Martin, "Prehistory: Mogollon," 61-62; Katz and Katz, "Pecos Past," 47-48; Susan Marjorie Applegarth, "Prehistoric Utilization of the Environment of the Eastern Slope of the Guadalupe Mountains, Southeastern New Mexico." Ph.D. diss, University of Wisconsin-Madison, 1976.

¹⁹ Simmons, Stodder, Dykeman, and Hicks, "Human Adaptation and Cultural Change in the Greater

Despite its peripheral status, the Guadalupe Mountains-Carlsbad Caverns region shared many traits with the rest of the pre-Columbian world. By 1350 A.D., the people of this remote region enjoyed cultural, economic, and technological ties with the core Mogollon world, and through it, to the Anasazi, Hohokam, and increasingly the hybrid Chichimecan cultural tradition that rose in northern Mexico. Yet in the region between the Pecos River and the Guadalupe Mountains, the ties were not as strong as along the Rio Grande or elsewhere within the main currents of prehistoric influence and trade. Southeastern New Mexico and far west Texas remained more isolated than other places with the Mogollon world, far from the dominant vectors of the era. Despite the appearance of many cultural adaptations, the persistence of brownware pottery offers insight into the situation. The painted pottery was more aesthetically pleasing than the plain brownware, but the imported colorful pots were either hard to obtain or beyond the economic reach of the region's inhabitants. Compared with other areas in the Southwest, the continued brownware production along the Pecos River and toward the Guadalupe Mountains illustrated both its ties to the south and how marginal the region that produced it remained.²⁰

This remote region was also susceptible to the same forces that affected the core cultures that helped sustain it. The Jornada hold on survival was more tenuous in the Guadalupe Mountains than along the Rio Grande, and the complex of social organization, structures, and other features of life in the region during this phase shows considerably less diversity in the mountains than along the rivers. As a result of its peripheral status — of weaker trade ties, less desirable land and economic opportunity, and a far more scattered and loosely linked population — impact on the core areas of their culture necessarily affected the people of the periphery much more heavily than it did closer to the central institutions and locations of Mogollon culture. In the Guadalupe Mountains and along the Pecos River, the cultural ties played a significant role in defining the people as part of a larger group. The Jornada Mogollon east of the Rio Grande and away from El Paso found themselves on a weak limb of the Mogollon world. They had the ability to stave off disaster from local sources, for they could depend on the core of Mogollon culture to help. But they had little defense against problems that emanated outward from the heart of their culture.

Toward the end of this era, the relationships that sustained the region showed signs of fraying. The dual pattern of agriculturalists and hunter-gatherers began to break down around 1300 and was certainly complete by 1350. Some archaeologists suggest that this change resulted from a period of deteriorating environmental conditions such as the periodic droughts that affected other parts of the Southwest. Others believe it resulted from the decline of bison in southeastern New Mexico and trans-Pecos Texas, and their greater availability, along with other game animals, elsewhere. Archaeologists think that the greatest opportunities to hunt bison between the Pecos River and the Guadalupe Mountains occurred in two separate eras: the period between about 1250 and 1300, and the period

Southwest,” 112-14; Stuart and Gauthier, *Prehistoric New Mexico*, 259.

²⁰Charles C. DiPeso, “Prehistory: Southern Periphery,” 152-56; Katz and Katz, “Pecos Past,” 47, indicates that painted pottery “may represent a purely aesthetic change.”

beginning in about 1450 and continuing for a century. A major bison kill site, a place where prehistoric people successfully killed numerous bison, at Garnsey in the vicinity of Roswell dates from about 1450; instead of the bison cows that were the targets of such efforts on the northern plains, bulls were the focus of this endeavor. The kill occurred in the spring, the time of year when hunter-gatherers struggled to survive the end of winter and find new sources of food. The higher-fat content bulls reflect a seasonal need for more fat in the diet. The Garnsey site also suggests increasingly availability of this animal; the hunters were selective about the animals they butchered, likely an indicative that they were not worried about future sources of meat. In this later time, the three-century-long Little Ice Age had begun to cool the planet, making the once hotter climate of the southern plains more attractive to the powerful animal and its human predators.

When the entire Southwest experienced a localized series of droughts about 1300, the people of the region's peripheries experienced a tremendous impact. Agriculturalists retained great power as long as their crops continued to produce, but without a consistent yield they too were subject to the forces of the hunting and gathering world. This dislocating change in economic and most likely cultural relationships put great pressure on agriculturalists. Some certainly returned to hunting and gathering, possibly even joining extant bands of long-lost relatives, who at the time were probably venturing farther and farther to find the game that sustained them. Others withdrew back toward the core of the culture, much as had the people of the great southwestern prehistoric sites of Mesa Verde and Chaco Canyon as their world declined merely 200 years before. Climatic change may have caused this departure, but the limits of the attributes of the physical environment and of trade ties made it a reality always on the horizon. The periphery of any culture remained difficult to sustain even into the twentieth century.

While the agriculturalists departed for better land much closer to water as higher levels of rainfall ended, hunter-gatherer groups, including some recently sedentary Jornada people, responded by becoming highly nomadic hunters, living off larger and increasingly easy to find expanding buffalo herds to the north and east, acquiring greater mobility as a result of using dogs as beasts of burden, and establishing a wider range of living. In effect, environmental change and the problems it created compelled the division of the Jornada people into two groups. One presaged the nomadic Plains peoples, later given range and strength by the horses that arrived with the Spanish. The other more closely mirrored the Pueblo peoples of the Rio Grande spine and of the northern Pecos River in its sedentary living and dependence on cultivated crops. Some linguists point to this split as an explanation of the perplexing similarity of the Pueblo Towa dialect and the Plains Kiowa language. This varied form of development revealed the marginal status of the periphery of the Mogollon sphere even in the prehistoric world. Agriculture in the region simply could not sustain the number of people who inhabited it. On the margins, in the worst locations for agriculture, hunting and gathering persisted and adapted to both the growing population and long-standing trends toward a warmer, drier climate.²¹

²¹ Lynne Sebastian and Signe Larralde, "Living on the Land: 11,000 Years of Human Habitation in Southeastern New Mexico," (Roswell, NM: Bureau of Land Management, 1989) Cultural Resources Series No. 6, 93-94; for the question of who hunted bison and who traded for their meat and skin, see Spielman, "Coercion or Cooperation?" 42-48. Nancy P. Hickerson, "Jumano: The Missing Link in South Plains

Agriculture as a way of life was also doomed in this peripheral region. The crops on which sedentary Jornada groups depended thrived in river valleys; there were few of these east of El Paso across the Salt Flats and in the Guadalupe Mountains, and most river valleys were too high in elevation to offer a suitable growing season. The Pecos River was the largest valley in the area and it could sustain a sizable population. Elsewhere, successful agriculture was contingent on favorable weather conditions and available water. Agriculture, even in the river basins, became a dangerous strategy as technological innovation and other changes helped foster an expanding population. With scarce resources and more people clamoring for them, the bounty of agriculture, increasingly fragile, had to be divided more and more ways. The result was greater pressure on agriculturalists and the land they used, on game animals, on water and on every other available resource in the immediate vicinity.²²

Outside pressure also came to bear on this periphery, severing or curtailing ties to other parts of the prehistoric world. Between about 1000 and 1350, most of the Southwest experienced severe environmental change that disrupted existing communities. At Chaco Canyon during the eleventh and twelfth centuries, one form of Anasazi culture reached an apogee. A rapid decline, likely a result of changing environmental conditions, overuse of available resources such as timber, and perhaps the collapse of other locations to the north and even to the south that were tied both through trade and ceremonial relationships, followed. By 1200, the Chaco Complex was abandoned. Mesa Verde was also abandoned during the subsequent 100 years, as were many other Pueblo locations. These people retreated from these desertifying outposts and migrated closer to sources of sustenance. Some scholars attribute the development of the western pueblos and those along the Rio Grande to this retreat.

The peripheral status of southeastern New Mexico and far west Texas exacerbated the problems prehistoric people experienced in other places in the Southwest. As life became much harder on this periphery, pre-Apachean peoples about whom archaeologists know little descended the western part of the Great Plains and arrived in the region; on their heels were the Athapaskan peoples, the forerunners of the Apaches who had driven their predecessors from the plains. Archaeological evidence indicates that Rattlesnake Springs, near the mouth of Rattlesnake Canyon in the Guadalupe Mountains, served as a camping site for Apachean or at least Athapaskan peoples, and Slaughter Canyon and its pictographs show evidence of an Apache presence. Experts disagree on when the collapse of agriculture occurred in southeast New Mexico and far west Texas, but all are certain that by 1300, the agriculturalists were in hasty retreat from this area as the environment deteriorated for agriculture, as hunters and gatherers pursued proliferating buffalo onto the plains, and as other peoples pushed into the area. What the land once promised it could no longer deliver to Jornada people, and subsistence

History," *Journal of the West* Vol. 29 No. 4 (October 1990): 5-12.

²² Michael S. Foster and J. Charles Kelley, "An Archeological Overview of the Western Trans-Pecos, Texas, With Reference to the Archeology of the Salt Basin Area," in "Archeological Investigations in the Three-Mile And Sulpher Draw Watershed, Culberson County, Texas," *The Artifact* Vol. 27 No. 3 (1989).

cultures contended with a recurring problem: finding a new place that could give them what they needed.²³

Throughout southeastern New Mexico and far west Texas, signs of Jornada use declined after about 1150. Regional variation among peoples became more acute, as different groups sought out strategies for survival. Fewer artifacts in a smaller number of places suggest a decline in population, and the level of technological sophistication diminished. Although many of the same physical features remained, the increasing sparseness of settlement strongly suggested that the Jornada peoples were leaving the area. Trade continued with other places within the region, especially the Sierra Blanca area, closer to the Rio Grande, but it became more limited than before. All indications affirm that Jornada use of this region peaked at or before 1150, and subsequent Jornada life was part of an extended retreat from this marginal region. After 1450, almost no signs of habitation persist in formerly resource-laden areas, and the Jornada people, both agriculturalist and hunters and gatherers, canvassed elsewhere in search of new and more promising living accommodations.

After about 1450, the remnants of the sedentary Jornada people clustered around waterways and eked out their subsistence from the Pecos River and its offerings. Their range had shrunk considerably; their ability to provide declined as well. They needed the river even more than ever, looking to it as a source of food as well as sustenance. Freshwater mussels found in the river became a dietary staple. Small groups of people — most probably families or kinship networks made up of groups of families — gathered food and other necessities. A smaller population helped make survival possible, but the prospects were not very good. A tipi ring, the circle of stones typically found in locations where Native Americans erected their cone-shaped, hide-wrapped structures, found near the location of the modern Brantley Reservoir offered an anomalous piece of evidence. Difficult to date accurately, the tipi ring may demonstrate the arrival of plains nomads, cultural exchange or accretion between Jornada people and incoming plains peoples, or evidence of the changing culture of the hunter-gatherer branch of the Jornada. The tipi shows one fact of life for certain: the Jornadas were losing control of the region that sustained them.

As their departure turned into demise, greater geographic divisions existed in the region's patterns of life. Jumano people, typically understood as an outgrowth of the Jornada people or as people who "became" Jornada through close cultural links and diffusion, rose to prominence in the region. Most accounts closely link the Jumano to the Cochise group, a strain of what can be described as a generic prehistoric desert culture that existed from as early as 7,000 B.C. to as late as 750 A.D., and flourished around 3000 B.C.; Jumano language was either a Tanoan dialect, similar to those of Taos, San Juan, Isleta, Jemez, and Pecos pueblos, or Caddoan, of a piece with the language of the Caddo people to the east across the Trinity River in eastern Texas whose range extended into Arkansas and

²³ Sebastian and Larralde, "Living on the Land," 95; Katz and Katz, "Pecos Past," 45-47; Katz, "Late Prehistoric Period Environment and Economy of the Southern Guadalupe Mountains, Texas," 52-53. M. Jean Tweedie "Notes on the History and Adaptation of the Apache Tribes." *American Anthropologist* 70, No. 6 (December 1968): 1132-1142.

possibly Kansas and Missouri. Each scenario projects a different origin for these pivotal but obscure people. When the Spanish made contact in the early 1540s, the Tanoan language dominated much of the Rio Grande and was spoken as far south as the confluence of the Rio Grande and the Rio Concho and on into the deserts of Chihuahua; Caddoan languages extended across the plains from the Texas area toward the Pecos River, the Guadalupe Mountains, and beyond to the Rio Grande.

From whichever direction they emerged, the Jumanos first become identifiable during this era. Limits on the early Jumanos probably came from surrounding groups with different cultural traditions and languages, but over time the relations between Jumano peoples and other groups became more peaceful. The shared sense that the South Plains was open and large enough for many helped maintain the calm. In southeastern New Mexico and far west Texas, trade became the nomadic Jumano forte, as they brought bison hides and meat to the settled Tanoan villages near the Rio Grande and goods back to the plains that the Jumanos distributed among the hunters who entrusted them with hides. Material evidence of trading ties such as pottery, sandals, fabrics, weapons and projectile points, and baskets substantiates the importance of trade. Along the Canadian River in modern Oklahoma, Plains village agriculturists, perhaps Tanoan from the west or Caddoan from the east and southeast, settled, while hunters and gathers roamed the *Llano Estacado*, the staked plains of what is now west Texas. By the time of the Spanish *entrada* in 1540, the Jumanos had become a recognized force in the pre-contact world.²⁴

On the plains east of the Rio Grande, other peoples fiercely contested Jumano dominance. Athapaskan peoples, the Apachean groups, splintered and became a series of distinctive regional bands on both sides of the Rio Grande. East of the river, they battled Jumano peoples for control of trade, for access to resources, and for territory. Their cousins to the west, the “Apaches du Navaho” or the Navajos of today, headed south along the western edge of the Colorado Plateau. The Apachean encroachment in the eastern Southwest started slowly from the north, in part driven by simple population expansion, in part by the appearance on the South Plains of the people who became known as the Comanches. A sequence of successive conquests began, with the Athabaskan Apachean peoples expanding southward from the central plains to the southern plains, attracted by the seemingly wealth of the region and the trade network of the Jumanos. The Comanches followed close behind. By the time the Spanish arrived, the Jumanos found their horizons challenged, at least at the northern end of the vast range they regarded as their own.²⁵

²⁴ Nancy P. Hickerson, “Jumano: The Missing Link in South Plains History,” *Journal of the West*, 29 4 (October 1990): 5-7; Whalen, “Out of the Archaic on the Edge of the Southwest,” 634-36; Sebastian and Larralde, “Living on the Land,” 97.

²⁵ Hickerson, “Jumano: The Missing Link in South Plains History,” 10-12; scholars vary widely on the question of who the Jumanos were. Some, such as Hickerson and Elizabeth A. H. John, indicate Tano roots; others perceive them as a break-off from the Caddo people. Increasingly evidence suggest Jornada Mogollon roots, and a split in the late-Archaic-proto-historic period that made some Jumano hunters and gatherers, nomads on the plains, and others agriculturalists at places such as Salinas, New Mexico. Others suggest that the Tompiro Pueblos were actually Jumano. At the moment, there is no overwhelming

Jumano contact stretched far and wide, and numerous native peoples might have had contact with those who inhabited the Carlsbad Caverns-Guadalupe Mountains region. Pueblo people such as the Hopis to the north, Zunis in what is now west-central New Mexico, the Keresan-speaking people of Rio Grande Valley, the people of Zia Pueblo, the Manso and Suma of the El Paso area, and the Piro of the fringes of the Rio Grande Valley, Kiowas from the plains, Tiguas, nomadic Apache bands who arrived in the area after Vázquez de Coronado came north, and finally the nemesis of the Apaches, the Comanches, who arrived after the Apaches. On the periphery of this region, Plains-style villages existed and interacted with the southwestern world. The southernmost known expression of this culture occurred at Antelope Creek in what is now the Texas Panhandle, where people who evinced the traits of Plains culture lived beginning about 1200 A.D., and remaining until early in the sixteenth century. Toward the end of this period, consistent and heavy trade between the people of Antelope Village and the pueblos developed, in the aftermath of the collapse of the trade center of Casas Grande in northern Mexico and as the arrival of the people of the Four Corners region along the Rio Grande spine disrupted trade networks to the north. As a result, more comprehensive patterns of trade developed — including Plains people, Jumanos, and Pueblo people. The most mobile of the groups, the Jumanos, played a valuable role in this process. Scarce resources and the Jumano trade networks drew other peoples to their regions to trade at the *rancherías*, the small homestead-like base that the Jumanos inhabited.²⁶

Before the arrival of the Spanish, a complex Native world existed that sometimes occupied the Carlsbad Caverns-Guadalupe Mountains region. For Paleo and early Archaic peoples, the Guadalupe Mountains-Carlsbad Caverns region was largely bereft of the natural resources that led to levels of organization found elsewhere in the Southwest. Culture, climate, and resources offered the best measures of the way in which native peoples used their world, and their successes, measured by longevity, depended on their ability to adapt. As the more than 10,000-year trend toward a more arid and warmer climate continued, life became more difficult for people throughout the Southwest and the Southern Plains. Agriculture both solved and exacerbated existing problems; agriculture provided the constant supply food that promoted population growth, which in turn made continued survival more difficult. In the estimation of many archaeologists and anthropologists, the apex of pre-Columbian habitation of southeastern New Mexico and far west Texas occurred between about 700 A.D. and about 1200 A.D., just before a dramatic climatic change in the form of drought and the first arrival of Athapaskan peoples began. For the Jornada people, who most regard as the forerunners of the Jumanos and some of the Tanoan-speaking southern pueblos, these twin changes forced difficult tactical decisions on which their very survival hinged.

preponderance of evidence; the author is most persuaded by the Jornada Mogollon to hunter-gatherer and agriculturalist argument, which accounts for the predisposition here to regard the Jumanos as Tanoan.

²⁶ Christopher Lintz, "Texas Panhandle-Pueblo Interactions from the Thirteenth Through the Sixteenth Century," in Spielman, ed., *Farmers, Hunters, and Colonists*, 89-105.

The relationship of the region's people with northern Mexico remains unclear for most of the time period, and becomes especially murky after 1150, more than 300 years before the first written chronicles appear, when on-the-ground evidence diminishes greatly. Many scholars find entirely plausible the notion that before the coming of Apachean peoples, the subregion was a northern offshoot of the core areas of Mexico rather than an adjunct to the plains or northern pueblo people. The southern spread of the Tano language and its reach into Mexico as well as the power of the Chichimeca cultural tradition to the south in what is now central and northern Mexico suggest that no less than firm trading ties existed between Tanoan speakers and their southern and more powerful neighbors. Although most of the evidence in the Guadalupe Mountains region reveals more local patterns of trading, some cultural influences such as painted pottery typical of Casas Grande and the Chichimeca world show how pervasive the influence of northern Mexico had become on the Mogollon Tano-speakers.

The departure of agriculturalists from the region remains the subject of a great deal of speculation. Some scholars suggest that the region was an edge area between competing cultural groups as late as the tenth century; the competition among culture groups for the resources in the area and the prospect of war would likely mean that hunting in such places was less thorough, leaving a greater bounty for any group that eventually established control there. Yet like most semiarid edge areas, the region was fragile, its apparent bounty the result not of consistent use, but of under use. The edge-area scenario also links the region more closely to the rest of the Pueblo world. If accurate, the demolishing of the edge areas would have contributed to the end of agriculture in the region in a time frame that may also coincide with the abandonment of more famous locations such as Chaco Canyon and Mesa Verde. Clearly, changing climate, growing population, and the use of resources that did not easily replenish contributed to the near abandonment of southeastern New Mexico and far west Texas.

One result is indisputable. By 1540, when Vázquez de Coronado arrived, hunter-gatherers had returned to dominance in the region. Except for small settlements in river valleys such as the Pecos, people moved through the region in search of game and other food. Unlike in the Archaic era, when the vectors of living moved people toward sedentary agriculture, after about 1300, the peoples who passed through southeastern New Mexico and trans-Pecos Texas increasingly saw the region as a location for seasonal use. Their life comprised the many resources they gathered and for which they traded. By this time, Native Americans routinely traversed the region, deriving sustenance from it as they passed through but rarely stopping to develop any sedentary pattern of settlement. As Europeans approached, the Guadalupe Mountains-Carlsbad Caverns region was on the periphery of the Meso-American and the prehistoric southwestern world, a place people tried to settle but over time found inadequate to their needs.

Chapter 2: The Spanish and Mexican Era

When Christopher Columbus landed on the island of San Salvador in the Bahamas chain in October 1492, he set off a more than 500-year-long process of demographic, cultural, biological, and ecological changes that continue in the New World. Following his lead, and in search of the riches Columbus felt certain he found, Spanish and Portuguese explorers came to the Americas. It was a land divided by Pope Alexander I in the Inter Caetera issued May 3, 1493; the split was codified in the Treaty of Tordesillas in 1494, with one section to the west ceded to the Portuguese and the rest — which turned out to be most of North America, all of Central America, and a large section of South America — given to Spain. The New World inhabitants and their claims to land were not taken into consideration. The Spanish avidly pursued conquest in search of souls for Christ and gold for their coffers. Their quest was an extension of the *reconquista*, the retaking of Spain from the Moors completed in 1492— what they saw as a moral quest to spread the power, beauty, and faith of Spanish culture and Catholicism to those who had not yet experienced its glories. Spanish territorial expansion occurred rapidly; Juan Ponce de León first arrived in what is now Florida in 1513; Hernán Cortés claimed Mexico in 1521, Francisco Pizarro conquered the Inca empire between 1531 and 1533, and Hernán de Soto explored the interior of what is now the southeastern United States from 1539-1543. Spanish zeal, the power of diseases that emanated from the crossroads of Europe, Africa, and Asia, and military power gave this proud European nation much more than a toehold in the Americas.¹

When Francisco Vázquez de Coronado marched into the interior of New Spain to search for Cibola and the remaining seven cities of gold at the beginnings of the 1540s, he followed the Spanish tradition in the New World. He departed with one of the most elaborate European expeditions sent to the interior of North America, including more than 300 Spaniards, among them several women, six Franciscan priests, and more than 1,000 native allies. In July 1540 they seized Cibola, today's village of Zuni in west-central New Mexico. The 100-family village was not at all what the Spaniards expected — none of the gold, none of the impressive structures they believed characterized Cibola, was anywhere to be found.

Vázquez de Coronado's men began a program of conversion and conquest while the Spaniards searched for additional souls to convert. Following the Rio Grande, they camped along

¹ David J. Weber, *The Spanish Frontier in North America* (New Haven: Yale University Press, 1992, 30-45; Adolph Bandelier and Fanny Bandelier, *Historical Documents Relating to New Mexico, Nueva Vizcaya, and Approaches Thereto, to 1773*; Francis Jennings, *The Invasion of America: Indians, Colonialism, and the Cant of Conquest* (NY: W.W. Norton & Company, 1975): 2-6.

its banks during the winter of 1540-1541. A series of encounters, mostly fractious and sometimes bloody, with Pueblo people followed. By the spring of 1541, the Spaniards destroyed at least thirteen Pueblo villages.

Vázquez de Coronado left the western pueblos and pushed north along the Rio Grande to Pecos Pueblo. Deceived by a native of the so-called land of Quivira whom the Spanish called the Turk, the Spanish left Pecos and followed his guidance to the supposed wealth of this new kingdom somewhere on the plains beyond Pueblo country. They followed a circuitous route, seemingly leading everywhere and nowhere at the same time. Vázquez de Coronado followed the beguiling Turk, past the location of present-day Roswell, New Mexico, north of the Guadalupe Mountains-Carlsbad Caverns region, onto the plains of west Texas near Lubbock.² From there, the expedition marched across the panhandles of Texas and Oklahoma to a frustrating end of the journey, at the Wichita Indian villages on the Arkansas River near present-day Lyons, Kansas. There the Turk's deception became known to the men he led to this faraway place. After discovering that the people of Pecos Pueblo asked the Turk to lead the Spanish somewhere far from the Pueblo homeland, where the foreigners and their horses would starve to death, the Spanish garroted the Turk, leaving themselves without guides or allies in a sea of grass. Soon after they headed back to the Rio Grande pueblos. After a riding injury in December, Vázquez de Coronado returned to Mexico by the route he came, leaving only bad memories for the pueblos. He also left some of his native allies, a few stragglers, and two priests, soon to become martyrs, in New Mexico.³

Vázquez de Coronado's adventure summarized the European approach to the arid Southwest. They stayed close to the major watercourses except for specific purposes, such as the ill-founded search for Quivira, and despite being from the Iberia peninsula, which shared much with the places they found, they looked past remote desert lands in search of gold, water, and produce. In this context, the way in which Vázquez de Coronado skirted southeastern New Mexico and far west Texas is hardly surprising. The Roswell area through which he passed showed year-round streams and creeks as well as a river; the region to the south appeared parched. Vázquez de Coronado could not imagine that the gold he sought could be there, and his deceptive guide told him that the riches he craved were elsewhere. Without first-hand geographic knowledge, blinded by the prospect of gold, and sharing the predispositions about value that Europeans brought along from the Old World, Vázquez de Coronado had neither intellectual nor economic reasons to explore southeastern New Mexico or far west Texas.⁴

Vázquez de Coronado's response characterized the Spanish and Mexican governments, which

² Archeological evidence indicates that Vázquez de Coronado may have traveled southwest of Lubbock, suggesting he may have passed by the present site of Carlsbad.

³ Weber, *The Spanish Frontier in North America*, 45-49.

⁴ Felix D. Almaraz, Jr. "An Uninviting Wilderness: The Plains of West Texas, 1534-1821" (*Great Plains Quarterly* 12 (Summer 1992): 169-180.

had nominal and frequently interrupted control of the region from the early seventeenth century into the middle of the nineteenth century. In their view, there was little of value on the plains and in the mountains east of El Paso. The Guadalupe Mountains provided a landmark to the east of the area of their greatest interest that also harbored, in the Spanish view, uncooperative and sometimes hostile people. The Rio Grande, winding north through the Mesilla Valley and onto Albuquerque and the Rio Arriba beyond it, defined the range of Spanish interest and control. Even into the nineteenth century, Spanish and Mexican presence in the province of Tejas y Coahuila was typically confined to central Texas, in particular the area around San Fernando de Bexar, today's San Antonio. The area between central Texas and El Paso remained largely devoid of Spanish and Mexican influence.⁵

Lost Spaniards such as the shipwrecked Alvar Nuñez Cabeza de Vaca traveled through northern Mexico in the 1530s and had contact with the southernmost of the Jumano people near the mouth of the Río Conchos. Later, Fray Augustín Rodríguez in 1581 and Don Antonio de Espejo in 1583 passed through the region; but none of the three initiated any form of settlement. Even the famed *Jornada del Muerto*, the more than 100-mile waterless trek labeled the Journey of Death, passed to the west of the Carlsbad-Guadalupe region. In the 1720s, Spanish explorer and map-maker Francisco Alvarez y Barreiro ceded the region southeast of El Paso to the "Apaches del Natage" and the area to the northeast to the "Apaches Pharaones," both probably forerunners of the people recognized today as Mescalero Apaches. Alvarez y Barreiro's maps show that the Spanish felt they had little control over the region as late as the middle of the eighteenth century. Although at the end of that century the Spanish had become more interested in the area, by that time their New World empire was crumbling and they lacked the resources and initiative to explore the region. In 1821, New Spain declared its independence and the Mexican nation was born.

The Mexican government, which controlled the former colony of New Spain beginning in 1821, and the Republic of Texas, which seized Texas and the Trans-Pecos region in 1835, also had little time to devote to development of this periphery. Both fought to establish primacy in their central areas, battles that often occurred to the detriment of remote regions. Only after the annexation of Texas by the United States in 1845 did forces with the ability to transform the Carlsbad-Guadalupe Mountains region begin to focus upon it.

Spanish exploration in the area began as it did throughout the New World. First came reports of advantages that remote places offered, then military and religious expeditions, often combined but with very different purposes, and then finally the codification of Spanish control that resulted from conflict, negotiation, or settlement. Vázquez de Coronado initiated the colonial process in New Mexico. A lost wanderer such as Alvar Núñez Cabeza de Vaca — who by some accounts crossed the Pecos River after approaching from the east in 1535 and headed south along it, skirting the very edge of the southeastern New Mexico and far west Texas region — was anomalous. He provided perhaps a

⁵ Gladys Collins, "Spanish West Texas, 1535-1759," (*West Texas Historical Association Year Book VII* (1931): 95-99.

source of information, but was hardly part of a pattern of conquest and subsequent colonization.

The first expedition to the north after Vázquez de Coronado in 1540 had conversion as its goal. The aftermath of a mining boom in Chihuahua, Mexico, which spawned towns such as Santa Bárbara along the Río Conchos, also fed a desire for the riches of the north. Some of the many rumors about the supposed riches of these lands reached the heart of the mining district, and many who came to mine thought of quicker and easier ways to acquire their fortune. Spanish leaders were less than pleased with such aspirations. Under a royal decree called the “Order for New Discoveries,” the Spanish Crown in 1773 forbade unauthorized expeditions beyond official boundaries, threatened violators with the “pain of death and loss of all their property” for infractions, outlawed the use of the term “conquest” to describe the “pacification” such advances entailed, and appointed missionaries as the primary agents of exploration and so-labeled pacification. This policy slowed commercial intensity, but opened the way for ecumenical advances. Officials regarded the clerical efforts of Catholic priests as the highest form of cultural transmission. In this context, the speed with which Fray Augustín Rodríguez received royal permission for him and two other Franciscans to travel north along the Río Concho affirmed the feelings of the Spanish Crown and New Spain authorities toward gallivanting adventurers. After almost 100 years of Spanish colonizing efforts in the Americas, the Crown placed much more faith in its ecumenical representatives than its civic ones.

In 1581, Rodríguez, the other two friars, and an escort of seven soldiers commanded by Capt. Francisco Sánchez Chamuscado headed up the Conchos to the Rio Grande, to northern New Mexico. Some accounts place them east of the El Paso region; others indicate that they stayed within the confines of the Rio Grande Valley. After a sojourn in New Mexico, most of the expedition headed back to Mexico along the same Rio Grande path, leaving Rodríguez and a companion behind to convert Pueblo peoples to Catholicism. Sánchez Chamuscado died during the return trip, but his men reported to the viceroy’s notaries. Although the report was circumspect and mentioned little of potential riches in the north, the specter of priests alone among the native peoples, even priests who volunteered to stay such as these, attracted the attention of Spanish leadership. There were hidden motives as well; many sought to make the area and its presumed riches their own under the guise of a rescue mission. Soon, an expedition formed to go after them and bring them safely back to New Spain.⁶

Personal motives abounded in this new endeavor. Although many rushed forward to save the lost padres, the rumors of great mineral wealth moved most of the rescuers. Among them was Don Antonio de Espejo, who had come to New Spain in 1571 with the Inquisition as one of its agents and remained to become a wealthy cattle rancher. After a dispute that ended in a death and a trial, Espejo fled to the north and used the pretense of rescuing the priests as a way to escape judgement in New Spain. Supporting Espejo was Father Bernardino Beltrán, who believed it his duty to go north to help

⁶ Weber, *The Spanish Frontier in North America*, 76-79; Joseph P. Sánchez, *The Rio Abajo Frontier 1540-1692: A History of Early Colonial New Mexico* (Albuquerque: Albuquerque History Museum, 1987), 28-31; Hackett, ed., Bandelier and Bandelier, *Historical Documents Relating to New Mexico, Nueva Vizcaya, and Approaches Thereto, to 1773*, 193-94.

Rodríguez. The new expedition received royal authorization and on November 10, 1582, the group left for the north.⁷

Espejo followed the Rio Grande north. At Puaray, the expedition found that the priests were dead, negating the mission that Fray Beltrán thought was important. Espejo took a different view and continued to explore central New Mexico. At Zuñi, the Spaniards found a book and a small trunk that the Vázquez de Coronado expedition left behind in the 1540s; among the people of the Pueblo were a significant number of Mexican Indians who had come north with Vázquez de Coronado more than forty years before. Some still retained the Spanish words they learned from Vázquez de Coronado's men. While at Zuñi, Espejo and Fray Beltrán argued over control of the expedition. The priest and his faction returned to New Spain along the Rio Grande. Espejo and eight men remained, soon finding themselves in a skirmish with the people of Puaray. Memories of Vázquez de Coronado made subsequent Spaniards unwelcome at best among the Pueblos. The Spaniards fled toward Cicúye, the pueblo at Pecos, fearing the pursuit of Puaray warriors. When they arrived near Cicúye, they avoided the pueblo with its commanding view of the plains.⁸

The Spanish experienced a new emotion in their sojourn to New Mexico: fear. On the run, weakened, trapped between the warriors they thought followed them and the ones they knew awaited them at Cicúye, the Spaniards stayed away from the cities. Instead, they marched south along the Pecos River, which Espejo renamed El Rio de Los Vacas, the River of the Buffalo, after the buffalo they saw near it. The two-month journey back to Mexico was as much a retreat as a march, but following the Pecos River south helped solidify the Spanish perception that two routes — one up the Rio Conchos to the junction with the Pecos River, and the second up the Rio Grande, to New Mexico — offered viable ways to reach this quixotic, if not yet obviously economically valuable, addition to their holdings.⁹

On the way back, Espejo's expedition experienced the first recorded encounter with the people of the southeastern New Mexico and Trans-Pecos region. On August 7, 1583, near the great eastern bend of the Pecos River, probably north of the modern town of Pecos, Texas, but somewhere south of Carlsbad, New Mexico, Espejo encountered three Jumano men, who guided the Spanish to Jumano *rancherías*, most likely near modern Carlsbad, Rocky Arroyo, and the Delaware River. The Jumanos

⁷ Weber, *The Spanish Frontier in North America*, 78-79; Joseph P. Sánchez, *The Rio Abajo Frontier 1540-1692: A History of Early Colonial New Mexico* (Albuquerque: Albuquerque History Museum, 1987), 35-37; George P. Hammond and Agapito Rey, *The Rediscovery of New Mexico, 1580-1594: The Explorations of Chamuscado, Espejo, Castano de Sosa, Morlete, and Leyva de Bonilla and Humana*. Albuquerque: University of New Mexico Press, 1966: 11-22.

⁸ Weber, *The Spanish Frontier in North America*, 79; Sánchez, *The Rio Abajo Frontier 1540-1692*, 37-39.

⁹ Sánchez, *The Rio Abajo Frontier 1540-1692*, 39; J. Charles Kelley "The Route of Antonio de Espejo Down the Pecos River and Across the Texas Trans-Pecos Region in 1583: Its Relation to West Texas Archeology. (*Sul Ross State Teachers College Bulletin* No. 7, West Texas Historical and Scientific Society Issue No. 7, December 1937: 8-24.

informed the Spanish that they were about twelve days journey from the mouth of the Río Conchos, and offered to guide the Spaniards to the river. The Jumanas then offered hospitality to their guests, and at their *ranchería* prepared a feast that included catfish, sardines, and mojarra, a small tropical fish.

By the time the Jumanos encountered the Spanish, their *rancherías* were semipermanent or sedentary, sporting gardens and sometimes inhabited by some members of the group throughout the year. They served as trading bases for the Jumanos, and as were always the case in southeastern New Mexico and Trans-Pecos Texas, the *rancherías* were outliers tied to core areas along the Brazos, Red, and Little Colorado rivers far to the east. As in the core areas, the Jumano *rancherías* were nestled in sheltered stream valleys, located where conditions mirrored the environments that the Jumanos favored elsewhere. The Jumanos guided Espejo and his men to a number of *rancherías*, where the Jumanos generously fed their guests, and then took the Europeans to the Rio Grande, which the Spaniards followed south into Mexico.¹⁰

Espejo's travels added knowledge of the area south of Pecos Pueblo, but did little to resolve the considerable tension that still existed on the northern frontier of New Spain. Prompted by ongoing unsubstantiated rumors of riches to be found, unauthorized expeditions headed into the north, some of which met their end as a result of their own failings. Others, such as the Gaspar Castaño de Sosa expedition, were halted by the application of the "Orders of New Discoveries." In 1590, Castaño de Sosa, the lieutenant governor of Nuevo León, the most northeastern province of New Spain, led more than 170 men, women, and children north to pueblo country. Castaño de Sosa's group, with two-wheeled carts called *carretas*, oxen, goats, dogs, and horses, crossed the Rio Grande near present-day Del Rio, Texas, and headed north up the Pecos River. Passing through the southeastern New Mexico and the Trans-Pecos region in the fall and early winter, Castaño de Sosa and the Spaniards faced the land's harsh privations. The area offered little to these people accustomed to the semiarid Iberian Peninsula.¹¹

Along the way, this renegade band of colonists carefully observed southeastern New Mexico and the Trans-Pecos region. Following Espejo's route to the north, they encountered nomads who used dogs for transportation along the Pecos River in Texas. These clearly were not the same people who inhabited the *rancherías* Espejo visited. They found a cache of shelled corn in an *olla*, a pot, near the location of present-day Carlsbad, New Mexico. As they marched north toward Pecos Pueblo, they saw no signs of human habitation and met no one; either the people who used the region were

¹⁰ Hickerson, "Jumano," 10; W. H. Balgemann, Sr., "New Mexico's Guadalupe Mountain Area Noted Years 1535-1977: A Brief Historical Resume of Area," (unpublished mss., 1979), Carlsbad Caverns Library, Carlsbad Caverns National Park; Sebastian and Larralde, "Living on the Land," 96; J. Charles Kelley, "The Route of Antonio de Espejo Down the Pecos River and Across the Texas Trans-Pecos Region in 1583; Its Relation to West Texas Archeology," 16-17.

¹¹ Weber, *The Spanish Frontier in North America*, 79-80; Sánchez, *The Rio Abajo Frontier 1540-1692*, 40-43.

elsewhere during the early winter, gathering the plants that would help sustain them through the cold season ahead, had already migrated to warmer places, or perhaps they had learned to avoid these men wearing metal breastplates, sitting astride large animals, and carrying noisy sticks that left painful wounds. The first fifty years of interaction between Spaniards and natives north of the Rio Grande taught the Pueblos — and possibly through trade networks, other people — to be wary of the white-skinned people who approached from the south.

Castaño de Sosa's men experienced the well-formed Pueblo distaste for Spanish invaders, but upon their arrival, this group initially behaved in a manner different from earlier expeditions: they came to Cicúye in need. Closing in on Pecos Pueblo, the Spaniards and the warriors of the Pueblo skirmished, but weakened by their trek and a lack of food, Castaño de Sosa's men were less belligerent than their predecessors. By the time they reached Cicúye in December 1590, the thin bearded Spaniards only sought food; they lacked the inclination or energy to fight. The hard trip up the Pecos River deprived them of their strength and for the moment any ideas of asserting power. That soon changed, as Castaño de Sosa and his men assaulted the pueblo. After fierce fighting, Pecos Pueblo surrendered. Its fall marked an important moment in Spanish-Pueblo relations. The Indians perceived Cicúye as the most powerful of the pueblos, and after the surrender there, the Pueblo world capitulated to the newcomers. Castaño de Sosa hardly benefitted from the inroads he made. Expecting forgiveness for violating the "Order of New Discoveries" as a result of his success, Castaño de Sosa was surprised to find Juan Morlete, the Crown's Protector of Indians, in New Spain to arrest the explorer. Castaño de Sosa was taken in leg irons to Mexico City, where he was convicted of invading the lands of "peaceable Indians" and sentenced to six years exile in the Philippines.¹²

Spanish expeditions became more frequent. After Don Juan de Oñate's *entrada* in 1598, New Mexico became the northernmost frontier of New Spain. Spanish institutions such as the mission, a structure inhabited by priests who used work and other social structures to bring local people to the Catholic faith, developed; Spanish civil and ecumenical rule prevailed, at least formally, even while church and civil authorities grappled for control. Catholicism was introduced, often with coercion and sometimes through violence. Spanish customs superimposed a grid upon Pueblo life, creating a complicated form of cultural fusion that melded Pueblo and Catholic rituals. Between Oñate's expedition and the Pueblo Revolt of 1680, the area surrounding the Rio Grande spine remained contested cultural terrain as the Spanish sought to translate their military advantage into social power.

The Spanish also considerably influenced inter-Indian trade networks that existed in the region, trading both with the pueblos and with Plains peoples while restricting pueblo goods and trade. In effect, the Spaniards interceded in trade, superimposing themselves atop the existing structure, curtailing the role of the pueblos, and in some instances, venturing onto the Plains themselves.¹³ In general, during the

¹² Weber, *The Spanish Frontier in North America*, 79-80; Sánchez, *The Rio Abajo Frontier 1540-1692*, 40-43.

¹³ Timothy G. Baugh, "Ecology and Exchange: The Dynamics of Plains-Pueblo Interaction," in Spielman, ed., *Farmers, Hunters, and Colonists*, 107-26.

seventeenth and eighteenth centuries when the Spanish dominated the pueblos, they also determined the nature of Pueblo trade; when ecumenical and civil leaders grappled, when the Inquisition disrupted Spanish life in New Mexico, and at other times when Spanish institutions were weak, preoccupied, or absent, the Spanish role in trade diminished and Pueblos and Plains peoples returned to longer-standing terms of interaction.

Although the introduction of the Catholic religion proved a powerful force within the mountains that walled off the Rio Grande Valley, little of that influence became manifest in southeastern New Mexico and Trans-Pecos Texas. Spanish dominion extended neither far nor deep, and loosely settled areas of nomads such as the Trans-Pecos fell under a different Spanish classification than did the sedentary people of the Rio Grande Valley and the surrounding Pueblos. Southeastern New Mexico and the Trans-Pecos showed little tangible evidence of Spanish voyages through it. Only the river courses revealed the Spanish passage, and most of the little that remained came from explorers' accounts of their journeys. The encounter of people — the mixing of Hispanic and Indian cultures that characterized contact along the Rio Grande — was largely absent in the Carlsbad-Guadalupe region.

Spanish influence appeared in other, more indirect ways. The Spanish offered goods that Indian people coveted, and the Pueblos of the Rio Grande Valley served as intermediaries between the Spanish and the nomadic and sometimes semi-sedentary people outside the valleys. Trade became a crucial part of cultural accretion, of achieving Spanish ecumenical objectives such as conversion as well as attempting to, in the ongoing phrase of the Spanish after 1573, “pacify” unconverted and sporadically hostile people.

Almost all of the Native American peoples of the greater Southwest experienced changes in their ways of life because of the Spanish presence. The combination of Spanish technology and authority impressed its values atop Pueblo life; the sedentary people of the Rio Grande region found themselves with less autonomy and a system that they neither wholly understood nor in which they cared to participate. Yet the choices they faced changed, in part because of Spanish authority, in part because of the range of goods and other accouterments the Spanish brought, and in part because when faced with inexorable change, Pueblo peoples understood the seemingly advantages of the Spanish ways as a magic that was absent in their own beliefs and practices. Pueblo resistance took many forms, but so did acquiescence born of the material advantages of trade.

From the pueblos, Spanish influence extended in concentric rings; the farther away from the Rio Grande, the less the Spanish could assert control or even influence over native peoples. The Plains peoples particularly vexed the Spanish, for the power the European newcomers could assert was muted by the distances of the southern Plains and the intimate familiarity of native peoples with its micro-environments. On the Plains, the Spanish were as much supplicants as conquerors, as much in need of cooperation as able to compel it.

The acquisition of the horse by Native Americans was the single catalyst that empowered many Plains peoples to resist the Spanish and simultaneously trade more effectively with them. The horse greatly changed transportation and mobility for anyone who acquired one; it transformed the Navajos into a pastoral society. For most other Apachean peoples, horses helped to expand their range and

make more resources of different kinds available to them, assuring greater success. The Apaches could dominate where previously they fought to keep their position; they could move more frequently and go farther when they did, taking their bounty and their captives with them and creating a different cultural view of material possessions and wealth, capturing greater bounty, and becoming by their own standards more wealthy. The horse became so important to Apachean peoples that they treasured it as a gift of their gods, not an accidental acquisition that resulted from the inability of the Spanish to manage their animals.¹⁴

The horse became a medium of exchange between Spaniards and nomadic native peoples. It enabled the Spanish to exercise a modicum of control and to assert their diplomatic objectives as it offered nomadic native people the opportunity to extend the reaches of their domain, find new arrays of resources to trade and to sustain them. Horses gave Native Americans new access both to the peoples of northern New Spain and to those of the more humid climates on the eastern edge of the Plains, in what is now Arkansas, river-basin parts of Kansas, and possibly southwestern Missouri. With the ability to move as much as forty miles in a day instead of four, Indian life became more cosmopolitan. Most groups interacted with a significantly larger number of other cultures after they acquired horses than they did before that time.

One branch of the Jumanos, a hunting and gathering group whose origins remain in dispute, became the most significant representatives of this new order. Most likely descended from the Jornada Mogollon people who became hunters and gathers at the end of the proto-historic era, this group came across the Guadalupe Mountains and the Pecos River and headed for the Plains. Between 1540 and 1700, they emerged as the leading social and economic intermediaries across a large area. Their geographical reach was vast, stretching from the Little Colorado River in modern Texas north at least to the Canadian and Red rivers and west to the Rio Grande. These Jumanos established *rancherías* similar to the ones Espejo found in the 1580s along the Pecos throughout their range, and these small centers revealed their presence. The Jumanos took a strong interest in the area east of the Guadalupe Mountains. A prominent settlement and a number of smaller ones were along the lower Pecos River.¹⁵

Whoever they were, the Jumanos served as the primary traders and communicators of cultural variation between Spanish arrival and the *reconquista* of New Mexico by Don Diego de Vargas in the 1690s. The expedition led by the governor of New Mexico in 1692 traveled across the salt flats east of

¹⁴ John, *Storms Brewed in Other Men's Worlds*, 59.

¹⁵ John, *Storms Brewed in Other Men's Worlds*, 155-95, map of the range of various groups on 200-01; Hickerson, "Jumano," 9-10; Sebastian and Larralde, "Living on the Land," 100. Hickerson classes the Jumanos as Tanoan people; Sebastian and Larralde describe them as Caddoan. Sebastian and Larralde also note that another group called Jumano were known near the Roswell area. These people were agriculturalists, offering either an enormous coincidence of nomenclature or support for the idea that both groups of Jumanos were the descendants of the Jornada Mogollon; others, including noted ethnobotanist and Southwestern intellectual jack-of-all-trades Dan Scurlock, concur.

El Paso and explored Guadalupe Canyon, at the base of Guadalupe Peak.¹⁶ The Jumanos' range exceeded that of the Spanish and they could communicate with a wide range of peoples. The Jumanos carried goods such as turquoise and textiles from the pueblos of New Mexico to the many peoples of the Plains, roaming as far as the Caddo world beyond the Trinity River in modern east Texas. They took buffalo meat and hides from their own hunts to both the pueblos and the Caddos. The Jumanos also assisted the Spanish in a range of diplomatic activities and expressed interest in Catholicism, at the same time occasionally presenting a threat to Spanish dominance and authority. Yet they managed to maintain their position; they had little enough direct contact with the Spanish population to provoke animosity from either side, but they remained close enough through their long-standing ties to the Tompiro Pueblo peoples in what is now south-central New Mexico, who themselves may have been Jumano agriculturalists, to acquire the horses and metal goods offered by the Spanish. Between about 1630 and 1680, the Jumanos expanded their traditional role as intermediaries and found an enviable position in the post-contact world. They filled the trade niche left vacant by the collapse of the Casas Grande culture of northern Mexico, gained wealth, power, and status, and enjoyed the fruits of their niche — trade goods, ample food, good horses, and even firearms.¹⁷

The Jumanos found a niche for a moment in time. When it shrank, it diminished rapidly. The Jumanos had been a force on the Plains; their trade contacts and goods, mobility, and political and diplomatic savvy created a wide intermediary role that made them valuable to almost every group between New Mexico and the east side of the Trinity River. As long as that balance of power persisted, the Jumanos remained in a position of control. By the 1680s, parts of their network collapsed. Apachean people — Sierra Blancas and Siete Ríos — attacked Tompiro in 1653. In 1667, the Tompiro Pueblos planned a revolt against the Spanish during an extended drought that began in 1666; it was modeled on a similar plot in 1650, in which the people were to drive all the horses to the Sierra Blancas on Holy Thursday and then kill the horseless Spanish. This revolt also failed. The Tompiro leader, Don Esteban Clemente, was hung for his efforts. With his death, the pueblo became leaderless. Intensive Athapaskan attacks during the following decade decimated the pueblos and even the trading center of Humanas, the largest Tompiro Pueblo, became impossible to defend. Drought, disease, famine and attacks, primarily by the Siete Ríos Apaches, further decimated the pueblo. The remaining Jumano pueblo people drifted away to the missions at El Paso or to other, more secure pueblos, and Spanish control of the *jornada*, the waterless trek east of the Rio Grande from New Mexico to New Spain

¹⁶ John L. Kessell and Rick Hendricks, eds. *By Force of Arms: The Journals of Don Diego de Vargas, New Mexico 1691-93* (Albuquerque: University of New Mexico Press, 1992).

¹⁷ John, *Storms Brewed in Other Men's Worlds*, 169-70; for Vargas, see J. Manuel Espinosa, ed., *First Expedition of Vargas into New Mexico, 1692* (Albuquerque: University of New Mexico Press, 1940) and John L. Kessell and Rick Hendricks, eds., *By Force of Arms: The Journals of Don Diego de Vargas, 1691-1693* (Albuquerque: University of New Mexico Press, 1992); J. Manuel Espinosa, trans. *First Expedition of Vargas into New Mexico, 1692*: 50-160.

became unsteady. By the 1680s, this important Jumano trade conduit was no more, forcing the Jumanos to refocus their trade on other pueblos.¹⁸

The Pueblo Revolt of 1680 also threatened Jumano preeminence. During the revolt, pueblo peoples expelled the Spanish from New Mexico, dramatically in cases such as Pecos Pueblo. There, the pueblo attackers killed the priests, destroyed the church, and sunk a kiva within it to lay their religious symbols and structures atop those of the Spanish symbolically. The Pueblos and their Apachean allies killed 380 Spaniards including seventy-three soldiers — almost half the military presence in the province — and twenty-one priests. They drove the remaining Spaniards and some Christianized native people from the north. Among the Spanish communities in New Mexico, only El Paso survived. In one brief triumphant moment, the Spanish presence in the north became marginal. When that happened, major Jumano markets and sources of goods ceased to exist.¹⁹

At the same time, Northern Athapaskans who likely became the eastern Apaches spilled into the Jumano heartland, most probably from the front range of the Rocky Mountains, threatening all travel across the Jumano trades routes. Numerous and powerful, these Apachean people raided the Jumanos, impinging especially on east-west travel, and invaded their hunting grounds. The Apachean groups became so powerful so quickly that they demolished many smaller groups on the peripheries of the territory they reached. The Apaches reached into central Texas, harassing the small Coahuiltecan groups who depended on the San Antonio River and its environs and the Balcones Escarpment — a geological uplift that runs north-south through modern Austin, stretches to the west and leads into the Texas Hill Country — for their intensive, hunting and gathering subsistence. Mounted Apachean people descended upon the Coahuiltecan, worsening existing tensions among them. In the 1660s and 1670s, the Coahuiltecan turned to the Spanish missions and later the Spanish civil authorities in northern New Spain for protection. They were the first of many groups to seek non-Indian protection in the face of Athapaskan expansion.

By 1683, Jumano dominance of even the Guadalupe Mountains and Trans-Pecos area was in jeopardy. Apachean attacks drove the Jumanos from positions of comfort and power and penned them between the Rio Grande and the seemingly endless advance of Apachean peoples. The proud Jumanos, formerly peers of all peoples they encountered, were reduced to supplicants. Apachean attacks forced them to the weakened Spanish in El Paso. Juan Sabeata, the leader of the Jumanos and a man of consummate political and diplomatic skill, tried to save the Jumano position in regional affairs. For as much as a decade, he maneuvered to revive Jumano fortune and position and save their prerogatives. In

¹⁸ John, *Storms Brewed in Other Men's Worlds*, 93, 170-71; Albert H. Schroeder, "Pueblos Abandoned in Historic Times," in Alphonso Ortiz, ed., *Handbook of North American Indians Volume 9: Southwest* (Washington, DC: Smithsonian Institution Press, 1979), 237-39; for a more detailed account, see Jack D. Forbes, *Apache, Navaho, and Spaniard* (Norman: University of Oklahoma Press, 1960), 163-69.

¹⁹ John, *Storms Brewed in Other Men's Worlds*, 98-102; Forbes, *Apache, Navaho, and Spaniard*, 177-224; see also Andrew Knaut, *The Pueblo Revolt*, ;

his most bold effort, Sabeata sought the assistance of the Spanish by telling missionaries of a great cross that appeared in the sky during a battle and secured a bloodless victory. This was a ruse to garner a Spanish escort across the now dangerous buffalo plains the Jumanos once ruled. Sabeata also duped Spanish military and civil authorities with tales of the Tejas kingdom, where there was supposedly so much grain that the animals ate it as well as the humans, and near it, the fabled Gran Quivira. "Spaniards" in vessels, he said, built wooden houses along the shore there. To the Spanish, this could only mean their French colonial rivals. In 1684, the governor of New Mexico sent an expedition out on the Plains, which the Jumanos quickly turned into a foray against the Apachean peoples. Missionaries expressed pleasure at the number of Christianized Indians they met and the responsiveness of other peoples along the way. The French were far away, if present at all, and the expedition acquired new goals. Captain Juan Domínguez de Mendoza, who led this excursion, soon ferreted out Sabeata's real goal, but the buffalo hunting was excellent and Jumanos and Spanish alike hunted their share. When the Spanish returned to El Paso, they promised to return the following year to continue proselytizing and renew what must have seemed like a promising relationship. Although the Jumanos expected to see the Spanish every year, with the Spanish presence in New Mexico gone and northern New Spain in disarray, Mendoza did not appear the following year. The missionaries returned the following year in 1688, but the two-year lapse diminished their worth, and with it, the Indians' prime reason for acceptance of a new faith. The missionaries were not military men, who the people facing the Apachean onslaught really needed, and the two-year gap in Spanish presence hurt their credibility as well as the position of everyone but the Apacheans in the Trans-Pecos region.²⁰

Sabeata also cultivated other colonial powers. The Spanish assisted his efforts to maintain some control over trade, but internal strife, revolts, and general reticence prevented them from contributing to the extent that Sabeata desired. In an entirely coincidental meeting in 1686 among the Hasinai, one of the main Caddo groups, Sabeata encountered Sieur de René Robert Cavelier La Salle, the French explorer mistakenly credited with discovering the Mississippi River. In 1685, after an unsuccessful attempt to locate the mouth of the Mississippi, La Salle built a small installation called Fort St. Louis on Garcitas Creek near the San Antonio River on the Texas Gulf coast. La Salle's men traveled all over the Southwest and even reached the Rio Grande, making friends with native peoples, and asking questions about the location of Spanish mining facilities and the strength of the Spaniards. On one of these ventures, he and Sabeata met, and the Jumano leader sought to enlist the French in his increasingly futile attempt to resist the Apachean peoples. La Salle declined, leaving the Jumanos disheartened and vulnerable.²¹

By the early 1690s, the Jumano dominance of the Plains and trade networks had ended. The

²⁰ John, *Storms Brewed in Other Men's Worlds*, 175-81; Forbes, *Apache, Navaho, and Spaniard*, 195-98; 213-15.

²¹ John, *Storms Brewed in Other Men's Worlds*, 181; Weber, *the Spanish Frontier in North America*, 149-53; Forbes, *Apache, Navaho, and Spaniard*, 211-13.

Athapaskan peoples from the north demolished the structure of the Jumanos world, leaving the Jumanos fragmented, weak, and separated. Sabeata continued to seek colonial protection — telling the Spanish that the French tried to turn native groups against them, while telling the French of the aggressive posture of their seemingly common enemy, the Spanish, and suggesting that the Jumanos would help in a war against these newest European intruders. Playing both sides against the middle could not last, and when it ended the Jumanos were shattered, powerless, and destitute. Sabeata had his final contact with the Spanish colonial authorities in 1692, when he arrived at Julime Pueblo on the Río Conchos. He delivered a letter from two Franciscans, reported he was in the midst of a great war, and disappeared from the pages of recorded history. Sabeata's convoluted endeavors were not enough to invigorate the Spanish and bring them to his support nor did they stall the onrushing Apaches, who soon swept the Jumanos from the prominence they enjoyed. Within one century, the Jumanos followed Sabeata into the unrecovered past. They no longer existed independently, with some scholars seeing them as vanished and others arguing that the Jumanos merged into the Lipan Apache and subsequently lost any remaining cultural distinctiveness.

The experience of the Jumanos reflected a pattern evident in colonial processes throughout the world. When colonial powers enter a new area, its officials find pre-existing tensions, rivalries, and relationships that determine the local balance of power before the arrival of outsiders. From Africa and India, to the Americas and Australia, weaker local groups sought out powerful newcomers as protection from indigenous enemies, and in some cases allied with them against aggressive neighbors. Juan Sabeata was hardly unique; he only erred in choosing a patron power not sufficiently strong or enthusiastic to offer broad protection over a wide area. However, Sabeata had few options. The Spanish were the clear power, and one with whom Apachean peoples had at least some, if little, contact. The French were few in number in Sabeata's area, and were less inclined than the Spanish to help. After both colonial powers declined his request, Sabeata ran out of options.

Sabeata's conundrum was typical of an aspect of indigenous experiences around the globe that lasted into the twentieth century. Outsiders were not always bad in the eyes of indigenous peoples; they could be used for local purposes too. In the best-known American version of this tale, Absaroka or Crow scouts led General George A. Custer to the immense Lakota and Cheyenne camp on the banks of the Greasy Grass in the summer of 1876. For more than a generation, Lakota people had pushed the Crows and the Pawnees off the lands they held until mounted Lakotas brought a half-century of terror. The Lakota expansion contributed to the geopolitical situation on the Plains, to turning other Indian people against them and providing knowledgeable and cooperative scouts for the Americans. The battle at the Little Big Horn occurred well outside any area the Lakota people could claim as their own before 1850; the community nearest to the modern Little Big Horn National Battlefield today is called Crow Agency, Montana, not Sioux City, or some other name. In this light, Crow and Pawnee assistance to the incoming Americans acquires a different meaning; it was part of an effort of these tribes to keep their lands and people from feared enemies. To them, as to Sabeata, the newcomers seemed valuable allies; the Pawnees and the Crows erred only in thinking the Americans would fight their battles and then go

away, restoring Crow and Pawnee lands.²²

In the aftermath of the end of the Jumano network, Apaches dominated the Guadalupe Mountains-Trans-Pecos subregion and the Plains so completely that the entire area became known as the *Gran Apachería*. Scholars debate the date of the Apaches' arrival on the Plains; the majority indicate within a decade either way of 1525 as the most plausible date. By the early seventeenth century Apachean peoples were evident, and in fact were regarded as threats along the fringes of the Jumano trading world. Apachean peoples became a powerful force on the Plains by the late seventeenth century. By the 1680s, as Sabeata tried to find a middle ground for the Jumano, Apaches had become powerful enough to endanger Spanish New Mexico; the Siete del Ríos Apaches consistently threatened Salinas and Tompiro Pueblo, waiting for the vigilant sedentary people there to drop their guard. Nor were these powerful newcomers frightened of the Spanish. Mescalero Apaches, who had come to inhabit the Organ, Davis, and Guadalupe mountains, harried the Spanish retreating down the Rio Grande after the Pueblo Revolt of 1680. By the 1690s, a new and powerful force asserted itself across a wide area.

The Mescaleros who made the Guadalupe Mountains and the Trans-Pecos their own were typical of the Athapaskan Apachean peoples who came down from the north. The land they inhabited was abundant for their purposes; with a small population and a wide range of resources at different elevations, the women could gather resources widely. After they acquired the horse, the men could hunt a broader territory inhabited by a larger number of species — especially the buffalo — that made hunting more attractive as a source of subsistence. The Mescaleros lived in thrown-together brush shelter wickiups, a structure formed by placing leafy branches over an oval-shaped framework. The dwellings were flimsy because they were temporary; wickiups did not travel from place to place with these mobile people. For Plains hunting, they used tipi-style dwellings, probably acquired as a result of interaction with peoples of the Plains. Frequent movement prevented the spread of filth-born diseases among the Mescaleros, with historic accounts noting the premium placed on cleanliness among them.²³

As did the Mesilla Phase people before them, the Mescaleros used agave as a major source of sustenance. In May or June, after the red flower stalks that designated mature agave plants pushed up, Apache women took hatchets and four-foot-long sharpened Pinyon sticks and searched for an agave field close to wood and water. The women cut the big leaves as close to the heart of the plant as possible, and used the Pinyon stick to chisel the roots of the plant out of the ground. This work produced an ivory-white bulb as much as two or three feet in circumference. The Mescaleros then cooked their agave in largely the same manner as had the Mesilla Phase people. The syrupy result became a feast, and the leftovers were spread into thin sheets, dried on flat rocks, and taken along.

²² Urs Bitterli, *Cultures in Conflict* brilliantly explicates this idea; see also Evan Connell, *Son of the Morningstar* for the gritty details of the Custer situation in an other-than-chronological fashion.

²³ C. L. Sonnichsen, *The Mescalero Apache* (Norman: University of Oklahoma, 1960), 16-18; Opler, "Mescalero Apache," 429-30.

With this seemingly endless supply of agave and other resources, the Mescaleros could survive in their new homeland independent of the outside world.

These Mescalero people left comparatively little cultural remains of their presence. Their nomadic lifestyle and the temporary structures they built assured that archaeologists would puzzle over their presence. In some places, they left tantalizing clues to the nature of their life. In West Slaughter Canyon, almost seventy feet above a dry stream bed, a wide low cave contains several hundred multi-colored pictographs, painted in a variety of natural colors. Called the Painted Grotto, the cave seems to have had consistent ceremonial use. This cave and the main entrance to Carlsbad Caverns appear in the Mescalero oral tradition, strengthening archaeological explanations.²⁴

Spaniards perceived the Mescaleros and other Apaches as a threat to their weakened control both during and after the Pueblo Revolt. In 1682, Governor Antonio de Otermín invaded the Mescalero stronghold of the Organ Mountains from El Paso, in part out of frustrations that stemmed from the success of the revolt. He also sought to reassert the Spanish presence and to punish the Mescalero for their practice of raiding sedentary communities. The 1684 excursion Sabeata persuaded Captain Juan Domínguez de Mendoza to undertake also helped show a Spanish presence in the Apachean world, even if it failed to accomplish Sabeata's goals. Traveling across the Pecos River to the vicinity of modern San Angelo, Texas, a distance of more than 350 miles, spoke volumes about the limits of Apachean power and remaining presence of the Spanish. Yet this Spanish assertiveness was as much for show as for any purpose. As the Apaches ascended, the Spanish, who were limited to the stronghold of El Paso until the 1690s, could do little to slow Apache power or its expansion.²⁵

Even after the successful reconquest of New Mexico by Don Diego de Vargas, the Spanish presence in New Mexico remained too weak to assert dominance over anything but the valleys between the mountains along the Rio Grande. To the north and west of the Spanish colonies lay the lands of the *Indios Bárbaros*: the western Apaches, the Navajos, the Utes, and a new and increasingly threatening group who descended from the plains to the east, the Comanches.²⁶ All these groups frequently raided

²⁴ Jack R. Willams, *Indians of the Guadalupes* (Florissant, CO: Carlsbad Caverns Natural History Association) 2d ed., 26-28.

²⁵ Kenner, *A History of New Mexican-Plains Indian Relations*, 19; John, *Storms Brewed in Other Men's Worlds*, 95-110; Weber, *the Spanish Frontier in North America*, 135-40; Forbes, *Apache, Navaho, and Spaniard*, 173-90.

²⁶ The etymologies for the various Apachean groups are quite complex. Morris E. Opler, "The Apachean Culture Pattern and Its Origins," in Alfonso Ortiz, ed., *The Handbook of North American Indians: 10 Southwest* (Washington, D.C.: Smithsonian Institution Press, 1983), 368-92, provides the most comprehensive analysis. Opler identifies seven southern Apachean groups, Chiricahua, Jicarilla, Kiowa-Apache, Lipan, Mescalero, and Western Apache. All except the Kiowa-Apache speak a closely related language, the Kiowa-Apache most likely having diverged before the Apachean peoples entered the Southwest. Mescaleros appear to be named from their practice of, relying on the Mescal or Agave plant. Other groups have been named by their relationship to specific places; the Sierra Blanca Apaches turn to have three distinct historical provenances: the first group are the linear descendants of the Apaches del Perillo, first reported in 1653, and who became known as the Apaches de Faraones after the Pueblo

the poorly defended colonies, carrying off horses, livestock, and in some cases women and children. From the east came the Lipan and Jicarilla Apaches, who both traded with New Mexicans and sometimes preyed upon them. Even more vulnerable were the outlying pueblos such as Zuñi, Ácoma, Laguna, Jémez, Pecos, Picurís, Taos, Santa Clara, and La Alameda. After the death of de Vargas, who took ill while chasing Faraòn Apaches in the Sandia Mountains in 1704 and died soon after, these pueblos were besieged by the *bárbaros*. Defending property and life became an ongoing chore for the Spanish — its success proof of their value to the pueblos, its failure a sorry reminder of pueblo weakness. As a last resort, the Spanish gave common grants to Spanish *vecinos*, citizens who had served their king and country, and encouraged them to settle the Sangre de Cristo and Jemez mountains that border the northern Rio Grande Valley. These poorly protected and easily accessible communities were targets of Indian raiding parties. The Spanish also formed buffer communities to bear these raids; one community, Abiquiu, was founded in the 1730s and peopled by *genizaros*, detribalized Indians who had accepted Spanish ways by choice or force. They were deemed expendable and placed on a vulnerable edge of the Spanish-controlled area. In the southeast, around the Guadalupe Mountains, the Natagè and Faraòn Apaches, most likely branches of the Mescaleros, encroached on the Spanish in the Rio Grande Valley. The Faraòn were deemed the most ferocious and the least amenable to Spanish entreaties. These people's ability to deter the Spanish from the peripheral area beyond El Paso was so great that as late as the 1720s Spanish mapmakers showed the Guadalupe Mountains and the Trans-Pecos as the territory of the hostile Natagè and Faraòn Apaches.²⁷

A fierce Spanish campaign slowed raiding; by 1706, the Spanish could claim success in stopping the attacks on the pueblos from the *bárbaros* and could begin to think of establishing new settlements. However, the Apache dominance central to the Spanish peace was short-lived. Despite all efforts, northern New Mexico remained a drain on Spanish resources. The colony continued to cost the royal treasury large sums each year, and little profit other than trade and the possible collection of souls for Christ seemed forthcoming. After the *reconquista*, Spanish leadership ranged from outstanding to pathetic. The best leaders, such as de Vargas, consolidated the Spanish position and earned respect for the Crown. The worst undermined all positive efforts. As the Spanish struggled and the Mescalero, Natagè, and Faraòn Apaches consolidated their realm in the south, the northern and eastern areas of the

Rebellion of 1680. The second are the ones also known as Carlanas, who lived north of the Raton River in what is now southern Colorado. The final group of Sierra Blanca Apaches are the ones known today as the White Mountain Apaches. Other confusing situations result.

²⁷ John, *Storms Brewed in Other Men's Worlds*, 226; Espinosa, *First Expedition of Vargas into New Mexico, 1692*: 161-208; Charles L. Kenner, *A History of New Mexican-Plains Indian Relations* (Norman: University of Oklahoma 1969), 23; Forbes, *Apache, Navaho, and Spaniard*, 264-67; Weber, *The Spanish Frontier in North America*, 204-05; Morris Opler, "Mescalero Apache," in Alfonso Ortiz, ed., *Handbook of North American Indians Volume 10: Southwest*, 420-21; see also William deBuys, *Enchantment and Exploitation: The Life and Hard Times of a New Mexico Mountain Range* (Albuquerque: University of New Mexico Press, 1986) and Hal K. Rothman, *On Rims and Ridges: The Los Alamos Area Since 1880* (University of Nebraska Press, 1992).

Gran Apachería came under attack from a new force, the Comanches sweeping down the Plains.

Southern Shoshonean people who roamed a wide area northwest of the Wichita lodges on the plains of Kansas, the Comanche became a fierce foe of Apachean peoples, and later of the Spanish, Mexicans, Texicans of the Texas Republic, and the onrushing Americans. Comanches first appeared in the Spanish world view in 1706, when General Juan de Ulibarri took forty Spanish soldiers and 100 Pueblo warriors to Cuartelejo, in modern Scott County, Kansas, where a number of people from Picurís Pueblo fled as a result of the Spanish reconquest of New Mexico, built a pueblo, and found themselves doing the bidding of the Cuartelejo Apaches, one of the many small groups of Apachean peoples on the plains. On the way, Ulibarri found Taos bracing for a Ute and Comanche attack with a fear that the Spanish previously had not seen. The year before, the Comanches had come to the Taos trade fair with their allies, the Utes, and liking what they saw, returned prepared to take it. For a Spaniard leading a sizeable number of soldiers away from the colony, the prospect was as terrifying as it was to the Taoseños. At Cuartelejo, Ulibarri found two other developments that he knew would upset the New Mexico leadership: more fear of a Ute-Comanche raid and a French-made gun that the Apache people there took from attacking Pawnees. The geopolitical concerns of the Spanish expanded once again.²⁸

The problem was larger than Ulibarri and the Spanish imagined in 1706. On the way back to Santa Fe, Ulibarri found that Utes and Comanches raided *rancherías* of the Carlanas, the Sierra Blancas and the Penxaye Apaches. After Ulibarri's departure from Cuartelejo, the Utes and Comanches attacked the Apaches throughout what is now the western tier of counties in Kansas. A new and dangerous alliance had formed on the Plains, linking the Utes and Comanches against the more widely distributed Apachean peoples and the Navajos. By the first decade of the eighteenth century, no Apachean community, *ranchería*, or stronghold within the reach of the Utes and Comanches was safe from attack. Assaults continued to increase in frequency and intensity. In 1719, the Comanches engaged in a destructive raid against Taos. In its aftermath, the Spanish learned of the impact of the Comanches on the *Apachería*. There were depopulated *rancherías* throughout the eastern Apache realm, and the palpable fear of the destruction of many more settlements in the near future permeated Apache life.²⁹

The balance of power was changing, and the Comanches and their Ute allies were in ascendance. The Spanish were neither sufficiently strong nor numerous to intervene regularly. Left to their own resources in isolated valley communities, the Apaches could not readily withstand Comanche assaults. The death of thirty-two of the almost 100 Spanish soldiers assigned to New Mexico in the slaughter of the Pedro de Villasur expedition far out on the Plains in 1720 further diminished Spanish military power. The Comanches and Utes swept the Apachean peoples from the Plains, with fortunate

²⁸ John, *Storms Brewed in Other Men's Worlds*, 226-31; Kenner, *A History of New Mexican-Plains Indian Relation*, 26-31; Weber, *The Spanish Frontier in North America*, 187-88.

²⁹ John, *Storms Brewed in Other Men's Worlds*, 231-32; Kenner, *A History of New Mexican-Plains Indian Relations*, 28-32; Weber, *The Spanish Frontier in North America*, 166-71.

survivors fleeing to New Mexico and finding refuge in pueblos. The Comanches impressed the French, who by 1750 supplied the Comanche with arms and encouraged their hostility against the pueblos and the Spanish. The Comanches seemed ever more powerful as the Apaches weakened. By 1766, Apache dominance ended throughout the Plains. Even east of the Pecos River, the plains of West Texas had become Comanche territory.³⁰

Only in far southern area of the Plains did Apachean peoples retain their control, and there only after fighting off serious threats. In the Trans-Pecos region near the Guadalupe Mountains, the Mescalero Apaches tenuously remained in control. Comanche raids destroyed the structure of some groups; the once vaunted Faraòn Apaches were defeated and in decline built a *ranchería* along the Rio Grande before the 1750s, where they traded for the buffalo meat they used to hunt. The Comanches drove other Apache groups into the arms of the Spanish; one settled outside the village of San Elizario, about twenty miles from El Paso, and another found the Hueco Tanks a safe refuge. Even the Mescaleros suffered greatly, finding their territory limited, their sovereignty challenged. With so many prizes for the Comanches to find, they soon left the Trans-Pecos region, driving even farther east to the Spanish settlements in south-central Texas such as San Antonio. The people there were wealthier and the prizes greater than could be expected from the mobile Mescalero bands. The Mescalero bands, which included the Sierra Blanca, the Siete Ríos, other groups, and a number of Apache refugees from the north who assimilated with the Mescaleros, retained a more secure position than most.³¹

Despite an all-out war between the Mescaleros and the presidio, the Spanish garrison, at El Paso during the 1770s and 1780s, a kind of appeasement led the way to a period of relative peace for the first twenty-five years of the nineteenth century. Teodoro de Croix, commander-general of New Spain, led the most effective attacks on the Mescaleros, penetrating the Sacramento, Guadalupe, and Organ mountains as well as the Sierra Blanca range in efforts to dislodge them. A tactical strategist, de Croix also fractured the long-standing alliance between the Lipan and Mescalero groups. When de Croix's successor, Bernardo de Gálvez, took charge of the *Provincias Internas*, the internal provinces of New Spain, in 1786, he inaugurated a policy of plying Indians with liquor and offering them inferior firearms that would not stand up to those of the Spanish. He reasoned that when hungry, Indian people were dangerous to his colony; when full and a little drunk, they might be more pliable and less inclined to concerted aggression. The success of this program surprised other Spaniards. The rations and goods worked as planned, and prolonged strife between the Mescalero Apaches and the Navajos further eased the fears of the Spanish. With other Indian groups pacified and yearning for a truce and the Mescaleros distracted, a period of calm began.³²

³⁰ John, *Storms Brewed in Other Men's Worlds*, 232-57; Kenner, *A History of New Mexican-Plains Indian Relations*, 32-36; Weber, *The Spanish Frontier in North America*, 196-98.

³¹ Sonnichsen, *The Mescalero Apaches*, 43-49.

³² Sonnichsen, *The Mescalero Apaches*, 47-52; Kenner, *A History of New Mexico-Plains Indian Relations*, 55-60; Opler, "Mescalero Apaches," 420-21.

The Mescaleros were among the many beneficiaries of the new situation. The Spanish offered them goods and amenities to keep the peace, and the Mescaleros willingly took these offerings. With the Comanche menace to these last Apachean peoples in the east diminishing as New Mexico and Comanche interests elsewhere converged, Spanish generosity looked like a promising prospect. In 1793, a large group of Mescaleros agreed to stay on tracts along the Rio Grande near modern Belen, New Mexico, a step toward a mutual relationship that probably had the added advantages of protecting Mescaleros from the Comanches, who made an alliance with the Spanish in 1786. Comanche-Spanish joint raids on the Apaches became common; in 1797, a combination of Spanish soldiers and settlers, Comanches, and pueblo Indians attacked more than 400 Mescaleros in the sand hills of southeastern New Mexico. With such physical coaxing, the Mescalero-Spanish relationship worked well. When U.S. Army Lieutenant Zebulon Pike visited San Elizario in 1807, he reported peaceful relations between the Spanish and the many Apaches in the vicinity. In 1810, the Spanish formally acknowledged the Mescaleros with a treaty that granted rations and the right to occupy a sizable area that ranged from the Sacramento Mountains to Chihuahua and from El Paso onto the Plains. The document was a testament to the harmonious relations that changed the tenor of the Guadalupe Mountains-Trans-Pecos region.

The harmony was short-lived, disrupted by the tumultuous affairs of Spain and its colonies. Turmoil in Europe resulted from Napoleon Bonaparte's attempt to install his brother as king of Spain in 1808. Not only did Fernando VII, the son of the deposed king, return to the throne in 1814, the New World colonies acquired freedoms they did not want to give up when the rightful king returned. Added to his troubles at home, which culminated in a new constitution in 1820, Fernando VII found the weakened grasp of Spain on Mexico to have become limp. With tacit American approval and modest financial aid, Bernardo Gutiérrez de Lara, commander of a Mexican army rebelling against Spain in the early 1800s, invaded Texas. The Americans captured the port of Mobile, Alabama, from the Spanish during the War of 1812, ostensibly to keep the British away from it; after the war, they refused to return it to Spain. Americans also pressed their claims to Florida and the western boundary of Louisiana, culminating in the Adams-Onís Treaty of 1819, in which the United States acquired Florida and the two nations drew a boundary line along the Sabine, Red, and Arkansas rivers that extended west to the Pacific Ocean along the 42nd Parallel. This extinguished American claims to Texas, which the Spanish feared, and also left a large area, dominated by the Comanches and other Plains groups, between Santa Fe and the growing American migration west.³³

Spanish problems in North America were only beginning. The weakened king could do little to stop the attrition of his holdings. While the Adams-Onís treaty made promises — American subjects, especially in Florida, along the Gulf of Mexico, and in Louisiana — continued to agitate for removal of the Spanish. When a Mexican-born military officer, Augustín de Iturbide, launched a drive for Mexican independence from Spain, the last vestiges of the Spanish empire in North America crumbled. The people of New Spain became the people of Mexico, and in the streets of San Antonio and Santa Fe,

³³ Weber, *The Spanish Frontier in North America*, 297-99.

shouts of *viva la independencia!* replaced *viva el rey!* Mexico became an independent nation, inheriting all the problems of Spain in North America, in particular the expansionism of the United States that would become known as Manifest Destiny, and few of the fallen empire's worldwide resources.³⁴

From its inception, the Mexican state was feeble and largely unable to exercise even the limited power that the Spanish developed in the far north. El Paso remained a crucial juncture, but on the periphery — and often even in its core — the constantly changing Mexican regimes were barely able to sustain governance of their important northern regions, New Mexico and Texas. Internal political turmoil, economic scarcity, and weak institutions contributed both to the end of the Indian-Spanish harmony that bribery had brought and to a growing lack of control and subsequent lack of respect for the Mexican government that might have been the only sentiment shared by Comanches, Mescaleros, and even the Anglo-Americans who encroached upon Texas, New Mexico, and California.³⁵

The encroachment of Anglo-Americans illustrated the weakness of the Mexican north. *Empresario* grants to faux Catholics such as Moses and Stephen F. Austin in Texas, unauthorized trade along the Santa Fe Trail from St. Louis to Santa Fe, and the Russians and Americans who arrived in California and hungrily eyed the province provided ample evidence of desire. The Texas Revolution of 1835 became the first genuine proof of the intentions of the expansion of English-speakers, but even the Alamo was only a prelude to the gradual diminishment of Mexican power in its north and the rise of its increasingly aggressive northern neighbor.

Its fundamental weakness compelled the Mexican government to maintain existing friendly ties with peoples such as the Mescaleros — a clear acknowledgment of the weakness of the Mexican periphery and the strength of the Mescaleros in their land. The Mexicans had neither the energy nor the capability to fight the Mescaleros; throughout the 1820s and 1830s, the northern control crumbled and Mexican governments succeeded one another with stunning rapidity. For the Mescaleros, this meant that the status quo persisted in the Guadalupe Mountains and Trans-Pecos region and they could raid with impunity beyond it. In those two decades, no travelers on the *Jornada del Muerto* or going to Chihuahua were safe. Even as the raids increased and nearly all of the livestock in El Paso disappeared, in 1832 the Mexican government reaffirmed the 1810 agreement. Although Mexican soldiers dealt the Mescaleros a stunning defeat in a surprise attack at the Hueco Tanks near the end of the 1830s, the Mescaleros clearly controlled the Guadalupe Mountains and its environs. As late as 1842, Mexican officials engaged in negotiations with the Mescaleros in the hope of avoiding internal problems at a time when their external situation seemed grim. This negotiating highlighted the problems of the Mexican government. Too weak to address the genuine threats to its sovereignty, it did what it could to maintain the status quo for as long as possible.

The Mescaleros had one other advantage, one more reason to be left alone as tumult swirled

³⁴ Weber, *The Spanish Frontier in North America*, 300-01.

³⁵ David J. Weber, *The Mexican Frontier 1821-1846: The American Southwest Under Mexico* (Albuquerque: University of New Mexico Press, 1982), 1-14.

around them along the Rio Grande, in Chihuahua, and in Texas. The Guadalupe Mountains-Trans-Pecos region remained fundamentally apart from the conflicts of the time. Its resources were not what the Americans and Mexicans grappled over. It remained too remote to be of interest to the weak core areas of Mexico and the nascent Texas republic. Only a few settlements, such as the land grant village of Santa Rosa to the north of the region settled in 1822, existed, and these had little to offer the burgeoning international trade markets. Nor were these little communities guaranteed to survive in the rugged physical and social environment of the times. In 1824, Pablo Montoya received a large grant in the area, Santa Rosa but pressure from the Comanches, raids, theft of stock, intermittent attacks, and the constant fear these endeavors created, forced its abandonment by about 1840. The Mexican government could sign agreements, but it could not protect its citizens from attacks from beyond its borders.

This was the paradox of the Spanish and Mexicans, not only in a rim area such as the Guadalupe Mountains and the Trans-Pecos but also in the core areas of the northern provinces of New Spain and the northernmost states of the Republic of Mexico. The Spanish and Mexicans claimed these lands and exerted varying degrees of influence over the events that occurred there, but they never established firm control. Their institutions existed, but never genuinely coalesced. Their numbers remained small and a range of factors, from the distances necessary to supply these places to externalities such as the waves of Apachean and Comanche peoples who descended upon the region, prevented the establishment of a core colony or a solid Mexican state. The remote north was within the reach, but beyond the grasp of the Spanish and the Mexicans, assuring that the American arrival — with its attendant sources of capital, better trade goods, and easier access to markets — would be first appealing, next a threat, and finally an irresistible force.

The Guadalupe Mountains and Trans-Pecos region remained marginal throughout the Spanish and Mexican period. Its desert-like conditions and especially the lack of water made it unattractive except as a place to pass through on the way to the sedentary pueblos of northern New Mexico. The people who lived there were hard for the few Spanish to control for any stretch of time and even more difficult to compel cooperation. When the region appeared in Spanish consciousness at all, it was a hostile place populated by hostile people, varieties of Apaches culminating in the Mescaleros. It could not even be harnessed as an area of peripheral defense of the interests of New Spain in the manner of northern New Mexican communities such as Abiquiu, created in the eighteenth century and populated with *genizaros*, detribalized Indians, as a target to satiate Ute, Comanche, and Navajo raiders before they reached the core of colonial New Mexico. Nor could the Mexicans bring anything more to bear on the region. The Mexican government practiced a kind of appeasement inherited from late in the Spanish era; instead of the gifts of the Spanish, the Mescaleros and others received the reaffirmation of treaties, likely fully aware that Mexican officials had little choice in the matter. The Mexican government lacked the resources to change realities and had no incentives to address problems beyond the spine that led north to Santa Fe and the Rio Arriba. The harsh deserts and forbidding mountains east of El Paso were sufficient protection for the denizens of a weak core state.

By the end of Mexican era, the Guadalupe Mountains and the Trans-Pecos region had become

the staging ground that they would remain until industrial technologies such as the railroad and irrigation systems entered the region. The vectors of Spanish, Mexican, and Texican expansion avoided or bypassed the region; it had little to offer people who judged the value of land by the depth of its grasses, the height of its trees, and its access to water. After they ascertained that Northern New Spain lacked significant material advantages, the only interest the Spanish had in the region was as a buffer zone. The sparse desert and waterless flats served to protect a core that governments could not afford to guard with soldiers. Pre-industrial core areas barely attempted and could not sustain the development of the region without the surpluses of industrialization and its technological accouterments.

Before 1845, all kinds of people passed through the region, most stopping only temporarily. Since near the end of the Archaic period, the constellation of people, their practices and the environment had not lined up to make any but the river valleys suitable for sedentary habitation. The people of the area remained what they had been throughout most of human history: nomads who depended on a seasonal bounty from an array of places to survive, thrive, and continue. With its attributes invisible to pre-industrial Europeans and their New World counterparts, the region remained what it had been for most of human history: a place through which to pass, where the people who traversed it were fortunate to find water, game or other foodstuffs. The Guadalupe Mountains, the Trans-Pecos, and their surroundings remained a periphery.

Chapter 3: The American Appearance

As the United States envisioned its future, the complicated mosaic of European and Latin American claims and Native American presence west of the Mississippi River attracted the attention of the new and powerful republic to the north and east of the Guadalupe Mountains and the trans-Pecos region. This new nation, possessors by purchase of everything north of the Adams-Onís treaty line along the Red, Sabine, and Arkansas rivers, had to find a way to hold this vast land it had barely begun to explore. Mexican independence in 1821 quashed Spanish claims, and the French had become a mere memory in the aftermath of the 1803 sale of Louisiana. Among European powers, only the British remained to contest American expansionist desires. Mexico, the successor to New Spain, lacked the resources to hold its northern possessions against the encroachment of American citizens acting in loose concert with their government's desires. Slowly, Tejanos and Nuevo Mexicanos — the Spanish-speaking peoples of Texas and New Mexico — were seduced by first the trade goods and then the ideas of this republic that promised liberty and prosperity resulting from individual efforts. After the Texas Revolution in 1835 and the Republic of Texas' annexation by the United States ten years later, Americans enjoyed much more than an intellectual and commercial toehold in the former New Spain. Expansionist ideology under the concept of Manifest Destiny — the widely held idea by Euro-Americans that the North American continent belonged to the United States and should be conquered as soon as possible — insisted on more. In a war begun in 1846 on a pretext and to which a broad range of luminaries objected, including Illinois state legislator Abraham Lincoln and the writer Henry David Thoreau, the United States seized an enormous portion of northern Mexico. The Mexican War and its aftermath filled out the physical limits of the southern boundaries of the United States. America then began efforts to eliminate the last European power, the British, still entrenched in the Pacific Northwest, out of its self-defined area of interest. The young nation invented a mission for itself and intended to carry it out, no matter what other countries believed or tried to do to stop this young expansionist upstart.¹

¹ Robert W. Johansen, *From the Halls of Montezuma*, ; Weber, *The Spanish Frontier in North America*, 271-301, insightfully describes this process in the Spanish departure from Florida and the American Southeast; William H. Goetzmann, *Exploration and Empire: The Explorer and the Scientist in the Winning of the American West* (NY: Alfred A. Knopf, 1966), 231-64, describes the causes and consequences of the Mexican War.

After the Treaty of Guadalupe Hidalgo in 1848, when Mexico formally ceded its holdings north of El Paso and the Rio Grande to the United States, American officials contemplated the lands the war bestowed upon them. The so-called bloodless conquest of New Mexico in 1846 — when Brigadier General Stephen Watts Kearny boldly promised the people of Santa Fe that he would keep at bay the Navajos, who long preyed on the weak colony and province — had given way to violence in the Taos Revolt of 1847. There Gov. Charles Bent and a number of Anglos died at the hands of a combined Pueblo Indian and Hispano force. Despite the commerce on the Santa Fe Trail that linked St. Louis and Santa Fe with the Mexican city of Chihuahua and promoted international trade, American national interests in New Mexico were a great deal more ideological than economic. While California offered the prospect of wealth even before the 1848 gold strike at Sutter's Mill, New Mexico was as peripheral to the American republic as it was to New Spain or Mexico. Kearny saw himself as a liberator, and the Hispano elite, the *ricos*, concurred. For more than a generation, the Santa Fe Trail trade enriched them and they were loath to give up wealth and their connections with the north to support the idea of Mexican nationalism and the weak governments that Mexico spawned.² Although the Americans had no obvious economic need for New Mexico beyond existing trade in 1848, its acquisition fit the American pattern begun with the Louisiana Purchase: acquire lands and then discern what purpose they might have.

New Mexico was a periphery in the United States; the Guadalupe Mountains and the trans-Pecos area were the peripheries of a periphery, a place that few Americans considered when they forced Mexico to sign over much of its northern lands. This was no surprise; neither Mexico nor the Republic of Texas had any use for this remote region. This desert never figured in Mexican or Texican plans, except when Mescaleros or other peoples in the vicinity threatened order in the region's core areas. Nor did Americans see any obvious use for the region except to pass through it. El Capitan, the visible peak of Guadalupe Mountains, served as a place people could use to find their geographic bearings, but in any practical sense the region lacked importance. Insufficient water, barely arable soil even in the river valleys, tremendous heat and aridity, and the lack of known minerals — excepting salt, which enjoyed only little market value — left the region neglected in the most classical of colonial forms.

Significant American interest in the region began in the middle of the nineteenth century. After the Treaty of Guadalupe Hidalgo, a parade of U.S. Army expeditions, railroad surveys, and boundary surveys began. These efforts were of a piece with the earlier surveys of John C. Frémont and U.S. Army Corps of Topographical Engineers, which beginning in the 1830s searched for railroad routes through the West, including areas claimed but not settled by Mexico. Official American representatives, whose task it was to assess information, define boundaries, and otherwise locate the areas in question within the world view of the expanding United States, comprised a vanguard. As did Lewis and Clark and every other American explorer who preceded them, these Southwest explorers fully expected to

² Andrés Réseñdez, "Caught Between Profit and Ritual: (Ph.D. diss., University of Chicago, 1997); Douglas C. Comer, *Ritual Ground: Bent's Old Fort, World Formation, and the Annexation of the Southwest* (Berkeley: University of California Press, 1996).

open the way for settlement of the new territories acquired by the United States.

The U.S. Army Corps of Topographical Engineers led the way in the process. From its beginnings in 1838, this division enjoyed a mission all its own, the obligation to record accurately as many of the features of the American West, within and outside the boundaries of the United States at that moment, as its officers could and to provide the documentation to support settlement and even military endeavors. This included well-traveled roads and trails, mountain peaks, river-basin valleys, and anything else that the contingent of no more than thirty-six men at any one time observed. Compared with the rest of the U.S. Army and even its Corps of Engineers, this mission was unique. Of all the branches of the service, the Topographical Engineers shared a great deal more with espionage units than did other military forces. As if they were spies, the Topographical Engineers specialized in reconnaissance and the knowledge that stemmed from it.³ Scientist and explorer both, these engineers epitomized the spirit of the intellectual transformation from Romanticism to Empiricism that joined with western expansion and eventually crested late in the nineteenth century and in the first five decades of the twentieth century. Most experienced awe at the sublime and romantic features they recorded just as they began to measure and quantify them, to know them in the terms of emerging empirical science.

Throughout the late 1840s and 1850s, Americans sought to determine what they had won from Mexico in the recent war, a process made imperative by the California Gold Rush. Their military explorers defined the land around them in largely utilitarian terms. Potential routes for a railroad to the California coast stood first among their objectives, followed by the need for overland routes for migrants to California and the Pacific Coast. A number of the important possible paths passed through the trans-Pecos region. These surveyors collected a corpus of knowledge that informed future American decisions in an area that only an ideology such as Manifest Destiny could make valuable to nineteenth-century people. In an age when most people depended on wood for their shelters and heat and even regarded trees as an indicator of the fertility of land, this region was terribly lacking.⁴ The problems that beset the Spanish and the Mexicans — lack of water, limited arable lands, and the inability to transform these fundamental qualities — also hampered the Americans. They too regarded the area as only a place through which to pass.

They acquired that knowledge from experience, from a range of travelers and surveys, from officials and individuals, and from the reports of military officers who traversed the region. Most familiar with the new acquisitions from Mexico knew the Guadalupe Mountains and the trans-Pecos were a semiarid to arid plain, cut by occasional rivers and equally few streams; these observers lacked any specific knowledge of mineral resources or other potential bounty. They knew that the Spanish and Mexicans had never successfully explored for anything of economic consequence. Transportation routes

³ Goetzmann, *Army Exploration in the American West*, 4-5.

⁴ John Perlin, *A Forest Journey*: (Cambridge, MA: Harvard University Press, 1990, ; Hal Rothman, "The Indians, Deer, and Wolves Seem Here to Have Things Their Own Way: Settlement and Environment in McLean County, Illinois, 1820-1850," (unpublished paper, possession of the author).

provided the one genuine purpose for exploring the area; to link the heart of Texas with the nation's new western territories required roads or railbeds through as much as one thousand miles of open land, large areas of which remained under Comanche Indian control well into the 1870s. Explorers took great personal risk, even when they traveled with armed military escort, and such considerations for survival affected their thinking when they discussed any options they perceived.

The first American expedition across the area closely followed the signing of the treaty of Guadalupe Hidalgo. In 1848, Maj. Robert S. Neighbors, the federal Indian agent in Texas who had served in the same office for the Republic of Texas, and Colonel John S. "Rip" Ford, a former physician and politician who became a Texas Ranger hero during the Mexican War, headed a semi-official expedition that sought a route to El Paso from central Texas. They paralleled the route of an early 1849 Topographical Engineers' survey from Central Texas to the El Paso region, which traveled west well south of the Guadalupe Mountains and just north of the Davis Mountains. Neighbors and Ford followed a more northerly route. They left Austin, followed the Upper Colorado River, and crossed over to Brady's Creek, a tributary of the San Saba River. From there they continued west along the Concho River to its mouth, cut across the Pecos River through Horsehead Crossing and went straight west to the Rio Grande at El Paso. On their return, they crossed through the Guadalupe Mountains to the Pecos and retraced the route back to Austin from there. The party discovered a possible railroad route to accompany the road they sought on the way back; the railroad route they found viable passed within miles of the limestone Carlsbad formation.⁵

The most surprising aspect about the Neighbors and Ford survey in the fiercely individualistic state of Texas was the cooperation it inspired between local, state, and federal authorities. Although no representative of the Corps of Topographical Engineers accompanied Neighbors and Ford, the information from the survey enjoyed wide currency, and at least in exploration, developed a spirit of cooperation that joined disparate entities more typically at odds. In effect, Texans looked at the information as the basis of a road route, while federal officials saw in the same reports the start of a southern transcontinental railroad, but neither found the situation objectionable. In 1850, with the ideology of Manifest Destiny and federal resources behind it, Lieutenant F.T. Bryan of the Corps of Topographical Engineers resurveyed both the Neighbors-Ford route and the more southerly one previously explored.⁶

The early surveys piqued greater curiosity about the ways to reach this new part of the United

⁵ Goetzmann, *Army Exploration in the American West*, 229-31; T. R. Fehrenbach, *Lone Star: A History of Texas and the Texans* (NY: McMillan, 1968), 375-77; Goetzmann, *Exploration and Empire*, 273; for an interesting look at the indirect consequences of the Neighbors expedition, see Thomas S. Edrington, "Military Influence on the Texas-New Mexico Boundary settlement," *New Mexico Historical Review*, 59 4 (October 1984), 371-94.

⁶ Max Meisel, *A Bibliography of American Natural History* (NY: The Premier Publishing Co., 1924-1929); Goetzmann, *Army Exploration in the American West 1803-1863*, 231-34; Goetzmann, *Exploration and Empire*, 273; United States, *Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* (Washington: A.O.P. Nicholson, Printer, 1855-1860).

States. Mexico's great failing in its northern lands had been a failure to establish reliable communication and transportation to and from its outposts. The Americans had no intention of repeating this dramatic Mexican shortcoming. They moved quickly to initiate and secure their own routes, rapidly binding the newly acquired territories more tightly to the American core than they had ever experienced with its Mexican predecessor. This process had a twofold effect: it illustrated the power of the Americans, while at the same time it inspired resentment in the people of New Mexico at the transformation of nationality, language, and power that followed the end of the Mexican War.

The first major military expedition through the Guadalupe Mountains and the trans-Pecos region solidified these contradictory sentiments as it mapped with more detail possible routes across the southern plains. Dispatched in 1849 by Colonel John James Abert, the head of the Corps of Topographical Engineers and a vaunted explorer in his own right, Captain Randolph Barnes Marcy headed a force comprising two companies of his Fifth Infantry regiment, one company of the First Dragoons, and Lieutenant James Hervey Simpson of the Topographical Engineers. Just beginning a distinguished career in exploration, Marcy sought a pathway for a transcontinental railroad as well as an overland migration route. In 1849, he began a journey that left Fort Smith, Arkansas, and followed the merchant Josiah Gregg's Canadian River Trail of 1839 into New Mexico. There the expedition turned toward Santa Fe. Simpson's command remained to explore areas to the west of the Rio Grande as Marcy headed back to Fort Smith. The return took him south from Santa Fe, along the Rio Grande to El Paso. Marcy then turned east, traversed the Guadalupe Mountains, and headed down the Pecos River on his way to Big Spring, a favorite stopping point for the Comanche, located in modern Texas. From there, the expedition continued east to Fort Washita on the Red River. The work of Marcy and Simpson confirmed the viability both of an overland road to El Paso and an accompanying rail route. Despite an encounter with the Kiowa Indians in which one of his men was killed and the continued presence of the Comanches, Marcy himself favored his return route through the Guadalupes and across the edge of the *llano* to Big Spring as the easiest southern way to El Paso as well as the best possible rail route to California.⁷

As Marcy surveyed the region, commissioners from the United States and Mexico debated the question of the new, post-Mexican War boundary between the two countries. Complicated by the Gold Rush in California and national political machinations, the effort proceeded slowly, but in 1850 work on the east end of boundary began in earnest. For this endeavor, a new boundary commissioner, John Russell Bartlett of Providence, Rhode Island, was selected. A bookstore owner with an armchair interest in exploration, Bartlett was a political appointee who lacked the skills and experience necessary for surveying. His most important qualification for the task had little to do with exploration; for years he had been a partner in a bookstore in the Astor Hotel in New York, frequented by such luminaries as an

⁷ Robert Royal Russel, *Improvements of Communication with the Pacific Coast as an Issue in American Politics, 1783-1864* (NY: Torch Press, 1948): 8-25; Edward Wallace, *The Great Reconnaissance: Soldiers, Artists, and Scientists on the Frontier, 1848-1862* (Boston: Little-Brown, 1955); Goetzmann, *Army Exploration in the American West 1803-1863*, 213-17; Goetzmann, *Exploration and Empire*, 271-72.

aged Albert Gallatin, the Swiss-born American financier and statesman; John Lloyd Stephens, an attorney with a passion for antiquities who revealed the Maya to the modern world; Henry Schoolcraft, an early proto-ethnologist of Native Americans; and the journalist and proto-archaeologist Ephraim G. Squier. With Gallatin, Bartlett founded the American Ethnological Society, similar in its goals to the American Antiquarian Society. The bookshop in the Astor Hotel held a certain cachet among mid-nineteenth-century intellectuals. Edgar Allan Poe was even known to visit the shop, for the company was excellent and the opportunity for stimulating conversation and new ideas unmatched.⁸

Bartlett believed the knowledge this experience provided prepared him for the work of a boundary commissioner, but talking about ethnology and crossing 1,000 miles of desert were entirely different endeavors. Bartlett set out for Texas in spring 1850 with a large, well-equipped contingent that included a detachment of Topographical Engineers, a number of civilian surveyors, fifty mechanics, field scientists sponsored by various professional societies, personal friends and relatives, and a small navy to transport the troops. Numerous calamities befell the expedition from the moment it left New York Harbor. Murders occurred along the way; consistent episodes of drunkenness by officials as well as civilian teamsters almost destroyed the mission; at least one near-mutiny occurred; and insubordination became rife. On August 3, 1850, the main contingent left on the steamer *Galveston*; Bartlett and the accompanying dignitaries departed more than one week later on a different ship. Before they reached the Lone Star State, the men on the *Galveston* engaged in behavior any gentleman such as Bartlett would have scorned. Stopping at Key West, Lieutenant Isaac G. Strain, the naval officer who accompanied the expedition, led the men ashore with predictable results. When they returned to the ship, Strain felt compelled to have two men bound and locked in their cabins and a third thrown overboard. Only the intervention of the chief Topographical Engineer, Brevet Lieutenant Colonel John McClellan, saved the men from severe discipline. When the *Galveston* docked in New Orleans, tension grew. By the time the party started for San Antonio, little discipline remained. A little more than one month later, the party arrived in San Antonio. The trouble continued; a teamster killed a San Antonio resident and Bartlett paid the family a one-hundred dollar indemnity. One teamster murdered another and fled. The trouble continued on the way to El Paso. Bartlett left ahead of the main group by the Upper Road in an effort to reach El Paso to meet the Mexican commissioner on the appointed day. The main contingent followed, but soon one of McClellan's officers shot the wagon master, who subsequently died of his wounds. While a jury deliberated the officer's fate, the man committed suicide; soon after, the jury acquitted him on the grounds of self-defense. Strain, himself known for drunkenness, left the expedition to return to Washington, D.C., to file charges against McClellan. Bartlett concurred, asking McClellan to resign; The colonel responded by demanding a court martial and charging that Bartlett's brother, George, transported illegal goods with the expedition and then sold them to the military at exorbitant prices. McClellan also charged the quartermaster for the expedition with engaging

⁸ Goetzmann, *Exploration and Empire*, 271-72; C. W. Ceram, *The First American: A Story of the North American Archaeology* (NY: Harcourt, Brace, Jovanovich, 1971), 201-03; C. W. Ceram, *Gods, Graves, and Scholars: The Story of Archaeology* (NY: Alfred A. Knopf, 1951), 337-53.

in the same activities. As a result, McClellan followed Strain, neither returning to the expedition.⁹

Bartlett clearly could not lead as diverse and contentious a group as the boundary survey expedition. His choices of compatriots for the trip, mostly friends, relatives, and hangers-on, initiated many of the problems. They often behaved frivolously, neither showing nor inspiring respect, and by example undermining the discipline that military officers sought to maintain among their troops. Bartlett's unwillingness to travel with the men and behave as their leader certainly created a vacuum that every officer on the expedition tried to fill. Nor was there any sense of purpose among the members of the expedition; Bartlett's own dilatory leadership style assured that. Combined with the difficult conditions of such work and an entirely ordinary contingent of soldiers and civilians, the situation showed all the traits of a disaster waiting to happen. Problems continued even after the expedition reached El Paso. Bartlett fired a number of teamsters, some of whom went on a drunken rampage and killed Edward Clarke, the son of Bartlett's political sponsor, U.S. Senator John Clarke of Rhode Island. Bartlett's commission dispensed military justice, hanging four of the men, but the expedition remained disorganized, unruly, demoralized, and inefficient.¹⁰

As Bartlett traversed west Texas on his way to El Paso to meet with the Mexican boundary commissioner, the region's topography tantalized his literary side. When Bartlett first approached the Guadalupe Mountains, he saw before him "the bold head" of "this most remarkable landmark, rising as it does far above all other objects, and terminating abruptly about three thousand feet above the surrounding plain." After almost 1,000 miles of desert and scrub land, the Guadalupe Mountains seemed majestic in comparison, of a piece with the Romantic spirit of the age and somehow divorced from the empiricism beginning to take shape in American science and literature. "No sunrise at sea or from a mountain's summit could equal the grandeur that which we now beheld," Bartlett admiringly wrote in his journal, "when the first rays struck the snow-clad mountain which reared its lofty head before us. The projecting cliffs of white and orange stood out in bold relief against the azure sky, while the crevices and gorges, filled with snow, showed their inequalities with a wonderful distinctness. At the same time the beams of sun playing on the snow produced the most brilliant and ever-changing iris hues. No painter's art could reproduce, or colors imitate, these gorgeous prismatic tints."¹¹ Bartlett's first view of the Guadalupe Mountains defined it for Americans. His colorful descriptions set the tone for the subsequent understanding of this great uplifted reef.

The new commissioner also managed to botch the political ramifications of the complicated negotiations with the Mexican boundary representative, General Pedro García Condé. Under orders to

⁹ Goetzmann, *Army Exploration in the American West 1803-1863*, 169-73; Goetzmann, *Exploration and Empire*, 257-62.

¹⁰ Goetzmann, *Army Exploration in the American West 1803-1863*, 172-73; Goetzmann, *Exploration and Empire*, 271.

¹¹ John Russell Bartlett, *Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua* V 1 (NY: D. Appleton & Company, 1854), 117-18.

be conciliatory toward the Mexican government, Bartlett did not push the American advantage in any determined way. He noted the map used by the Treaty of Guadalupe Hidalgo commissioners was inaccurate, locating the Rio Grande two degrees of longitude west of its actual location and placing El Paso, the crucial point in the 1847 map, about thirty miles too far to the north of its actual location. Following this map left both the Mesilla Valley in southern New Mexico and the Santa Rita area in western New Mexico under Mexican control. Professional and personal disputes continued to flourish; A.B. Gray, the surveyor, refused to accept the longitude-latitude line to which Bartlett and Condé agreed, arguing instead for a measurement from the “town of Paso” as designated in the treaty instead of the inaccurate longitude and latitude measures that Bartlett accepted. Gray’s interpretation placed the U.S.-Mexico border farther to the south than the Bartlett-Condé line. In subsequent years, the question of the boundary line escalated into a major political dispute in the United States that placed expansionist southern Democrats on one side and the crumbling Whig party on the other. Only the signing of the Gadsden Treaty on December 30, 1853, resolved the problem. Under its terms, the United States agreed to purchase the disputed territory, a rectangular-shaped tract of more than 29,640 square miles in southern Arizona and New Mexico. Many regarded the Gadsden Purchase as a poorly disguised effort to keep the option of a southern transcontinental railway open.¹²

The question of the southern rail line melded closely into the dominant issue of the 1850s, the crisis over slavery that eventually redefined the nation as a union instead of a loosely affiliated collection of states. Beginning with the Missouri Compromise of 1820, slavery had been forbidden in territories north and west of the northern boundary of Missouri. This compromise salved the conscience of slavery opponents who could say they had begun to halt the expansion of the peculiar institution. At the same time it gave advocates room for hope; they added new territory into which to expand to maintain relative parity in congressional representation. The fragile arrangement held until the Mexican War, which brought a number of new territories into the nation. Nor could the fiction of parity in the admission of free and slave states be maintained after the Treaty of Guadalupe Hidalgo. Abolitionists who believed that the Missouri Compromise of 1820 doomed slavery to eventual death were horrified to assess the prospects for slavery in the new territories; from a southern perspective, the territories seemed rife for slavery. In 1846, U.S. Representative David Wilmot, a first-term congressman from Pennsylvania, added an amendment to appropriation legislation that barred slavery from any of the territories conquered from Mexico. The House passed the bill with the proviso attached, exacerbating tensions between North and South; the U.S. Senate failed to act on it. In the Senate, John C. Calhoun, the patriarch of southern politicians, crafted an eloquent constitutional defense of slavery as a property rights issue, but Wilmot’s effort energized the north and accelerated the polarization that dominated national politics.

It also created the context in which a southern political revival took place in the making of law

¹² Goetzmann, *Army Exploration in the American West 1803-1863*, 173-97; Goetzmann, *Exploration and Empire*, 261-64.

and in its implementation in the courts. The Compromise of 1850, another in the long chain of political waffling designed to keep the issues concerning slavery from destroying the nation, made concessions to free-state ideology. It offered the settlers in any territory the right to decide if the resulting state would accept slavery or repudiate it, an idea called “popular sovereignty” that had gained considerable credence since it attracted national attention in 1847-48, as Lewis Cass, a possible presidential candidate, conceived the idea, and the Free Soil Party formed to support it. This encouraged southerners, for it meant that any territory west of the Mississippi River, not just those south of the northern boundary of Missouri, might be enticed into accepting slavery.

The Missouri Compromise effectively assured parallel admission of slave and free states, guaranteeing that well into the 1850s the South remained powerful in Congress. Southerners had a long history of national leadership. From George Washington and Thomas Jefferson to Andrew Jackson and John C. Calhoun, this region enjoyed effective spokesmen who wielded great power in the nation’s capital. When Manifest Destiny became the era’s dominant ideological current, southerners poised themselves to take advantage of the opportunity presented them. Jefferson Davis, President Franklin K. Pierce’s Secretary of War from 1853-1857 who later went on to the presidency of the Confederate States of America, played an instrumental role in assuring that southern routes for a transcontinental railroad were explored as thoroughly as northern options. From Davis’s prescient perspective, it was a rare opportunity to use technology to extend and enhance the paternalistic, cruel, and anachronistic system of cash-crop slavery that prevailed along the southern and southeastern coasts.

Davis’s astute maneuvering guaranteed that the Corps of Topographical Engineers surveys would include the exploration of both northern and southern routes. Among the primary purposes for most military exploration in the West was the location of a rail route to the Pacific Ocean. The topography to the south was flatter than to the north, making a southern route an easier engineering feat. The entire path, from the *llano* of west Texas to the coastal mountains outside San Diego, had to be carefully surveyed to assess its suitability. The siting of any route across the West spoke volumes about the nation’s future; a political rationale for such a decision clearly could not suffice in the polarized climate of the 1850s. Neither the Abolitionists nor southerners enjoyed a clear advantage. Northern businessmen also had a stake in the situation. A northern rail route offered them greater potential profits than a southern counterpart. In the face of what North or South perceived as economic injustice, either Abolitionists or southerners could disrupt the workings of the nation in their own section of the country. Whatever decision resulted required greater authority than politics could grant it; it had to be regarded as a nonpartisan and even moral decision. The stakes for Topographical Engineers and other explorers, regardless of their political views, were enormous.

Within this complicated national context, in 1854 another military officer, the erratic Brevet Captain John Pope of the Corps of Topographical Engineers, led a survey along the southern route. Pope had been the most unprofessional and least distinguished member of the Topographical Engineers. In 1838, he reported on a reconnaissance of Minnesota; a superior noted that Pope’s map was the same as that of Joseph N. Nicollet, a French scientist who immigrated to the United States, and sponsored by Pierre Chouteau of the American Fur Company, surveyed the upper Mississippi River in

1838. Pope also received a reprimand for his conduct on the Northeastern Boundary Survey. Senior officers, such as Lieutenant Colonel Joseph E. Johnston, declined the pleasure of Pope's company in their commands. Yet the captain had a flare; once he appeared in St. Louis after last being seen in Santa Fe, inaccurately claiming to have discovered a new Santa Fe Trail. Pope became something of a pariah within the Corps, but the prevailing view of him in the military seemed not to disturb him in the least.¹³

The grandiose and vain Pope served as a perfect foil for Jefferson Davis's strategy. The Secretary of War — a southerner who identified strongly with the culture of the South and the idea of state's rights and who felt the need to support the region's expansion but opposed secession — had to rely on the Corps of Topographical Engineers for survey work. Only two members of the corps, Pope and Davis's lifelong friend and West Point classmate, Major William H. Emory, came from slave-holding states. Subject to charges of political maneuvering in favor of the peculiar institution of slavery, Davis tried to seem impartial in his selection of officers. His 1853 and 1854 decisions appeared unbiased, but the choice of the unreliable Pope belied the question of impartiality. Any northern observer could assess Davis's choices and accuse the secretary of favoring a southern route not only as because of the regional affiliation of the officers who carried out his orders, but also by the omission of any survey in search of a more central railroad pass through the Rocky Mountains.¹⁴

Davis held power firmly and wielded it carefully; usually he succeeded with finesse. In the case of the Pope survey, Davis kept control by his choice of officer. In October 1853, the Secretary of War ordered Pope to survey a route that began at Doña Ana, New Mexico, and continued east across the *Llano Estacado* to Preston on the Red River. This route followed the Thirty-second Parallel, the southernmost alternative rail route considered by the federal government, and it clearly best suited the goals of the South. At the same time, Davis ignored the requests of northerners and expansionists for survey work on northern routes, and instead commissioned another survey east from San Diego to demonstrate the transcontinental viability of the southern route. Pope and a large party left Doña Ana early in February 1854 with two objectives: to find a pass through the Guadalupe Mountains and to explore the *llano*. Previous work made both objectives easily attainable. Marcy had the needs of a railroad in mind when he followed the Neighbors and Ford route along the Thirty-second Parallel, as did Lieutenant Nathaniel Michler of the Corps of Topographical Engineers in 1849 and 1850, when he followed part of Marcy's return path. Pope easily found a route through the Guadalupe Mountains, discovering several caves, attempted to sink wells near the Pecos River, and continued to the *llano*.¹⁵ In a fashion typical of his career, Pope never ventured far onto the unfamiliar *llano*, but enthusiastically

¹³ Goetzmann, *Army Exploration in the American West 1803-1863*, 69-73, 129, 246-47; Goetzmann, *Exploration and Empire*, 274; Brevet Captain John Pope, *Report of Exploration for Route for the Pacific Railroad near the Thirty-Second Parallel of North Latitude from the Red River to the Rio Grande* (Washington, DC: 1854).

¹⁴ Goetzmann, *Army Exploration in the American West 1803-1863*, 277-79; Goetzmann, *Exploration and Empire*, 291-92.

¹⁵ Pope, *Report of Exploration*.

attested to its suitability afterwards. He found the region desirable for a rail route, ticking off its numerous advantages; sinking artesian wells in the *llano* as a source of water ranked prominently among Pope's assertions. He even announced that a southern rail route could capture most of the trade in northern Mexico for the United States. Pope also described the voyage through the Guadalupe Mountains as an "easy passage," although in need of clearing and roadwork in some places; Bartlett opined differently in 1850 when he saw the narrow pass through the mountains, part of it "on a bare rocky shelf not wide enough for two wagons to pass." Pope put out the kind of effort Davis had every reason to expect and reported in the fallacious manner entirely consistent with his previous behavior. The Secretary of War added another weapon to his arsenal — a vain, disingenuous and easily manipulated officer.¹⁶

Sectional issues and the route of a transcontinental railroad remained intertwined until the secession of the southern states in 1861 dashed any chance of railroad construction along the Thirty-second Parallel. The question of exploration and national goals had become charged by the insistence on regional, state, and local prerogatives that ultimately brought the nation to civil war. Against this backdrop, the Guadalupe Mountains and the trans-Pecos region remained inconsequential. The great schemes of the moment and the textured complications of the 1850s all viewed the region as a path to somewhere else. Where Indians adapted their cultures to survive in the region, an entire generation of Euro-American visionaries and officers, explicating the dominant and interconnected ideas of their time — exploration and sectional crisis — thought little of the trans-Pecos area as they passed through it, seeing it only as avenue to other places and goals. As did most of their predecessors, surveyors left only their intentions in the Guadalupe Mountains and the trans-Pecos region and marks on a map to denote where they crossed.

During the contentious 1850s, the best way to preserve a free-state or slave-state advantage became to create on-the-ground realities in the disputed territories. With the doctrine of popular sovereignty determining the expansion of slavery even more comprehensively after the Kansas-Nebraska Act of 1854 enshrined the idea of local choice, the concepts of Manifest Destiny and individual advantage from national expansion drew ever closer. Anglo-American settlement of the region, based on the expansionist doctrine of Manifest Destiny, the vast numbers of Americans and their growing economic power, and the technological systems of a nascent industrial society, followed the surveyors, initiating a range of changes that allowed for the development of communities in the region. Reverberations from the activities of the people who passed through the Guadalupe Mountains and the trans-Pecos region characterized this transformation process. Roads and trails first defined the area for Americans; emigrants to the California Gold Rush followed Marcy's return route as they headed west and a generation of migrants followed.

In the general headiness about expansion, civilian entrepreneurs also capitalized on the efforts of

¹⁶ Goetzmann, *Army Exploration in the American West 1803-1863*, 233-37, 291-93; Goetzmann, *Exploration and Empire*, 289-90; Pope, *Report of Exploration*, 7; Bartlett, *Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua* V 1, 120-21.

federal explorers to provide services to the burgeoning nation. The Gold Rush that began in 1848 prompted a wave of settlement, and the United States became a nation with two widely separated coasts. The connections between both coasts remained tenuous; supplies, goods, mail, and people had to travel from the eastern United States around the Cape of Good Hope at South America's southern tip before they completed the long and arduous trip to San Francisco. If they were bold and foolhardy travelers could cross the fever-ridden Isthmus of Panama instead, risking fatal fever and other maladies in an effort to shorten the typically six-month trip around the Cape of Good Hope. The truly brave could attempt a cross-country ordeal, but this last choice was favored by migrants rather than commercial shippers. Anyone who made the trip from St. Louis across the plains and over the Sierra or Cascade mountains was likely to prefer another way to return. No matter what route anyone chose to California, the journey remained an ordeal until the 1870s.

After California's statehood, delivery of the U.S. mail by a system organized during the 1840s became a priority. Statehood meant an entire range of official mail had to reach the new state in a timely manner; the six-month voyage around South America assured that news and necessary documents were outdated long before they arrived in San Francisco or Sacramento. With everything from land claims, new legislation, court decisions and news about the sectional crisis essential to the development of legal, social, and economic practices in the new state, federal officials sought a better means to send important documents to the most distant part of the nation. One of the most certain ways to facilitate this goal was to let a contract for overland delivery of the U.S. mail.

A fifty-six-year-old eastern entrepreneur named John Butterfield responded to this offer with an ambitious plan to follow the route of the military surveys from Missouri to San Diego. Certain he would secure the bid, Butterfield built a network of people and secured almost unlimited financing before receiving the contract. He promised a chain of stations within the first year of operation, and with this pledge, on September 16, 1857 he won the federal contract for the semiweekly cross-continental mail delivery at the astronomical sum of \$600,000 per year for six years. *The New York Times* thundered at what it saw as squandering of the taxpayer's money, but President James Buchanan wired his congratulations to Butterfield, calling the contract a "glorious triumph for civilization." Buchanan understood the implications of the overland mail service as a means to facilitate the nation's growth.¹⁷

For Butterfield, acquiring the contract was the easiest of the many tasks he faced; building the route and all necessary facilities proved far more difficult. By 1858, crews had begun the construction of stations along the survey route, and the entrepreneur's planned Butterfield Overland Mail Trail took shape. From Tipton, Missouri, near St. Louis, to San Francisco — an almost 3,000-mile journey — Butterfield's stages were scheduled to make the trip in twenty-three days and twenty-three hours; an excellent run could reach the coast in a little more than twenty-two days. El Paso was the halfway point; one visitor remarked on being forty-three minutes behind the coach running the opposite direction at the

¹⁷ Robert N. Mullin, *Stagecoach Pioneers of the Southwest* (El Paso: Texas Western Press, 1983) Southwestern Studies Monograph No. 71, 31-33.

one-square-block Butterfield station in Franklin, near El Paso. With speed at a premium, the arduous trips taxed the spirits of drivers, animals, and the occasional passengers.¹⁸

Visitors did not find the options for food, sleeping, or other accommodations much to their liking. Meals cost a dollar, but all that anyone typically received for that sum was pork, crackers, and coffee without milk or sugar. “Breakfast was served on the bottom of a candle box,” one visitor noted, “and such as sat down were perched on inverted pails or nature’s chair.” Tin cups held the coffee they drank. Breakfasts consisting of, in the words of one traveler, “coffee, tough beef, and butterless shortcake,” were typical.¹⁹ Sleeping accommodations were as bad and facilities for washing simply did not exist. These intrepid passengers could make the trip, but the experience would rarely be described as pleasant.

The Butterfield Overland Stage was a fragile operation from its inception, entirely dependant on a seemingly never-ending line of stations. Spaced no more than 113 miles apart anywhere in the country — the longest distance being that between the Pecos River and the first stop to its west — stations held supplies and replacement men and animals. More than 250 leather-braced swaying coaches, called “celerity wagons” by their makers and ordered especially for the Butterfield company; traveled the route. These coaches had smaller wheels for a lower center of gravity so they would be less likely to overturn on rugged western roads and trails. Canvas replaced wood on the tops and sides to reduce the weight of the Butterfield coaches. More than 800 workers — stagecoach drivers to cooks — tended the line. Passengers paid the exorbitant fare of two hundred dollars going westward; because the mass of passengers were headed in that direction, travelers paid less coming back east. The fare equaled nearly the annual salary of a schoolteacher. Most travelers found the journey excruciating. In 1858, newspaperman Waterman L. Ormsby II of the *New York Herald*, who regarded the opening of Butterfield’s mail route as one of the greatest events of the age, found the *Llano Estacado*, the staked plains, the most grueling portion of the trip. “As far as the eye could see,” he wrote, “there were decayed and decaying bones of animals and sometimes men.” Nor did the Guadalupe Mountains impress Ormsby. “Guadalupe Peak loomed up before us all day in the most aggravating manner,” the journalist noted. “It fairly seemed to be further off the more we traveled, so that I almost gave up in despair of hopes of reaching it.” Ormsby’s sentiment echoed that of John Russell Bartlett nearly a decade before. Bartlett and his party “expected to reach it within a couple of hours of leaving camp,” the commissioner wrote in 1850. “But hour after hour, we drove directly towards it without seeming to approach nearer; and finally after journeying ten hours, the mountain seemed to be as distant as it was in the morning.” Fortunately for Butterfield, the mountain’s curious visual qualities posed little problem for his stage line. Passengers were an afterthought for the Butterfield Overland Mail; the primary objective

¹⁸ Robert Hine, *The American West: An Interpretive History* (Boston: Little, Brown and Company, 1973), 140-41; Mullin, *Stagecoach Pioneers of the Southwest*, 32.

¹⁹ Mullin, *Stagecoach Pioneers of the Southwest*, 35; quotes from Walter Lang, ed., *The First Overland Mail, Butterfield Trail, St. Louis to San Francisco, 1858-1861* (East Aurora, NY: no publisher, 1940).

was to carry the mail.²⁰

The Overland Stage Company built a series of stations from east to west in the trans-Pecos following the southern route along the Thirty-second Parallel after reaching the Pecos River at Horsehead Crossing to southeast of the Guadalupe Mountains. The first of these, 113 miles to the west and called Pope's Crossing after the obstreperous officer, was located almost exactly on the modern Texas-New Mexico border at the Pecos River. Farther west were the Delaware Springs and Independence Springs stops. The stagecoaches then began the difficult climb up the escarpment that led to the Guadalupe Mountains. At the base of El Capitan, along the route surveyed first by Neighbors and Ford and then by Marcy, the company established a "home station," a small stop where coaches changed drivers and passengers could lay over, at the Pinery in Pine Spring Canyon.²¹

The Pinery station was typical of these intermediate stops on the stage line. They were designed to allow the stage to replace tired horse or mule teams with fresh animals; at the more important of these stops, veterinarians, wheelwrights, and blacksmiths were sometimes stationed. When the route was threatened by Indian people who resented its passage through their land, armed guards deployed to the stations. The siting of such stations stemmed from utilitarian objectives. Water, especially in the dry Southwest, timber, and pasture determined location. The Pinery station offered a characteristic example of a stop; it sat adjacent to an acequia, an irrigation canal, from nearby Pine Spring, and a rock-walled corral for stock surrounded it. The Pinery featured a fifty-seven-foot long by forty-one wide stone fort with walls that reached eleven feet in height, the fourth of ten such structures that the company built west of the head of the Concho River in Texas. The meadows around it provided forage for stock. Three rooms, a blacksmith's shop, and a water tank graced the interior of the fort, assuring that the people there had a place to sleep, the necessary facilities for essential repairs and water. When Ormsby arrived on September 28, 1858, only the corral had been constructed; station master Henry Ramstein and his crew lived in tents. By November, the station was completed. While it was not a place of plenty, people who stopped there could survive. Ormsby received only venison pie and baked beans to eat when he arrived, but as the station became established, a wider variety of food became available. For between forty cents and a dollar, shortcakes, antelope, biscuits, "jerked" beef, and coffee were available. The nearby mountains abounded with game, and the people who stayed there made some small efforts at agriculture. Generally, the station depended almost exclusively on the passing stagecoaches for news, supplies, and other necessities for the survival. The only other consistent Anglo-American presence in the region remained the military, which like the Mescalero peoples, often came to utilize the springs in the limestone formations at the base of the mountains, graze their animals in its vicinity, and hunt the

²⁰ Lyle H. Wright and Josephine M. Bynum, eds., L. Waterman Ormsby, *The Butterfield Overland Mail* (San Marino, CA: The Henry Huntington Library, 1954); Mrs. Charles Gregory, "Old Tales Told by Intrepid Writer," *El Paso Times* September 27, 1958, 11; Mullin, *Stagecoach Pioneers of the Southwest*, 33; Bartlett, *Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua* V 1, 118.

²¹ Mullin, *Stagecoach Pioneers of the Southwest*, 37.

natural life that depended on these sources of water in an otherwise arid part of the world.²²

The Pinery Station was a short-lived affair. Despite plotting a route that went west from the Pinery to stations at Crow Springs, Cornudas Tanks, Alamo Springs, and the ever-essential Hueco Tanks, a source of water that drew all kinds of people, within a year of the opening of the Pinery the company decided to use a different route across the trans-Pecos region. The distance between sources of water — especially west of the Pinery, where more than 100 miles of barren land, in places replete with salt or gypsum and rarely showing any evidence of water, made the trek difficult under the best of conditions — prompted the decision. The altitude of the Pinery also contributed to the decision; tired animals near the end of a more than fifty-mile trek became exhausted during the 2,000-foot climb to the Pinery. With the U.S. Postmaster General's approval, the company replaced the route with one that went south from Horsehead Crossing along a more southerly route guarded by Fort Stockton and Fort Davis soldiers.²³

Although the Butterfield company ceased to use the Pinery Station, it remained a useful stopover in the vicinity of the Guadalupe Mountains. Soldiers continued to use the station as a rest stop, and nearby dugout shelter houses that served as accommodations testified to this continued role. Others used the site — travelers through the region, squatters, freighters and drovers, and occasional renegades escaping pursuers; all stayed there intermittently.²⁴

The Butterfield Overland Mail fared only marginally better than its Pinery Station. The Thirty-second Parallel route was a southern concoction, a product of the nimble Jefferson Davis's political maneuvering. When Isaac Stevens, Washington Territory governor, promoted a far northern railway across the upper tier of American states and territories that appeared foolhardy in comparison with the already viable southern route, Davis seemed a certain victor. After Abraham Lincoln won the presidency in 1860 and South Carolina led the southern states into secession, all that maneuvering, and all the dreams based on it, collapsed. The possible southern rail route passed through what would become the Confederacy, and ceased to be viable as a way to transport freight. Nor did northern politicians care to accommodate southern desires in the aftermath of secession. The clouding secession question compromised Butterfield's position, and a combination of financial setbacks and a power play by rivals removed him from the presidency of the company he founded in 1859. He resigned rather than sit on the board of directors of the company he founded, and in 1860, experienced a physical breakdown followed by a devastating stroke. Subsequent company leadership was neither as supple nor as determined as the founder, and the firm's prospects faded. A central route to the California,

²² Roscoe P. Conkling and Margaret B. Conkling, *The Butterfield Overland Mail, 1857-1869* V 1 (Glendale, CA: The Arthur H. Clark Company, 1947), 390-92; Dava McGahee Davy, "The Pinery Station," (Carlsbad, New Mexico: Carlsbad Caverns Natural History Association, no date), 1.

²³ Mullin, *Stagecoach Pioneers of the Southwest*, 41; Hine, *The American West*, 140.

²⁴ Conkling and Conkling, *The Butterfield Overland Mail, 1857-1869*, 1 393.

already organized by another freighting company — Russell, Majors, and Waddell, and a faster mail service called the Pony Express became the focuses of cross-country shipping. A move by Butterfield's successor to establish a parallel central route did little to elevate the company's fortunes. During the Civil War, the Butterfield operation transferred to the central route, where it made arrangements with the American Express Company and the United States Express Company, both of which initially operated as subcontractors to the Central Overland Mail Company, as the Butterfield operation was renamed. The Central Overland Mail Company found itself in financial difficulty in 1862, and its contract was transferred to Ben Holladay. After the war, the Wells Fargo Express Company took over the operation and became a success.²⁵

Within a very few years of the first runs on the Butterfield line, other Anglos came to the trans-Pecos area, where they developed economic endeavors. Of these, the cattle industry became most significant, creating not only an economy but a mythology in the immediate post-Civil War era that indelibly stamped an imprint on American society. Both the mythos and the cows that supported the cattle industry emanated from Texas, from which cattle had been driven to market before the Civil War. New Orleans and Memphis were typical destinations; Sedalia, Missouri, became the terminus of a major cattle drive during the Civil War. After the war, as the railroads slowly made their way west, Kansas towns such as Abilene, Newton, Wichita, and Dodge City made their names as the places where railroad track met the cattle trails, where the lean beef that came from west Texas met the conveyance that would bring it to dinner tables of industrial America. Texas offered a logical location to increase a herd. Typically mild winters made the region an outstanding place to breed cattle, with mothers delivering as many as twelve calves in a lifetime; the dry climate and sparse flora worked against Texas as a pasture. Forage became increasingly scarce as more and more animals grazed the same open western landscapes — the ones with the best grass that were closest to water.²⁶

As the Texas plains, the *llano*, became first crowded and then packed with cattle, the most savvy and seasoned of the cattlemen anticipated the problems and sought other pastures. Among them were cattle entrepreneurs Charles Goodnight and his friend, Oliver Loving, easily the most experienced cattlemen in Texas. They drove cattle as far as Chicago before the war, took a one-thousand head herd to the goldfields outside Denver in 1860, and after the Civil War broke out, retained their allegiance to Texas by supplying the Confederacy with beef throughout the conflict. After the Civil War, the two took their herds west and north, away from the Indian territory (present-day Oklahoma) and railheads in Kansas, toward Colorado and eventually Wyoming and Montana. During the summer season, the grasses in the north grew tall and cattle feasted. Following the Butterfield trail through Texas to the Pecos River, the Goodnight-Loving herds turned north and followed the water into New Mexico and to Fort Sumner, constructed in 1862 in the southeastern part of the state. Initially the pair then took their

²⁵ Mullin, *Stagecoach Pioneers of the Southwest*, 42; Hide, *The American West*, 141.

²⁶ Frederick Merk, *History of the Westward Movement* (NY: Alfred A. Knopf, 1978), 457-61; Mari Sandoz, *The Cattlemen: From the Rio Grande Across the Far Marias* (NY: Hastings House, 1958), 85-95.

cattle around the Raton Mountains and up the plains at the base of the Front Range of the Rocky Mountains to the mining boomtown of Denver. There, in the fast-growing city, Loving sold this first herd to John W. Iliff, who supplied the Union Pacific Railroad construction crews with beef as he built a massive ranch in northeastern Colorado. Goodnight returned to Texas and brought another 1,200 head. When he made winter camp about forty miles from Fort Sumner, Loving joined him and the two began to sell cattle to government contractors at the fort and in Santa Fe, New Mexico. During the following years they went farther north, along the Bozeman Trail into Wyoming and Montana. Loving died at Fort Sumner as a result of a battle with Comanches along the Pecos River in 1867, but the following year, Iliff purchased \$40,000 worth of cattle from Goodnight at a ranch the Texan founded in Colorado. Goodnight and his partner pioneered a new cattle route, one that avoided the tensions between cattle drovers and Indians in the Indian Territory and the drovers and farmers in Kansas and brought beef to the transport cars of the Union Pacific that took the cattle to Chicago for slaughter.²⁷

The Goodnight-Loving Trail, as most knew this developing route to the north, became one of the most famous of the cattle trails. The trail followed the eastern rim of the trans-Pecos region. During the late 1860s and 1870s, the wide paths of marks left by cattle hooves became a common sight throughout much of the area as the animals headed north. Again, the dominant currents of the time passed by the Guadalupe Mountains and trans-Pecos region, resulting in no permanent settlement to add to the few who already lived along the Pecos. The area offered too little to people who sought home and profit elsewhere, who looked across the Pecos River and saw wasteland. Their interests left only millions of hoofprints along the trail, only the empty and sometimes fouled water holes from which the cattle drank and the torn flora and absent fauna that denoted the passage of large herds of animals not native to the area.

Loving's death at the hands of the Comanches highlighted another of the situations that endangered cattlemen, cross-country travelers, and the few settlers alike. East of El Paso remained Mescalero Apache country into the 1850s, while Comanches dominated the *llano* and large areas of central Texas. Settlers left the core areas of Texas at their own risk well into the 1860s; Comanches were so powerful and dominant that the advance of the Anglo-Americans into west Texas cost, in an unusual kind of tabulation, an average of seventeen Anglo-American lives per mile, a total that worked out to more than 200 people per year who were killed or captured by Comanches over a thirty-five-year period. Texas author laureate John Graves characterized the meeting between Comanches and Texans as a situation in which "each breed found the other rough, acquisitive, and treacherous," and nothing in their mutual experience altered the opinion of either. Others have regarded the Comanche-Texan conflict as reflecting opposite sides of a similar cultural attitude. Both were proud, arrogant, vain, and persuaded they were moral and correct as they tried to eliminate the other. Only one had the American Army on its side.²⁸

²⁷ Merk, *History of the Westward Movement*, 457-61; Sandoz, *The Cattlemen*, 95-99; David Dary, *Cowboy Culture: A Saga of Five Centuries* (NY: Alfred A. Knopf, 1981), 122-26.

²⁸ John Graves, *Goodbye to a River* (NY: Alfred A. Knopf, 1960), 49-50; Fehrenbach, *Lone Star*, 529-30.

The westward expansion of Texans required protection, and the U.S. Army entered the region to play its typically prominent role in such endeavors. The surveys of the early 1850s noted the conditions in the region; directly or indirectly, all pointed out the need to address the question of the Comanches, and in the trans-Pecos, the Mescaleros. Both Indian peoples regarded the contested areas as their homeland and resented the intrusion of Anglo-American soldiers, settlers, and travelers. Accustomed to the mobile life of hunters and gatherers, experienced at raiding sedentary peoples of any race, the Mescaleros and the Comanches held their ground. In the construction of the world of Manifest Destiny, and in the terms of nineteenth-century Anglo-America, both stood in the way of “progress” and “civilization.”

By the early 1860s, the impact of an American presence became obvious in the trans-Pecos. It initiated a process that changed the existing balance of power in a way that Mescaleros and other southern plains and mountain peoples, accustomed to dealing with the Spanish and Mexicans, did not anticipate. American commerce traversed the region, leaving a few people in the region who possessed specific goals that related to the larger national economy. Americans shaped the vectors of a different future, one in which Mescaleros and other Indian peoples played a diminishing role and American settlers, still largely missing from the scene at the end of the 1850s, grew in importance. The catalyst of that transformation was the U.S. Army, directed from Washington, D.C., and unlike its Mexican and Spanish predecessors, capable of executing the orders given it. The Army was assigned several basic missions. First came securing the passage of Americans through the area, a goal intermittently achieved by the beginning of the Civil War. Following that objective, the military was supposed to prevent Indian raiding into Mexico, and finally, clear away Indian peoples in the region, both to terminate the incessant raiding that continued unabated and to make way for settlement. At the time, few considered the region as any great prize. Its resources seemed too sparse, its climate too hot and dry for most preindustrial Americans.

By the early 1860s, the Americans could claim more than a decade of experience in this border region, but still had little to show for it. While the stagecoaches went through and El Paso and other communities along the Rio Grande benefitted from the American ascension to power, the control the United States could establish was only as wide as the wagon tracks across the *llano* and through the mountains that its soldiers could defend; many times dominance was even more narrow. Despite Manifest Destiny, despite an ethos of conquest by settlement, initial American vectors in the region mirrored those of previous inhabitants. Even these newest conquerors passed through, following the easiest routes to the places they deemed more hospitable — those with water for crops and deep grasses for grazing. These sojourners had little initial impact on the region, adding little but expansion or widening of existing trails and a few forlorn and often withering homesteads and forts. Americans generally followed older trails and water courses in the trans-Pecos, a testament to the harsh and forbidding character of the region and the difficulty of securing it without the direct connections of railroads to the core of industrial America. Without trains, the American advantage, usually so pronounced in the post-Civil War West, was muted.

The appearance of the Americans and the surveys they initiated accomplished other tasks. They

made the nation conscious of the trans-Pecos region, as much for its qualities as a conquered place as for any mineral, agricultural, or ranching attributes it might have. Manifest Destiny and a need for cross-continental links explained American interest in the trans-Pecos region, and the surveys marked an American zone along the Rio Grande and out onto the *Llano Estacado* of west Texas. Establishing on-the-ground control of this region became a complicated endeavor that encompassed the better part of the twenty years that followed the beginning of the Civil War.

Chapter 4: The Military Seeks Control

During the 1850s, the Southern Plains illustrated a pattern of contact and conflict that had become common throughout the western United States. Indian peoples who dominated areas before the establishment of American rule and the significant influx of Anglo-Americans found their preeminence in jeopardy. On the Central Plains, a combination of environmental change and inadvertent overuse of resources by Indian and Anglo alike endangered the riverine environments that sustained Cheyennes and overland travelers alike. Pressure created by use of the river valleys for grazing threatened buffalo herds as early as the 1840s, more than two decades before white buffalo hunters in the employ of railroads and the military began to wipe out these enormous shaggy creatures farther north. On the Northern Plains, along the Bozeman Trail, travelers who disrupted Indian life and broke treaty promises inspired violence between the tribes and soldiers; near Fort Laramie, in 1851, the shooting of a stray cow by an Indian led to the deaths of a number of soldiers and Indians and a permanent rift in relations. The large areas that Native Americans needed to maintain their ways of life assured that conflicts would continue. In the Southwest, the Mescaleros and Comanches faced the same encroachment, the same limiting of range and options, and their experience reflected those of other peoples of their time on the plains and in the West.¹

The American military, as did its explorers and surveyors, became the enforcers of the doctrine of Manifest Destiny. During the 1850s, the Army first asserted its jurisdiction in the remote portion of the Mexican cession known as the Guadalupe Mountains and the trans-Pecos region. Mescaleros vexed incoming Americans well before the military developed a consistent presence in the area. When Alexander Doniphan, a powerful, just, and self-righteous Missouri lawyer whose military experience before the Mexican War included an expedition to the Navajo, led his troops to El Paso on the route of his subsequent march through Mexico that ended with his participation in the conquest of Chihuahua, Mescaleros ran off a herd of horses and oxen. After a

¹ Elliott West, *The Way to the West: Essays on the Central Plains* (Albuquerque: University of New Mexico Press, 1995), 1-84; Robert Utley, *The Lance and the Shield: The Life and Times of Sitting Bull* (NY: Henry Holt, 1993); James E. Sherow, "The Workings of the Geodialectic: High Plains Indians and Their Horses in the Region of the Arkansas River Valley, 1800-1870," *Environmental History Review* 16 2 (Spring 1992).

seventy-mile pursuit, soldiers found the oxen — twenty of them speared — but the Mescaleros and the valued horses had disappeared. As Anglo-Americans headed west in the rush to the California goldfields, the Mescaleros found them easy prey; so were stagecoaches, which were typically alone and defended only by a driver and any willing passengers. By the 1850s, the Mescaleros developed a habit of harrying Americans who passed through their region.²

The low-level conflicts and the ongoing tensions between Indians and the Americans it precipitated presaged the first U.S. military forays into the mountains that harbored the Apache peoples, with logistic support provided by Fort Bliss, one of a series of posts built starting in 1848 in what is now El Paso. The Army would eventually build chains of forts along the Rio Grande and the San Antonio-El Paso road to guard against depredations and support military expeditions. In 1850, Lieutenant Enoch Steen led an Army detachment from Doña Ana to the Organ Mountains, home of the Sierra Blanca Apaches, to the northwest of Guadalupe Mountains. The Sierra Blancas rarely participated in the raiding to their south; they simply wanted to be left alone. In this instance, they bluffed the soldiers, claiming to have a war party of more than 2,000 awaiting the military; in reality 200 or 300 warriors were all that this small band could muster. Steen's detachment turned back.³

This initial Army foray only delayed a certain conflict. Increased American presence in the region and the growing numbers of Apachean peoples limited the economic resources available in the Guadalupe Mountains and on both sides of the Pecos River. American activities curtailed the range of these peoples, and game became scarce as the presence of the various trails through the region shortened the distance the Mescaleros could travel without conflict. When the American government promised Mexico in the Treaty of Guadalupe Hidalgo that it would halt Indian raiding south of the border, another source of Apachean sustenance became first contested and later disappeared. All of this placed the Apache tribes of the southern plains in a difficult position. The Comanches to the east kept them pinned across the Pecos, the mountains no longer provided enough game for sustenance, and American soldiers sought to prevent them from using Mexico as a source of food. In 1850, a number of Mescalero and Lipan leaders told Brevet Captain A.W. Bowman of the Quartermaster Corps that the Indians “must steal from somebody; and if you will not permit us to rob the Mexicans, we must steal

² Sonnichsen, *The Mescalero Apache*, 57-58; Goetzmann, *Army Exploration in the American West, 1803-1863*, 157; Bernard DeVoto, *1846: The Year of Decision* (Boston: Little, Brown and Company, 1943), 13, 83-84, 391-94; Merk, *History of the Westward Movement*, 368; an excellent map of the war with Mexico can be found in Mark C. Carnes and John A. Garraty with Patrick Williams, *Mapping America's Past: A Historical Atlas* (NY: Henry Holt, 1996), 98.

³ Robert G. Ferris, ed. *Soldier and Brave: Historic Places Associated with Indian Affairs and the Indian Wars in the Trans-Mississippi West*. Washington, D.C.: United States Department of the Interior, National Park Service, 1971: 318; Sonnichsen, *The Mescalero Apaches*, 58-59; “Record of Engagements with Hostile Indians in Texas 1868 to 1882,” *West Texas Historical Association Year Book*, IX (1933): 101, 105, 114, 117.

from you or fight you.”⁴ The clarity of this geopolitical understanding presented only ominous long-term overtones. As early as mid-century, the Mescaleros and Lipans recognized that the choices they faced worsened their circumstances.

The Mescaleros soon sought to forge a separate arrangement with the Americans. In September 1850, an entire band of Mescaleros from the Davis and Guadalupe Mountains, led by Simon Manuel and Simon Porode, appeared at the community of San Elizario to see what the newly entrenched Americans had to offer. Treated well by American authorities in both San Elizario and El Paso, the Mescaleros promised to return for treaty talks. No record of their return exists.⁵ From the Mescaleros’ perspective, the Americans were only slightly different from the Mexicans. Mescalero people could presume that the Americans needed their cooperation as much as did the Mexicans and Spanish before, and the arrangement of treaties, at which both sides occasionally winked and then surreptitiously violated — Americans in general to acquire land, Mescaleros to find food and stores to survive — served as general guideline for interactions. In this, the Mescaleros misunderstood their new neighbors and future adversaries. The Americans were not the Mexicans; the newcomers understood their role in the region in entirely new ways.

The Mescaleros could also see that the newcomers were different. These Americans had many more soldiers and guns than their predecessors, better means of transportation, and less fear of the wide-open hinterlands that had been Mescalero domain. They seemed to embody abundance; big, well-armed men on large horses, eating regularly and wearing warm clothing. To the Americans the Mescaleros appeared decimated but threatening, “more filthy than swine and as precarious and uncertain as the wolf,” in the words of Major Jefferson Van Horne, who led a battalion of the Third Infantry escorting a long train of supply wagons to El Paso in 1850. Under these new circumstances, the Mescaleros recognized their predicament and shied away from contact with the growing number of whites in their region. Only the southernmost groups, in the Davis Mountains, could not resist the dangerous temptations to attack passers-by on the southern route to El Paso.⁶

The military presence became increasingly threatening to the Mescaleros, who sought ways to preserve the limited world left them. The construction of Fort Bliss near El Paso in 1848 signaled the beginning of an escalated Anglo presence. New Mexico Territorial Governor James S. Calhoun, who served as the Indian agent for the territory in the manner of most territorial governors, sought to utilize the Army as a way to secure treaty arrangements. This coercive club offered a forceful reminder; in April 1851, the Jicarilla leader Francisco Chacon

⁴ Sonnichsen, *The Mescalero Apache*, 60-61; quote from *Report of the Secretary of War for 1850*, 295-97.

⁵ Sonnichsen, *The Mescalero Apache*, 62.

⁶ Sonnichsen, *The Mescalero Apache*, 64-65, 82-84.

and two Mescalero leaders, Josecito and Lobo, signed a treaty with Calhoun. The governor sought ways to provide for the people who embraced his offer, albeit out of necessity as much as desire. Ongoing raiding was a threat to order in the New Mexico Territory. Calhoun planned to isolate Mescalero and Jicarilla bands at least 100 miles away from the nearest white settlements. Josecito encouraged his people to try agriculture as an economic strategy, and for a time, the experiment seemed to work. Even after Calhoun's untimely death in 1852, Mescalero leaders kept seeking an arrangement. A party of about thirty Mescaleros visited Santa Fe at the end of June 1852, and the warm reception they received prompted hopes of a solution that would keep violence to a minimum. Positive sentiments on both sides ran high in the summer of 1852.⁷

The fractious nature of relations between Native Americans and incoming soldiers and civilians dashed any hopes of maintaining peaceful coexistence. In retaliation for a military attack on Jicarilla people, some of the tribe's warriors and a band of Utes attacked a stagecoach, killing more than ten passengers, including a Philadelphian who had come west with his wife and baby to be the sutler at Fort Buchanan. The wife and baby were kidnaped and later killed as the soldiers closed in on their Indian captors. This incident became a wedge between Indians and whites, more divisive than typical raiding because of the death of the sutler, an economic asset to the region, and his family. The incident pitted Americans and Mescaleros against each other with the worst expectations and spurred a much harsher policy from the new civilian leader, David Meriwether, who became governor of New Mexico Territory in August 1853. Meriwether believed that the policies preceding his tenure had been too lenient and in 1854, the New Mexico Territory experienced a range of skirmishes and uprisings that seemed a prelude to an all-out war with the eastern Apache peoples.⁸

In the Guadalupe Mountains, the Mescaleros were drawn into some of these forays. Much of the turmoil occurred north of the trans-Pecos region. Mescalero leaders such as Josecito tried to keep their people out of the fighting, but government reports blamed them as well as the newly adversarial Sierra Blanca people. The death toll rose; the road from San Antonio to El Paso ceased to be safe, wagon trains of emigrants to California stopped at Hueco Tanks or Eagle Springs experienced attacks, ranches were raided for stock, and a seemingly endless list of similar encounters made restraint difficult. The Army regarded the area from the White Mountains in New Mexico to the Pecos as hostile; a Mescalero leader named Gómez from the Big Bend region in west Texas routinely raided the El Paso-San Antonio road; and a number of Mescaleros and Lipans had crossed over into Coahuila and Chihuahua and raided the road from there. As 1854 ended, the Mescaleros had been drawn into the conflict their

⁷ Sonnichsen, *The Mescalero Apache*, 65-67, 69; Captain William Banta and J.W. Caldwell, *Twenty-Seven Years on the Texas Frontier* (L.G. Park: Council Hill, Okla.: 1893): 189-201.

⁸ Sonnichsen, *The Mescalero Apache*, 67-69.

leaders tried to avoid as an Indian war brewed on the southern plains.⁹

The deteriorating diplomatic climate showed the fundamental changes that differentiated American sovereignty from that of its predecessors. From the initial Mescalero perspective, all European and Neo-European peoples were the same; they all needed Apachean allies both to assure their control and to provide a buffer against the threat of Comanches, the Utes and the Navajos. U.S. behavior quickly showed that new rules governed these interactions. Instead of offering treaties, the Americans made demands; when Mescalero people acquiesced or were compelled to comply, the Americans made more demands. Worse, the Americans did not honor the treaties made with the Mescaleros. William Carr Lane, governor between Calhoun and Meriwether, reached an agreement with the Mescaleros that promised to provide agricultural implements and help sustain them for four years while they learned to till the soil. The U.S. Senate refused to ratify this treaty, and all the Mescaleros received was a piece of paper that had no practical value. The Americans came to the region in ever-greater numbers, established frequently used routes through Mescalero lands, and in some instances appeared to be settling on lands the Mescaleros saw as their own. The Mescaleros experienced what they regarded as unprovoked violence, not recognizing that American settlers could not or did not care to differentiate among the many native groups that surrounded the Rio Grande. When incidents occurred, whites made no effort to distinguish among Indians; typically, the first ones they saw were deemed guilty of whatever offense preceded the moment.¹⁰ Under these circumstances, Mescaleros felt unjustly persecuted and entitled to revenge. When they took their vengeance, whites felt entitled to their own.

Retaliation took the form of military attack as well as vigilante action. Early surveys of Mescalero land paved the way for military intervention in support of civilian objectives; in January 1854, Lt. Col. Daniel T. Chandler led a force of 150 soldiers into the Sierra Blancas to search for the Mescaleros. Chandler did not find any Mescaleros, but did discover a fine location for a military outpost near the junction of the Rio Bonita and the Rio Ruidoso to the east and north of the Guadalupe Mountains. Later that year, Chandler led a summer campaign against the Mescaleros, holding talks with leaders José, Negrito, Pluma, and a son of the famed leader Gómez. Chandler wanted the Mescaleros to give up those responsible for recent raids, including an attack on Eagle Springs and killings on the El Paso-San Antonio road. The Mescalero leaders said the men responsible were not part of their band but promised to find them and turn them over to the soldiers. This ruse allowed the Mescaleros to leave and they avoided Chandler for the rest of the summer, but the Army's intrusion into their traditional

⁹ Sonnichsen, *The Mescalero Apache*, 69-72; Kelly R. Hays, "General Garland's War: The Mescalero Apache Campaigns, 1854-1855," *New Mexico Historical Review* 67 3 (July 1992), 251-68; Dixie L. Dominguez, "Hueco Tanks: A Vital Resource in Southwestern History," *Password* Vol. 31, No. 3 (Fall 1986): 125.

¹⁰ Hays, "General Garland's War," 254.

territory was one reason for increased Mescalero raiding through 1854.¹¹

The failure of this expedition and another to the north that sought to root out Mescalero people prompted the next round of military action, undertaken by troops from the departments of New Mexico and Texas. Units from Fort Bliss and Fort Davis traveled across the Trans-Pecos early in 1855 in an unsuccessful search. New Mexican forces had better luck. Led by Captain Richard S. Ewell, a baldheaded man with a high voice and bulging eyes who went on to become a lieutenant general in the Confederate army, eighty men from the 1st Dragoons left Fort Thorn on the Rio Grande in southern New Mexico a few days before New Year's Day. Another group, 50 infantry and 29 dragoons from Fort Fillmore in the Mesilla Valley commanded by Captain Henry W. Stanton, received orders to proceed to the Capitan Mountains to rendezvous with Ewell's command. Moving south along the Rio Peñasco, the two commands initially met little opposition, but within one week, Ewell's men were under consistent attack. On January 17, the Mescaleros attacked the soldiers with arrows and bullets. Assuming he was close to Mescalero winter strongholds filled with grain and the other supplies nomadic people kept to help them through the winter, Ewell maintained his march. A battle followed the next day in which Stanton and a small detachment blundered into a trap; he and another soldier paid with their lives before Ewell's men arrived to disperse the Mescaleros. A few days later, Ewell withdrew and headed to Las Lunas. To the north of Ewell, a small military detachment under Lt. Samuel D. Sturgis overtook a raiding party of a dozen Mescaleros in the Manzanos Mountains. Three Indians were killed and four wounded, at the cost of three Dragoons and one civilian injured.¹²

Despite the failure to achieve significant military objectives, these Army expeditions altered the circumstances in which the Mescaleros and the Americans grappled. Before this, the Mescaleros believed that they had some control of the conflict's broad outlines. Generally, they picked the time and place of their raids, successfully avoided pursuit, and easily escaped or retreated into the mountain sanctuaries with little fear of serious pursuit. Chandler, Ewell, Stanton and Sturgis shattered all sense of complacency or superiority the Mescaleros felt. Not only did the Americans penetrate the heart of the Mescalero homeland, they did so in the winter, at the time of year when nomadic peoples were most vulnerable. If soldiers destroyed their stores of food, nothing stood between the Mescaleros and the cruel fate of starving time, when people tried to survive on whatever food they could scrounge from the cold, dry winter world.

Winter raids became a standard American tactic against western Indians, used by Kit Carson against the Navajos in 1863 and by General George Crook against the Lakotas and

¹¹ Hays, "General Garland's War," 258-59.

¹² Hays, "General Garland's War," 261-62; Sonnichsen, *The Mescalero Apaches*, 74-80; Robert M. Utley, *Frontiersmen in Blue: The United States Army and the Indian, 1848-1865* (Lincoln: University of Nebraska Press, 1967): 149-153.

Cheyennes in 1875, 1876, and 1877. Ante- and post-bellum frontier soldiers were hardly crack troops; made up of new immigrants in search of work, those who sought the excitement of military action, and groups despised by mainstream society such as the Irish before the war and African-Americans afterwards, only Civil War veterans, hardened by the effects of war and skillful in their execution of military tactics, changed the post-bellum mix. With the exception of the African-American Ninth and Tenth Cavalry regiments, frontier military units showed little continuity. Winter attacks offered an important avenue to show strength and weaken Native American adversaries. Nomadic western peoples lived in the saddle and often relished warfare as a way for young men to prove their worth within the bounds of their society. Federal troops were volunteers or wartime conscripts, men who typically knew little of the skills battle required and less of what they soon faced on the plains. Military supply lines and the winter assaults they enabled evened the terms of engagement between seasoned Native American warriors and the almost always inexperienced and often dilatory, alcoholic, or barely competent federal troops. In a situation where the stultifying dullness of routine left little to do but drink, when officers whose training did not include the tactics of Indian warfare failed to effectively adapt, lead, or inculcate discipline, and in a time before Congress authorized funds to train soldiers to shoot, the problems of the military seem entirely of a piece with those of the society from which it sprang. The advantage of winter attack by men on grain-fed horses who carried their own feed against people who depended on stored food and natural forage and who lacked experience with winter fighting changed the terms of engagement.¹³

Mescalero retaliation for attacks on Apache people inspired other military responses that showed the vulnerability of all parts of the Mescalero homeland to soldiers' incursions. A band that attacked an Army horse-grazing camp about twenty-five miles east of Los Lunas was pursued by Fort Thorn soldiers to the Guadalupe Mountains, where units from Fort Bliss took up the chase. If any illusions about the protection the mountains provided remained to the Mescaleros, this second penetration shattered them. As the military prepared another attack, Mescalero leaders reported peacefully to their new Indian agent, Dr. Michael Steck, at Fort Thorn, stopping the military raid. Although officers were disappointed, for the moment the continuous skirmishing ended.¹⁴

The Americans offered the bands a tract of land that measured twenty-seven miles wide and stretched from the Pecos River to the mountains adjacent to the newly established Fort Stanton, at the junction of the Rio Ruidoso and the Rio Bonita. The appearance of the

¹³ Robert Utley, *The Lance and the Shield*; Edwin L. Sabin, *Kit Carson Days, 1809-1868: Adventures in the Path of Empire*, rev. ed. (Lincoln: University of Nebraska Press, 1995); R.C. Gordon-McCutchan, *Kit Carson: Indian Fighter or Indian Killer?* (Niwot, Colorado: University Press of Colorado, 1996): .

¹⁴ Hays, "General Garland's War," 262-65; Sonnichsen, *The Mescalero Apaches*, 80-81; Morris E. Opler, "Mescalero Apache," in Alfonso Ortiz, ed., *The Handbook of North American Indians: Southwest V* 10 (Washington, D.C.: Smithsonian Institution, 1983), 421-23;

Mescaleros who accepted the new reservation lands shocked even the most grizzled New Mexicans. Even Governor Meriwether, no friend of the Mescaleros, pitied them. They seemed “in the most destitute condition imaginable,” hardly the warriors who disrupted white segments of the territory and threatened its people, livestock, and communication arteries. The Indians had little food and clothing, weak horses, and no obvious way to survive on or off this newly created reservation. Despite American promises, the bands could count only on limited assistance from the federal government, and ending up being forced to seize food to feed themselves. In some eyes, this was stealing; from other perspectives, survival. In one instance, Lydia Spencer Lane, the wife of a Fort Stanton officer, watched Mescalero men cut up a mule that had died, presumably of disease, at the post and carry off everything but the bones and hooves. “A dead mule is not to be despised,” she mused, “when one is starving.” The next day, the same men were back in search of more food.¹⁵

Hunger became a constant for the reservation Mescaleros, prompting some attempts to leave the reservation and return to the mountains that long sustained them. Until they returned stolen stock — typically only the horses remained; the Mescaleros often ate everything else they took — Steck refused to help them. Some Mescaleros did leave for the mountains. The treaty they signed with Meriwether promised them provisions, but the U.S. Senate refused to ratify it. Promised food arrived intermittently, if at all. More Indians left the reservation. Finally, in November 1856, more than one year after the Mescaleros stopped fighting Americans, Steck relented. He gave them blankets, shirts, knives, tobacco, and provisions and promised them five cows and thirty *fanegas*, a Spanish measure equaling about two and one-half bushels, of corn each full moon as long as they behaved themselves. Earlier he had begun a farming project, embarking on the typically futile white attempt to turn nomadic hunters into agriculturalists. One result of this Indian-white cooperation was that in the minds of Army officers and Indian agents, the reservation Mescaleros became differentiated from the groups in the Sierra Blancas who refused to surrender and continued their raids. The reservation effectively drove a wedge through intra-tribal relations as it changed the Mescalero lifestyle.¹⁶

This stasis persisted as the military presence in southeastern New Mexico and far western Texas grew. Fort Stanton was the culmination of a chain of six forts built near the Mescaleros between 1851 and 1855. Forts Fillmore and Conrad were built in 1851 to control local Apaches and Navajos. Fort Thorn was established in 1853, a year before Fort Craig and Fort Davis, the latter located on the San Antonio-El Paso Road. Named after the officer killed early in 1855, Fort Stanton was intended to maintain Army control over the adjacent

¹⁵ Hays, “General Garland’s War,” 267-68; Sonnichsen, *The Mescalero Apaches*, 82-83; Lawrence Lindsay Mehren, “A History of the Mescalero Apache Reservation, 1869-1881 (MA thesis, University of Arizona, 1968): 15-55; Alfred Thomas, *The Mescalero Apache, 1653-1874*, Apache Indians XI (NY: Garland Publishing, Inc.: 1974).

¹⁶ Hays, “General Garland’s War,” 268; Sonnichsen, *The Mescalero Apaches*, 83-85.

reservation. Mescalero people on the reservation took up farming, but relations between them and the people of the Mesilla Valley deteriorated. Hispano and Anglo ranchers did not like the fact that Indians owned good bottom land with water. Ranchers routinely encroached on Indian land, running cattle without permission and calling for military protection when Indians resisted the trespassing. From pursuers of the Mescaleros, the Army evolved into arbiters of disputes between the Mescaleros and Anglo and Hispano settlers. In one incident in 1858, the Mesilla Guards, a local group that practiced this pattern, were arrested for an attack on a Mescalero camp. Apache retaliation, probably by people from the Gila region to the west of the Rio Grande, took lives; those in the Mesilla Valley blamed nearby Mescaleros, and again the Army had to stand between civilians and the Indian peoples the American government made wards of the nation.¹⁷

The attack on Fort Sumter in Charleston, South Carolina, harbor on April 12, 1861, reverberated throughout the country, even to peripheries such as the Guadalupe Mountains and the trans-Pecos region. Secession split the ranks of the American Army. Many of its West Point-trained officers were southerners who sympathized with the rebellion and chose their home state over the nation. In an era in which state's rights remained a prominent intellectual rationale, such a decision often tore men apart. Many southern officers followed their states into secession, anticipating the dilemma of Robert E. Lee, who despite powerful allegiance to the military and the principles of the nation as well as a strong personal desire to avoid secession, sided with his beloved home state of Virginia. On the peripheries, the impacts of such decisions were even greater. Across the west, 313 officers — about one-third of the total in the U.S. Army — left their commands to serve the Confederacy. If officers at the scattered forts in Mescalero country supported the Confederacy, the federal presence that supplied food to the Indians and quieted conflict quickly disappeared. Officers loyal to the Union began to move the men under their command, who did not have the luxury of choosing sides in the conflict, back east. Some of the officers joined the armies gathering at Fort Leavenworth in Kansas and others were fated to be made prisoners of war in Texas. When secessionist Texans under Lieutenant Colonel John R. Baylor rode west to claim the new Confederate Territory of Arizona, they controlled not only much of the area of the Mexican cession and the Gadsden purchase, but also lands flanking the old Butterfield stage line from San Antonio to Tucson. Baylor was ordered to occupy Fort Bliss in El Paso, abandoned by Union troops, and attack Fort Fillmore near Las Cruces. Even the troops at Fort Stanton by the Mescalero reservation burnt their supplies and on Aug. 2, 1861, left to join other Union forces in Albuquerque. Only troops in northern New Mexico — a small number of Regular Army troops and volunteers raised in New

¹⁷ Ferris, *Soldier and Brave*: 226-227, 318, ; Leonora Barrett, "Transportation, Supplies, and Quarters for the West Texas Frontier Under the Federal Military System 1848-1861." *West Texas Historical Association Year Book V* (June 1929): 97-99; Sonnichsen, *The Mescalero Apache*, 83-88; Opler, "Mescalero Apache," 422.

Mexico, Colorado and California — remained opposed to a Confederate Southwest.¹⁸

For the Mescaleros on the reservation and their relatives in the mountains, the departure of the American troops from Fort Stanton offered a range of options. The Mescaleros clearly experienced a kind of liberation, but also likely felt deprived of the security such arrangements produced. As these hungry people watched the Union troops try to burn supplies, they must have wondered about the white peoples' sense. Confederate arrival produced no breakthroughs. The Confederates were obsessed with the conquest of a greater Southwest and dallying with Indians, reservation or otherwise, held no important position in their world view. Fighting between newly arrived Confederate troops and the Mescaleros began almost as soon as the southerners arrived at the ruins of Fort Stanton.

The new invaders came to New Mexico to drive the Union soldiers out and capture southwest lands for the Confederacy, not to battle Indians. After an ongoing series of skirmishes around Fort Stanton, the Confederates returned to Doña Ana. They departed, leaving the Hispanos who grouped around the fort and stretched to a community called Placitas (which later became the famed Lincoln) scrambling for protection from the strengthened Mescaleros, who capitalized on the absence of the bluecoats to renew old rivalries. Soon after the departure, all the Hispano ranches around the dismantled Fort Stanton were abandoned. Along the old Butterfield route — which Mescaleros from the Guadalupe and Davis Mountains almost severed, at the sheep ranches near Pecos, on the *Jornada del Muerto* — Mescalero raiders again appeared, to attack and claim the bounty of triumph.¹⁹

Abortive Confederate attempts at peace with the Mescaleros failed. A Mescalero leader named Nicolás rode a stagecoach nearly 200 miles to El Paso to meet with the Southerners and promise them peace. He departed on a stage, grabbed a colonel's gun after about twenty miles and disappeared into the brush. Within days, raiding commenced again. Seven soldiers under a lieutenant accompanied by seven civilians sent after the Mescaleros blundered into another trap and all were killed. The Mescalero fortunes rose and their power returned just as the Union blunted the Confederate advance outside Santa Fe at Glorieta Pass in March 1862. As they retreated down the Rio Grande, the disconsolate Confederates had few resources left to expend on the Mescaleros and even less inclination to tangle with them. As federal troops returned to southern New Mexico, they too had to grapple with the Mescaleros thought tamed almost a decade before.²⁰

¹⁸ Ralph E. Twitchell, *Leading Facts of New Mexican History* v 2 (Cedar Rapids, IA: Torch Press, 1911), 363-69; Fehrenbach, *Lone Star*, 367-68; Sonnichsen, *The Mescalero Apache*, 88-91; Alvin M. Josephy, Jr. *The Civil War in the West*. NY: Vintage Books, 1991: 34, 46, 49-50..

¹⁹ Sonnichsen, *The Mescalero Apache*, 91-93; Twitchell, *Leading Facts of New Mexican History* V 2, 429.

²⁰ Sonnichsen, *The Mescalero Apache*, 94-96; Alvin Josephy, *The Civil War in the American West* (Alfred A. Knopf, 1995); Twitchell, *Leading Facts of New Mexico History* V 2, 360-90.

To accomplish this task, the Union military sent Brevet Brigadier General James H. Carleton, a man with extensive experience in the West that dated to the Mexican War era. The thick-haired, heavy-sideburned native of Eastport, Maine, almost fifty in 1862, was still a powerful leader and a conscientious person. First appointed a second lieutenant of the Dragoons in 1839, he was cited for bravery in the Mexican War, led the 1st California Volunteer militia in 1861, and was appointed brigadier general in the U.S. Volunteers a year later. Respected as one of the most competent and dependable American military officers, Carleton was a formidable adversary for Indian people throughout his four-year tenure in New Mexico.²¹

By February 1863 Union forces turned their attention back to the Indian threat. Carleton considered the possibility of another Confederate invasion “so remote as to justify me in employing the troops under my command in chastising the hostile tribes of Indians by which the settled portion of the Territory are surrounded.”²² Against the Mescaleros, Carleton initiated a campaign that typified his leadership: he declared all-out war. Carleton ordered Colonel Christopher “Kit” Carson and five companies of New Mexico Volunteers to find the Mescaleros, kill the armed men, capture the women and children, and destroy stock and foodstuffs. Carleton did not want treaties or agreements; unconditional surrender was his sole military objective. In his first encounter with the Mescaleros, Carson’s volunteers fired upon two leaders, Manuelito and José Largo, who were on their way to Santa Fe to ask for peace. They and a number of their warriors died. Other Army columns were ordered by Colonel J. R. West of the First Infantry California Volunteers, commander of the District of Arizona, to search for Mescaleros; one expedition, led by Capt. N. J. Pishon found nine deserted *rancherías* in the Guadalupe Mountains, but he expressed disappointment at missing the chance for a military engagement. As the relentless military continued the pursuit, the Mescaleros recognized that their moment of freedom had ended. They surrendered to Carson, who was sympathetic to Indian people, rather than to the few Regular Army officers who remained on duty in New Mexico. On Feb. 17, 1863 one hundred Mescaleros arrived at Fort Stanton; the group left March 5 for the reservation Carleton created in 1862 at the Bosque Redondo, near Fort Sumner. Later, other Mescalero leaders went to Santa Fe, and asked for peace talks. More than 400 were sent to Bosque Redondo.²³

²¹ Twitchell, *Leading Facts of New Mexican History* V 2, 428-29; Sonnichsen, *The Mescalero Apache*, 96-97.

²² Carleton to Brig. Gen. Lorenzo Thomas, Adjutant-General, U. S. Army, February 1, 1863, in Robert N. Scott, ed., et al. *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, 70 vols in 127 parts (Washington, D.C.: U.S. Government Printing Office, 1880-1901), series I, vol. 15, serial 21, p. 670, hereafter cited as *O.R.*

²³ Sonnichsen, *The Mescalero Apache*, 99-104; Twitchell, *Leading Facts of New Mexican History* V 2, 429; Andy Gregg, *Drums of Yesterday: The Forts of New Mexico* (Santa Fe: The Press of the Territorian, 1968): 17-22; West to Capt. Ben C. Cutler, Assistant Adjutant General, November 9, 1862, in Scott, et al, *O.R.*,

Bosque Redondo typified the problems of reservation life. The Mescaleros had been nomadic throughout their history. At the Bosque Redondo, they were confined to a limited area with resources near the Pecos River, effectively caged in by New Mexicans who raised cattle around them. However, there were few living options for the Mescaleros. "We are worn out," their leader Cadete told Carleton in Santa Fe, "we have no more heart, we have no provisions, no means to live." Their survival depended on Carleton. If the Mescaleros followed his rules, they were fed. If individuals fled, Carleton's men hunted them down. There were few choices. By summer 1863, the Mescaleros at Bosque Redondo had become agriculturalists by the force of Carleton's will.²⁴

The reservation became a location of much tension for Mescalero people, nearby settlers, and the military. The enforced agricultural lifestyle did little to improve the Mescalero situation. The problems of the reservation became aggravated when Carson and his men successfully carried out Carleton's orders and returned from Navajo country with numerous Navajos forced to walk to their exile at the Bosque Redondo. Eventually, 9,000 Navajos were sent to Bosque Redondo, overwhelming the roughly 400 Mescaleros who lived there, and expropriating resources that the Mescaleros regarded as their own. Mescalero people soon had to travel almost twenty miles to find wood for cooking. Farming attempts also failed. After a successful crop in 1863, a series of disasters — including blight, hail, drought, and flooding — demolished the weak agricultural underpinnings of reservation life. The Mescaleros also began to suffer from diseases that they avoided while roaming the plains; their concentration eliminated the protection from prolonged epidemics that mobility provided. Also, Navajos and Mescaleros fought constantly, in organized and spontaneous ways, but the Mescaleros were thoroughly outnumbered. Under this pressure, Mescalero customs suffered and the social structure of tribal life began to deteriorate.²⁵

Despite the seeming harshness in his military posture, Carleton also cared for his wards in a typical nineteenth-century fashion. He wanted the reservation to succeed, and on numerous occasions went out of his way to provide food, blankets, and other necessities. Carleton also advocated fair treatment, particularly of the Navajos, whom he favored above the Mescaleros. He insisted that the American government provided an institutional structure suitable to transforming Indian people into cultural Americans who believed in individual enterprise and private property. Carleton stood hard against the nomadic ways of Indian life, and in a sentiment

series I, volume L/1, serial 106, p. 212.

²⁴ Sonnichsen, *The Mescalero Apache*, 102-04; Twitchell, *Leading Facts of New Mexican History* V 2, 429.

²⁵ Sonnichsen, *The Mescalero Apache*, 104-05; Twitchell, *Leading Facts of New Mexican History* V 2, 429; Opler, "Mescalero Apache," 422; L.R. Bailey, *The Long Walk: A History of the Navajo Wars, 1846-68* (Los Angeles: Westernlore Press, 1964): 164-180.

that presaged the *noblesse oblige* of a later time, equally firm against the abandonment of Indians by their conquerors. In his concern, he emerged as a champion of Indian rights from a moral perspective as others became obsessed only with the act of conquest and any economic advantages that might stem from it.

Carleton clashed with Dr. Michael Steck, who became Indian superintendent of New Mexico in 1863. Steck never liked the Bosque Redondo reservation, and it became even less appealing with almost 10,000 Navajo there as well. He decided that since the Army established this untenable arrangement, the Army could pay for its upkeep. Carleton, the military commander of the territory during the war, could not understand what he regarded as Steck's intransigence, and the Mescaleros suffered as a result of their conflict. The two clashed repeatedly, and letters from each to the nation's capital screamed with insults and derogatory comments about the other. Despite the letters, neither Steck nor the Mescalero agent, Lorenzo Labadie, convinced Carleton of the validity of their point of view. Only a public outcry against Carleton's autocratic rule of the territory in 1865 impinged upon his empire.²⁶

These distractions deprived Carleton of the near-total control he previously enjoyed, and without his iron will, conditions at the reservation became even more untenable for the Mescaleros. Beginning in about 1864, Mescalero people began to drift away from the reservation. Ojo Blanca, a respected leader, left first; forty-two of his followers joined him. Although Labadie convinced him to return a few months later, a subsequent census revealed that more than 900 Mescaleros and other Apaches were missing. Even though Carleton cracked down on the Indians, creating a more complicated system of passports and passes and renewing his old order that any male Indian found off the reservation could be shot on sight, the escapes continued. A few left here, more there. Soon after, raiding of Anglo-American and Hispano settlements began again; Mescalero people took sheep, cattle, and horses, emptied a wagon train, and even ambushed a party of soldiers in the Sacramento Mountains as they accumulated goods and supplies. Southeastern New Mexico had changed, others such as the Navajos staked claims to the region, and the Mescaleros found that they faced competition for their territory. A battle between Mescalero and Navajo men near Alamogordo left one Navajo dead and the Mescaleros minus 500 sheep and thirteen burros they had taken, proving that life off the reservation could be as hard as that on it for the Mescaleros.²⁷

As a result, the U.S. Congress appropriated \$100,000 for the upkeep of the reservation and its people, but the project became another in the ongoing series of deceptive tactics that worked against both the Mescaleros and Navajos at Bosque Redondo. The money was allocated to buy food, clothing, and supplies. As occurred in many other instances, white suppliers and government buyers defrauded the Indians. When the supplies arrived at Bosque

²⁶ Sonnichsen, *The Mescalero Apache*, 112-15; Twitchell, *The Leading Facts of New Mexican History* V 2, 434-37.

²⁷ Sonnichsen, *The Mescalero Apache*, 115-17; Opler, "Mescalero Apache," 422.

Redondo just prior to Christmas, most were useless. Crates were full of ruined and rusty implements, broken plows and shovels, poor materials, and even shoddy blankets. One physician, Dr. George Gwyther, who wrote about this incident almost a decade later, remembered: "I took one pair of [blankets] to the scales, and by accurate weight found they weighed 4½ pounds; and a single government blanket, such as is issued to troops, weighs 5½ pounds, and costs \$4.50, the reader can judge the honesty of an invoice which charged \$22 per pair for such articles." Although the scandal brought federal officials to New Mexico, the Mescaleros' lot again failed to improve. Some tribal leaders counseled staying, but as cold weather set in late in the fall of 1865, every Mescalero who could walk rose one night and left the reservation. A few days later, the weak, the ill, and the old also disappeared. Only nine Mescaleros, old and infirm, remained at Bosque Redondo. After more than three years of horrible living conditions, the Mescaleros returned to their mountains, determined to stay there. Even as it became more dangerous from soldiers, settlers, and other Indians alike, the Mescalero way of life offered an alternative to brutal dependency on whites, destructive idleness, and slow starvation.²⁸

As New Mexico Territory lacked the economic or military resources necessary to bring the Mescaleros back to the reservation and federal troops had other assignments, the groups resumed their old ways. After the reservation system failed them, the Mescaleros scattered to confuse pursuers, again breaking into their historically based groupings across different mountain ranges. The people who once inhabited the Guadalupe Mountains seemed to have returned, as did those in the Sierra Blanca, the Davis Mountains, and the Sacramento Mountains. Others headed for the *Llano Estacado*, controlled by their old enemy, the Comanches; a few even joined Comanche war parties as Indians understood that their rivalries with whites superseded their own historical animosity. Mescaleros also developed good relations with the Lipan Apaches, whom they joined on buffalo hunts and in defensive and occasionally offensive action against the Comanches and other Indian groups, and continued raiding Anglo-American, Hispano, and Indian stock and crops. In one instance, the Mescaleros seized 1,165 head from cattle entrepreneur John Chisum. Their period of freedom lasted a number of years, as postwar chaos and attention elsewhere — especially to the reconstruction of the South — made Indian issues in New Mexico Territory a peripheral issue.²⁹

Although from a Mescalero perspective this era offered the most promise since the days before American soldiers pursued them, in reality, the situation was a brief interlude before U.S. institutions and technologies applied their full force on the region. As the 1860s drew to a close, Anglo-American commercial endeavors also approached the area. Goodnight and Loving carved their trail along the Pecos River, Chisum and other cattle barons coveted more of the

²⁸ Sonnichsen, *The Mescalero Apache*, 117-29; Opler, "The Mescalero Apache," 422.

²⁹ Morris E. Opler and Catherine H. Opler, "Mescalero Apache History in the Southwest," *New Mexico Historical Review* 25 1 (January 1950), 20-21.

sparse range for their cows, and changes in administrative patterns that favored the cattle trade created a context that soon pressured Mescalero hideouts. As they eyed the increasing number of fat cattle in the valleys below, the Mescaleros could not know that their freedom would soon face even greater outside pressure. In 1869, the U.S. Army again assumed responsibility for the Indians of the New Mexico Territory. Despite the overwhelming advantages held by the military, more than a decade passed before the Army took command of the region, establishing temporary subposts at places such as Pine Springs and Manzanita Springs.³⁰

Military responsibility meant more active pursuit of the Mescaleros. With the 1869 appointment of Lieutenant A.G. Hennisee to Fort Stanton, a proximate military presence not seen in the region since the early 1860s resurfaced. Hennisee's men scoured the region for the Mescaleros, although largely without success. The Mescaleros recognized the power of a proximate military that could pursue, demoralize, and eventually capture them; Carson's earlier pursuit proved as much. The tribes also feared a return to the Bosque Redondo. As a result, the Mescaleros assiduously avoided both Fort Stanton and Hennisee, preferring to stay hidden in their mountains except when raiding. Despite the best efforts of the Army, Mescalero forays continued unabated.³¹

The Guadalupe Mountains again became a center of Mescalero activity. The remote forbidding mountains provided shelter from pursuit as well as a possible escape route onto the *llano* to the east. Occasionally soldiers pursued the Indians into the Guadalupe, but to little long-term advantage. Although on occasions before and after Hennisee's arrival, such as a pursuit of the Mescaleros out of Fort Union by Captain Francis P. Wilson that left more than twenty-five Mescaleros dead in 1867, the military enjoyed great success, generally all soldiers could do was note the Mescaleros' presence and power in the Guadalupe Mountains. Ongoing Indian activities made these mountains even more important in the face of accelerated military pressure.³²

The 1869 arrival of a new officer in the region, Lieutenant Howard Bass Cushing of Troop F of the Third Cavalry, contributed to the pressure. A native of Wisconsin and decorated Civil War veteran, Cushing gave the Americans an advantage that had not enjoyed since assaults at the beginning of the 1860s. Like his predecessors, Cushing aggressively subscribed

³⁰ Opler and Opler, "Mescalero Apache History in the Southwest," 21.

³¹ Opler, "Mescalero Apache," 422-23; Opler and Opler, *Mescalero Apache History in the Southwest*, 22-23.

³² Barbara Biggers, "An Ethnohistorical Study of the Mescalero Apache in the Guadalupe Mountains," unpublished paper, Texas Tech University, 1979, 12; Leo Oliva, *Fort Union and the Frontier Army in the Southwest* (Santa Fe: National Park Service, 1993) Southwest Cultural Resources Center, Professional Papers no. 41; see also Charles Haecker and Neil C. Mangum, "Historical and Archaeological Investigations of Apache War Sites, Guadalupe Mountains National Park," (unpublished paper), copy courtesy of National Park Service, Santa Fe.

to the doctrine of all-out war, and pursued the Mescaleros with a tenacity and alacrity that equaled Carson's. Cushing's first encounter with the Mescaleros occurred in July and August 1869, when he served with a unit sent to the Sacramento Mountains. A small and indecisive skirmish with the Mescaleros ensued, the troop returned to Fort Stanton, and the military planned future engagements aimed at ousting the Mescalero from the mountains.³³

Military pursuits continued, and as winter approached, Cushing led Troop F after raiding Mescaleros. In November 1869, Cushing's men chased into the Guadalupe Mountains after a band of Mescaleros thought to have stolen stock from a ranch on the Río Hondo. The troop found Mescalero *rancherías* near Sitting Bull Falls in the northern portion of the mountains and in the battle that followed, destroyed them, recaptured the stolen livestock, and seized more than thirty Mescalero horses and mules. The Mescaleros watched the aftermath of the battle with trepidation. Cushing clearly posed the same problem as had Carson earlier in the decade, but with an even greater degree of intensity. The November raid in the mountains was both a signal and a threat to the Mescaleros. It indicated the presence of a new and revitalized Army that possessed greater determination than at any time since the Mescaleros left Bosque Redondo and it threatened tribal strongholds deep in the mountains.³⁴

After a brief respite at Fort Stanton, Cushing again set out after the Mescaleros. On December 19, 1869, a new campaign began, designed in every way to mirror the successes of other winter marches throughout the American West. Winter gave the American military an advantage; Indian supplies were fixed in location, while soldiers could restock from elsewhere. Even if the soldiers lost their supplies, they could retreat to their forts and secure more. Cold weather and little available forage or game pinned the Mescaleros in their mountains and forced them to stand and fight rather than flee until more advantageous conditions arose. Winter conditions made Mescalero assets into liabilities, a reality that the astute Cushing recognized and utilized.

Cushing's December-January campaign demoralized the Mescaleros. The Army units returned to the area where Cushing found the *rancherías* in November and discovered exactly what they expected: the Mescaleros had abandoned that area. Following mountain trails to the south, on December 26, Cushing and his men discovered another *ranchería* at a spring believed to be near Bone or Guadalupe springs. Cushing charged up the canyon, and the Mescaleros waited for the cavalry to close the distance. As the soldiers came within range, the Indian let loose one "good round volley from guns and arrows," Cushing recalled, inflicting some damage on the soldiers. The military advanced, and the Indians dispersed, fleeing into the hills and nearby canyons. Cushing could not send men after them, for he commanded too few soldiers to chase down the many dispersing people, but he secured the Indian camp. As he rode

³³ John P. Wilson, "Indian Fighter Extraordinary," 40.

³⁴ John P. Wilson, "Indian Fighter Extraordinary," 40.

through it, Cushing noted the impressive bounty his men captured. In the forty to fifty “wigwams,” as Cushing described them, soldiers found many buffalo robes and dressed and tanned beef, deer, and antelope hides as well as 20,000 pounds of prepared mescal and 15,000 pounds of jerked and packed beef, meat treated so that it would last throughout the winter. The soldiers seized clothing, cooking utensils, bows and arrows, and other materials as well. Here were the tribe’s stores for an entire winter. Cushing’s men destroyed everything they captured, and at the end of the day, all these valuable stores and materials were aflame. As the Mescaleros watched their winter supplies burn, Cushing accomplished his purpose. Once again the military intimidated the tribes, but this was even more devastating. Mescalero preparations for the winter had been destroyed in one attack, and they recognized that they would have to forage for survival throughout the winter. This was a damaging and demoralizing blow.³⁵

The tenacious Cushing continued south through Upper Dog Canyon, intending to deceive the Mescaleros. He moved along Dark Canyon and toward XT Springs and the Río Azul, the Blue River, in a manner designed to convince his adversaries that he planned an immediate return to Fort Stanton. On the morning of December 30, Cushing took forty men and left his supply train on the trail. Veering to an old trail south to the Ojo Sotalosa, the junction of Nickel and Lamar creeks in Texas, Cushing and his men found pony tracks. Soon they saw a wisp of smoke over a distant mountain and trailed that to another *ranchería* in a canyon — most probably at the mouth of McKittrick Canyon. A battle followed. Cushing again captured a heavily stocked *ranchería* and destroyed extremely valuable food caches and materials. As the camp went up in flames, the Mescaleros in the hills around organized a rally. At one point more than forty warriors came over a mountain toward the canyon, but they stopped out of rifle range, behind large boulders. There they stood and cursed the soldiers in Spanish, but could not advance. They felt powerless to save any of their dwindling stores. Cushing’s pressure produced not only military results, but a feeling of growing helplessness among the Mescaleros.³⁶

Although Cushing returned to Fort Stanton and soon after departed for Arizona, where he was killed in a foray in 1871, military pressure against the Guadalupe Mountains Indians continued. The tactics that Kit Carson initiated in 1862 became standard: mobile Indian people had no recourse after destruction of their supplies during winter months and the Army could press its advantage against weakened foes. In January 1870, Captain Francis S. Dodge left Fort Davis with 200 Buffalo soldiers from the Ninth Cavalry, possibly the largest military expedition into the Guadalupe Mountains. On January 20 and 21, they engaged the Mescaleros

³⁵ Lieutenant Howard B. Cushing to Post Adjutant, Fort Stanton, January 8, 1870, copy located in Albert Schroeder Collection, Mescalero Apache 1859-1875, New Mexico State Records Center and Archives, Santa Fe; Wilson, “Indian Fighter Extraordinary,” 46, offers the name “Sanguinara” or bloodstone for the canyon, a name he noted did not persist.

³⁶ Lieutenant Howard B. Cushing to Post Adjutant, Fort Stanton, January 8, 1870.

at the head of Delaware Creek. They killed about twenty-five men, captured several more, and destroyed additional valuable supplies. Skirmishes continued and they began to show results favorable to the Army. In February, a small Mescalero band led by José La Paz returned to Fort Stanton and resumed agriculture, signaling a change in attitude among at least a few of the Mescaleros. Further military actions in April, May, and June 1870 pressured the Mescaleros even more. Cushing's methods changed power relationships, and the tactics and consequences of he and his successors gradually drove these Indians back into the arms of American society.³⁷

Although Cushing's forays had dramatic impact, they were only part of the process of driving the Mescaleros back to the reservation and into a system where they became inconsequential to the society that conquered them. Even after 1865, as Army's presence in the region remained intermittent, in some ways it functioned effectively. The old stage station at Pine Springs became a familiar stopping point for American soldiers. Water and shelter could always be found there and the location stood next to one stretch of what remained of the old Butterfield route, one of the important navigational landmarks and routes in the region. The soldiers' presence sometimes impinged upon the Mescaleros, who sought to water animals and camp near the limestone-based springs at the base of the mountains. Even the occasional presence of soldiers at Pine Spring offered another reason, symbolic and actual, for the Mescaleros to give up their ways. They could see as well as anyone that their world continued to narrow.

Changing military and administrative procedures also affected the Mescaleros. By about 1871, the U.S. Army garrisoned as many as 800 soldiers in five posts — forts Richardson, Griffin and Concho in Texas, Fort Selden in southeastern New Mexico, and Fort Bowie in Arizona — as a defense against Kiowa and Comanche raiders as well as occasional Cheyenne and Arapaho attacks, all aimed at northern Mexico. Mescaleros and Chiricahuas Apache participated in the same practice, as did a group of the Kickapoo who fled the prairies of Illinois during the 1830s and settled south of the Mexican border. The Treaty of Guadalupe Hidalgo in 1848 gave Americans the responsibility to halt such raids, and the Army found itself with a vexing and complex problem. Nor could they successfully protect their own side of the border from members of the same raiding groups who slipped north from Mexico. The international border complicated the military situation and gave Indian peoples in the region a unique kind of impunity.³⁸

At about the same time, President Ulysses S. Grant began a new Indian policy that

³⁷ Wilson, "Indian Fighter Extraordinary," 46-47; Sonnichsen, *The Mescalero Apache*, 128; Commanding Officer, Fort Davis, to Inspector General, Department of Texas, January 28, 1871, copy in Guadalupe Mountains National Park library.

³⁸ Robert Utley, *Frontier Regulars: the United States Army and the Indian, 1866-1890* (NY: Macmillan Publishing Company, 1973), 352-55; John Mack Faragher, *Sugar Creek* tells the story of the Kickapoo departure;

became known as the “peace policy.” After election to the White House in 1869, he found a battle between the military and reform groups for control of Indian administration that resulted from policy decisions made twenty years before. In 1848, the Bureau of Indian Affairs shifted from the War Department to the Department of the Interior, ending military administration of Indian peoples and increasing tension between civilians and the military over Indian issues. The military generally retained the view that military solutions produced better results, but chafed at the more complicated situation that Department of the Interior administration required. By the late 1860s, these issues had come to a head. Military leaders believed since they were forced to address the consequences of failed Indian policy, they should administer Indian life; reformers sought a more conciliatory policy. Despite his Civil War background as commander of the Union Army, Grant sided with the civilian reformers and instituted a policy described as “conquest by kindness.” One result was that on some reservations the position of Indian agent was split off from the military. Typically, religious groups offered candidates for such slots. Another more ominous situation for the Mescaleros developed; this clear distinction between the on- and off-reservation Indians permitted the military to treat all off-reservation Indians as hostile, a situation in the trans-Pecos that occurred during the Civil War but was later relaxed. The reformers who favored Grant’s policies could rarely implement them on the reservations, and Indians often left reservations simply to have enough food to eat. Such an edict gave Cushing a kind of permission his predecessors lacked since the Civil War and accounted for much of the success of the military in the Guadalupe Mountains.³⁹

These combined factors helped bring the Mescaleros out of the mountains and back to the lower elevations of their historic range near the Tularosa River. Slowly at first they came, spurred by the difficulties of life when the military could penetrate their strongholds and intrigued by the concept of civilian agents. In 1871, Vincent Colyer, a Society of Friends leader and an advocate of Indian people, received a presidential commission to explore Indian issues. Of the Mescaleros, he remarked that they had been at peace for a long time and should be granted a reservation; the Mescalero situation had been in turmoil since the closing of the Bosque Redondo. In 1873, Colyer’s suggestion became law, as an area of the Mescalero range — mainly mountainous, with only a very little lower elevation land — became the Tularosa Reservation, south of Fort Stanton and east of Tularosa, permanently given to the Mescaleros. The Indians protested such a small and useless reservation; without sufficient lowlands, agriculture was doomed and hunting at higher elevations could not sustain anyone. Despite its shortcomings, Indian numbers at the reservation increased; in 1871, 400 people received supplies at the reservation post. By 1873, the number grew to 2,679, an incredible increase supported by an 1872 census count, which reported 830 Mescaleros, 440 Aguas Nuevos, 350 Lipans, and 310 Eastern Chiricahua Apaches, also called Warm Springs Apache, at the reservation. For the second time, the Mescaleros’ lifestyle — hunting and gathering — ended as

³⁹ Utley, *Frontier Regulars*, 195-200.

a result of military action.⁴⁰

Reservation life offered little for the Mescaleros the second time around. Although there were fewer Native peoples at Tularosa during the 1870s than lived at the Bosque Redondo a decade earlier, the variety of tribes led to instances of intra-Indian conflict. A Mescalero appeal persuaded Congress to add arable land to the east and hunting grounds on the west side of the Sacramento Mountains to the reservation in 1875; an 1882 order added grazing land to the east and excised land that miners sought. The reservation remained crowded and unsafe, even with the departure of the Eastern Chiricahua to a new reservation. Beginning in 1874, whites reversed the pattern that had so long made their lives uncomfortable. They raided the reservation, stealing horses. In one instance, they attacked a Mescalero encampment within the reservation along the Pecos River, killing men, women, and children while a nearby Army unit did nothing. The possibilities of reservation living again seemed untenable, and a number of Mescaleros once more fled to the mountains. Whites made the presumption upheld by law, that by leaving the reservation the Mescaleros had become, in the parlance of the time, "hostile," and could be hunted down and killed at will. Adventurers anxious to experience "Indian hunting" killed three Mescaleros and according to some accounts, took their scalps, before the Army arrived and escorted the starving, freezing, and terrified Mescaleros back to the Tularosa reservation in January 1875. "It was heart-rending," Indian agent W. D. Crothers wrote, "to see a class of human beings so destitute of the absolute necessities of life; many of them almost naked and bearing marks of an outraged class of human beings."⁴¹

Despite instances of justice and kindness toward the Mescaleros, their conditions worsened. The Mescaleros rarely knew who posed a greater danger to them: the squatters on the reservation and their settler friends, or the military units designated to protect them. No consistency in military policy became evident; even a congressional investigation showed that the Mescaleros were not at fault when they fled, but still squatters and settlers raided and took Indian stock and possessions. In 1877, a smallpox epidemic among the demoralized, poorly fed, and increasingly socially dislocated Mescaleros compounded their problems. Mescalero life and social organization took another blow.⁴²

The beginning of the famed Lincoln County War in 1877, in which Billy the Kid became a notorious figure, also menaced the Mescaleros. The Tularosa reservation was close to Lincoln, New Mexico, a wide spot in the Río Hondo Valley west of modern Roswell, New

⁴⁰ Opler and Opler, "Mescalero Apache History in the Southwest," 23-24; Opler, "Mescalero Apache," 422-23; Sonnichsen, *the Mescalero Apache*, 138-44; Lawrence Mehren, editor. "Scouting for Mescaleros: The Price Campaign of 1873." *Arizona and the West*, Vol. 10, No. 2 (September 1968): 171-190.

⁴¹ Opler and Opler, "Mescalero Apache History in the Southwest," 24-25; Sonnichsen, *The Mescalero Apache*, 140-57.

⁴² Opler and Opler, "Mescalero Apache History in the Southwest," 26-27; Sonnichsen, *The Mescalero Apache*, 156-58.

Mexico. The city was the center of this profiteers' war between different factions of mercantile traders who traded in cattle and sold supplies to the government. Fort Stanton itself stood a mere nine miles from Lincoln, and clearly the military and commercial leaders were well acquainted. Selling cattle to the Army was a prime source of profit, especially when enhanced by the addition of stolen cattle. When the Regulators, which included Billy the Kid, and the House of Murphy gunmen went to war in 1877-78, the reverberations rang all the way to the already intimidated Mescaleros. They believed that no whites could be trusted, and the lackadaisical approach of the Army — not only to white attacks on the Indians, but also to the consistent but widely scattered conflict of the Lincoln County War — more than offset any trust developed by Indian agents such as the sympathetic Frederick C. Godfroy, who succeeded Crothers in 1876. Turmoil again compelled the Mescaleros to flee to the higher ground where they felt safe and that they called home.⁴³

The Lincoln County War only compounded existing problems for the Mescaleros; for other Apachean groups in the trans-Pecos region, the situation was new and frightening. Although the Jicarilla Apaches agreed to join the Mescaleros at Tularosa, the Lincoln County situation remained so dangerous that only thirty-two ventured to the Mescalero Reservation. Conflict between other Indians and the government also had an impact on the Mescalero reservation. Efforts to move the Warm Springs Apache, whose reservation lands until May 1877 were at Ojo Caliente, south of Socorro, New Mexico, to the San Carlos Reservation on the Gila River, east of Globe in the Arizona Territory, met with strong Indian resistance. Every time the military escorted these Apaches to the Arizona Territory, they simply left and returned to their New Mexico homelands. One Chiricahua band, led by Victorio, spent most of the two years between 1877 and 1879 searching for a home that both they and the U.S. government could accept. Victorio's band became so successful as renegades that when the Indian agent at the Mescalero reservation warmly welcomed the newly arrived Victorio and the fifty to sixty men who followed him in June 1879, both the Indian leader and the government agreed to the situation. Victorio even arranged for him and his men's families to come to Tularosa, and the oft-used Mescalero Reservation acquired new inhabitants. This peace was short-lived. Soon after, in 1879, a judge and a prosecuting attorney arrived at the reservation for a visit and some hunting. Victorio assumed they came to try him on existing counts of horse theft and murder, and the leader and his men again fled. Victorio's success at avoiding the troops sent to retrieve him and especially at surviving in the old way, by raiding, made him an admired figure on the reservations. Other Indians admired his success at confounding the Army, and soon some undertook their own breakouts. Early in 1880, more than 200 Mescaleros were among the many who imitated the prestigious and increasingly powerful Victorio.⁴⁴

⁴³ Sonnichsen, *The Mescalero Apache*, 157-58; Opler and Opler, "Mescalero Apache History in the Southwest," 27; Robert M. Utley, *Billy the Kid: A Short and Violent Life* (Lincoln: University of Nebraska Press, 1989), 54-56, 103-06.

⁴⁴ Sonnichsen, *The Mescalero Apache*, 159-84; Opler and Opler, "Mescalero Apache History in the

The decision to follow Victorio was not difficult for most Mescaleros. Once again, the Army failed to protect the bands, and again the Mescaleros received unclear messages about their fate from Indian agents and military commanders. Some Mescaleros fled the reservation because they feared attacks by area settlers, for southeastern New Mexico had become home to a range of legal and extralegal militia and other organized but not officially sanctioned armed groups. Military attack remained the greatest concern of other Indians, especially after Colonel Edward Hatch arrived in the area with more than 1,000 Ninth Cavalry troops — who, along with the Tenth Cavalry and two infantry units, the 24th and 25th Regiments, comprised the famed African-American Buffalo soldiers — and Indian scouts.⁴⁵

The Buffalo Soldiers took a different view of military life than did most other postwar soldiers. Many joined the United States Colored Troops during the Civil War, and in the Army, they endured the same constant prejudice and derision that African-Americans experienced throughout American society. The military did have advantages for men whose options outside it were narrow. Regular if shoddy meals, shelter, clothing, and a modest income meant a great deal to people who were the children of slaves and who found most other possible opportunities blocked by social strictures, custom, and law. Even African-Americans born and raised free in the North found military service an appealing option. The Army uniform conveyed the pride of those who defeated slavery and also limited if only slightly the prejudice of the time. While other soldiers deserted, drank themselves into a stupor, and committed suicide in astonishing numbers, Buffalo Soldiers became among the most professional of American troops. They routinely enjoyed the lowest rates of desertion and the highest rates of re-enlistment in the western Army.⁴⁶

An engagement near Ojo Caliente, about thirty-five miles up the Alamosa River from the Rio Grande in southwestern New Mexico on September 4, 1879 inaugurated an extended conflict between Victorio's band and the Army, different from other famed Indian chases such as Chief Joseph of the Nez Perce or Dull Knife's breakout. Alone among them, Victorio led; he was not chased, but instead set the course that the soldiers followed almost without a whit of concern for their whereabouts. Unlike Joseph or Dull Knife, Victorio was in his homeland; he knew the ground, he knew the distances to water, the places to hide, and every locale from which to derive food or stage an ambush. He knew the situation better than did his pursuers; even the sky assisted him as he divined which nights would be moonlit and which would not. Victorio also crossed international borders, repeatedly using Mexico as a sanctuary. Victorio

Southwest," 28-29; Utley, *Frontier Regulars*, 366-74; Opler, "Mescalero Apache," 423.

⁴⁵ Robert M. Utley, "The Buffalo Soldiers and Victorio," *New Mexico Magazine* (March 1984): 47-50.

⁴⁶ Utley, "The Buffalo Soldiers and Victorio," 47-48; William L. Leckie, *Buffalo Soldiers: A Narrative of Negro Cavalry in the West* (Norman: University of Oklahoma Press, 1967).

did not flee the American troops; he simply outdistanced them as he returned to his homeland to live his life as his people had for as long as they could remember. For a long time, the idea of a chase existed clearly in the minds of American soldiers, but only on the very fringe of Apache thinking about the situation.

After Ojo Caliente in September 1879, Victorio's attacks in southwestern New Mexico grew in frequency, and the Army responded. Ranchers and others throughout the Mesilla Valley chased Victorio. In encounters, they suffered staggering casualties. Colonel Hatch deployed most of his Buffalo Soldiers in an effort to find Victorio. One unit, led by Major Albert P. Morrow, even crossed the international border to the Warm Springs stronghold, the Guzman Mountains in northern Mexico, in pursuit. Victorio seemed not at all bothered by the soldiers behind him; he was on his home ground and he knew the soldiers were exhausted from the campaign and their hard ride. When the soldiers found Victorio near the Corralitas River on October 27, the Indians easily held their own and punishing the troops, compelled them to return to the north side of the border. Skirmishes continued with Mexican military units. Victorio's men, now numbering as many as 150, destroyed two parties of Mexicans in the Candelaria Mountains south of Juarez, and moved back across the border to avoid the expected Mexican retaliation.⁴⁷

U.S. military leadership seemed unequal to the task of fighting Victorio, a situation easily apparent to the people on the Mescalero reservation. By December 1879, reports of Victorio's men in the Sacramento Mountains emboldened the Mescaleros and sent fear through Anglos, Mexicans, and the military around the reservation. After Victorio returned to New Mexico, panic ensued, and Hatch himself took charge of the troops who faced this vaunted Indian leader. Hatch's first venture was a failure; in Hembrillo Canyon, a nearly inaccessible spot in the San Andres Mountains, Victorio's band countered an Army assault in April, killing eight soldiers, and disappearing before the soldiers could regroup. Hatch combined troops from Arizona with Civil War hero and Colonel Benjamin Grierson's men from Texas. With pursuit tactics failing, Hatch decided to try to eliminate any supplies Victorio could get from reservation Indians. Hatch and Grierson decided to eliminate any help that Victorio might receive from Indians north of the border. After a few incidents, including one in April 1880 where one thousand soldiers converged on the Mescalero Reservation from all directions as the Mescaleros came in at the request of the agent only to discover they were to be disarmed and relieved of their horses, the Mescaleros again fled, fearing an imminent massacre or abandonment and eventual starvation on the reservation. The military gave chase and a number of Indians were killed by Army carbines. Grierson felt sure Victorio would receive no more support nor warriors from the New Mexico reservation. Victorio's Warm Springs warriors returned to their home in the Mogollon and Black ranges in southwestern New Mexico, where

⁴⁷ Utley, *Frontier Regulars*, 368-71; Opler and Opler, "The History of the Mescalero in the Southwest," 28-29; Sonnichsen, *The Mescalero Apache*, 164-65.

they continued raiding. With help from north of the border unlikely and Mexicans searching for Victorio's men south of the Rio Grande, the Apache seemed trapped and the career of this vaunted leader appeared close to an end. Again, Victorio outwitted pursuers and returned to Mexico.⁴⁸

Despite the obvious advantages held by the American military, subduing Victorio proved difficult. Hatch wanted to bring Grierson and his Texas-based troops to western New Mexico, but Grierson envisioned a different way to trap Victorio. If they spread his men among subposts along the Rio Grande west of Fort Davis, Grierson argued, they could protect Texas and trap the Apache leader. Although Hatch protested, General Edward O.C. Ord and his superior, General Philip H. Sheridan, allowed Grierson to start his plan. Implementing the maneuver offered Grierson a rare post-Civil War moment in the sun. Successful during the war, superior officers had held him back in its aftermath. Sheridan detested him, Grierson lacked West Point credentials, and he was closely identified with African-American troops, all of which combined to his detriment. In this case, Grierson guessed well, for when Victorio recrossed the Rio Grande into the United States with 500 Mexican troops pursuing him, he found himself between two of Grierson's subposts along the river.

A fierce battle followed at a waterhole called Tinaja de las Palmas in Quitman Canyon, Texas. Grierson and his Tenth Cavalry camped there to await Victorio; scouts under the command of Lieutenant Henry Flipper, the first and then-only African-American officer in the regiment, brought news of Victorio's border crossing. Grierson guarded the one waterhole in the vicinity, knowing that Victorio would have to stop there to water his animals. As the sun rose on the morning of July 30, 1880, Grierson saw Victorio's men advance and then turn eastward to avoid a fight. Grierson sent an officer and ten men to check the Indians' flight. As the expected Army reinforcements rode up, Victorio's chances narrowed. Afraid of being cornered, the Indians fled toward the Rio Grande.⁴⁹

This struggle initiated Victorio's last foray into the United States. On July 31, the U.S. Cavalry chased him across the Rio Grande, but the determined Indian leader turned around and four days later made one last dash for the Guadalupe Mountains along the west side of the Sierra Diablo Range. His goal was to reach the Mescalero Reservation. Grierson anticipated this move and raced northward, covering sixty-five miles in twenty-one hours. He took Rattlesnake Springs, Texas, and in a heated exchange of gunfire, kept Victorio from this crucial water source. After Victorio ambushed a provision train to the east of Rattlesnake Springs and the military fended off his attack, Victorio returned to Mexico with his options limited and his

⁴⁸ Sonnichsen, *The Mescalero Apache*, 173-84; Utley, *Frontier Regulars*, 370; Leckie, *Buffalo Soldiers*, 217-20.

⁴⁹ Leckie, *Buffalo Soldiers*, 224-25; Utley, "The Buffalo Soldiers and Victorio," 53-54; Sonnichsen, *The Mescalero Apache*, 187; Utley, *Frontier Regulars*, 372 "The Battle of Tinaja de Las Palmas," *Hudspeth County Herald*, July 23, 1993.

prestige and confidence damaged. Many of the Mescalero Indians with Victorio wanted to surrender and return to their reservation, but he suppressed the revolt by killing the Mescalero leader. The Mexican army still sought Victorio, and by October, his time was running out. The cooperative effort between Mexicans and American soldiers continued until the Mexican government expressed objections to American soldiers on their land. The U.S. Army withdrew, and in the Candelaria Mountains on October 14, 1880, Colonel Joaquin Terrazas led his soldiers against Victorio in the night battle of Trees Castillo. By morning, Victorio and more than eighty of his warriors and supporters — male and female, adults and children — were dead and the remaining women and children had become captives. Victorio's war had finally ended, and with a few exceptions, so had the era of free-roaming Indians in the trans-Pecos region.⁵⁰

As much as some Mescaleros admired and embraced Victorio's actions, his breakout and the raiding that accompanied it complicated life for all the Indians of the Southwest. It revealed the futility of military resistance to the enforced transformation of Indian life. Romantic as it was, Victorio's war was an anachronism, a lone battle fought well after the larger conflict had been decided. Like the Battle of Little Big Horn or the Dull Knife excursion that preceded it or Geronimo's efforts that followed, Victorio's war revealed the ways in which the boundaries of the Southwest had solidified against Indian people. Victorio and later Geronimo succeeded as much as they did because they could use the Mexican border as a way to create the open space they needed to survive. Reservation breakouts could terrorize Anglo and Hispano populations, but they could not turn the clock back to a time where Mescaleros, Chiricahuas, or any other Indian people could control more than the high remote areas of mountain ranges against the intruding cavalry. Much more symbolic in the scope of history than a sustained threat to Anglo dominance, Victorio's war showed how much, not how little, U.S. Army presence supported the institutions of American society. Although the Americans could not yet physically control every inch of the trans-Pecos and the *llano* to its east, the power of their institutions was sufficient to establish control that could only be challenged in intermittent ways. The lesson of Victorio's war was hardly the romantic posture of the rise of a valiant but weakened people; instead it showed the full force of a post-railroad society brought to bear on a small fringe group. More than anything, the chase of Victorio showed that Mexican border or not, Americans had acquired the vaunted patience necessary to wait out and ultimately wear down its Indian foes.

The end of Victorio's war also ended an epoch in the trans-Pecos region. His short-term success but long-term failure revealed that the era in which military chases of Indian people were an ongoing reality had come to an end. There were later skirmishes as reservation conditions failed to improve and some Indian people asserted anger and disappointment, but ever after, the Mescaleros and other southwestern peoples were held within the bounds of their reservations. Although similar reservation breakouts occurred elsewhere in the West into the

⁵⁰ Leckie, *Buffalo Soldiers*, 227-29; Sonnichsen, *The Mescalero Apache*, 187-88.

1890s, in the Southwest only Geronimo sustained a breakout on the level of Victorio after 1880. Victorio's war revealed one final significant change: it showed that with military support and on a largely lawless frontier, the institutions of American society had begun to coalesce.

In this respect, the military served as a vanguard in clearing the area for Anglo-American settlement. No part of this process was easy. Soldiers, politicians and settlers thought it was completed numerous times, but following the beginning of the post-Mexican War surveys, pushing Indians onto reservations and keeping them there took more than thirty years. Outnumbered and usually outgunned, the Mescaleros, the Chiricahuas, and other warriors used their knowledge of the region, their acclimation to high remote places, and their mobility to confound Grierson and inflict damage upon Anglo and Hispano settlers. Only as those opportunities narrowed and larger numbers of more seasoned and determined soldiers, especially the Buffalo Soldiers, trailed them could the military successfully round up Indians and keep them isolated.

For the Army, long-term settlement by ranchers and farmers remained a less important goal than the immediate pacification, especially during the Civil War, of Indian peoples. Many military decisions revealed expediency rather than an attempt to implement a consistent policy that might last as their governing principle. Promises made to the Mescaleros and other Indians were usually worthless, and even well-meaning agents failed to give the Indians a sense of security about their situation. As a result, the old ways and the free life in the mountains often called out to the tribes.

Pacification and removal to reservations hardly ended conflict with Indian people in the trans-Pecos. On a yearly basis that often seemed cyclical, Indian people who had been removed from the region left reservations and returned to their old homes, initiating a pattern of conflict that continued until they were again returned to their reservations. This created a fluidity, a seasonal lack of security that made history real in the lives of settlers in the region and illustrated the layering of life even on this periphery. As they built homes near the waterholes of the region and branched out, Hispano and Anglo-American settlers knew they built in places that Indian people once controlled and still coveted. The cyclical reappearance of displaced Indians in search of a lost world also demonstrated the fundamental falseness of American assumptions about their own power and the resolve of Indian people. To many, especially the soldiers who did the fighting, it seemed that the same battles occurred nearly every year in the same or similar places against the same or extremely similar adversaries. This engendered a lack of security for both soldiers and settlers that permeated their lives.

It also illustrated the difficulty of surviving in the trans-Pecos not only for ranchers but also for those who sought to establish towns. Few communities rose, and the ones that did were tainted by a kind of lawlessness that had been endemic even before the Lincoln County War. Without industrial technology, best exemplified by the railroad, the Americans were no better able to harness the Guadalupe Mountains/trans-Pecos region than were any of their predecessors. Although they had more soldiers, money, and resources, the lines of supply that they created remained too thin to sustain sedentary life. In this era, like no other, the region

earned the sobriquet “frontier.” To figuratively close this era, the values and accouterments of industrial society had to become widely available throughout the region.

Chapter 5: Vectors of Settlement

By the time Mexican soldiers killed Victorio and his followers in the mountains of northern Mexico in October 1880, the Guadalupe Mountains and the trans-Pecos region had already acquired a new sedentary population. An increasing number of Anglo-American and Hispano settlers lived within the boundaries of the Mescalero homeland. To the west, the fertile Mesilla valley had long been a stronghold of Hispano livestock farmers, some of whom grazed animals in the various mountain ranges during the summers; later they explored opportunities to ranch or farm in the region. Finding land expensive and rare along the Rio Grande, still more sought to try their hand at ranching or farming outside the confines of the fertile valley. Others trickled south from Las Vegas, New Mexico, and the Mora area, initially trailing sheep and sometimes a few cows. Some settled along the rivers and streams that passed through the region. Few in the trans-Pecos expected to find wealth in agriculture; only the most savvy, creative, and entrepreneurial stood a chance at achieving such a goal even in the lucrative industry of ranching during its military-supported heyday in the 1860s and 1870s.

Other opportunities drew Anglo-Americans to the trans-Pecos. To the north of the Guadalupe Mountains, the two military forts — Stanton and Sumner — became magnets for people who sought to provide the Army with the commodities it needed to feed, clothe, and shelter soldiers and to fill its obligations to reservation Indians. Competition for such contracts provided one of the many smouldering problems that played a part in initiating the Lincoln County War of 1878. Although only a few people lived between the salt flats west of the Guadalupe Mountains and the Rio Grande, many regional people, especially Hispanos, used this valuable mineral resource. Communities began to develop along the Pecos watershed as well, spurred by Pecos, Texas, and its notorious jurist, the roguish Judge Roy Bean who administered, in the famous phrase, “law west of the Pecos.”¹ Only after Victorio’s death could settlers anticipate security. As long as Victorio and others like him roamed free, settlement in any area they could reach remained a chancy proposition.

¹ Utley, *Frontier Regulars*, 370-75; Jack Skiles, *Judge Roy Bean Country* (Lubbock: Texas Tech University Press, 1996); Delmar Hayter, “The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900,” *West Texas Historical Association Year Book* Vol. 62 (1986): 69-85

Although the Army helped open the area to new Anglo-American settlement, population in the Guadalupe Mountains and the rest of the trans-Pecos grew slowly. The region was still peripheral to the larger socio-political forces, the railroads, lawyers, and other manifestations of industrial society that drove development elsewhere in New Mexico and Texas. Although some entrepreneurs, particularly the noted cattleman John Chisum, became wildly successful, the region offered too few prospects for many others. Some eked out a living in ranching, agriculture or mining; others looked to sell to the government to survive. Parts of the region remained outside the influence of the forces of modern order that the Army represented. The Treaty of Guadalupe Hidalgo, which guaranteed former Mexican citizens living under U.S. administration all of their former rights, made little or no difference for those living in Hispano towns; Anglo towns where law was a concept but not a reality dominated. The economic and cultural ties that might precipitate social order and the rules of American society were not yet firm. For a series of reasons that cut both to the advantage of people of the region and against them, the trans-Pecos remained with the reach but beyond the grasp of industrial America.

The 1880s ushered in Anglo settlement of the region in a more comprehensive manner than occurred before the end of significant Indian raiding at the start of the decade. Before then, settlers lived on their own, without secure connections to the outside world — especially when Victorio and other raiders roamed the hillsides. These early settlers were isolated, not significantly different from neighboring Indian people in their inability to access a world larger than the trans-Pecos. Idiosyncratic and in some ways throwbacks to the pre-Civil War ethos of pre-capitalist individualism that once permeated the nation, they lacked connections to the Anglo-American world that spawned them, to the sustaining technologies, methods, and values of American culture. Instead, most early settlers, their resources limited to what they could scrape from a harsh and difficult land, survived with their guns in hand.

As always happened as the American nation expanded and secured dominance of an area, its patterns appeared everywhere, pressuring all prior forms of social, cultural, and economic organization. Communities started in southeastern New Mexico — some for obvious reasons, others with no economic justification for their location. No railroad traversed the region until the 1880s. Without one, such communities remained as isolated any pre-industrial predecessors. They were connected, but only by a hard horse or wagon ride to a fort within this remote region or a railroad stop beyond its boundaries. What separated the people who founded communities such as Salt Flat, Pine Springs, Eddy, and Seven Rivers from the others who came before was their sense of mission, articulated in the concept of Manifest Destiny. They internalized a national ethos of achievement as a group that in practice translated into individualism and even self-aggrandizement. To most such settlers, this intellectual trick made little if any difference. They were there, and not only would they survive, they expected to prosper no matter what the obvious limits of their skills, place, and technologies.

This determination to stay in remote places even under adverse conditions helped foster a diverse subregional economy. Throughout most of the nineteenth century's second half, ranching and homesteading served as the basis for this subregional economy, with mining playing

a smaller role and only the onset of widespread irrigation making agriculture possible. These economic activities, including the development of ranches such as the Frijole, Williams, and Seven Rivers, as well as a range of similar economic endeavors, became central to bringing industrial America's institutions to the region. In an oft-described process of colonialism, where dominant culture individuals settled peripheries in hopes of wealth only to find their status diminished as a result of their choices, the trans-Pecos and the Guadalupe Mountains served as a primary example. Despite the will of an expansionist nation and its settlers, the region remained inaccessible and marginal.

Transportation networks and other institutions of Anglo-American culture continued to precipitate further changes. As the resources of Guadalupe Mountains and the trans-Pecos became more important in a changing technological and economic environment and as the machined miracles of the modern age drew ever closer, institutions of American society began to coalesce. In some instances, this precipitated conflict with the Spanish-speaking population of the surrounding area. In others, such relationships illustrated the difficult nature of expansion in unfamiliar topography and biogeography; not only did Americans find terrain that many described as hostile, they had to superimpose their socio-cultural overlays on existing templates of people who may not always have openly resisted, but never quite acquiesced either. The opportunity for widespread cultural misunderstanding and attendant conflict, tension, and ill-will remained great.

Within a very few years, railroads reached the region and the values of American society took precedence over all that came before. In 1881, the first rails reached El Paso from the west; by 1883, four railroads vied for trade in the city, which observers reported was transformed by the economic activity associated with the transportation network of the age.² The region experienced the railroad's influence in ever-widening concentric circles, as economic activity from Roswell to the Guadalupe Mountains became different in an effort to conform to the demands of the national market. Instead of thinking of the market in local and regional terms, asking only what the government would buy, ranchers and farmers wondered what their products might bring in the competitive market generated by the railroads. The railroad became a double-edged technology for many on the ranches in hinterlands such as the trans-Pecos. It expanded markets for their products while simultaneously highlighting their remote status, asking stark questions about the nature of prosperity and its distribution in industrial America.³

² Mario T. García, *Desert Immigrants: The Mexicans of El Paso, 1880-1920* (New Haven: Yale University Press, 1981), 14-15.

³ Such questions typified the semiarid West during the late nineteenth century; for more see Richard White, *Roots of Dependency: Subsistence, Environment, and Social Change Among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1983); William E. deBuys, *Enchantment and Exploitation: The Life and Hard Times of a New Mexico Mountain Range* (Albuquerque: University of New Mexico Press, 1986); and Hal K. Rothman, *On Rims and Ridges: The Los Alamos Area Since 1880* (Lincoln: University of Nebraska Press, 1992), for examples.

In the period between about 1880 and 1900, the trans-Pecos and the Guadalupe Mountains passed from unconnected remote area to marginal periphery connected by rail to the core of industrial society. Although the Mescaleros and other Indian people in the area had been consigned to reservations, their presence served to accentuate their importance as part of the subregional economy; as elsewhere in the West, government contracts to feed and support them served as the initial basis of Anglo-American economy, reemphasizing the importance of federal support in the process of western development. Especially in peripheral areas, which almost always lacked sufficient indigenous capital to support development, government influence became important and stayed that way. Without it, Anglo-American settlement could not have been sustained.⁴

Federal support was hardly a new concept in the Guadalupe Mountains or the trans-Pecos in 1880. The Army had been the first American presence in the region, as it undertook surveys and built forts, and bought local and regional products. This pre-railroad regime brought settlers in its wake and provided at least a measure of protection for them; the chain of five forts built in the 1850s that culminated in Fort Stanton, and its later and more northern counterpart, Fort Sumner, offered at least the pretense of protection and the illusion of control of the region. In the minds of potential settlers in the late nineteenth century, a consistent military presence meant that order was close at hand.

The Civil War dramatically slowed regional settlement. As Confederate and Northern forces dueled in New Mexico and west Texas, the military's ability to maintain protection diminished. The Union Army experienced great difficulty securing its hold on the region; the Confederates who traversed the region as they sought a southwestern empire paid little attention to local matters. The two armies feinted and grappled as settlers watched with trepidation and often fled for safety. The depopulation of ranches around Fort Stanton after the Confederates abandoned it illustrated the importance of the external presence. Without visible military support, Anglo-American and Hispano habitation outside the Rio Grande corridor remained insecure. As the Civil War escalated, both the Union and the Confederacy left the Guadalupe Mountains and the trans-Pecos to the Mescaleros.

The reestablishment of Union control during 1862 and long-sought national development legislation cleared the way for larger numbers of settlers. The passage of the Homestead Act of 1862 by Congress, an impossibility with the presence of representatives of southern states, held up the yeoman farmer as the pinnacle of achievement of Manifest Destiny and the backbone of the virtuous American republic.⁵ Although the passage of this act occurred

⁴ Richard White, *It's Your Misfortune and None of My Own: A New History of the American West* (Norman: University of Oklahoma Press, 1991) argues that the West became the kindergarten of the federal state."

⁵ Donald J. Pisani, *Water, Land, and Law in the West: The Limits of Public Policy, 1850-1920* (Lawrence: University Press of Kansas, 1996); Roy Robbins, *Our Landed Heritage* (Lincoln: University of Nebraska Press, 1944); Paul Wallace Gates, "The Homestead Law in an Incongruous Land System,"

at precisely the moment of a historical turning point, when individual prosperity first stemmed more from owning the means of production than it did from the independence of land ownership, the act encouraged individuals to make parts of the unclaimed West their own. Its immediate impact in the trans-Pecos remained small, but the act added another intellectual vector to the ways in which Americans constructed their identity. In the end, the numbers of settlers grew in the trans-Pecos as much because of ideology as any economic opportunity the region offered.

Although Mescaleros, Lipans, Comanches, and other Native peoples long dominated the trans-Pecos, before and after the Treaty of Guadalupe Hidalgo a thin layer of Spanish-speaking people spread across the area. Many Hispanos were part of families that came up the Pecos River in the 1850s as *ciboleros*, buffalo hunters. Others came from Mexico in small clusters during the same time and started agricultural communities along river courses. Some followed the paths opened by the military; the people who abandoned Fort Stanton after the Confederate pullback were largely Hispano, as were those who returned after General Carleton ordered its reestablishment in 1862. Towns, bookended by Tularosa, founded in 1862, and Puerto de Luna, established in 1873, further illustrated the Hispano presence. Even the famed town of Lincoln, location of Billy the Kid's legendary breakout, began in 1868 as a Hispano town called Placitas sporting twelve to fifteen abode flat-roofed houses. Other clearly Hispano towns, such as Las Chosas, the dugouts, on the Bonita River east of La Placita; La Junta, at the junction of the Ruidoso and the Bonita, where the Hondo River began; and Plaza de San Jose, which became Missouri Plaza, were founded in the same era. Atop Indian life lay a pre-Anglo veneer of Hispano culture.⁶

Hispanos predominated in such communities until the end of the 1860s. In Placitas, the Hispanic population practiced agriculture to survive. A few businesses, owned by Hispanos, marked the little community, and to some Anglo observers, a mythic parallel existed between such towns on the economic outskirts of the nation and Taos and Santa Fe during the early 1820s, when Anglo-American trappers and traders first came over the mountains from the north. The parallel was located mostly in the mind's eye of the mythmaker; the resources that catapulted Santa Fe and Taos to preeminent positions in national consciousness did not exist in the trans-Pecos. Lincoln County itself came into existence in 1869, with a predominantly Hispano population, according to the U.S. Census for 1870. One precinct, including the Ruidoso Valley and San Patricio, a tiny village of about fifteen adobes lining one street beside the Ruidoso River north of its junction with the Bonita, typified this overwhelming majority. Of

American Historical Review 41 (July 1936): 652-81.

⁶ Katz and Katz, "History of the Carlsbad Basin, Southeastern New Mexico," 44-46; Carole Larson, *Forgotten Frontier: The Story of Southeastern New Mexico* (Albuquerque: University of New Mexico Press, 1993), 68-69; see also Lily Klasner, *My Girlhood Among Outlaws* (Tucson: University of Arizona Press, 1972), 54.

the fifty families recorded as living there, forty-three were Hispano and the rest Anglo-American. Its 141 Hispanos far outnumbered the nineteen Anglos. In 1867, two-hundred Hispanics from the Manzano Mountains to the west founded La Plaza de San Jose, which English-speakers called Missouri Plaza, about twenty miles west of Roswell along the Rio Hondo. During the early years of the town, former Confederate officers who ran a store, two English-speaking families, a Frenchman, and a man named John Newcomb comprised the entire non-Hispano population.⁷

Anglo settlement also began, both west and south of Roswell at the northern end of the region and closer to the Guadalupe Mountains. The first Anglo-American settlers came for reasons of their own. Veterans of the Civil War, dislocated individuals, and people who simply did not value the trappings of civilization typified such settlers. Men such as Captain Felix McKittrick, who in 1869 settled in the canyon that now bears his name in what has become Guadalupe Mountains National Park, felt a need to leave the confines of civilization and set out on their own. Others followed McKittrick into the Guadalupe Mountains, which soon showed increasing evidence of an Anglo-American presence. By 1876, the Rader brothers built a two-room house of native stone about 400 feet from Frijole Spring; like the Mescaleros before them, they too required the proximity of water. Although some accounts place a man named Walcott living in a crude dugout at the Frijole Spring in the 1860s, the Raders clearly owned the property; they paid taxes on the land around the spring, following a pattern of codification of settlement that typified Anglo-American settlement throughout the arid parts of the West. The brothers, bachelors, ran cattle, giving way to family called Herring. Elsewhere, Confederate Army veteran John Shattuck, his wife, Julia Lyons Shattuck, and their family settled at the head of Dark Canyon in the lower Guadalupe Mountains in 1885; newlyweds William Ward and his wife started their own spread nearby. This sparse population typified the region; it also had little to bring it together save the needs of nearly nonexistent communities.⁸

Anglo-American settlement even in this periphery followed predictable patterns. The first to settle were loners such as McKittrick, people committed to one ideal or another who found the remoteness they experienced enticing rather than threatening, or individual ranch families such as the Shattucks. Often they were the first sedentary Anglo-Americans in the region; outlaws — in this area cattle rustlers — preceded organized settlement of any kind and while such miscreants saved most of their menace for cattlemen and rarely preyed upon homesteaders in the trans-Pecos, legitimate residents and their less law-abiding neighbors had to coexist. Besides the Army, they were the only Anglo-Americans living in the region.

⁷ Katz and Katz, "History of the Carlsbad Basin, Southeastern New Mexico," 45; Klasner, *My Girlhood Among Outlaws*, 38; Utley, *Billy the Kid*, 38; Larson, *Forgotten Frontier*, 69.

⁸ Peggy S. Froeschauer, *Cultural Landscape Report for the Frijole Ranch, Guadalupe Mountains National Park* (Santa Fe: National Park Service, 1995), 14-16; n.a., *Eddy County, New Mexico, to 1881* (Lubbock, Texas: Southeastern New Mexico Historical Society, 1982), 16.

Anglo capital also contributed to the presence of Hispano herders in the area, a form of political and economic control that presaged the dominance that stemmed from Anglo-American settlement. Sheep herders from El Paso and San Elizario grazed flocks in the trans-Pecos; they were soon replaced by the herdsman of larger and sometimes distant Anglo concerns. Until this point, the small towns of the trans-Pecos functioned autonomously; rarely did political, social, and cultural concerns outside the region affect local life. The military remained the dominant representation of mainstream American culture in the area, and its intermittent successes before 1869 reflected the value of national institutions on this periphery. As cattle operations became more important in the region, a kind of class structure solidified. Although Hispanos made up a majority of the non-Indian regional population into the 1870s, their power diminished as outside Anglo money, handled through the growing number of Anglo commercial interests in the region, altered the balance of economic power.⁹

The new arrangement quickly became apparent in the changing distribution of the region's political and economic power. As cattle ranching became the dominant industry in the trans-Pecos and a leading source of strife, new forces exerted their influences on the region. As did most incoming industries, ranching shifted the balance of power away from the status quo and toward those with the largest number of cattle and pockets sufficiently deep to sustain a business during bad years. In many of the small communities that Hispano merchants served, Anglo economic concerns — often aided by their Anglo-American background, and their ability to speak English and to sell commodities to the Army — first challenged and then overwhelmed Hispano merchants. Placitas, which in an instructive name change became Lincoln in 1872, offered a prime example. Although Hispano merchants were successful during the town's early years and the regional population remained predominantly Spanish-speaking, by the time of the Lincoln County War in 1878, not one but two Anglo commercial houses vied for the dominant position in the cattle trade, as well as in local and regional economic endeavors such as banking.¹⁰ The Lincoln County rivalry between James G. Dolan and his "House of Murphy" and the forces of John Henry Tunstall and Alexander McSween that has been the subject of much myth-making also entailed another transformation. Both economic endeavors replaced Hispano concerns that lacked the access to capital and to markets that Anglo commercial entrepreneurs enjoyed. These new businessmen became new layers placed economically atop the Hispano base of Placitas-turned-Lincoln.

Political transformations followed economic ones. Predominantly Hispano towns fell by

⁹ Larson, *Forgotten Frontier*, 69; F. Stanley, *The Seven Rivers, New Mexico Story* (Pep, Texas: no publisher, June 11, 1963), 2-3; for more on the process of *partidario*, a Spanish practice of running sheep on shares much like sharecropping in the South that Anglo-Americans throughout New Mexico coopted, see deBuys, *Enchantment and Exploitation* and Rothman, *On Rims and Ridge*.

¹⁰ Utey, *Billy the Kid*, 17-35; Larson, *Forgotten Frontier*, 112; Joel K. Jacobsen, "An Excess of Law in Lincoln County: Thomas Catron, Samuel Axtell, and the Lincoln County War," *New Mexico Historical Review* 68, n. 2 (April 1993): 133-152.

the wayside as larger sources of outside capital and their predilection for ordering economic activity created new centers of wealth that superseded existing communities. Anglo-Americans took political offices previously held by Hispanos, sometimes by catering to the anti-Mexican prejudices of their Anglo-American neighbors. Economic vectors promoted some newer communities over existing ones. Well before 1900, Roswell wrested a leading role in regional commerce away from Lincoln. In 1889, Roswell became the seat of the new Chaves County, taking political importance from Lincoln County and the town of Lincoln as a sign of its growing economic position. One of fourteen new counties in New Mexico created from existing ones between 1880 and 1910, Chaves County came to dominate the southeastern portion of the territory. Lincoln lost further ground when the county seat it held moved to Carrizozo in one of New Mexico's innumerable late nineteenth-century boundary changes. Roswell became the economic center of the region as well as an important political center and Carrizozo enjoyed new status derived from a growing role in politics. Lincoln lost its political and economic position and soon withered.¹¹

The increasing solidification of power and wealth in a few hands contributed to the region's growing lawlessness. The colonial nature of the regional economy inspired not only Indian and Hispano resistance, but some by Anglo-Americans as well. After 1880, most Indians were confined to reservations; their difficulties had become separate from those of the rest of the population. Hispanos remained sufficiently numerous and important — tied by kinship and long-term interaction to the dominant Anglo community — to maintain a significant position in regional affairs, but with each passing year, Hispano power and status in an area soon called "Little Texas" diminished. For Anglo-Americans, the region became an outlaw's paradise. Many of the first Anglos to settle there were former and sometimes unreconstructed Confederates, often unwilling to pay more than lip service to American law. The environmental characteristics of the area promoted crime; the trans-Pecos contained a rustler's dream: open country; deep mountain canyons, often with springs, in which to hide; little infrastructure in the form of roads or marshals; and thousands of generally unattended animals. Typical self-interest guided resistance to the coalescing power structure, as poorer Anglos watched the prosperity of others in their midst with envy and sought to shave a piece of it for themselves. The abundance of herds enticed a wild element, and with few scruples on the part of many cattle buyers, rustling became a common practice. As happened around the world, from Tasmania to the Cape Province of South Africa, individuals from the dominant culture who failed to share in colonial prosperity sought their own extralegal paths to wealth and status.¹²

¹¹ Larson, *Forgotten Frontier*, 69, 204; Utey, *Billy the Kid*, 37; Jerry Williams, *New Mexico in Maps*.

¹² Urs Bitterli, *Cultures in Conflict: Encounters Between European and Non-European Cultures, 1492-1800* (Palo Alto: Stanford University Press, 1988); Noël Mostert, *Frontiers: The Epic of South Africa's Creation and the Tragedy of the Xhosa People* (London: Jonathan Cape, 1992); Robert Hughes, *The Fatal Shore*.

The locus of much of the rustling that passed as individualism originated in the community of Seven Rivers. Founded in 1867 by Dick Reed, who started a trading post there, it soon became a haven for the outlaws who sought to prey on the successful John Chisum and his more than 80,000 head of cattle. In the time-honored New Mexico tradition, Chisum dominated lush grasslands that were not his own; these public domain lands were free for the claiming, but Chisum's men treated anyone who tried as an interloper. A native of Tennessee, Chisum entered the cattle business in Denton County, Texas, in the 1850s; after the Civil War began, he became a supplier of beef to the Confederacy, in 1863 moving his operation west to the confluence of the Concho and Colorado rivers in Coleman County. In 1867, he brought 600 head of cattle to Fort Sumner. He found the area attractive and after engaging in a partnership with Charles Goodnight, Chisum established himself at the Bosque Grande in 1872. Chisum ran as much 20,000 cows that first, and his herd quadrupled in his first years in New Mexico. He required more grazing land in each successive year. Despite Chisum's lack of personal pretension, he appeared to later arrivals to be preserving his position on federal land at their expense. In response, a loosely knit group of small ranchers who followed the Pecos River north built herds out of Chisum's "strays." A class-, wealth-, and priority-based war began as a series of small, personal skirmishes. Reed's trading post became the center of a network of anti-Chisum people who settled in a fifteen- to twenty-mile radius around the confluence of the seven springs that gave the locale its name.¹³

Hugh Beckwith, a soft-spoken Englishman, became the leader and the spokesman for order among a loosely affiliated band that did not routinely obey American law. Beckwith came to the region as one of Chisum's cowhands and eventually became the cattleman's most outspoken adversary. The Englishman married Refugia Pino, the daughter of one of the Hispanic families in the area, giving him a larger stake in some form of order than many of the newcomers, mostly Texans, who arrived with dreams of wealth and little thought of putting down roots. When such men sought to divest Hispanos of their land on the typical late nineteenth century pretext that no clear title to the property existed, Beckwith stood in their way. In most accounts, he earned a reputation for decency and fairness.¹⁴

Preserving this in-between status of outright opponent of the powers in the region but principled and moral leader within the context of the so-called outlaw community proved a

¹³ Utley, *Billy the Kid*, 19-20; n.a., *Eddy County New Mexico to 1891*, 22; Stanley, *The Seven Rivers, New Mexico Story*, 2; Larson, *Forgotten Frontier*, 19-24, gives 1873 as the date for the founding of the trading post at Seven Rivers; she spells the founder's name "Dick Reid."

¹⁴ Stanley, *the Seven Rivers, New Mexico, Story*, 3-4; Larson, *Forgotten Frontier*, 24; the pattern of intermarriage between Anglo men and Hispanas typified the region. Even Sheriff Pat Garrett, the man who effectively supported the coalescing of American institutions, was married to a Hispana. Later generations frowned on such intermarriage, especially when relationships involved non-white men and white women. Yet before the firm establishment of dominant culture, such relationships predominated. See West, *The Way to the West* and White, *The Middle Ground*, for countless examples.

complicated and difficult task for Beckwith. Changing rules about land during the 1870s allowed some cattlemen to secure the use of large areas of valuable range land for a few years without even filing for title or otherwise complying with public domain law; it also gave them *de facto* power to exclude others. Chisum, perhaps the leading southwestern rancher of the day, was one of the major beneficiaries of the changes in law. Between 1867 and 1875, his herd grew from roughly 1,000 head to more than 80,000.¹⁵ The amount of grass this widely scattered herd consumed impinged upon almost every other rancher, Anglo or Hispano, in the trans-Pecos. In a repeat of the very issues that divided the nation and caused the Civil War, state's rights individuals asserted their claims against the growing power of corporate America and its many offshoots. Beckwith and others like him chafed at the growing consolidation of power and wealth.

Southeastern New Mexico remained a rough place in the 1870s, and Beckwith and his family became embroiled in its turmoil. Chisum harbored no love for the Seven Rivers cowboys, whom he routinely claimed rustled his cattle. Nor did he like Dolan, instead favoring Tunstall and McSween in the brewing Lincoln County War. Chisum's presence on that side pushed Beckwith's Seven Rivers group toward the Murphy-Dolan alliance. Only Hugh Beckwith tried to persuade the young men to stay neutral. One son, Robert Beckwith, who served as the postmaster of Seven Rivers, disregarded his father's counsel and took the Murphy-Dolan side. In the famous Five-Day Battle for McSween's house in Lincoln, the younger Beckwith, serving as a deputy sheriff tainted by his obvious allegiance to the Murphy-Dolan side, was killed while attempting to serve a warrant on McSween during the middle of the battle. Later Hugh Beckwith and his son-in-law, who Beckwith blamed for the deaths of his two sons, drew on each other in a heated dispute. Beckwith killed him and was severely wounded himself. The Lincoln County War, which had been an intellectual disagreement, became a hybrid economic and cultural dispute as well as a blood feud that in the end required the intervention of federal troops.¹⁶

Inter-ethnic conflict took many forms. The continuing disenfranchisement of Hispanos in the trans-Pecos and the subsequent elimination of knowledge of their substantive role in shaping the region took time. As did such situations across the West, the battle between incoming Anglo-Americans and resident Hispanos centered on perceptions of law and custom. The new arrivals believed that American law, the law of the nation that invented the idea of Manifest Destiny, always held sway. When permitted to argue in their defense, Hispanos pointed to the Treaty of Guadalupe Hidalgo as the legal rationale for their patterns of ownership, which

¹⁵ Harwood P. Hinton, Jr., "John Simpson Chisum, 1877-1884," *New Mexico Historical Review* 31 3 (July 1956), 187-89; Sandoz, *The Cattlemen*, 226; Larson, *Forgotten Frontier*, 108-11; Katz and Katz, "The History of the Carlsbad Basin, Southeastern New Mexico," 46-48.

¹⁶ Utley, *Billy the Kid*, 58, 97-99, 134; Stanley, *The Seven Rivers, New Mexico Story*, 4-6; Hinton, "John Simpson Chisum," 191-93.

typically relied on a relatively vague descriptive grant from the King of Spain, the Viceroy of Mexico, or the Republic of Mexico. In the late nineteenth century, American law often regarded Spanish and Mexican land grants as holding lesser validity than later American homestead claims. The result was a situation in which Hispanos from California to New Mexico lost their land to squatters, speculators, and even to the lawyers who defended them. Often Hispanos understood neither laws of American society nor the language in which such proceedings took place. Extralegal action by Anglo-Americans compounded even this enormous problem, as Hispanos were intimidated away from their property or consigned to the worst areas of a region while Anglo-Americans occupied the choice river basins and best ranges.¹⁷

One of the clearest illustrations of the changing nature of law and community relations took place on the gypsum and salt flats to the west of the Guadalupe Mountains. The Salt War of 1877 typified the difficulties that accompanied the change in jurisdiction and the transfer from custom to law. A group of saline lakes about 110 miles east of El Paso had been the source of salt for Mexican people on both sides of the Rio Grande for generations. People pushed handcarts across the sparse flats and rugged mountains of west Texas, always an arduous trip, collected the salt, and returned to the Rio Grande area to market their acquisition. Several villages in the El Paso area, including Ysleta, San Elizario, and Socorro, depended on the trade for sustenance. In 1877, after a number of attempts by Texas interests to privatize the resource, Judge Charles Howard, who had previously promised to protect free access to the salt beds, claimed them for himself and instituted a fee for collecting salt. In an instant, a resource that had been by custom a public commodity became private. An uproar that led to violence ensued. Mexicans organized to defend their access, while a company of volunteer rangers attempted to enforce Howard's decree. In a series of battles, Howard, a priest who spoke for the salt collectors, and three of the Anglo-American volunteer rangers were killed and a number were taken prisoner. Eventually, federal troops arrived to end the violence, a U.S. Army commission arrived to investigate, and the government reestablished Fort Bliss in El Paso to keep the peace.¹⁸

This cross-cultural conflict typified many patterns in the American West. As U.S. institutions coalesced in the region, the rules of Spanish and Mexican society were superseded by American law. This foreshadowed changing legal status and use of resources, as well as the sort of ad hoc chicanery in which Howard engaged. Such behavior typified Anglo-American expansion, taking place in Texas, California, and New Mexico as well as on Indian lands

¹⁷ Leonard Pitt, *The Decline of the Californios* (Berkeley: University of California Press, 1964); deBuys, *Enchantment and Exploitation*, 171-92; Rothman, *On Rims and Ridges*, ; Malcolm Ebright, *Land Grants and Lawsuits in Northern New Mexico* (Albuquerque: University of New Mexico Press, 1994), describes the general terrain in New Mexico.

¹⁸ García, *Desert Immigrants*, 156-57; David Montejano, *Anglos and Mexicans in the Making of Texas, 1836-1986* (Austin: University of Texas Press, 1987); C. L. Sonnichsen, *The El Paso Salt War* (El Paso: Texas Western Press, 1961).

throughout the West. In many ways, this laying down of an Anglo-American cultural overlay signified the consolidation of new power everywhere it appeared. It indicated that one older cooperative regime closed, and another, in which Anglo-Americans dominated by law and sometimes force, had begun.¹⁹ With the Salt War of 1877, the remote periphery of the Trans-Pecos region started to become typical.

The arrival of rail lines in the region secured the new order and replaced any remaining vestiges of a less-organized past. Railroads first reached El Paso in 1881, giving the little city on the banks of the Rio Grande a chance at being the first great southwestern city. By 1883, four railroads — the Southern Pacific; the Atchison, Topeka, and Santa Fe; the Texas and Pacific; and the Galveston, Harrisburg, and San Antonio — served the city; the following year, the Mexican Central's track reached the international border, and El Paso became a truly important junction.²⁰ It also pulled the surrounding hinterlands around it on both sides of the border more firmly into industrial capitalism's web.

While the railroad to El Paso offered people in the Guadalupe Mountains and throughout the trans-Pecos region an opportunity to participate more widely in commerce, it also remained brutally distant — out of reach but not out of sight. Throughout the 1880s, the significance of the new transportation technology, still 100 miles distant over the old roads and trails, grew, but it remained a frustrating force on the horizon to visionaries in the trans-Pecos. Local and regional outlets still provided most of the capital in the region; ranching and mining, while often successful, were still limited by the enormous difficulties in reaching the El Paso rail yards. As a result, the prices that products brought remained governed by a local and regional scale and not by their more lucrative national counterparts.

Nor was the trans-Pecos a freestanding region. El Paso increasingly counted its east, including the Guadalupe Mountains, within its economic sphere, while northern areas of the region such as Lincoln and Roswell looked to Las Vegas, Mora, and Pecos as its models. Despite barbed wire fencing and other technological advantages that cut across the range, the llano remained open as hooves of grazing animals passed across it, and the geographic center of the trans-Pecos — the area around Seven Rivers — remained the province of outlaws, renegades, and the cows they coveted. Although the Pecos River provided a geographic center as it wound its way through the heart of the area, no economic, political, or cultural core to match yet existed. Pulled by different forces in a range of directions, the Guadalupe Mountains

¹⁹ Bitterli, *Cultures in Conflict*; ; Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815* (Cambridge: Cambridge University Press, 1991).

²⁰ García, *Desert Immigrants*, 14-15; Sam Truett, "Neighbors by Nature: Rethinking Environmental History in the US-Mexico Borderlands," *Environmental History* 2 2 (April 1997), ; offers an example of this process; S.G. Reed, *A History of the Texas Railroads*, NY: Arno Press, 1981: 356-364; Rosa Lee Wylie, "The Coming of the Railroad in Culberson County," *The Permian Historical Annual XXI* (December 1981): 115-116.

and the trans-Pecos area remained a hinterland, largely devoid of any intrinsic identity.²¹

Some saw a future in the area as a place that could be persuaded to bloom with the application of modern technologies. An ambitious Confederate veteran, Joseph C. Lea, stood among the first. In 1877, he purchased the town of Roswell from a colorful raconteur, Van C. Smith, who started the remote community to keep himself from the temptation of gambling in settled places. Smith founded the town as Rio Hondo in 1869, renaming it “Roswell” in 1873 after his father. Lea became one of a very few local leaders who recognized that the future of the middle Pecos Valley depended on the expansion of its agricultural and ranching productivity. He was a dynamo who wholeheartedly believed in the future, without any hint of fear that its resources might not sustain cash-crop farming and ranching. Lea promoted the region with vigor and zest, persuading passers-by that no area offered them the opportunity that they would find around Roswell. He and others like him eschewed the casual violence that had become standard in the area, for it projected a counterproductive image of southeastern New Mexico — their home and the place they chose to make their fortune. At great economic and social cost and ultimately lesser political expense, Lea remained neutral throughout the Lincoln County War, advocating through his actions social order ahead of any other value.²²

In the 1880s, this stance helped Lea emerge as one of the region’s most influential people. He recognized the coming opportunities even before they reached the horizons of his neighbors’ understanding; this foresight encouraged others to follow his lead as the pace of development accelerated through the 1880s. Lea also recognized the political consequences of growth and the competition between communities both for economic advantage and for the position as county seat or the location of other government offices. Such a siting offered an economic baseline that could help sustain a community through lean years. From his seat in the territorial House of Representatives, to which he was elected in 1888, and with help from other regional leaders, Lea engineered the creation of Chaves County with Roswell as its seat in 1889.²³

The battle to create Chaves County linked Lea to others who supported his goals. Two of these were a former sheriff, Pat Garrett, who enjoyed the distinction of killing Billy the Kid, and the sheriff partner’s in an irrigation project, Charles B. Eddy. Originally from New York, Eddy came to New Mexico after he and a brother acquired two cattle ranches in Colorado and made them profitable. Enthusiastic, talkative, well off, and clearly a success, Eddy acquired huge tracts of land in southeastern New Mexico, in some instances by manipulating the Desert Land Act, passed in 1877 to encourage irrigation by offering 640 acres of public land with the

²¹ Tom Sheridan, *The Bitter River: A Brief Historical Survey of the Middle Pecos River Basin*, Bureau of Land Management, Roswell District Office, Roswell, N.M.: August 1975.

²² Uteley, *Billy the Kid*, 19-20; Larson, *Forgotten Frontier*, 195-200.

²³ Larson, *Forgotten Frontier*, 200-05.

title conditional on irrigation improvements. Garrett was already a national celebrity from his encounter and subsequent book about Billy the Kid. He and Eddy became instrumental in the process of securing the votes for a new county. Eddy received a form of regional acceptance and legitimation when the newly created county, which included much of the middle and lower Pecos River valleys, was named for him.²⁴

Irrigation was essential to any kind of Anglo-American settlement in southeastern New Mexico and individual efforts preceded organized commercial irrigation. Most of this was small scale, accomplished by Hispano and Anglo settlers alike. The skills and techniques came from every direction; from the Purgatoire River in southern Colorado, up the Rio Grande from Mexico and San Antonio, and later, from the Mormon example in Utah and from the returning veterans of the California Gold Rush, who showed their practices as they passed through headed east. Near Roswell in 1868, an irrigation system began on the Hondo River; ranchers such as Chisum followed soon after. Most of these were small-scale operations designed for one purpose, but a few lasted. The most impressive was a system built by Henry Harrison at Rattlesnake Springs. It became the longest continually operating irrigation system in Anglo-American New Mexico.²⁵

By the time they met Lea, Garrett and Eddy had become the biggest proponents of large-scale irrigation in the region. Eddy had a genuine interest in irrigation and Garrett enjoyed connections and even notoriety that resulted from his role in the Lincoln County War. Along with investors, they founded the Pecos Valley Irrigation Company in 1884, which developed a large ditch east of the Pecos River to Charles Eddy's ranch, located between Seven Rivers and the location of the modern town of Carlsbad. In 1886, after as many as thirty-five percent of southwestern cattle died as a result of a prolonged drought and a shortage of forage brought on by long-term overgrazing, Eddy recognized the region's future lay in agriculture and not ranching. Tales of the success of California irrigation played a role in persuading him of the viability of expanding the amount of land he irrigated; from the Imperial Valley through the Central Valley in the Golden State, irrigated agriculture had become a way of life. In 1887, with financing from the son of a family friend and the president of Chemical Bank in New York, Eddy constructed an irrigation canal to some of his company's land near La Huerta, north of Carlsbad. The initial endeavor was a success, changing the vision both local people and outside investors held of the Pecos River Valley.²⁶

²⁴ Larson, *Forgotten Frontier*, 204; Mark Hufstetler and Lon Johnson, *Watering the Land: The Turbulent History of the Carlsbad Irrigation District* (Denver: National Park Service, 1993), 12-14; Steve Bogener, *The Carlsbad Project* (second draft), Bureau of Reclamation History Program (Denver, CO: Research of Historic Reclamation Projects, 1993).

²⁵ Delmar Hayter, "The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1990," *West Texas Historical Yearbook* 67 (1986): 69-85; Katz and Katz, "History of the Carlsbad Basin, Southeastern New Mexico," 46-61.

²⁶ Hufstetler and Johnson, *Watering the Land*, 14-17; Larson, *Forgotten Frontier*, 158-60, 204; for

Irrigation became one of the technological catalysts of transformation, followed by the railroad that made it possible to move the produce that resulted from broader distribution of water to markets elsewhere. Flushed with success, Eddy, his brother John, and their partners and friends incorporated the Pecos Valley Land and Ditch Company in 1887. They planned three major canal systems, one each east and west of the river in the lower Pecos Valley, the third near Garrett's land in the Roswell area. When completely implemented, the project would provide water for crops on most of the land in the middle and lower Pecos valleys.²⁷

As did many such investors in the late nineteenth century West, the men who formed the Pecos Valley Land and Ditch Company possessed dreams that far exceeded the reach of their pocketbooks. Despite the wealth of some of the project leaders as well as their access to investors, most conceived of the Pecos Valley irrigation as a small-scale endeavor. With only \$40,000 in capitalization, the new company was tiny; it lacked the resources to build on the scale its leaders planned. Construction began on only one of the proposed canals; called the Halagueno Ditch, it merely expanded Eddy's existing canal near La Huerta. The funds ran short, and in this incarnation, Eddy and Garrett's company accomplished only a little of its planned work.²⁸

Available money and the scope of their dreams seemed to be the only obstacles to success. In 1888, Eddy raised the stakes, offering a much larger irrigation project for the Pecos Valley. The newly renamed outfit, the Pecos Irrigation and Investment Company, included a new source of funds, Robert Weems Tansill, who made his fortune in five-cent cigars in Chicago, and an extraordinary promoter, Charles W. Greene, a booster, newspaperman, and the publisher of Pat Garrett's memoirs about Billy the Kid. Together the newcomers offered the capital and managerial, promotional, and organizational skills the original proponents lacked. By 1889, the company enjoyed substantial capitalization; its coffers held more than \$600,000 and Greene traveled the country, selling another \$400,000 in Pecos Irrigation and Investment Company mortgage bonds to the Illinois Trust and Savings Bank of Chicago.²⁹ The new

California irrigation, see Donald J. Pisani, *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West* (Berkeley: University of California Press, 1983); Donald J. Pisani, *To Reclaim a Divided West*: (Albuquerque: University of New Mexico Press, 1992), and Norris Hundley *The Great Thirst: Californians and Water, 1770s-1990s* (Berkeley: University of California Press, 1993).

²⁷ Hufstetler and Johnson, *Watering the Land*, 16-17; Susana R. Katz and Paul Katz, *The History of the Carlsbad Basin, Southeastern New Mexico*. Bureau of Reclamation, Southwest Regional Office, Contract No. 3-CS-57-01690: 55-60.

²⁸ Hufstetler and Johnson, *Watering the Land*, 16; Lee C. Myers, ed. *The Pearl of the Pecos: The story of the establishment of Eddy, New Mexico and irrigation on the lower Pecos River of New Mexico*, Compiled from Eddy newspapers between October 12, 1889 and October 23, 1897 [cq]. Privately published, Carlsbad, New Mexico: 8-25.

²⁹ Hufstetler and Johnson, *Watering the Land*, 16-17.

backers provided the capital necessary to build the irrigation apparatus. Tansill also brought in another backer, James J. Hagerman, a wealthy Colorado Springs railroad builder and investor, whose instincts were aroused as he heard of the possibilities of the Pecos Valley.³⁰

Hagerman typified the entrepreneurial spirit of the age. Hard-driving and a little bit reckless, he made his fortune in Milwaukee in iron foundries and in iron ore mines of the Great Lakes region. He retired to Colorado Springs, but soon became enmeshed in the burgeoning silver mining industry there. Hagerman contributed to the building of the Colorado Midland Railroad and invested widely in area silver mines. His portfolio included a substantial percentage of the profits from the famed and wildly lucrative Mollie Gibson mine in Cripple Creek, Colorado. Although Tansill and Eddy perceived Hagerman simply as an “angel,” an investor with vast resources who alone could support the irrigation project, Hagerman remained a hands-on operator and soon became the driving force — not only in the irrigation company, but in the development of the entire middle and lower Pecos River Valley as well.³¹

The irrigation project in the Pecos Valley began to show all the traits of typical colonial economic enterprises. The project began with interested settlers who offered a vision that led to prosperity and growth, an economic and social template that reflected their roots in the national mainstream to lay upon a regional landscape that up to that time had not been harnessed for the wider industrial economy. These initial investors risked their own funds on a small-scale project, soon realizing that they lacked the resources to build a project that matched their dreams, and that not incidentally, offered the status and profits they sought. Recruiting money through connections to the core of industrial society, they found investors whose resources and reach far exceeded their own. Within a short period, these new investors assumed control and implemented projects on a larger scale than the people of the region could conceive; they also added another overlay to the scene, one conditioned and driven from the outside that took greater notice of needs beyond the region than within it. The initiators of the project found themselves scrambling to use their local standing to maintain status, power, and a chance at the wealth the new project might offer as the decisions increasingly came from people who sat behind long and wide oak burl desks far away.

As his partners raised money, Eddy looked toward future growth of the region. In 1888, he platted a townsite near his Halagueno ditch in hopes of capitalizing on the planned reclamation project. Located near the center of the area to be irrigated, the townsite, which soon became called “Eddy” after its founder, seemed the likely center for a subregional economy as irrigation filled its valleys and its coffers with expected wealth.³² Again, in a pattern

³⁰Percy Hagerman, *James John Hagerman: A Sketch of his Life By His Son Percy Hagerman*, The Texas Historical Survey, Student F.E.R.A. Project, 1935. Sponsored by the University of Texas.

³¹ Hufstetler and Johnson, *Watering the Land*, 17-18.

³² Hufstetler and Johnson, *Watering the Land*, 20-21.

that typified development in the arid regions of the United States, the plans preceded not only the arrival of the residents who would live there, but also the economic system that would entice them there in the first place.

The development program moved forward. In 1889, with funds raised through Tansill and Greene, the company constructed its first canals. By March 1889, when Ralph Tarr of the U.S. Reclamation Service visited the region to initiate a field survey mandated by law, the Northern Canal, which started at a diversion dam on Pat Garrett's property near Roswell and ran almost forty miles, neared completion. The Eddy projects had begun as well, with crews planning the first canals that were supposed to extend more than forty miles to the Texas border and irrigate as much as 125,000 acres. A diversion dam, a system of canals, and a large wooden flume that would carry the water across the river before sending it down toward Texas, were all planned.³³ By the standards of the trans-Pecos in 1890, this was an enormous project.

Hagerman integrated the project with another major infrastructural development of his own, the railroad he financed that ran through the Pecos Valley. In 1890, he incorporated the Pecos Valley Railroad Company and planned tracks that would reach from the Texas & Pacific line that passed through Pecos, Texas, on its way to El Paso, north to Roswell. In this most crucial of developmental steps, Hagerman provided the internal infrastructure to necessary to deliver the fruits of irrigation to the outside world. As one of the two predominant technological innovations in the area, the railroad opened new options for the entire region. When the rail lines reached Eddy in February 1891, it increased the value both of land and the water from the irrigation projects. At Roswell, where trains first arrived in 1894, railroads completed the process of linking the Pecos Valley to the outside world to its south.³⁴

Hagerman built his railroad from south to north, both a symbolic and post-Civil War irony in the context of American Western expansion. Instead of looking to the Atchison, Topeka, and Santa Fe, 160 miles to the north along a route roughly following the path of the old Santa Fe Trail, he linked to the southern route from San Antonio to El Paso and onto California. Inexplicably, Hagerman, who hailed from Canada and the Midwest, bypassed the opportunity to connect to industrial America and instead became linked to the agrarian South, the semiarid Southwest, and the as-yet largely undeveloped southern California area. He may have expected more rapid growth in the Southwest and West. While the decision provided the people of the Pecos Valley with two directions — west and south — in which their produce could easily travel, it also added to the region's anomalous nature. At precisely the moment the greatest

³³ Hufstetler and Johnson, *Watering the Land*, 24-25; Ralph S. Tarr, *Reconnaissance of the Guadalupe Mountains* (Austin, TX: Geological Survey of Texas, 1892).

³⁴ Hufstetler and Johnson, *Watering the Land*, 32-33; Delmar Hayter, "The Early Development of the Pecos River Valley of New Mexico and Texas, 1880-1900" *West Texas Historical Yearbook* 62 (1986), 69-85; n.a., *Eddy County New Mexico to 1891*, 24; Elvis E. Fleming, "J.J. Hagerman and the Pecos River Railroad," *Permian Historical Annual XIII* (December 1973): 21-35.

vectors of expansion pushed through the northern plains, an economic leader with ties to that process selected a less-direct connection for his latest project.

The combination of the irrigation project and Hagerman's railroad changed the tenor of life in the Pecos Valley. These outside developers — Hagerman, Eddy, and the others — brought the systems of industrial America along with the technologies they sponsored. A significant amount of money had been invested in the Pecos Valley, and its newly proclaimed leaders, who bankrolled the region, expected their investment to pay off. After generations of being a periphery, the Pecos Valley had been linked to the core in such a way that local idiosyncracies such as the grappling for economic control that characterized the Lincoln County War became undesirable and regional patterns increasingly came to mirror the mainstream values of American society as closely as could be accomplished along a spur railroad that connected to a trunk line on a periphery.

The railroad and irrigation systems radically changed the economy of scale in the trans-Pecos. Prior to 1890, the main economic endeavor had been stock-raising, and for most of the Anglo-American history of the region, the animals had been sold locally, often to the Army. When the hooves of the Pecos Valley animals went elsewhere, a huge cattle drive — comprising thousands of animals and more than one hundred men — changed the picture of the region for a substantial time. The conflicts of the region centered on this regime, with the renegade communities that preyed on Chisum and the conflict over control of a seemingly fixed economy that could grow no more after the range lands of the area were filled with cattle. In the aftermath of the railroad and the irrigation development, the changes that indicated a shift to an agricultural economy began in earnest. Water reclamation offered the possibility to divide land into the parcels of individual ownership. No longer could a cattleman own a water source and enjoy control over vast surrounding acreage. A canal or ditch could make that land bloom with the produce of a yeoman farmer. In effect, the institutions of industrial society fostered the illusion of personal independence that had become an American icon and myth. In the view of the late nineteenth century, the people who came to settle in this technologically transformed environment were an essential component of the backbone of virtuous democracy.

The genesis of communities in the region stemmed from the view of irrigation as a social panacea. The Pecos Irrigation and Investment Company sold dreams; the irrigable land it offered and the use of the railroad to bring people in and produce out made living in the region feasible in Anglo-American terms for immigrants and migrants. Promoters such as Charles Eddy talked little or not at all about the hardships that the military once faced in the region; they noted the Indian past, but disregarded it in the present. The trials and travails of explorers were the stories of myth, not of post-railroad, post-irrigation reality. With these technologies, the message explained, the Pecos Valley, once dry, sparsely inhabited, and distant, became no different from anywhere else.

Certainly after 1890, the organizational structure of the region mirrored that elsewhere in the country. Its patterns of ownership, especially the consolidation of the most valuable land in a few hands and its resale as irrigated land to newcomers, were typical of the rural West. So was

the ongoing strife between partners in the operation; first Garrett found himself on the outside, then Eddy and Hagerman quarreled, and a power struggle followed. Although Hagerman became the majority partner in both the railroad and the irrigation project, Eddy still owned the townsite. Two of the pillars of the transformed region often found that their objectives did not mesh. Hagerman regarded the irrigation project as part of a multistage network, in which national needs and concerns outweighed regional and local ones; Eddy saw himself as the local developer and placed the region's needs ahead of larger issues. Two different forms of industrial-era development coincided. Discord followed.³⁵

The tension initially did not affect the irrigation project. The company constructed its first major dam project in the lower Pecos Valley beginning in 1889. The company hired separate contractors to build the three major features: the diversion dam, the flume across the river, and the canal. The most complex part of the operation was the large wooden flume, which was completed in March 1890. The diversion dam, built for irrigation with the kind of rockfill design typically employed in hydraulic mining, took longer. Eventually called the Avalon Dam, this structure impounded as much as one billion acre-feet of water in its six-mile-long reservoir. Locals marveled at the canal — forty-five feet wide at the bottom and seventy-feet wide at the top; one observer wrote that when full of water, the “tallest man in America could not wade [through] it.” Three and one-half miles below the head gates, the main canal divided into its eastern and western tributaries, carrying water to lands on both sides of the river as well as downstream.³⁶

Despite planning and preparation, the new dam could not meet the needs of the growing area. Avalon Dam was too small to both maintain the reserve of water necessary for the canals and to provide sufficient water storage. In October 1892, shortly after the completion of the original system, a new project began upstream from Avalon Dam. Called McMillan Dam, the rockfill structure was projected to be 1,686 feet long and as much as fifty-one feet high; its total cost was to exceed \$175,000. After its completion, McMillan Dam held almost eight times the amount of water behind Avalon Dam, enough to supply the entire Pecos Valley canal system for seventy-two days.³⁷ The Avalon and McMillan dams were remarkable technical and social achievements in a region that fifteen years before had seen an outright war between two factions of Anglo-American newcomers trying to control the region's wealth. The dams proved that in spite of Chisum, Billy the Kid, and even the Mescaleros, the real power in the trans-Pecos now lay outside its rugged topography.

³⁵ Hufstetler and Johnson, *Watering the Land*, 32.

³⁶ Hufstetler and Johnson, *Watering the Land*, 24-28.

³⁷ Hufstetler and Johnson, *Watering the Land*, 39-42; n.a., *Eddy County New Mexico to 1891*, 24; Hayter, “The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900,” 75-76.

Charles Eddy's incessant promotions and the success of the initial irrigation project attracted settlers. To Europeans and Americans in other parts of the country, the trans-Pecos seemed another of the seemingly infinite locations to prosper in the American West. Climatic anomaly played into this perception. A number of very wet years followed 1890, creating the illusion of natural prosperity as well as that easily derived from irrigation. The valley appeared to be an outstanding location to grow grapes, peaches, apricots, plums, pears, and apples. Despite setbacks in a sugar beet project, the transformed area appeared to offer great potential. Hagerman recruited immigrants from as far away as Switzerland to farm. One group from the Canton of Vaud purchased land in the region before they arrived in 1891 and eventually formed one of the important cores of the Eddy community.³⁸

During the early 1890s, the trans-Pecos seemed close to fulfilling a level of promise that only participants in the economic revolution of the nation could recognize. From paleo-people to the renegades of Seven Rivers, the region always seemed spare, even a zero-sum equation in which the gains of any group came at the expenses of another. Eddy, Hagerman, and their friends reinvented the area as a typically late nineteenth century location, a place of infinite promise where only hard work separated an immigrant or the poor from prosperity and the even-more important personal independence. Hagerman and his peers believed in a mythological America where virtuous work not only set people free but made them powerful and prominent and gave them the potential to endure. Even with irrigation, the Pecos Valley threatened to test the very basis of such assumptions.

Rainfall that the dams were supposed to augment provided the initial catalyst for questioning the viability of private irrigation in Pecos Valley. August 1893 brought extraordinary precipitation, and the water rose behind Avalon Dam. Finally, the water topped the dam, and soon after the structure gave way, creating an enormous wall of water that swept down the valley. The water drowned fields, inundated houses, and spread out in the lowest areas nearest to the river. It destroyed the dam and severely damaged the flume and the canal system, as well as the railroad.³⁹

In the United States, 1893 was a dismal year. An economic downturn became the Panic of 1893, as British investors who owned much of the American railroad network sensed weakness and began to sell off their holdings. The failure of the Philadelphia and Reading Railroad in a bankruptcy cost investors more than \$125 million and devastated an economy careening out of control. Extensive government silver purchases, mandated by the Silver

³⁸ n.a., *Eddy County New Mexico to 1891*, 14, 18-19; *Carlsbad Current Argus*, "Pioneers Recall Beet Sugar Refinery of 1890s," March 19, 1950; Hayter, "The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900," 77.

³⁹ Hufstetler and Johnson, *Watering the Land*, 42-43; n.a., *Eddy County New Mexico to 1891*, 13; Hayter, "The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900," 76.

Purchase Act, drained national gold reserves, and even a mammoth bailout by Eastern bankers could not raise federal assets in gold above the symbolic \$100 million mark. On June 27, 1893, the New York stock market crashed, plunging the nation into what would be a severe four-year depression.

As is typical in colonial economic situations, the peripheries were hit even harder than the core, and the American West was no exception. Much of the region's wealth during the 1890s derived from railroads and mining, in particular silver mining. These were the days of the silver mining center of Aspen, and of the Populists' alliance with silver mine owners in Nevada, Idaho, and other western states in an effort to secure less expensive capital for farmers in search of loans. Western assets vanished; even Hagerman, who made most of his money in the east and who had become by 1893 the leading financial backer on the Pecos Valley, suffered immensely. By the 1890s, his wealth mainly came from railroads and silver. During the crisis, he later remarked, his net worth declined by more than \$2.4 million in just one month.⁴⁰ As the rains fell and decimated the Avalon Dam, the national economic power that supported the entire valley also faced inundation.

Despite his depleted capital, Hagerman stood in the breach. Faced with the imminent departure of many area farmers, he promised to finance the dam's rebuilding at his own expense. The more than \$150,000 he invested became his last major financial contribution to the Pecos Valley. Early in 1894, the rebuilding project ended with a slightly bigger and higher Avalon Dam. Hagerman's bold gesture inspired confidence, for if a man with such wealth and commitment — represented by his personal funds — still believed in the region, others could not reasonably give up their own faith. Hagerman's gesture shored up lagging confidence, but it only slowed a pattern of decline.

The dam failure served as a catalyst for other problems with irrigated agriculture in the trans-Pecos. Hagerman's investment of the additional \$150,000 smacked of the old adage, "throwing good money after bad." Farming in the Pecos Valley remained as much a dream as a viable reality. Many in the valley tried to grow specialized perishables for which better markets existed east and north of the region; Hagerman's railroad connected the area only to Texas and the West, where produce demand was lower. The long train rides and the constant jostling damaged some of the valley's exports on the way to market. Although Hagerman solved the problem of long train rides by financing another spur to Amarillo, Texas, he could do little about drought, dust, and other impediments to agriculture.⁴¹

Although the spur reached Roswell in 1894, its cost pressured Hagerman's depleted

⁴⁰ Robert W. Larson, *New Mexico Populism: A Study of Radical Protest in a Western Territory* (Boulder: Colorado Associated University Press, 1974); Hufstetler and Johnson, *Watering the Land*, 42.

⁴¹ Hufstetler and Johnson, *Watering the Land*, 43-44; n.a., *Eddy County New Mexico to 1981*, 24; Hayter, "The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900," 73.

resources, and by 1896, creditors placed the railroad in receivership. Hagerman's Texas & Pacific branch from Pecos reorganized as the Pecos Valley and Northwestern. It built north and east through Roswell and eventually toward Amarillo. As it did elsewhere in the West, the Atchison, Topeka and Santa Fe came in on the heels of local collapse and purchased the rail system. In this case, Hagerman felt relief as the AT&SF completed his construction; by 1901, the railroad also owned the remainder of his interests.⁴² The conditions of the valley and a national financial crisis combined to drain the resources of a proud and sophisticated industrial capitalist. The trans-Pecos region retained its irascible hostility to human endeavor.

The Pecos Irrigation and Improvement Company fared no better. The needs of the canal system and the recruitment of new farmers to purchase the water drained company coffers, and a decline followed. Even the introduction of new crops failed to slow the company's end. Land speculation within irrigated areas worsened local economic conditions, driving prices up and changing the crops grown as farmers had to earn more to pay their mortgages. As occurred with most of the private irrigation companies in the West, this one went bankrupt. With cash short and problems mounting, Hagerman issued an ultimatum to his Swiss investors and the other bondholders as 1897 ended. If they did not increase their investment, neither would he and his partners. In a complicated financial arrangement that engendered ill feelings and put the entire investment at risk, the company reorganized in 1898 as the Pecos Irrigation Company with more than \$1.7 million of unsecured capital. Hagerman gradually pulled out of the lower Pecos, focusing his considerable energies on the Roswell area. Although the bondholders filed lawsuits, the reorganization took effect February 1, 1901, ending the initial irrigation regime in the trans-Pecos.⁴³

By 1900, the entrepreneurial Hagerman lost a fortune, as had most of the principals of the various companies. Garrett had been forced out of leadership first, and Eddy fought with Hagerman and departed to a successful career as a railroad and corporate entrepreneur elsewhere in New Mexico and the West. The town that bore his name changed its title to "Carlsbad" in 1899. Other investors fell by the wayside. Hagerman absorbed most of the financial damage; as the controlling influence he risked the most, stood to gain the most, and paid the highest economic price. Although the entire trans-Pecos irrigation and railroad endeavors during the 1880s and 1890s may have been ill-advised from the start, Hagerman pointed to more tangible factors in their demise. He regarded shoddy dam construction and

⁴² Hufstetler and Johnson, *Watering the Land*, 43-45; n.a., *Eddy County New Mexico to 1981*, 13; Hayter, "The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900," 80-81; for a description of the AT&SF's practices, see Hal Rothman, "Selling the Meaning of Place: Tourism, Entrepreneurship, and Community Structure in the Twentieth-Century American West," *Pacific Historical Review*.

⁴³ Hufstetler and Johnson, *Watering the Land*, 43-49; n.a., *Eddy County New Mexico to 1981*, 124-25; Hayter, "The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900," 79.

untrained engineers, poor financial management, the region's inherent agricultural limitations, and a lack of efficient transportation as the catalysts.⁴⁴ Hagerman's perspective contained merit. Only after 1898, with the new rail link to Roswell and Amarillo, could goods from Eddy County easily reach the huge markets of the Midwest and East; the initial dam construction was haphazard, financial management remained slipshod, and the agricultural limitations of the region were genuine. Combined with nationwide economic conditions after 1893, the national confidence in industrial power as a transformative factor for all regions helped Hagerman and his partners overreach even the technologically enhanced capabilities of the trans-Pecos.

Hagerman's financial losses illustrated the ongoing issue of the Guadalupe Mountains and the trans-Pecos. Even with the advantages of industrial technology and access, however limited, to the national market, the region remained difficult to harness in any consistent manner. Capital infusions helped, but aspirations that exceeded even the valley's enhanced capabilities doomed participants to expensive failure. Their inability to see the actual region — a semiarid place possessed of poor and rocky soil, with precipitation patterns that fluctuated greatly, and far from any core area even on railroad tracks — and their overwhelming faith that nothing could stand in the way of American industrial progress meant that many of the late-nineteenth century entrepreneurs never really accepted the trans-Pecos for what it was.

In a semiarid region, the application of industrial technologies, especially the railroad and corporate irrigation, made development feasible but failed to secure the success of individual companies. These technologies and the market economy ended the historic pattern of following the river courses to pass through the region. Instead of circumventing the region as had nearly all predecessors, Anglo-American industrial technologies and market conditions made sedentary habitation possible. Encouraged by the ebullient promoter, Charles B. Eddy, a community grew up along the Pecos River that served as a center for the region. The town of Eddy, now Carlsbad, created a different kind of staying power that superseded even the technological strategies of the era.

As Carlsbad became established, it changed the direction of local and regional culture. Since before the days of Seven Rivers, the region tolerated a wide-open tradition that condoned extralegal and often illegal activity. The tension among Anglos that culminated in the Lincoln County War attested to the personal way that regional disputes usually ended. By 1900, the psychic and cultural room for the outlaw behavior of the era largely disappeared, except where codified in law such as in Phenix, adjacent to the town of Eddy. There the practice of vice, forbidden in Eddy proper, took place in an officially sanctioned manner. Instead, Eddy, a city with aspirations, a center for the region, took shape and grew.

These links to the market economy came at a price. A community was only as valuable as its resources and only as important as its infrastructure. Especially in the peripheries of the semiarid world, the arrival of market goods and technologies had the potential to create

⁴⁴ Hufstetler and Johnson, *Watering the Land*, 47-48.

dependency on the outside. Instead of devising home-grown economic strategies that would sustain the region through lean times as well as more successful ones, the region looked to the national market for sustenance. On one level, this predilection accounted for the failure of various economic strategies; on another, it also explained the successes of the region when they occurred. In Eddy and throughout the Guadalupe Mountains and the trans-Pecos region, the tenuous relationship between the region and the outside world became a dominant feature of regional economic life. The result was a turn to federal support, first in irrigation, where public money soon replaced the private funding of the Hagerman era, later with the establishment of the Carlsbad Cave National Monument.



Mescalero Apache wicki-up (Courtesy Guadalupe Mountain National Park)



Indian mortar holes at Guadalupe Mountains National Park (Courtesy Guadalupe Mountain National Park)



Cathedral Rock – South Peak of Guadalupe Mountains

Historical sketch of El Capitan and Guadalupe Peak in 1854, drawn by Robert Schuchard (Courtesy Guadalupe Mountain National Park)



El Capitan and Guadalupe Peak (Courtesy National Park Service)



During the 1880s and 1990s many of the ranchers of the rugged Guadalupe continued to drive their cattle several hundred miles northeast to Clayton, N.M., because it had a more direct rail route to their markets. The men who made that trail drive in 1889 sat for this portrait in Clayton, surrounding a clerk from a Clayton general store who asked if he could join them for the picture. “Black Jack” Ketchem, who was hanged at Clayton in 1901 for train robbery was a Guadalupe cowboy and a member of this trail drive. He stands at the center, rear. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



The Butterfield Stage line ran past the Guadalupe mountains, and the Pinery, one of its way stations, was located at the base of Guadalupe Peak. All that is left today at the national park are these ruins. (Courtesy Guadalupe Mountains National Park)



The town of Eddy (today's Carlsbad) was a real estate development created "overnight" on a previously structureless and treeless plain. The town company immediately paid for the creation of several major buildings to impress potential buyers. This photograph shows the Haggerman Hotel and the brick bank building to the right. It also shows the little ditch system for the live cottonwood staves that were quickly set out to create some shade in the area. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



Much of the money for early development of irrigation projects in the middle Pecos Valley came from John Hagerman, left, at that time owner of the Mollie Gibson silver mine of Colorado, known as the richest in the world. This photograph was taken at his headquarters at South Spring, a few miles southeast of Roswell. The floods on the plains of New Mexico, which destroyed the parts of the system, including the wooden flume above, cost him most of his fortune. (Courtesy Southeastern New Mexico Historical Society of Carlsbad.)



One of the pivotal structures in the original irrigation system near today's Carlsbad was this large wooden flume which carried the main canal across the Pecos River. Floods would periodically destroy the structure – and shut down the irrigation system – several times, before a concrete flume replaced the wood one. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



The original Pecos Valley irrigation system near Eddy drew its waters from the two man-made lakes that were constructed at the upper end of the project. This buggy, photographed about 1895, sits beside the headgates at Lake McMillan, which was the larger of the two reservoirs. The headgates were on the Pecos River, about eighteen miles north of today's Carlsbad. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



In 1903 the privately owned Pecos Valley Irrigation Company finally replaced its giant wooden flume with this concrete structure. The following year another major flood struck that destroyed all the dams, reservoirs and bridges in the area and threw the irrigation company into bankruptcy – but left the concrete flume standing undamaged. It is still in use today. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



The Pecos Valley's limestone understructure gave the early irrigation system several unexpected problems relating to leakage in reservoirs. Sinkholes soon showed up in the bottom of Lake McMillan, and this large dirt dike, under construction in 1912, was built across part of the lake bed in an attempt to keep the lake's waters away from the larger holes, but the problem was never totally solved. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



Irrigating sugar beets on a farm near Hagerman in 1896. Thousands of acres of sugar beets were planted in the Pecos Valley during the 1890s, but the agricultural experiment failed. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



Around 1902, many of the valley's farmers set out peach and apple orchards. This was also the experimental period for cotton in the area, and this farm is irrigating cotton rows between the orchard trees. The orchards all failed within a decade, but cotton became one of the valley's long-term money crops. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



The early agricultural economy of the Middle Pecos had periods of prosperity mixed with years of disaster. Ranching was often in an alternative cycle, and the area's cattle and sheep industries successfully carried the town of Eddy/Carlsbad through several hard years. This stock pen and loading facility, photographed in 1903, were set beside the railroad at the south edge of town. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



While most of the irrigation farmers who came into the Pecos Valley set up operations on smaller acreage, a few large farms did appear. These pigs and cattle are grazing in 1895 on alfalfa at the Tansill Farm, which began its existence with a fine home and a large array of outbuildings. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



Since the 1890s, the valley's American hunters have frequently traveled to the Guadalupe in pursuit of wild game. These men are skinning a brown bear beside a log cabin in the heights around Big Dog Canyon around 1903. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



In the High Guadalupe there is a fairly limited area of pine forest, and the earliest ranchers were able to build log cabins. This was the Ned Shattuck place in Upper Dark Canyon in 1932, one of the last log buildings to remain in use. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



In early 1891 the railroad came north to Eddy, and three years later it was continued north to Roswell. This group of men was photographed with the first train to reach the outskirts of Roswell. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



For many years after the railroad came to Eddy, no additional railroad system penetrated the ranching region that ran almost one hundred miles east from the Pecos River to the Texas state line. Eddy/Carlsbad was the railroad terminus for a vast section of that area of the llano estacado, and provided mail and economic service. This fully loaded mail car, above, was preparing to make its twice-weekly trip to the small communities of the eastern sandhills in 1918.



Jim White was fully involved in the mythology of Carlsbad Caverns. In this 1926 photograph, he poses with the bucket used to haul guano miners and later tourists down into the bat cave.



Taken inside the Bat Cave in 1924, this photograph shows several tourists or scientists descending by means of the bucket to the guano operation. From there they were led by Jim White into the more decorated parts of the cave. At the end of their tour they ascended via the bucket. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



The town of Carlsbad adjusted to the tourist industry as the caverns became established as a major attraction. The town's La Caverna Hotel was built in 1928 and for a time provided most of the accommodations for the upscale tourist trade. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



Sixteen mule teams were still pulling supply wagons between the Pecos Valley's railroad and the surrounding ranching communities to the east during World War I, as this team is doing in 1917. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



One of the isolated ranching operations in the Guadalupe Mountains was the Frijole ranch, run by a host of owners of the years. The ranch house, above, was used as a residence by the National Park Service after the national park was established. (Courtesy Guadalupe Mountains National Park)



Miners worked several small-scale guano operations in the minor caves of the Guadalupes beginning in the 1890s. Soon after the turn of the century, the largest of these operations was the Bat Cave, today's Carlsbad Caverns. This photograph shows the above-ground facilities at the Bat Cave that existed in 1924. The A-frame hoist and bucket are at right. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



One of the popular stops during tours of Carlsbad Caverns was the lunchroom, 750 feet below the surface, as evidenced by the lines above. The caverns targeted the country's middle and upper class travelers, with special trains and limousines used for transportation. The elegantly dressed travelers contrast with the rustic cavern tour guides. (Courtesy Carlsbad Caverns National Park)



The elegantly dressed travelers contrast with the rustic cavern tour guides. (Courtesy Carlsbad Caverns National Park)



Willis Lee examines one of the caverns natural formations during the expedition sponsored by the National Geographic Society. (Courtesy Carlsbad Caverns National Park)



Illinois Producer No. 1 was the first successful oil well in the middle Pecos valley. The photograph is somewhat misleading in that the geological conditions underlying the valley do not produce natural gushers. The people surrounding the well had been invited to witness the detonation of a nitroglycerine charge at the bottom of the recently completed well which, it was hoped, would increase the wells flow. This “gusher” was a very brief side-effect of that explosion that the photographer was fast enough to catch. (Courtesy Southeastern New Mexico Historical Society of Carlsbad)



Oil and natural gas have been lucrative industries in the Trans-Pecos since the early years of the twentieth century. A typical oil rig, Pratt No. 1, operated by Humble Oil Company, was operating in McKittrick Canyon in this 1967 photograph. (Courtesy Guadalupe Mountains National Park)



During World War II Carlsbad Army Air Field sprang into existence southwest of town as a training facility for navigators and bombardiers. When the war ended, the base disappeared almost as quickly as it had appeared. This aerial photograph was taken shortly after the base closed in 1945. (Courtesy Southwestern New Mexico Historical Society of Carlsbad)



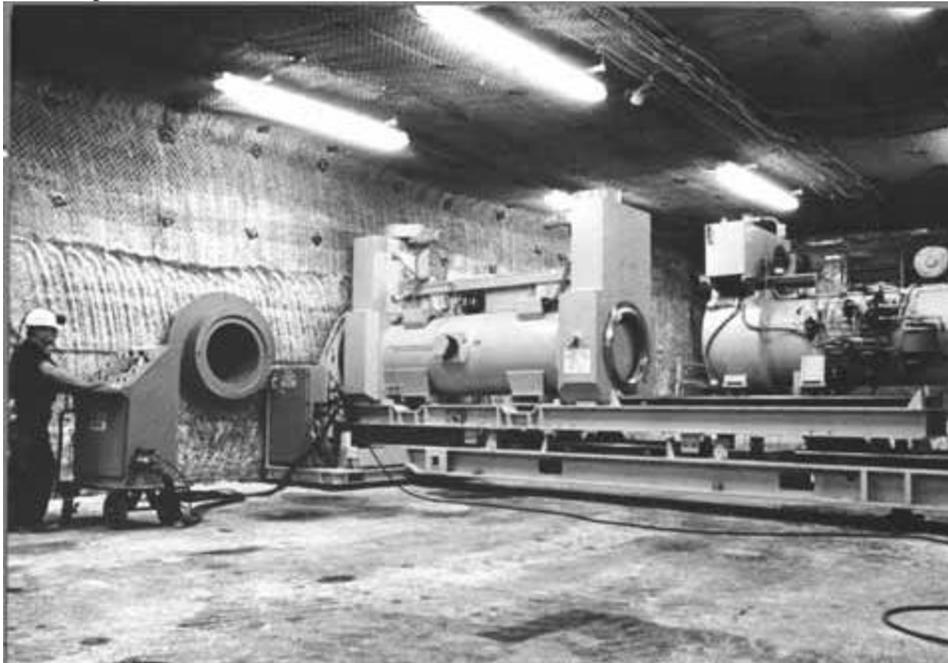
Major potash deposits were discovered in the desert east of Carlsbad in the 1920s. Mining began early in the following decade, and by 1960 there were six major mines employing several thousand workers. This aerial photograph of the Potash Company of America plant was taken in 1948. (Courtesy Southwestern New Mexico Historical Society of Carlsbad)



Wallace Pratt donated his McKittrick Canyon properties as one of the foundations of Guadalupe Mountains National Park. (Courtesy Guadalupe Mountains National Park)



One of the most serious controversies facing the park involved the Pine Spring Café, shown above in 1968. (Courtesy Guadalupe Mountains National Park)



The major employer in the Carlsbad area at the end of the twentieth century is WIPP – the Waste Isolation Pilot Project for storage of low – level nuclear waste. The facility includes a vast network of corridors carved into thick salt beds one and a half mile below the desert floor. This machine inserts cylinders of waste into storage tubes drilled into the salt. (Courtesy WIPP)



Thomas Boles, the first superintendent of Carlsbad Caverns, returned to the area in September 1972 for the dedication ceremonies for Guadalupe Mountains National Park. (Courtesy U.S. Army, photograph from Guadalupe Mountains National Park Archives)

Chapter 6:

Aspirations and Realities

By the twentieth century, economic and social patterns common to the peripheral communities of the West had come to define the trans-Pecos and southeastern New Mexico. American rules and laws held sway. Ranching, agriculture, and mining dominated regional economic life, and Anglo-Americans enjoyed a measure of control over the area's prior inhabitants, and even physical nature itself. Permanent settlements dotted the landscape — towns, farms, and ranches — defining the region dramatically different from that of pre-Columbian peoples, Victorio's followers, or even the rustlers and regulators of the 1870s.

This new level of energy was more apparent than real. Southeastern New Mexico and trans-Pecos Texas remained different from core areas of the nation — the humid and sticky agricultural lands of the Middle West, the expansive cattle ranches of the Great Plains, and the ports and factories of industrial America. Far removed from the politics, cultural life, and aspirations of either Texas or New Mexico, development in the region proceeded at a pace determined by local people and the economic demands of railroads and markets. Regional growth proved idiosyncratic, following rhythms dictated by physical limitations. Attempts to build dams and irrigate land had both succeeded and failed, bringing prosperity to some by linking them to national markets, but driving others to ruin when their decisions and the limited productivity of local land did not mesh. Only those who practiced subsistence agriculture succeeded at all, but they typically bumped along at the bottom of the economic ladder without the amenities craved by those closer to the market economy.

The end of private financing for large-scale projects tempered the tone of life in southeast New Mexico, but the industrial myth remained strong, and private enterprise still seemed the best way to shape a strong regional economy and culture. The era of dam-building exuded a bold optimism, a confidence in the ability to tame nature and bend it to the will of humans. With leaders such as James J. Hagerman spouting a philosophy of ongoing prosperity and everyone dreaming of wealth in the liquid gold regulated by the dam, not being drawn in was hard. Outside investment seemed to confirm local optimism, but when the money dried up and the projects withered, a more typical feel settled over the trans-Pecos. Instead of a perpetually bright future, local residents faced an ongoing struggle in which their success depended on the ability to persevere and to find new ways to eke a living from the parched ground they called home. While the region possessed significant attributes, shortages of capital and hopes severely impaired the development of promising economic strategies. A gap existed in the trans-Pecos, one that typified semiarid peripheries: they simply lacked the ability to sustain its peoples' aspirations.

For the first two decades after 1900, the area languished in a kind of torpor. Although the Texas legislature passed homestead provisions that increased settlement in what later became Guadalupe Mountains National Park, most new claims more closely resembled subsistence farms than the large-scale agricultural enterprises increasingly common elsewhere in the West. Around Carlsbad, people searched for new options, grasping at solutions such as guano mining to augment the irrigated agriculture upon which they had previously depended. While this created pockets of prosperity and some enthusiasm, it could not replace the ebullient optimism of the preceding decade.

At the southern end of the region, near the Guadalupe Mountains, the developments of the Hagerman era had a far more limited impact. Settled by immigrants streaming west from *llano* Texas, not from the north or mountain West that produced Hagerman, Eddy, and the other leading entrepreneurs of the 1890s and early 1900s, the region remained largely wide open, dotted by ranches separated by the immense distances that made Texas legendary. Few sources of water made each drop precious, holding population size in check and forcing many into a way of life that seemed archaic even to people of the small-town West. Ranch life remained hard, especially on the peripheries, and much of the region acquired a hard-edged cast. Its people struggled long and hard to survive. They knew and sometimes even resented their lot.

Despite the hardships, settlement around the Guadalupe Mountains increased after 1900, when the Texas legislature passed the Eight Section Act, which gave settlers larger portions of land. This typical western strategy owed its origin to explorer and Gilded Age Renaissance man John Wesley Powell. In 1878, while serving as head of the Geographical and Geological Survey of the Rocky Mountains, he suggested to the Interior Department that 2,560 acres was a much more equitable size for homesteads in the arid West than 160 acres. Legislation such as the Timber and Stone Act of 1873, which allowed settlers to homestead additional lands for sources of wood and stone, set the precedent, and after 1900 significant federal legislation permitted similar claims on the public domain.¹ Although it served to attract more settlers, even the promise of more land could not assure prosperity.

By 1900, a slow but steady stream of settlers had trickled into the Guadalupe Mountains and the surrounding area. The Texas and Pacific Railroad owned thousands of sections of land in Hudspeth and Culberson counties, many of which were available to homesteaders after the first train arrived in Van Horn, Texas, in 1882. Possessed of the belief that land would grant them independence, settlers came slowly at first, then in droves. In 1883, R. P. Bean, who came to Van Horn from Lampasas, Texas, in an ox cart, homesteaded the "2" ranch, north of the town. The next year, John Formwalt purchased the Moon Ranch near Van Horn, while Perry Altman homesteaded the PX Ranch on the west side of the Guadalupe Mountains. Transactions conveying these and other ranches to new owners suggested how hard life was on a ranch in the trans-Pecos. Turnover was high, and many busted. Only the most determined souls and those with the fewest choices stayed and managed. Both groups

¹ John Wesley Powell. *Report on the Lands of the Arid Region of the United States*, quoted in Walter Prescott Webb. *The Great Plains* (NY: Grosset & Dunlap, 1931): 353, 419-422; Wallace Stegner, *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West* (NY: Penguin Books, 1953); F. Louise Pfeffer. *The Closing of the Public Domain* (Palo Alto: Stanford University Press, 1950), 3-12.

exhibited traits that made the trans-Pecos their best — and sometimes last — hope. Peripheral people in a remote place, they remained largely apart from the institutions of their society.²

After the turn of the century, some institutions of industrial America reached this periphery, contributing to the illusion of modern development and causing some locals to muse that the pioneer period had ended with the new century. A rush of new filings accompanied other changes in the region, including the arrival of the first African-American resident in the Anglo-American era. George Johnson came to the Guadalupe Mountains after Perry Altman found him abandoned in New Orleans. Johnson broke horses for Altman until the rancher died after which he worked on a ranch belonging to John Helms. His son, George Johnson Jr., worked on a road crew during the 1930s. Other signs of change followed. In 1901, Jim Brownfield installed the first fence on the flats; after its completion, one could no longer drive the entire width of Texas without opening a gate. Brownfield became an important way new technologies reached the region. In 1904, he installed the first telephone line in Crow Flats, stringing it along the top of fence posts. Eventually a number of telephones were connected, each family with a different ring. When one phone rang, they all did, so no one expected privacy on this first party line. Two years later, Brownfield introduced the automobile to the area. Governmental institutions, a sure sign of the civilization that Mark Twain's fictional Huck Finn sought to avoid, soon followed. Post offices opened with regularity in small towns, with branches established both in Orange, New Mexico, and Ables, Texas, in 1903. The pattern continued throughout the first decade of the century. Schools opened, usually with homesteader wives as teachers, mail came by buckboard instead of on horseback, and other changes that offered a future consistent with the new century became common.³ The trans-Pecos seemed to be acquiring the traits of the Carlsbad area, with more settlers and growth on the horizon.

One such settler, John Thomas "J. T." Smith, arrived in 1906, filed on a tract of land, and took up residence with his family at the old Rader brothers dugout by Frijole Springs while they built on to the nearby house begun by the Rader brothers. Earlier, while in Van Horn to work on the construction of the Jackson Hotel, Smith had discovered that the land around the spring, then called the Spring Hill Ranch, lacked an owner. As with other abandoned property, Smith could acquire homestead rights by depositing a filing fee at the El Paso courthouse. Early efforts of the Smith family appear to have been directed at subsistence and at first they seem to have lived only intermittently at the site. Within a few years, they lived full time at the Frijole Ranch and their presence served as a catalyst for the institutions that promised permanence. On August 30, 1916, a post office opened at the ranch, and by 1927 it received mail three days each week.⁴ An outpost had been established, succeeding because of the determination of its residents.

² Ben Gilmore, "Guadalupe Mountains National Park History," unpublished typescript, Vertical File, Guadalupe Mountains National Park, 4-7.

³ *Ibid.*, 7-8.

⁴ Gilmore, "History of Guadalupe Mountains National Park," 8-11; Rosa Lee Wylie, *History of Van Horn and Culberson County, Texas* (Hereford, TX: Pioneer Book Publishers, n.d.), 20; Froeschauer, *Cultural Landscape Report for the Frijole Ranch*, 8-25.

Another ranch, to which James Adolphus "Dolph" Williams came in 1917, illustrated how difficult such a life was in wilds of west Texas. Even the accounts of the construction of the house leave murkiness. In one story, Henry Belcher had the house constructed in 1908 for his new bride, Rena. According to another, Belcher's brother had the house built for his new bride, who stayed one day and one night and then fled the isolation and loneliness. Either way, the house was attractive. It was built with a steep gabled roof in the fashionable architectural style of the time, and nestled about 5,000 feet below Guadalupe Peak in the foothills, the house stood out. Henry and Rena Belcher and their baby daughter Bernice raised cattle on the ranch, carrying as much as 3,000 head. With water piped in from Bone Spring in the canyons below, the operation worked successfully for almost a decade. Facing the consequences of overgrazing, the ranch started to unravel. In the late 1910s, a drought further depleted the grass cover, and Belcher sold. Williams, a cowpuncher from Louisiana, bought the property. He remained a bachelor, initially running cattle with a partner named Geronimo Segura, who married and by the 1930s, had a wife and eight children who lived at place now known as Segura Dugout. After a few years, the two men switched to sheep and goats, which were better adapted to the varied environment of the Guadalupe. At times, the men ran as many as 3,000 animals; at others, as few as 500. In all situations, relatives and hired hands helped manage the flocks.⁵

The Williams ranch was isolated, and its residents worked to maintain steady contact with neighbors. Ranch life was interdependent, as people needed their neighbors and relatives. The social dimensions of such interaction were as important as the economic benefits derived from cooperation, and its made travel between ranches a constant reality. Williams was known as a frequent visitor at area ranches, especially Frijole ranch, a long and difficult trip from his ranch. Williams' nephew, Terry Scaife, remembered that the trip from the ranch to Frijole took them through Bone Canyon and up the slopes just beneath the main cliff. There they rode along, leading the horses across about fifty yards of slate until they reached the base of El Capitan. From there, they descended toward Guadalupe Spring. Williams was known for finding his way back to his ranch in the twilight by a trail only he knew.⁶ Williams remained on the ranch until 1941, when he moved to Black River Village, New Mexico. He died there the following year.

To the north near the town of Carlsbad, the next in a series of replacement economies, new strategies conceived to return the area to its previous economic status, began to emerge early in the new century. At first the community sought new economic forms to augment irrigated agriculture and ranching, but after the demise of large-scale private irrigation, it sought to supplant these amenities completely. The most important new enterprise was the mining of guano, a commonly used fertilizer before the development of synthetic and chemical substitutes. Bird and bat colonies provided the best sources of guano, and intrepid explorers in many parts of the Southwest sought these droppings as a source of economic sustenance, and even wealth. Central Texas, with its own system of limestone

⁵ n. a., "Williams Ranch, First Draft, 1977," Guadalupe Mountains National Park Vertical File.

⁶ n. a., "Williams Ranch, First Draft, 1977," Guadalupe Mountains National Park Vertical File; John F. Chapman, "Visit of Nephew to Dolph Williams (Williams Ranch), August 31, 1972," Guadalupe Mountains H2215, Guadalupe Mountains National Park Library.

caves, yielded some guano. So did areas under the limestone hills of eastern Kansas, distilled from the Permian Sea, and other similarly porous locations. The locations of guano deposits typically shared a revealing characteristic; the surrounding land and population were poor. These smaller deposits encouraged intraregional guano usage, with locally procured supplies spread on local land, a hedge against the decline in quality of marginal tracts. Larger deposits had great value in the market.

During the nineteenth century, guano mining had become an international industry of sufficient importance that its control became a target of U.S. diplomacy. From the 1840s into the 1890s, a worldwide rush for guano took place. Supplies from Peru's arid Chita region set the standard, and American entrepreneurs hurried to compete. Between 1856 and 1903, U.S. businessmen claimed ninety-three separate islands, atolls, keys, and any other outcropping of rock that held guano under the authority of the Guano Islands Act of 1856. The American government stood ready to support such acquisitions with the threat of military intervention. Lands claimed by these entrepreneurs became U.S. territories, allowing the rapid development of their resources under appalling conditions. Companies kidnaped and took workers to these islands to labor in the muck of the mountains of wet guano that covered these islands. Often overcome by the ammonia in the guano, some workers suffered lung disease and other maladies from breathing spore-filled air, and their living conditions paralleled those on prison islands. Until mixed fertilizers emerged as a cost-effective replacement after the turn of the century, guano acquisition remained a focus of U.S. foreign policy.⁷

When guano mining developed near the town of Carlsbad around 1900, it was already an anachronistic and obsolete strategy typical of small communities on the peripheries of industrial America. By 1899, more than 400 American fertilizer plants utilized a range of materials that doomed guano mining. Standard Oil and the Armour Company produced fertilizer from their byproducts, swamping the market and pushing guano aside. This once valuable material only remained viable in discrete niches that were too small to interest large corporations. Beginning in the 1880s, some Carlsbad-area farmers collected guano for their own use, but the sources they discovered were not large enough for systematic development. In 1903, Abijah Long, a recent arrival from Goldthwaite, Texas, who had tried a number of occupations, was working as a freighter for the Joyce Pruitt Company of Carlsbad. At the end of each day, Long turned his mules loose to graze near Oak Creek Springs. Then, with two companions, Sam Evans and "Mr. Brown," he explored the area near his camp. "Anyone who went out of town kept their eyes open," Long later wrote, "in search of something that might be valuable." On a typical foray, he found a hole in the ground, one that seemed to lead to a much larger area. Long lowered a lantern into the hole, but still could not see anything. Curious he descended, coaxing Evans to come with him and the two soon found themselves standing on the floor of an enormous room, lit only by their lantern.⁸

Long and Evans had entered one of the countless limestone caves that lay underneath the

⁷ Jimmy M. Skaggs, *The Great Guano Rush: Entrepreneurs and American Overseas Expansion* (NY: St. Martin's Press, 1994), 129-49, 199.

⁸ Abijah Long and Joe N. Long, *The Big Cave* (Long Beach, Calif.: Cushman Publications), 8-21; Robert Nymeyer and William R. Halliday, *Carlsbad Caverns: The Early Years: A Photographic History of the Cave and Its People* (Carlsbad, N.Mex.: Carlsbad Caverns-Guadalupe Mountains Association, 1991), 14-15; Skaggs, *The Great Guano Rush*, 199.

Permian Uplift. Formed by the contact between oxygen and the upward seeping of hydrogen sulfide-rich brine from the oil and gas fields below, the caves lay. First carbonic acid and later hydrogen sulfide formed caves as the water table in the area dropped, leaving older caves closer to the surface and newer caves beneath, closer to the falling water table. Thousands of caves dotted the rim of the prehistoric sea throughout the Permian Uplift, and nineteenth-century adventurers who explored them recognized that such caves offered a special window into the past as well as the opportunity to seek the unknown.⁹

Exploring further, Long found the entrance to a second and more interesting cave, but the day was growing short. After inspecting the first cave, he succeeded in climbing out, but Evans remained stranded underground overnight. The following morning, as Long awaited Brown's return from Carlsbad with enough rope to make a ladder for Evans, he looked around for other interesting features. At dawn, he noticed a swarm of bats descending into the larger mouth of another cave. Awestruck by their vast numbers and the rapid end to the swarm as the sun beckoned, Long approached the side of the hill. "There, certainly, was an opening to something even larger inside," he reasoned. After Brown returned, and helped to extract Evans, Long tried to convince the men to join him in exploring the second cave, but they refused. The three returned to Carlsbad.¹⁰ A few days later, Long, Andy Fairchild, and Jacob "Jake" Lynn returned to the site. Long descended first, and the other two soon followed, apparently forgetting that leaving one above outside the cave immensely increased their chances for a safe exit.

A peculiar odor assaulted their senses as they descended. The men stood, transfixed, afraid of whatever animal they assumed emitted the pungent aroma. Fear of cave-dwelling creatures, so common in American folklore, dominated their thoughts. The dim light of their torch offered a glimpse of the immensity of the cavern, and as they scoured the area for animal tracks, an occasional bat careened overhead. Moving forward, the smell became stronger, nearly overwhelming the men. Mounds of some substance, different from the rest of the cavern floor, rose in front of them, and Long intuited the source of the smell. "Bats," he exclaimed. "Millions of them." The mounds were guano, centuries of it piled up at their feet, one-quarter of a mile long and more than seventy-five feet wide. Long resolved to mine this tremendous resource. He took a few sackfuls to test the potency of the fertilizer and headed to Carlsbad to file a mining claim.¹¹

A new industry that would help carry the region to the next economic panacea was under way within a few weeks. Long assembled a crew under the direction of his brother-in-law, Charles Hannsz, and soon roads and structures took shape. Workers cleared the area and sank a shaft above the guano deposits. A pulley lowered a bucket to the bottom, where men with shovels filled it and returned it to the top. Other improvements became necessary, and the expense of upgrading soon exceeded Long's

⁹ Jagnow and Jagnow, *Stories from Stones*, 34-36.

¹⁰ Long and Long, *The Big Cave*, 8-21; "Original of Discoverers of Cave Tells How He Entered It," Daily Current Argus, November 17, 1930; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 15-17.

¹¹ Long and Long, *The Big Cave*, 23-27; "Original of Discoverers of Cave Tells How He Entered It," Daily Current Argus, November 17, 1930; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 17-19.

resources. He took on partners, the Ramsey Brady Company of Carlsbad, to assure adequate financial resources.¹² The strange cave from which the bats departed every night at sunset had become an industrial site in the remote stretches of the Chihuahuan Desert tucked in the southeasternmost corner of the New Mexico Territory.

With access to capital, Long improved the process of extracting guano. The bucket and pulley method proved slow and laborious, and it took a long time to remove sufficient guano to make the twenty-eight mile trip to Carlsbad worthwhile. A route to the cave was leveled to make transportation easier, and Long's workers blasted two vertical shafts into the cave near the guano deposits. Long had hand cars with wooden wheels built to run on a wooden track made. Miners loaded the car with eight to ten fifty-pound sacks of guano at a time. After the sacks were sewn shut by John Forehand, another of Long's associates, workers hoisted the cart to the surface.¹³

With the development of this improved process, Long's mine became sufficiently productive to spur exploration for additional sources of guano. With strong demand for the fertilizer in southern California orange groves as well as other areas of the world, an economic mainstay for southeastern New Mexico developed. For the people of the region, the discovery of guano seemed like a godsend. Trapped between a failed past and an uncertain future, they now possessed the foundation for a new regional economy. Even Long noted the prior desperation of the region. Working with guano was disagreeable; bat excrement was malodorous and being underground was hardly desirable. The men stayed in the cave and continued working, Long presumed, because they had few other avenues of employment. After other miners found additional sources of guano, Carlsbad became a processing center, with drying racks to reduce the weight of the guano to lessen freight charges, an innovation made after the Hawaiian Fertilizer Company of San Francisco, Long's most significant client, announced it would only purchase dry fertilizer. Guano from the caves under the Permian Uplift soon became a staple of the regional economy.¹⁴

Workers extracted a fantastic amount of guano during the heyday of the industry, between 1903 and 1923. At peak operation, between twenty and forty men sacked, elevated, and hauled the bagged guano twenty-two miles to the railroad at Carlsbad. Beneath the surface, up to their hips in guano, two men with shovels could fill and tie four hundred fifty-pound sacks a day. From September to March, the principal guano mining season, Long's workers shipped about forty tons of guano each day, enough to fill between one and three railroad cars. According to guano miner/explorer Jim White, over this twenty-year period, a cumulative total of more than 100,000 tons of guano found its way to Carlsbad. Other estimates were far smaller, but a significant amount of guano was extracted from the caves.¹⁵

¹² Long and Long, *The Big Cave*, 33-36; "Original of Discoverers of Cave Tells How He Entered It," *Daily Current Argus*, November 17, 1930.

¹³ Long and Long, *The Big Cave*, 37; Bob Hoff, "Bat Guano Mining at Carlsbad Caverns: Insignificant Historical Footnote or Important Period of History?"

¹⁴ Skaggs, *The Great Guano Rush*, 215-26; Long and Long, *The Big Cave*, 37, 53-54; -----, *Carlsbad Current* July 2, 1907; Marc Reisner, *Cadillac Desert: The American West and its Disappearing Water* (NY: Viking, 1986).

¹⁵ Vernon Bailey, *Animal Life of the Carlsbad Cavern* (Baltimore: Williams & Wilkins Co., 1928), 113-14; "Forty Cars of Guano," *Carlsbad Argus*, January 19, 1912; J. Tom Meador, "Guano, Guano Miners, and Guano

Like many similar enterprises, control over guano mining quickly passed from individuals to corporations and from locals to outside owners. Forced to leave the industry by the combination of what he thought low-grade guano, the demands of the work, and his own lack of resources to make his business grow, in 1906 Long sold out to H. F. Patterson of Carlsbad for \$500. Patterson retained him as foreman. Long's departure signaled the beginning of a new era for guano mining in the Carlsbad area as ownership shifted away from individuals to larger-scale operations. The El Paso Fertilizer Company purchased the property later in 1906, and in 1911, the General Fertilizer Association of Los Angeles paid \$75,000 for the cave. In the end, six companies, most of which marketed their product to southern California citrus growers, dominated regional guano mining.

Extraction continued throughout this era, seemingly unable to exhaust the enormous mountain of guano in the cave, especially with the limited technologies of the era. Predictions of an additional twenty years of mining in the caves continued into the 1910s. Soon after, competition from other sources of guano made mining less lucrative, and it became harder for regional companies to survive. By the 1920s, the General Fertilizer Company, long the mainstay of the Carlsbad area, approached insolvency.¹⁶ Guano filled a niche that progressively diminished after 1920 and chemical compounds synthesized during World War II eventually replaced guano as an important source of fertilizer for American agriculture.

Among the miners in Carlsbad was a Texas cowboy named James Larkin "Jim" White. White was born on a ranch in Mason County, Texas, in 1882, and like many other Texans, came to the part of New Mexico still known as "Little Texas." He claimed to have begun "riding ranch" by the age of ten, and in 1892, he "teamed up" with John and Dan Lucas, owners of the X-X-X Ranch, about three miles from the mouth of the cave from which the bats emerged daily at sunset. White claimed that in June 1901 he "worked his way through the rocks and brush until I found myself gazing into the biggest and blackest hole I had ever seen out of which the bats literally seemed to boil." White estimated the depth of the cave at two hundred feet, watched the remaining bats depart, and returned to his camp. He told none of the other cowboys of his discovery.¹⁷

Mines," unpublished manuscript, Carlsbad Caverns National Park Library, 1984, 6-9. White reported the 100,000-ton figure to General Land Office Mineral Examiner Robert Holley in 1924. White's total may be an exaggeration. In his 1924 field notes, geologist Willis T. Lee, who the National Geographic Expedition in 1924 that spent six months at the caverns, offered the sum of 823 tons shipped from the caverns to the General Fertilizer Company of San Bernadino, California, between 1916 and 1920.

¹⁶ Long and Long, *The Big Cave*, 54-55; "Guano Cave Deal," *New Mexico Sun*, May 31, 1907; "Guano Company Starts Work," *Carlsbad Argus*, April 14, 1911; "Original of Discoverers of Cave Tells How He Entered It," *Daily Current Argus*, November 17, 1930; J. N. Weems, "Appraisal of Concession of Bat Guano Mining in Carlsbad Caverns National Park, New Mexico," *Carlsbad Cavern National Park Library, Carlsbad Caverns National Park*; Hoff, "Bat Guano Mining at Carlsbad Caverns"; Robert Holley to John T. Murphy, April 10, 1923, *National Archives, Record Group 79, Carlsbad Caverns Series 6, Central Classified Files*.

¹⁷ Jim White, *The Discovery and History of Carlsbad Caverns* (Carlsbad, N.Mex.: Jim White and Charley Lee White, 1940), 1. Although this book was actually written by journalist Frank Ernest Nicholson and is more accurate as a reflection of White's sentiments than his actual words, there is little reason to dispute the sequence and pattern of the events it recounts.

White likely was not the first to discover the so-called “Bat Cave,” but he was the first to regard it as more than a curiosity. When he happened upon it in 1898, the area had been explored, and others commented on the bats. Most exploration in the area involved economic speculation, but apparently those who saw the bats earlier could not find the caves from which they sprang or simply did not appreciate the value of guano. Perhaps the muckiness of the material, the idea of making a living from animal excrement, dissuaded others. White clearly believed he found something new and hid his find from the other cowboys. Just as certainly, he took greater interest in the caves than any predecessor.

A few days later, White returned, again furtively, but far better equipped. He arrived at mid-afternoon with a kerosene lamp, several coils of rope, some wire, and a hand axe, and he proceeded to cut wood for a ladder. His companion this time was a young Mexican boy called “Muchacho,” (Kid or Boy) the only one of the cowboys with any interest in White’s cave. White lowered the completed ladder into the cave, climbed down, and found himself in complete darkness and silence. Lighting his lantern, he maneuvered down to the floor of an awesome space. “I could see ahead of me a darkness so black it seemed a solid,” he later wrote. “The light of my lantern was a sickly glow.” White forged onward into the network of caves, elated, terrified, awestruck, and somehow oppressed by the silence and the darkness. To calm himself, he spoke aloud; the echoes nearly drove him mad. “Perhaps you can appreciate my sense of satisfaction when I wormed my way back and could see a shaft of sunlight filtering down through the entrance,” White remembered. Later he felt relieved to be above ground, somehow bested by the cave.¹⁸

White anticipated the modern spelunker, someone attracted to the cave for compelling personal reasons. He returned with whomever would accompany him, making as thorough an exploration as the limits of lighting and his resources would permit. He approached it systematically, telling all about what he encountered. Many felt that he invented the cave or at least profoundly exaggerated its size and depth. White actively wanted to persuade everyone of the importance of the cave. He could see that humans had visited the cave before him. He reportedly found a skeleton there, which was passed around the town and later lost. He found another, and then later, as a guano miner, a third. Despite this tangible evidence of a human presence, the tendency on the topside was to regard White as a bit eccentric. People in Carlsbad thought he fabricated the entire story. Local incredulity failed to deter him from an ongoing series of trips to the cave. Whenever he had a break in ranch work, White recounted, “I’d wrap a couple of sandwiches and explore more and more of the cave.”¹⁹ Few others in the region appeared interested in it for anything but mining.

Almost a dozen people claimed to have reached the bat cave first, a claim that if substantiated granted local bragging rights, and over time, at least some potential for financial reward. As the caves attracted greater attention, White and Long engaged in a generation-long debate about who discovered the chamber, with each seeking to establish his primacy. The list of “discoverers” also included Rolth Sublett, who claimed to have revealed the cave to Long around 1900; John Forehand, a former

¹⁸ White, *The Discovery and History of Carlsbad Caverns*, 2-8; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 36-37.

¹⁹ White, *The Discovery and History of Carlsbad Caverns*, 9.

employee of Long who claimed that he had been in the cave in 1898; and Charles J. Hannsz, but on balance these after-the-fact claims of primacy proved irrelevant.²⁰

The real power of any primacy claim came from the privilege of defining the caves for outsiders. Adept at a range of promotional strategies, White made the caves his own in a manner similar to the way that archaeologists of the era claimed ruins as their private preserves. Deliciously eccentric as the twentieth century progressed, a romantic relic of an earlier time, and a fabulous teller of tall tales who envisioned the caves as more than a source of guano, White created a place in the national consciousness for the great caverns, a template through which mid-century America could understand the mysterious depths of Carlsbad Caverns. In this sense, he became the living embodiment of the cave during its transformation from a hole in the ground to source of guano to “eighth wonder of the world.” White first offered guided tours to a small, local audience in about 1901 and he remained associated with the caves until he died in 1946.²¹ A conventional businessman, Long came in a distant second, and the others were mere pretenders to the throne.

White’s vision of the meaning of the caves led to the Carlsbad Caverns that generations of visitors emblazoned on the rear bumper of their automobiles. His tales possessed the flair and drama upon which myths are built, and the constant stories he disseminated elevated his claims to primacy. From 1901 until 1920, White tried to promote the caves, but he found few takers. In an apocryphal tale that may have approximated the truth, White awoke one morning in 1920 determined to “start the task of showing the world the cave whether they wanted to see it or not.” He began building trails and guard rails, leveling paths through the rock. On angular ascents and descents, he pounded discarded automobile axles — usually from Fords, he boasted — into the cracks in the rocks and strung them with galvanized wire to create handholds.²² White’s system of trails became the first concession to the traveling public, a constituency only barely aware of the existence of the caves in 1920.

Photography helped to distribute the message. Ray V. Davis moved with his family to Carlsbad in 1913 to farm as he had in Kansas. He did not like farming and soon opened a small photographic studio. Most towns of the era had such a business; weddings and ceremonies always required a photographer, and family and commercial portraits sustained a thriving business. Very small communities relied on itinerant photographers, who arrived at predictable intervals, and Davis’s photography studio — his “picture gallery” as it was referred to at the time — provided one more piece of evidence that Carlsbad was a significant town. Davis’s gallery eventually became the catalyst for promoting the caves. Although legend has it that he accompanied two young travelers to the cave for his first photo trip in September 1922, Davis’s own account suggests that he had explored the cave with Jim White and

²⁰ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 13-14; Neal Bullington, “Who Discovered Carlsbad Caverns?” (Unpublished typescript, 1968), Carlsbad Caverns National Park; Long and Long, *The Big Cave*, 56.

²¹ Almost fifty years after White’s death in 1946, Carlsbad Caverns was designated a World Heritage Site.

²² White, *The Discovery and History of Carlsbad Caverns*, 12-13; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 39-41.

came to take pictures at White's behest.²³

Davis was not the first to photograph the caves, but he was the first to reveal their grandeur in pictures. Commercial photographers had taken pictures of the guano mining operation and guano miners as early as 1906 or 1907. A local youth, George Adams, took his own photos of the caves before 1910. Davis went deeper into the caves than his predecessors, taking his early significant pictures in the King's Palace, often repeatedly shooting scenes for desired effect, endlessly tinkering with perspective and point of view, and experimenting with a range of lighting strategies and techniques. His photos captured what earlier efforts did not — the depth and mystery of the caverns, the unusual underground forms, and a scale so large as to dwarf human endeavors.²⁴ Davis's photos made Carlsbad Caverns remarkable.

Much of southeastern New Mexico remained incredulous. Davis's photos transformed the familiar into the spectacular, something that many in Carlsbad, accustomed to thinking of the caves as a smelly guano source, had difficulty comprehending. Davis acquired a reputation for exaggeration, a label that sorely vexed him. With White's help, he organized a tour of the cave for a group of local dignitaries. Although forty signed up, only thirteen appeared at the designated time. The group bunked at White's ranch overnight, and the next day they were lowered two by two in the guano bucket into the cave. After an awe-inspiring daylong tour, the men were lifted to the surface, struck by the majesty of the cave and in awe of its vast silence.²⁵ In a single day Carlsbad Caverns had become more than a mere source of guano — the most important people in Carlsbad had authenticated it as a spectacular place.

The tour suggested important ideas to White, and to a lesser degree, Davis. The thirteen visitors insisted that White take pay for his labors; after all, they ate his food, bunked at his house, and availed themselves of his guide services. Demurring at first, he finally accepted one dollar from each. He subsequently decided that he would charge visitors an admission fee of two dollars. Publicity from the trip sent a steady stream of townspeople to the caverns; White depicted this process as word-of-mouth advertising. Davis also benefitted as his images of the cavern established a standard, both for promotion and for souvenirs.²⁶ Although neither man ever became wealthy from such efforts, they shared an infatuation that made life exciting and occasionally profitable.

The caverns soon became a regional attraction, with White guiding tours and Davis shooting seemingly endless photographs of dignitaries. Visitors first mainly came from Carlsbad and Eddy County, and as the word spread, from much of southeast New Mexico, the trans-Pecos, and west Texas. Carlsbad Caverns became like many regional attractions of the day. Before television and film, before people widely heard radio, a natural phenomenon might be the most extraordinary thing a rural

²³ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 58-61.

²⁴ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 60-62; White, *The Discovery and History of Carlsbad Caverns, New Mexico*, 10-11, offers that tale of the two travelers. Davis's account, of repeated trips and a pattern over time, does less to strain credulity.

²⁵ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 61; White, *The Discovery and History of Carlsbad Caverns, New Mexico*, 12-13.

²⁶ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 60-62; White, *The Discovery and History of Carlsbad Caverns, New Mexico*, 14.

family saw in a lifetime. The operation was not sophisticated: White lacked title to the land, but retained connections with guano mining by serving as the sim-official caretaker of the area. Visitors descended in an old guano bucket. Everything about a trip to the caverns was idiosyncratic, typical of the way life was often held together with baling wire on the peripheries of the nation. Davis made countless trips into the caves to shoot pictures, using vast quantities of magnesium powder to create a flash big enough to illuminate the object of his lens. Accidents, while usually insignificant, frequently resulted; Davis once fell into a fifteen-foot pit in the Big Room as he photographed a group of Masons. White had to rescue countless visitors who nearly fell into holes or off ledges. On another occasion, Davis photographed a group so large it required almost three pounds of flash powder to illuminate everyone. The explosion reverberated along the walls, and Davis feared that he had brought the caverns down upon himself and his guests. The walls held, but it was a scary moment. Life in the cavern guide business was energizing. "We had no end of fun," White remembered.²⁷

Davis displayed an intrepid promotional wizardry that helped draw much attention to the caves. Using his own money, he embarked on a major advertising campaign, distributing pictures of the caves at conventions and installing enlarged photos — as large as three feet by four feet — in hotel lobbies and chambers of commerce throughout the Southwest. He printed 100,000 windshield stickers that read: "We visited Carlsbad Caverns, Photographed by Ray V. Davis." People took them not only for themselves, but for friends who had not yet made the trip. This inaugurated the long-standing tradition of status by bumper sticker, and the subsequent two generations of the American middle class felt incomplete if they lacked a "We Visited Carlsbad Caverns" bumper sticker on their vehicle. Postcards also sold wildly; Davis's assistant, a young man named Robert Nymeyer, turned out as many as 2,000 postcards each night for months on end, and even this did not keep up with the demand.²⁸ By 1922, Carlsbad Caverns enjoyed a significant place on the map of southwestern regional attractions.

Davis' promotions came at an important moment for the region remained in perilous economic straits, weighted down by a torpor that had existed since the beginning of the century. By the early 1920s, southeastern New Mexico seemed past its peak, only held together by federal water projects. Irrigation of new land slowed, and agriculture and ranching were regional mainstays in an era when the value of agricultural production fell against the cost of goods manufactured in the industrial cities of the nation.²⁹ The population of Carlsbad and of the region as a whole stabilized, irrigation remained controversial, and the decade seemed to pass by the region. Through a series of inadvertent steps, Carlsbad Caverns and its tourist appeal became the solution to the problems of the area, a panacea that could change the general direction of the region. The caverns underwent a steady transformation from local and regional attraction to one with national significance.

²⁷ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 62-63; White, *The Discovery and History of Carlsbad Caverns, New Mexico*, 17-18.

²⁸ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 64-65; "Notes of Interview of February 3, 1968 with Ray V. Davis, by WRH, at Mr. Davis' home," Carlsbad Caverns National Park Library.

²⁹ Hufstetler and Johnson, *Watering the Land: The Turbulent History of the Carlsbad Irrigation District*. (Denver: National Park Service, Rocky Mountain Region, Division of National Preservation Programs, 1993): 126-27.

Photography initiated this process, but a constellation of factors maintained the momentum. Davis' pictures offered a new way to look at Carlsbad Caverns. During the 1920s, the influx of tourists from within the region traveled the growing network of roads to see the caves, augmenting the regional economy. Most had seen one of Davis's photographs or at least had heard about them; throughout New Mexico and west Texas, the caves became the talk of the day. Many had also known of the guano mining that helped sustain the region, but did not appear to connect the two as emanating from the same place. The enthusiasm Davis's pictures generated prompted people to visit the caves. They recognized that something special lay beneath the otherwise ordinary trans-Pecos. Visitors regarded the bat caves as a new discovery, not the site of two decades of guano mining. This perspective embodied a kind of hope that the trans-Pecos possessed unique attributes and really was special, worthy of the attention of the nation.

During the early 1920s, the National Park Service, a new and aggressive agency, looked to buoy its position among competing federal agencies. In the astute hands of Stephen T. Mather, the first director of the agency, and his able second-in-command, Horace M. Albright, the Park Service added park areas with surprising regularity throughout the late 1910s and 1920s. Some were full-fledged national parks, the crown jewels of the system, requiring congressional approval — the Park Service established Zion, Grand Canyon, Acadia, Great Smoky Mountains, and Shenandoah national parks during this era. Others were national monuments, established by presidential prerogative under the Antiquities Act of 1906 and created for tactical — as well as aesthetic, cultural, and scientific — reasons. Battling other federal agencies, especially the U.S. Forest Service, the Park Service honed a practiced eye and supple acquisition skills.³⁰ In time, Mather and Albright developed successful strategies for park growth and consolidation, and the caves near Carlsbad attracted the attention of this formidable duo.

The news about their interest seemed to come simultaneously from different quarters. Jim White found “men with government cards” among his guests and hoped the government might be more responsive to his development schemes than the private investors he had previously queried. A movie company inquired about shooting a film at the caves, and officials at the General Land Office in Santa Fe realized that they knew too little about the location. By some accounts, U.S. Senator Holm O. Bursum and U.S. Representative John Morrow, both of New Mexico, had begun to lobby for a national monument. Irrigation and water allocation problems kept a stream of government officials surveying the Pecos River. Ongoing attempts to dam and irrigate in both states, especially a Reclamation Service study of Red Bluff on the Texas end of the Pecos Basin, required formal division of the river water, but the task proved elusive. The water held in Pecos River reservoirs regularly seeped out, and no one could find a way to recover it. Reports of the caves permeated this exploratory process, and by

³⁰ John Ise, *Our National Park Policy: A Critical History* (Baltimore: Johns Hopkins University Press, 1961), 330; Hal Rothman, *Preserving Different Pasts: The American National Monuments* (Urbana: University of Illinois Press, 1989); Hal Rothman, "'A Regular Ding-Dong Fight': Agency Culture and Evolution in the NPS-USFS Dispute, 1916-1937," *Western Historical Quarterly* (April 1989): 141-61.

1923, the Department of the Interior began the process of assessing this unusual resource.³¹

The caves had acquired a place in regional culture and the numerous interests competing to use them inspired a reaction from federal officials. In April 1923, the General Land Office (GLO) dispatched Mineral Examiner Robert A. Holley to the caves. He arrived a skeptic, according to Jim White, who recounted Holley's impressions in his ghost-written autobiography: "We didn't feel as though this cave was of much importance, but the Department thought I'd better run down and measure it up so's they'd know if it was big enough for them to consider." White remembered that it took Holley nine days to lay his measuring line between the entrance and the Jumping Off Place. "I suppose you want to start on the lower level next?" White asked. Holley demurred.³² Hyperbole for certain, White's story became a folktale.

Holley's response was more sophisticated than reported. The examiner's records show eight hours of measuring before he reached the Jumping Off Place, not nine days. He was clearly experienced in solving the problems that often beset federal officials in the small-town West. Holley also showed understanding of the delicacy of his task. "There is no use trying to camouflage the motive behind this work as they are all onto the game," Holley wrote his GLO superior, John T. Murphy, in confidence from Carlsbad on April 10, 1923. The locals supported the idea of withdrawing the area from entry to provide some kind of protection for the caves. "They are all tickled to know the government is taking an interest," Holley continued, noting that this stance was unusual during the 1920s in the West.³³

The unique caves near Carlsbad created a context in which government intervention appeared to be an advantage. The caves were a source of local and regional pride, and government withdrawal and designation, especially in the increasingly important national park or monument categories, provided precisely the kind of recognition that locals craved. Even in the 1920s, every town had its claim to fame and government acknowledgment of the merits of such a claim was an important — and in the view of the time, impartial — distinction that helped separate the genuinely valuable from the cornball. In an area where federal involvement in reclamation saved the region from enormous expense and significant danger, the federal presence was not the perceived liability it had already become elsewhere in the West.

Holley's correspondence from Carlsbad and his subsequent report to the commissioner of the General Land Office revealed a strong tactical understanding of the social and cultural terrain of southeastern New Mexico, as well as considerable support for the idea of a reserved area. He advocated putting Jim White on the federal payroll. Holley needed an assistant, and White was the best-positioned person in the region to help federal efforts. He had ties to the General Fertilizer Company and had pioneered in guiding visitors to the caves. Holley recognized that he could maintain local support and have the advantage of White's experience with a simple gesture that would only cost six dollars a day. Holley noted that the fertilizer company was in arrears not only to White, but also to

³¹ Hufstetler and Johnson, *Watering the Land*, 126-27; White, *The Discovery and History of Carlsbad Caverns, New Mexico*, 12; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 65.

³² White, *The Discovery and History of Carlsbad Caverns, New Mexico*, 21.

³³ Robert A. Holley to John T. Murphy. April 10, 1923.

creditors, and he insisted that the government did not need to purchase the company's forty-acre holding. "Let them retain their Bat deposit and work it at their pleasure," he wrote Murphy. "The Gov't. can sink a shaft for a few hundred feet at a much lower point, easily accessible, and have a much better entrance." Holley envisioned a pattern of visitor traffic that bypassed the company's entrance for a new one fashioned by the government.³⁴ In the 1920s, this was a typical strategy that helped in defining the role of the federal government in many areas in the West.

Holley's extended trips into the cavern left him amazed and awed. They were so impressive that Holley's final report used a flowery descriptive language uncommon in government reports, then and now. "I am wholly conscious of the feebleness of my efforts," he summarized, "to convey in words the deep conflicting emotions, the feelings of fear and awe, and the desire or an inspired understanding of the Divine Creator's work." The caves moved him, spoke to his soul and his sense of the nation and its destiny in complex ways, and left him feeling that the country would be diminished without these caves designated as a national treasure. Holley recommended the reservation of the caves outside Carlsbad as a national monument, a solution Jim White wholly supported.³⁵

The report created much enthusiasm within the region, and residents of Carlsbad sought to show off their newfound prize to anyone who passed. In one instance, W. F. McIlvain, the president of the local chamber of commerce, invited the participants in a water users meeting to see the caves. Among the three who ventured to the caves was Richard L. Burges, a prominent El Paso attorney. Burges was enthralled, but left with the idea that the United States Geological Survey (USGS) sponsored Holley's work. When he wrote Washington, D.C., to ask for a copy of the report, USGS officials noted that Holley did not work for them, but that one of their most trusted field officials, Willis T. Lee, was soon headed to Carlsbad on other business.³⁶

Lee was typical of the first generation of post-Civil War scientists. Born in 1866 and raised on a dairy farm in Pennsylvania, he had a passion for science that he could not develop until he left home. After working his way through Wyoming Seminary in Pennsylvania and continuing to Wesleyan University, the University of Chicago, and finally Johns Hopkins University, Lee became exceptional among his early twentieth-century peers for the depth of his passion and commitment and the breadth of the education he so actively sought. In a time when many scientists were self-taught, he acquired a first-rate education. His credentials gave him greater status than many others, but Lee sacrificed much to pursue his passion from a place in the federal service.³⁷

Lee's aptitude and understanding of geology far surpassed that of most scientists, and after he

³⁴ Holley to Murphy, April 10, 1923; John T. Murphy to the Commissioner, General Land Office, April 12, 1923, NA, RG 79, Carlsbad Caverns, Series 6.

³⁵ John Ise, *Our National Park Policy: A Critical History* (Baltimore: Johns Hopkins University Press, 1961), 330-31; R.F. Burges to Director, U.S. Geologic Survey, August 21, 1923; W. F. McIlvain to U.S. Geologic Survey, September 11 1923, National Archives, RG 79, Central Classified Files, Carlsbad Caverns.

³⁶ Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 67.

³⁷ Curtis M. Hinsley Jr., *Savages and Scientists: The Smithsonian Institution and the Development of American Anthropology, 1846-1910* (Washington, D.C.: Smithsonian Institution Press, 1981); Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 93.

joined the USGS, he became one of its best regional examiners. Stationed in Albuquerque beginning in 1903, he played an important role in the construction of the dam-based irrigation infrastructure of New Mexico. Lee uncovered the reasons behind the failure of the McMillan Dam in 1905 — the thick beds of gypsum and rock salt not only drained naturally, they dissolved. Even impermeable rocks shattered under the force of the water. As a result, the dam was ineffectual, its reservoir continuing to lose water. In his published account in the prestigious journal *Science*, Lee noted these flaws and recommended building the new reservoir elsewhere. Local political forces ignored the science and rebuilt the reservoir on the same location. Even an embankment built to keep water from the porous areas failed to prevent drainage.³⁸

By the early 1920s, Lee was nearing sixty and remained at the peak of his career. He was widely respected and commanded the attention of a national audience at a time when scientists spoke in the romantic language that the public embraced. A member of both the Cosmos Club and the Explorers Club, bastions of intellect and access to power, Lee could always find a well-positioned audience for his ideas. When the government sent him to Carlsbad in 1923 to assess the leaking Spencer Dam and the nearby Carlsbad-Reservoir Site No. 3, which allowed him to repeat his familiar message about the unsuitability of the lower Pecos River for reservoirs, it was only a short step to look at the caves and see what merit they might have.³⁹

Like White and Davis before him, Lee instantly felt the magic of the caves. They entranced and enchanted him, and he felt pulled toward them. In his subsequent report and in a series of talks that followed his trip, he joined the chorus advocating a national monument at Carlsbad Caves. With little local opposition — and in fact much encouragement from White, McIlvain, and nearly everyone else along the Pecos River — the conditions necessary for a national monument designation finally aligned. On October 25, 1923, President Calvin Coolidge used the power granted him by the Antiquities Act of 1906 and designated 719 acres under which the caves lay — excepting the forty-acre patent of the General Fertilizer Company — as Carlsbad Cave National Monument.⁴⁰

National monument status was never significant nor widely sought after in the 1920s. The category had grown piecemeal and remained as much an odd storehouse of threatened places resulting from special interests as it was a collection of legitimate park areas. Since the first establishment of a national monument in 1906, all kinds of reserved areas had been added to the category with no consistency of purpose, some remarkably significant, others so inconsequential as to defy legitimate explanation. The Grand Canyon became a national monument in 1908; Mount Olympus National Monument, later Olympic National Park, was established the following year, as was Shoshone Cave

³⁸ Hufstetler and Johnson, *Watering the Land*, 97-108; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 93. As late as 1975, the reservoir still lost an inordinate amount of water as a result of seepage.

³⁹ Hufstetler and Johnson, *Watering the Land*, 126-28; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 67, 93; Hal K. Rothman, *Devil's Bargains: Tourism and Transformation in the Twentieth-Century American West* (Lawrence: University Press of Kansas, 1998).

⁴⁰ Ise, *Our National Park Policy: A Critical History* (Baltimore, Johns Hopkins Press, 1961), 330; Rothman, *Preserving Different Pasts*, 135; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 94-95.

National Monument in Wyoming, which so defied the designation “national” that it joined a very small number of decommissioned national park areas in 1954. The most important aspect of the monument category before 1930 was political: a significant number of sites used this designation as way stations to national park status. Zion National Park began as Mukuntuweap National Monument; Sieur de Monts National Monument later became Acadia National Park; the Grand Canyon advanced to national park status in 1919. The monument category lacked definition and, some caustically observed, integrity.⁴¹

Only in the Southwest did the monuments develop a distinct identity and only as the result of the efforts of one man. From his headquarters at Casa Grande National Monument outside Coolidge, Arizona, Frank “Boss” Pinkley carved a place for the monuments in regional culture. Accentuating archaeology, ostensibly the purpose behind the Antiquities Act of 1906, Pinkley made the category an important part of the regional cultural landscape, but his emphasis on prehistory made other kinds of park areas orphans in an already underfunded and uncomfortably managed system. While Pinkley always welcomed the addition of new areas, his primary emphasis remained archaeology.

Lee’s efforts, and not monument status, elevated Carlsbad Cave National Monument. Lee published the results of his initial visit in the January 1924 issue of *National Geographic*, and the National Geographic Society offered \$16,000 to bankroll an expedition to the caves that same year. One account suggests that Lee needed to conjure up a prehistoric skull to persuade the directors of the society, who shared in a widespread, class-based obsession with prehistory at the time, to back the expedition. With funds in hand and a paid leave of absence from the USGS, Lee’s family comprised most of the expedition, with Lee and his two children, twenty-one-year-old Elizabeth and nineteen-year-old Dana, doing most of the work. Vernon O. Bailey, the renowned naturalist, also accompanied the group, as did Russell R. Runyan of the USGS, who mapped the caves. The expedition spent almost six months exploring, surveying, mapping, and photographing Carlsbad Cave National Monument.⁴²

The presence of a National Geographic Society team exploring the caverns was a heartening and significant event in southeastern New Mexico. Even in the 1920s, rural areas felt isolated and far away from the exciting innovations of modern life, and anything out of the ordinary attracted much attention. As people in Carlsbad began to take more pride in the geological curiosities nearby, and especially as White and Davis promoted the caves in a way that illustrated their economic benefits, attention from a national organization of prestige and stature seemed inherently good. Not only did it attract new people who thought the region important, it also offered the opportunity for locals to feel that their home area enjoyed a place of significance in American society, positive proof that they would not entirely waste the energies of their past.

Even more important was the portrayal of the caverns that graced the cover of *National Geographic* in September 1925. Although Lee tried to rename the features of the cavern with Native

⁴¹ Rothman, *Preserving Different Pasts*, 134; Rothman, “From Monument to Park,” *Environmental Review* 10 n. 2 (Spring 1986): 46-57.

⁴² Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 94; Dana W. Lee, “The National Geographic Society’s Expedition to Carlsbad Caverns, New Mexico March 20 to September 15, 1924 - A Diary and Record of the Expedition,” typescript, Carlsbad Caverns National Park Library.

American names appropriate to the Southwest, a transformation that White mocked and locals resisted with vigor, his expedition helped make the caverns a focus of national science and culture, and even more important, a destination for visitors. In a time when national tourism remained a largely upper-middle-class activity, its tone still dictated by the cultural affirmation embodied in the expositions and world's fairs of the turn of the century, such attention proved the importance of the caves. With photographs in *National Geographic* and with the colloquial designation of the site as another of the so-called eighth wonders of the world, the caverns appealed to an audience far broader than the locals who typically viewed them only as an interesting curiosity.

This level of interest became the catalyst for the development of tourism in the region, an activity that local elites made their own. After Lee departed, W. F. McIlvain, the president of the local chamber of commerce, took on the role of custodian. In the 1920s, national monument custodians were typically volunteers, "dollar-a-year men" from nearby communities or neighbors of the reserved site. Most played a role in the establishment of the monument and had some deep abiding passion for the place they guarded. A few were like McIlvain, representatives of local elites with other careers. The latter group typically surfaced when the monument had some potential value in status or income for the region. The Park Service usually chose its volunteer representatives wisely, recognizing that influential locals who stood to gain were more likely to be responsible and to follow through on National Park Service directives. When NPS Acting Director Arno B. Cammerer offered McIlvain the custodial position, he pointedly noted that he expected "that a booking office be established in [Carlsbad's] City Hall and the present hit-and-miss arrangement would be done away with." In other situations, the monuments were left to eccentric buffs, but not in Carlsbad.⁴³

The spate of publicity also helped promote the site and the public became increasingly interested. Tourism numbers grew: after 1,280 visitors came to Carlsbad Cave National Monument during 1923-1924, the first year following its establishment, the number rose consistently, reaching 76,822 in 1928-1929. The swelling numbers meant that even greater opportunities existed for those who wanted to capitalize on the cave. Other photographers followed, prominent among them Russell Neville, who settled in Carlsbad in 1929. Known as the Cave Man, Neville presented a confusing array of personas to the world. He had been an attorney, an accountant, a magician, an author, a photographer, and the person who shot the first extensive film of caves across the nation. Neville was also a popular speaker and his photography won prestigious awards. Although his first film efforts in Carlsbad were underwhelming, he quickly learned how to produce outstanding still photographs. Another of the early promoters of the caverns, Neville helped bring the park even greater popularity.⁴⁴

National monuments typically fell well outside the development-funding patterns of the National

⁴³ Arno B. Cammerer to W. F. McIlvain, August 28, 1924; McIlvain to Cammerer, September 4, 1924, NA, RG 79, Series 7, Carlsbad Caverns; Rothman, "From Monument to Park," *Environmental Review* V 10 2 (Spring 1986): 46-57.

⁴⁴ Rothman, Preserving Different Pasts, 88-104; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 117-21.

Park Service. Throughout the 1920s, the agency managed monuments in a haphazard fashion. The only regional organization to support the category was Pinkley's in the Southwest, and his official correspondence from the era was laden with calls for better funding and organization. Only one condition elevated national monuments to the forefront of Park Service interest: plans to raise the monument to national park status. Typically, development activity at a national monument, especially one that offered values other than archaeology, was a precursor of an effort to create a national park.⁴⁵

From its initial proclamation, Carlsbad Cave differed from most other sites in the monument category. As Lee departed, Cammerer began to assess development, administration, and funding strategies. The Park Service had to keep an eye on Jim White, whose cave-guiding rate had been set by contract at ten dollars per party for up to five visitors, with two dollars for each additional tourist. NPS officials pushed to have White and the Carlsbad-area transportation services invest in maintaining the roads and trails as they sought federal funding. NPS estimates of the cost of development approached \$80,000, well beyond the sum allocated to the entire monument category in 1925, and the agency approached friendly New Mexico politicians, especially U.S. Senator Andrieus A. Jones, to secure their support for a special appropriation.⁴⁶

Many reasons existed for the New Mexico congressional delegation to support development of Carlsbad Cave National Monument. Despite the state's spectacular scenery, vast historical and archaeological treasures, and other interesting features, it still lacked a national park. For the new state, a little more than a decade old during the mid-1920s, such a prize was well worth the effort it required. Earlier attempts in New Mexico had failed, and internecine struggles had bogged down ongoing ideas elsewhere in the state. The government rejected Former Secretary of the Interior Albert B. Fall's proposal for an "All-Year Round National park" near his southern New Mexico ranch, and the Park Service grappled with the Forest Service over Bandelier National Monument and the Pajarito Plateau in the northern half of the state. Under these circumstances, Carlsbad Cave offered the Park Service and New Mexico important tactical advantages, as well as spectacular caves.⁴⁷

The rapid development of Carlsbad Cave illustrated its significance. Close on the heels of the monument proclamation, the National Park Service implemented procedures and mechanisms characteristic of national parks instead of those typical for national monuments. Congress appropriated \$5,000 in 1924 and \$25,000 the following year for development of the monument, the latter sum significantly more than the combined total allocated to the rest of the national monument category. The Park Service appointed Jim White the monument's chief ranger at a salary of \$1,860 per year; excepting general superintendent Frank Pinkley, only custodians oversaw national monuments elsewhere, the vast majority of whom were volunteers. Road construction also proved critical. The first

⁴⁵ Rothman, "From Monument to Park," 46-57.

⁴⁶ Cammerer to McIlvain, August 24, 1928, Arno B. Cammerer to W. F. McIlvain, September 11, 1924, NA, RG 79, 7, Carlsbad Caverns.

⁴⁷ Dietmar Schneider-Hector, *White Sands: The History of a National Monument* (Albuquerque: University of New Mexico Press, 1993), 59-71; Hal Rothman, *On Rims and Ridges: The Los Alamos Area Since 1880* (Lincoln: University of Nebraska Press, 1992).

road that brought visitors to the caves was the same one used to haul guano to the railhead; in October 1925, McIlvain confidently looked forward to the imminent completion not only of a new approach road to the cave entrance, but a new state road to the monument boundary.⁴⁸ Clearly, the Park Service planned to use Carlsbad Cave in a manner different from the rest of the monuments.

Visitor service amenities increasingly reflected the influence of the Park Service. The first visitors were lowered into the cave in the same bucket used to hoist out guano. Locals such as McIlvain and White controlled the nature of visitation, and NPS officials from afar could only make periodic suggestions. In 1925, as the money for developing the monument became available, the Park Service pressured White and McIlvain to reduce the fee for the lower cave trip from three dollars to two. Interest in the monument was growing, and it was reflected in more group travel. One example was the New Mexico Masonic Grand Lodge conventioners, who met in Roswell in February of 1926 and traveled to the caverns on a special Atchison, Topeka and Santa Fe railcar. Park Service officials recognized that the need to exert greater control over visitor services. By 1926, as the Park Service prepared to assume formal administrative duties, agency officials even began to standardize the apparel for White and his assistants. Although it did not expect the regulation NPS gray and green uniform with accompanying Stetson, the Park Service wanted the guides in what Cammerer called “the holiday attire of the western cowboy”: a twenty-gallon cowboy hat, a red silk handkerchief around the neck, and overalls.⁴⁹ As elsewhere in the nation, the public held federal park officials accountable for the actions of local operatives, and the agency demanded the appearance of professionalism even when it lacked genuine control.

Visitor services proliferated, and the Park Service had to grapple with a range of businesses that did not always understand the agency’s objectives. Within the boundaries of the monument, agency dictums held sway, although the remote location and the values of the era resulted in some unlikely activities. In 1928, the Cavern Supply Company offered lunch 750 feet below ground. The lunchroom seemed entirely beyond the nature of activities the park service preferred to permit. It was a curiosity, albeit an essential one for visitors who made the long trek through the cave, but it seemed to negate the ideals for which the agency stood. In this light, the lunchroom can be seen as a concession to local interests as the Park Service embarked on the long and often intricate process of developing the park without alienating the local constituency.⁵⁰

Outside monument boundaries, the agency had even less control. By 1927, an unregulated, privately owned visitor service industry surrounded the entrance to the park. White’s City — astride the monument boundary where the park access road intersected the main highway and named for C. L.

⁴⁸ Arthur E. Demaray to W. F. McIlvain, October 3, 1925; W. F. McIlvain to Stephen T. Mather, October 19, 1925, NA, RG 79, 7, Carlsbad Caverns; Ise, *Our National Park Policy*, 330; Rothman, *Preserving Different Pasts*, 134-36.

⁴⁹ Demaray to McIlvain, October 3, 1925; McIlvain to Stephen T. Mather, October 19, 1925; W. F. McIlvain to Stephen T. Mather, January 30, 1926; Demaray to McIlvain, February 3, 1926, NA, RG 79, 7, Carlsbad Caverns.

⁵⁰ A. E. Demaray to Thomas Boles, May 27, 1927, NA, RG 79, 7, Carlsbad Caverns; Rothman, *Preserving Different Pasts*, 136.

“Charlie” White, who homesteaded the tract — provided tourist services even as it threatened the standards the agency promoted. When Charlie and Emma White arrived in southeast New Mexico from Kentucky in 1909, the approach road to the cavern entrance served only the guano industry. White came to New Mexico for the dry air; like many arrivals since the turn of the century, he initially worried less about how he made a living than about the air he breathed. White taught school at Francis, New Mexico, herded sheep, served as cashier in a bank he tried to start, and installed the first gasoline pumps at Loving, New Mexico. He encountered Jim White in a chance meeting in 1926, and on hearing of the caverns and Jim White’s promotional efforts, Charlie White rushed to Carlsbad to file a homestead claim on one half section, 320 acres, that straddled the road at the turn-off. He had never even seen the land.⁵¹

By 1926, automobile visitors had yet to reach the caverns in huge numbers, but Charlie White, a seasoned entrepreneur, anticipated that a deluge would not be long in coming. He owned his land, putting him beyond the reach of federal officials. He built a Texaco station, a little cafe, and put up ten tents. Despite struggling to acquire water, White found himself in control of a precious resource: the only stop with food, gasoline, and overnight accommodations between the town of Carlsbad, twenty miles down the road, and the caverns. He was a tireless worker and developer; by 1940, not only did White’s City sport a post office, it offered more than three hundred rooms that were typically filled each night during the summer season.⁵² Although Charlie White’s development existed only because of the park, it also competed with the licensed operators. This position forced the Park Service to respond.

When the Park Service looked to solidify its management position at Carlsbad, it turned to Colonel Thomas Boles. Boles arrived in 1927, just as the Park Service began its campaign to lift the caverns to national park status, and remained as its superintendent for nineteen years. Like Jim White before him, Boles was a great showman. He was also an enthusiastic park manager. A native of Arkansas and the son of a U.S. congressman, Boles possessed experience and connections that far exceeded most national monument custodians. An engineer by training, he entered the Park Service in 1922 as the superintendent of Hawaii National Park, later designated Hawaii Volcanoes National Park; after a five-year stint there, he left the agency, but returned at the behest of Horace Albright.⁵³

Boles’ combination of experience, temperament, and connections perfectly suited a national monument on the way to becoming a national park. Throughout the late 1920s, Carlsbad Cave received increasing attention, not only from scientists and the public, but also from Congress. In an age when congressional officials and their government counterparts routinely departed the national’s capital during

⁵¹ Bart Ripp, "Greetings from White's City," *Albuquerque Living*, March 1984, 70-71; Billy Mack Jones, *Health-Seekers of the Southwest, 1817-1900* (Norman: University of Oklahoma Press, 1967), 175-98; White's City Gazette and Souvenir Menu, n.d., Carlsbad Caverns Research Library, CACA.

⁵² Ripp, "Greetings from White's City," 70; Robert Bryant, "Cashing in on the Caves," *New Mexico Business Journal* 9 n. 11 (November 1985): 53-55.

⁵³ A. E. Demaray to The Times Record Company, Fort Smith Arkansas, May 26, 1927, NA, RG 79, 7, Carlsbad Caverns; Shankland, *Steve Mather of the National Parks*, 251; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 114-16; Albright as told to Robert Kahn, *The National Park Service: The Founding Years, 1913-1933* (Salt Lake City: Howe Bros. Press, 1986), 175.

the torpor of summer, Mather possessed an unequalled prize — the junket to national parks and proposed national parks. As a way of keeping his alliances strong, Mather often took caravans of members of Congress and their friends to the parks. In October 1927, the chair of the House appropriations committee, Louis Cramton of Michigan, and two other committee members arrived in Carlsbad to inspect the monument in a specially provided Fred Harvey company sleeper car. Boles met them, and in a four-car caravan he took the congressmen to the caves and provided the trip of a lifetime. Cramton was a friend of the agency, and the trip helped persuade him of the need for national park status. The Park Service continued to invest resources in the monument, sending inspectors and even educational experts, a sure sign Carlsbad Cave played an important role in agency plans. By 1930, when the bill to create Carlsbad Caverns National Park came before Congress, Mather, Albright, and Boles had all played integral roles in securing the support necessary to pass the bill.⁵⁴

Against the backdrop of the national park bill, Frank E. Nicholson arrived at Carlsbad Caverns with a fifteen-person team to seek out unexplored parts of caverns. Nicholson was a journalist and showman, a teller of tall tales who craved the limelight. In 1929, a syndicate of publishers sponsored an expedition to enter the unexplored parts of Carlsbad Cavern. Amelia Earhart, the famous flier, told Boles she wanted to accomplish this very goal, but her aerial adventures precluded her quest to explore underground. Nicholson was able to attach himself to the publishers' expedition, and promptly turned it into his own adventure. When the party arrived at Carlsbad Cavern on February 20, 1930, its lack of knowledge of spelunking quickly became apparent, but Nicholson did not let a lack of expertise get in the way of a good story. His daily articles with the Carlsbad Caverns byline told a much more exciting story than the minuscule discoveries credited to him; in one case, Nicholson claimed the discovery of a pit of record-breaking depth that was actually more shallow than other existing caves. With the technologies of the day, there was little further exploring to accomplish, and with the publishers in need of something sensational, the endeavor fell apart. Douglas Oliver, known for a book about African hunters Martin and Osa Johnson, took the lead after the sponsors removed Nicholson. In the end, Oliver wrote a book about the adventure curiously mistitled *A Boy Scout in the Grand Cavern* that mentioned neither Nicholson nor Boles, and people in the area made fun of the folly. Boles simply regarded the adventure as another source of free publicity for his park.⁵⁵

After his source of funding waned, Nicholson was forced to scrape for ways to pay his bills. He invented stories about his experiences in the caverns; in one adventure falling rock trapped him, in another he was lost and rescued himself. Despite the fabrications, Nicholson kept the park on the front page of many newspapers, earning the gratitude if not the respect of locals. He also wrote a little booklet called *Jim White's Own Story*, according to local legend as a way to pay his bill, and in the end, White became the heroic figure of the caverns. Although *Jim White's Own Story* resulted as much

⁵⁴ Thomas Boles to A. E. Demaray, November 21, 1927; Thomas Boles to H. M. Albright, July 8, 1929; Minor R. Tillotson to H. M. Albright, May 14, 1929; Memo for Mr. Albright, May 22, 1929, NA, RG 79, Series 6, Carlsbad Caverns.

⁵⁵ H.S. Hunter, "Amelia Earheart to Lead Party Exploring Carlsbad Caverns Pit," *El Paso Herald*, Feb 1, 1930; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 140-47.

from Nicholson's imagination as from White's recollections and much of it was demonstrably false, it remained the most complete version of the story of the place. It also became the prism through which the nation understood the caverns. A few months after Nicholson departed, President Herbert Hoover signed the bill proclaiming Carlsbad Caverns National Park.⁵⁶

Carlsbad Caverns National Park became one of the best examples of the second generation of national parks. After the initial parks, Yellowstone and Yosemite, the first generation were largely mountain tops. Mount Rainier and Grand Teton national parks typified the breed; both were relatively small and restricted to land that was difficult to use for other economic purposes given the technologies of the day. As Mather and Albright broadened support for the parks, they seized upon other strategies. Geography played an important role. No area of the country received more NPS attention during the 1920s than did the East. The creation of national parks like Acadia, Great Smokey Mountains, Shenandoah, and Mammoth Cave made the park system national and dramatically increased park visitation. The Park Service looked to expand the rationale for park selection beyond scenic mountaintops. The combined promotional efforts of White, Davis, and even Boles played an instrumental role in creating a meaning for Carlsbad Cave National Monument that resonated loudly enough in American society to merit its transfer to the national park category. The combination of factors granted Carlsbad Caverns a special status that persisted for more than two generations and that elevated tourism to an unparalleled level of importance in southeastern New Mexico and the trans-Pecos.

Tourism did not replace the existing social, economic, and cultural structure of the region and it accelerated the development of an infrastructure that supported other kinds of growth. Roads improved in the region, and as more and more tourists came, a measure of prosperity became typical. Favorable and consistent national press coverage elevated Carlsbad not only as a destination for visitors, but ultimately as a place to live and work. The national park became an indicator of growth and even a predictor of long-term stability and prosperity.

The growing importance of Carlsbad Caverns showed that the attributes of southeastern New Mexico and the trans-Pecos could be presented in many ways. Agriculture and ranching remained tenuous even with irrigation, and the people of the region searched for new strategies. While guano mining was one primary use of the caves, it was not the only one. With the attention of the GLO and the National Geographic Society, the caves acquired a new meaning that placed them in the same category as the Grand Canyon in the national mindset. This iconography spoke to Americans, newly empowered by the automobile to go where they pleased, and the full-fledged promotional campaign of Boles and the Park Service attracted them. In southeastern New Mexico, the caves and the Park Service fit well together.

Tourism grew rapidly throughout the 1920s, compelling a change in nomenclatural status for the national monument. Like other similar changes in designation, the proclamation of Carlsbad Caverns

⁵⁶ Gilmore, "History of Guadalupe Mountains National Park," 8-11; Rosa Lee Wylie, *History of Van Horn and Culberson County, Texas* (Hereford, TX: Pioneer Book Publishers, n.d.), 20; Froeschauer, Cultural Landscape Report for the Frijole Ranch, 8-25.

National Park attested to the growing importance of the place in the experience and iconography of industrial society. Carlsbad Caverns became a place that people expected middle-class Americans and their children to see. It came to reflect their values and self-image, their conception of the relationship between the American nation and the physical world on the North American continent.

At its inception, Carlsbad Caverns National Park did not yet define southeastern New Mexico. The new park was ancillary to layers of agricultural and ranching activity, a shadow economy on which regional people depended but to which they typically failed to grant importance. With a federal presence, tourism, and the dollars that both generated, the caverns pulled away from the neighboring towns and ranches, at least until the trauma of the Great Depression of 1929 and the rescue of the New Deal increased the similarities between Carlsbad Caverns and the rest of the region.

Chapter 7: A Stronger Federal Presence: Depression, New Deal, and World War II

The stock market crash of October 1929 particularly devastated rural America. Throughout the 1920s, the prosperity enjoyed by much of the nation usually did not include farmers and ranchers. The structure of industrial capitalism, the failed promise of agricultural prosperity after World War I, the increase in credit and related upward pressure on the price of land, and the drought of the late 1920s all contributed to stasis and then decline in the agricultural economy and to poverty and misfortune among farmers. Even irrigation, often the salvation of agriculturalists, could not reverse the trends that demonstrated agriculture's lack of viability in an industrial economy.

The depression that followed the stock market crash exacerbated the problems of rural America. During the 1920s, farmers had produced increasing quantities of crops, driving the prices of staples down. Cotton prices peaked at the beginning of the decade, and as corn, wheat, and soybeans flooded the market their prices fell as well. With the onset of the Depression, the agricultural market collapsed entirely. Gross farm production decreased by 50 percent between 1929 and 1932, signaling that places dependent upon agriculture were in for hard times. With drought and depression came despair, and only President Franklin D. Roosevelt's New Deal offered even a slim chance of reversing rural America's long-standing decline.

The New Deal emerged as one of the most revolutionary programs in American history involving the federal government. An unprecedented intervention into national economic and social affairs, it redefined the role of the state in American society. The Depression left as much as one-quarter of the workforce unemployed at any given time and precipitated a crisis in public confidence. American institutions seemed to have failed the people, and thousands simply gave up. Some starved, some begged, some rode the rails, and all felt that the promise of the nation had been tarnished. When Roosevelt ascended to the presidency, he brought an ebullience that his dour predecessor, Herbert Hoover, could not muster. Roosevelt's manner alone inspired hope, and the programs he espoused produced a tenuous optimism. The New Deal injected government money into the economy, creating jobs by the thousands, providing guarantees that became the basis of the American social "safety net" and building a range of projects that reshaped the national landscape.¹

¹ William Leuchtenberg, *Franklin D. Roosevelt and the New Deal, 1932-1940* (New York, Harper & Row, 1963), 1-26.

It also counteracted long-standing western resentment of the involvement of the federal government in what westerners considered local affairs. Since the settlement of the West, westerners often regarded the federal government as meddlers who deprived local people of the prerogatives of place. Westerners reacted against the General Land Office special agents who tried to administer western holdings, stood firmly against Reclamation Act of 1902, which benefitted the very western farmers who fought it, and let out a loud howl when Theodore Roosevelt proclaimed more than 7,000,00 million acres of national forest just before Congress curtailed his power to proclaim such lands in eleven western states. As long as western states had viable economies, they could protest federal efforts. During the Depression, many places that previously complained about federal intervention meekly waited their turn at the federal trough.²

In peripheries such as southeastern New Mexico and the trans-Pecos, the impact of depression was as great as in the industrial cities, where gangs of the unemployed roamed the streets in search of work. Carlsbad and its environs depended on the industrial economy to buy its products, and with the establishment of the national park, to visit in growing numbers. During the 1920s, as many park visitors came from within the region — from west Texas and Colorado — as from the rest of the country. The depression crimped that relationship; even ranchers and subsistence farmers in far west Texas felt its impact and intra-regional travel declined. Increasingly reliant on tourist dollars — and despite the long tradition of independence in the region — people looked longingly for federal salvation once the Roosevelt administration made clear its national plans.

As a result, between 1929 and 1945 the federal role in southeastern New Mexico and the trans-Pecos dramatically increased, and the policies of the Roosevelt administration raised the visibility and importance of Carlsbad Caverns National Park. After the bombing of Pearl Harbor in December 1941, the demands of World War II brought new federal activities to the region, again increasing the government's presence and power. New Deal projects, Civilian Conservation Corps (CCC) camps, and regional military activities combined with the park to create a healthier but increasingly state-dependent economy in southeastern New Mexico and the trans-Pecos.

The New Deal offered the possibility for a range of improvements; everywhere else in the destitute West, its programs built infrastructure. Federal programs designed to put people back to work first replaced and then supplanted private industry, accelerating the patterns that had begun when the Reclamation Service rescued irrigated agriculture along the Pecos.³ Like much of the West, southeastern New Mexico and the trans-Pecos continued to look to outside benefactors to sustain regional life. The federal government, already regarded as a valuable and benevolent force in the Carlsbad area, became even more significant.

² Samuel P. Hays, *Conservation and the Gospel of Efficiency* (Cambridge: Harvard University Press, 1959), 36-69; Harold K. Steen, *The United States Forest Service: A History* (Seattle: University of Washington Press, 1976), 98-100; Hal Rothman, *preserving Different Pasts: The American National Monuments* (Urbana: University of Illinois Press, 1989), 68; Richard Lowitt, *The New Deal and the West* (Bloomington: University of Indiana Press, 1984), 1-9.

³ Richard Lowitt, *The New Deal and the West* (Bloomington : Indiana University Press, 1984), 1-15.

The extractive economy, the only major economic endeavor without direct ties to the government, also emerged and grew in importance during this period. Although the gradual demise of the guano industry slowed development, potash mining soon replaced it as the dominant local industry in Carlsbad. In the larger region, oil and gas development throughout west Texas and southeast New Mexico had begun before World War II and grew in significance during the war and in its aftermath. It became the leading industry east of the Pecos River and attracted thousands of new residents to the larger area. Tied closely to government needs, the oil and gas industry became crucial in national strategy beginning during World War II. Its products became essential to the war effort and to the rise of the use of petroleum and natural gas in the postwar world.

Extractive industries provided a third economic basis in the region, adding derricks and fires in a visible dimension that had a broader geographic impact than the park. In Carlsbad and along the Pecos River, a culture and economy that depended on federal support flourished. A subsistence regime persisted near the Guadalupe Mountains, only peripherally tied to the mainstream economy and generally spared the problems of this most difficult of decades. The people there remained poor, and because the prosperity of the 1920s largely passed over them, the norms of the 1930s did not feel like deprivation. Elsewhere in the region, along the Caprock and away from the Permian Reef, oil exploration took hold. With ranching and irrigated agriculture, extractive industries became one of the dominant facets of the nonfederal economy, pushing the region toward a role as a supplier of industrial America's raw materials.

The discovery of oil at Spindletop in east Texas in January 1901 kicked off a rush for the liquid gold throughout Texas and into New Mexico. By 1910, when oil was discovered in the trans-Pecos, wells had sprung up throughout east Texas, Indian Territory (which became the state of Oklahoma in 1912), eastern Kansas, and parts of Louisiana. Oilmen, many of whom experienced previous oil booms in Pennsylvania, Virginia, or Ohio, became common across the southwestern landscape. As these experienced wildcatters moved westward, they struck oil at greater depths and in greater quantities than anyone had ever imagined.⁴

The initial strike in the Permian Basin set the standard for future development in west Texas and eastern New Mexico. On the morning of May 28, 1923, the Santa Rita No. 1 well blew a gusher, smearing the quarter-acre north of the site on the Ollie Parker ranch eleven miles from Big Lake, Texas. Oilmen soon determined that the well would produce about two hundred barrels per day. Within a few days, as many as three hundred people had descended on the town, including representatives of Texas Company (later Texaco), and Gulf Oil.⁵ An oil rush in the Permian Basin had begun.

Although most oil exploration took place in west Texas, interest soon extended into southeastern New Mexico. Initial drilling took place near Dayton in Eddy County in 1909, but it produced only a "brown well," one that contained oil without commercial value. In 1924, oil was

⁴ Carl Coke Rister, *Oil! Titan of the Southwest* (Norman: University of Oklahoma Press, 1949), 25-218.

⁵ Rister, *Oil!*, 287-88; *Oil Weekly* 29, no. 10 (June 23, 1923), 25.

discovered fourteen miles south of Artesia. This area had been mapped by an independent geologist from Tulsa named V. H. McNutt, a scientist who became instrumental in developing mineral resources in the Permian Basin. Another nearby site, the Twin-Lakes well, began to produce about 250 barrels a day. With resources from the Picher Oil Company, a business formed by investors from Joplin, Missouri, and Picher, Oklahoma, the field became the first prominent New Mexico oil strike. In 1925, oil production in the state surpassed one million barrels for the first time; by 1926, the Picher Company's wells yielded more than two million barrels. In 1927, more than one million barrels were pumped from the Artesia fields alone.⁶ Even larger finds soon followed. In 1927, near Jal, just below the Caprock in Lea County, New Mexico, the Texas Production Company drilled into a natural gas field that produced ninety million cubic feet of gas each day.

A group of oil companies, including Texas, Prairie, Midwest, Ohio, Humble, Empire, Skelly, and Sinclair began drilling operations. So did independents such as the Maljamar Oil Company, which by 1927 had three producing wells, averaging 115 barrels per day, twenty-five miles east of the Artesia field. With the discovery of oil near Hobbs by the Midwest Company and its subsequent development by Midwest and Humble, the little town of Hobbs, New Mexico, turned into a boomtown. By 1931, oil fields in the region had produced more than seven million barrels.⁷

Southeast New Mexico went wild for oil throughout the rest of the 1920s and the 1930s. Besides Hobbs and Jal, oil fields began producing in Eunice and Monument, and the industry became so important that refinery construction began in Dayton. Other refineries followed, including one run by the Western Refining Company in Pecos, Texas. Tied to the development of oil in west Texas, the region boomed as another extractive industry arose to replace guano mining in the long history of efforts to create an independent economic structure.

Oil and gas exploration appealed to the culture of southeastern New Mexico and the trans-Pecos. Wildcatters, who searched for underground reserves, leased land, and set up wells, mirrored cowboys riding the range. They, too, were independent, answering to no one and following their instincts. Often reserved and even taciturn in daily life, many became flamboyant after success. The wildcatters evinced individualism and seemed to promise a new way to put the region back on its feet without federal support.

Another ancillary industry grew to greater importance as the oil business boomed. Natural gas, often found with oil, was initially perceived as a waste byproduct. The ninety million cubic feet of gas at Jal initially did not appear to have significant economic value. Gas fires burning this seemingly useless byproduct dotted the southeastern New Mexico landscape as late as 1935. The El Paso Natural Gas

⁶ Rister, *Oil!*, 300-01; Rinehart Oil News Company, *West Texas-New Mexico Oil* (Tulsa: Rinehart Oil News Company, 1937), 28; Petroleum Division, A. I. M. E., *Petroleum Development and Technology in 1927* (NY: American Institute of Mining and Metallurgical Engineers, 1928), 659-62.

⁷ Rister, *Oil!*, 301-02; Rinehart Oil News Company, *West Texas-New Mexico Oil* (Tulsa: Rinehart Oil News Company, 1937), 29; Petroleum Division, A. I. M. E., *Petroleum Development and Technology in 1927*, 618-21.

Company, formed around 1928, took the lead in harnessing the region's natural gas resources. By the mid-1930s, it had become the primary regional producer of natural gas.⁸

Despite the region-wide success of the oil and gas industry, the search for a consistent and widely available economic formula continued in Carlsbad. The wells and their development meant prosperity, but with the exception of landowners who leased property to the oil companies, much of the wealth from such endeavors drained out of the region. Some young men found employment in the oil fields, which paid well in an effort to compensate for the inherent danger involved in the work, but generally the fields enriched newcomers, and the governing apparatus, not longtime residents of the region. Despite the romantic image of the wildcatters and the oil-lease men, they reprised an all-too-common situation in the West. The prosperity their appearance promised typically arrived with the outsiders and departed with them, leaving most of the people in the region exactly where they had been before oil was discovered in the trans-Pecos.

The combination of oil and gas and ongoing guano operations suggested a future in mining for the region. Many sought some other mineral of value near Carlsbad; as Jim White pointed out when he described his impetus for searching for the Bat Cave, people in southeastern New Mexico always looked to the land for economic opportunities. Deserts and semiarid areas all over the world had begun to yield valuable minerals and fossil fuels and there were many reasons to believe that southeast New Mexico and far west Texas would do the same. Ongoing efforts to administer dams and irrigation had offered valuable geological characterizations of the region, beginning with Willis T. Lee's work from 1903 to 1905. In 1910, the federal government first eyed the salt beds east of Carlsbad as a possible source of oil; after 1920, the development of potash became a possibility.⁹ Like guano, potash possessed considerable value. Widely used as a fertilizer before the advent of synthesized chemical compounds, potash was buried in the Salado geological formation, sandwiched between two salt formations largely devoid of sylvite and other potassium and magnesium evaporite minerals. This layer, named the McNutt Potash Zone after the intrepid geologist V.H. McNutt, yielded minerals that could be processed into fertilizer.¹⁰

World War I forced the United States to develop its own sources of potash, which typically had been imported from Germany. As hostilities deepened and trade ceased between the two nations, German potash became unavailable in the United States. The shortage inspired hyperbole, with the mineral described as the "salt that nearly lost a war," an important indicator of its significance. The price of potash skyrocketed from a prewar average of \$35 per ton to \$500 per ton by the end of 1914. The

⁸ Doris Gregory, "Gas Flares Brightening Economy," *El Paso Times*, June 15, 1964.

⁹ "New Mexico Potash, Eddy, N. Mex.: *War Minerals Report 432*" (Washington, D.C.: Department of the Interior, 1945); James S. Wroth, "Special Features of Core Drilling in the Salt Beds of Western Texas and New Mexico," Bureau of Mines Information Circular 6156 (Washington, D.C.: Bureau of Mines, 1929).

¹⁰ Arnold L. Brokaw, C. L. Jones, M. E. Colley, and W. H. Hays, "Geology and Hydrology of the Carlsbad Potash Area, Eddy and Lea Counties, New Mexico," United States Geological Survey 4339-1, Open File Report 1972, (200) R290 no. 1793, United States Geological Survey Library, Denver, Colorado.

situation encouraged domestic exploration for the mineral, an endeavor supported by a pattern of funding that began with a congressional appropriation in 1911 to the U.S. Geological Survey and the Bureau of Soils to research potash. In 1912, John A. Udden of the University of Texas discovered potash salts in bailings from oil wells in Potter County, Texas, and his subsequent work in the Permian Basin revealed similar salts in its salines. The price of potash plummeted with the war's end, as did the domestic industry. Only the American Trona Company (later renamed the American Potash and Chemical Company) survived, due largely to its development of an inexpensive, efficient method of extracting potassium chloride and other chemicals from Lake Searles, California. The wartime scarcity inspired Congress to appropriate funds to support a domestic industry. In 1924, U.S. Senator Morris Shepherd of Texas introduced a bill authorizing the Bureau of Mines and the USGS to explore the salt strata of the Permian Basin for potash minerals. The bill passed in 1926, and in the resulting survey twenty-four test wells revealed massive beds of polyhalites as well as other potash minerals. The Bureau of Mines pioneered a process that allowed its extraction, and a domestic potash industry took shape.¹¹

The proximity of potash to oil deposits also spurred the development of potash mining. After Spindletop, oil booms throughout Texas and southeast New Mexico drove the regional economy, especially after the 1929 market crash. The wildcatters who searched for oil also sought other minerals; after 1925, they closely watched the debris from oil drilling for signs of potash. The demand for the fertilizer, the fear of another shortage resulting from an international political crisis, the close links between the two commodities, and the support of legislators such as Senator Shepard all but assured the development of a potash industry in southeastern New Mexico.¹²

Near Carlsbad, V. H. McNutt served as the catalyst for the development of the potash industry. In 1925, he found crystals of potassium in bailings from a Snowden & McSweeney Co. well. Test bores the following year revealed a thick layer of sylvinites, a combination of potassium chloride and common salt, about one thousand feet below the surface. Snowden and McSweeney company officials leased fifteen thousand acres of the public domain near Carlsbad and set up a separate company to mine and refine potash. This new company became the United States Potash Company (USPC).¹³ Acquiring the expertise and money to mine potash was a complicated process. Snowden and McSweeney drilled for oil, not minerals; the company lacked the expertise for a complicated mining

¹¹ "New Mexico Potash, Eddy, N. Mex.: *War Minerals Report 432* (Washington, D.C.: Department of the Interior, 1945); James S. Wroth, "Special Features of Core Drilling in the Salt Beds of Western Texas and New Mexico," Bureau of Mines Information Circular 6156 (Washington, D.C.: Bureau of Mines, 1929); n.a., *A History of Potash, Presented in Pictures and Words* (Carlsbad, NM: Potash Company of America, 1945); Donald C. Swain, *Wilderness Defender: Horace M. Albright and Conservation* (Chicago: University of Chicago Press, 1970), 233-35.

¹² Rister, *Oil!*, 266-350; Swain, *Wilderness Defender*, 233-35.

¹³ B. G. Messer and J. E. Tong, "Exploration, Development, and Production at Duval Sulphur and Potash Company's Potash Operation in Eddy County, New Mexico, *The Mines Magazine* 43 n. 3 (March 1953): 53-60; Swain, *Wilderness Defender*, 236.

endeavor. After a number of attempts, the Pacific Coast Borax Company purchased half the common stock of U.S. Potash and prepared to sink a shaft near Carlsbad and to build a refinery. Pacific Coast Borax, a subsidiary of Borax Consolidated Limited of London, produced small amounts of potash during World War I, but left the industry when prices fell at the end of the war.¹⁴

Pacific Coast Borax had close ties to the National Park Service, also an important organization in southeast New Mexico. The company produced Twenty Mule Team Borax, the product NPS Director Stephen T. Mather promoted to make his fortune. Pacific Coast Borax's chief executive in North America was Christian Zabriskie. Like Mather and Horace M. Albright, Mather's right-hand and eventual successor, he was a graduate of the University of California, and the three men enjoyed close ties. Albright's father and Zabriskie had even been in the mortuary business together in the mining town of Candelaria, Nevada. An incapacitating stroke in November 1928 forced Mather to resign, and on January 12, 1929, Albright succeeded Mather as director of the Park Service. Within a year, Zabriskie asked Albright to take over U.S. Potash; the gregarious, driven, and uncompromising new NPS director was genuine executive material. Albright demurred for two years, but finally agreed after the rout of Herbert Hoover in the 1932 election. He left the Park Service to become vice-president and general manager of U.S. Potash.¹⁵ In Albright, the company secured an effective leader who already knew a great deal about southeastern New Mexico.

During the two years Albright pondered his career change, competition for potash accelerated. U.S. Potash sunk a shaft to reach potash in December 1929; when it completed the work in January 1931, it had the entire field to itself. Even though the company built its own refinery near the Pecos River about thirteen miles from the mine in 1932, its luxury of exclusivity did not last long. The Potash Company of America (PCA) had set up its own operation, sinking an initial shaft in 1931, that ultimately lacked commercial potential, and a second, successful one in 1933 that began the expansion of the business. By early 1934, the company had finished building a crushing mill and a twenty-mile railroad to Carlsbad, and its first carloads of manure salts were being shipped. Despite an almost 40 percent fall in the price of potash over the previous year, PCA shipped its first high grade muriate of potash in 1935, sank another shaft, and expanded its operation again. In 1936, a third competitor, the Union Potash and Chemical Company, opened for business. The three companies united in a campaign against foreign potash and by 1936 potash prices regained about half the earlier loss. The three Carlsbad-area companies, which produced almost half the nation's potash, again became profitable, continuing to grow despite an antitrust investigation of the industry in the late 1930s. By 1942, they were producing more than 1.2 million tons of potassium salts annually in the United States, almost entirely by the three New Mexico mines and the site at Searles Lake, California.¹⁶

¹⁴ Swain, *Wilderness Defender*, 236.

¹⁵ Swain, *Wilderness Defender*, 236-38; Horace M. Albright, as told to Robert Cahn, *The Birth of the National Park Service: The Founding Years, 1913-1933* (Salt Lake City: Howe Brothers Press, 1986), 279-81; Robert Shankland, *Steve Mather of the National Parks*, 3d ed. (New York, Knopf, 1970), 33-34.

¹⁶ "New Mexico Potash, Eddy, N. Mex.: War Minerals Report 432"; n.a., *A History of Potash*,

In Carlsbad, the impact of potash mining resembled that of guano extraction. Potash supported an ongoing, dependable, visibly productive industry that provided many jobs in the region. Even during the 1930s, observers noted that manpower was scarce in southeastern New Mexico, a problem worsened by World War II, and the demands it put on the civilian labor force.¹⁷ Men who labored in the potash mines held tools, loaded railcars full of the product, and came home dirty. They looked like men at work in a way that seemed real, as opposed to employees at Carlsbad Caverns National Park who gave tours and in, comparison, seemed somehow less impressive. By the 1930s, the local newspapers touted the park, but to most people in the region, the potash mines seemed far more important. They represented a traditional kind of labor that people understood.

At Carlsbad Cavern National Park, Thomas Boles faced the Depression with the same ebullience that he brought with him in 1927. Boles had never been a team player, as that concept was understood, in the National Park Service. His work, even more than that of Frank Pinkley, was at odds with the agency's demeanor under Mather and Albright. Although the leadership regularly lauded Boles for his promotional efforts, which were truly unparalleled among the national parks and monuments, he fell short — far short — as an administrator. In many ways, he exemplified the problems inherent in the Park Service's transition from its haphazard roots to its much-coveted status as a professional agency.

Deliciously idiosyncratic and selected largely for his promotional skills, Boles was the quintessential first-generation park manager, an energetic jack-of-all-trades who knew how to meet people and how to spark their interest in his park. He traveled constantly, making friends with business leaders, chambers of commerce, auto clubs, and anyone else who might send a few visitors his way. Boles thought of the park as a magnet for visitors. He designed park features to accommodate them and loved to give tours personally. Boles even escorted humorist Will Rogers and other celebrities, basking in the glow of their presence and in the publicity that inevitably followed. In photographs with celebrities, his critics often charged, Boles managed to have himself on the left, assuring that his name would come first in the caption. In February 1934 alone, he drove 2,783 miles in the park's car, attending conferences, speaking at high schools, and administering various park programs.

Presented in Pictures and Words; Swain, Wilderness Defender, 238-39.

¹⁷ "New Mexico Potash, Eddy, N. Mex.: War Minerals Report 432."

No one in the Park Service ever complained about his efforts or his ability to win friends, a fact repeatedly confirmed by the hordes of letters lauding him that descended upon the Washington headquarters of the agency.¹⁸ Boles possessed two enormous shortcomings that became increasingly apparent as the Park Service grew more professional: he was a poor administrator and he had great difficulty following the dictates of the agency. No national park superintendent received more reprimands for failing to file paperwork, respond to letters and telegrams, and keep the Washington office informed of his activities. A torrent of letters sanctioning Boles for his failures flowed from headquarters. “You have fulfilled the promises I made to myself concerning your public contact work in a large way,” Horace Albright wrote to Boles at the end of 1931. “It is a sad fact that in no other unit of the system have we had as much serious trouble in personnel and financial matters as at Carlsbad. In the summing up of your administrative abilities and achievements you have failed in returning to the Service that full measure of responsibility and trust that I must rely on for the proper administration of that park.”¹⁹ Nor could Boles be counted on to do things the Park Service way, with the quasi military spit and polish evident in the choice of uniform and Stetson originating in the World War I-era and the elite roots of the agency

Boles also failed to recognize a significant transition in which Albright played an enormous role: the efforts of the Park Service to explain — “interpret,” in agency parlance — the meaning of the national parks. As the 1920s ended, the agency invested heavily in creating an educational division. As some within the Park Service, especially the curmudgeonly Frank Pinkley of the Southwestern National Monuments group, pointed out, intellectualizing the emotional impact of national parks did little to further social objectives. Turning the vistas of the Grand Canyon into a taxonomic tour of plant life hardly persuaded first-time visitors of the special meaning of the national parks or the American experience, but the Park Service, tied to its roots in the Progressive era, persisted.²⁰

¹⁸ “Will Rogers and ‘Ma’ Visit Carlsbad and National Park,” *Carlsbad Daily Current-Argus*, May 11, 1931; Arno B. Cammerer to Thomas Boles, August 7, 1931; E. H. Simons to Horace M. Albright, September 24, 1931; Horace M. Albright to Thomas Boles, December 9, 1931; Superintendent’s Monthly Report, March 1934, 11, NA, RG 79, 7, Carlsbad Caverns; Shankland, *Steve Mather of the National Parks*, 250, 313; Albright as told to Cahn, *The Birth of the National Park Service*, 326; Nymeyer and Halliday, *Carlsbad Caverns: The Early Years*, 115-17.

¹⁹ Albright to Boles, December 9, 1931; Shankland, *Steve Mather of the National Parks*, 243-54.

²⁰ Hal Rothman, *Preserving Different Pasts: The American National Monuments* (Urbana: University of Illinois Press, 1989), 172-78; Hal Rothman, “Forged By One Man’s Will: Frank Pinkley and the Administration of the Southwestern National Monuments, 1923-1932,” *The Public Historian*, 8 n. 2 (Spring 1986): 83-100.

The emphasis on education revealed an important division within the agency that further marginalized Boles. NPS leaders aspired to be part of and to attract the American elites, and the agency continued to offer the message of the turn of the century its 1920s audience, one increasingly enamored of the automobile. When the Park Service developed programming, it followed its leaders' personal sense of what was important. Park officials sought to "educate" people who simply wanted experience, who valued the automobile trip as much as the destination.

Like many first-generation park superintendents, Boles felt uncomfortable with the shift in emphasis. An entertainer who understood people and gave them what they wanted — typically theatrics, drama, and the occasional piece from the rock formations, as Director Horace Albright attested — he personally escorted visitors through the caverns against the wishes of his Washington superiors. Especially between 1929 and 1932, when the Depression strained agency resources and Park Service officials cast about for a viable mission in a time of diminishing funds, Boles found his approach to park management under siege.

The New Deal rescued the Park Service from the fate of offering anachronistic interpretation. The Depression challenged American institutions and values. In a 1932 summer train trip to see the parks, a custom of early NPS directors, Albright found himself astonished at the depth of the Hoover administration's resentment and the lack of respect for what he considered American values. After Albright's famous car ride with Franklin D. Roosevelt in the new administration's first days and the pivotal role of the Park Service in early New Deal programming, the agency focus on uplifting education melded with the needs of the Depression era. Parks, new and old, could be used to tell a story that gave Americans hope. The park system served as one of many forms in American life that subtly told the public that despite the crisis of economic collapse, American institutions remained strong.²¹

The Park Service found itself in flux during the early 1930s as a series of important changes in leadership and government forced a reassessment of agency policy and practice. Mather's retirement and Albright's departure for U.S. Potash left a serious void. When Arno B. Cammerer was confirmed as director, control of the agency passed from these visionary founders to bureaucrats who merely carried out the directives of the original leaders. Instead of aggressive, skilled, and well-connected direction, the agency endured paper-pushers and functionaries who doggedly followed existing policies without the innate flexibility and responsiveness of their predecessors. Against the backdrop of the New Deal and Secretary of the Interior Harold L. Ickes' vituperative disdain for Cammerer, the change in leadership had a paralyzing effect.²²

²¹ Rothman *Preserving Different Pasts*, ; Albright, *The Birth of the National Park Service*, 278; John Ise, *Our National Park Policy: A Critical History* (Baltimore: Johns Hopkins University Press, 1961), 349-58 ; Ronald Foresta, *America's National Parks and Their Keepers* (Washington, D.C.: Resources for the Future, 1984), 40-46.

²² Hal Rothman, "'A Regular Ding-Dong Fight': Agency Culture and Evolution in the NPS-USFS Dispute, 1916-1937," *Western Historical Quarterly* 25 n. 2 (April 1989): 141-61.

These changes also illustrated the difference between mavericks like Boles and the increasingly formal and professional mainstream employees of the agency. The 1930s were notable in the Park Service for the increase in number of areas administered and the development of area management. In 1935, the agency divided its holdings into regions, and instead of dealing directly with the director's office in Washington, D.C., park superintendents communicated with a regional office that centralized field reports and distilled them for upper management.²³ For Boles, who relied on personality, charm, and face-to-face encounters to establish the rapport so central to his success, the division into regions diminished his effectiveness and his operation. He became just one among many instead of someone special, a superintendent besieged by requests for appropriate paperwork instead of appreciated for the friends he made for the agency and for the people who left Carlsbad with a warm feeling toward the park, the NPS, and the government.

New Deal money exacerbated Boles's dilemma. Franklin D. Roosevelt's programs to alleviate the problems of the Depression offered welcome new opportunities for the Park Service. A reorganization of the federal government in 1933 gave the Park Service administrative responsibility for national monuments and other areas previously administered by the Forest Service and War Department, including the sites of many of the most significant battles in American history — Gettysburg, Yorktown, Shiloh, Chickamauga, and Little Big Horn. The Park Service expanded its reach at the very moment that resources became available to entice the agency's desired constituency. As New Deal funding built everything from the Golden Gate Bridge across San Francisco Bay to the student union at the University of Illinois, federal programs to construct facilities in national parks played a major role in providing widespread employment for the legions in search of work. A range of projects, often administered through different federal agencies and programs, provided the vehicle for this massive employment and facilities development initiative.²⁴ It also required considerably greater administrative skill from park managers.

²³ Richard Polenberg, *Reorganizing Roosevelt's Government: The Controversy Over Executive Reorganization, 1936-1939* (Cambridge: Harvard University Press, 1966), 1-27; Rothman, *Preserving Different Pasts*, 203-04; Foresta, *America's National Parks and Their Keepers*, 35-40.

²⁴ Richard Polenberg, *Reorganizing Roosevelt's Government: The Controversy over Executive Reorganization, 1936-1939* (Cambridge, Harvard University Press, 1966), 15-41; Rothman, *Preserving Different Pasts*, 162-86; Foresta, *America's National Parks and Their Keepers*, 3-35; Horace M. Albright as told to Robert Cahn, *The Birth of the National Park Service: The Founding Years, 1913-1993* (Salt Lake City: Howe Brothers Press, 1986), 262-312.

In the national parks and monuments, the single most important channel of federal capital was the Civilian Conservation Corps (CCC). During its nine-year existence, more than two million enrollees worked in 198 CCC camps in national park areas and 697 camps in state, county, and municipal parks. Under the various bureaus that administered CCC programs — the Emergency Conservation Work program (ECW), the Public Works Administration (PWA), the Works Progress Administration (WPA), and others — more than one thousand miles of park roads and 249 miles of parkways were built in national park areas. CCC workers were counted among the fortunate during the Depression. As they earned the income that primed the pump of dormant economies in innumerable communities around the nation — all but five dollars of their monthly earnings of one dollar per day were sent home to their families — they also constructed the first genuine infrastructure in many national parks. The CCC built buildings and roads, landscaped grounds, cut fire trails and hauled brush, and especially in newly established or remote park areas, created the first facilities that ever existed. During the first twenty-five years of the National Park Service, no single entity did more for the parks than the CCC.²⁵

Although the Depression significantly curtailed tourism, Carlsbad Caverns National Park enjoyed a place in the American mainstream that helped it retain a claim on federal money throughout the 1930s. In the decade since the beginning of serious efforts to attract visitors to the caverns, the efforts of White, Davis, and Boles had been so successful that Carlsbad Caverns had become part of the iconography of American society. To Americans, the caverns symbolized both the success of their society and the beauty of their land. This was a winning combination in every sense of the word. From window stickers to photographs, the image of the caverns appeared everywhere, and the importance of that image grew as Carlsbad became a colloquial “eighth wonder of the world,” a must-see for Americans who craved a distinct national identity that derived from the landscapes of the West.²⁶ This new importance, especially during the Depression, when all kinds of natural and cultural symbols were pressed into service to shore up American morale, made Carlsbad Caverns a likely candidate for New Deal development work.

The Civilian Conservation Corps’ impact on the town of Carlsbad and on Carlsbad Caverns National Park paralleled that of many communities around the West. Communities such as Carlsbad served as regional hubs, places through which regional life, economics, and culture flowed. People brought what they raised to warehouses and railroads, creating a funnel that took goods in and sent cash, markers, scrip, and loans out into smaller towns, farms, and ranches. In essence, towns such as Carlsbad became core areas within the subregion, more powerful than the little towns that depended on them, but still subordinate to the networks of transportation and the larger markets of the Midwest and

²⁵ Ise, *Our National Park Policy*, 360-64; John C. Paige, *The Civilian Conservation Corps and the National Park Service, 1933-1942: An Administrative History* (Washington, D.C.: National Park Service, 1985).

²⁶ Marguerite S. Shaffer, “See America First,” (Ph.D. diss., Harvard University, 1994); Hal K. Rothman, *Devil’s Bargains: Tourism in the Twentieth-Century American West* (Lawrence: University Press of Kansas, 1998), 1-28.

the East. The Depression affected these relationships, for it made these “nodes” along railroad lines poorer, unable to sustain their end of the bargain with the smaller towns and individual homesteads around them. The CCC reversed this negative trend, initiating economic activity in these small towns by creating work that transferred money back into the communities, enabling local merchants again to fill the intermediary role between periphery and core areas.²⁷

In places such as southeastern New Mexico and the trans-Pecos, CCC camps functioned in concert with a range of federal development projects. Again, the federal presence in irrigation played an important part in facilitating further endeavors. The region already recognized the significance of federal help in creating infrastructure, and with that realization, residents more willingly accepted a wider federal presence than did other communities more completely engrossed in the nebulous ethic of frontier individualism. Along the Pecos River and its environs, the advantages of federal participation in all kinds of projects far outweighed any obvious disadvantages. Infrastructure projects that demanded attention and available labor abounded not only in the town of Carlsbad, but all along the Pecos River and around the Guadalupe Mountains. The reservoirs built two decades earlier needed constant attention as did area irrigation canals. Road construction was a priority, and trails needed to be widened and more clearly marked. With public works money available from a variety of sources, regional and park officials could create extended wish lists that had some chance of realization. Even the Emergency Conservation Work program, the rubric under which much government-funded development took place, assessed lands that belonged to individual agencies to see if ECW funds could be spent there.²⁸

The CCC established camps in southeastern New Mexico during the first year of the ECW program. In Carlsbad, the initial camp was on the northwestern edge of the town and operated for the CCC’s entire nine-year span. Another camp was also located in town, although contemporary accounts suggest it might have been an offshoot from the original camp. Men at the camp in town performed work in the Carlsbad Historic District. CCC camps sprouted elsewhere around the region. The Forest Service administered a camp near Queens, New Mexico, in the Lincoln National Forest: enrollees, as CCC camp men were called, built the road to the town that still carries traffic in the 1990s. The men also built numerous earthen tanks that ranchers relied upon to collect water.²⁹

²⁷ Eugene Moehring, “The Comstock Urban Network,” *Pacific Historical Review* Vol LVXI 3 (August 1997): 337-362; Rothman, *Devil’s Bargains*.

²⁸ Francis Hastings Gott, “Reconnaissance Report on the Recreational Possibilities of the Carlsbad Irrigation Project, Eddy County, New Mexico,” NA, RG 79, 0-32, Carlsbad 207.

²⁹ Jim McGrath, “A History of the CCC at Carlsbad Caverns and Rattlesnake Springs,” (unpublished MS., Carlsbad Caverns National Park Library, ca. 1990); David Hutson, “A Brief History of the Civilian Conservation Corps and Their Local Impact,” (unpublished MS, Carlsbad Caverns National Park Library, 1992).

A third camp opened in July 1938 at Rattlesnake Springs in Carlsbad Caverns National Park. Like most camps in national parks, this one concentrated on projects that affected the quality of the facilities and of the visitor experience. Enrollees built the ranger's cabin, laid a pavement surface in the main lunchroom in the caverns, and started work on several of the park's staff houses. Built in one of the dominant architectural styles of the time, the New Mexico Territorial Revival style, these triplexes blended the low forms of southwestern style with the rolling contours of the southeastern New Mexico landscape. The camp within the park operated until 1942, when federal legislation and the demands of World War II terminated the program.³⁰

The New Deal accentuated the significance of the federal presence in southeastern New Mexico and the trans-Pecos. The advantages of federal designation seemed immense in the 1930s, when extensive government programs guaranteed that federal support was directly proportional to the amount of federal land in an area. In a part of the world where people believed in their rugged individualism, but where more than a generation of roller-coaster swings between prosperity and marginality tempered perceptions, relying on the government seemed less a threat to regional identity and more a common sense decision. If the government was going to give money away, people in the region asked, why not take it?

As a result, efforts to expand federal holdings during the 1930s met with little of the local resistance common at other times and other parks in the West. The people of Carlsbad found that the federal presence helped restore prosperity; regional newspapers noted the growth of the town during the Depression decade. "Unusual gains are made by Thriving City" read a headline in the *El Paso Times* in 1938; the combination of "Mines, Cattle, Farms, and Caverns," as a 1941 *El Paso Times* headline described Carlsbad's economy, helped the community prosper as other places in the nation simply endured.³¹ The federal presence was an integral and warmly received component.

In this context, Carlsbad Caverns National Park seemed a likely candidate for expansion. During the decade, the first initiative to add the Guadalupe Mountains to the park system gathered momentum. Efforts to define the Permian Uplift as a park began with the most basic of western necessities: the need for paved roads that could serve as arteries between communities. During the 1920s, travelers from El Paso who wanted to reach Carlsbad first headed to Alamogordo, then through the Sacramento Mountains to Artesia, and finally south to Carlsbad. This roundabout journey offered beautiful scenery but poor opportunities for those who thought that better road connections could help stimulate a commercial relationship between Carlsbad and its Texas neighbors. By 1927, the commercial community in El Paso favored a road to link the towns. Some El Pasoans, such as Haymon Krupp and Frank Pickerell, flush with success in the oil boom, regarded all of southeastern New

³⁰ McGrath, "A History of the CCC at Carlsbad Caverns and Rattlesnake Springs"; Hutson, "A Brief History of the Civilian Conservation Corps and Their Local Impact."

³¹ "Carlsbad Continues Remarkable Recovery: Unusual gains are made by Thriving City," *El Paso Times*, November 6, 1938; "Carlsbad Developed Within 50 Years," *El Paso Times*, November 10, 1940; "Mines, Cattle, Farms, and Caverns," *El Paso Times*, November 16, 1941.

Mexico as El Paso's "trade territory" and pressed for a road as a way to secure economic preeminence in the region. The El Pasoans found support among some trans-Pecos Texans who planned a park in McKittrick Canyon in the Guadalupe Mountains as a way to encourage support for a road. J. C. Hunter of Van Horn, Texas, a judge for Culberson County and an oilman with considerable wealth by the standards of the time and place, led this group.³²

The interest in Carlsbad Caverns following Lee's expedition created another context for the road. El Pasoans and others wanted to see the caves and the town stood to benefit if it could capitalize on the interest in Carlsbad in some fashion, particularly if visitors traveled through El Paso. Commercial interests in Carlsbad recognized the same opportunity; in the effort to create a national park from the existing national monument, they sought to include some of the features of the Guadalupe Mountains, especially Guadalupe Peak and El Capitan. Although this initial park idea went no further, the combination of these interests led to the construction of two roads that linked El Paso and Carlsbad — the "short line" — which later became U.S. 62, opened in 1929, and U.S. 80, which linked El Paso and Van Horn.³³ Roads became an important conduit for travelers as well as a means to develop interest in the Guadalupe Mountains.

Besides acquiring park areas managed by other federal agencies and receiving the resources to build facilities in them, the Park Service also embarked on aggressive land acquisition projects throughout the 1930s. Already favored because of its ability to employ thousands in public works projects, the Park Service met with little local resistance to the land withdrawals necessary for park area establishment because of economic imperatives dictated by the Depression and the success of New Deal programs. While some residents — often goaded by competing federal agencies such as the Forest Service — fought efforts to create national parks, most Western communities warmly received Park Service representatives. A national park seemed to guarantee economic survival in an era when most economic activity in the rural West stemmed from federal programs.³⁴

³² Judith K. Fabry, *Guadalupe Mountains National Park: An Administrative History* (Santa Fe: National Park Service, 1988) Southwest Cultural Resources Center professional papers No. 19, 16-17; Floyd S. Fierman, *Roots and Boots: From Crypto-Jew in New Spain to Community Leader in the American Southwest* (Hoboken: KTAV Publishing House, 1987), 117-24.,

³³ Fabry, *Guadalupe Mountains National Park*, 17-19; "El Paso Sees the Cavern Road Coming," *Carlsbad Current-Argus*, March 11, 1927; "El Paso's Short (Cut?): Paso-Carlsbad Road in Summer: El Paso to Carlsbad Short Line Road May be Used by Late Summer with 35 Mile Link Unfinished," *Carlsbad Current-Argus*, February 1, 1929.

³⁴ Hal Rothman, "Shaping the Nature of a Controversy: The Park Service, the Forest Service and the Cedar Breaks National Monument," *Utah Historical Quarterly*, Summer 1987; Foresta, *America's National Parks and Their Keepers*.

Carlsbad proved especially fertile territory for the Park Service. The community enjoyed a long history with the federal government, and the establishment of the park was as much a local triumph as an agency victory. Efforts to expand the park seemed only to bode well for the town of Carlsbad and the entire trans-Pecos region. A larger park meant more people, more money, and more jobs, all desirable during the 1930s. The existence of vast tracts of public domain land near the existing boundaries offered an easy opportunity to expand; little of the grappling with the Forest Service that so typified the 1920s was necessary.³⁵

The establishment of the national park in 1930 included provisions that permitted expansion. In 1924, 1928, and 1929, the Department of the Interior had withdrawn public domain land around Carlsbad Cave National Monument in anticipation of expanding the park; with permission to expand already granted by the authorizing legislation, land acquisition only required the recommendation of the secretary of the interior and the signature of the president. On February 21, 1933, President Herbert Hoover signed an executive order that added 9,239 acres to the park, an addition that gave the park space on which to construct a suitable approach road to accommodate the vastly increased amount of visitor traffic.³⁶

The addition of land in 1933 signaled that the nature of Carlsbad Caverns National Park had begun to change. The monument had been established to preserve a wonder, a curiosity at which the public could gaze, mystified at the awesome works of nature. The proclamation of the national park followed the same intellectual trajectory, but clauses in the legislation hinted at new dimensions. The discovery of new caves beneath the ground did not genuinely require expansion except to assure that private interests would not succeed in claiming these so obviously public interest lands. The permanent approach road required land, and that acquisition initiated the reconceptualization of the park as more than its underground caves.

During the 1930s, a number of attempts to expand the park ensued, all of which spoke to different conceptions of Carlsbad Caverns National Park and of the national value of the Guadalupe Mountains region. As a result of the lack of infrastructure in far west Texas, the region lagged behind the rest of the state. Nor did Texas offer the range of governmental services that industrial states had begun to see as their obligation. State parks provided one example.

³⁵ Rothman, *Preserving Different Pasts* ; Rothman, *On Rims and Ridges: The Los Alamos Area Since 1880* (Lincoln: University of Nebraska Press, 1992, ; Rothman, "A Regular Ding-Dong Fight."

³⁶ Ise, *Our National Park Policy*, 33-31; Fabry, *Guadalupe Mountains National Park*, 21.

Although the Texas State Parks Board had been established during the 1920s, by 1930 it still lacked resources to develop a state park system. The Depression further retarded park development, and despite strong promotional efforts in the early part of the decade, a bill to create a state park in the Guadalupe Mountains and another in the Davis Mountains languished in the Texas legislature. For the Park Service, still in an aggressive mode with Horace M. Albright at the helm, the beleaguered state parks board appeared as an ally in the quest for new acquisitions. Although NPS officials recognized the board's lack of power, they also recognized the potential that could be realized with the help of the Park Service and the support of the Guadalupe Mountains Park Association, at the time an adjunct of the El Paso Chamber of Commerce. In November 1931, Roger W. Toll, the superintendent of Yellowstone National Park and a rising star in the agency hierarchy, traveled to the trans-Pecos to see what opportunities awaited the Park Service there.³⁷

Toll was part of the original NPS cadre, already a man of considerable ability and experience when, on Horace Albright's recommendation, Mather met him and recruited him for the agency in 1921. Hailing from Denver, Toll had been a charter member of the Colorado Mountain Club, earned an engineering degree at Columbia University, traveled the world, worked for the U.S. Coast and Geodetic Survey, and served as a major in World War I. His family had avidly supported the establishment of Rocky Mountain National Park, and Mather came away so impressed with Toll that he offered the young man the vacant superintendent's position at Mount Rainier National Park. Toll's experience as a civil engineer, his military service, family connections, and general bearing had persuaded the director. A lifelong relationship followed that only ended with Toll's tragic death in the same automobile accident near Deming, New Mexico, in 1936 that killed biologist George M. Wright, the thirty-two-year-old head of the Wildlife Division of the Park Service.³⁸

By the time he arrived in southeastern New Mexico, Toll's responsibilities included the assessment of potential park areas. As superintendent of Yellowstone — the last step prior to assignment in the Washington, D.C., office as assistant director's post in the era before the Park Service subdivided into regions — Toll had attained the most important field post in the agency. He was widely regarded as the best judge of difficult situations in the agency. As his correspondence and reports from the Carlsbad area showed, the area presented no special problems for acquiring land and expanding park boundaries, but Park Service goals proved more ambiguous: what did the agency want from Carlsbad Caverns National Park and the trans-Pecos region?

³⁷ Roger W. Toll, Report to the Director, January 20, 1932, NA, RG 79, O-35, Carlsbad Caverns; Rothman, *Preserving Different Pasts*, ; Swain, *Wilderness Defender*, 183-205; Fabry, *Guadalupe Mountains National Park*, 18-20; Thomas R. Cox, *The Park Builders: A History of State Parks in the Pacific Northwest* (Seattle: University of Washington Press, 1989).

³⁸ Shankland, *Steve Mather of the National Parks*, 247-48, 274-75; Albright, as told to Cahn, *The Birth of the National Park Service*, 93, 242-43.

A number of objectives characterized almost every action taken by the Park Service during Albright's tenure as director. First and foremost was expansion of the agency's domain, a goal inherited from the Mather regime. Next, the Park Service sought to broaden its constituency; under Albright, this meant that the definition of what could be included in the park system was more malleable than it had been under Mather. Garnering support from powerful political leaders ranked high in agency priorities, as did gaining an advantage against agency adversaries. This loose formula dictated when the Park Service acted and when it was silent, when it expended hard-won capital and when it watched from the sidelines.³⁹

The initial move in southeastern New Mexico included a characteristic NPS maneuver at the expense of its chief rival, the U.S. Forest Service. The NPS and the USFS had been locked in a struggle since the founding of the Park Service in 1916; by 1925, the Park Service had reached parity, and just before the New Deal, it clearly possessed the upper hand. Toll's insistence in 1932 that fifty-five square miles of the Lincoln National Forest were essential for any park smacked of an Albright-like effort to gain ground and keep adversaries on the defensive. Two separate proposals for parks in the Guadalupe Mountains region did not, in Toll's estimation, stand on their own. The Forest Service land between them could be used to link these scenic additions to Carlsbad Caverns National Park, achieving myriad NPS objectives. This perspective relied on a certain amount of sophistry; throughout the system, national parks contained an array of noncontiguous units and one more would not have increased the difficulty of managing the park system. The proposal reflected the most acquisitive tendencies of the Park Service, a posture that usually riled the Forest Service and local commercial economic interests. Grazing interests opposed the withdrawal of the Forest Service land, and in 1932, with the Hoover administration's parsimonious policy of public spending, the project collapsed.⁴⁰

With New Deal public works resources available in the 1930s and federal policy dictating that the Park Service spend money, an entirely new context arose, changing not only the NPS approach, but also the feelings of potential park opponents. Federal dollars found a warm reception everywhere; no other money seemed available. When Roger Toll returned to the Guadalupe Mountains in 1934 and toured the area with J. C. Hunter, he found a situation that seemed ripe for some kind of park expansion.⁴¹

³⁹ Rothman, "'A Regular Ding-Dong Fight,'" 141-51.

⁴⁰ Toll, Report to the Director, January 20, 1932; Roger Toll to the Director, February 21, 1934, NA, RG 79, O-35, Proposed Guadalupe Mountains National Park; Fabry, *Guadalupe Mountains National Park*, 20-21.

⁴¹ Ben H. Thompson to the Director, April 19, 1934; George M. Wright to the Director, March 28, 1934, NA, RG 79, Roger Toll Files, Proposed Guadalupe Mountains National Park or Carlsbad Extension.

The real question involved the cost of private land. Hunter's Grisham-Hunter Corporation owned 43,200 acres, for which Hunter wanted \$237,600. Another private citizen, J. C. Williams, owned El Capitan, an essential feature of the park, and J. T. Smith owned 200 acres around the Frijole Post Office, which he valued at \$10,000. Hunter's assertion that his corporation would sell the land to people in search of summer home sites was the sort of veiled threat that the Park Service had often encountered. It provided an impetus to pursue the funding to buy land, an anomaly during the New Deal, but again, the project did not come to fruition.⁴² During the 1930s, the Park Service could have all the federal land it wanted, but in economic hard times, the government would not buy land with money it needed to put people to work. Even under the most favorable conditions the Park Service had ever experienced, it failed to include the Guadalupe Mountains in the national park system.

One final effort to create a national monument from the Guadalupe Mountains took shape in 1934, when Judge Hunter purchased the lands in the Guadalupe Mountains from the Grisham-Hunter Corporation, and continued to agitate for a park. He offered a 1,000-acre section of McKittrick Canyon, perhaps the most beautiful land in the Guadalupe Mountains, to the Texas State Parks Board. The board's status had been enhanced by the brilliant decision of Lyndon B. Johnson, the state director of the National Youth Administration, to build roadside parks throughout Texas, one of the few amenities that unskilled workers could build anywhere. Johnson's roadside parks made state parks a viable option, in essence including them under the public works rubric, and the previously marginalized state board, became part of a resurgence. With the help of E. H. Simons of El Paso, always involved in park efforts in the Guadalupe Mountains, Hunter secured a visit from the state parks board and Herbert Maier of the National Park Service. Simons also recruited the El Paso press in his quest. The Sunday *El Paso Times* featured a full page of photographs of McKittrick Canyon twice in the weeks following the visit.⁴³

Support for the project continued to grow. Texas Highway Commission officials visited the area, assuring reporters that they intended to fix any problems with the road that slowed development. Even Texas Governor-elect W. Lee "Pass the Biscuits Pappy" O'Daniel, a radio personality who won the 1938 gubernatorial election with a traveling tent show, visited the region, and promised to support a park. Park Service officials were gratified, but they recognized that the 1,000-acre donation posed real management problems. The acreage was too small to be effectively administered, according to NPS landscape architects, leading to questions about acquiring sufficient land for a park in the Guadalupe Mountains, as well as the potential for including the obviously worthy McKittrick Canyon in any kind of park.⁴⁴

⁴² Fabry, *Guadalupe Mountains National Parks*, 22-23.

⁴³ Robert A. Caro, *The Years of Lyndon Johnson, Volume 1: The Path to Power* (NY: Random House, 1981), 346-49; Fabry, *Guadalupe Mountains National Park*, 23-25.

⁴⁴ Fabry, *Guadalupe Mountains National Park*, 24-25; Robert A. Caro, *The Years of Lyndon Johnson Volume II: Means of Ascent* (NY: Alfred A. Knopf, 1990), 165, 188-90, offers a glimpse of "Pass the Biscuits, Pappy" O'Daniel.

An expansion of Carlsbad Caverns National Park again increased the likelihood of adding some portion of the Guadalupe Mountains to the park system. On February 3, 1939, Franklin D. Roosevelt added 39,488 acres to Carlsbad Caverns National Park, extending the boundaries of the park nearly all the way to the Guadalupe Mountains. This led to greater NPS interest in the project, but the agency's state partner lagged behind. Under O'Daniel, Texas did little other than make promises, neither accepting the 1,000-acre donation nor purchasing the remaining 43,000 acres of the ranch.

The lack of state support was not necessarily a disadvantage. In other circumstances, the Park Service used such reluctance as a way to improve its position. In the Guadalupe Mountains, the agency attempted to use this opening to acquire McKittrick Canyon and possibly more. The scenery was clearly national caliber and each Park Service inspector found it worthy. Wildlife abounded, adding another value that NPS officials could trumpet. The private land still remained a major hurdle, but NPS officials sought to circumvent it by providing language for a bill allowing the sizable revenues generated at Carlsbad Caverns National Park to be used for the purchase of the private land in Texas. At that time, all excess revenues generated by the park system returned to the general operating accounts of the U.S. Treasury. Even this provision failed to bring the plan to fruition. A draft bill proclaiming the addition of the area was drawn up and presented to the secretary of the interior for transmission to the president. It never left the secretary's desk; a copy today remains in the National Archives in Washington, D.C., testimony to an idea whose time had not yet come.⁴⁵

The failure to acquire additional land in the trans-Pecos at the moment of so many other Park Service successes suggested that from the agency's perspective, Carlsbad Caverns National Park remained in a different category than other national parks. Dinosaur National Monument grew by 203,885 acres from its original eighty in 1936, creating a park with outdoor recreation values from a paleontological excavation site.⁴⁶ A parallel transformation should have been easy in New Mexico, but the circumstances that helped nearly everything else in the park system only impeded efforts in the trans-Pecos. The state seemed poised to take the lead, but as the Park Service waited, state efforts never progressed beyond conceptualization. NPS officials had more important issues to address, and Carlsbad Caverns' status as a one-of-a-kind curiosity dampened enthusiasm for adding scenic land and wildlife to a park already inundated with visitation. The moment passed, and it belonged to a later generation to preserve the Guadalupe Mountains.

Unlike the Park Service, the Bureau of Reclamation found the Depression and the New Deal hard going in southeastern New Mexico. Instead of creating an opportunity to expand the agency's primacy, the New Deal reduced it to a secondary role, but one that bureau officials relished after two contentious decades in the area. Since the Reclamation Service (the Bureau of Reclamation after 1923), arrived to bail out private irrigation, relations had become frosty. The Carlsbad Project needed

⁴⁵ Ise, *Our National Park Policy*, 331-32; Fabry, *Guadalupe Mountains National Park*, 25-26. The actual document is located at NA, RG 79, O-35 Proposed National Parks, Guadalupe Mountains.

⁴⁶ Ise, *Our National Park Policy*, 41; Mark W. T. Harvey, *A Symbol of Wilderness: Echo Park and the American Conservation Movement* (Albuquerque: University of New Mexico Press, 1994).

expansion and modernization, but infighting, territoriality, and a lack of organization prevented improvement and fostered a climate in which everyone pointed fingers at supposed culprits instead of seeking solutions. In particular, the inability of users and the Bureau of Reclamation to agree upon a funding strategy to increase the water supply doomed the project. Bureau of Reclamation policy was designed to turn water projects over to local irrigation districts; at Carlsbad, the headaches associated with management led the agency to rush this transfer. After 1938, the plans to transfer the Carlsbad projects to a local irrigation district were in place; the initial date of transference, which specified a period of five years beginning on January 1, 1938, passed without any action, and another decade passed before federal officials abruptly transferred the administration of the dams to the Carlsbad Soil and Water Conservation District, effective January 1, 1949.⁴⁷

Local reticence during the 1930s stemmed from obvious sources. The Depression and the New Deal increased federal power, and local entities had to cast about for the financial resources to survive. The added burden of initiating an irrigation district seemed too great. While the farmers in the Carlsbad area chafed under the federal regime, they also recognized that the government controlled most of the resources and that independence could be quite expensive. Coupled with a decrease in water fees in the initial contract between the bureau and the irrigation district, advocates of local control could see as many reasons to stand pat as to actively move toward genuine local administration.⁴⁸

The New Deal offered the nascent Carlsbad Irrigation District even greater advantages than it did the National Park Service. Dams required considerable maintenance, almost all of it labor intensive and the dams in the vicinity of Carlsbad needed even more than average care. After the establishment of a CCC camp, called BR No. 3, north of Carlsbad in August 1934, an extended program of maintenance, improvement, and modernization began on the Carlsbad Project.⁴⁹ The project involved the two primary dams, Avalon and McMillan. Each had a long history of problems, including seepage for which no one seemed able to account. In 1934 and 1935, CCC crews constructed a 2,000-foot extension to the east embankment at Lake McMillan in an effort to exclude the most porous parts of the reservoir. Workers placed more than 43,000 cubic yards of dirt fill and more than 9,400 cubic yards of rock by hand. After McMillan, CCC workers turned their attention to Avalon Dam, which they raised by six feet to eliminate the chance of an upstream dam-break breaching the lower dam. They also

⁴⁷ "Carlsbad Soil and Water Conservation District, Long Range Plan, Revised 1985," Carlsbad Public Library, 4-7; Hufstetler and Johnson, *Watering the Land*, 135-37, 140; Norris Hundley, *The Great Thirst: Californians and Water, 1770-1990* (Berkeley: University of California Press, 1993) is the best general history of the Bureau of Reclamation; see also Donald J. Pisani, *From Family Farm to AgriBusiness: The Irrigation Crusade in California and the West, 1850-1931* (Berkeley: University of California Press, 1984). Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (NY: Pantheon Books, 1985) and Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (NY: Penguin Books, 1993) offer different perspectives.

⁴⁸ Hufstetler and Johnson, *Watering the Land*, 136.

⁴⁹ Hufstetler and Johnson, *Watering the Land*, 137.

widened and strengthened a spillway.⁵⁰

A near breach of McMillan Dam during flooding along the Pecos River in May and June of 1937 refocused CCC attention. After the flooding, which terrified the region, Bureau of Reclamation engineers decided that the dam required immediate reconstruction. Work began in November 1937, and by the following spring the CCC had widened the dam's crest from sixteen to twenty-five feet, added three feet of rock to the top, poured a concrete apron and cleared a channel below the headgates, and generally improved the physical structure of the dam. After 1938, the first CCC camp and a newer one, BR No.82, concentrated on improvements to the Carlsbad project.⁵¹ By the time the second camp closed in May 1942, almost six months after the Japanese attack on Peal Harbor, CCC labor had thoroughly modernized the infrastructure of the Carlsbad Irrigation District.

In the trans-Pecos, as in the rest of the nation, CCC programs served their purpose. They put legions of young men back to work, kept them off the streets, imbued them with a sense of belonging, and not incidentally accomplished valuable projects that could contribute to a promising future. When the order came to terminate the CCC by July 1, 1942, the nation was consumed by World War II, and even Franklin D. Roosevelt's plea to save the CCC as a program for pre-draft age youth was rejected by Congress. The war changed national priorities, and the CCC, perhaps the most socially valuable of New Deal programs, became obsolete.⁵²

The corps' facilities in Carlsbad were refitted to serve the war effort. The original site on West Pierce Street served as a prisoner-of-war camp. Beginning late in 1944, as many as three hundred German prisoners were held there, transferred in to be used as labor in the cotton fields of Eddy County. Most of the Germans had been captured in North Africa in 1943, and were familiar with southeastern New Mexico's climate. Farmers were not impressed with their work, but the camp continued until early in 1946, when the prisoners were returned to Germany. The Rattlesnake Springs site became a recreational camp for the military, with the swimming pool having particular appeal.⁵³

Southeastern New Mexico made three specific contributions to the American war effort. Men from Eddy County served in the 200th Coastal Artillery Regiment (Anti-Aircraft), a National Guard unit that was inducted into active service in January 1941. The unit, sent to reinforce General Douglas MacArthur's command in September, was assigned to help defend Clark Air Field. When the Japanese attacked the Philippines on December 8 (across the International Date Line from Pearl Harbor), the Eddy County men became among the first units under fire in World War II, and participated in the withdrawal to Corregidor and the Bataan Death March. As part of the war buildup, the army built a

⁵⁰ Hufstetler and Johnson, *Watering the Land*, 137-38.

⁵¹ Hufstetler and Johnson, *Watering the Land*, 139.

⁵² Paige, *The Civilian Conservation Corps and the National Park Service, 1933-1942*, 32-37.

⁵³ Jim O'Hearn, "POW Camp: 16 Months in Our Own Backyard," *Carlsbad Current-Argus*, September 18, 1988; "CCC Helped Make Today's Caverns," *Carlsbad Current-Argus*, October 9, 1987.

training base for bombardiers and navigators southwest of the town of Carlsbad in 1942.⁵⁴

An auxiliary field at the Carlsbad air base was the site of one of the war's stranger experiments. A secret government project envisioned cooling captured bats into a sleep-like state, dropping them from an airplane over Japan and relying on their tendency to roost in dark spaces to deliver incendiary bombs to the wooden structures that made up most of Japan's homes and offices. In a 1943 test, Army officers collected bats from Carlsbad Caverns. As researchers photographed the sleeping bats before dropping them from an airplane, the warm New Mexico sun revived the animals, who then flew off carrying their weapons and a fifteen-minute fuse. The bats performed splendidly, roosting in the base air control tower, hangars, offices and barracks buildings. Base personnel, kicked off their field by the project's secret classification, watched in horror from behind locked gates as most of their facilities went up in flames. Despite the apparent lethal effectiveness of the bat bombs, the project was canceled: it eventually proved impossible for the military to trust bomb delivery to the cave-dwelling fliers.⁵⁵

A resurgence in mining in the trans-Pecos accompanied the outbreak of hostilities in December 1941. Engaged in a massive effort in the Pacific, Europe, and North Africa, the nation needed resources and infrastructure that could move both east and west. Throughout the West, plants opened, roads were constructed, and mines were dug. In some cases, these were older endeavors given new life as a result of the crisis; in others, they were new operations that provided essential material for the war effort or for civilian needs.⁵⁶

The oil and gas industries acquired even greater significance than they had before the war. Fuels were essential for the war effort and Japanese expansion in the Far East and German conquest in Europe strained the resources of American allies. When the war began, the United States produced two-thirds of the world's oil supply, making it more than the arsenal of democracy — the nation was also the supply depot for the free world. In the Southwest, oil production took on new urgency; during World War II, nearly 70 percent of American oil came from Texas, Oklahoma, Kansas, New Mexico, Louisiana, and Arkansas. With his assistant, Ralph K. Davies of the Standard Oil Company, Secretary of the Interior Harold L. Ickes led the effort to educate the nation on the significance of oil, as well to the drive to increase levels of production. "This is an *oil war*," Ickes told a meeting of Midwestern oilmen in 1943, emphasizing the importance of places such as southeastern New Mexico and far west Texas. Oil production rose by more than 25 percent between January 1942, and the end of the war,

⁵⁴ Marcus Griffin, *Heroes of Bataan* (Carlsbad, NM: Marcus Griffin, 1946); Louis Morton, *The War in the Pacific: The Fall of the Philippines* (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1953): 32-33, 45; Donald A. Young, *The Battle of Bataan* (Jefferson, NC: McFarland & Company, 1992): 334-335.

⁵⁵ Jack Couffer, *Bat Bomb: World War II's Other Secret Weapon* (Austin: University of Texas Press, 1992): 113-122.

⁵⁶ Gerald Nash, *World War II and the West: Reshaping the Economy* (Lincoln : University of Nebraska Press, 1990).

much of it from southwestern states.⁵⁷

Other minerals contributed to the war effort both in direct and indirect ways. American potash again replaced German potash during the conflict; memories of World War I shortages remained vivid. In west Texas, fluorspar deposits in the Eagle Mountains excited geologists, who recognized the value of the material for manufacturing steel, aluminum, and high-octane gasoline. The Spar Valley, accessible by unimproved ranch roads, offered the most promise. The Texas deposits provided as a new source for the valuable mineral at a time when demand exceeded production capacity at existing mines in Illinois and Kentucky. Mica from an area of Culberson and Hudspeth counties, about sixteen miles south of Van Horn, also attracted federal attention.⁵⁸

The war continued a pattern of ongoing change in southeastern New Mexico and the trans-Pecos that had begun with the end of the Hagerman era. Since the arrival of federally funded irrigation early in the century, growing federal involvement had characterized the region. A federal program or project, it seemed, matched each new private endeavor. The economic collapse of the 1920s only accelerated trends that had begun two decades earlier. The development of potash, oil, and other extractive industries seemed to reverse growing federal involvement, but with the arrival of World War II, even these industries were drawn into the federal web.

Like many other regions in the West, the Carlsbad-Guadalupe Mountains area was “rescued” by the New Deal and its associated federal presence. When little private economic activity existed, federal programs and the jobs they provided seemed like a godsend. That rescue continued with wartime federal programs in the region, enhancing the tendency toward dependence on the national government that had been an integral part of the history of the region and the larger West. Southeastern New Mexico and the trans-Pecos followed the dominant pattern, linking in partnership with federal agencies at the same time they pronounced their independence. If a difference existed, it could be found in the Carlsbad area, where despite potash mining and other activities, people seemed to more clearly recognize the significance of the federal presence. Their history with government involvement exceeded that of other parts of the region, also giving people the opportunity to integrate federal participation in the economy into their conception of self, and as a result, discount the federal contributions by inventing as their own endeavor. This created a complicated relationship with the federal government. As elsewhere in the West, people in southeastern New Mexico both needed and resented it, making its presence simultaneously the best and worst thing about their lives.

New Deal and wartime efforts logically expanded the previous federal role in the area. The tourist industry had become an important shadow industry, a critical but largely unacknowledged part of

⁵⁷ Daniel Yeargin, *The Prize: The Epic Quest for Oil, Money, and Power* (NY: Simon and Schuster, 1991), 366, 389-92; Rister, *Oil!*, 344-49.

⁵⁸ U.S. Department of the Interior, War Minerals, Report, “Texas Mica and Feldspar Co., Culberson and Hudspeth Counties, Tex.,” W.M.R. 129, (Washington, D.C.: Bureau of Mines, 1943); Glen L. Evans, “Fluorspar Deposits in the Eagle Mountains of Hudspeth County, Texas,” (Austin: The University of Texas Bureau of Economic Geology, 1943), Mineral Resource Circular No. 26.

the regional economy, before the New Deal, and the CCC and the improvements in reclamation facilities enhanced the dependence on federal dollars. Carlsbad Caverns National Park became more important, as indicated by the growing number of resources invested there and the attempts to add the Guadalupe Mountains attested. The military reinforced the importance of federal money during the war years, and by 1945, the entire region enjoyed a healthy economy driven by federal dollars.

By 1945, the widely held sense of independence in southeastern New Mexico and the trans-Pecos had been superseded by federal endeavors. Beginning with the creation of the federal water district and Carlsbad Cave National Monument, and continuing through the proclamation of the national park, the arrival of the CCC and other New Deal projects, and the military, the Carlsbad Caverns-Guadalupe Mountains region became as dependent on federal support, albeit from a range of agencies, as any locality in the West. As its importance grew, people of the region denied its centrality to their life. That complicated — even paradoxical — relationship opened the way for the conflicts of the postwar era.

Chapter 8:

Carlsbad Caverns in the Post-War Era

By the end of World War II, Carlsbad Caverns had become an important tourist destination for Americans. It enjoyed a special symbolism with the widest swath of the national public, a resonance that remained steady in a changing American culture. A trip to Carlsbad embodied the most attractive dimensions of post-war American dreams: the freedom and means to travel in pursuit of personal objectives, in this case the ability to visit a much-acclaimed wonder. The windshield stickers that Ray V. Davis created became bumper stickers that touted the Carlsbad experience, markers of participation in the affluence and optimism that served as the basis for post-war America's transformation.¹

The Park Service matured after World War II, relinquishing its claim as the primary federal agency in the West for a comfortable position within the federal bureaucracy as first the Bureau of Reclamation and later the departments of Defense and Energy dominated the regional scene. With enormous bipartisan support for its development goals — including a decade-long capital development program between 1956 and 1966 called MISSION 66, the growing importance of recreation as an activity, and a clear link between national park visitation and patriotic feeling and participation, the Park Service moved far from its roots. The agency professionalized in a number of remarkable ways. The large number of GI Bill-educated scientists who joined the agency in the 1950s and 1960s changed its entire tenor. Before 1945, the Park Service was an organization dominated by landscape architects. It then became first an agency led by scientists, and later a people-management agency in which law enforcement became the primary objective.²

¹ Nymeyer and Halliday, *Carlsbad Cavern: The Early Years*, 64.

² Rothman, *Devil's Bargains*, 112-37; Foresta, *America's National Parks and Their Keepers*, 43-90; Sellars, *Preserving Nature in the National Parks*, 200-15.

The agency and its goals also became politicized in new ways in the post-war era. This trend started in an innocuous fashion, but soon external political situations determined the patterns it would follow. The replacement of George Hartzog, Jr., a career Park Service employee, as director after Richard M. Nixon's election in 1972 with campaign operative Ronald Walker signaled a new kind of agency politics. The directorship had never been a political post; Walker's appointment altered the intellectual terrain for the people who made up the core of the agency. They had always regarded the Park Service as insulated from political machinations. Walker's appointment inaugurated a decade-long shift that left many career employees confused and dispirited.³

Another dimension to the Park Service's politicization occurred in the process of adding new parks. The agency historically experienced great control over the choice of areas for inclusion in the system. This held even beyond the short-lived Walker directorship. Rarely were national park areas of any significance proclaimed without the agency's support, with Congress and the Department of the Interior showing great trust in agency standards. A dramatic change in how park areas were established took shape beginning in the middle of the 1970. U.S. Representative A. Philip Burton of California's Fifth District began to use parks as part of omnibus bills to assure the support of otherwise recalcitrant congressional representatives. This practice, called "park-barreling," reached an apex in omnibus bills in 1978 and 1980, adding a significant number of parks without agency input and, in some situations, over strenuous agency objections.⁴ By 1980, the Park Service struggled for control of the park establishment process, a terrain crucial to the agency's sense of identity and well-being.

Against this backdrop, Carlsbad Caverns National Park rose to a pinnacle, but by 1980, the beginning of a problematic future became apparent. In the great expansive post-war moment – the "Great Aberration" of prosperity that began shortly after the end of World War II and continued until the combination of post-Vietnam War inflation and the Organization of Petroleum Exporting Countries (OPEC) oil embargo in 1974 initiated a twenty-two-year decline in the real value of wages – Carlsbad Caverns represented the attainment of American ideals. Its role as geologic curiosity expanded into a designation as a mid-century wonder. In 1903, Theodore Roosevelt said of the Grand Canyon: "It is a place that every American, if he can travel, should see." By the 1970s, Carlsbad Caverns had joined that category for the broader, automobile-based traveling public. It had become an indicator of belonging to the expanding middle class, a site that Americans had to see if only to think of themselves as enjoying the fruits of post-war society's opulence.⁵

³ Foresta, *America's National Parks and Their Keepers*, 68-83.

⁴ John Jacobs, *A Rage For Justice: The Passion and Politics of Phillip Burton* (Berkeley: University of California Press, 1995), 356-79; Joanne Robinson, *You're in Your Mother's Arms: The Life and Legacy of Congressman Phil Burton* (San Francisco: Mary Judith Robinson, 1994), 227-46.

⁵ Rothman, *Devil's Bargains*, 188-200.

After World War II, Carlsbad Caverns underwent a series of transformations that redefined what visitors experienced when they came to the great caverns along the Permian Uplift. The Park Service now framed its wonders differently. The showmanship that often characterized early park interpretation had been superseded by the more serious efforts of the Education Division. Increasingly, the Park Service sought to use the national parks to convey the kinds of positive sentiments about American society and progress that characterized the world's fairs of the pre-World War I era. National parks became a mass experience, coveted by the American mainstream. By the 1950s, automobile travelers with two weeks each year of vacation who chose to experience the nation through its parks, almost always with their children in tow, looked to the Park Service to make their visitor experience culturally as well as emotionally uplifting.

As the emphasis on education grew in the Park Service and as national parks came to represent a form of affirmation of U.S. life in the post-war period, the range of offerings that agency leadership would tolerate narrowed. Since its inception, the Park Service strove to be regarded as serious, but there was always a little of the snake-oil salesmanship in the agency's makeup, especially at smaller and more remote parks. In part, such promotion-oriented people were attracted to the agency; in part, survival at a remote park depended on making it important. As a result, the agency tolerated a range of practices that might not always have fit within the guidelines of written policies. Curtailing these became a priority in the professionalizing climate of the post-war era.

At Carlsbad Caverns National Park, Thomas Boles remained the superintendent until 1946. He represented the older Park Service, one of the generalized jacks-of-all-trades who would do anything for their parks, often without going through channels or consulting agency policy. The inveterate Boles was the consummate showman. He never met a form of media he could not embrace. Throughout the 1930s, he found himself in trouble with Horace Albright and the Washington, D.C., office of the Park Service, but with the division of the agency into regions in 1935 and New Deal money and programs dominating agency attention, Boles was able to remain in his capacity at Carlsbad Caverns with little oversight well into the 1940s. As did many superintendents on the peripheries, Boles learned to do just enough required paperwork to keep out of trouble with his superiors. As World War II escalated, more vexing problems such as maintenance, resources, and workpower dominated the horizons of the Park Service, and Boles retained a remarkable degree of independence.

One issue impaled Thomas Boles between the National Park Service's past and its future: the Rock of Ages ceremony he routinely offered on his cavern tours. Boles insisted on guided tours of the caverns long after it ceased to be feasible; he wanted two tours a day, at 10:00 a.m. and 1:00 p.m., so that he personally could offer visitors the benefit of his expertise. The crowds were often huge — numbering as many as 600 — and Boles' winning personality and flamboyance kept them captivated. To promote the park, Boles was purported to break off stalagmites from rock formations and pass them out to tour visitors. Park Service observers cringed when they heard of this practice and Boles

was ordered to stop.⁶ The Rock of Ages ceremony was the zenith of his tour, the moment that visitors anticipated with excitement. Boles would stop a tour group in “a natural amphitheater facing a huge stalagmite — the Rock of Ages, said to be the oldest in the world,” Ford Sibley wrote in one tour account used by the Southern Pacific Railroad in its promotions. At the Rock of Ages formation, Boles asked visitors to sit. As he waited, people put out their cigarettes and shushed their children. The whispering soon stopped. Boles thanked everyone for coming to Carlsbad Caverns, and offered a talk that was part fantasy, part fiction, and pure hyperbole. “Many years ago, three or four distinguished geologists met at the base of that formation, computed its volume and estimated its age,” Boles told his audience. “And fittingly chose the name Rock of Ages.” He cautioned them that when the cavern lights went out they would be in total and complete darkness for the first time in their lives. “As the lights dimmed, Sibley said, ‘A solid blackness covered everything. I peered around and waved my hand before my eyes. There was no sensation of sight at all. I was alone, underground, and totally blind.’” After what seemed forever, but Sibley later decided was less than a minute, a small glow appeared. “I could hear the Rangers singing. And as the light advanced up the Big Room, jumping from rock to rock and wall to wall, the music swelled louder: ‘Rock of Ages, Cleft for Me.’ When the song reached its loudest, the lights were full on again and the Big Room was bright as day.” Boles then finished his talk, saying: “I know in my mind that the heavens above can’t be any more beautiful than the Carlsbad Caverns of New Mexico.”⁷

The Rock of Ages ceremony hung between the enthusiastic past of the Park Service and its increasingly professional future. In many ways, so did Boles. When Jim White, Ray Davis, and others first attracted public interest to the cavern, they promoted it in a manner that anticipated Boles. The superintendent was only the most skilled practitioner, one more conversant with the needs of the nation among a group that loved the caverns and would do anything to attract attention to it. Of them, only Boles even nodded toward the NPS concept of standards. By the 1940s, the flashy approach was passe, even embarrassing for an agency moving rapidly toward professionalization. With specialization becoming common in the aftermath of the New Deal and an entire generation of the post-war college educated, often returning veterans funded by the G.I. Bill, the Park Service regarded its activities with greater seriousness than before. The centralizing of authority that the New Deal promoted was also reflected in the agency, although as the Park Service professionalized, standardization became a watchword.⁸

Boles found himself in a complicated position. Facing much negative attention from Albright during the 1930s, he learned how to function with maximum autonomy within a growing bureaucracy.

⁶ F. A. Kittredge to the Director, December 8, 1931; Horace M. Albright to Thomas Boles, December 15, 1931, NA, RG 79, Central Classified Files, Carlsbad Caverns.

⁷ Ford Sibley, “My Trip Through Carlsbad Caverns,” (Southern Pacific Railroad, 1946); “Colonel Boles’ Rock of Ages Talk,” Carlsbad Caverns Library, Carlsbad Caverns National Park.

⁸ Rothman, *Preserving Different Pasts*, 212-32; Frank Williss and Harlan D. Unruh, *The National Park Service and the New Deal*, 1-11.

Boles became adept at doing just enough of the routine administrative work to avoid scrutiny from superiors. He gave up none of the prerogatives of the old Park Service, where superintendents had enormous control over their domain. In some ways, Boles' autonomy remained problematic. The culture of the agency supported this entrepreneurial, Progressive-era style, although not always to the extent that Boles pushed it. The longer an individual had been associated with the Park Service, the easier it was to look at Boles and see a cheerful anachronism that could be allowed to continue. As long as the direct line of succession from Mather to Albright to Cammerer continued, complaints about Boles were restricted to his limited administrative repertoire. With the ascent of Newton B. Drury, the former president of the Save-the-Redwoods League, to the directorship in 1941, Boles' position began to deteriorate.⁹

The Rock of Ages ceremony became the test case for a new professional Park Service ethic. From the Educational Division to the scientists, agency leaders regarded the cavern ceremony as the worst the Park Service could offer. The growth of professionalism made Boles and his show anachronistic. Since the inception of the Educational Division in the 1930s, agency leaders made the commitment to use the national parks to uplift the public, not titillate or pander. The efforts to make visitor responses to the Grand Canyon intellectual rather than emotional offered one end of this spectrum. The construction of the Jefferson National Expansion Memorial in St. Louis, which commemorated a hard past in a hard time, presented the other. Nowhere in between could be tolerated a ritual the Park Service regarded as blatantly low brow as the Rock of Ages ceremony.

Boles' problems with the Rock of Ages Ceremony began with the ever-inquisitive Horace M. Albright, by the early 1940s a fixture with U.S. Potash and a frequent visitor to the Carlsbad area. The former NPS director had never been entirely comfortable with the level of sideshow at Carlsbad Caverns National Park, but over the years he had grown to appreciate Boles. The combination of Boles, Charles White, and Jim White had always made him anxious. During the 1930s, the thought of Boles in particular often made Albright cringe. Nor could Albright leave the Park Service and simply let go. Despite his long and successful career outside the agency, in his mind he never really left. The Park Service had been his formative experience, the place where he learned the privileges and responsibilities of power. It remained close to his heart. His constant stream of letters both enlightened and vexed successors well into the 1970s. Until the mid-1950s, Albright retained considerable political influence from his venerated tenure and his close relationships with Republicans and Democrats alike. The same astute maneuvering that so benefitted the Park Service during Albright's years with the agency made him a constant and sometimes sharply critical observer from the outside.¹⁰

Carlsbad Caverns National Park had never been everything it should to Horace Albright, and from his position at U.S. Potash, he staged an ongoing campaign to bring it up to his insisted standards.

⁹ Susan Schrepfer, *The Fight to Save the Redwoods: A History of Environmental Reform, 1917-1978* (Madison: University of Wisconsin Press, 1983), 1-45; Ise, *Our National Park Policy*, 443-516.

¹⁰ Swain, *Wilderness Defender*, 239-56.

In many ways, he singled out Carlsbad Caverns National Park. He knew of its idiosyncracies from his days as director and the potash mines in the Carlsbad area brought him consistently closer to the park than to many others. His ongoing laments to the often ineffectual Cammerer and the activist Drury revealed his fears. "It is regrettable," Albright wrote in 1942, "that [Charley] White . . . has permitted a great number of old buildings to stand along the road with the roofs off and windows and doors out." The entrance to the park needed marking to differentiate it from White's camp, he recommended. Similar situations provided some of Albright's most difficult moments as director; from outside the agency, he regarded them with even less alacrity.¹¹

After the 1930s, when Albright harshly criticized Boles, the former director softened. The context of World War II and the need to lift civilian and military morale increased Albright's appreciation of Boles' gifts, and only someone of far less inventiveness than Albright could dismiss the enormous good Boles accomplished with the superintendent's fundamental overzealousness. A 1942 letter revealed Albright's new appreciation. Not only had the cavern trails never been in better condition, he wrote, but the lunchroom was clean and the service good. Carlsbad Caverns filled the function of parks during wartime, becoming a place that symbolized national solidarity, sacrifice, and patriotism. For Albright, far more susceptible during the war to the pull of emotion than he had been as director, the Rock of Ages ceremony, performed for military personnel completing training at the Carlsbad airbase, was now an inspiring moment.¹² The tough Albright showed a more flexible side, condoning a practice that he found questionable under different circumstances.

The Park Service moved to become more professional even under the difficult situations of war. Drury played a significant role. He was the first true preservationist to take the reins of the agency and the first from a professional conservation background. He also opposed grandstanding in any form, insisting that the national parks offer a solemn, educational experience. The early directors wielded great power, and wartime limitations enhanced Drury's position. Drury did not share Albright's new perspective on Boles and the Rock of Ages ceremony, and when a parade of visitor complaints during the war highlighted management problems at Carlsbad, Drury moved to bring the park in line with his vision of the agency.¹³

The rash of visitor complaints revealed two major categories of problems to a committee led by regional naturalist Natt N. Dodge and including landscape architect Charles Kell and assistant park superintendent John H. "Jack" Diehl. Visitors regarded park facilities as inadequate. They complained about everything from the long wait for the elevator to the lack of a comfortable area to wait before the tour began. Even more significant, the complaints focused on problems of service and people management. Visitors felt that rangers impinged on their ability to enjoy the park. Guides were called

¹¹ Horace M. Albright to Newton B. Drury, November 18, 1942, NA, RG 79, Series 7, Carlsbad Caverns National Park.

¹² Ibid.

¹³ Newton Drury, Memorandum for Regional Director, May 6, 1943, NA, RG 79, Series 7, Carlsbad Caverns.

“officious” and “discourteous,” heresy within the culture of the Park Service. Some visitors referred to the guides’ techniques for crowd management as “herding.”¹⁴ In a park renowned for its visitor service located in an agency obsessed with public relations, such a situation demanded quick attention.

The solutions to such problems were relatively obvious, but they led to questions about the need for certain kinds of programs. Some problems could be addressed in the short term; these involved the park practices of agency personnel and visitor management. Larger problems, such as questions of facilities and access pointed out earlier by Albright, would have to wait until resources for development could again be found at the end of the war. Of all the problems, Dodge and his committee regarded the herding of visitors as the most telling, but resolvable within the existing practices of the park. In addition, the rangers’ practice of challenging visitors by suggesting that riding the elevator out of the canyon was only for “sissies” needed to come to an immediate end.¹⁵

Director Newton B. Drury did not agree. The most closely tied to the ethic of preservation of any Park Service leader, Drury envisioned a more sedate, more educational form of interpretation at Carlsbad Caverns National Park. With input from Ned Burns, chief of the Park Service’s Museum Division, who judged the Rock of Ages ceremony “a cheap theatrical quality out of harmony with the natural beauty of the Caverns ... Which arbitrarily limited the number of trips into the Caverns,” Drury halted the ceremony. “We do not favor the Rock of Ages ceremony,” he wrote Regional Director Minor R. Tillotson in 1944. “Especially do we object to the orientation of the program of cave trips around this ceremony ... Artificial intrusions in the cavern must be held to an absolute minimum.” Unlike Dodge, Drury regarded the problems in the caverns as results of existing practices. The emphasis of interpretation needed to change, the director believed, and in a September 12, 1944 memorandum he ordered a provisional end to the Rock of Ages ceremony. The ceremony was officially discontinued December 5, 1944.¹⁶

Drury emerged as the great opponent of the Rock of Ages ceremony, but Albright’s past criticism of the park drew Drury’s attention to it. Albright had made his peace with concepts such as the Rock of Ages ceremony. From his businessman’s perspective and under the circumstances of the war, he could see its significance. Albright feared the mundane; in a world in flames and with a nearby military presence, there was little banal about any inspirational moment. Drury focused on the forms and nature of what had become a park ritual. Although he surely recognized its spiritual value, Drury regarded the Rock of Ages ceremony as the source from which each of the park’s management problems stemmed. Drury was prescient. The complaints of visitors about the way they were “herded” all pointed to the

¹⁴ Natt N. Dodge, Memorandum for the Regional Director, Region Three, September 22, 1943, NA, RG 79, Series 7, Carlsbad Caverns.

¹⁵ *Ibid.*

¹⁶ Newton B. Drury, Memorandum for the Regional Director, Region Three, May 6, 1944, NA, RG 79, Series 7, Carlsbad Caverns; Newton B. Drury, Memorandum for the Regional Director, Region Three, September 12, 1944; N. J. Burns, Memo for the Director, January 19, 1945, NA, RG 79, Series 7, Carlsbad Caverns.

practices that the Rock of Ages ceremony made necessary: the large and intermittent tours, the crowded “bottlenecking,” and the long waits all resulted from the way the ceremony was offered. To Drury, by the end of 1944 envisioning a post-war future with much greater levels of visitation, such practices were anachronistic at best and more likely counterproductive. With Ickes’ support — Drury was Ickes’ hand-picked choice for Park Service leadership — the experimental end to the ceremony became permanent.¹⁷

The decision to end the Rock of Ages ceremony produced one of the most consistent and long-lived bursts of public opposition that the Park Service experienced prior to the 1960s. There had always been opponents of national parks and of the Park Service — local interests and even powerful politicians such as Ralph Henry Cameron, the Republican senator from Arizona who created trouble for the agency over the Grand Canyon during the 1920s. What set apart the firestorm that followed the termination of the Rock of Ages ceremony was that it came from friends of the Park Service. A range of people, including Secretary Ickes and New Mexico’s Democratic senators Dennis Chavez and Carl Hatch received complaints — from ministers, businessmen, ordinary travelers, and almost every other constituency among the respectable in America.¹⁸ The people who supported the agency since the days of Stephen T. Mather spoke; they wanted the Rock of Ages ceremony, no matter what Drury and others in the agency thought.

Carlsbad Caverns provided a different experience than watching Old Faithful erupt, seeing the view from Mather Point, viewing Tower Falls, or even gazing at El Capitan in Yosemite National Park. It had more in common with feeding bears in other parks, thought Natt Dodge, an activity that stressed the individual visitor more than the feature itself.¹⁹ To the many who protested the end of the Rock of Ages ceremony, the event, not the cavern itself, was the most powerful memory of their experience. The ceremony made their trip special. Here was meaning and significance, emotion and feeling rolled into one. Here was nature subordinate to human imagination and manipulation, a wondrous place made significant not by a sophisticated and discrete template as in faux historic communities such as Santa Fe, New Mexico, but by brazen and direct orchestration that appealed to the most meaningful and at the same time most contrived emotions Americans possessed. The Rock of Ages possessed a poignancy that moved people, especially during World War II. It provided solemn testimony that there was a spiritual dimension to life at a time when temporal concerns dominated everything.

¹⁷ Swain, *Wilderness Defender*, 244-47; Superintendent’s Monthly Report, December 1944, Carlsbad Cavern National Park Library; Ise, *Our National Park Policy*.

¹⁸ B. J. Lynch to Director, National Park Service, February 7, 1945; Jay F. Strawiniski to Thomas R. Boles, March 28, 1945; Thomas R. Boles to Jay F. Strawiniski, April 7, 1945; Rev. James D. Wiliford to Harold L. Ickes, April 18, 1945; Mrs. John C. Koster to U.S. Sen. Dennis Chavez, February 26, 1945; Mrs. John C. Koster to U.S. Sen. Carl Hatch, March 7, 1945; Kenneth L. Dixon, “Ban on Rock of Ages Ceremony Still Brings Protests,” *El Paso Times*, June 1, 1946, National Archives, Record Group 79, Carlsbad Caverns, Series 7, 201.

¹⁹ Natt N. Dodge, Memorandum for the Regional Director, Region Three, August 21, 1944, NA, RG 79, Series 7, Carlsbad Caverns.

Boles played a visible role in the opposition to ending the Rock of Ages ceremony. He had spent more than fifteen years cultivating the southwestern public and when he asked for a favor — a letter, a newspaper editorial, or even a telephone call — few who remembered his generosity with his time and availability for their functions said no. In this, Boles worked against agency policy — subtly and behind the scenes, but not so discretely that the Washington, D.C., office did not recognize Boles' hand behind at least some of the opposition. Boles' network centered around civic organizations such as chambers of commerce, Kiwanis clubs, and newspapers. These sources provided an inordinate amount of the opposition, with the Carlsbad Chamber of Commerce in the lead. E. T. Scoyen, an associate regional director in the Santa Fe office of the Park Service, brought one such example to the attention of agency leaders. Early in 1946, the Santa Fe Kiwanis Club, where Scoyen served as treasurer and Natt Dodge was secretary, received a request from the Carlsbad chapter asking for a resolution in favor of reviving the ceremony. "We shall do everything in our power to keep them taking any action in the matter," Scoyen wrote Drury. Scoyen and Dodge succeeded, but Boles' allegiance to the agency became suspect.²⁰

Changes in NPS policy and procedures offered another reason to curtail Boles' activities. The post-war Park Service quickly developed a pattern of transferring most superintendents every three years, in no small part to counteract the enormous proprietary interest in individual parks that longtime officials developed. The longtime superintendent of Southwestern National Monuments, Frank Pinkley, had been the first and most grandiose example; he regarded all the southwestern national monuments as his parks. Other long-serving superintendents became similarly attached to individual parks, as did Boles, sometimes substituting personal or regional standards for agency policy. Frequent transfers promoted professionalism, and few cases begged for it more than Boles. After nearly twenty years at Carlsbad Caverns, Boles and the park were closely identified, too closely so, some said. Persistent rumors that Boles could not resist intermittently offering the Rock of Ages ceremony did not help relations with his superiors. His efforts to foster regional outrage such as Scoyen detected sealed Boles' fate. On June 8, 1946, Boles was transferred to the superintendency of Hot Springs National Park in Hot Springs,

²⁰ E. T. Scoyen, Confidential Memo to the Director, March 7, 1946; E. T. Scoyen, Confidential Memo to the Director, March 12, 1946; Victor Minter to Secretary of the Interior, June 25, 1945, NA, RG 79, Series 7, Carlsbad Caverns National Park.

Arkansas, where Boles had close ties. In an unusual switch, Hot Springs Superintendent Donald Libbey replaced Boles. The change in leadership went even further, removing others who were tied to Boles' regime. Longtime Carlsbad Caverns Assistant Superintendent Jack Diehl was promoted to the regional office in Santa Fe as a planner, while William E. Branch, who had been superintendent at Petrified Forest National Park, stepped into the assistant superintendent's position. "Thank you, Colonel Boles for a job well done," an editorial in the Carlsbad *Daily Current-Argus* closed, pointing out Boles' affinity for making friends for himself and promoting the park at the same time. Boles' departure deprived supporters of the Rock of Ages ceremony of their enthusiasm. Although public complaints continued for some time, they ceased to be from community leaders across the Southwest and came almost exclusively from repeat visitors who remembered the ceremony from an earlier trip. Written complaints became a rarity. The superintendent's report noted the first "in many a month" in September 1947.²¹ Without Boles to organize opposition, the change became permanent as memory of the ceremony diminished.

The struggle over the Rock of Ages ceremony typified the nature of turmoil between the park and its neighbors in the post-war era. During this time, the Park Service professionalized at an accelerating pace. In the new agency, a consummate showman such as Tom Boles became an anachronism. The Park Service developed a new, often science- and education-driven set of priorities, especially after the early 1950s, when those trained under the auspices of the GI Bill sought employment in the agency and brought new intellectual skills with them. This move toward science was best exemplified in documents such as the Leopold report of 1963, which clearly showed the influence of professional scientists — albeit an attitude tinged with a healthy romanticism.²² In a value system that preferred education in a neoclassical sense to the entertainment of the firefall at Yosemite or Carlsbad's Rock of Ages Ceremony, struggles between the agency and the local — and sometimes regional — public were sure to ensue.

MISSION 66, the enormous decade-long capital development program begun in 1956 to revamp the national parks in time for the fiftieth anniversary of the Park Service's founding, also played a significant role in eliminating idiosyncracies that made Carlsbad Caverns National Park out of the ordinary within the park system. Many of the differences between Carlsbad and other parks stemmed from the incredible need for resources to administer the caverns. The

²¹ "Carlsbad's Loss," Carlsbad *Daily Current-Argus*, April 28, 1946; Superintendent's Monthly Report, May 1946, Carlsbad Caverns National Park Library; Superintendent's Monthly Report, September 1947, Carlsbad Caverns National Park Library.

²² Richard A. Sellars, *Preserving Nature in the National Parks* (New Haven: Yale University Press, 1997), 205-12.

combination of specialized activity such as caving, the need for an innumerable number of guides and rangers, and the large physical plant required to run the park led to expedient procedures when resources were scarce. Under MISSION 66 the Park Service usually received what it asked for, and the excuses for idiosyncratic practices disappeared not only at Carlsbad Caverns, but throughout the park system. Even the most remote parks received full-fledged physical plants, temporarily reducing management problems to questions of personnel.²³

Carlsbad Caverns reached a pinnacle of importance in the post-war era as it became an example of the bounty of being American. The park enjoyed enhanced symbolic meaning among a large segment of the American public. To those who found themselves with the funds and the leisure time to travel, the caverns were one of the places they selected to visit. With the time provided by the annual two-week vacation that had become codified in custom in the post-war era, larger numbers of visitors flocked to this wonder of the world. In it they saw a wonder worthy of the mid-twentieth century, a place that could both divorce them from the technological urban present of the 1950s and remind them of the successes that made it possible for them to travel. For the expanding middle class, awash with opportunity, Carlsbad Caverns was both familiar and different, something remarkable and tame at the same time. It awed successive generations in an upward spiral of visitation that began while Boles was in his last days at the park and continued through the Bicentennial of the Declaration of Independence in 1976.

The message it provided was a new kind of social affirmation, much different from the culturally highbrow railroad travel of the turn of the twentieth century. After Boles, Carlsbad Caverns offered a decidedly “middlebrow” experience; it appealed to the best instincts of a wide swath of the American public, drawn to urban areas and made more affluent by World War II and the decade that followed. The experience did not smack of hucksterism, especially after Boles. There was nothing of turn-of-the-century Coney Island left at the park. Its tourism was democratic. The entire middle-class could easily participate in it and it offered important insights into the nature of American life.²⁴ Mid-century Americans had to see Carlsbad Caverns. It remained a wonder and a curiosity, but the park had also become an indicator of belonging to a forward-looking, self-referential nation that took enormous pride in its accomplishments.

²³ Foresta, *America's National Parks and Their Keepers*, 80-94.

²⁴ John Jakle, *The Tourist in Twentieth-Century America* (Lincoln: University of Nebraska Press, 1985), 185-99; Eric Goldman, *The Crucial Decade and After: America 1945-1960* (NY: Random House, 1961), 1-22; John Kasson, *Amusing the Millions: Coney Island at the Turn of the Century* (NY: Hill and Wang, 1978), 31-47.

These factors combined to make Carlsbad Caverns National Park increasingly important in the decades following World War II. The park stood for the things Americans valued, represented their ability to travel, and became a source of national pride. In this configuration, Carlsbad Caverns became a central piece of the puzzle of identity for post-war Americans. It was one of the many symbols that told them who they were and what was important about bearing the standard of the Free World.

The rise of Carlsbad Caverns National Park revealed a classic pattern in the American West. As tourism grew in importance, a service industry subject to its own rhythms began to compete with conventional extractive industries, not only for economic preeminence, but also for the region's heart and soul. This regional economy, dependent on agriculture, ranching, and potash mining, added another pillar, tourism. However, tourist work was different. To the people of southeastern New Mexico, service work seemed ephemeral and less important than other jobs, even demeaning. No one "produced" anything; no steaks, no potash, no grapes, no airplane wings. For many, tied to the framework of a production-oriented economy, reconciling this new form of economic activity with the concept of "real" — that is productive — work proved difficult. As it had to many who engaged in it elsewhere in the West, tourist service seemed somehow secondary, not fully worthy of the efforts of the region's proud and independent people. The increasing reliance on service created a quandary, one that many western regions shared.

Tourism was normally a sink, a place to which production economies descended. But not here. Despite southeastern New Mexico's history of successive Anglo-American economic regimes — beginning with agriculture and ranching, proceeding to guano, oil and gas in the larger region, potash, and military work — the turn to tourism came as a result of external factors instead of internal collapse that typified its embrace elsewhere in the West. Unlike other places, which sought to manufacture a reason for visitors to come, at Carlsbad Caverns, the caves provided infinite reasons within the cultural boundaries of mid-century America. In this sense, tourism moved alongside existing economic endeavor in the trans-Pecos instead of replacing other ways of making a living. This both smoothed the transition and made it more difficult for people to grasp the significance of the service economy.

The development of regional infrastructure and the consistent increase in visitation promoted economic development. Carlsbad Caverns experienced great increases in visitation immediately after the end of the war, as did most parks. Throughout 1946 and 1947, superintendents Boles and Libbey reported continuous visitation milestones: the largest annual

total, the largest visitation in a single day, the greatest monthly visitation total.²⁵ To meet the ever-growing demand, the park needed improved facilities, the town of Carlsbad more motel rooms and restaurants, and the region better roads. The claim on resources to support such development came from two sources: tourism and the oil and gas industry. Only these possessed sufficient importance to attract outside investment, either federal or private.

Transportation technologies also played a significant role in further linking southeastern New Mexico and the trans-Pecos with the rest of the nation. The network of national highways such as Route 66 and U.S. Highway 30 barely sufficed during the 1930s and World War II. The streams of postwar travelers proved a need for greater highway capacity. The threat of the Cold War contributed greatly to the sense that highways had become even more important to national defense. As trucks replaced trains as the primary delivery system of goods, Americans became the best example of author Daniel Yeargin's "hydrocarbon man" — people dependent on oil, the remarkably cheap and seemingly infinite fossil fuel. In 1956, President Dwight D. Eisenhower signed the Highway Act of 1956, which authorized the construction of 41,000 miles of interstate highways, initially four-lane roads that eventually spanned the continent and made cross-country vehicular travel a staple of American mythology.²⁶ In the nineteenth century the railroads began the process of connecting southeastern New Mexico and the trans-Pecos to the rest of the country; hydrocarbon society completed its physical dimensions, finalizing the emergence of a broader, middle-class audience at Carlsbad Caverns and other places that could be reached by road.

For Carlsbad Caverns National Park, the new highways that linked the nation began as a promise and ended as a curse. As long as Carlsbad Caverns remained a destination — a place to which people came instead of stopping and passing through — its remote location did not constitute a liability. Throughout the 1950s and 1960s, people planned their vacations around a

²⁵ Superintendent's Monthly Report, May 1946, Carlsbad Caverns National Park Library; Superintendent's Monthly Report, June 1946, Carlsbad Caverns National Park Library; Superintendent's Monthly Report, August 1947, Carlsbad Caverns National Park Library; Superintendent's Monthly Report, September 1947, Carlsbad Caverns National Park Library.

²⁶ John Rae, *The Road and the Car* (Cambridge: MIT Press, 1971, 37; Yeargin, *The Prize*, 541-60; David Halberstam, *The Fifties* (NY: Fawcett Books, 1994), 156-188.

trip to the caverns. They came from both coasts and the Midwest, over a pastiche of roads, two-lane and four-lane, to reach their destination. A steady march arrived in Carlsbad or White's City, sought accommodations, and took a tour through the caves as an integral part of being American. As the interstate highways reached completion, the patterns of American travel rapidly changed. The interstate became the primary mode of cross-country travel, eclipsing two-lane roads and small towns so completely that a best-selling nonfiction work in the early 1980s, William Least-Heat Moon's *Blue Highways*, was named after the anachronistic two-lane roads drawn in blue on most maps.²⁷ In addition to this physical change, new generations — first the children of the 1960s who threw out the existing symbols of American society, and their even more callous successors, the so-called Generation X, raised on MTV — created their own symbols. Carlsbad Caverns lost ground in the constellation of American wonders.

The transformation of travel patterns played a particularly significant role in the Southwest. Regional patterns of travel followed Route 66, “the highway that’s my way that’s the best,” as crooner Bobby Troup immortalized it, as it wound from St. Louis to the Pacific Coast. Construction of the national highway began in 1926. As the road reached further into the West, it came to fill a function similar to that of the railroad. Like the railroad, the highway created a culture; the expectations of people within its influence were different than those beyond. After Route 66 reached Santa Monica Pier in 1938, it became a corridor on which travelers focused, fostering a culture tied to the people and goods that came along the road that was largely independent of the world that surrounded it.²⁸

Travel conditions were also different, although not to the degree that subsequent interstate highways created. Along Route 66, amenities — by the standards of the day — abounded, including gasoline stations, restaurants, motor courts, and other respites for travelers. Beyond it, travelers took their chances. Even the cross-country highways were two lanes at best; Route 66 acquired the moniker “Bloody 66” as a result of the enormous casualty rate along it.²⁹ The difference between the two lanes of a major highway and those of smaller highways — as long as the latter was paved — was measured in the volume of traffic. As long as that similarity persisted, leaving Route 66 to see Carlsbad Caverns did not constitute a psychic hardship, a diversion from a goal.

²⁷ William Least-Heat Moon, *Blue Highways: A Journey into America* (Boston: Little, Brown and Company, 1982).

²⁸ Marguerite S. Shaffer, “See America First: Tourism and National Identity” (Ph.D. dissertation, Harvard University, 1994), 1-26; Michael Wallis, *Route 66: The Mother Road* (NY: St. Martin’s Press, 1990); Quinta Scott and Susan Croce Kelly, *Route 66: The Highway and its People* (Norman: University of Oklahoma Press, 1988).

²⁹ Scott and Kelly, *Route 66: The Highway and its People*.

The nature of motor travel remained idiosyncratic well after World War II, enhancing the sense of adventure that every automobile traveler experienced. As travelers proceeded further west, they found more appealing regionalisms, all of which enhanced the sense of the act of traveling as part of the adventure. Food offerings changed from barbecue to chili con carne and tamales. Visitors were attracted to the motor courts of places such as Albuquerque — with such names as the Coronado, the Pueblo Bonita Court, and the Eldorado. With such enticing concepts at hand, a trip to the caverns evoked the same imagery as did the main highways and people traveling Route 66 did not seem to mind the distance out of the way that Carlsbad Caverns required. In 1960, when the popular television show *Route 66* featured an episode at Carlsbad Caverns, the point was made. In the story, George Maharis and Martin Milner, the show's two stars, took jobs at White's City to replenish their depleted finances and find themselves trying to coax out a group who fear nuclear attack and have taken refuge in the caves. Despite being more than 200 miles from the actual Route 66, the show illustrated the cultural centrality of Carlsbad Caverns. Continual promotion of El Paso by its Chamber of Commerce created a road loop that travelers could take. These two- or three-day side trips had considerable appeal in a culture accustomed to the concept of the Atchison, Topeka, and Santa Fe Railroad's Indian detours, day- and overnight side tours departing from railroad depots and Fred Harvey hotels.³⁰

The transformation of Route 66 into Interstate 40 following 1960 inaugurated new and far more complicated automobile travel patterns. The four-lane divided interstates' physical construction and speed of travel separated people from the landscapes through which they traveled. These highways bypassed existing towns and other attractions; as did train passengers of a century before, interstate drivers passed through the landscape, selectively engaging it and enjoying far greater control over their experience than did drivers on two-lane highways. Interstate travelers could drive hundreds of miles without stopping for a red light; they could eat at the chains of now-familiar restaurants perched along the highway's controlled exits and entrances. The interstates made auto travel into a national experience rather than a local and regional one. The carcasses of towns the interstates passed by dotted the nation.

For Carlsbad Caverns National Park, the construction of interstate highways began a long and elaborate chipping away at the place of the park in national consciousness. As the premium on haste replaced the languid leisurely vacations of earlier in the century and as the interstates centralized the flow of cross-country traffic, progressively fewer travelers ventured beyond the corridors created by these highways. With speed limits as high as seventy miles per hour and traffic moving even more quickly by the early 1970s, the interstate highways provided a raceway across the country. While places such as the Grand Canyon — a little more than one hour from the interstate — retained and even enhanced their audience, places farther away suffered. For Carlsbad Caverns, almost three hours from Interstate 40 to the north and two-and-one-half hours from Interstate 10 at El Paso, the changes in travel patterns presented a genuine challenge.

³⁰ "Carlsbad Caverns to be Used in National Television Show," *El Paso Times*, November 10, 1960; Jakle, *The Tourist*, 226-27.

Another challenge to visitation cropped up in the changing nature of American entertainment and the expectations of the young. For generations, rural and small-town Americans had experienced entertainment that came to them. It took many forms: traveling fairs and baseball teams, movies, the circus, and other features produced a culture that craved something, in some cases anything, out of the ordinary as a diversion from humdrum daily life. When Ringling Brothers coined the phrase “The Greatest Show on Earth” to describe its traveling circus, most people in small-town America easily accepted the characterization. After World War II, television appeared, altering the formulas for success on which traveling entertainment depended. Americans could stay home, and without paying, experience a previously unimagined range of entertainment. Dramatic changes resulted. Americans became more critical of the entertainment they saw in person, expecting more and becoming far less easily impressed. Television also portended an increasingly homogeneous America — in language, in fashion, and in what its viewers regarded as worthy. These different factors combined to push Carlsbad Caverns gently to the margins of the mainstream.

The transformation was ironic. The same sorts of technological innovations that made Carlsbad Caverns more accessible drew the attention of younger Americans away from the caverns. By the 1970s, when movies boasted a range of incredible adventures from *Planet of the Apes* to *2001: A Space Odyssey* and television shows such as *Lost in Space* offered a vision of the future that could — and should — exist for Americans, the magic of Carlsbad Caverns seemed lost on an increasingly sedentary, urban public that mainly traveled by interstate highways. A walk through the caverns seemed dated; television and movies routinely showed more spectacular scenes. To a culture that increasingly had difficulty differentiating between the “real” and the contrived, the experience of being underground among even the most spectacular natural formations had considerably less cachet and somehow seemed less impressive than it had a generation before.

Another irony existed. During the two decades following World War II, southeastern New Mexico experienced consistent growth. New motels in the town of Carlsbad helped handle the growing visitation during the first thirty years after the war, and some people settled there as a result of their visits. Retirees in search of the ubiquitous Sunbelt, where life was inexpensive and the weather mostly stayed warm, also flocked to the region, soon providing another pillar for the regional economy. As the town’s primary feature, Carlsbad Caverns National Park began to struggle for its place at the center of the American mainstream, the service economy that the park represented played an increasingly significant role in southeastern New Mexico and the trans-Pecos.

This shift appeared slowly and as if behind a mask. Park visitation continued to rise, and in 1960, the *Carlsbad Current-Argus* could crow that more than 9.5 million visitors had passed through the caverns since it became a national park in 1930. Other factors contributed to the growth of a service economy in the region. New Mexico State University opened its first branch campus in Carlsbad in 1950 as the town’s population consistently grew. Following a typical pattern in the post-World War II West, Carlsbad grew from 7,116 people in 1940 to 17,975 in 1950 and 25,541 in 1960. An airplane factory in Carlsbad produced its first plane in 1960, the result of a local \$7 million bond issue, but this

manufacturing endeavor remained more the exception than the rule.³¹ The nods toward traditional forms of economic activity — plants, manufacturing and similar light industry — effectively prevented the local community from recognizing its growing dependence on service endeavors such as the park.

Water availability buttressed traditional economic activities in the region, and improvements in the delivery system furthered the federal presence. A 1967 Bureau of Reclamation report advocated the construction of a new dam to inundate McMillan Dam and Reservoir and replace it with a larger lake. Located between McMillan and Avalon dams, the new structure would eliminate the hazards that plagued the Carlsbad project since the turn of the century. The Carlsbad irrigation district assumed responsibility for the costs associated with providing additional irrigation water, while the federal government took on the flood control and dam safety expenses, the vast share of the project's cost. The project was authorized in 1972; construction began in 1984, and the dam completed in 1987.³² With the solution to the region's long-standing water problems under construction, few questioned the viability of traditional endeavor until economic changes forced the entire region to scramble for new strategies.

The decline of the potash industry was a severe blow to the region's aspirations. In November 1967, U.S. Borax and Chemical Company closed its refinery near Loving, sending the regional economy into a tailspin. At the height of post-war prosperity — before the combination of the Vietnam War, which drained the federal treasury and national enthusiasm, and the OPEC oil embargo, which dramatically raised energy prices, sent inflation spiraling and created a condition called “stagflation” — Carlsbad endured a mini-depression that shook the community and the region. Guano mining had already declined precipitously since even the doldrums of the 1930s. During the 1950s and 1960s, the Park Service obtained a number of the remaining holdings from disinterested owners. As guano fell from prominence, potash rose; during the 1955-1956 fiscal years, the industry, centered in Carlsbad, produced nearly 15.5 million tons of the mineral valued at almost \$61 million. In 1962, the one-millionth railroad car filled with potash left Carlsbad. At its peak, potash employed four thousand people in southeastern New Mexico. The 1967 closure portended a difficult future. The impact was so rapid and dramatic that the 1970 census showed a decrease in the population of Carlsbad to 21,297 people, a fall of more than 4,000 from the 1960 numbers.³³ Although traditional economic endeavor continued to play a significant role, after 1967 the region sought to attract other forms of economic activity.

³¹ “Carlsbad Population Up 8,000 in 8 Years,” *El Paso Herald*, May 24, 1958; “New Factory in Carlsbad Turns Out First Airplane,” *El Paso Herald*, December 19, 1960; “Caverns Celebrate Birthday,” *El Paso Times*, May 15, 1961.

³² Hufstetler and Johnson, *Watering the Land*, 148-49; New Mexico First, “Water: Lifeblood of New Mexico,” (Albuquerque: New Mexico Town Halls, 1988), 38-43; Curtis C. Wayne, “Brantley Dam ‘is Born’ Tuesday,” *Carlsbad Current-Argus*, August 31, 1988.

³³ U.S. Census, 1970; “Carlsbad Area Produces 12 Millions Tons of Potash,” *Carlsbad Current-Argus*, October 20, 1957; “No. 2 Million ‘Scheduled’ Now in Carlsbad: Potash Mines Hit New High,” *El Paso Times*, April 22, 1962; Jed Howard, “A Carlsbad Chronology,” July 2, 1987, Carlsbad Public Library.

In this new formulation of economic activity, Carlsbad Caverns National Park played a crucial role. In the late 1960s and 1970s, it retained a powerful capability to draw visitors to it — before and during the cultural revolution that changed American tastes — and some of those visitors became new town residents. As the community focused on tourism as a source of employment and retirees as a constituency for locals to serve, a new Carlsbad took shape — one dominated by motels and medical facilities. Among Sun Belt communities, Carlsbad began to experience the transformations of the 1980s more than a decade in advance of the election of Ronald Reagan.

The park took the lead in changing the culture of the region to service-oriented activities, as occurred in many parts of the country that experienced similar change. The Park Service had long been an innovator in service activities; its programs set the national standard for American travelers before the fragmenting of national culture that began during the late 1960s. At Carlsbad Caverns, interpretation and visitor services had been in place for more than thirty years. The park weathered the Rock of Ages controversy and by 1960 offered a formalized, educational program designed to provide visitors with an experience that was both awe-inspiring and intellectually significant. Visitor amenities met the typically stringent rules and regulations of the agency, providing quality service. Carlsbad Caverns became the bellwether in the region, the service to which other offerings were compared — and typically found wanting.

By the 1960s, Carlsbad Caverns could boast a comprehensive trail system paved to accommodate the demands of post-war visitors. From the earliest trails laid by Jim White and the first Park Service construction efforts such as the entrance stairway built in 1925 — typically dirt walkways and wooden stairways — the Park Service gradually but consistently upgraded the cavern's trails. The Park Service handled most of the work. PWA and CCC workers and others performed occasional tasks, but the largest share fell to agency employees. By 1929, the Park Service used professional staff to engineer its trail development. Accurate surveys and grades lessened the slope and the difficulty of descent. In 1930, a tunnel at the entrance that permitted a more gradual descent replaced the entrance stairway. The remainder of the 1930s was largely devoted to smaller projects. After World War II, the modern trail system began to take shape. Efforts to remove the remaining wooden stairways and lessen the grades continued, and between 1951 and 1953, paving of the pathways followed. In 1954 and 1955, the elevators were installed, and cavern seating areas were constructed. In 1963, a 1,000-person rock amphitheater for summer bat flight spectators was completed at the natural entrance. By then, visitors could feel that the caverns were accommodating in a way they had not previously been.³⁴

³⁴ Donald R. Standiford, "The Development of the Cavern Trail System and Other Visitor Facilities in Carlsbad Caverns," unpublished manuscript, Carlsbad Caverns National Park Library.

The cavern lunchroom, 750 feet below the surface, provided an example of the agency's ability to work with licensed concessionaires. Jim White established a lunch stop on his early tours, but before the establishment of the monument people ate wherever they chose. They carried lunches with them, often packed by Carlsbad restaurants. The water they drank dripped into wooden casks White placed in judicious locations, and cave pools often provided additional drinking water. By 1928, thirsty visitors nearly drained Devil's Spring, and the Park Service piped water there to accommodate the growing number of visitors. The Park Service began to pipe in water and installed a drinking fountain to relieve the pressure on cavern resources. In 1927, the Cavern Supply Company was organized and the following year it began to offer the famed box lunches familiar to two generations of travelers in the original lunchroom at the north end of the caverns, . In 1929, the lunchroom was relocated to its present location, next to the elevator shaft and directly below the visitor center. On February 9, 1937, Jim White, who resigned from the Park Service in 1929, opened a booth in the new lunchroom for selling postcards and his memoirs, and he remained as long as his health allowed.³⁵ In this setting the Park Service was able to assess closely the services that visitors received and monitor the costs. Despite occasional disagreements it was an ideal arrangement, one in which the Park Service and the concessionaires had mutual goals and could agree upon the most satisfactory course of action.

National Park Service firmly held control inside the park, but it extended not an inch beyond its boundaries, where White's City sat. Like many early tourism entrepreneurs, Charlie White was a character who did anything he could to attract visitors and entice them to stay. More than thirty billboards dotted the roads to White's City, each announcing a different attraction. White opened the "Million Dollar Museum," full of hundreds of butter molds, typewriters, bear traps, roller skates, buttons, shoes, postcards, and other implements of daily life. The rattles of almost one-hundred rattlesnakes stood alongside animal horns and heads, doll houses, and other curiosities. A two-headed rattlesnake and a two-headed turtle once graced the museum, and the head of the twelfth-largest moose ever shot in Wyoming remains. Kiss-o-meters, an arcade device that used an individual's handshake to rate their puckering style and ability, offered a diversion.³⁶ Road travelers might not be awed by White's City, but they were likely to be amused.

White's City posed problems for the Park Service. Like Ralph Henry Cameron's hotel and camp and the Kolb Brothers' studio at the Grand Canyon, it was outside of agency reach, but White's City played an important role in shaping how people regarded the caverns. The fact that

³⁵ Standiford, "The Development of the Cavern Trail System and Other Visitor Facilities in Carlsbad Caverns," 8-12.

³⁶ Bryant, "Cashing in on the Caves," 54-56; Ripp, "Greetings From White's City," 71.

White shared the same last name as the unrelated Jim White, who served as Chief Guide at the caverns until June 26, 1929, also hindered the Park Service's efforts to create a respectable image for Carlsbad Caverns National Park. The collection of kitsch outside the park somehow intimated that what was inside it was not sacred. The lunchroom on the cavern floor, while convenient, also accentuated the sense of the caves as profane space, part and parcel of the modern world.

The relationship between White's City and Carlsbad Caverns illustrated an always problematic situation for the Park Service after automobiles became a primary means of conveyance for park visitors: how to assure the quality of experience when the Park Service did not control the people and facilities that offered service. At the Grand Canyon, control had been accomplished by moving the train depot closer to the "appropriate" facilities, but that was when rail passengers comprised the overwhelming majority of visitors. With automobiles and roads, parks such as the Grand Canyon experienced the same situation as did Carlsbad Caverns. With myriad ways to approach the park and many choices among places to stop on the way, visitors became subject to influences that combined to undermine the impact of the park's message.

As it did in countless other situations, the Park Service used its vast resources to bring outside operators within its fold gradually. Agency officials worked with Charlie White to achieve mutually beneficial agreements that both furthered White's goals and upheld Park Service standards. In the process, the Park Service way became the measure of service endeavor in the Carlsbad area. In 1961, when the ten-millionth visitor entered the caverns, Park Service officials could point to their activities as a major linchpin of the region. The work of the agency anticipated change, as service endeavor became an increasingly larger part of the regional economy. The loud protests in 1968, when the Department of the Interior announced plans to close the caverns two days a week in an economy measure on the heels of the decline in the potash industry, illustrated how important tourism had become.³⁷

The connection to the bigger cave in Lechuguilla Cave made Memorial Day weekend 1986 further highlighted the shift. The cave had been discovered in 1914 and was known in the fashion of most caves for the better part of the century, but in the 1980s, the connection to the larger portion made it something new, an unexplored cave that spoke to the cultural needs of a culture that placed a premium on fresh experience. Lechuguilla was mined for guano by John Ogle, Cad Ogle, and C. Whitfield, who claimed it in 1914, but it had fallen from scrutiny.

³⁷ "Two-Day Caverns Closing Ordered," *Carlsbad Current-Argus*, November 22, 1968; "Caverns Closed at Carlsbad Two Days a Week," *El Paso Times*, November 23, 1968; "Caverns to be Open Seven Days a Week," *El Paso Times*, December 21, 1968; "Cargo Reports Carlsbad to Open for Seven Days," *El Paso Times*, February 27, 1969; *The Capitan Reef* 4 (Spring 1996):12.

Occasional forays into the cave occurred, but few people took any notice; one group labeled the cave “Misery Hole” after a 1950s trip. The cave drew little attention until 1974, when cave researcher David Jagnow reported the possibility of a larger room beneath the known bottom of the cave. During the late 1970s, a number of Park Service and Cave Research Foundation expeditions explored the cave, bringing it to the attention of cavers and the public.³⁸ In this sense, Lechuguilla Cave was discovered — reclaimed really from obscurity — and made into a symbol of authentic experience.

Lechuguilla Cave became a reflection of the culture of wilderness. This phenomenon grew in popularity and size in the aftermath of the technological revolution that made serious outdoor activity more accessible to people, and it became a marker of individuality and status in an age of mass consumption. Lechuguilla Cave came to stand for beauty and mystery, for the awe the paved main cavern no longer inspired in everyone. Noted outdoor writer Tim Cahill made clear that distinction: “I am in the heart of the newest wonder of the world,” he wrote in *National Geographic*. “Like the Grand Canyon, Lechuguilla is overwhelming. Experienced cavers (the only kind that can deal with Lechuguilla’s demands) are immediately dazzled.” When Cahill likened his experience to that of Lewis and Clark, NPS cave specialist Ron Kerbo, who became the park’s second cave specialist in 1976, responded: “you know, I used to use that analogy myself. But then I realized that everywhere Lewis and Clark went, there were people. Exploring Lechuguilla is entirely different. No one’s ever been in those virgin passages. It’s Neil Armstrong stuff.”³⁹

The contrast between the perception of Lechuguilla and New Cave, “discovered” in Slaughter Canyon in the 1930s, showed the range of distance from the mainstream a park like Carlsbad Caverns could contain. After a goat herder named Tom Tucker stumbled across New Cave, the Ogle Mining Company claimed it and after a few studies, in 1943 began to mine its guano. The operation generated few positive results at a time when the demand for guano was low, and mining continued intermittently until the late 1950s. By the late 1940s, the cave had become an attraction; the feature film *King Solomon’s Mines* was filmed there in 1950. In 1954, miners found the bones of a previously unrecorded species of a bat that carbon dating indicated was more than 17,800 years old. In 1957, the cave yielded camel bones, and deer and bison

³⁸ n.a., “Capsule History of Lechuguilla Cave,” ca. 1989, Carlsbad Caverns National Park Library; Tim Cahill, “The Splendors of Lechuguilla Cave,” *National Geographic* 179 3 (March 1991): 34-58.

³⁹ Cahill, *The Splendors of Lechuguilla Cave*, 56-58.

bones, along with stone blades and pottery fragments were all found. Yet New Cave never set off a rush to explore comparable to Lechuguilla, nor did it seem to represent a new experience for the public. The Park Service preserved New Cave as an primitive underground experience, calling it the “Slaughter Canyon Cave” and providing an activity that resembled spelunking for a wider swath of the public that could generally engage in the sport.⁴⁰ Lechuguilla Cave represented authentic experience; the older, less spectacular New Cave only simulated it.

The interest in Lechuguilla Cave spoke to real American needs. By the 1980s, young Americans especially craved experience that others could not imitate. Spelunking met the criteria. Although it had always been a specialized experience, it possessed all the features that people who sought to prove themselves sought; it was, as Kerbo noted, “Neil Armstrong stuff” — unrepeatably, impossible to package, and too difficult for most. In a culture sold on the cult of experience that had already packaged Mount Everest to the unprepared for the sum of \$65,000 per head, Lechuguilla Cave had tremendous appeal.⁴¹ It remained authentic, “real,” not susceptible to the corruption of the mainstream.

In this, Lechuguilla Cave remained a specialized activity, apart from the developing norms of personal expression in American society — what can be called the “Xtreme Games” syndrome — but equally a part of the culture of tourism, tied to the very roots of the Carlsbad Caverns experience. To an observer, the descriptions of Lechuguilla Cave mirrored those of the discovery and popularization of Carlsbad Caverns in the 1920s and 1930s. Here was a spectacular wonder, a place far from the ordinary that reflected Americans’ desires. Here was a place to which people could aspire, intellectually if not physically, that suggested that there were mysteries still to be uncovered and explored even in a time when humans walked on the moon and technology allowed both the processing of billions of bytes of information per second and pictures of the inside of the living human body. Humanity could know and maybe even understand, Lechuguilla Cave seemed to say, but it could not conquer all.

Lechuguilla Cave was also an important part of the continuing economic reliance on tourism in the region. As an attraction, the existence of the cave again elevated Carlsbad Caverns, providing a new attraction that drew people to previous ones as well. With articles in *National Geographic* magazine, and a parade of spelunkers who sought to explore this exciting new find, Lechuguilla Cave offered much to the region. The increasing prominence of tourism after 1970, especially in the aftermath of the demise of the potash industry, made Lechuguilla Cave an important component in the transition from regional production economies to their service successors.⁴²

⁴⁰ n. a., “History of New Cave,” n.d., Carlsbad Caverns National Park Library; Renee Rubin, “Bat Guano Mining Near Carlsbad: A Former Miner Remembers an Unusual Venture,” PUB

⁴¹ Jon Krakauer, *Into Thin Air: A Personal Account of the Mt. Everest Disaster* (NY: Villard, 1997).

⁴² U.S. Department of the Interior, Bureau of Land Management, “Final: Dark Canyon Environmental Impact Statement,” (Roswell: Bureau of Land Management, 1993), 1-1-3-46.

To observers of the regional scene, the transition to service economies and tourism made sense. Since Anglo settlement in the nineteenth century, the region had relied on one panacea after another. Ranching, irrigated agriculture, guano, oil and gas, and potash all promised prosperity and success, all provided it and the hope for the future that came with dreams — at least temporarily. The shift to service activities such as tourism followed the same pattern. Carlsbad became interested in “retirees and rest homes,” local observer and historian Jed Howard noted, succinctly defining the parameters of the changing economy, and the numbers bore him out. Although visitation at Carlsbad Caverns National Park continued a fluctuation of about 100,000 visitors annually, ranging from 672,960 in 1980 to 781,963 in 1982 and a peak of 792,398 in 1989 before falling to 679,450 in 1991, in 1990 tourism employed more Eddy County workers than did mineral extraction. As was typical, all forms of tourist endeavor paid employees far less than did the shrinking manufacturing and mining sectors.⁴³ To many, tourism and service indeed appeared to be a sink to which the regional productive economy had descended.

This new business field also provided a look at a different future, one being simultaneously pioneered in similar communities. The shift to service meant dispatching with older ideas and the ways of living that attended them. It often meant giving up the creation of a tangible product for something intangible, the production of valuable minerals for a visitor’s thankful word as proof of accomplishment. For many, schooled in this older American form of endeavor, the transition was hard. For younger people, especially as the 1980s began, this new form was all they knew.

The new pillar in this setting was the same one that had underpinned the region since early in the twentieth century: the federal government. In 1973, the Department of Energy (DOE) came to Carlsbad looking for a radioactive waste disposal site, filling the enormous gap left in the community by the decline of potash. Since the days of irrigated agriculture, most regional economic activities had some sort of federal underpinning; although only the park and the adjoining Lincoln National Forest seemed overtly federal. The energy agency’s presence of the 1970s pointed to a more complicated future. Cynics could charge that the DOE looked for communities in distress as locations for its activities, but in troubled economic times it remained a welcome addition anywhere in the West. In the Carlsbad area, the arrival of DOE had the additional effect of fusing the region’s past and charting the nation’s future.

This new and visible federal presence had at least one significant drawback: its payroll came closely attached to the issue of hazardous waste disposal. After 1945, the use of products that generated hazardous waste escalated with remarkable speed, generating widespread concern about pollution in American society. By the 1960s, a backlash against the downside of industrialization began in earnest. Rachel Carson’s *Silent Spring*, which chronicled the impact of a widely used pesticide, DDT, on birds and other species, awakened the public, and the modern environmental movement took

⁴³ Jed Howard, “Carlsbad Chronology,” July 2, 1987, Carlsbad Public Library, Carlsbad, New Mexico; New Mexico Department of Labor, “Non-Agricultural Employment, Wages, and weekly earnings, 1990,” (Santa Fe: New Mexico Department of Labor, 1990); New Mexico Economic Development Department, 1991, “Eddy County Tourism, 1990,” (Santa Fe: New Mexico Economic Development Department, 1991).

shape, replete with oppositional politics and a strong distrust for government pronouncements. At its urging and with the support of much of the public, government and industry began to address the problem of technological prosperity. In this mix, waste disposal and the management and containment of its impact became major issues.⁴⁴

Much of the West remained in federal hands, subject to callous treatment by federal decision-makers. A range of nuclear, and chemical facilities, many tied to the military, abounded. Beginning during World War II, radioactive material in Los Alamos, New Mexico, and Hanford, Washington, became an important component of the national arsenal. After the war the widespread presence of military bases and installations as the nation moved toward nuclear power assured that dangerous materials were everywhere. Civilian atomic power applications increased, and the nation began to look for places to store low- and high-level waste from both civilian and military use permanently.⁴⁵

New Mexico and Carlsbad had been part of the history of nuclear testing even before the efforts to site repositories began. On December 10, 1961, as part of the Eisenhower-era Atoms for Peace program and under the rubric of “Plowshares,” the test detonation of an atomic device took place outside Carlsbad. This test was supposed to pave the way for the use of nuclear explosions for peaceful civilian purposes. Although the people of the region were initially less than enthusiastic about an underground nuclear explosion in their backyard, the local newspaper supported the project as an economic boon for the area. As did many such issues, nuclear testing split the growth coalition — those in the community who stood to benefit from economic development — from everyone else, especially those who felt comfortable and secure in their existing economic niches. Potash mine owners feared the blast would collapse their mines, farmers thought that nuclear fallout would damage their crops, and motel owners and NPS officials recognized that the explosion might deter tourists. Government studies addressed those concerns, promising that no fallout would occur. After a three-year hiatus in atomic testing ended in 1961, Carlsbad took the lead as the location of the first atomic test for peaceful purposes. The bomb was detonated 1,200 feet below ground in an ancient salt deposit at noon on December 10, 1961, the 3.1 kiloton blast creating a cavity 150 feet in diameter and 75 feet high.⁴⁶

⁴⁴ Hal K. Rothman, *The Greening of a Nation? Environmentalism in the United States Since 1945* (NY: Harcourt Brace, 1997), 170-196.

⁴⁵ n. a., “N. M. Atom Blast is set for Dec. 10,” *El Paso Herald*, December 2, 1961; Frank Morgan, “Salt Deposit Aids Test of Bomb Near Carlsbad,” *El Paso Herald*, December 6, 1961; Valerie Kuletz, ; Peter Hales, *Atomic Spaces*, ; Michele S. Gerber, *On the Homefront: The Cold War Legacy of the Hanford* (Lincoln: University of Nebraska Press, 1992); Hal K. Rothman, *On Rims and Ridges: The Los Alamos Area Since 1880* (Lincoln: University of Nebraska Press, 1992).

⁴⁶ “Expert Says Plan Gnome Won’t Hurt, Mine, Oil Area,” *Carlsbad Current-Argus*, September 11, 1958; Bill Becker, “Gnome A-Blast All Set,” *El Paso Times*, December 10, 1961; US AEC, “Project Gnome: Part of the U.S. Atomic Energy Commission’s Plowshare Program for Peaceful Uses,” (Albuquerque: US AEC, 1961), 1-9; n. a., *Projects Gnome and Sedan: The Plowshare Program* (Washington, D.C.: Nuclear defense Agency, 1973), 1-33; Frank Keith and Catherine B. Wren, *The Nuclear Impact: A Case Study of the Plowshare Program to Provide Gas by Underground Nuclear Stimulation in the Rocky Mountains* (Boulder: Westview Press, 1976); Richard G. Hewlett and Jack Holl, *Atoms for Peace and War, 1953-1961: Eisenhower and the Atomic Energy Commission* (Berkeley:

The blast created another image for Carlsbad, different from the place of underground wonders that the community had long promoted. After the blast, Carlsbad became part of the national wasteland, one of the places that could be sacrificed so that the rest of the country could be safe — first from the Soviet threat of the Cold War and later from the threat of contamination from its own toxic wastes. Carlsbad developed a love-hate relationship with federal dominance, as did southern Nevada, which endured more than 100 aboveground and countless below ground nuclear tests. Both tourist attraction and national sacrifice zone, the region around Carlsbad had been softened for further federal entreaties by the acceptance of Project Gnome.

In the later process of seeking locations for waste repositories, federal agencies and waste-producing contractors looked for specific characteristics. These typically included rural locations in need of an economic boost, and a prior federal presence. Both the national park and Project Gnome provided a context for further federal presence, and the 1961 blast and the 1975 siting of a \$100 million uranium processing plant near Carlsbad indicated local familiarity and maybe even acceptance of the risks inherent in a waste repository.⁴⁷ In the search for a place to store nuclear waste, Carlsbad had many desirable traits. Only the characterization of a site as safe for hazardous waste storage held up the determination that the Carlsbad area was suited to house a nuclear waste repository.

Salt formations such as those near Carlsbad were desirable locations for storing nuclear waste. These salt beds tended to be found in geologically stable area generally freed of earthquakes, and as early as 1950 the National Academy of Sciences pronounced geologically stable formations such as deep salt beds as ideal locations for long-term storage of waste materials. Throughout the 1960s, scouting for locations went on, especially in places such as the Permian Uplift, which were known to have salt formations. Sandia National Laboratory in Albuquerque took a lead role in the search for a site in New Mexico, looking at southeastern New Mexico in the 1970s, as regional economic doldrums muted much possible opposition. On October 2, 1980, the U.S. Congress approved initial funding for a project called the Waste Isolation Pilot Program (WIPP), to be located twenty-six miles east of Carlsbad. The facility was designed to be an experiment that would determine whether low-level nuclear waste from the production of nuclear weapons could be safely stored in salt beds. This category of waste consisted of clothes, tools, rags, and items contaminated with small quantities of radioactive elements, typically plutonium.⁴⁸

The search for a location for federal nuclear waste coincided with efforts to site repositories for civilian and military high-level nuclear waste, and toxic waste of various kinds and other hazardous byproducts of industrialization. By the mid-1970s, American attitudes toward nuclear power had

University of California Press, 1989).

⁴⁷ Mike Stepanovich, "NM Will Get \$100 Million Uranium Plant," *El Paso Times*, October 10, 1975.

⁴⁸ Sandia Laboratories, *Draft Environmental Impact Statement for Waste Isolation Pilot Plant, Eddy County, New Mexico* (Albuquerque: Sandia Laboratories, 1977), 1-4-1-10.

passed from suspicion to dread; the crisis at Three Mile Island in Pennsylvania ended American confidence in the nuclear power industry. The public did not differentiate between waste storage and nuclear power production. With enormous quantities of waste scattered around the country, efforts to consolidate them in permanent and safe repositories began to take shape.⁴⁹

Issues of siting quickly descended to questions of politics and privation. The federal high-level waste siting process focused on three locations, but in a move engineered by U.S. Sen. Bennett Johnston of Louisiana, in 1987 attention centered only on Yucca Mountain, Nevada. A pattern in siting became clear: poor, rural places were singled out as were urban communities with relatively low levels of education and community organization, especially if they were dominated by people who tended to passively accept authority.⁵⁰ This left large sections of the Southwest vulnerable — especially southeastern New Mexico and the trans-Pecos, where typically sparse population and economic need went hand in hand.

In both Texas and New Mexico, attempts to site hazardous or nuclear waste storage facilities focused on the remote and the poverty-stricken areas. In 1989, Texas planned to continue to build a low-level nuclear waste dump near Fort Hancock in Hudspeth County, about fifty miles east of El Paso, despite considerable evidence that the area could be subject to an earthquake that might destabilize the storage facility. The site also appeared to fall within the 100-year flood plain. In 1995, the Mescalero Apaches narrowly defeated a proposal to store nuclear fuel rods on their Tularosa reservation temporarily. Wendell Chino, who led the Mescaleros since the early 1950s, supported the plan for the hundreds of millions of dollars he expected to receive for the tribe. Chino championed Indian sovereignty, and in his more than forty years of leadership, produced a record of success. His projects ranged from the Inn of the Mountain Gods (with an artificial lake that New Mexico authorities never sanctioned), Ski Apache, a bingo parlor, and numerous cases in which he demonstrated tribal sovereignty in contravention of state desires. From Chino's point of view, nuclear fuel rod storage was simply another form of economic development. The Mescalero people's objection to that idea saved an enormous fight that the state of New Mexico would have been hard pressed to win.⁵¹

The constellation of power and profit lined up behind the hazardous waste siting industry guaranteed that no dump proposal ever really died. Most slipped into abeyance as proponents waited for a more propitious moment. By 1996, at least three low-level dumps were planned for west Texas, prompting Sierra Blanca store owner Bill Addington to call the proposals an attempt to "turn West Texas into a national toilet." Opponents rallied, headed by the Sierra Blanca Legal Defense Fund

⁴⁹ Sandia Laboratories, *Draft Environmental Impact Statement for Waste Isolation Pilot Plant, Eddy County, New Mexico*, 1-10-1-14; Rothman, *The Greening of a Nation?*, 190-94.

⁵⁰ Jeff Wheelwright, "For Our Nuclear Waste, there's Gridlock on the Road to the Dump," *Smithsonian*, 40-49; Rothman, *The Greening of a Nation?*.

⁵¹ Stephen Schmidt, "Natives and Nuke-Junk," November 13, 1991, *Environmental News Service* 2 #138; Bill Hume, "Apache Vote Spared State, Chino a Fight," *Albuquerque Journal* February 6, 1995, A-8; Ramon Bracamontes, "Texas Would Build Dump on Quake Site," *El Paso Times*, April 27, 1989.

(SBLDF). In November 1996, twenty-one opponents of the dump were certified as official participants in a hearing. Early in 1997, resistance seemed strong and ready, but the forces arrayed in favor of the dump possessed considerable power and influence as well.⁵²

On the Mescalero reservation, the monitored storage proposal promoted by Chino made a comeback. After a vote that defeated the proposal, Fred Kaydahzinne, the housing director on the reservation, initiated a vigorous petition drive that forced a second ballot, in which advocates of the dump prevailed. Opponents charged that the petition drive was fraudulent because Kaydahzinne's office controlled more than 60 percent of the housing on the reservation and people felt compelled to sign the petition. Plans proceeded as opponents mustered energy and resources for another long battle.⁵³

Efforts to site a nuclear waste dump in southeastern New Mexico and the trans-Pecos continued a long-standing economic pattern, the search for outside panacea; only its form had become more dangerous. Since the turn of the twentieth century, a series of panaceas had come to the region. Each in time was revealed as inadequate to fulfill economic or psychic needs of the area. Worse, the nuclear waste dumps perpetuated colonial patterns that infuriated residents. The federal waste to be stored at WIPP and on the Mescalero reservation came from all across the country. Thirty-three utilities, mostly on the East Coast, initially subscribed for the Mescalero site. The waste slated for West Texas storage originated on the East Coast as well. The converse of extractive industries, efforts to site such projects could be called "injections" to an unwilling region. Opposite in direction, they had the same effect: they placed southeastern New Mexico and the trans-Pecos at a disadvantage to the outside.

This backdrop complicated questions of park management and economic development in the region. The park provided a benign counterpart, one that, some argued inadvertently opened the region to other sometimes malevolent entreaties. The situation offered a reprise of the tensions of the turn of the century, of the public-private, East-West fissure that once threatened to break the nation apart. In the 1990s, regional interdependence was a foregone conclusion. The issues centered not on whether the outside would affect southeastern New Mexico, but in what ways that impact would occur and on the kind of input locals would retain into decisions that affected their future. For the National Park Service, this created a genuine dilemma — how to manage park resources in a climate in which the actions of other federal agencies created animosities toward federal endeavors. The Park Service was compelled to find a path through a complicated maze.

⁵² J Truman, "Battle for Texas Nuke Dump," September 26, 1996; J Truman, "Desolate Real Estate — Critical National Importance," January 12, 1997, (Pocatello, ID: Downwinders Inc., 1997); Sierra Blanca Legal Defense Fund: Update 2 2 (Fall 1996).

⁵³ John Sterling, "Mescalero Dump Blocked . . . and Reborn," *Earth Island Journal* Summer 1995.

Chapter 9: A Southern Cornerstone in a Subregion: Guadalupe Mountains National Park

The expanded federal presence in southeastern New Mexico did much economically for the area north of Carlsbad Caverns National Park, but little for the trans-Pecos region to its south. Even as nuclear tests, the decline of potash mining, and changing expectations in the region made Carlsbad and the oil-rich areas to its east and north part of a new economy, just a few miles to the south older patterns of living, centered around ranching and in some cases agriculture and mining, retained their holds on regional life. The ways of living that long existed in the trans-Pecos continued well into the 1960s, largely oblivious to the changes in the national economy and even to the cultural changes that by the middle of the decade swept the nation. To visitors, even those from as close as Roswell or El Paso, the region seemed out of time, a remnant of an earlier America, lacking the issues and problems of the rest of the country. The setting evoked a seemingly better America, a happier, more unified place in which people pulled together in support of community goals at the same time as they articulated their independence. The area around the Guadalupe Mountains seemed more like what the nation once had been than what it had become.

Outside influences always had an impact on the region even before the railroad surveys of the mid-nineteenth century, and during the 1960s those influences became stronger. The remote nature of the region and its marginal economic status no longer shielded the Guadalupe Mountains from external interests. One dimension of the era's cultural change placed a growing emphasis on preserving untrammelled land from development. Reaching its pinnacle in the passage of the Wilderness Act of 1964, this movement spurred interest in places such as the Guadalupe Mountains.¹ Although much of the area was not technically eligible as federal wilderness land because of privately owned acreage eliminated the requisite 5,000-acre roadless tracts, the scenery was spectacular and few people encroached upon the region. With a strong federal presence in the larger area and the economic benefits of the tourism generated by national park status apparent, an effort to create some kind of national park area in the Guadalupe Mountains took shape.

¹ Weldon Heald, "Looping the Guadalupes," *Travel* V. 120 no. 4 (October 1965): 34-36; Annette Richard Parent, "Guadalupe: Barrier Reef in the Desert," *National Parks* V. 48 no. 10 (October 1974): 4-9; Roderick Nash, *Wilderness and the American Mind* (New Haven: Yale University Press, 1983) 3rd ed., 220-26; Rothman, *The Greening of a Nation?*, 177-90.

In this effort, engineered by groups both within and outside the immediate area, the trans-Pecos once again followed typical patterns. By the 1960s, the region languished. Whatever aspirations people held for it had become stale, and an insular quality pervaded the region. The Guadalupe Mountains seemed detached from the rest of the nation, a quality that made some from outside its boundaries covet it. Atop Guadalupe Peak, environmental activist Edward Abbey observed: "This is a harsh dry bitter place, lonely as a dream. But I like it. I know I could live here if I wanted to. If I had to."² From the perspective of some who engaged in what had become called the "rat race" of modern life, the psychic distance between the wind-blown escarpment and the spectacular mountains peaks was a prized commodity, one they sought to protect from the potential changes that could change it.

An unusual combination of people joined in bringing a federal presence to the southern part of this subregion. President Lyndon B. Johnson stood in the forefront to galvanize advocates. He wanted to secure another national park for his home state of Texas. His powerful position in the year that followed his landslide victory over Barry Goldwater in 1964 brought the idea of a far west Texas park to the forefront of conservation politics once again. His desire for a national park in his home state created the context in which the effort could take place. Wallace E. Pratt, a Humble Oil geologist and later company vice president, served as the local catalyst. Long before Johnson's election, Pratt urged the creation of a national park in the Guadalupe Mountains that included his beloved McKittrick Canyon and his home, the Ship on the Desert. Pratt lived in two distinct worlds: the New York City world of Humble Oil's corporate offices and the rural world of McKittrick Canyon that he had first visited in the 1920s and later made his home. His ability to transcend the geographic distance between the two locales illustrated the ways in which modern transportation made even remote places accessible. J. C. Hunter Jr. and his representative, Glenn Biggs, made a significant tract of land available to the federal government and worked to assure that the government could secure its purchase. The result was the preservation of one of the most spectacular and geologically significant land forms in the national park system.

The authorization of Guadalupe Mountains National Park in 1966 added the southern cornerstone to the Carlsbad-Guadalupe Mountains subregion. The Guadalupe Mountains had always been a landmark; no matter what their designation, they marked a line between a place where people could make a living, albeit often a hardscrabble one, and where such endeavor was simply impossible. To the west of the mountains, the salt flats and a scrub desert stretched all the way to the Hueco Tanks, just east of El Paso. To the south and east stretched countless miles of arid land, infrequently divided by small streams or springs and occasional oases. In the park designation, the mountains formally received what they long possessed in local lore: a place of distinction that highlighted an important boundary between habitable acres and land that even irrigation could not harness.

² Edward Abbey, "Guadalupe's Trails in Summer," *National Geographic* Vol. 156 n. 1 (July 1979): 134-41.

The park also served as harbinger of change for the people of the region. Despite the national park status, a designation that slowed change and formalized procedures in most places, in the Guadalupe Mountains, park creation accelerated the pace of transformation. The region had been so deeply static for so long that the park became a catalyst in the trans-Pecos. In this context, Guadalupe Mountains National Park was proactive, like the later Alaskan national parks derived from the Alaskan National Interest Lands Conservation Act of 1980 (ANILCA), anticipating later demand from users. As a result, the change it created in its wake inaugurated a process that continued well beyond establishment of the park, laying the basis for a future that differed from the one anybody in the trans-Pecos anticipated.

The establishment of Guadalupe Mountains National Park came at a crucial time for the Park Service. Between park authorization in 1966 and its establishment in 1972, the Park Service and the park system underwent radical change. At its fiftieth anniversary in 1966, the agency intellectually still very much mirrored its origins; it remained committed to the complicated set of intellectual and cultural ideals that Stephen T. Mather and Horace M. Albright assembled in the 1910s. Despite significant professionalization and the rise in importance of science, large natural areas with spectacular scenery still formed a preeminent focus of agency acquisition efforts. Conrad L. Wirth and George Hartzog, Jr., who led the agency from 1953 until 1972, emphasized expanding the park system, sometime over the protests of other agency officials who remained committed to an earlier set of ideas, a foreshadowing of great change in the Park Service's responsibilities. From MISSION 66 to Parkscape USA (Hartzog's successor program to the ten-year capital development bonanza that preceded the fiftieth anniversary of the founding of the Park Service in 1966), the parks seemed to be changing away from being distant, revered places to becoming proximate and hands-on locales used by everyone. By 1972, the combination of social unrest and cultural turmoil precipitated the new stance. With the establishment of Gateway National Recreation Area in New Jersey and Golden Gate National Recreation Area in San Francisco, and the growing emphasis on urban parks and what would come to be called multicultural sites, the agency and its value system were in flux.³

In this context, Guadalupe Mountains National Park became the symbolic last traditional national park in the lower forty-eight states. Remote, expansive, and devoted largely to nature and scenery, with only specialized recreation possible, Guadalupe Mountains was conceived without the constraints of successor parks. Along with North Cascades and Redwoods national parks, both authorized the same year, Guadalupe Mountains joined the small group of the last natural national parks fashioned from lands not already included in the park system. Such parks stood out as the plethora of areas that stemmed from changing national goals and aspirations and later from the so-called "park-barreling" process, muddied the

³ Foresta, *America's National Parks and Their Keepers*, 169-222; Sellers, *Preserving Nature in the National Parks*, 208-10.

meaning of national park system designation.⁴ In the context of a changing agency and even greater alterations in what the public expected from the national parks, Guadalupe Mountains was a throwback to an earlier era.

After the failed efforts of the 1930s, the mantle of leadership for a park in far west Texas passed to Wallace E. Pratt. Originally from Phillipsburg, Kansas, and physically small at a lithe and energetic 115 pounds, the gentlemanly Pratt, the first professional geologist hired by the Humble Oil and Refining Company, was a true Renaissance man. He studied at the University of Kansas, and for him geology became “not only a means of livelihood, but quite literally a way of life.” Pratt probably understood Permian-era geology better than anyone in the 1920s and 1930s, was fond of quoting Alexander Pope and Bertrand Russell, and counted the much renowned writer Joseph Wood Krutch as a close personal friend. His impact on oil exploration was only matched by his modesty. “I was lucky,” he recalled. “The time just happened to be ripe for someone with my bag of tricks to come down the pike.” After graduating in 1907, Pratt worked for the U.S. Bureau of Mines in the Philippines and for private industry in Central and South America. In 1918 he joined the one-year-old Humble to introduce scientific techniques to its search for oil. Within one year, he added ten geologists to the company’s payroll and introduced the seismograph, which became a standard oil exploration tool, to the company. In 1921, he found the first major oil field with seismic surveying, near Sugarland, Texas, and followed it with the discovery of a major oil find in a fault zone that extended northeast from the Mexia, Texas, area. Pratt’s well-equipped geologists scoured Texas and Oklahoma for sources of oil, succeeding beyond the company’s wildest expectations; with nine seismographic crews in the field before the end of 1925, Humble found so much oil that it soon possessed more than twice the reserves of its nearest competitors. In 1924, Humble rewarded Pratt by making him a member of its board of directors.⁵

Pratt’s infatuation with the Guadalupe Mountains began only a few years after he joined Humble. When he arrived in west Texas in 1921 to survey oil leases, a real estate agent showed him McKittrick Canyon. “It was — and is — the most beautiful spot in Texas,” he told an interviewer many years later. Impressed with its beauty and the stunning geology evident in the canyon walls, Pratt and two friends purchased the property. A few years later they were surprised that Judge J. C. Hunter had purchased much of the land in south McKittrick Canyon that the trio thought they owned. Pratt and his friends received only an oral description of their purchase; Hunter looked at the surveys in the land office and acquired a gem. In the winter of 1930, after Pratt bought out his partners, he commissioned Houston architect John Staub to design a home that fit the region. The four-room house was built entirely of stone quarried from

⁴ Mackintosh, *The National Parks: Shaping the System* (Washington, D.C.:National Park Service, 1985), 62-80; John Jacobs, *A Rage for Justice: The Passion and Politics of Phillip Burton* (Berkeley: University of California Press, 1995), 363-401.

⁵ Amos Salvador, “Memorial,” *The American Association of Petroleum Geologists Bulletin* 66 9 (September 1982): 1412-22; W. L. Copithorne, “From Doodlebug to Seismograph,” 42-47.

the McComb Ranch. The Stone Cabin or *Manzanital*, after the ranch on which it was located, became the Pratt family's summer home. In 1945, a larger home, on a promontory at the base of a mountain outside the canyon and called "The Ship on the Desert," was completed. The Pratts lived there for fifteen years, without a telephone, more than ten miles from the nearest neighbor. The need for health care finally compelled them to move closer to modern amenities. The entire time, Wallace Pratt recalled, they received the news of the world over a radio receiver every morning — broadcast from Ottawa, Canada, by the Canadian National Broadcasting Agency.⁶

During his time in the Guadalupe Mountains, Pratt developed an even more pronounced appreciation for the region's beauty. Its geology had always entranced him; the visible strata in the rock inspired his initial purchase and the time he spent in the canyons enhanced his sense that the region was special. As he aged, he said later, he learned to see with new eyes and recognized not only the geological but also the aesthetic value of the land he called his own. The man who had been at best a lukewarm advocate of a national park during the 1930s became its primary proponent in the 1950s and 1960s.⁷

Pratt took the lead in shaping the contours of a national park in the Guadalupe Mountains and also assisted in the process of acquiring land. In 1958, he approached the federal government with an offer to donate his holdings in McKittrick Canyon as the basis for a national park. As 1961 ended, the federal government accepted 5,632 acres from Pratt and his family. Pratt's activities did not end with the donation. He wrote Frank Tolbert of the *Dallas Morning News*, well known for his popular nature column, "Tolbert's Texas," seeking to enlist the writer's support. He sent a copy of the letter to J.C. Hunter Jr., who owned the land that his father bought in 1925 and the family's other acquisitions. The Guadalupe Mountain Ranch, as the more than 72,000-acre property was called, was the crucial piece in Pratt's vision of a national park project. To secure it, Pratt sought a benefactor, someone who would purchase Hunter's land and give it to the Park Service. Lacking Pratt's independent means, Hunter wholeheartedly agreed with Pratt's assessment that a benefactor would make the transaction feasible. After a visit by a National Park Service team, which favorably recommended more than 27,000 of the 72,000 acres for inclusion in a park proposal, Hunter put the property on the market. At about the same time, Secretary of the Interior Stewart Udall was informed of the project. Recognizing that the 45,000 acres that the Park Service did not deem suitable for inclusion created an obstacle to the purchase of the desired 27,000, Udall also began to seek

⁶ Wallace E. Pratt, "Memorandum for Mr. Donald A. Dayton, Superintendent, Carlsbad Caverns and Guadalupe Mountains National Park, on Historic Structures In Guadalupe Mountains National Park, June 13, 1974, NA, Rocky Mountain Region, RG 79, SW Regional Office, General Administration Files, 1968-1970, H30, 1974-1976, GUMO.; Fabry, *Guadalupe Mountains National Park*, 29-32; Edgar and Patricia Cheatham, "The Extraordinary World of Wallace E. Pratt," *Petroleum Today* 12 2 (Summer 1971), 1-5

⁷ Cheatham and Cheatham, "The Extraordinary World of Wallace E. Pratt," 1-5; W. L. Copithorne, "From Doodlebug to Seismograph," 42-47.

outside funds.⁸ Different strains of momentum in support of a Guadalupe Mountains national park began to converge.

The election of Joe Pool, a freshman congressman from Texas, spurred the move for a national park. After three terms in the Texas legislature, Pool was elected as a congressman-at-large, meaning that the entire state was his district. During the campaign, he canvassed west Texas and found that the people he wanted to support him favored a national park. After his election in January 1963 — without contacting either the Department of the Interior or any of the interested parties in west Texas — Pool introduced a bill in the House of Representatives to study the area for national park status. Although the Park Service completed such a study the year before, Udall commended Pool's plan and an update of the previous year's study was undertaken. The slow legislative process worried J.C. Hunter Jr., and in dialogue with Pratt, he decided that he could not wait for the federal government to appropriate money to purchase his land. Between 1961 and 1963, Glenn Biggs negotiated with a number of potential buyers, but could not complete a transaction. Along with Pool and another Texas congressman, Ed Foreman of Odessa, Biggs continued to try to generate interest in the park, meeting with U.S. Senator Ralph Yarborough, the senior member of the Texas delegation. Others joined the growing movement, including Texas Governor John Connally and former Texas Secretary of State and Attorney General John Ben Sheppard, in 1963 president of the Texas State Historical Survey Committee. Sheppard urged his county committees to initiate resolutions in support of a national park and at the same time pushed the U.S. Highway 180 Association, made up of leaders in communities along the highway in west Texas and southeastern New Mexico, to support the project and even challenged Texaco to support the park. "I predict a big company like the Texas Company, which has made so much money in this state and taken so much of our mineral resources out of the state will cooperate," Sheppard predicted. "I don't think they'll stand in the way of the people of Texas enjoying the recreation and the scenic beauties of their land."⁹ A groundswell that advocated the park emanated from west Texas and New Mexico.

To this point, the process of creating Guadalupe Mountains National Park had been

⁸ Weldon Heald, "A Guadalupe Mountains National Park," *National Parks* V. 39 (September 1965): 4-8; "Background of Wallace Pratt Land Donation: Notes Taken from Land Files at Carlsbad Caverns National Park," Guadalupe Mountains National Park Library, VF, Planning Documents, Box not labeled; Fabry, *Guadalupe Mountains National Park*, 32-37.

⁹ "Commissioners Endorse Guadalupe Park Proposal," *El Paso Herald-Post*, July 29, 1963; "Dell City Council Boosts Guadalupe Park Proposal," *El Paso Herald-Post*, August 10, 1963; "State Park Planners Eye Guadalupe Area as Site," *El Paso Herald-Post*, August 21, 1963; "Texas Governor Favors Guadalupe National Park," *National Parks* V. 38 (March 1964): 16; Charles H. Callison, "National Capital Report: Conservation Outlook," *Audubon* V. 67 (January/February 1965): 25 "Mineral Rights Top Park Talks," *El Paso Times*, July 21, 1965; Paul Mason Tilden, "Washington Newsletter," *Natural History* V. 74 (August/September 1965): 62; "Sheppard Thinks State Will Drop Mineral Rights for Guadalupe Park," *San Angelo Standard-Times*, May 28, 1966; Monte L. Monroe, "Glenn Biggs and His Crusade for a Guadalupe Mountains National Park," (unpublished paper, 1992), VF Box: history general Folder # 1609, Guadalupe Mountains National Park; Fabry, *Guadalupe Mountains National Park*, 42-45.

typical of the way national parks entered the park system — prior to the first four decades of the twentieth century. Normally community and regional leaders, the movers and shakers in the comfortable phrase of the time, tapped their political, social, and economic connections. The role Wallace Pratt undertook was a reprise of that played in other situations by similar people. From John Muir at Yosemite National Park and Enos Mills at Rocky Mountain National Park to Laurence Rockefeller at National Park, a prominent and usually wealthy figure with strong ties to the region but from outside its borders almost always played a catalytic role in creating the momentum that established the park. On the surface, the process that Guadalupe Mountains followed seemed very similar.¹⁰

What was different was the political, social, and economic climate of the 1960s. In some ways, the time made creating a new national park a far easier task. In an optimistic nation, full of the sense that it could solve social problems such as poverty once and for all, and with remarkable affluence spread up and down the socioeconomic ladder, anything was possible. A society that set as a goal the eradication of diseases such as smallpox for all time could conceive of anything. A national park seemed as if it were simply frosting on a rich cake, a *coupe de grace* that illustrated not only the wealth of the nation but its potent moral fiber as well. The attention Congress showed the national parks assisted as well. In the throes of MISSION 66, when individual representatives and senators competed to offer the Park Service even greater resources for capital development each year, a national park not only symbolized cultural greatness, it also became a source of revenue for states fortunate enough to receive one. Lyndon Johnson, who made his reputation bringing home federal projects to Texas, was in the White House and had counterparts in Congress. Hard-nosed U.S. senators such as Clinton P. Anderson of New Mexico and Alan Bible of Nevada — always on the lookout for federal development dollars for their states — and representatives such as Wayne Aspinall of Colorado — a proponent of economic development projects but a staunch opponent of the Wilderness Act — fueled the charge for new projects. No self-respecting elected state official wanted to watch the opportunity to bring federal dollars into their district or state slip away. A boom in national park area establishment followed.¹¹

Despite the enthusiasm that accompanied the effort to proclaim a Guadalupe Mountains National Park, there were circumstances that complicated the situation. The federal government had begun to exercise much greater oversight than earlier in the century, especially in environmental affairs. This move began with antipollution legislation, typically aimed at water and

¹⁰ Stephen Fox, *John Muir and His Legacy: The American Conservation Movement* (Madison: University of Wisconsin Press, 1981); Robin Winks, *Laurence S. Rockefeller* (Washington, D.C.: Island Press, 1997).

¹¹ Paul Brooks, "Congressman Aspinall vs. The People of the United States," *Harper's* v. 226 no. 1354 (march 1963): 60-63; Richard Alan Baker, *Conservation Politics: The Senate Career of Clinton P. Anderson* (Albuquerque: University of New Mexico Press, 1985), 106; "'Unspoiled Areas' U.S. Wants for Parks," *U.S. News and World Report* V. 60 no. 7 (February 14, 1966): 76-77.

air pollution, and it soon extended into other areas. After the publication of Rachel Carson's *Silent Spring* in 1962, and with Stewart Udall, the author of the influential *The Quiet Crisis*, an analysis of the precarious environmental situation of the nation, in the secretary of the interior's chair, federal agencies and congressional committees closely scrutinized proposed activities in a prelude of attention. This culminated in the National Environmental Policy Act of 1969 (NEPA), the authorizing legislation for the environmental revolution.¹² Increased attention cut both ways.

Yarborough recognized the opportunity the Guadalupe Mountains situation provided and he sought to capitalize upon it. In early November 1963, as the Park Service and many of the supporters of a park moved toward their goal, Yarborough raised the stakes by introducing S. 2296, a bill to create Guadalupe Mountains National Park. Pool, recognizing that a more experienced and influential official circumvented him, tried to save face with the introduction of H. R. 9312, which he called the "official Interior Department measure," on December 2, 1963. Two days later Yarborough revised his proposal to standardize the geographical boundaries of the two bills.¹³ With pending legislation, Congress could begin to assess the proposal's viability.

Enormous obstacles still stood between the proposals and a national park in the Guadalupe Mountains, and the largest of them remained the question of the Guadalupe Mountains Ranch. Hunter wanted fair market value for his property. After failing to find a benefactor to purchase the property and donate it as parkland, he recognized that federal appropriations were necessary. Tax dollars would have to be spent to "throw away money to make someone a millionaire," as U.S. Representative Julia Butler Hansen of Washington, chairwoman of the House Appropriations Subcommittee, described the situation when it came to her committee in 1967, a prospect that seemed a daunting barrier. Issues of mineral rights also had to be resolved. Although Pratt once told Hunter to retain at least a share of his mineral rights when the land sold, in front of the House subcommittee he indicated that the area was likely bereft of oil and gas. Whether Pratt recognized that a national park that included private mineral rights would be less desirable or whether he genuinely thought the area lacked potential remains unclear, but representatives of Texaco, Inc., which held mineral leases for more than 25,000 acres of Hunter's land, argued for continued exploration. Congressman Richard White of El Paso, the sponsor of the bill, also testified, supporting the idea of the park, but he preferred that the state of Texas retain its mineral rights to the school section. The prospect of the great wealth that emanated from the Permanent University Fund (PUF) to the east, a gift to the state university by Haymon Krupp, an El Paso oil entrepreneur and one of the most successful of the first generation of west Texas wildcatters, was enough to persuade Texans to remain cautious in their generosity to any park project.¹⁴

¹² Rothman, *The Greening of a Nation*

¹³ Fabry, *Guadalupe Mountains National Park*, 45-46.

¹⁴ Charles H. Callison, "National Outlook," *Audubon* V. 68 (March/April 1966): 63; "Sheppard Thinks State Will Drop Mineral Rights for Guadalupe Park," *San Angelo Standard-Times*, May 28, 1966; John L. Moore, "Uncle Sam Said Consistent," *San Angelo Standard-Times*, June 2, 1966, 1A; Fabry,

These were typical dilemmas in the creation of large national parks after World War II, testimony to the changes in the nation that transpired between the 1900 and mid-century. Nineteenth- and early twentieth-century national parks had been created from public lands that seemed to have no apparent commercial economic value at the time of their creation, “worthless lands” in the misleading phrase of historian Alfred Runte, Jr. Most were located far from population centers and often far from even rural families and their economic operations. Pratt played an important role in changing that comfortable situation — not only in West Texas, but throughout the nation. Modeled on his scientific pursuit of oil and aware of the small cost of leasing mineral rights, a constellation of companies leased mineral rights not only on private land, but also to as much federal land as they could. Proclaiming a national park in the 1960s meant wading through the mire of private ownership and leases; resolving it entailed a level of cost never anticipated by the early twentieth-century officials of the Park Service and the Department of the Interior.¹⁵

This problem of how to create a national park of the caliber of the rest of the system without the vast unsettled and unclaimed tracts of public land that existed at the inception of the system demanded a range of strategies. Texas, which retained its public domain when it entered the Union in 1846, possessed relatively little federal land and most of that had been purchased from private owners or traded for federal land elsewhere. Even the state owned only a small part of Texas, long a bastion of individualism, leaving no alternative but to acquire private land in the process of creating a national park. Before 1965, no federal mechanism devoted to acquiring such land existed. Only with the establishment of the Land and Water Conservation Fund (LWCF) in 1964 did the acquisition of private land by government purchase become viable. The result of an Outdoor Recreation Resources Review Commission (ORRRC) recommendation, the LWCF was a fund to which federal agencies and later, states and cities, could turn for resources to purchase open space for recreation.¹⁶

In the heady climate of the mid-1960s and with powerful forces lined up in its support, on October 15, 1966, Lyndon Johnson proudly signed the bill that authorized Guadalupe Mountains National Park. Texas joined the other states in the Union that possessed one of the crown jewels of the park system. In the West, only Oklahoma, Nebraska, and Kansas lacked a national park, enunciating the ways in which the acquisition of a national park had moved from being the prerogative of an agency with a clear vision of the category to revealing the strength of a state’s position on the political scene. The Guadalupe Mountains bill allowed for land

Guadalupe Mountains National Park, 46-49; Floyd S. Fierman, *Roots and Boots: From Crypto-Jew in New Spain to Community Leader in the American Southwest* (Hoboken: KTAV Publishing House, 1987), 113-29.

¹⁵ Alfred Runte, Jr., *National Parks: The American Experience* (Lincoln: University of Nebraska Press, 1987) 2nd. ed., 48-64.

¹⁶ Souter and Fairfax, *State Trust Lands*; Foresta, *America’s National Parks and Their Keepers*, 172-73.

acquisition for the new park by purchase, donation, or exchange, allocating 4,667 acres specifically for exchange. Mineral rights remained a sticking point. Texaco first lobbied against relinquishing its mineral rights, finally accepting the caveat that mineral rights would return to the company if the Park Service abandoned the lands. The company then turned the gift into a public relations maneuver, using it to remind the people of Texas of the company's contribution in the state. White assisted in the oil company's goals when he announced that "Texaco has again proved itself a good citizen of west Texas, recognizing the great benefits, recreation, tourist trade, and national recreation that will come through (sic) our area as a result" of the proposed Guadalupe Mountains National Park. A ceiling of expenditures for creating the park, \$1.8 million for land acquisition and \$10.4 million for development, completed the measure.¹⁷ Congress still had to appropriate the funds, an enormous sticking point as inflation began to eat into the health of the economy. The question of the funding to purchase the land remained the obstacle that could create an actual national park with facilities and amenities.¹⁸

Appropriations became a struggle, circumvented only by Yarborough and his understanding of the LWCF. The acquisition of the Guadalupe Mountains Ranch stood between the park on paper and one visitors could eventually see. In 1967, Congress appropriated \$354,000 for Guadalupe Mountains National Park, with \$280,000 for land acquisition. This sum allowed for the acquisition of a few small properties. After securing a three-year option on almost 59,000 acres of Hunter's holdings, the Department of the Interior requested the remaining \$1,446,000 of the acquisition funds. Of that, the department needed \$1.2 million to complete the Hunter transaction; the rest was earmarked for the purchase of other smaller properties. The House Appropriations Subcommittee balked at the expenditure, Director George Hartzog Jr. placed Guadalupe Mountains below development funds for Indiana Dunes National Lakeshore and Assateague Island National Seashore on the agency's list of priority projects. Congress asked for a \$6 billion budget cut to defray the growing cost of the Vietnam War and rising inflation. The House subcommittee cut the more than \$30 million in NPS land acquisition requests. Only careful maneuvering by Yarborough saved \$200,000 for Guadalupe Mountains, essentially a down payment on the Hunter property, to the final bill. Not satisfied, the powerful Texas senator turned to a 1968 amendment to the Land and Water Conservation Act, which permitted the Interior Department to spend LWCF funds with the approval of the Secretary of the Interior and the House and Senate appropriations committees. Yarborough approached Udall, who agreed that the proposed \$1.2 million expenditure for the Hunter ranch was a proper use of LWCF money, and both committees supported Udall. Johnson endorsed

¹⁷ Charles H. Callison, "National Outlook," *Audubon* 68 (November/December 1966): 462-63; "The Park System Expands," *National Parks* V. 40 no. 231 (December 1966): 18; Natt N. Dodge, "The New Guadalupe Mountains National Park," *National Parks* V. 41 (February 1967): 4-8; "Texaco Gives Mineral Rights to New Park," *El Paso Times*, November 2, 1967; "Steps Taken to Buy Land," *El Paso Times*, November 3, 1967; Fabry, *Guadalupe Mountains National Park*, 53-55.

¹⁸ Fabry, *Guadalupe Mountains National Park*, 55-56; Dethloff, *The United States and the Global Economy Since 1945*, 95-103.

the measure after the 1968 election, and in September 1969, Congress approved final funding. After the lands had been acquired, Guadalupe Mountains National Park was established by a notice dated September 30, 1972, and placed in the *Federal Register* on October 6, 1972.¹⁹ The formal notice of establishment provided a fitting indicator of the complexities of national park establishment after mid-century.

At slightly more than 77,500 acres, the new park posed many questions. By traditional national park standards, exemplified by the nearly one million acres of the Grand Canyon, the new park seemed small. It shared much with the classic national parks: remote location, untrammled areas, spectacular scenery, and other attributes, but it did not compare in its claim on the hearts of Americans. Despite its importance in the settlement of the Southwest, despite the surveys and military battles that took place throughout the area, “Guadalupe Mountains” did not resonate as did names such as Yosemite and Yellowstone. Like the people of the nineteenth century, tourists bypassed the region. The new park did not draw people to drive the more than 100 miles of two-lane highway across the salt flats from El Paso or the more than 200 miles from Interstate 40 to the north. Few if any felt that a visit to the Guadalupe Mountains affirmed them as Americans or spoke to their psychic needs. The new park would have to seek a different constituency.

As the expectations of the national park system changed, the questions that could be asked of the new Guadalupe Mountains National Park became broader. The 1960s offered the nation new perspectives about the utility of open space. A constellation of factors contributed, beginning with the abysmal condition of national forest campgrounds and the vast management needs of the national parks during the 1950s and continuing with Outdoor Recreation review panel and Bureau of Recreation efforts to extend recreational opportunities throughout the nation. As riots during the 1960s highlighted the deteriorated condition of urban areas throughout the nation and the traditional boundaries of American culture collapsed under the weight of their own inconsistencies, the need for a more broadly defined park system that offered greater opportunities and that spoke to a far more diverse national heritage eclipsed the traditional distinctions that contributed to the defining of standards for inclusion in the park system. In an era that saw the creation of Golden Gate and Gateway national recreation areas as well as the addition of the Frederick Douglass Home in 1962, the Tuskegee Institute National Historic Site in 1973, and the Women’s Rights National Historical Park in 1980, the role of a small remote national park could be difficult to define.²⁰

In this context, Guadalupe Mountains became one of the last traditional national parks. Created from outside the system, replete with the values of the turn-of-the-century Conservation movement, and located so far from the main corridors of American travel as to be

¹⁹ Fabry, *Guadalupe Mountains National Park*, 56-57.

²⁰ Mackintosh, *Shaping the System*, 61, 76-78, 85; Foresta, *America’s National Parks and Their Keepers*, 169-222.

a largely *de facto* wilderness, Guadalupe Mountains traced its heritage to earlier generations of national parks. Like Rocky Mountains National Park, it had been preserved for its scenery, and like Grand Tetons National Park, it had been carved from acres of human habitation around it, although without the incredible rancor that marked the Wyoming park. Despite its small size, Guadalupe Mountains National Park offered the kind of respite from the modern world that the conservationists of the early century envisioned as one of the highest goals of the national parks. However, by the 1960s, the public made other demands on the national parks. Along with its peer parks, Redwoods and North Cascades, Guadalupe Mountains faced anomalous status in a changing national scene.

The issue of designated wilderness illustrated the differences in the meaning of national parks as the nation changed and the park system responded. The passage of the Wilderness Act in 1964 required that all roadless areas greater than 5,000 acres under federal control be reviewed for potential designation as wilderness. The United States Forest Service (USFS), the federal land management agency with the greatest acreage of holdings, responded slowly to the new law, regarding wilderness designation as a single use among many, a contradiction of the agency's 1960 policy of multiple use. Forest Service critics charged that even in multiple use, timber cutting came first and all other uses were far behind. The Park Service also perceived wilderness as a strategy to curtail agency prerogatives in land management, and it stalled, avoided, and generally sought to circumvent wilderness advocates. One consequence of this strategy was that the Park Service's public constituency, which by the early 1970s very vocally embraced the goals of the environmental movement, became alienated from the agency. The people who once served as the agency's strongest public voices became its harshest critics, eroding not only public appreciation and understanding of the agency, but in some cases its congressional support as well. In the court of public opinion, with an energized environmental movement, the Park Service had to find new ways to achieve its management goals.²¹

The complicated national conflicts played out in the assessment of Guadalupe Mountains National Park for potential wilderness designation. The situation pitted typical interests against one another, most of which expressed points of view that did not directly coincide with the statutory limitations of wilderness designation. On March 15, 1970, as the master planning process at the park began, representatives of interested groups and organizations met with the Park Service to offer their input into the process of deciding park management goals. Each organization offered its perspective. The Sportsmen's Club sought limited hunting in the parks if a species population problem occurred. Wilderness advocates came from the range of supporters of the movement at that time. Organizations such as the regional chapter of Sierra Club, headquartered in El Paso, and the New Mexico Mountain Club opposed most development within the park. Other federal agencies also offered perspective.

²¹ Harold K. Steen, *The United States Forest Service: A History* (Seattle: University of Washington Press, 1976); David A. Clary, *Timber and the Forest Service* (Lawrence: University Press of Kansas, 1986); Foresta, *America's National Parks and Their Keepers*, 69-70; John C. Freemuth, *Islands Under Siege: National Parks and the Politics of External Threats* (Lawrence: University Press of Kansas, 1991).

Clare Cranston of the U.S. Geological Survey called wilderness designation “discrimination of the worst kind . . . against the bulk of our population.” Representing another viewpoint, the Carlsbad Chamber of Commerce advocated development, regarding the new park as an economic gold mine similar to Carlsbad Caverns National Park.²²

The situation posed a typical problem for the Park Service, replayed in wilderness hearings around the country. Two different kinds of friends of the agency opposed each other, forcing the Park Service to pick between them. In the early 1970s, the Park Service still hewed to its traditional ways. Before 1972, agency officials maintained their allegiance to park management by principle, rather than the bald-faced reaction to political pressure that followed the politicization of the agency in 1972. The question that wilderness hearings asked was simple: which principle? The mission of the Park Service had been bifurcated between preservation and use since the agency’s inception. The Mather-Albright legacy of accommodating visitors offered a link to groups such as chambers of commerce and others who stood to benefit from the growth of tourism. The Leopold Report of 1963, with its emphasis on national parks as “vignettes of primitive America,” offered a different vision, one similarly devoid of human habitation but based on science. Besides political concerns of constituent support and agency mission, cultural questions also loomed large.²³ Within the agency, the split between the two principles was equally powerful. Talented individuals who would succeed anywhere chose the Park Service because they believed in the integrity of the national parks and the mission of the agency — which depended on what kind of expertise they possessed and on what their division sought to accomplish. Choosing between these polar-opposite goals was both gut-wrenching for the agency and a harbinger of a more difficult future.

Across the country, the sociocultural stance of the late 1960s and early 1970s that opposed all forms of authority combined with the need to comply with the dictates of the Wilderness Act to put the Park Service on the defensive. The agency was compelled to hold public hearings concerning wilderness designation when it wanted to address the question with internal regulations. The hearings typically spiraled out of control, with local residents in most places opposing wilderness as an unnecessary burden on their communities and the regional economies and advocates resoundingly in favor of a proposal to protect nature from greedy humans. Often class dimensions appeared in the process. Proponents of wilderness were typically more affluent than opponents, and they usually possessed higher levels of education. In the 1960s and 1970s, when the question of privilege loomed large in American society, wilderness hearings provided a confusing juxtaposition of the questions that vexed the nation.²⁴

²² “Preliminary Planning Session, Guadalupe Mountains National Park, March 15, 1970,” Guadalupe Mountains National Park, VF Planning Documents 1335; Fabry, *Guadalupe Mountains National Park*, 58.

²³ Sellers, *Preserving Nature in the National Parks*, 214-15; Wayne and Judy Landrum to the Editor, *Carlsbad Current-Argus*, May 21, 1970.

²⁴ Rothman, *On Rims and Ridges*, 214-215.

The practical disposition of such questions was equally difficult to resolve. Almost any time the agency recommended "no wilderness," at least one vocal segment of the public organized a letter-writing campaign to challenge the agency. Often, the letters had little to do with a statute; they tended to attest to the value of wilderness as an abstract ideal rather than the specific wilderness in question. In this, such missives reflected the times: they argued for a concept over the specifics of any situation.²⁵ Some in the Park Service, especially younger employees, secretly and sometimes publicly cheered wilderness advocates, but in general, the vocal emphasis on wilderness made accommodating the mainstream public — the large group whose support was essential to the future of the park system — much more difficult. Life in the court of public opinion complicated the circumstances of decision-makers from the top of the agency to the very bottom.

At the new Guadalupe Mountains National Park, the question of wilderness proved much easier to resolve than in many similar instances. The park had clear wilderness dimensions. Much of the central area of the park was high in elevation, difficult to reach, and nearly roadless. The Park Service recognized that the park it created was *de facto* wilderness. Designation seemed to be a small step. The people in the region also recognized the viability of the proposal. Despite the variety of perspectives expressed in a March 1970 meeting, the entire subregion had much greater experience and concomitant dependence on federal projects to recognize the need for a compromise stance. Most of the opposition to wilderness stemmed from the sense that the entire Guadalupe Mountains National Park would be designated a wilderness. In this view, the park could not have facilities, roads, campgrounds, or employee housing. Closer scrutiny revealed that like many national parks, Guadalupe Mountains would have the amenities associated with the park system located in a small area — not incidentally the area that would comprise the overwhelming majority of visitor use — and the rest of the park would remain untrammled. This illustrated a conundrum for the Park Service. Most visitors rarely left the paved roads and trails. Some never made it beyond the Visitor Center. In most parks, more than 95 percent of visitors stayed within the range of visitor services. In this context, as long as designated wilderness did not include the amenities that locals counted upon to bring visitors to their parks, the designation posed only peripheral problems at Guadalupe Mountains. By the time hearings on the park master plan convened in November 1971, much of the opposition to wilderness dissipated. The *Carlsbad Current-Argus* played an influential role in changing the perceptions of wilderness in the town of Carlsbad, revealing much of the subtlety in the law and showing its readers how the various points of view on wilderness could be reconciled. In October 1971, the Carlsbad Chamber of Commerce announced that it had reversed its position and would support the master plan and the wilderness proposal it contained. By the November 1971 hearings, opposition to wilderness became muted. In October 1972, 46,850 acres, more

²⁵ National Speleological Society, "A Wilderness Proposal for the Guadalupe Escarpment, New Mexico and Texas," NA, Rocky Mountain Region, RG 79, SW Regional Office, General Administration Files, 1968-1970, D18a, 1968-1970, GUMO.

than 60 percent of park, became a designated wilderness.²⁶

The designation of the Guadalupe Mountains wilderness and subsequent designation of 33,125 acres of wilderness at Carlsbad Caverns National Park set a tone for management of the subregion that was often challenged, but usually held firm. The region's remote nature allowed it to be managed in a fashion significantly less accommodating to visitors than many other similar parks closer to large population centers or the heavily traveled interstate highways. Even at Carlsbad Caverns, where visitor accommodation had been the watchword in the main cavern since the days of Jim White, newly discovered caves such as Lechuguilla were held out as wilderness. Even New Cave in Slaughter Canyon was offered as a primitive experience, without the many accouterments most of the traveling public expected. With the exception of places that had been long designed for the most common traveling experience, the rest of southeastern New Mexico and the trans-Pecos would be designed to hold back change, and to allow the kind of vignettes of primitive America recommended by the Leopold Report.

The Lincoln National Forest experienced this new emphasis under a different set of circumstances. Although managed by the United States Forest Service, its lands linked the two national parks, providing public management that assured continuity and balance between the bookends of Guadalupe Mountains and Carlsbad Caverns. Established in 1902 as a result of game hunters who feared creation of a southern New Mexico national park would limit their hunting privileges, the Lincoln National Forest followed a typical pattern for southwestern forests. A management plan in 1931 identified "a permanent timber supply for local settlers" — a very small objective for a national forest — as the primary goal of forest management, and looked askance at the increase in recreational visitors and applications for summer-home permits. Over time, a range of constituencies availed themselves of Lincoln National Forest resources. As the century continued, more and more of those users enjoyed the recreational pursuits that the Forest Service once eschewed.²⁷ As did a number of other national forests around the West, the Guadalupe District of the Lincoln National Forest imperceptibly became an offshoot of the national parks around it.

One manifestation of the increasing influence of recreation on the larger region was the creation of two designated wilderness areas: Capitan Mountain, established in 1980 and

²⁶ *Wilderness Recommendation, Guadalupe Mountains National Park, Texas* (Washington, D.C.: National Park Service, 1972); Carlsbad Sportsmen's Club Inc. to Master Planning Team, National Park Service, May 5, 1970, NA, Rocky Mountain Region, RG 79, SW Regional Office, General Administration Files, 1968-1970, D18a, 1968-1970, GUMO; "Nixon Asks Congress Set Guadalupe as Wilderness," *El Paso Times*, n.d., copy in Meador papers, 3.18, Carlsbad Caverns National Park Library; Fabry, *Guadalupe Mountains National Park*, 59.

²⁷ Robert D. Baker, Robert S. Maxwell, Victor H. Treat, and Henry C. Dethloff, *Timeless Heritage: A History of the Forest Service in the Southwest* (College Station, TX: Intaglio, Inc., 1988), 132-40; Dietmar Schneider-Hector, *White Sands: The History of National Monument* (Albuquerque: University of New Mexico Press, 1993), 56, 62, 72.

encompassing 35,822 acres, and White Mountain, at 48,873 acres, first authorized in 1964 and expanded in 1980. As a result of its enormous land base and the obvious threat that wilderness designation posed to activities such as timber-cutting, the Forest Service resisted the implementation of the Wilderness Act with more vigor than any other federal agency, but again the situation in southeastern New Mexico and the trans-Pecos did not easily fit within agency categories. Its history as a region passed over made accommodation of new ideas and management practices less controversial than elsewhere. In a national forest established to accommodate hunters, where timber-cutting had always been a small-scale endeavor in comparison especially to the larger operations of the Pacific Northwest, the designation of wilderness came as no surprise. It did not threaten the usual commercial interests that played such a dominant role in determining Forest Service policy.²⁸

Nor did the rancor that often marked situations where geography, mission, and constituency overlapped mar relations in the Guadalupe Mountains between the Park Service and the Forest Service. Instead, federal officials found that their goals and projects typically fit together nicely, allowing for a cross-agency camaraderie that was far different from the tension that marked the first half of the century elsewhere in the West. Especially as recreational use of the Lincoln National Forest increased, the two agencies shared similar responsibilities and could utilize each other's experience, personnel, and resources in a range of endeavors. On occasion, such as a 1979 report from Superintendent Donald Dayton that proposed linking the two parks by transferring the Bureau of Land Management and Forest Service land between the two parks and the Park Service, the different agencies challenged each other, but usually over issues of mission and constituency. The circumstances created no less than cordial and often warm relations that presaged the future of federal management elsewhere in the West.²⁹

Cordial relations did not always foretell agreement, as showed by the situation that developed on the Guadalupe Escarpment during the process of studying the Lincoln National Forest for wilderness status. A 22,800-acre portion of southern Lincoln National Forest, the escarpment had been recommended as wilderness in President Jimmy Carter's proposed "National Heritage Trust" in 1977. The Forest Service concurred during the Roadless Area Review and Evaluation (RARE) II process, in which the agency divided its holding into three categories: lands suitable for wilderness, not suited for wilderness, and in need of further study. The generally negative public response to the RARE II process was muted in the trans-Pecos.

²⁸ "December Hearing to View Plans for Forest," *Carlsbad Current-Argus*, November 18, 1971; "Guadalupe Hearing Saturday," *Carlsbad Current-Argus*, November 28, 1971; "Guadalupe Forest Proposals Aired on Saturday," *Carlsbad Current-Argus*, December 3, 1971; Clary, *Timber and the Forest Service*, 91.

²⁹ R. E. Latimore, "Report on Functional Inspection -Wildlife and Range Management, Lincoln National Forest, December 2-3, 1957 & February 10-14, 1958," USFS 69 a 821, 1440 Inspection, GFI, Range and Wildlife, 1926-58, Lincoln National Forest; William D. Hurst to Luther Peterson, September 30, 1966; Fred H. Kennedy to Hon. Joseph M. Montoya, July 30, 1964, USFS 3432821, 7700, Transportation System, General FY 1967-1970. Superintendent, Carlsbad Caverns and Guadalupe Mountains to Regional Director, Southwest Region, September 17, 1979, Carlsbad Caverns National Park, L1419.

In May 1980, the Forest Service changed its policies, initiating a proposal to explore the escarpment for oil and gas reserves. The foresters kept the study secret until the 1980 election. In its aftermath, both New Mexico senators — Pete V. Domenici and Harrison R. Schmitt — supported opening the area for exploration, as did New Mexico Governor Bruce King. A battle between extractive industries and the environmental movement took shape.³⁰

Within this formulation lay an ongoing series of conflicts that spoke to the core of the dichotomy between extractive economic users and their government counterparts. The Guadalupe Mountains offered great potential for oil and gas development — BLM studies repeatedly showed that the region could produce a range of minerals for market.³¹ With the establishment of the national park, the lands also became part of an enormous complex that spoke to the needs of recreational users, one dimension of the many tourists who frequented the area. The situation on the escarpment was a classic conundrum. Not only did two powerful public constituencies grapple, but the controversy pitted two federal agencies, the Park Service and the Forest Service, against each other. Each agency enjoyed the support of specific segments of the public. The essence of the issue boiled down to, in the words of *El Paso Times* staff writer John Stark, “beauty or oil.” Extractive industries believed the potential of the region to yield energy resources during an era when energy costs were skyrocketing and U.S. dependence on foreign reserves made the nation vulnerable was paramount. Conservationists and those who made their living in the tourist industry saw oil and gas drilling as a threat to their livelihood, the sort of activity that would ruin the region for the recreational travel that had become an important part of its economy. Even typically conservative segments supported recreational use; *Field and Stream* magazine, not known for its support of wilderness, offered an article extolling the virtues of backpacking in the Guadalupe. The situation offered an incommensurable comparison, a comparison between figurative apples and oranges, of the sort that dogged land and natural resource issues. In the United States, public opinion and the political process provided the only resolution to such questions.³²

Some lined up on the issue in surprising ways. The *Carlsbad Current-Argus*, long a champion of industrial development of almost any sort for the region, offered an editorial that

³⁰ “Heritage Trust Plan May Affect Guadalupes,” *El Paso Herald-Post*, May 24, 1977; “McKittrick Canyon to be Battleground,” *Lubbock Avalanche-Journal*, November 11, 1980; “Should Guadalupes Be Opened to Drilling?” *Carlsbad Current-Argus*, November 18, 1980; Clary, *Timber and Forest Service*, 175-77.

³¹ Bureau of Mines, “Mineral Investigation of a Part of the Brokeoff Mountains (NM-030-112) Wilderness Study Area, Otero County, New Mexico, and the Lonesome Ridge (NM-060-801) and a Part of the Devil’s Den NM-060-0145) Wilderness Study Areas, Eddy County, New Mexico,” (Washington, D.C.: Bureau of Mines, 1987), MLA 43-87.

³² Steve Netherby, “Backpacking the Guadalupes,” V. 80 no. 3 (July 1975): 98-101; John Stark, “Guadalupes: Oil or Beauty,” *El Paso Times*, November 18, 1980; Rothman, *On Rims and Ridges*.

surprised longtime observers. Although strongly asserting the need for energy independence over the preservation of aesthetic beauty or unique ecology, the editorial expressed doubt that the choice was so distinct. “It would seem to us,” the piece concluded, “that our aggressive quest for resources can start in the less environmentally desirable areas. Until that is accomplished, and until we have exhausted alternative sources of energy, we think the environmentalists have a solid argument when they say ‘hands off the Guadalupe.’” This bold stand reflected the growing importance of the tourism and the service economy throughout southeastern New Mexico and the trans-Pecos. It also provided a powerful reason why 1980 ended without the passage of congressional legislation to allow gas and oil exploration on the Guadalupe Escarpment and why the area was included in a study area — the Forest Service’s “undetermined” category — with a final decision expected by 1986. BLM testing revealed little oil on the escarpment and changes in the national economic picture, especially the marked decline in oil prices in 1985, made moot questions of oil exploration on the escarpment. Early in 1998, the escarpment remained a wilderness study area.³³

The wilderness question allowed an opportunity to highlight the economic importance of tourism. The Park Service released data showing its effect in the area; in 1981, the total expenditures in the area from visitors to the two national parks reached almost \$45 million; construction and other projects at the parks added another \$2,250,500, and payments in lieu of taxes to Eddy County, New Mexico, and Culberson and Hudspeth counties in Texas, also topped \$1 million.³⁴ Advocates of wilderness could use such data to show that tourism produced almost as much revenue as did extractive industries.

The battle for the Guadalupe Escarpment showed how thoroughly the Park Service was committed to a series of conceptions about Carlsbad Caverns and the Guadalupe Mountains. If the agency had its way, as much of the two parks as possible would remain untrammeled — with or without wilderness designation, providing an economic and aesthetic anchor in the region. The two parks would also be managed as part of a larger whole — “ecosystem management” would come into vogue to describe such practices later in the 1980s — adding to the conception of the Guadalupe Mountains as the one of the last traditional national parks in the continental forty-eight states. In the trans-Pecos, the Park Service would maintain the values of its founders.

Since its inception, the management of Guadalupe Mountains provided an illustration of this goal. From the birth of the idea of a national park in the 1930s, a skyline drive from the Guadalupe Mountains through the Lincoln National Forest to Carlsbad Caverns had been seriously considered. The initial Guadalupe Mountains master plan included a tramway that was

³³ “Mountain Oil: Drill or Not?” *Carlsbad Current-Argus*, November 23, 1980; John Stark, “Oil Search Threatens Guadalupe,” *El Paso Times*, November 30, 1980; Mike Baca, interview by Hal Rothman, January 8, 1998.

³⁴ National Park Service, “Importance of Carlsbad Caverns and Guadalupe Mountains National Parks to Area Economy Told,” News Release, March 19, 1982, Carlsbad Caverns National Park Library.

to run to the top of Guadalupe Peak from Pine Springs. The view from the top of Guadalupe Peak would command the entire trans-Pecos, allowing glimpses of Mexico to the distant south, metropolitan El Paso to the west, and as far as the eye could see across the *llanos* of west Texas to the east. From the peak, those visitors who wished could enter the designated wilderness. The tramway had begun as an extension of the idea of the parkway, an idea with great credence during MISSION 66 and Conrad L. Wirth's tenure as director. By the time master planning hearings took place in 1970, the parkway had become a tramway to the top of Guadalupe Peak.³⁵ Such a project would compromise a large section of the park from the point of view of the Leopold Report, making not only a distant and difficult peak easily accessible, but affecting the visual aesthetics of the peak as well. Some would regard the view as diminished as a result of the tram line up its side. Despite the move toward environmental science, consideration of the tramway revealed that the Park Service retained strong tendencies toward visitor accommodation.

Nor was the tramway proposed for Guadalupe Mountains unique. During the late 1960s and 1970s, the Park Service seemed infatuated with such conveyances, partly to accommodate sedentary visitors and also to reduce traffic, air pollution, and other symptoms of the impact of growing demand from park visitors. The motivation partially stemmed from the desire to mute charges of elitism; the national parks had always been far from urban areas and hard to reach for many. Even as the two-week vacation automobile trip to the national parks became the standard family summer vacation, the parks still retained an exclusive tinge. Spending much time off the beaten track required time or money and usually both. During the 1960s, those who had been previously left out demanded a share of this visible bounty of American society. With greater wealth and leisure time at their disposal, middle and lower-middle class Americans wanted to see more of their national parks. They did not necessarily subscribe to the value system that equated difficulty of access with authenticity. What had to be addressed was the appropriate venue for tramways and other conveyances. If they conveyed people to places that were otherwise difficult to reach, they ran the risk, in the view of the time, of devaluing experience by making it more common. With proposals for tramways under study at parks as diverse as Olympic, North Cascades, Yosemite, and Mesa Verde, no single device asked the Park Service to choose between its many obligations as completely as did any proposal for a tramway.

In an era when the agency increasingly responded to vocal public constituencies, tramways fell victim to the loud complaints of newly energized environmentalists. At Bandelier National Monument in northern New Mexico, a proposal for a similar tramway into what later became a designated wilderness inspired much public ire; elsewhere across the nation, similar

³⁵ Heald, "A Guadalupe Mountains National Park," 6; *Master Plan, Guadalupe Mountains National Park* (Washington, D.C.: National Park Service, 1976); John A. McComb to Friends of Guadalupe Mountains National Park, October 30, 1974, Guadalupe Mountains National Park Library, VF 38, Planning Documents.

planning objectives were discarded as inappropriate, largely as a result of public antipathy. Pages and pages of critical letters in environmental impact statement documents were persuasive when they spoke with one voice.³⁶ The demands of one segment of the public limited the opportunities to reach the most typical travelers.

At Guadalupe Mountains National Park, the tramway became a political obstacle. As it often did, the Park Service initially favored construction; even the Section 106 compliance report — the mandatory evaluation of the impact of the tramway on historical and cultural resources required by the National Historic Preservation Act of 1966 — suggested the tramway would have no serious impact. The National Parks and Conservation Association vehemently disagreed, leading a chorus of opposition. The Sierra Club and other environmental organizations followed. John A. McComb, the Southwest representative of the Sierra Club, lobbied against the tramway, and found much support. “The nation would live to regret a tramway in Guadalupe Mountains National Park,” one opponent wrote McComb in a widely shared sentiment. For the Park Service, the situation seemed another of the many cases that could pit the agency against its most vocal former friends. In 1975, with inflation and rising oil prices denting the prosperity that marked the first quarter-century following World War II, the Department of the Interior embarked on a campaign to control costs. Unofficially, the tramway fell victim to this economic concern. Rep. Richard White of El Paso, who had been one of the important congressional advocates of the park, strongly favored the tramway, telling Park Superintendent Dayton that without it he would not support designated wilderness. Without White’s support, the park stood little chance of receiving a designated wilderness. Caught between environmentalists and the region’s congressional delegate, the Park Service faced a situation in which success meant that at least one constituency — and probably more — was likely to be unhappy.³⁷

The solution required finesse, a quality that Park Service officials always needed to bring disparate constituencies together in support of agency goals. Dayton recognized the conundrum. He told other Park Service officials that he knew that the tramway was controversial, but “we don’t have much choice if the public wants to see it.” The solution came in the form of a survey, administered to visitors at both Carlsbad Caverns and Guadalupe Mountains. The survey offered five choices, all of which included a visitor center and typical amenities, but each of which offered a different means to reach the interior of the park. When

³⁶ Foresta, *America’s National Parks and Their Keepers*, 68-72; Rothman, *On Rims and Ridges*, 265-75.

³⁷ Rex E. Gerald, “Evaluation of the Impact on Cultural and Historical Resources of a Tramway and of Planned Facilities Development in Specific Areas of Guadalupe Mountains National Park, Texas,” June 1973, Guadalupe Mountains Library, VF 42, Planning Documents; John A. McComb to Friends of Guadalupe Mountains National Park, October 30, 1974, Clifton R. Merritt to John McComb, November 15, 1974, Guadalupe Mountains Library, VF 38, Planning Documents; “Guadalupe: Easy Access vs. Protection,” *National Parks and Conservation Magazine* V. 50 no. 3 (March 1976):22; Fabry, *Guadalupe Mountains National Park*, 87-92.

the results were announced, slightly more respondents chose foot and horse trails than chose the tramway. The only other option that drew significant support was a shuttle bus. By the end of November 1975 the Park Service could truthfully assert that the tramway did not have overwhelming support among park visitors. They clearly craved something different from Guadalupe Mountains National Park, more in line with the first generation of national parks rather than with the ski areas and their gondolas that pervaded the American West. The lack of enthusiasm persuaded White to reconsider his position. The tramway at Guadalupe Mountains National Park remained a possibility, but its chances dimmed greatly.³⁸

After the decline in support of the tramway, the Park Service's commitment at Guadalupe Mountains National Park shifted strongly toward creating a park that mirrored the large natural areas that had long been regarded as the crown jewels of the system. In part, the moment determined this choice. At no time in U.S. history than the fifteen years following passage of the Wilderness Act did greater numbers of Americans vocally embrace the concept of preserving wild nature. In a culture labeled as plastic in the worse sense of the word, pristine nature — no matter how many times it had been altered by humans — promised a kind of authenticity that television could not provide. Nature spoke to more than national roots and experiences, to the conquest of a continent and the self-applied approbation "nature's nation." It reflected a primal need, many believed, a basic human instinct to be free of the constraints of civilization, in the thinking of the time.

For the Park Service, this offered a license to address one of its more complicated management problems, the question of the evidence of modern people within the park system. Since the nineteenth century, national parks had been formed from places that humans inhabited but had been reconceived as being devoid of people. Native Americans disappeared from national parks such as Yosemite and Glacier, only reacquiring even basic rights to use the parks in an historic fashion after the passage of the American Indian Religious Freedom Act in 1977. From the Great Smoky Mountains to Redwoods National Park, the agency removed any vestiges of historic activity in a process that could often inspire local opposition, antipathy, and in some rare instances, outright resistance by any means available. The agency policy in such situations — that sometimes the few had to give up something of value for the good of the many — sounded archaic by the time Guadalupe Mountains National Park was established in 1972.³⁹

This question created management problems for the new park. Human habitation in the Guadalupe Mountains had been an important part of the story of the region, but the park had been proclaimed more for its scenic and natural values. A range of historic structures existed in the park, all significant in local and regional history, but most — like the region itself — were

³⁸ Superintendent, Carlsbad Caverns and Guadalupe Mountains, to Regional Director, Southwest Region, January 7, 1975, W3815-Proposed Legislation, Guadalupe Mountains National Park; Fabry, *Guadalupe Mountains National Park*, 94-95.

³⁹ Mark D. Spence, *Environmental History, Pacific Historical Review*; interview with David Clary.

peripheral to the national story. The situation forced different parts of the mission of Park Service against each other once again at the same time it threw together the different strands of federal statute and policy. Preserving the historic past was positioned against maintaining vignettes of primitive America while the goals of Section 106 juxtaposed against the idea of pristine nature embodied in the Wilderness Act. The decisions reached revealed much about the direction of the agency and plans for Guadalupe Mountains National Park.

Addressing concerns about most of the structures and historic remains provoked little controversy. The remains of the Pinery, the Butterfield Overland Mail station — the most accessible historic remnants in the park, was added to the National Register of Historic Places in 1975. Park Service archaeologists preserved it by realigning and remortaring deteriorating walls. Other historic resources — the Pratt Stone Cabin at the junction of North and South McKittrick canyons, the Williams ranch on the west side of the park near the mouth of Bone Canyon, and the Ship of the Desert — were either closed to the public or so difficult to reach that few attempted the trip. The Park Service adapted historic structures as well. The Frijole Ranch House, listed on the National Register, housed Ranger Roger Reisch and later the Frijoles Ranger Division. Despite the lack of historic structures reports for all the properties except the Pinery, the Park Service ably managed most historic structures.⁴⁰

The Pine Springs Cafe, long a staple along Highway 62/180, illustrated the complexity of managing resources and the fluidity of NPS goals at Guadalupe Mountains National Park. The Pine Springs Cafe belonged to the Glovers, who had first established the Pine Springs Station in the late 1920s. At its peak, the homestead contained guest houses and a filling station. A school stood nearby. In its heyday, a dance hall built in 1930 to accommodate Standard Oil Company workers on the pipeline from Wink to El Paso graced the property. After 1945 the property declined in significance, but it remained a regional institution of considerable repute. People counted on being able to stop at Pine Springs, have coffee and catch up on regional news.⁴¹

Pine Springs posed an obstacle to Park Service goals even before the creation of the park. Walter and Bertha Glovers were senior citizens who had lived their lives outside the range of government influence. They did not want interference in any way. They expected their property to be left out of the park, but in the end it was included, as the Park Service feared having land so close to the park's main artery that the agency could not control. The Glovers balked at any serious negotiation, at one point asking for \$1 million for their dilapidated buildings that appraised in the range of fifty thousand dollars. In the end, rather than face condemnation and eminent domain proceedings, the Glovers settled for fifty-five thousand dollars and a lifetime estate, the right to continue to occupy the property until the surviving

⁴⁰ Fabry, *Guadalupe Mountains National Park*, 167-90.

⁴¹ Nancy Adele Kenmotsu, "Survey in the McKittrick Canyon Watershed, Guadalupe Mountain National Park, Culberson County, Texas," (Austin, TX: Department of Antiquities Protection, Texas Historical Commission, 1993), 21-27.

spouse died. Walter Glover died in 1973 at the age of ninety-four; when Bertha Glover died in August 1982 at the age of eighty-nine, the Park Service fully expected to take control of the property. In a meeting shortly after Mrs. Glover's death, Mary Glover Hinson, the Glovers' only daughter who had been residing with her parents, indicated that she thought she could complete family affairs by the end of the calendar year and then leave. As late as October 1982, the Park Service made plans to administer the property.⁴²

Mary Hinson's situation suddenly attracted national attention and became a public relations disaster for the Park Service. Although the *El Paso Times* noted Hinson's impending closure earlier, when *USA Today* carried the story on October 26, 1982, the story began to attract national attention. Television networks NBC and ABC picked up the story, and an outcry of sympathy arose for Hinson. U.S. Senator Lloyd Bentsen of Texas requested an extension for Hinson, White added his voice to the fray, and Secretary of the Interior James Watt, an advocate of privatizing park services, expressed his concern.⁴³ The news stories incorrectly used the word "eviction" to describe the end of the Glovers' life estate, and the Park Service came off poorly in the press. Especially during the administration of Ronald Reagan, government agencies that attempted any kind of initiative found themselves without the support of the administration and castigated by the media.

The Pine Springs saga dragged on for another decade. Hinson used public support and the threat of congressional intervention to retain short-term extensions until 1987, when the Park Service made a genuine attempt to oust her. In this case, the agency was reversed by another Reagan-era Secretary of the Interior, the erratic Donald Hodel — the man who advocated draining O'Shaughnessey Lake behind the Hetch-Hetchy Dam and once told reporters that a hat and sunglasses — what he called a personal protection system — were the best solution to the breakdown of the ozone layer — granted Hinson a five-year permit. In the early 1990s, the agency again marshaled its forces, and this time it finally ousted Mary Hinson and leveled the Glover structures in 1993. Even a decade after the end of the life estate, the situation could spur controversy. The Associated Press wire story used the word "intimidating" to describe NPS behavior, and Goodi Sanders, who ran the cafe for Hinson since the late 1980s, told reporters: "if it was just me, I'd go to court in a heartbeat. But I don't think Mary's heart could stand it."⁴⁴ The wilderness ethic held firm at Guadalupe Mountains National Park, but at a public relations and even a political cost that gave agency administrators pause. While the Park Service could gently exercise legitimate authority granted by the owners of a piece of property, the court of public opinion could still chastise the agency. The agency moved carefully, especially with the

⁴² Fabry, *Guadalupe Mountains National Park*, 72-76, 190.

⁴³ Fabry, *Guadalupe Mountains National Park*, 192-93.

⁴⁴ "Cafe Reluctantly Closes in Mountain Park," *El Paso Times*, January 3, 1993; Rothman, *The Greening of a Nation*.

1994 election of a Republican majority in the House of Representatives and a growing anti-government tenor across the nation.

Despite this anti-federal backlash, federal influence remained powerful if not dominant in southeastern New Mexico and the trans-Pecos. The establishment of Guadalupe Mountains National Park created a chain of federal holdings including a large stretch of the Lincoln National Forest that stretched from Carlsbad Caverns National Park to Guadalupe Mountains National Park. In a region with a now marginal private economy, the growing federal presence gained in significance as national park visitors — both those who simply toured the parks and stopped in the visitor centers, and those who spelunked caves and climbed mountains — became an increasingly important part of the regional economy.

This situation and the growing significance of WIPP in the regional economy asked once again the most dramatic question of this long overlooked and still largely marginal region: what could it offer U.S. society? Much of the region seemed at odds with the prevailing currents of American life, operating on a different set of premises than did the rest of the nation. As the country, especially the West, sought to wean itself from federal spending, the trans-Pecos seemed to relish in its federal embrace.

Epilogue:

Parks in the Post-Industrial World

From the Visitor Center at Guadalupe Mountains National Park, the world spreads out before the eyes of an observer. In the baked summers, the land seems to shimmer from the heat, appearing to offer the mirages of lore. Mexico must be off in the distance, and the *llano*, the famed plains of west Texas, seem to stretch forever. Looking into the distance, it would be easy to spot Clint Eastwood riding out of the haze, the “Man with No Name” of Spaghetti Western fame to characterize a place best known to only a few. More readily, it requires no effort here to imagine standing on a prehistoric shoreline and looking out over the vast shallow inland sea, warm and full color. Even the base of Guadalupe Peak offers that feeling of power that high places give. Before the internal combustion engine and before airplanes, that vantage, that elevation, gave so much to anyone who stood there. The mountains sheltered, their lofty perch allowing anyone who watched from them to see all who approached.

This great advantage was defensive in nature and could not transcend the peripheral advantages for humanity of the Guadalupe Mountains, southeastern New Mexico, and the entire trans-Pecos region. Everyone who crossed the historical stage found its attributes lean, and in their own way, each ran up against the fundamental limits of human endeavor in aird places. Most took what they could from the area; few settled it. Only with the addition of industrial society’s accouterments could the region be harnessed, settled, and made home to more than the few who spread across it before the railroad, the automobile, and the market economy.

This reality, this trick of fate, offered only one advantage. It made the people who stayed adaptable in ways all who departed were not. The act of remaining in a place from which coaxing a living was a strenuous, ongoing, always tenuous task from the beginning of human memory signified a willingness to change, to try new strategies, to do whatever it took to survive. In this all the people who lived in the region shared an essential trait, one that gave them a necessary malleability even as the American economy began to change and the assumptions of industrial America first seemed archaic and then began to fall away. The reality that hit the rest of the nation with full power in the 1980s and 1990s only seemed a stage in an ongoing process of change in the trans-Pecos and southeastern New Mexico.

In the aftermath of the 1974 OPEC oil embargo, the United States entered a new economic phase in which its industrial production initially ceased to be competitive in the world market, bottomed out, and then was reconstituted in a new and distinctly different form. The election of Ronald Reagan in 1980 was both a reflection of that change and a force that accelerated it: Reagan was elected because he promised a return to a world that had gone by. The actions he undertook as president accelerated both the arrival and the impact of the new economic world. Sadly, much of the nation was unprepared for the changes that followed in the wake of the move toward a service economy, a moment often mislabeled as the beginning of the "Information Age." The wrenching dislocation that the recession of 1982 produced, the transfer of wealth and power from the once-proud industrial northeast (renamed the "Rust Belt"), to the Sun Belt of the South and Southwest, the enormous debt that resulted from ruinous deregulation of the savings and loan industry and the expansion of consumer credit, and the rambunctious optimism and sometimes chauvinism of the wealthy and a new political intelligentsia that accompanied the change all were hallmarks of a culturally different America.

These changes profoundly affected Guadalupe Mountains and Carlsbad Caverns, but in markedly different ways. Carlsbad Caverns suffered; it was an icon of the older America, of an earlier time and place. Its location was not conducive to the hurry-up pace of the time-driven world of the 1980s and 1990s. Far from the interstate highways, the community around the national park had to be a resort and a destination, traits it did not genuinely possess in the 1980s and 1990s, to attract the vast numbers of visitation that flocked to the park in earlier generations. The kind of visitor that once sought Carlsbad Caverns was drawn to other places, often imitations of the kind of experience that the caves offered. Disneyland, Las Vegas, and the array of theme parks soon had a greater hold on a large segment of the traveling public than did the spectacular caverns beneath the ground of southeastern New Mexico. To generations raised on television that could easily discern but did not seem to care about the difference between authentic and imitation, the appeal of Carlsbad was not great enough to supersede the distance from the interstate, the long and often agonizing drive on two-lane roads, and the lack of laser or light shows or even television screens in the cavern. After the dawn of Music Television (MTV), after cable television, Walkmans, laser discs, holograms, and the spate of techno-tricks that dominated the big and little screens, the spectacular caverns at Carlsbad lost at least some of their power to awe the many jaded by a plethora of rapid-fire images.

In no small part, this transition stemmed from the range of experiences available to Americans as the nation passed from an industrial to a post-industrial economy. For the people of the 1930s, many of whom were lucky to have access to a radio, Carlsbad Caverns seemed remarkable, impossible, a wonder of the world. The very idea that they could drive to these spectacular caverns and then ride an elevator down into them,

hundreds of feet below the surface, was incomprehensible to someone who lived in a small town most of their life. By the 1980s, even teenagers had at their command a vast array of images of the real and the fantastic from around the globe. They could see the Taj Mahal, the Great Wall of China, and Darth Vader without ever leaving their living rooms and they often possessed few critical skills that could help them differentiate among such disparate images. In this world of competing images delivered to the home television screen, places such as Carlsbad Caverns had a much harder time persuading the young of their significance. Everyone understood that Carlsbad Caverns was authentic; what the changes in the nature and availability of images called into question was the meaning of that authenticity.

At Guadalupe Mountains, that distance from a four-lane highway gave an entirely different constituency the peace its members sought. A specific following for wilderness-type travel remained, people who actively sought alternative experiences apart from the dominant vectors of American travel. Away from the mainstream, these people found solace and authenticity, a range of experiences that put them in touch with what they believed most important about the human experience. The more than one-hundred-mile drive from El Paso and the more than forty miles from Carlsbad Caverns made the location of Guadalupe Mountains perfect for such activities. The spectacular scenery, remote trails, and the large uninhabited distances made the park an outstanding example of a remote park that catered to a specific segment of the travel market. The time required just to reach the Visitor Center, let alone the specialized knowledge and skill necessary to surmount the difficult trails and terrain, assured that the people who embraced the park recognized their experiences as different from what they usually regarded as the herd-like mentality of the mainstream. The very act of choosing Guadalupe Mountains National Park in and of itself made an important cultural statement to the very people who chose it. Accurately or misguided, they told themselves that the activities they were engaged in were more substantial than those of ordinary visitors because of the distance they traveled to reach the park and because of the degree of difficulty their attainments involved. This designation served as a marker between these people and the more general public.

The Park Service always possessed a soft spot for the specialty visitor — the traveler who in their values, beliefs, and desires mirrored those of the people who self-selected careers in the agency. Such visitors often seem like intellectual relatives to park rangers, people with whom they could become friends. Rangers encouraged this constituency, sparing them the derogatory nicknames often associated with less-enthusiastic and more sedentary visitors. At parks that attracted such visitors, a camaraderie even stronger than the typical powerful intra-park relationships in the Park Service often bloomed. When the park staff and a visible percentage of visitors shared similar values about the resources of any park, as they did at Guadalupe Mountains National Park, a meaningful *esprit de corps* that Stephen T. Mather would have embraced permeated the park.

In a regional economic climate in which tourism had finally been recognized as gaining in

significance, the changing patterns of visitation asked important questions of the Park Service. By the late 1980s, many western states had begun to shift their emphasis toward attracting tourists as a primary economic strategy. With almost an entire century of experience promoting tourism, New Mexico was prominent among them, but even its leaders wondered how this transformation would take place. As late as 1989, state Economic Development and Tourism Commission members loudly asserted that New Mexico needed a strategy to survive in the tourist game. New Mexico's historic advantages were as vulnerable in the post-industrial as those of its leading national park.¹

Again, the trans-Pecos led in the move to greater investment in tourism as a strategy. Much of southern New Mexico and far western Texas long recognized the limits of the traditional forms of economy that dominated the region. The list of panaceas and programs, from irrigation to WIPP, attested to the ongoing struggle to thrive. The move to tourism there seemed natural, less fraught with the abandonment of traditional values than in places where the factory had closed and tourism seemed a salve for the woes of the displaced. Studies of tourism and tourism bureaus cropped up all over New Mexico. Las Cruces, home of New Mexico State University, stood out as one of the communities most actively courting tourism, as Santa Fe in the north blossomed as a destination, transformed for visitors with all the tension that process implied.²

The move to tourism validated historic patterns in southeastern New Mexico as it challenged long-standing assumptions about the place. Jed Howard, a teacher at Carlsbad High School and an astute chronicler and regional historian, observed that tourism had "always been a shadow economy, one people tried to overlook." Serving tourists seemed to lack substance, he continued, and seemed to lessen the people of the region in their own estimation. As a result, they rationalized its importance, diminishing it as they held up more traditional activities-- agriculture, ranching, and after 1980, WIPP — as holding the future of the region.³

The changing socioeconomic climate affected the two parks differently. Carlsbad Caverns National Park found itself prepared for the shift in emphasis and the greater recognition of its significance in the regional economy. The park offered statistics about the dollar value of visitation in the region in a range of circumstances, illustrated the employment benefits and the

¹ Todd G. Dickson, "New Mexico Lacks Tourism Strategy," *Las Cruces Sun-News*, March 11, 1989; Rothman, *Devil's Bargains*, 350-83.

² Lee Gemoets, "NMSU May Do Tourism Study," *Las Cruces Sun-News*, November 23, 1988; Lee Gemoets, "Bureau Plans Tourism Study," *Las Cruces Sun-News*, June 22, 1989; Stacey Bush, "Las Cruces Courts the Tourist Trade," *Las Cruces Sun-News*, July 2, 1989; Bruce Selcraig, "Glitz and Growth Take a Major Hit in Santa Fe," *High Country News*, August 8, 1994; Bruce Selcraig, "Lack of Enchantment: Santa Fe's Boom Goes Flat," *High Country News*, 28 2 (February 5, 1996), 1, 14-16; Candelaro Versace, "A Tale of Two Mayors: Santa Fe's Embattled Debbie Jaramillo," *Crosswinds*, December 1995, 14-16.

³ Jed Howard, interview by Hal Rothman, Carlsbad, New Mexico, July 19, 1996.

funds that research, capital development, and construction generated at the park, but park officials faced a recurring problem: visitation, the key to future growth, held constant when it did not fall, and its average level remained below that of the 1970s. An irony permeated the situation: at the moment that Carlsbad Caverns National Park was best positioned to fulfill the needs of the region, the source of its growth, visitation, slowed.

In the Guadalupe Mountains, the changing conditions pointed to a different future, one more infused with visitors than the past. As the park approached its twenty-fifth birthday, growing numbers of visitors, more than 220,000 annually by the mid-1990s, challenged the attributes of a twelve-mile-wide wilderness park. The trail to Guadalupe Peak, the highest point in Texas, was well trod, sometimes too well. Nevada Barr, a Park Service ranger who wrote intriguing mysteries set in national park areas, captured the spirit of this dichotomy in *Track of the Cat*, set in Guadalupe Mountains National Park. During the heart of a murder investigation, Ranger Anna Pigeon, the protagonist, is detailed to monitor the Pentacostal Church's annual fund-raising hike to Guadalupe Peak. "People of all ages swarming up Guadalupe Peak," Pigeon recounts in a typical Park Service dilemma. "Overweight men, women and girls in dresses, nobody carrying food, many carrying no water at all or a quart to be shared by a family of four when every man, woman, and child would need at a least a half gallon to make it comfortably-- and safely--the ten miles to the top of the mountain and back."⁴ Barr's fanciful account rang increasingly true, especially to those who coveted the solitude, the peace, the whistle of the wind that characterized the desert park.

Southeastern New Mexico and the trans-Pecos and its bookends, Carlsbad Caverns and Guadalupe Mountains national parks, embody that solitude. Even in the most crowded moments in the caverns of Carlsbad, when the voices of visitors drown out the silence and a trip through the Big Room feels much like a walk through a city park, an area nearly devoid of people is only a few feet away. The trail to the top of Guadalupe Peak may be crowded, but in the waterless Guadalupe Mountains back country, people remain few and far between even at the height of backpacking season.

Other attempts to harness the Guadalupe and Delaware Mountains include Texas's first wind power plant, on the Six Bar Ranch about 100 miles east of El Paso and visible on the approach to Guadalupe Mountains National Park. Built at a cost of almost \$40 million, 112 eighty-foot-high wind turbine towers, each topped by a fifty-two-foot fiberglass propeller, generate 35 megawatts of power, which the Lower Colorado River Authority purchases and transmits to its customers in central Texas.⁵ Wind energy offers another of the many economic strategies in the region, potentially a valuable source of revenue, but one likely limited to a small

⁴ Nevada Barr, *Track of the Cat* (NY: G. P. Putnam's Sons, 1993), 85-91.

⁵ Bruce Hight, "Power Blowin' in the Wind," *Austin American-Statesman*, October 1, 1995, D1, D4; Guadalupe Mountains National Park, "Kennetech Wind Generation Project," (n.d.), Carlsbad Caverns National Park files.

work force. As was mining and oil and gas development, wind energy was extractive. Its impact was visual, with the spires of the towers juxtaposed incongruously along the horizon. To some, its marring of the skyline was as objectionable as the oil derricks that stretched across west Texas and southeastern New Mexico.

Carlsbad Caverns also included a 33,125-acre designated wilderness established in 1978, which provided an important intellectual link between the two parks. Since the environmental revolution of the 1970s, the back country at Carlsbad had been an alternative to the cave experience. Despite more than sixteen million visitors to the park by 1971, former park naturalist Neal R. Bullington wrote that “most went away knowing almost nothing of Carlsbad Caverns National Park. For to most visitors the cavern is the park. Seven miles of entrance road and a few acres with buildings represent the sum total of their park experience above ground.” The only pavement in the 46,000-acre park was the entrance road, offering the possibility for wilderness experience such as offered in Guadalupe Mountains National Park. The establishment of the wilderness codified that perception, linking Carlsbad caverns more closely with the dominant ethos of the 1970s. At Carlsbad Caverns, as in most wilderness areas, the wilderness was as much symbol as an attainable goal. Between 1989 and 1993, use of the wilderness area for overnight stays never exceeded 446 in any year. In 1994, 733 overnight stays were recorded. The reverence for the concept of wilderness but its limited use mirrored the experience of Guadalupe Mountains National Park. It also increased the shared cultural terrain between Carlsbad Caverns and Guadalupe Mountains national parks; managed jointly until 1987, they also offered experiences that converged.⁶

Carlsbad Caverns was an important economic engine in southeastern New Mexico. In 1991, the park employed the equivalent of ninety-five full-time employees. The concessionaires employed thirty-five people full-time throughout the year and another fifty-five during the peak travel season. The payroll injected more than \$3.3 million into the area, coupled with the more than \$50 million directly generated by tourism and an additional \$5 million in additional commerce stemming from the park and its visitors. Carlsbad Caverns played a significant role in the regional economy, on par with almost every other industry in the region.⁷ In the 1990s, the region gradually grew to understand and accept the park’s importance.

Yet that acceptance, long coveted by the Park Service, illustrated the problems of parks on the periphery. Visitation to Carlsbad seemed mired well below the historic highs of the 1970s; between 1985 and 1995, the annual totals remained in a range between a low of 586,954 in 1990 and a high of 645,526 in 1985. This fluctuation illustrated a problem first recognized during the late 1970s: visitation to Carlsbad Caverns seemed to have peaked; while

⁶ Neal R. Bullington, “Carlsbad Backcountry,” *National Parks and Conservation Magazine* V. 46 no. 6 (June 1972): 8-12.

⁷ Sellars, *Preserving Nature in the National Parks*, 359.

evidence of intermittent growth existed, stagnation more aptly described the condition.⁸ At the moment the region again depended on federal endeavor, when it seemed best prepared to recognize the significance of the tourist economy, the park apparently had run up against the realities of the American public's changing tastes.

By the 1990s, the two parks shared greater commonality. Visitation to Guadalupe Mountains increased, albeit mostly in the Visitor Center and on the trail Nevada Barr so poignantly described. The *de facto* division into sacred and profane space — space that humans use, from some perspectives, defile, and untrammelled space of the sort that preservationists such as John Muir and Edward Abbey advocated — had become as apparent at Guadalupe Mountains as at Carlsbad Caverns. On the periphery, national parks of evidently different character grappled with the same kinds of issues.

As the twenty-first century approached, southeastern New Mexico and the trans-Pecos remained much as they had been throughout the twentieth century, a periphery dominated by outside forces. By the 1990s, the most significant such forces were federal endeavors, making the two parks in the region its bookends. The limits of geographic and technology illustrated the situation: as conventional forms of economy fell by the wayside, the entire subregion embraced the service economy concept well before the rest of the nation. The result was a place people visited, a place they revered for its beauty, magnificence, and solitude, one to which they came to retire, and a place where they exploded atomic devices and planned to store their nuclear waste. The history of the region provided a conundrum that the Mescalero people would certainly have understood: consigned to a nearly useless reservation on the periphery of their historic range, in sight of the mountains that once sheltered them, they too experienced the process of being coveted by an outside that wanted their land, but in the end, had little use for them. This was the problem of the periphery in the post-industrial world: how to maintain identity and economy, how to resist transformation and yet retain the ability to stay. The bookends, the two national parks, provided mitigating institutions, but in and of themselves they were only part of a solution to regional problems.

The story of the Carlsbad Caverns National Park and Guadalupe Mountains National Park area and its surroundings highlights most of the important themes in the history of the nineteenth- and twentieth-century American Southwest. Places once remote and inhospitable, lacking the necessities to sustain pre-industrial Anglo-Americans and others, developed slowly. Entrepreneurs played an important role, as did outside forces such as railroads and state legislatures. The federal government established a presence with military personnel that it retained through the Park Service and other agencies. Home to a hardy few with strong and deep ties, such places maintained a kind of iconoclastic independence. Transportation technologies provided the catalyst for long-term transformation, creating new economic and social relations to accompany improved access. Over time this led to changes in patterns of land

⁸ Superintendent's Annual Report, Carlsbad Caverns National Park, 1977, 1985, 1990, 1995.

ownership and use, and eventually to the kind of public-private partnership exemplified by the activities of people such as Wallace Pratt at Guadalupe Mountains National Park. This subregion, around which so much activity has swirled, has an important and largely untold place in the history of the American Southwest. It tells the story of transformation of southeastern New Mexico and far western Texas and in a broader sense, that of the western United States.

Bibliography

Articles, Chapters, Journals and Series

- Abbey, Edward. "Guadalupe's Trails in Summer." *National Geographic* 156, no. 1 (July 1979): 134-141.
- Allison, V.C. "Evening Bat Flight from Carlsbad Caverns." *Journal of Mammalogy* 18 (1937): 80-82.
- Almaraz, Felix D. Jr. "An Uninviting Wilderness: The Plains of West Texas, 1534-1821." *Great Plains Quarterly* 12 (Summer 1992): 169-180.
- Armstrong, Ruth W. "Carlsbad's Golden Anniversary." *National Parks and Conservation Magazine* 54, no. 5 (May 1980): 4-8.
- Bailey, V. "Bats of the Carlsbad Cavern." *National Geographic Magazine* 48 (September 1925): 321-330.
- Baker, J.K. "Fossilization of Bat Skeletons in the Carlsbad Caverns." *National Speleological Society Bulletin* 25, part 1 (1963): 37-44.
- Barrett, Leonora. "Transportation, Supplies, and Quarters for the West Texas Frontier Under the Federal Military System 1848-1861." *West Texas Historical Association Year Book V* (June 1929): 95-108.
- Baugh, Timothy G. "Ecology and Exchange: The Dynamics of Plains-Pueblo Interaction," Katherine A. Spielman, ed., *Farmers, Hunters, and Colonists: Interaction Between the Southwest and the Southern Plains*. Tucson: University of Arizona Press, 1991: 107-26.
- Berger, Meyer. "Nature's Awesome Underworld." *Reader's Digest* 31, no. 183 (July 1937): 77-79.
- Black, D.M. "Cave Pearls in Carlsbad Caverns." *Scientific Monthly* 74 (1952): 206-210.
- ."Chinese Walls of New Cave, Carlsbad Caverns National Park." *Science* 123 (1956): 937-938.
- Black, T.H. *The Origin and Development of the Carlsbad Caverns*. Albuquerque: New Mexico Geological Society, Guidebook No. 5, 1954.
- Bretz, J.H. "Carlsbad Caverns and Other Caves of the Guadalupe Block." *New Mexico Journal of Geology* 57 (1949): 447-463.
- Brockmoller, Sunny Leigh. "The Identification and Classification of Projectile Points from the Plateau Complex, Van Horn, Texas." *The Artifact* 25, n. 1 (1987).

- Brooks, Paul. "Congressman Aspinall vs. The People of the United States." *Harpers* 226 n. 1354 (March 1963): 60-63
- Bryant, Robert. "Cashing in on the Caves." *New Mexico Business Journal* 9, n. 11 (November 1985): 53-55.
- Bullington, Neal R. "Carlsbad Back Country." *National Parks and Conservation Magazine* 46, no. 6 (June 1972): 8-12.
- ."Geology of the Carlsbad Caverns." In *Delaware Basin Exploration*. West Texas Geological Society, Guidebook 68-55: 20-23.
- Cahill, Tim. "The Splendors of Lechuguilla Cave" *National Geographic* 179, n. 3 (March 1991): 34-58.
- Callison, Charles H. "National Capital Report: Conservation Outlook." *Audubon* 67 (January/February 1965).
- Carpenter, Betsy. "Subterranean Blues: Caverns are an Uncharted, and Increasingly Threatened, Wilderness." *U.S. News and World Report* 115 (November 22, 1993): 57-59.
- "Caverns in the Guadalupe Mountains." *Science* 55, n. 1558, Supplement (November 7, 1924): 12.
- "Caves Protected from Drilling." *National Parks* 68 (March/April 1994): 16.
- Cheatham, Edgar and Patricia Cheatham. "The Extraordinary World of Wallace E. Pratt." *Petroleum Today* 12, n. 2 (Summer 1971), 1-5.
- Collins, Gladys. "Spanish West Texas, 1535-1759." *West Texas Historical Association Year Book* VII (1931): 95-99.
- "Colonel Boles' Rock of Ages Talk." Carlsbad Caverns Library, Carlsbad Caverns National Park.
- "Congress Ends Debate Over Carlsbad Caverns." *National Parks* 68 (September/October 1994): 11-12.
- "Congress Expands New Mexico Parks." *National Parks* 64 (July/August 1990): 8-9.
- Crisman, B.L. "Other Caves in the Vicinity." In *A Guidebook to Carlsbad Caverns National Park*, G.W. Moore, ed. National Speleological Society, Guidebook Series no. 1 (1960): 31-35.
- Davy, Dava McGahee. "The Pinery Station." Carlsbad, New Mexico: Carlsbad Caverns Natural History Association, n.d.
- Davis, D.G. "Cave Developments in the Guadalupe Mountains: A Critical Review of Recent Hypotheses." *National Speleological Society Bulletin* 42 (1980): 42-48..
- ."Cave Developments in the Guadalupe Mountains, New Mexico and Texas." *Caving International Magazine* 3 (1979): 43.
- Dodge, Natt N. "The New Guadalupe Mountains National Park." *National Parks* 41 (February 1967): 4-8.
- Dominguez, Dixie L. "Hueco Tanks: A Vital Resource in Southwestern History." *Password* 31, n. 3 (Fall 1986): 123-136.
- "Drilling Means Risk for Lechuguilla Cave." *National Parks* 66 (September/October 1992): 14.
- Dunham, Robert J. *Capitan Reef, New Mexico and Texas: Facts and Questions to aid Interpretation and Group Discussion*. Permian Basin Section. Publication 72-14, Society of Economic Paleontologists and Mineralogists. Midland, Texas (May, 1972).
- Edrington, Thomas S. "Military Influence on the Texas-New Mexico Boundary settlement." *New Mexico Historical Review* 59, n. 4 (October 1984), 371-94.

- Evans, Glen L. "Fluorspar Deposits in the Eagle Mountains of Hudspeth County, Texas." Austin: The University of Texas Bureau of Economic Geology, 1943, Mineral Resource Circular No. 26.
- "Exploring Carlsbad *Cavern*." *National Geographic Magazine* 108 (August 1984): 4-9.
- Flanner, Hildegarde. "Geological Fantasia." *Travel* 62, n. 4 (February 1924): 16-19.
- Fleming, Elvis E. "J.J. Hagerman and the Pecos River Railroad." *Permian Historical Annual XIII* (December 1973): 21-35.
- Flores, Dan. "Bison Ecology and Bison Diplomacy: The Southern Plains from 1800 to 1850." *Journal of American History* 87, n. 2 (September 1991): 465-85.
- "Fossil Deposits Under the Entrance of Carlsbad Caverns." *Science* 118 (September 11, 1953): 308-309.
- Foster, Michael S. and J. Charles Kelley, "Archaeological Investigations in the Three-Mile and Sulphur Draw Watershed, Culberson County, Texas." *The Artifact* 27, n. 3 (1989): 9-14.
- ."An Archeological Overview of the Western Trans-Pecos, Texas, With Reference to the Archeology of the Salt Basin Area," in "Archeological Investigations in the Three-Mile And Sulphur Draw Watershed, Culberson County, Texas," *The Artifact* 27, n. 3 (1989).
- Gates, Paul Wallace. "The Homestead Law in an Incongruous Land System," *American Historical Review* 41 (July 1936): 652-81.
- "Greatest Show Under the Earth." *Popular Mechanics* 72 (July 1939): 50-53.
- Hay, Edwards. "New Cave: A New Look." *National Parks and Conservation Magazine* 48, n. 6 (June 1974): 21-24.
- Hays, Kelly R. "General Garland's War: The Mescalero Apache Campaigns, 1854-1855." *New Mexico Historical Review* 67, n. 3 (July 1992): 251-68
- Hartzog, George B. Jr. "Parkscape U.S.A." *Parks and Recreation* 1, n. 8 (August 1966): 616-620.
- Hayes, P.T. *Geology of the Guadalupe Mountains*, New Mexico. Washington, D.C.: United States Geological Survey, Professional Paper 446 (1964).
- Hayter, Delmar. "The Early Economic Development of the Pecos River Valley of New Mexico and Texas, 1880-1900." *West Texas Historical Association Year Book* 62 (1986): 69-85.
- Heald, W.F. "Guadalupe Mountains National Park." *National Parks Magazine* (September 1965): 4-8.
- ."Looping the Guadalupes." *Travel* 120, n. 4 (October 1963): 34-36.
- Hickerson, Nancy P."Jumano: The Missing Link in South Plains History." *Journal of the West* 29 n. 4 (October 1990): 5-12.
- Hill, C.A. "Speleogenesis of Carlsbad Caverns and Other Caves of the Guadalupe Mountains." Unpublished report to the National Park Service, Forest Service and Bureau of Land Management (1980).
- Hinton, Harwood P. Jr. "John Simpson Chisum, 1877-1884." *New Mexico Historical Review* 31, n. 3 (July 1956): 177-205.
- Hoff, Bob. "Bat Guano Mining at Carlsbad Caverns: Insignificant Historical Footnote or Important Period of History?" Vertical Files, Carlsbad Caverns National Park.
- Holland, David. "Flight of the Bats." *National Parks and Conservation Magazine* 38, n. 136 (January 1968): 8-10.

- Horberg, L. "Geomorphologic History of Carlsbad Caverns Area, New Mexico." *Journal of Geology* 57 (1949): 464-476.
- Jacobsen, Joel K. "An Excess of Law in Lincoln County: Thomas Catron, Samuel Axtell, and the Lincoln County War." *New Mexico Historical Review* 68, n. 2 (April 1993): 133-152.
- Jagnow, D.H. "Cavern Development in the Guadalupe Mountains." Columbus, Ohio: Cave Research Foundation (1979).
- Kelley, J. Charles. "The Route of Antonio de Espejo Down the Pecos River and Across the Texas Trans-Pecos Region in 1583: Its Relation to West Texas Archeology." *Sul Ross State Teachers College Bulletin* No. 7, West Texas Historical and Scientific Society Issue No. 7 (December 1937): 8-24.
- Lee, W.T. "A Visit to Carlsbad Cavern." *National Geographic Magazine* 45, n. 1 (January 1924): 1-40.
- ."Carlsbad Cavern." *Scientific Monthly* 21 (August 1925): 186-190.
- ."New Discoveries in Carlsbad Cavern." *National Geographic Magazine* 48, n. 3 (September 1925): 301-319.
- Lintz, Christopher. "Texas Panhandle-Pueblo Interactions from the Thirteenth Through the Sixteenth Century," in Katherine A. Spielman, ed., *Farmers, Hunters, and Colonists: Interaction Between the Southwest and the Southern Plains*. Tucson: University of Arizona Press (1991): 89-105.
- Lounsbury, Ralph G. "Materials in the National Archives for the History of New Mexico Before 1948." *New Mexico Historical Review* 21 (1946): 247-56.
- Mark, Kathleen. "El Capitan: Ancient Sea-of-Texas Peak." *Sea Frontiers* 24, n. 1 (January 1978): 9-18.
- Mehren, Lawrence, ed. "Scouting for Mescaleros: The Price Campaign of 1873." *Arizona and the West* 10, n. 2 (September 1968): 171-190.
- Messer, B. G. and J. E. Tong. "Exploration, Development, and Production at Duval Sulphur and Potash Company's Potash Operation in Eddy County, New Mexico." *The Mines Magazine* 43 n. 3 (March 1953): 53-60.
- Mitchell, Guy E. "Carlsbad Caverns: A Wonderland in the Under-land of New Mexico." *The Mentor* 13, n. 7 (August 1925): 45-50.
- Moehring, Eugene. "The Comstock Urban Network." *Pacific Historical Review* Vol LVXI 3 (August 1997): 337-362.
- Moore, G.W. "Geology of Carlsbad Caverns, New Mexico." *National Speleological Society Guidebook*, ser. 1 (1960): 10-17.
- n.a., "Capsule History of Lechuguilla Cave." Carlsbad Caverns National Park Library (1989).
- "NCPA Appeals Leasing Near Teddy Roosevelt." *National Parks* 66 (March/April 1992): 20-21.
- Netherby, Steve. "Backpacking the Guadalupe." *Field and Stream* 80, n. 3 (July 1975): 98-101.
- New Mexico First. "Water: Lifeblood of New Mexico." Albuquerque: New Mexico Town Halls (1988).
- Nymeyer, R.B. "Wonders Below." *New Mexico Magazine* 16, n. 12 (1938): 9-11, 38-40.
- Opler, Morris E. "The Apachean Culture Pattern and Its Origins," in Alfonso Ortiz, ed., *The Handbook of North American Indians. 10 Southwest*. Washington, D.C.: Smithsonian

- Institution Press, 1983.
- ."Mescalero Apache," in Alfonso Ortiz, ed. *The Handbook of North American Indians: Southwest V* 10. Washington, D.C.: Smithsonian Institution, 1983, 421-23.
- and Catherine H. Opler. "Mescalero Apache History in the Southwest." *New Mexico Historical Review* 25 1 (January 1950): 1-36.
- Parent, Annette Richards. "Guadalupe: Barrier Reef in the Desert." *National Parks* 48, n. 10 (October 1974): 4-9.
- Parent, Lawrence. "Mystery of the Breathing Cavern." *National Parks* 62 (July/August 1988): 20-23.
- Parvin, Bob, "In Search of the First Texans." *Texas Parks and Wildlife* (October 1983): 3-7.
- Pratt, Wallace E. "Memorandum for Mr. Donald A. Dayton, Superintendent, Carlsbad Caverns and Guadalupe Mountains National Park, on Historic Structures In Guadalupe Mountains National Park." June 13, 1974, NA, Rocky Mountain Region, RG 79, SW Regional Office, General Administration Files, 1968-1970, H30, 1974-1976, Guadalupe Mountain National Park.
- Powell, John Wesley. *Report on the Lands of the Arid Region of the United States*. Quoted in Walter Prescott Webb, *The Great Plains*. NY: Grosset & Dunlap (1931): 419-424.
- "Record of Engagements with Hostile Indians in Texas 1868 to 1882." *West Texas Historical Association Year Book*, IX (1933).
- "Report of the President and General Counsel, Anthony Wayne Smith, to the General Membership of the National Parks Association on the Occasion of the Annual Meeting of the Corporation and Trustees, May 25, 1967." *National Parks* 41, no. 235 (April 1967): I-IV.
- Ripp, Bart. "Greetings from White's City." *Albuquerque Living* (March 1984): 70-71.
- Rothman, Hal K. "The End of Federal Hegemony: The Wilderness Act and Federal Land Management on the Pajarito Plateau, 1955-1980." *Environmental History Review* 16, n. 2 (Summer 1992): 39-61.
- ."Shaping the Nature of a Controversy: The Park Service, the Forest Service and the Cedar Breaks National Monument." *Utah Historical Quarterly* (Summer 1987): 212-235.
- ."Forged By One Man's Will: Frank Pinkley and the Administration of the Southwestern National Monuments, 1923-1932," *The Public Historian*, 8 n. 2 (Spring 1986): 83-100.
- ."From Monument to Park," *Environmental Review* 10 n. 2 (Spring 1986): 46-57.
- ."Historian v. Historian: Interpreting History in the Courtroom." *The Public Historian* 15, n. 2 (Spring 1993): 39-53.
- ."A Regular Ding-Dong Fight': Agency Culture and Evolution in the NPS-USFS Dispute, 1916-1937." *Western Historical Quarterly* (April 1989): 141-61.
- Salvador, Amos. "Memorial." *The American Association of Petroleum Geologists Bulletin* 66 n. 9 (September 1982): 1412-22.
- Sanborn, William B. "The Monarch of New Cave." *Natural History* 63 (January 1954): 16-17.
- Schmidt, Stephen "Natives and Nuke-Junk." *Environmental News Service* 2 n. 138 (November 13, 1991).
- Schroeder, Albert H. "Pueblos Abandoned in Historic Times," in Alfonso Ortiz, ed., *Handbook*

- of North American Indians Volume 9: Southwest.* Washington, DC: Smithsonian Institution Press (1979): 61-84.
- Sherow, James E. "The Workings of the Geodialectic: High Plains Indians and Their Horses in the Region of the Arkansas River Valley, 1800-1870." *Environmental History Review* 16 n. 2 (Spring 1992).
- Sibley, Ford. "My Trip Through Carlsbad Caverns." Southern Pacific Railroad (1946).
- Spielman, Katherine A. "Coercion or Cooperation? Plains-Pueblo Interaction in the Protohistoric Period," in Katherine A. Spielman, ed., *Farmers, Hunters, and Colonists: Interaction Between the Southwest and the Southern Plains.* Tucson: University of Arizona Press (1991): 36-50.
- Sterling, John. "Mescalero Dump Blocked ... and Reborn." *Earth Island Journal* (Summer 1995).
- Swain, Donald C. "The National Park Service and the New Deal, 1933-1940." *Pacific History Review* 41 (August 1972): 312-332.
- ."The Passage of the National Park Service Act of 1916." *Wisconsin Magazine of History* 50 (Autumn 1966): 4-17.
- Taylor, Michael Ray. "Lechuguilla's Unique Geological Genesis Poses Oil Threat." *Audubon* 93 (September/October 1991): 84.
- "Texas Governor Favors Guadalupe National Park." *National Parks Magazine* (March 1964): 16.
- "The Park System Expands," in News and Commentary, *National Parks* 40, n. 231 (December 1966): 18.
- Thurmond, F. Lee Roi. "The Carlsbad Cave: Recently Explored Cave in New Mexico Which Rivals, If Not Exceeds, Mammoth Cave of Kentucky." *Scientific American* 129 (December 1923): 400.
- Tilden, Paul Mason. "Washington Newsletter." *Natural History* 74 (August/September 1965).
- Truett, Sam. "Neighbors by Nature: Rethinking Environmental History in the US-Mexico Borderlands." *Environmental History* 2 n. 2 (April 1997): 160-178.
- Tweedie, M. Jean "Notes on the History and Adaption of the Apache Tribes." *American Anthropologist* 70, n. 6 (December 1968): 1132-1142.
- "Unspoiled Areas' U.S. Wants for Parks" *U.S. News and World Report* 60 n. 7 (February 14, 1966): 76-77.
- Utey, Robert M. "The Buffalo Soldiers and Victorio." *New Mexico Magazine* (March 1984).
- Versace, Candelaro. "A Tale of Two Mayors: Santa Fe's Embattled Debbie Jaramillo." *Crosswinds* (December 1995): 14-16.
- Weems, J. N. "Appraisal of Concession of Bat Guano Mining in Carlsbad Caverns National Park, New Mexico." Carlsbad Cavern National Park Library, Carlsbad Caverns National Park.
- Wells, John W. "The Cavern of the Bats." *Sunset* 52, n. 5 (May 1924): 20-21+.
- Whalen, Michael E. "Moving Out of the Archaic on the Edge of the Southwest." *American Antiquity* 59, n. 4 (Oct., 1994): 622-38.
- Wilkinson, Todd. "Subterranean Journey." *National Parks* 68 (March/April 1994): 42-44.
- Winters, S.R. "A National Monument Underground." *The Outlook* 136, n. 18 (April 30, 1924): 732-734. Wood, Rachel, J.A.D. Dickson and Brenda Kirkland. "New Observations on the Ecology of the Permian Capital Reef, Texas and New Mexico." *Paleontology* Vol. 39, Part 3 (August 1, 1996): 733-762.

Wylie, Rosa Lee. "The Coming of the Railroad in Culberson County." *The Permian Historical Annual XXI* (December 1981).

Bibliographies

- Associates of the John Carter Brown Library. *The Mirror of the Indian*. Philadelphia: Pickering Press (1958).
- Barnes, Thomas C., Thomas H. Naylor and Charles W. Polzer. *Northern New Spain: A Research Guide*. Tucson: The University of Arizona Press (1981).
- Beers, Henry Putney. *Spanish and Mexican Records of the American Southwest*. Tucson: University of Arizona Press (1979).
- Davis, Richard C. *North American Forest History: A Guide to Archives and Manuscripts in the United States and Canada*. Santa Barbara: Forest History Society, Inc., and Clio Books (1977).
- Diaz, Albert J. *A Guide to Microfilm Papers Relating to New Mexico*. Albuquerque: University of New Mexico Press (1960).
- *Manuscripts and Records in the University of New Mexico Library*. Albuquerque: University of New Mexico Library (1957).
- "University of New Mexico Special Collections." *New Mexico Historical Review* 33 (July/October 1958): 235-51, 316-21.
- Dobyns, Henry F. and Robert C. Euler. *Indians of the Southwest: A Critical Bibliography*. Bloomington: Indiana University Press (1980).
- Fahl, Ronald J. *North American Forest and Conservation History: A Bibliography*. Santa Barbara: Forest History Society, Inc., and A.B.C.-Clio Books (1977).
- Greenleaf, Richard E. and Michael C. Meyer. *Research in Mexican History: Topics, Methodology, Sources, and a Practical Guide to Field Research*. Lincoln: University of Nebraska Press (1973).
- Grove, Pearce S., Becky J. Bamett, and Sandra J. Hansen, eds. *New Mexico Newspapers: A Comprehensive Guide to Bibliographical Entries and Locations*. Albuquerque: University of New Mexico Press (1975).
- Hasse, Adelaide Rosalia. *Index to the Microfilm Edition: Reports of Explorations Printed in the Documents of the United States Government: A Contribution Toward a Bibliography*. New Haven, Conn: Research Publications (1971).
- Hirschfelder, Arlene B., Mary Gloyne Byler and Michael A. Dorris. *Guide to Research on North American Indians*. Chicago: American Library Association (1983).
- Hoxie, Frederick E. *Native Americans: An Annotated Bibliography*. Pasadena, Calif.: Salem Press (1991).
- Marken, Jack W. *The Indians and Eskimos of North America: A Bibliography of Books in Prints Through 1972*. Vermillion: University of South Dakota Press (1973).
- Martin, M. Marlene. *Ethnographic Bibliography of North America: Fourth edition supplement, 1973-1987*. New Haven, Conn.: Human Relations Area Files Press (1990).
- Meisel, Max. *A Bibliography of American Natural History: The Pioneer Century, 1769-1865; The Role Played by the Scientific Societies; Scientific Journals; Natural History Museums and Botanic Gardens; State Geological and Natural History Surveys;*

- Federal Exploring Expeditions in the Rise and Progress of American Botany, Geology, Mineralogy, Paleontology and Zoology.* NY: Premier Publishing Co. (1924-1929).
- Murdock, George Peter and Timothy J. O'Leary. *Ethnographic Bibliography of North America.* 2nd ed., 5 vols. New Haven, Conn.: Human Relations Area Files Press (1975).
- Ohio State University Press. *The Hispanic Experience in North America: Sources for Study in the United States.* Kent State: Ohio State University Press (1992).
- Peabody Museum of Archaeology and Ethnology, Harvard University. *Author and Subject Catalogues of the Library.* 53 vols. Boston: G.K. Hall (1963)
- Prucha, Francis Paul. *A Bibliographical Guide to the History of Indian-White Relations in the United States.* Chicago: University of Chicago Press (1977).
- . *Handbook for Research in American History.* Lincoln: University of Nebraska Press (1987).
- Rader, Jesse Lee. *South of Forty: From the Mississippi to the Rio Grande, a Bibliography.* Norman: University of Oklahoma Press (1947).
- Rittenhouse, Jack D. *The Santa Fe Trail, A Historical Bibliography.* Albuquerque: University of New Mexico Press (1971).
- Saunders, Lyle. *A Guide to Materials Bearing on Cultural Relations in New Mexico.* Albuquerque: University of New Mexico Press (1944).
- Stoddard, Ellwyn R., Richard L. Nostrand, and Jonathan P. West. *Borderlands Sourcebook: A Guide to the Literature on Mexico and the American Southwest.* Norman: University of Oklahoma Press (1983).
- Stone, Jess H. *A Guide to the Museum of New Mexico History Library.* Santa Fe: Museum of New Mexico (1973).
- Swadesh, Frances Leon. *20,000 Years of History: A New Mexico Bibliography.* Santa Fe: Sunstone Press (1973)
- Thornton, Russell. *Sociology of American Indians: A Critical Bibliography.* Bloomington: Indiana University Press (1984).
- Twitchell, Ralph Emerson. *The Spanish Archives of New Mexico,* 2 vols. Cedar Rapids, Iowa: Torch Press (1914).
- Tyler, Daniel. *Sources for New Mexican History. 1821-1848.* Santa Fe, New Mexico: Museum of New Mexico Press (1984). *U.S. Serial Set Index, Part 1, American State Papers.* Washington, D.C.: General Printing Office.
- Wagner, Henry Raup. *The Plains and the Rockies: A Critical Bibliography of Explorations, Adventure and Travel in the American West, 1800-1865.* San Francisco: J. Howell-Books (1982).
- Western Americana: Frontier History of the Trans-Mississippi West, 1550-1900.* Woodbridge, Conn.: Research Publications, Inc. (1977).

Collections and Depositories

Bureau of Land Management records, Santa Fe
 Bureau of Reclamation records, Denver
 Carlsbad Museum

Carlsbad Public Library
Documentary Relations of the Southwest, Arizona State Museum
Eastern New Mexico State University — Portales
El Paso Public Library
Federal Records Center, Denver
Federal Records Center, Fort Worth
Files of *The Albuquerque Journal*, University of New Mexico Library
Laboratory of Anthropology, Santa Fe
Museum of New Mexico History Library, Santa Fe
National Archives, Denver and Washington, D.C.
National Park Service regional records, Santa Fe
New Mexico State Records Center and Archives, Santa Fe
New Mexico State University — Carlsbad branch
New Mexico State University at Las Cruces
Smithsonian Institution, Washington, D.C.
Southeastern New Mexico Historical Society, Carlsbad
Southwest Collection, Denver Public Library
Southwest Collection, Main Room, University of New Mexico Library, Albuquerque
Southwest Collection, Santa Fe Public Library
Special Collections Branch of the Zimmerman Library, University of New Mexico
University of New Mexico
Yale University Collection of Western Americana, New Haven, Conn. (accessed by microfilm)

Government Documents and Legislation

Annual Reports of the Commissioner of Indian Affairs to the Secretary of the Interior. Washington, D.C.: Government Printing Office.

Bjorklund, L.J., and W.S. Motts. *Geology and Water Resources of the Carlsbad Area, Eddy County, New Mexico*. Washington, D.C.: United States Geological Survey, Open File Report 59-9 (1959).

Bogener, Steve. *The Carlsbad Project* (second draft), Bureau of Reclamation History Program. Denver, CO: Research of Historic Reclamation Projects (1993).

Bradford, James E. *Upper Dog Canyon Archaeology: Guadalupe Mountains National Park*. Santa Fe: National Park Service, Southwest Cultural Resources Center (1980).

Brokaw, Arnold L., C. L. Jones, M. E. Colley, and W. H. Hays, "Geology and Hydrology of the Carlsbad Potash Area, Eddy and Lea Counties, New Mexico." United States Geological Survey 4339-1, Open File Report 1972, (200) R290 no. 1793, United States Geological Survey Library, Denver, Colorado.

Buck, Paul. *The Evolution of the National Park System of the United States*. Washington, D.C.: Government Printing Office (1946).

"Carlsbad Soil and Water Conservation District, Long Range Plan, Revised 1985," Carlsbad Public Library.

Fabry, Judith K. *Guadalupe Mountains National Park: An Administrative History*. Santa Fe,

- N.M., Division of History, Southwest Cultural Resources Center, Southwest Region, National Park Service, United States Department of the Interior (1990).
- Ferris, Robert G., ed. *Soldier and Brave: Historic Places Associated with Indian Affairs and the Indian Wars in the Trans-Mississippi West*. Washington, D.C.: United States Department of the Interior, National Park Service (1971).
- Froeschauer, Peggy S. *Cultural Landscape Report for the Frijole Ranch, Guadalupe Mountains National Park*. Santa Fe: National Park Service (1995).
- Genoways, H.H. and R. J. Baker, ed. *Biological Investigation in the Guadalupe Mountains National Park, Texas*. Washington, D.C.: National Park Service, Proceedings and Transactions, ser. 4 (1979).
- Gott, Francis Hastings. "Reconnaissance Report on the Recreational Possibilities of the Carlsbad Irrigation Project, Eddy County, New Mexico." NA, RG 79, 0-32, Carlsbad 207.
- Hayes, Phillip Thayer. *Examination and Reevaluation of Evidence for the Barrera Fault, Guadalupe Mountains, New Mexico*. Washington, D.C., Open-file Services Section, Branch of Distribution, United States Geological Survey (1979).
- . *Geology of the Carlsbad Caverns East Quadrangle, New Mexico*. Washington, D.C.: United States Geological Survey Geological Quadrangle Map GQ-98 (1977).
- . *Geology of the Guadalupe Mountains, New Mexico*. Washington, D.C.: United States Geological Survey Professional Paper No. 446 (1964).
- , and Koogler, R.L. *Geology of the Carlsbad Caverns West Quadrangle, New Mexico-Texas*. Washington, D.C.: United States Geological Survey Geological Quadrangle Map GQ-112(1958).
- Genoways, Hugh H., and Robert J. Baker, eds. *Biological Investigations in the Guadalupe Mountains National Park, Texas*. Washington, D.C., National Park Service Proceedings and Transactions Series No. 4 (1979).
- Hill, Carol A. *Geology of Carlsbad Cavern and Other Caves in the Guadalupe Mountains, New Mexico and Texas*. Santa Fe: New Mexico Bureau of Mines and Mineral Resources (1987).
- House Committee on Interior and Insular Affairs, *Guadalupe Mountains National Park, Tex*. 89th Cong., 2d sess., H. Rept. 1566 (1966).
- Hufstetler, Mark and Lon Johnson. *Watering the Land: The Turbulent History of the Carlsbad Irrigation District*. Denver: National Park Service (1993).
- Latimore, R. E. "Report on Functional Inspection - Wildlife and Range Management, Lincoln National Forest, December 2-3, 1957 & February 10-14, 1958." United States Forest Service 69 a 821, 1440 Inspection, GFI, Range and Wildlife, 1926-58, Lincoln National Forest.
- Katz, Susana R. and Paul Katz, *The History of the Carlsbad Basin, Southeastern New Mexico*. Bureau of Reclamation, Southwest Regional Office, Contract No. 3-CS-57-01690.
- Kenmotsu, Nancy Adele. "Survey in the McKittrick Canyon Watershed, Guadalupe Mountain National Park, Culberson County, Texas." Austin, TX: Department of Antiquities Protection, Texas Historical Commission (1993).
- Lee, Ronald F. *Public Use of the National Park System, 1872-2000*. Washington, D.C.: United States National Park Service (1968).
- Levy, Benjamin. *Draft Historical Resource Study, Guadalupe Mountains National Park*. Washington, D.C.: National Park Service (1971).

- Mackintosh, Barry. *Interpretation in the National Park Service: A Historical Perspective*. Washington, D.C.: Division of History, National Park Service (1986).
- . *The National Historic Preservation Act and the National Park Service: A History*. Washington, D. C.: National Park Service, History Division (1986).
- . *National Park Service Administrative History: A Guide*. Washington, D. C.: National Park Service, History Division (1991).
- . *The National Parks: Shaping the System*. Washington, D.C.: National Park Service, Division of Publications (1985)
- . *Visitor Fees in the National Park System: A Legislative and Administrative History*. Washington, D.C.: National Park Service, History Division (1983).
- McLean, J.S. "Factors Affecting the Microclimate in Carlsbad Caverns, New Mexico." Washington, D.C.: United States Geological Survey, Open File Report 761-171 (1976).
- n. a. *Projects Gnome and Sedan: The Plowshare Program*. Washington, D.C.: Nuclear Defense Agency, (1973).
- Morton, Louis. *The War in the Pacific: The Fall of the Philippines*. Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1953.
- National Archives and Records Administration. *Guide to Records in the National Archives: Southwest Region*. Washington, D.C.:
- National Archives and Records Administration (1989). National Park Service. *National Park Service Officials*. Centennial Edition. Washington, D. C.: National Park Service (1972).
- . *General Management Plan, Carlsbad Caverns National Park*. Washington, D.C.: National Park Service.
- . *General Management Plan, Guadalupe Mountains National Park*. Washington, D.C.: National Park Service.
- . *Pine Springs Development Concept Plan: Guadalupe Mountains National Park, Texas*. Washington, D.C.: United States Department of the Interior, National Park Service, Denver Service Center (1975).
- . *Resource Management Plan, Carlsbad Caverns National Park*. Washington, D.C.: National Park Service.
- . *Resource Management Plan, Guadalupe Mountains National Park*. Washington, D.C.: National Park Service.
- Nelson, Edward W. "Bats in Relation to the Production of Guano and the Destruction of Insects." Washington, D.C.: United States Department of Agriculture Bulletin 1395 (March 1926): 1-12.
- "New Mexico Potash, Eddy, N. Mex.: *War Minerals Report 432*." Washington, D.C.: Department of the Interior (1945).
- Oliva, Leo. *Fort Union and the Frontier Army in the Southwest*. Santa Fe: National Park Service, 1993. Southwest Cultural Resources Center, Professional Papers no. 41.
- Paige, John C. *The Civilian Conservation Corps and the National Park Service, 1933-1942: An Administrative History*. Washington, D.C.: National Park Service (1985).
- Records of the Adjutant General's Office (RG 94), National Archives, Washington, D.C.
- Records of the Bureau of Indian Affairs (RG 75), National Archives, Washington, D.C.
- Records of the General Land Office (RG 49), National Archives, Washington, D.C.
- Records of the Geological Survey (RG 57), National Archives, Washington, D.C.

- Records of the Interior Department (RG 48), National Archives, Washington, D.C.
- Records of the Office of the Chief of Engineers (RG 77), National Archives, Washington, D.C.
- Records of the National Park Service (RG 79), National Archives, Washington, D.C.
- Records of the State Department (RG 59), National Archives, Washington, D.C.
- Records of the United States Senate (RG 46), National Archives, Washington, D.C.
- Records of United States Army Continental Commands, 1821-1920 (RG 393), National Archives, Washington, D.C.
- Records of United States Army Continental Commands, 1821-1920 (RG 393, "Other Records of Military Installation, 1835-1920"), National Archives, Washington, D.C.
- Returns from U.S. Military Posts, 1800-1916, Microcopy No. 617, Records of the Adjutant General's Office (RG 94), National Archives, Washington, D.C.
- Gerald, Rex E. "Evaluation of the Impact on Cultural and Historical Resources of a Tramway and of Planned Facilities Development in Specific Areas of Guadalupe Mountains National Park, Texas," Guadalupe Mountains Library, VF 42. Planning Documents (June 1973).
- Guadalupe Mountains National Park. "Kennetech Wind Generation Project." (n.d.), Carlsbad Caverns National Park files.
- Rogers, Edmund B., comp. *History of Legislation Relating to the National Park System Through the 82nd Congress*. 3 volumes. Washington, D.C.: United States Department of the Interior, n.d.
- Sandia Laboratories, *Draft Environmental Impact Statement for Waste Isolation Pilot Plant, Eddy County, New Mexico*. Albuquerque: Sandia Laboratories (1977).
- Scott, Robert N. ed., et al. *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, 70 vols in 127 parts. Washington, D.C.: U.S. Government Printing Office (1880-1901).
- Sebastian, Lynne and Signe Larralde. *Living on the Land: 11,000 Years of Human Habitation in Southeastern New Mexico*. Roswell, NM: Bureau of Land Management, 1989, Cultural Resources Series No. 6.
- Senate Committee on Interior and Insular Affairs, *Guadalupe Mountains National Park, Tex.*, 89th Cong., 2d sess., S. Rept. 1682 (1977).
- Sheridan, Tom. *The Bitter River: A Brief Historical Survey of the Middle Pecos River Basin*. Bureau of Land Management, Roswell District Office, Roswell, N.M. (August 1975).
- Simmons, Alan H., Ann Lucy Weiner Stodder, Douglas D. Dykeman, and Patricia A. Hicks, "Human Adaptation and Cultural Change in the Greater Southwest." Arkansas Archaeological Survey Research Series no. 32. Wrightsville, AR: U.S. Army Corp of Engineers, Southwestern Division (1989)
- Tarr, Ralph S. *Reconnaissance of the Guadalupe Mountains*. Austin, TX: Geological Survey of Texas, (1892).
- Unrau, Harlan D., and G. Frank Williss. *Administrative History: Expansion of the National Park Service in the 1930s*. Denver: National Park Service, Denver Service Center (1983)
- United States. Atomic Energy Commission. "Project Gnome: Part of the U.S. Atomic Energy Commission's Plowshare Program for Peaceful Uses." Albuquerque: Atomic Energy Commission (1961).
- United States. Congress. *Protection of Lechuguilla Cave: Hearing Before the Subcommittee on*

- National Parks, Forests and Public Lands of the Committee on Natural Resources, House of Representatives, 103rd Congress, first sess., on H.R. 698, to Protect Lechuguilla Cave and Other Resources and Values in and adjacent to Carlsbad Caverns National Park. Hearing held in Washington, D.C., March 2, 1993.* Washington, D.C.: Government Printing Office (1993). United States. Department of the Interior. *Exploring the American West, 1803-1879.* Washington, D.C.: Department of the Interior (1982).
- Report on the United States and Mexican Boundary Survey, 2 vols.* NY: C. Wendell (1857-59)
- Reports of Explorations and Surveys to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean.* Washington, D.C.: A.O.P. Nicholson, Printer (1855-1860).
- United States. Department of the Interior. Bureau of Land Management, "Final: Dark Canyon Environmental Impact Statement." Roswell: Bureau of Land Management (1993).
- United States. Department of the Interior. Bureau of Mines. "Mineral Investigation of a Part of the Brokeoff Mountains (NM-030-112) Wilderness Study Area, Otero County, New Mexico, and the Lonesome Ridge (NM-060-801) and a Part of the Devil's Den NM-060-0145) Wilderness Study Areas, Eddy County, New Mexico." Washington, D.C.: Bureau of Mines, (1987), MLA 43-87.
- War Minerals, Report. Texas Mica and Feldspar Co., Culberson and Hudspeth Counties, Tex.* W.M.R. 129. Washington, D.C.: Bureau of Mines (1943).
- United States. Department of the Interior. National Park Service. "Preliminary Planning Session, Guadalupe Mountains National Park, March 15, 1970." Guadalupe Mountains National Park, Vertical Files, Planning Documents 1335.
- Wilderness Recommendation. Guadalupe Mountains National Park. Texas.* Washington, D.C.: National Park Service (1972).
- United States. Senate. Committee on Energy and Natural Resources, *Cave Research Institute Act of 1989, to accompany S. 855, 101st Congress, 1st sess.* (1989).
- Lechuguilla Cave Study Act of 1989, to accompany S. 558, 101st Congress, 1st sess.* (1989).
- Wroth, James S. "Special Features of Core Drilling in the Salt Beds of Western Texas and New Mexico." Bureau of Mines Information Circular 6156. Washington, D.C.: Bureau of Mines (1929).

Newspapers

- Albuquerque Journal (1995)
 Austin American-Statesman (1995)
 Carlsbad Argus (1912)
 Carlsbad Current-Argus (1927)
 Daily Current Argus (1930)
 El Paso Herald (1930-1961)
 El Paso Herald-Post (1963)

El Paso Times (1941-1989)

High Country News (1994)

Hudspeth County Herald (1993)

Las Cruces Sun-News (1989)

Lubbock Avalanche-Journal (1980)

New Mexico Sun (1907)

San Angelo Standard-Times (1966)

Sources

Primary Sources

- Abert, James William. *Western America in 1846-1847; The Original Travel Diary of Lieutenant J.W. Abert, Who Mapped New Mexico for the United States Army*. San Francisco: J. Howell, 1966.
- Bartlett, J.R. *Personal Narrative of Explorations and Incidents in Texas, New Mexico, Californian, Sonora, and Chihuahua, Connected with the United States and Mexican Boundary Commission during the Years 1850, 1851, 1852, and 1853*. NY: D. Appleton and Co., 1854.
- Emory, William H. *Notes of a Military Reconnaissance, from Fort Leavenworth, in Missouri, to San Diego, in California, including parts of the Arkansas, Del Norte and Gila Rivers. By Lieut. Col. W.H. Emory. Made in 1846-47, with the advanced guard of the "Army of the West."* 30th Cong., 1st Sess., House Exec. Doc. 41 (Serial 517). Washington: Wendell and Van Benthuysen, Printers, February 9, 1848. Reprinted as *Lieutenant Emory Reports*, edited by Ross Calvin. Albuquerque: University of New Mexico Press, 1951.
- Pope, John. *Report of Exploration for Route for the Pacific Railroad near the Thirty-Second Parallel of North Latitude from the Red River to the Rio Grande*. Washington, D.C., 1854.

Secondary Sources

- Albright, Horace M. as told to Robert Cahn. *The Birth of the National Park Service: The Founding Years, 1913-1933*. Salt Lake City: Howe Brothers Press, 1985.
- Agnew, S.C. *Garrisons of the Regular U.S. Army: New Mexico, 1846-1899*. Santa Fe, New Mexico: Press of the Territorian, 1971.
- Bailey, L.R. *The Long Walk: A History of the Navajo Wars, 1846-68*. Los Angeles: Westernlore Press, 1964.
- Bailey, Vernon. *Animal Life of the Carlsbad Cavern*. Baltimore: Williams & Wilkins Co., 1928.
- Baker, Richard Alan. *Conservation Politics: The Senate Career of Clinton P. Anderson*. Albuquerque: University of New Mexico Press, 1985.
- Baker, Robert D., Robert S. Maxwell, Victor H. Treat, and Henry C. Dethloff. *Timeless Heritage: A History of the Forest Service in the Southwest*. College Station, TX: Intaglio, Inc., 1988.

- Bancroft, Hubert Howe. *History of Arizona and New Mexico: 1530-1888*. San Francisco: The History Co., Publishers, 1889. Reprinted, Albuquerque, N.M.: Horn and Wallace Press, 1962.
- BaBandelier, Adolph F.A. *Final Report of Investigations Among the Indians of the Southwestern United States*. Cambridge, Mass.: J. Wilson and Sons, 1892.
- Bannon, John Francis. *The Spanish Borderlands Frontier, 1513-1821*. NY: Holt, Reinhart and Winston, 1970.
- Banta, William and J.W. Caldwell. *Twenty-Seven Years on the Texas Frontier*. L.G. Park: Council Hill, OK, 1893.
- Barr, Nevada. *Track of the Cat*. NY: G. P. Putnam's Sons, 1993.
- Belasco, Warren J. *Americans on the Road: From Autocamp to Motel, 1910-1945*. Cambridge, MA: The MIT Press, 1979.
- Barnett, J. *Guadalupe Mountains National Park: Its Story and Scenery*. Carlsbad: Carlsbad Caverns Natural History Association, n.d.
- Bartlett, Richard A. *Great Surveys of the American West*. Norman: University of Oklahoma Press, 1962.
- Bender, Averam Burton. *The March of Empire: Frontier Defense in the Southwest, 1848-1860*. Lawrence: University of Kansas Press, 1952.
- Billington, Ray Allen. *The Far Western Frontier, 1830-1860*. NY: Harper, 1956
- . *Westward Expansion: A History of the American Frontier*. NY: Collier Macmillian Publishers, 1982.
- Bitterli, Urs. *Cultures in Conflict: Encounters Between European and Non-European Cultures, 1492-1800*. Palo Alto: Stanford University Press, 1988.
- Bolton, Herbert Eugene, ed. *The Spanish Borderlands: A Chronicle of Old Florida and the Southwest*. Chronicles of America Series, vol. 23. New Haven: Yale University Press, 1921.
- . *Spanish Exploration in the South-West, 1542-1706*. Original Narratives of Early American History, vol. 2. NY: Scribner's, 1916, 1930.
- Bowden, J.J. *Private Land Claims in the Southwest*, 6 vols. Houston: Privately published, 1969.
- Carnes, Mark C. and John A. Garraty with Patrick Williams. *Mapping America's Past: A Historical Atlas*. NY: Henry Holt, 1996.
- Caro, Robert. *The Years of Lyndon Johnson, Volume I: The Path to Power*. NY: Alfred A. Knopf, 1983.
- . *The Years of Lyndon Johnson Volume II: Means of Ascent*. NY: Alfred A. Knopf, 1990.
- Ceram, C. W. *The First American: A Story of the North American Archaeology*. NY: Harcourt, Brace, Jovanovich, 1971.
- . *Gods, Graves, and Scholars: The Story of Archaeology*. NY: Alfred A. Knopf, 1951.
- Clary, David A. *Timber and the Forest Service*. Lawrence: University Press of Kansas, 1986.
- Comer, Douglas C. *Ritual Ground: Bent's Old Fort, World Formation, and the Annexation of the Southwest*. Berkeley: University of California Press, 1996.
- Conkling, Roscoe P. and Margaret B. Conkling. *The Butterfield Overland Mail, 1857-1869*, v. 1.

- Glendale, CA: The Arthur H. Clark Company, 1947.
- Cordell, Linda S. *Prehistory of the Southwest*. NY: Academic Press, 1984.
- Couffer, Jack. *Bat Bomb: World War II's Other Secret Weapon*. Austin: University of Texas Press, 1992.
- Cox, Thomas R. *The Park Builders: A History of State Parks in the Pacific Northwest*. Seattle: University of Washington Press, 1989.
- Crosby, Alfred W. *Ecological Imperialism: The Biological Expansion of Europe, 900-1900 A.D.* Cambridge: Cambridge University Press, 1986.
- Dary, David. *Cowboy Culture: A Saga of Five Centuries*. NY: Alfred A. Knopf, 1981.
- DeBuys, William. *Enchantment and Exploitation: The Life and Hard Times of a New Mexico Mountain Range*. Albuquerque: University of New Mexico Press, 1986.
- DeVoto, Bernard. *1846: The Year of Decision*. Boston: Little, Brown and Company, 1943.
- Deutsch, Sarah. *No Separate Refuge: Culture, Class, and Gender on an Anglo-Hispanic Frontier in the American Southwest, 1880-1940*. NY: Oxford University Press, 1987.
- Ellis, Richard N. *New Mexico Past and Present*. Albuquerque: University of New Mexico Press, 1971.
- Dilsaver, Lary M. Ed. *America's National Park System: The Critical Documents*. Lanham, MD: Rowman and Littlefield Publishers, 1994.
- Dutton, Bertha Pauline. *Indians of the American Southwest*. NY: Prentice-Hall, 1975.
- Ebright, Malcolm. *Land Grants and Lawsuits in Northern New Mexico*. Albuquerque: University of New Mexico Press, 1994.
- Espinosa, J. Manuel, ed. *First Expedition of Var_as into New Mexico, 1692*. Albuquerque: University of New Mexico Press, 1940.
- Everhart, William C. *The National Park Service*. Praeger Library of U.S. Government Departments and Agencies, No. 31. NY: Praeger Publishers, 1972.
- Fehrenbach, T. R. *Lone Star: A History of Texas and the Texans*. NY: McMillan, 1968.
- Fierman, Floyd S. *Roots and Boots: From Crypto-Jew in New Spain to Community Leader in the American Southwest*. Hoboken, NJ: KTAV Publishing House, 1987.
- Forbes, Jack D. *Apache, Navaho, and Spaniard*. Norman: University of Oklahoma Press, 1960.
- Foresta, Ronald A. *America's National Parks and Their Keepers*. Washington, D.C.: Resources for the Future, 1984.
- Fox, Stephen. *John Muir and His Legacy: The American Conservation Movement*. Madison: University of Wisconsin Press, 1981.
- Frazer, Robert W. *Forts and Supplies: The Role of the Army in the Economy of the Southwest, 1846-1861*. Albuquerque: University of New Mexico Press, 1983.
- , ed. *New Mexico in 1850: A Military View*. Norman: University of Oklahoma Press, 1968.
- García, Mario T. *Desert Immigrants: The Mexicans of El Paso, 1880-1920*. New Haven: Yale University Press, 1981.
- Gerber, Michele S. *On the Homefront: The Cold War Legacy of the Hanford Reservation*. Lincoln:

- University of Nebraska Press, 1992.
- Gilbert, Edmund William. *The Exploration of Western America, 1800-1850; An Historical Geography*. Cambridge (England) University Press, 1933.
- Glassow, Michael A. *Prehistoric Agricultural Development in the Northern Southwest: A Study in Changing Patterns of Land Use*. NY: Ballena Press, 1980.
- Goddard, Pliny Earle. *Indians of the Southwest*. NY: American Museum of Natural History, 1913.
- Goetzmann, William H. *Army Exploration in the American West, 1803-1863*. New Haven: Yale University Press, 1960.
- . *Exploration and Empire: The Explorer and the Scientist in the Winning of the American West*. NY: Alfred A. Knopf, 1966.
- Goldman, Eric. *The Crucial Decade and After: America 1945-1960*. NY: Random House, 1961.
- Gordon-McCutchan, R.C. *Kit Carson: Indian Fighter or Indian Killer?* Niwot: University Press of Colorado, 1996.
- Graves, John. *Goodbye to a River*. NY: Alfred A. Knopf, 1960.
- Gregg, Andy. *Drums of Yesterday: The Forts of New Mexico*. Santa Fe: The Press of the Territorian, 1968.
- Gregg, Josiah. *Commerce of the Prairies*. Norman: University of Oklahoma Press, 1954.
- Griffin, Marcus. *Heroes of Bataan*. Carlsbad, NM: Marcus Griffin, 1946.
- Hackett, Charles W., ed. and trans. *Historical Documents Relating to New Mexico, Neuva Vizcaya and Approaches Thereto, to 1773*. Washington, D.C.: Carnegie Institute. Vol. 1, 1923; Vol. 2, 1926; Vol. 3, 1937.
- Hafen, Le Roy Reuben. *Western America: The Exploration, Settlement, and Development of the Region Beyond the Mississippi*. NY: Prentice-Hall, Inc., 1941, 1947.
- Halberstam, David. *The Fifties*. NY: Fawcett Books, 1994.
- Hales, Peter. *Atomic Spaces: Living on the Manhattan Project*. Urbana: University of Illinois Press, 1997.
- Hall, Thomas D. *Social Change in the Southwest, 1350-1880*. Lawrence: University of Kansas Press, 1989.
- Hammond, George P. and Agapito Rey. *The Rediscovery of New Mexico, 1580-1594*. Coronado Cuarto Centennial Publications, 1540-1940, vol. 3. Albuquerque: University of New Mexico Press, 1966.
- Hansen, Niles M. *The Border Economy: Regional Development in the Southwest*. Austin: University of Texas Press, 1981.
- Hartzog, George B. Jr. *Battling for the National Parks*. Mount Kisco, N.Y.: Moyer Bell Limited, 1988.
- Harvey, Mark W. T. *A Symbol of Wilderness: Echo Park and the American Conservation Movement*. Albuquerque: University of New Mexico Press, 1994.
- Hays, Samuel P. *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920*. Cambridge, MA: Harvard University Press, 1959.
- Hewlett, Richard G. and Jack Holl. *Atoms for Peace and War, 1953-1961: Eisenhower and the*

- Atomic Energy Commission*. Berkeley: University of California Press, 1989.
- Hibbard, Benjamin H. *A History of the Public Land Policy*. Reprint, Madison: University of Wisconsin Press, 1965.
- Hine, Robert. *The American West: An Interpretive History*. Boston: Little, Brown and Company, 1973.
- Hinsley, Curtis M. Jr. *Savages and Scientists: The Smithsonian Institution and the Development of American Anthropology, 1846-1910*. Washington, D. C.: Smithsonian Institution Press, 1981.
- Hope, Jack. *Parks in Peril*. San Francisco: Sierra Club Books, 1972.
- Hummel, Don. *Stealing the National Parks: The Destruction of Concessions and Park Access*. Bellevue, WA: Free Enterprise Press, 1987.
- Hundley, Norris. *The Great Thirst: Californians and Water, 1770s-1990s*. Berkeley: University of California Press, 1993.
- Hunter-Anderson, Rosalind L. *Prehistoric Adaptation in the American Southwest*. Cambridge (England) University Press, 1986.
- Huth, Hans. *Nature and the American: Three Centuries of Changing Attitudes*. Berkeley: University of California Press, 1957.
- Ise, John. *Our National Park Policy: A Critical History*. Baltimore: Johns Hopkins University Press, 1961.
- Jackson, W. Turrentine. *Wagon Roads West: A Study of Federal Road Surveys and Construction in the Trans-Mississippi West, 1846-1869*. New Haven: Yale University Press, 1965.
- Jacobs, John A. *Rage For Justice: The Passion and Politics of Phillip Burton*. Berkeley: University of California Press, 1995.
- Jagnow, David H. and Rebecca Rowher Jagnow. *Stories From Stones: The Geology of the Guadalupe Mountains*. Carlsbad, NM: Carlsbad-Guadalupe Mountains Association, 1992.
- Jakle, John. *The Tourist in Twentieth Century America*. Lincoln: University of Nebraska Press, 1986.
- Jennings, Francis. *The Invasion of America: Indians, Colonialism, and the Cant of Conquest*. NY: W.W. Norton & Company, 1975.
- John, Elizabeth A.H. *Storms Brewed in Other Men's Worlds: The Confrontation of Indians, Spanish, and French in the Southwest, 1540-1795*. College Station: Texas A&M University Press, 1975.
- Jones, Billy Mack. *Health-Seekers of the Southwest, 1817-1900*. Norman: University of Oklahoma Press, 1967.
- Joseph, Alvin M. Jr. *The Civil War in the American West*. NY: Alfred A. Knopf, 1995.
- . *The Civil War in the West*. NY: Vintage Books, 1991.
- Kammen, Michael G. *The Mystic Chords of Memory: The Transformation of Tradition in American Culture*. NY: Knopf, 1991.
- Kasson, John. *Amusing the Millions: Coney Island at the Turn of the Century*. NY: Hill and Wang,

- 1978.
- Keith, Frank and Catherine B. Wren. *The Nuclear Impact: A Case Study of the Plowshare Program to Provide Gas by Underground Nuclear Stimulation in the Rocky Mountains*. Boulder: Westview Press, 1976.
- Kenner, Charles L. *A History of New Mexico-Plains Indian Relations*. Norman: University of Oklahoma Press, 1969.
- Kessell, John L. and Rick Hendricks, eds. *By Force of Arms: The Journals of Don Diego de Vargas, New Mexico 1691-93*. Albuquerque: University of New Mexico Press, 1992.
- Klasner, Lily. *My Girlhood Among Outlaws*. Tucson: University of Arizona Press, 1972.
- Lang, Walter, ed. *The First Overland Mail, Butterfield Trail, St. Louis to San Francisco, 1858-1861*. East Aurora, NY: n.p., 1940.
- Larson, Carole. *Forgotten Frontier: The Story of Southeastern New Mexico*. Albuquerque: University of New Mexico Press, 1993.
- Larson, Robert W. *New Mexico Populism: A Study of Radical Protest in a Western Territory*. Boulder: Colorado Associated University Press, 1974.
- Least-Heat Moon, William. *Blue Highways: A Journey into America*. Boston: Little, Brown and Company, 1982.
- Leckie, William L. *Buffalo Soldiers: A Narrative of Negro Cavalry in the West*. Norman: University of Oklahoma Press, 1967.
- Leuchtenberg, William. *Franklin D. Roosevelt and the New Deal, 1932-1940*. NY: Harper & Row, 1963.
- Long, Abijah and Joe N. Long. *The Big Cave*. Long Beach, CA: Cushman Publications.
- Lowitt, Richard. *The New Deal and the West*. Bloomington: University of Indiana Press, 1984.
- Marx, Leo. *The Machine in the Garden: Technology and the Pastoral Idea in America*. NY: Oxford University Press, 1964.
- McKnight, Cleavey Louis. *Descriptive Geomorphology of the Guadalupe Mountains, Southcentral New Mexico and West Texas*. Waco, Texas: Baylor Geological Studies, Bulletin No. 43, Baylor University, 1986.
- Meinig, D.W. *Southwest: Three Peoples in Geographical Change*. NY: Oxford University Press, 1971.
- Merk, Frederick. *History of the Westward Movement*. NY: Alfred A. Knopf, 1978.
- Merrill, George Perkins. *The First Hundred Years of American Geology*. New Haven: Yale University Press, 1924.
- Montejano, David. *Anglos and Mexicans in the Making of Texas, 1836-1986*. Austin: University of Texas Press, 1987.
- Mostert, Noël. *Frontiers: The Epic of South Africa's Creation and the Tragedy of the Xhosa People*. London: Jonathan Cape, 1992.
- Mullin, Robert N. *Stagecoach Pioneers of the Southwest*. El Paso: Texas Western Press, 1983. Southwestern Studies Monograph No. 71
- Nostrand, Richard L. *The Hispano Homeland*. Norman: University of Oklahoma Press, 1992.

- n.a., *Eddy County, New Mexico, to 1881*. Lubbock, Texas: Southeastern New Mexico Historical Society, 1982.
- n.a., *A History of Potash, Presented in Pictures and Words*. Carlsbad, NM: Potash Company of America, 1945.
- Nash, Gerald. *World War II and the West: Reshaping the Economy*. Lincoln: University of Nebraska Press, 1990.
- Nash, Roderick. *Wilderness and the American Mind*. New Haven: Yale University Press, 1967.
- Nymeyer, Robert and William R. Halliday. *Carlsbad Caverns: The Early Years: A Photographic History of the Cave and Its People*. Carlsbad, NM: Carlsbad Caverns-Guadalupe Mountains Association, 1991.
- Paige, John C. *The Civilian Conservation Corps and the National Park Service, 1933-1942: An Administrative History*. Washington, D.C.: National Park Service, 1985.
- Perlin, John. *A Forest Journey*. Cambridge, MA: Harvard University Press, 1990.
- Petroleum Division, A. I. M. E., *Petroleum Development and Technology in 1927*. NY: American Institute of Mining and Metallurgical Engineers, 1928.
- Pfeffer, F. Louise. *The Closing of the Public Domain*. Palo Alto: Stanford University Press, 1950.
- Pisani, Donald J. *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West*. Berkeley: University of California Press, 1983.
- .To Reclaim a Divided West*. Albuquerque: University of New Mexico Press, 1992.
- . Water, Land, and Law in the West: The Limits of Public Policy, 1850-1920*. Lawrence: University Press of Kansas, 1996.
- Pitt, Leonard. *The Decline of the Californios*. Berkeley: University of California Press, 1964.
- Polenberg, Richard. *Reorganizing Roosevelt's Government: The Controversy Over Executive Reorganization, 1936-1939*. Cambridge: Harvard University Press, 1966.
- Pomeroy, Earl Spencer. *The Territories and the United States, 1861-1890: Studies in Colonial Administration*. Seattle: University of Washington Press, 1969.
- Rae, John. *The Road and the Car*. Cambridge: MIT Press, 1971.
- Reed, S.G. *A History of the Texas Railroads*, NY: Arno Press, 1981.
- Reeve, Frank D. *History of New Mexico*. Two volumes. NY: Lewis Historical Publishing Company, 1961.
- Reisner, Marc. *Cadillac Desert: The American West and its Disappearing Water*. NY: Viking, 1986.
- Richardson, Elmo R. *The Politics of Conservation: Crusades and Controversies, 1897-1913*. Berkeley: University of California Press, 1962.
- Riley, Carroll L. *The Frontier People: The Greater Southwest in the Protohistoric Period*. Albuquerque: University of New Mexico Press, 1987.
- Rinehart Oil News Company. *West Texas-New Mexico Oil*. Tulsa: Rinehart Oil News Company, 1937.
- Rister, Carl Coke. *Oil! Titan of the Southwest*. Norman: University of Oklahoma Press, 1949.

- Robbins, Roy. *Our Landed Heritage*. Lincoln: University of Nebraska Press, 1944.
- Robinson, Joanne. *You're in Your Mother's Arms: The Life and Legacy of Congressman Phil Burton*. San Francisco: Mary Judith Robinson, 1994.
- Rothman, Hal. *Devil's Bargains: Tourism and Transformation in the Twentieth-Century American West*. Lawrence: University Press of Kansas, 1998.
- . *The Greening of a Nation? Environmentalism in the United States Since 1945*. NY: Harcourt Brace, 1997.
- . *On Rims and Ridges: The Los Alamos Area Since 1880*. Lincoln: University of Nebraska Press, 1992.
- . *Preserving Different Pasts: The American National Monuments*. Urbana: University of Illinois Press, 1989.
- Runte, Alfred. *National Parks: The American Experience*. 2d ed. Lincoln: University of Nebraska Press, 1987.
- Russel, Robert Royal. *Improvement of Communication with the Pacific Coast as an Issue in American Politics, 1783-1864*. NY: Torch-Press, 1948.
- Sabin, Edwin L. *Kit Carson Days, 1809-1868: Adventures in the Path of Empire*, rev. ed. Lincoln: University of Nebraska Press, 1995.
- Sale, Kirkpatrick. *Power Shift: The Rise of the Southern Rim and Its Challenge to the Eastern Establishment*. NY: Random House, 1975.
- Sánchez, Joseph P. *The Rio Abajo Frontier 1540-1692: A History of Early Colonial New Mexico*. Albuquerque: Albuquerque History Museum, 1987.
- Sandoz, Mari. *The Cattlemen: From the Rio Grande Across the Far Marias*. NY: Hastings House, 1958.
- Schneider-Hector, Dietmar. *White Sands: The History of a National Monument*. Albuquerque: University of New Mexico Press, 1993.
- Schoolcraft, Henry Rowe. *Information Respecting the History, Condition and Prospects of the Indian Tribes of the United States: Collected and Prepared Under the Direction of the Bureau of Indian Affairs, per act of Congress of March 3d, 1847*. NY: Lippincott, Grambo, 1851-1857.
- Schrepfer, Susan. *The Fight to Save the Redwoods: A History of Environmental Reform, 1917-1978*. Madison: University of Wisconsin Press, 1983.
- Scott, Quinta and Susan Croce Kelly. *Route 66: The Highway and its People*. Norman: University of Oklahoma Press, 1988.
- Sellars, Richard A. *Preserving Nature in the National Parks*. New Haven: Yale University Press, 1997.
- Shankland, Robert. *Steve Mather of the National Parks*, 3d ed. NY: Knopf, 1970.
- Simmons, Marc. *Spanish Government in New Mexico*. Albuquerque: University of New Mexico Press, 1968.
- Skaggs, Jimmy M. *The Great Guano Rush: Entrepreneurs and American Overseas Expansion*. NY: St. Martin's Press, 1994.

- Skiles, Jack. *Judge Roy Bean Country*. Lubbock: Texas Tech University Press, 1996.
- Smithsonian Institution Press. *Archaeological and Historical Perspectives on the Spanish Borderlands West*. Washington, D.C.: Smithsonian Institution Press, 1988.
- Sonnichsen, C. L. *The El Paso Salt War*. El Paso: Texas Western Press, 1961.
- . *The Mescalero Apache*. Norman: University of Oklahoma, 1960.
- Spicer, Edward H. *Cycles of Conquest: The Impact of Spain, Mexico, and the United States on the Indians of the Southwest, 1533-1960*. Tucson: University of Arizona Press, 1962.
- Stanley, F. *The Seven Rivers, New Mexico Story*. Pep, Texas: n.p., June 11, 1963.
- Steen, Harold K. *The United States Forest Service: A History*. Seattle: University of Washington Press, 1976.
- Stegner, Wallace. *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West*. NY: Penguin Books, 1953.
- Stewart, John. *Secret of the Bats: The Exploration of Carlsbad Caverns*. Philadelphia: Westminster Press, 1972.
- Stuart, David E. and Rory P. Gauthier, *Prehistoric New Mexico: Background for Survey*, 2nd ed. Albuquerque: New Mexico Archaeological Council, 1984.
- Sundquist, James. L. *Politics and Policy: The Eisenhower, Kennedy and Johnson Years*. Washington, D.C.: Brookings Institution, 1968.
- Swain, Donald C. *Federal Conservation Policy, 1921-1933*. Berkeley: University of California Press, 1963.
- . *Wilderness Defender: Horace M. Albright and Conservation*. Chicago: University of Chicago Press, 1970.
- Tennant, A. *The Guadalupe Mountains of Texas*. Austin: University of Texas Press, 1980.
- Thomas, Alfred. *The Mescalero Apache, 1653-1874, Apache Indians XI*. NY: Garland Publishing, Inc.: 1974.
- Thomas, David Hurst. *Archaeological and Historical Perspectives on the Spanish Borderlands West*. Washington, D.C.: Smithsonian Institution Press, 1989.
- Trails Illustrated. *Guadalupe Mountains National Park, Texas*. Trails Illustrated, 1990.
- Trimble, Stephen. *The People: Indians of the American Southwest*. Seattle: School of American Research Press; Distributed by University of Washington Press, 1993.
- Turner, Frederick Jackson. *The Frontier in American History*. NY: Holt, 1940.
- Twitchell, Ralph E. *Leading Facts of New Mexican History v 2*. Cedar Rapids, IA: Torch Press, 1911.
- Utley, Robert M. *Billy the Kid: A Short and Violent Life*. Lincoln: University of Nebraska Press, 1989.
- . *Frontier Regulars: The United States Army and the Indian, 1866-1891*. NY: Macmillan Publishing Company, 1973.
- . *Frontiersmen in Blue: The United States Army and the Indian, 1848-1865*. Lincoln: University of Nebraska Press, 1967.

- . *The Lance and the Shield: The Life and Times of Sitting Bull*. NY: Henry Holt, 1993
- Wallace, Edward Secomb. *The Great Reconnaissance: Soldiers, Artists, and Scientists on the Frontier, 1848-1861*. Boston: Little, Brown, 1955.
- Wallis, Michael. *Route 66: The Mother Road*. NY: St. Martin's Press, 1990.
- Weber, David J. *Myth and the History of the Hispanic Southwest: Essays*. Albuquerque: University of New Mexico Press, 1988.
- . *The Mexican Frontier, 1821-1846: The American Southwest Under Mexico*. Albuquerque: University of New Mexico Press, 1982.
- . *The Spanish Frontier in North America*. New Haven: Yale University Press, 1992.
- Weigle, Marta and Peter White. *The Lore of New Mexico*. Albuquerque: University of New Mexico Press, 1988.
- Weinstein, Bernard L. *Regional Growth and Decline in the United States: The Rise of the Sunbelt and the Decline of the Northwest*. NY: Praeger Publishers, 1978.
- West, Elliott. *The Way to the West: Essays on the Central Plains*. Albuquerque: University of New Mexico Press, 1995.
- West Texas Geological Society. *Guadalupe Mountains, Hueco Mountains, Franklin Mountains, Geology of the Carlsbad Caverns, Delaware Basin Exploration, October 31st, November 1st and 2nd, 1968*. Midland, Texas: West Texas Geological Society, 1969.
- . *Guadalupe Mountains, Hueco Mountains, Franklin Mountains, Geology of the Carlsbad Caverns, Delaware Basin Exploration, November 6th, 7th and 8th, 1969*. Supplement. Midland, Texas: West Texas Geological Society, 1970.
- Wheat, Carl Irving. *Mapping the Transmississippi West, 1540-1861*. NY: Institute of Historical Cartography, 1957-1963.
- White, Jim. *The Discovery and History of Carlsbad Caverns*. Carlsbad, NM: Jim White and Charley Lee White, 1940.
- White, Richard. *It's Your Misfortune and None of My Own: A New History of the American West*. Norman: University of Oklahoma Press, 1991.
- . *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815*. Cambridge: Cambridge University Press, 1991.
- . *Roots of Dependency: Subsistence, Environment, and Social Change Among the Choctaws, Pawnees, and Navajos*. Lincoln: University of Nebraska Press, 1983.
- Wiley, Peter. *Empires in the Sun: The Rise of the New American West*. NY: Putnam and Sons, 1982.
- Williams, Jack R. *Indians of the Guadalupes*. Florissant, CO: Carlsbad Caverns Natural History Association, 2d ed.
- Winks, Robin. *Laurence S. Rockefeller*. Washington, D.C.: Island Press, 1997.
- Worster, Donald. *Rivers of Empire: Water, Aridity, and the Growth of the American West*. NY: Pantheon Books, 1985.
- Wright, Lyle H. and Josephine M. Bynum, eds. L. Waterman Ormsby, *The Butterfield Overland Mail*. San Marino, CA: The Henry Huntington Library, 1954.

- Wylie, Rosa Lee. *History of Van Horn and Culberson County, Texas*. Hereford, TX: Pioneer Book Publishers, n.d.
- Yeargin, Daniel. *The Prize: The Epic Quest for Oil, Money, and Power*. NY: Simon and Schuster, 1991.
- Young, Donald A. *The Battle of Bataan*. Jefferson, NC: McFarland & Company, 1992.

Unpublished Sources

- Applegarth, Susan Marjorie. *Prehistoric Utilization of the Environment of the Eastern Slope of the Guadalupe Mountains, Southeastern New Mexico*. Ph.D. diss, University of Wisconsin-Madison, 1976.
- “Background of Wallace Pratt Land Donation: Notes Taken from Land Files at Carlsbad Caverns National Park.” Guadalupe Mountains National Park Library, Vertical Files, Planning Documents, (box not labeled).
- Balgemann, W. H. Sr., “New Mexico’s Guadalupe Mountain Area Noted Years 1535-1977: A Brief Historical Resume of Area,” (unpublished mss., 1979), Carlsbad Caverns Library, Carlsbad Caverns National Park.
- Biggers, Barbara. “An Ethnohistorical Study of the Mescalero Apache in the Guadalupe Mountains,” unpublished paper, Texas Tech University, 1979.
- Bullington, Neal. “Who Discovered Carlsbad Caverns?” (Unpublished typescript, 1968), Carlsbad Caverns National Park.
- Chapman, John F. “Visit of Nephew to Dolph Williams (Williams Ranch), August 31, 1972.” Guadalupe Mountains H2215, Guadalupe Mountains National Park Library.
- Christensen, Ernst. “Memorandum for the Naturalist’s Files.” July 20, 1946, Carlsbad Caverns National Park Library.
- Gilmore, Ben. “Guadalupe Mountains National Park History.” (Unpublished typescript), Vertical File, Guadalupe Mountains National Park.
- Haecker, Charles and Neil C. Mangum, “Historical and Archaeological Investigations of Apache War Sites, Guadalupe Mountains National Park,” (unpublished paper), copy courtesy of National Park Service, Santa Fe.
- Hagerman, Percy. *James John Hagerman: A Sketch of his Life By His Son Percy Hagerman*. The Texas Historical Survey, Student F.E.R.A. Project, 1935. Sponsored by the University of Texas.
- Howard, Jed. “A Carlsbad Chronology.” (July 2, 1987). Carlsbad Public Library.
- Hutson, David. “A Brief History of the Civilian Conservation Corps and Their Local Impact.” (Unpublished manuscript, Carlsbad Caverns National Park Library, 1992).
- Katz, Susana R. “Late Prehistoric Period Environment and Economy of the Southern Guadalupe Mountains, Texas.” Ph.D. diss., University of Kansas, 1978.
- and Paul Katz, “Pecos Past: The Prehistory and History of the Brantley Project Locality,”

- (unpublished report, Bureau of Reclamation, Southwest Regional office, 1985)
- and Paul Katz, "The Prehistory of the Carlsbad Basin, Southeastern New Mexico: Technical Report of Prehistoric Archaeological Investigations in the Brantley Project Locality," (unpublished report, Bureau of Reclamation, Southwest Regional Office, 1985), copy in Artesia Historical Museum, Artesia, New Mexico.
- Lee, Dana W. "The National Geographic Society's Expedition to Carlsbad Caverns, New Mexico March 20 to September 15, 1924 - A Diary and Record of the Expedition." Typescript, Carlsbad Caverns National Park Library.
- McGrath, Jim. "A History of the CCC at Carlsbad Caverns and Rattlesnake Springs." (Unpublished manuscript, Carlsbad Caverns National Park Library, ca. 1990).
- McLean, J.S. "Cave Climate Study, Carlsbad Caverns, New Mexico — A Progress Report." (Unpublished report to Carlsbad Caverns National Park, 1970).
- Meador, J. Tom. "Guano, Guano Miners, and Guano Mines." (Unpublished manuscript). Carlsbad Caverns National Park Library, 1984.
- Mehren, Lawrence Lindsay. *A History of the Mescalero Apache Reservation, 1869-1881*. M.A. thesis, University of Arizona, 1968.
- Monroe, Monte L. "Glenn Biggs and His Crusade for a Guadalupe Mountains National Park." (Unpublished paper, 1992), Vertical File, Box: history general Folder # 1609, Guadalupe Mountains National Park.
- Myers, Lee C., ed. *The Pearl of the Pecos: The story of the Establishment of Eddy, New Mexico and Irrigation on the Lower Pecos River of New Mexico, Compiled from Eddy Newspapers between October 12, 1889 and October 23, 1897* [cq]. Privately published, Carlsbad, New Mexico.
- n. a., "Williams Ranch, First Draft, 1977." Guadalupe Mountains National Park Vertical File.
- "Notes of Interview of February 3, 1968 with Ray V. Davis, by WRH, at Mr. Davis' home." Carlsbad Caverns National Park Library.
- Queen, J.M. "A Discussion and Field Guide to the Geology of Carlsbad Caverns." Unpublished report to Carlsbad Caverns National Park, 1981.
- Résendez, Andrés. *Caught Between Profit and Ritual*. Ph.D. diss., University of Chicago, 1997.
- Rothman, Hal. "The Indians, Deer, and Wolves Seem Here to Have Things Their Own Way: Settlement and Environment in McLean County, Illinois, 1820-1850." (unpublished paper, possession of the author).
- Shaffer, Marguerite S. *See America First*. Ph.D. diss., Harvard University, 1994.
- Standiford, Donald R. "The Development of the Cavern Trail System and Other Visitor Facilities in Carlsbad Caverns." Unpublished manuscript, Carlsbad Caverns National Park Library.
- White's City Gazette and Souvenir Menu, n.d., Carlsbad Caverns Research Library, Carlsbad Caverns National Park.