CULTURAL RESOURCES, ARCHAEOLOGY AND HISTORY OF THE PROPOSED **ORGAN MOUNTAINS-DESERT PEAKS NATIONAL MONUMENT** DOÑA ANA COUNTY, NEW MEXICO

AN EXPLORATION OF SIGNIFICANCE AND RISKS
FOR A NATIONAL TREASURE

JULY 1, 2013

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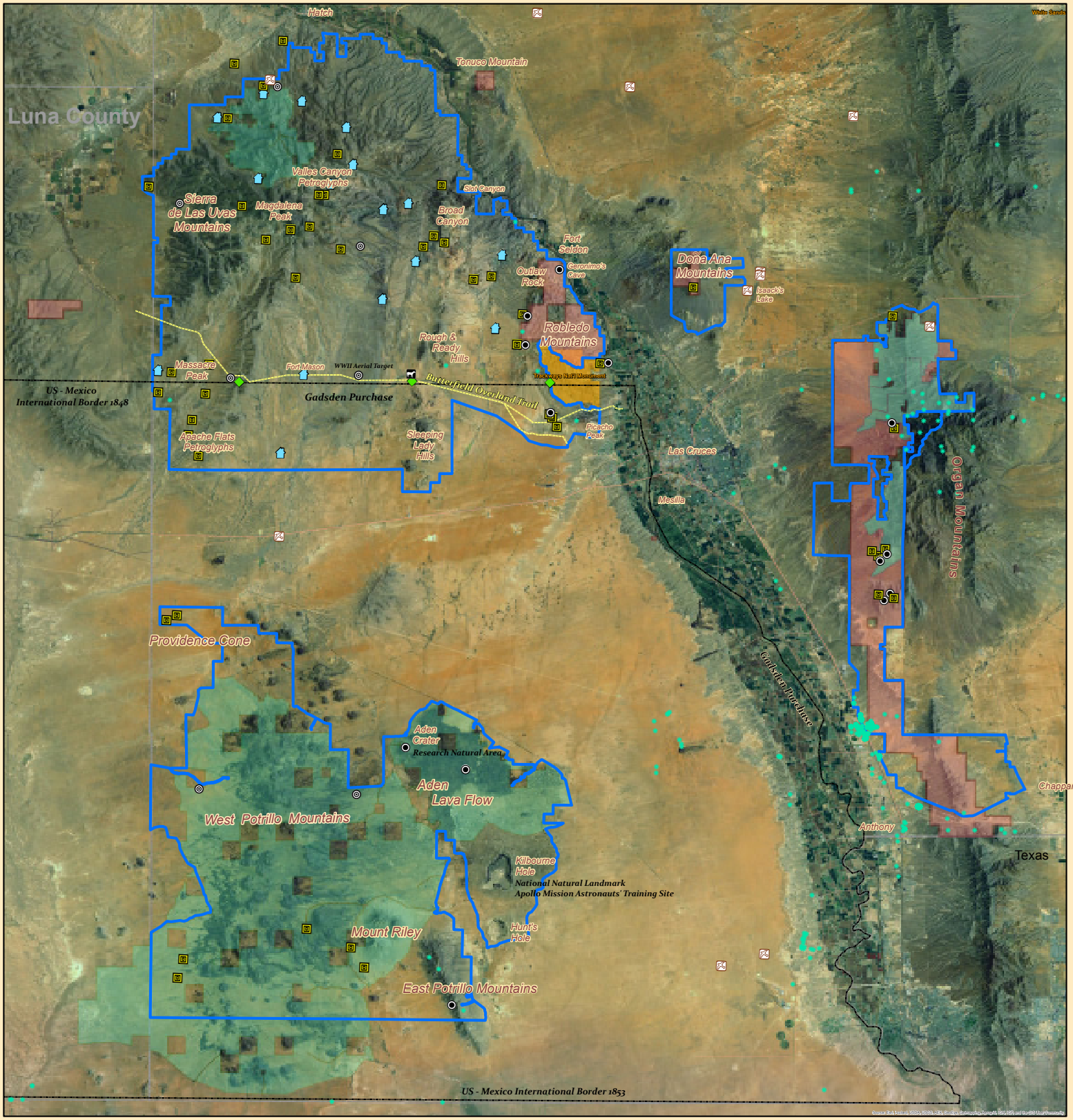
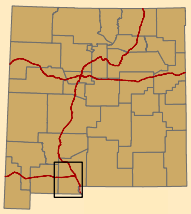
Proposed Organ Mountains - Desert Peaks National Monument





Points of Interest

- Aplomado Falcon Sighting
- Butterfield Stage Stop
- Cave
- Petroglyphs/Archeological Site
- Historic Ranch House Ruin
- Gadsden Purchase Survey Cairn
- Special Status Plant
- WWII Aerial Target

0 1.25 2.5 5 7.5 10 Miles

Legend

- Butterfield Overland Trail
- Gadsden Purchase
- Nat'l Monument Proposed Boundary
- BLM Wilderness Study Area
- Area of Critical Environmental Concern
- County Boundary

Modified January 9, 2013
Produced by L Ulving of NM Wilderness Alliance
Sources: NM BLM, BLM Geocommunicator,
RGIS, NMWA, Senator Bingaman's Office, ESRI Online Maps
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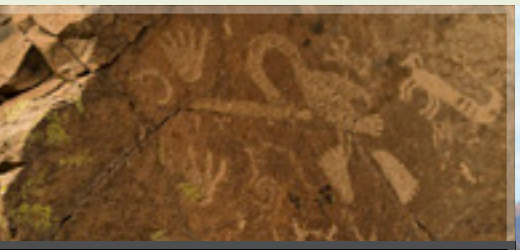
Organ Mountains-Desert Peaks National Monument



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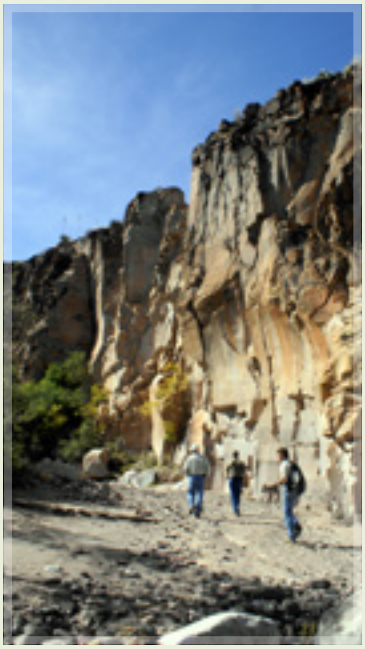


Executive Summary

An abundance of unique and outstanding natural and cultural resources make the proposed Organ Mountains-Desert Peaks National Monument a national treasure.

Among the most important historic and cultural features are:

» Spectacular prehistoric rock art carved and painted onto the cliffs in styles unknown elsewhere;

» Ancient archaeological sites showing up to ten thousand years of human occupation;

» Twenty two miles of the historic Butterfield Stagecoach Trail and at least one partially preserved stage stop by the Rough and Ready Hills;

» Sites related to the Apache wars and the last days of Chief Geronimo's battles with the U.S. Army, including a well-known site locally known as "Geronimo's Cave;"

» Locations where the infamous Billy the Kid attempted to remain hidden from his pursuers, including "Outlaw Rock" where Billy the Kid's inscription is still visible;

» Maar volcanic crater designated in 1975 as a National Natural Landmark, used in Apollo Space Missions 12–17;

» World War II Aerial Targets used by Deming Air Base preparing for World War II;

» Gadsden Purchase International Boundary; and

» Historic locations of Spanish settlement and Anglo ranching.

The resources represented in the Organ Mountains-Desert Peaks area are ideal for enhancing the public values of

» Historic and Environmental Protection
» Heritage Interpretation
» Recreation
» Economic Development and Tourism
» Education
» Cultural Preservation

The threats to these remarkable cultural materials are tremendous, and are increasing every day. The threats come as much from inadvertent destruction and lack of knowledge as from outright looting and treasure hunting. Protection of this region will allow the people of southern New Mexico and all Americans to benefit from the special heritage of this area and from the recreational and economic rewards deriving from that heritage.

Introduction

If you could do only one thing for your country, what would it be? The answers are as varied as individual Americans. They might cite service in time of war, service as an elected official for the people, service as an educator, a public servant, or a visionary entrepreneur. At this moment, our Congressional delegation and our Chief Executive in the White House have the chance to do something that encompasses all these actions and roles, something that goes beyond the present to encompass the past, present and future of a highly diverse and culturally rich nation.

While there is no "right answer" to the question above, the document you have before you demonstrates how a single act, establishing the Organ Mountains-Desert Peaks National Monument for coming generations of Americans, will achieve this all-encompassing service. As you read the different sections of this paper, you can engage with this amazing region at the level of an ordinary American exploring our history. At the same time, you will access detailed facts and expert interpretations allowing an understanding that protecting the Organ Mountains-Desert Peaks is truly a once-in-a-lifetime opportunity to perform an enduring service to the nation. This document is intended to serve as both a resource for decision making and an educational tool to better understand this American treasure.

What is the Organ Mountains-Desert Peaks region like? It is a place that defies simple description. In the south-central portion of New Mexico, bordering the lifeline of the Rio Grande, a series of mountain ranges and low peaks form a distinctive and starkly beautiful ecological and historical region within the western United States. Geographically, the region is part of the "basin and range" topography of the Northern Chihuahuan Desert ecozone. Historically and archaeologically, it is an area with outstanding potential for understanding peoples of the past.

The Organ Mountains and other peaks in the project area represent islands of resource diversity in the Chihuahuan desert environment—they are remote and, at the same time, vulnerable, given current land use and the pace of population expansion and modern development. The current of human history in south-central New Mexico is deep and represents a profound source of knowledge about how humans have dealt with aridity, resource scarcity, and climate change over a long span of time. The development of culture in this area followed a unique trajectory, connected with, but often very different from, the better known ancient cultures of the Southwest.

The Proposed Organ Mountains-Desert Peaks National Monument includes:

ORGAN MOUNTAINS

The crown jewel of the southern Rockies, this mountain range creates the dramatic backdrop for Las Cruces and Doña Ana County.

ROBLEDO MOUNTAINS

Named after famed Spanish soldier Pedro Robledo, these mountains housed both Billy the Kid and Geronimo in the mid 19th century and includes the Paleozoic Trackways National Monument.

SIERRA DE LAS UVAS MOUNTAINS

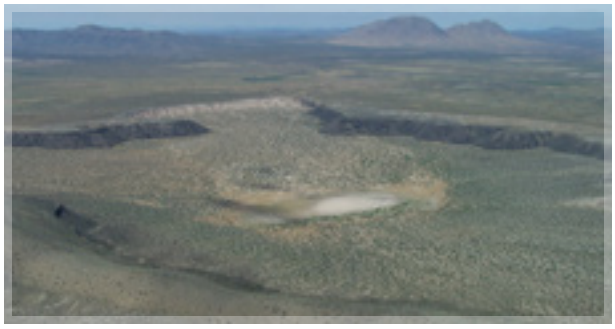
This large diverse mountain range includes historic sites such the Butterfield Stagecoach Trail, Geronimo's Cave, and petroglyph-lined canyons of Valles and Broad Canyons.

POTRILLO MOUNTAINS

The largest Wilderness Study Area in New Mexico, the Potrillo Mountains are part of the Potrillo Volcanic Field. The Potrillo Volcanic Field has more than 150 cinder cones, five maar craters including Kilbourne and Hunts Holes, and lava flows. The Potrillo Mountains are adjacent to the Mount Riley Wilderness Study Area, as well as Mount Cox and the East Potrillo Mountains.

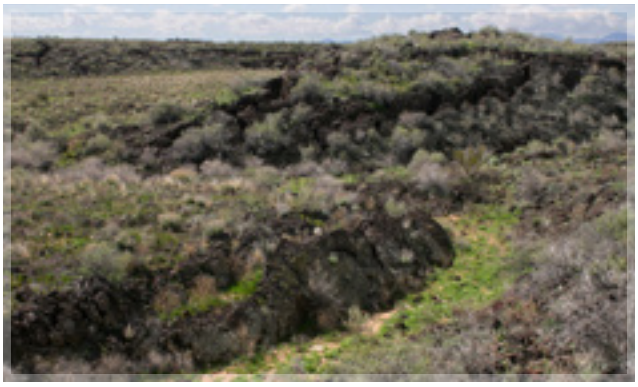
KILBOURNE HOLE

Designated as a National Natural Landmark in 1974, Kilbourne Hole is an exceptional globally famous mile-wide volcanic maar crater thought to be 80,000 years old. This rare geologic wonder was also used by the Apollo 12-17 missions to train astronauts for a lunar environment. This site is also near Hunt's Hole, a smaller crater also included in the Organ Mountains-Desert Peaks National Monument proposal.



ADEN LAVA FLOW

Located between Kilbourne Hole and Aden Crater, the Aden Lava Flow was created from lava flowing from nearby Aden Crater. This area offers one of the best opportunities in the continental United States to view lava flows and the many unique shapes and structures created by them.



ADEN CRATER

Aden Crater is a football field sized crater that lies in the northern part of the Potrillo Volcanic Field. Known for its other worldly feel created by ancient lava flows, Aden Crater also has fumeroles (volcanic vents), in which one was found to contain a deep chamber with the remains of a giant ground sloth. The sloth remains are now located in the Peabody Museum.

TYPES OF HISTORICAL SITES IN THE PROJECT AREA

Detailed analysis of the archaeological and historical record of the proposed Organ Mountains-Desert Peaks National Monument has revealed many kinds of unique sites within the proposal area. Some of them include:

» Rock art petroglyph and pictograph panels on exposed rocks and cliffs

» Butterfield Stagecoach Trail and stops, and other wagon roads used by early Spanish and Anglo settlements

» Military Forts used to protect settlers and travelers alike

» Mountain hide-outs for well known figures including Billy the Kid and Geronimo

» Camp sites of early Native Americans

» Quarries for prehistoric people gathering stone for tools and weapons

» Hunting blinds, where ancient peoples observed and ambushed game

» Villages of Native American pithouses and small farm plots

» Sacred locations for Native Americans

» Corrals and pens made by early shepherds and cattle herders

» Rock shelters used from the time of the earliest human inhabitants up to the Indian Wars

ROCK ART: PETROGLYPHS AND PICTOGRAPHS

The proposed Organ Mountains-Desert Peaks National Monument possesses a nationally significant repository of Native American "rock art." Comprised of petroglyphs and pictographs, the rock art in the Organ Mountains-Desert Peaks region spans many thousands of years from the Archaic period up to the nineteenth century. Certain pictograph and petroglyph styles show clear connections with the cultural expressions of the Mimbres area to the west and the Jornada Mogollon area to the east. Some motifs are clearly related to the historic Apache bands who resided here. While rock art can be found in almost every part of the Organ Mountains-Desert Peaks region, it is most prevalent in the Sierra de las Uvas Mountains.

BUTTERFIELD STAGECOACH TRAIL

In 1857 Congress authorized the establishment of America's first overland mail and passenger service. The contract was won by John Butterfield and his partners in what became known as the Overland Mail Company. The Butterfield Trail was the route used for this service, and ran from St. Louis to San Francisco. Entering New Mexico at El Paso, it followed the Rio Grande north to Mesilla, then westward across the foothills of the Sierra de las Uvas Mountains in a southern curve across desert wilderness to California. In 2012, the National Park Service began a process to consider recommending designation of the Butterfield Trail as a National Historic Trail. There are twenty-two miles of the Butterfield Trail within the proposed Organ Mountains-Desert Peaks National Monument, as well as a semi-preserved stage stop near the Rough and Ready Hills.

BILLY THE KID

William H. Bonney, later nicknamed Billy the Kid, is perhaps the most famous outlaw ever to occupy New Mexico. Bonney's time in New Mexico, and specifically in modern day Southeast New Mexico, corresponded with an era of lawless violence often referred to as the Lincoln County War. To some, he was considered a "thieving, murderous, little cowboy-gone-bad." To others, Bonney had an almost heroic status, respecting the native Mexican culture and people while fighting the law. In 1880, he left his mark quite literally in the Organ Mountains-Desert Peaks region when, along with friends Tom O'Folliard, Charles Bowdre, Dave Rudabaugh, and Tom O'Keefe, he holed up in the Robledo Mountains to keep an eye on Fort Seldon below. Bonney famously inscribed his name on the mountain in an area now known as "Outlaw Rock." Bonney's signature is still visible on Outlaw Rock today.

GERONIMO

During much of the 1800's, the U.S.–Mexico border region was a battleground between the Apaches and Spain, Mexico and the United States. Well-known Apache leaders like Victorio and Geronimo are believed to have been active in the Organ Mountains-Desert Peaks region. It was thought by many that Geronimo was a shaman who had supernatural powers. One such incident added to this mystique. As the legend goes, Geronimo and his followers entered a cave in the Robledo Mountains to avoid capture. The U.S. soldiers waited outside the cave entrance for him, but though he escaped, they never saw him leave. A secret exit has never been found.

APOLLO SPACE MISSION TRAINING SITE AT KILBOURNE HOLE

Kilbourne Hole, a rare 80,000 year old maar volcanic crater was used to train astronauts for the lunar environment on Apollo Missions 12–17. This mile wide crater, established as a National Natural Historic Landmark in 1975, became a valuable national training site due to its geology and moon like terrain.

WORLD WAR II AERIAL TARGETS

If you fly over the proposed Organ Mountain-Desert Peaks National Monument, you may be treated to a surprising sight: giant targets built with bladed soil rise out of the Chihuahuan Desert, resembling bullseyes or alien crop circles. They are remnants of a former regional air base and pilot training program essential to helping America win World War II. In 1942, twenty-four targets were built and used extensively by pilots at the Deming Air Base until the mid-1940's. Seven of the targets were built in the Organ Mountains-Desert Peaks region. Each target consisted of four concentric rings, the outermost being 1000 feet in diameter, with a wooden shack resembling a pyramid at the center. Nighttime targets required generators to power a string of lights that formed a large crosshair on the ground. Some of the targets had outlines to simulate the appearance of ships or buildings from the air. The concentric circles were constructed by scraping a shallow, cleared furrow on the ground,

sometimes leaving a ring of displaced rocks around the perimeter. Several of the World War II Aerial Target are visible today in the Organ Mountains-Desert Peaks region.

EL CAMINO REAL DE TIERRA ADENTRO

The Spanish explored and colonized the Americas by following established native paths connecting indigenous villages for hundreds and even thousands of years. What was to become known as El Camino Real de Tierra Adentro, "The Royal Road of the Interior," originally united the Spanish capital of Mexico City with the rich mining districts surrounding Zacatecas and Ciudad Chihuahua. The best-preserved length of the actual El Camino Real lies just northeast of the Robledo Mountains in the Organ Mountains-Desert Peaks region, in an area known as the Jornada del Muerto or "the Journey of the Dead Man." The El Camino Real de Tierra Adentro remained in use up until 1881, when the railroad's arrival ushered in a new era of transportation..

GADSDEN PURCHASE INTERNATIONAL BOUNDARY

An alignment of rock cairns situated within the proposed Organ Mountains – Desert Peaks National Monument boundary demarcates one of the most peculiar and important federal land procurements in United States history. The rocks marking the Gadsden Purchase settled years of controversy resulting from the inaccuracies of the official map of the United States cited in the Treaty of Guadalupe-Hidalgo. Upon discovering the error in the Disturnell map which was used to negotiate the Treaty and end the Mexican-American war, new negotiations were initiated that led to America purchasing additional land from Mexico. The Gadsden Purchase of 1853 gave the lower continental United States its final form.

Why Protect?

From the time of the first national parks and monuments, the American people have recognized the value of protecting our country's rich history and unique landscapes to preserve the nation's cultural heritage, natural environment, and national identity. The proposed Organ Mountains–Desert Peaks National Monument is clearly so unique in the cultural resources it contains, so fragile in its largely unprotected state, and so vast in its diversity of resources that protection is the best option.

When considering the need for protection and long-term planning for archeologically and historically rich public lands, it is important to recognize how the remains of past human societies are intimately connected with the natural resources of a given area. This happens in two ways:

1. The fragile and often elusive remains of ancient sites are embedded in the landscape as very delicate deposits, easily overlooked or damaged by foot and road traffic;

2. Ancient inhabitants and historic peoples, both Native American and Euroamerican, were heavily dependent on their surrounding landscape to make life possible. Both ancient and more recent historic sites are located in a meaningful arrangement within the natural environment, reflecting their function and their access to certain critical natural resources at different times.

Taking a moment to consider the deeper implication of Point 2 above, we can see that any scholarly research, as well as any attempt to interpret the human past for the public, must automatically take a broad, landscape-level approach to understanding past human activities. Though this notion has become a cliché for professional archaeologists, it is a relatively new idea for the public: ancient artifacts or even historical relics yield very little information when they are studied as isolated objects, out of context from their original locations and use within the larger landscape. Planning for appropriate future uses and protection of America's incomparable treasures such as the proposed Organ Mountains-Desert Peaks National Monument, we must consider the fate of archaeological sites and historic places reflecting our broader cultural heritage, given that they are so fragile, so intimately linked to natural resources, and so sensitive to natural- and human-caused degradation.

THE ORGAN MOUNTAINS-DESERT PEAKS REGION: A TIGHTLY WOVEN FABRIC OF HISTORIC SITES, PROPERTIES AND RECORDS

The proposed Organ Mountains-Desert Peaks National Monument is no less rich in historic period resources than in archaeological resources. As is possible with no other type of cultural resource, the tangible, highly visible nature of historic structures and features such as petroglyphs and trails helps capture the public imagination. This makes them especially successful sites for preservation efforts, because people can see and feel how these resources affect their daily lives. This same high-profile visibility, however, makes historic structures and features particularly vulnerable to poorly-planned development and uninformed use.

Resources belonging to the historic period are especially important for telling, at a regional level, the story of the American nation as a whole. Generations of Native, Spanish, and Anglo occupation, with their varying impacts on the culture, landscape, and social development of southern New Mexico, played out a narrative that is part of the larger history of the U.S. Regional history clearly illustrates the bigger picture, wherein the U.S. has grappled with universal themes of cultural conflict, debates about race, religion, and ethnicity, and struggles for equity and inclusiveness in an inequitable social environment in the course of its development.

How Do We Protect These Places?

Our public officials face the decision whether or not to protect the Organ Mountains-Desert Peaks region. But more difficult is deciding how multiple public requirements can be accommodated in choosing a management status for this land. This decision should take into consideration the following factors:

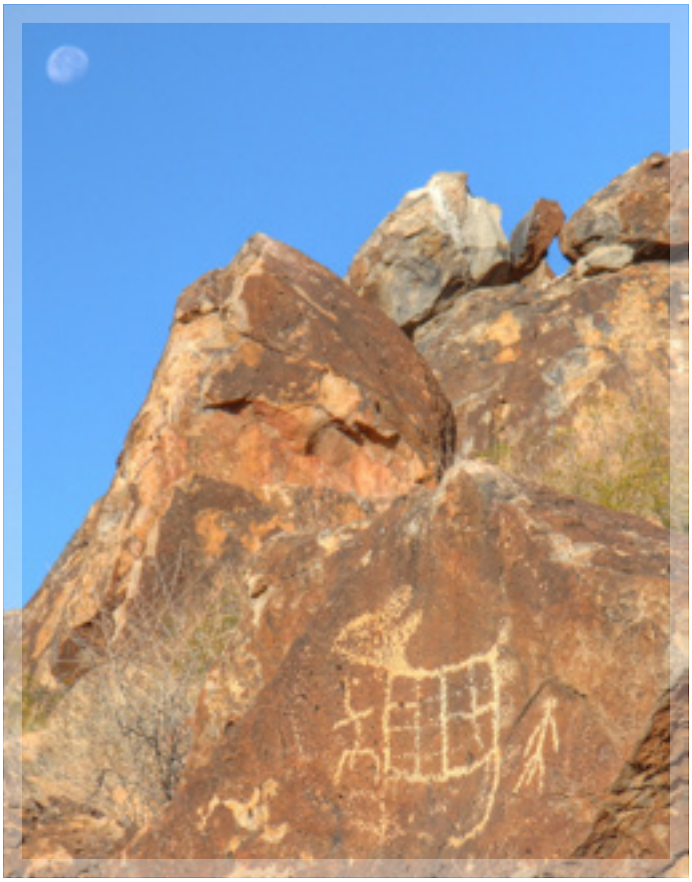
» The cultural resources within the proposed Organ Mountains-Desert Peaks National Monument are unique and nationally significant

» The cultural resources within this desert environment are unusually fragile

» The resources contained within the proposed Organ Mountains-Desert Peaks National Monument are vulnerable to extraction and development by the public

» Public education and recreation are the uses most compatible with the urgent need to protect and preserve cultural resources, history, and sacred traditional places

For all these reasons, from the professional perspective of archaeologists and historians, the creation of a national monument is an ideal way to manage the Organ Mountains-Desert Peaks region. A monument is open to all citizens for particular uses, yet affords a high level of protection to the irreplaceable cultural resources within the area. Federal land managers will thus have the right tools at their disposal to create a balance, consistent with American views on public lands, between usage and protection.



The Human Tapestry

Humans have lived in this part of southern New Mexico for at least ten thousand years, and there are sites from all time periods present in the proposed Organ Mountains-Desert Peaks National Monument. The research potential exists to study known sites and discover many new ones that contain:

» Exquisitely flaked Paleoindian spear points from the earliest times of human habitation

» Carved petroglyphs and painted pictographs on exposed rock faces, with geometric, animal and mythological images

» Caves and rock shelters containing stone tools and remnants of perishable objects such as woven sandals and baskets from the Archaic period, before people began farming

» Occupation sites from the Mogollon period, when people began farming, living in pithouse villages, and making fired pottery

» Remnants of Apache camps and hiding places from the tumultuous period of the Indian Wars

» Remains of Spanish and Anglo farming and ranching efforts in now-dry watersheds

The Superior Quality Of The Archaeological Record

Ancient peoples in the south-central region of what is now New Mexico interacted with the better-known cultures, but were different in many ways from any of them. Current knowledge indicates that the Organ Mountains-Desert Peaks region was a fertile ground for cross-cultural exchange. There is reason to believe ancient inhabitants were in contact with:

» Northern Mexico,
» the Mimbres Culture to the west,
» the Zuni and Chaco Canyon areas to the north, and
» the Jornada Mogollon (Mug-ee-yóne) Culture to the east.

The scientific knowledge waiting to be uncovered is immense and cannot be found anywhere else in New Mexico. The fact that the region has not yet been studied to the level that allows us to understand fully how south-central New Mexico fits into the larger picture of prehistoric and historic land use within the Greater Southwest makes it especially important and especially vulnerable to poor planning or destructive forces.

A review of the data available for this region shows how important cultural resources are in this desert wilderness. More than 20 discrete areas of significant rock art have been identified on the exposed volcanic and sedimentary rocks in the proposed monument. These include:

» At least 15 areas within the Sierra de las Uvas Mountains;
» Multiple locations in the Providence Cone area, which is as yet poorly explored;
» At least one area in the southern Organ Mountains, with much more territory unexplored;
» Four or more rock art sites in the Doña Ana Mountains, with much land still undocumented;
» At least nine rock art locations in other parts of the Organ Mountains-Desert Peaks region.

The archaeological record also includes:

» Open-air and rock shelter sites indicating that Archaic (pre-pottery and pre-bow-and-arrow) gatherers and hunters used these low mountain areas as an important source of food and tool-making materials;
» Sites from the later farming peoples, known as the Mogollon (Mug-ee-yóne), who ventured into the mountains for hunting, quarrying stone, and gathering important materials for medicines or tool-making;
» Late Historic sites that may be associated with the Apache Wars; it is known that famous chief Geronimo and his fighters took refuge in the Robledo Mountains, likely using some of the same rock shelters that their forebears had occupied millennia earlier;
» Remnants of the Camino Real, the “Royal Road” from Spanish Colonial Mexico northward to Santa Fe and beyond;
» Traces of the famous Butterfield Stagecoach Route that helped connect the young U.S. with its Pacific coast.

To understand the vastness of the archaeological material waiting to be studied and protected, the following points are important:

» Only a handful of formal archaeological surveys have been conducted in the project area;
» The existing surveys account for less than 5% of the total land base;
» Even with this tiny amount of archaeological survey, there are approximately 243 known archaeological sites;
» Based on the statistics above, professional archaeologists could conclude that the true density of sites in the proposed Organ Mountains-Desert Peaks National Monument could be as much as one site for every 123.5 acres, or almost 5000 sites.

Rock Art: A Fragile Treasure of Petroglyphs And Pictographs

SOME IMPORTANT STATISTICS

» Approx. 600,000 = NUMBER OF ACRES IN THIS SPECIAL AREA;

» 22 = NUMBER OF KNOWN ROCK ART AREAS—that's areas, not individual motifs, which number in the tens of thousands;

» 243 = MINIMUM NUMBER OF ARCHAEOLOGICAL SITES KNOWN AT THIS TIME;

» Less than 5% = PORTION OF ORGAN MOUNTAINS-DESERT PEAKS REGION SURVEYED FOR ARCHAEOLOGY TO DATE—That means at least 1 site for every 123.5 acres of land, so we can expect almost

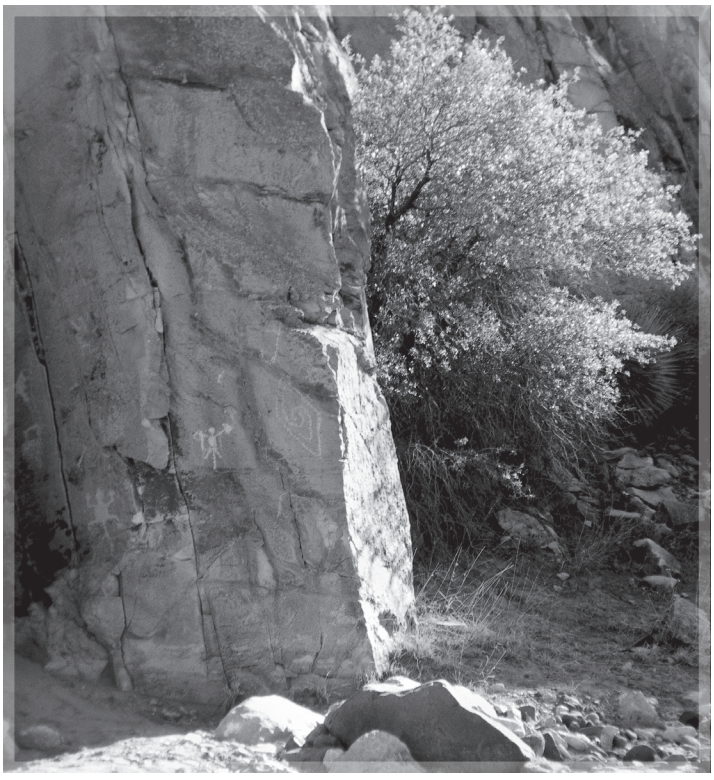
» 5000 = ROCK ART PANELS, ARCHAEOLOGY SITES, AND HISTORIC LOCATIONS IN THE ORGAN MOUNTAINS/DESERT PEAKS!

A visual count of known archaeological sites within the Organ Mountains alone yields a total of at least 70 sites. In the total area of wild lands that surround the Organ Mountains, the Sierra de las Uvas, the two Potrillo ranges, the Doña Ana Mountains, and the Robledos, there could easily be over five thousand archaeological sites, most of which have not been recorded or studied yet.

This large quantity of sites includes numerous rock art sites, some of which represent art styles unknown elsewhere in New Mexico. Rock art is especially vulnerable to degradation from natural forces and deliberate destruction. Most research to date has been conducted by avocational archaeologists, who study the pictographs and petroglyphs on their own time with little or no financial backing. Their work, coupled with that of professional specialists, shows that rock art in the Organ Mountains-Desert Peaks region spans multiple time periods from at least the Archaic up to the nineteenth century. Painted designs that seem to be connected to an art style of northern Chihuahua, Mexico are spread across the southern part of the state, including the project area. Other pictograph and petroglyph styles show clear connections with the cultural expressions of the Mimbres area to the west and the Jornada Mogollon area to the east. Some motifs are clearly related to the historic Apache bands who roamed here. Rock art is notoriously difficult to date and even more tricky to interpret; it is, therefore, imperative to preserve as many rock art sites as possible to increase the available data and to avoid obscuring important cross-cultural connections by destruction of the relevant designs.

Well-known rock art expert Polly Schaafsma recently discussed the dense but still poorly documented rock art of the Organ Mountains-Desert Peaks region. She says:

"The rock art of this area is extraordinarily important to our understanding of prehistoric life. This is partly because it forms a direct connection between the prehistoric mythology and religion of southern New Mexico with the modern Pueblo and Apache worlds. The Pueblo people today are direct descendants of the prehistoric inhabitants of New Mexico, and their religious iconography is reflected in the rock art of this area. This great cultural legacy thus has validity for people today, not just as a scientific database. Rock art conveyed important aspects of a religious belief system and associated mythology, and it's so valuable as a reflection of the time-depth of religious beliefs still held by Native Americans. It is incredibly important that rock art be preserved as part of complete, intact landscapes because it has direct connections with the archaeological sites—neither can be fully understood without the other. Vandalism is so common, and must be stopped before we lose these irreplaceable connections with the ancestral Puebloans and Athapaskans."



The Promise–and the Dangers–For Archaeology and History

The abundant, spectacular natural resources of the proposed Organ Mountains-Desert Peaks National Monument mark its clear prominence as a set of landscapes worthy of special protection and careful planning for appropriate uses. It is the unparalleled cultural resources of this region, however, that make protection particularly crucial. From an examination of the interpretive and research potential of heritage resources, it is easy to see how the proposed monument exemplify a suite of important public values. These values have gained acceptance across the political and social spectrum of the United States in large measure because they reflect the deeper principles on which the American republic is based. These values include:

1. Historic and Environmental Protection
2. Heritage Interpretation
3. Recreation
4. Economic Development and Tourism
5. Education
6. Community Pride
7. Cultural Preservation

New Mexico has never been better poised to enjoy the benefits of economic development through environmental and heritage tourism. Over the centuries, El Camino Real de Tierra Adentro has left a timeless, immeasurable, and indelible impression. It shapes regional life, traditions, and customs for those who traveled its path, for those who were already here, old-timers, newcomers, their descendants, and future visitors. Indeed, the living cultural corridor dotted by El Camino Real communities continues to thrive today. Protecting the Organ Mountains-Desert Peaks region as a National Monument will allow visitors and future generations to re-trace El Camino Real and its environs and to experience the natural bounty of its historic bosques and woodlands. The current effort to protect the Organ Mountains–Desert Peaks region augments and strengthens similar endeavors to encourage international visitation by promoting El Camino Real de Tierra Adentro and the Butterfield Trail through signage and events; and to tell the region's many stories from as many different vantage points as possible.

The superlative quality of known and yet unknown cultural materials in this region, from the oldest to the most recent historic periods, gives them a high potential to fulfill the public value of education and interpretation to all citizens. Most of our public lands have been established largely because of this potential, as this is a quality that persists through time regardless of various recreational and economic uses for public lands.

The value of economic development is potentially very high for the proposed Organ Mountains-Desert Peaks National Monument as the rich history, archeological sites, and ecological diversity of the region make heritage tourism a strong and viable economic option for local communities. In addition, the health and educational benefits of public recreation are strongly supported by the capacity of a national monument to allow multiple uses. Proper interpretation of, coupled with strong protections for, the dense numbers of archaeological sites can only enhance the recreation value of this region for local people and for visitors who come to enjoy and spend money.

Finally, there is a public value to the cultural resources of the proposed Organ Mountains-Desert Peaks National Monument that is more abstract, but no less significant. This has to do with our local population's sense of pride in its home place and its spectacular and diverse cultural heritage. Whether looking to the Native American past, the strong Spanish colonial presence, or the independent, hardy ranching period and the rollicking, colorful "Wild West" of latter times, our diverse southern New Mexico population will find both a source of knowledge and a direct connection with human history in the Organ Mountains-Desert Peaks region.

Tribes such as the Apache and Piro Mansa will have the capacity to identify important ancestral places within the region and to know that such places will be preserved and protected. Descendants of Spanish colonists and later ranchers and farmers will find in the proposed Organ Mountains-Desert Peaks National Monument a deeper understanding of what inventiveness was required to make the leap from a European-style existence to this harshly beautiful environment. This value of public pride is a source of greater community cohesion and promotes careful consideration of the different uses to which public land is put now and in the future.

As we consider the very significant values that can be attached to cultural resources within the proposed monument, it is imperative to recognize and plan for the various threats that exist to those resources. Unknowing and even deliberate destruction of cultural materials occurs on a large scale every day in New Mexico. The building of new roads, expansion of resource extraction efforts, and unregulated off-road recreation all pose major threats to the physical remains of past cultures. In addition, there is a widespread lack of public education about why thoughtless or unscientific collecting of artifacts actually harms the archaeological record.

As part of its public service mandate, a national monument would naturally have a strong educational component and would also make it possible for visitors to have contact with cultural materials in an appropriate setting, thus satisfying our natural desire to experience the excitement of archaeology and history firsthand. Because cultural heritage in south-central New Mexico is under direct threat every day, whether inadvertently or through knowing abuse, there is great urgency for us to find a solution for the Organ Mountains-Desert Peaks region that provides the greatest benefit to the greatest number of citizens. "Knowledge is power," they say, and protecting the resources within the Organ Mountains-Desert Peaks could be a powerful means of enhancing this region of the state.

APPENDIX 1:
THE SPAN OF HUMAN OCCUPATION IN THE PROPOSED ORGAN MOUNTAINS-DESERT PEAKS NATIONAL MONUMENT

To get a quick snapshot of the sequence of human history in the proposed Organ Mountains-Desert Peaks National Monument, it is helpful to look at the chronologies painstakingly developed by archaeologists. Scholars have developed these chronologies through comparing the stone tools, pottery, and architecture of ancient people as these material objects changed through time. Once a researcher has grasped the sequence of material culture items being used in a certain site or group of sites, it becomes possible to compare them with other sites in other areas to see which sites are contemporary with one another. By looking at both the changes in material culture as one goes deeper into the ground or across space, and by using chemical and physical dating techniques such as radiocarbon dating wherever possible, one can begin to get a picture of human occupation through time.

PALEOINDIAN PERIOD:
THE EARLIEST AMERICANS AND THEIR UNSURPASSED STONE TOOL TECHNOLOGY

For many decades, it has been known that humans occupied parts of New Mexico and the entire Western Hemisphere, for at least ten thousand years. In our state, we can point to numerous sites, including a few in the proposed Organ Mountains-Desert Peaks National Monument, which date to the Paleoindian Period (~10,000 years ago). More recent research across the hemisphere, however, is beginning to make it clear that there may have been people in the New World even before the ten-thousand year mark. We may one day be able to point to sites of this kind in New Mexico, though they have not yet been identified.

The Paleoindian lifestyle involved moving frequently across the land, gathering wild plants and hunting animals including the now-extinct megafauna of the late Glacial Period, such as mammoths and giant bison. In south-central New Mexico, the few Paleoindian sites currently known include the Cruz Tarin Site in the Uvas Valley (Kirkpatrick et al., 2000), part of the current project area. The Providence Cone vicinity, also part of the project area, has reportedly yielded the Paleoindian Folsom projectile points, though few if any have been professionally examined; parenthetically, it is the large, deftly flaked and very distinctive Paleoindian projectile points (spear points in this case) that make the sites very vulnerable to casual collectors.

Research potential for the Paleoindian abounds in the project area. The Organ Mountains-Desert Peaks region contains numerous rock shelters — shallow cave-like overhangs in cliffs — that are ideal places to look for remnants of this earliest cultural period. In addition, there are old drainages that could have sediment deep enough to cover such ancient sites.

THE ARCHAIC PERIOD:
GATHERING AND HUNTING IN A HARSH ENVIRONMENT

The subsequent period, called the Archaic, is a very long one (from about 5500-6000 BCE to about 1500-2000 years before the present), representing a continuation of the gathering and hunting lifestyle in a time when the Ice Age megafauna had become extinct and the mosaic of environments we know today in the Southwest was becoming established. People seem to have continued to be relatively mobile, but they may have developed certain spatial territories, where they moved among smaller areas to get plant and animal resources that were available on a seasonal basis. Hunting with atlatls ("attl-át-els", spear-throwers), was typical, and basketry and other forms of weaving became highly developed and essential technologies in everyday life. People lived in small structures that were relatively quick and easy to construct using cut saplings or branches and adobe, sometimes with the floors dug into the ground a few inches to a foot or so. At times the floors were lined with slabs of flat stone.

Sites from the Archaic Period are common throughout the proposed Organ Mountains-Desert Peaks National Monument. Not only are the sites numerous, but they are varied in size and function, in terms of the season in which they were occupied and the length of occupation. With so many Archaic sites of so many types, the Organ Mountains-Desert Peaks is a region that has tremendous potential to provide information on subtle changes in Archaic societies across a long timespan during which there was fairly frequent climatic change, an apparent increase in the human population, and important developments in technologies for making a living in the desert.

By the early centuries of the Christian era, as our calendar is reckoned, the Archaic inhabitants of south-central New Mexico and elsewhere were experimenting successfully with getting more and more food from domesticated plants. The process is not clearly known yet, but the research associated with it is very exciting, as we have gained sophistication in recognizing how Archaic groups first encouraged the plants they wanted to use in a casual way and, over time, began to alter the plants to such a degree that they were truly domesticated, growing only under human care.

THE FORMATIVE PERIOD: TRUE FARMING AS A WAY OF LIFE

As we move into what is known as the Formative Period, prehistoric inhabitants were engaging in a lifeway that is recognizably dependent on farming, although hunting and gathering wild plants was always important, right up to the Spanish invasion of the Rio Grande territory. After about A.D. 200 in the Western calendar, Formative societies were widespread across the Southwest, including south-central New Mexico. Pithouses, partially dug into the ground, became larger and more substantial; people lived in larger and more permanent villages, and they depended on hard-fired pottery and the bow and arrow as new technological introductions. Like the previous Archaic period, Formative sites are common in the project area and in fact are the most obvious sites, given that they are often larger and more dense with material remains, and are sometimes deposited on top of the older sites. What is particularly important about Formative sites in the Organ Mountains-Desert Peaks region is the potential to understand how people dependent on farming were using the drier upland areas away from the Rio Grande and its tributaries—our own success in an increasingly arid environment would be enhanced by a deeper knowledge of the use of different landscapes and different types of resources by these early agriculturalists.

THE HISTORIC PERIOD: EUROPEANS ENTER AND THE SOUTHWESTERN WORLD IS CHANGED FOREVER

It is no easier to summarize the historic period in southern New Mexico than the long human history that preceded it. This was a time of massive change, socially and culturally, for all of the inhabitants of this region.

In the centuries just preceding the entrance of Spanish colonists into the Rio Grande corridor, Athapaskan-speaking peoples we now know as Apaches developed a strong presence in southern New Mexico. The Apache, with a generally mobile lifestyle, created a very different network of interaction with other people than had been present before. Sometimes raiding, sometimes trading with other Native Americans and later the Euroamericans, the Apache were dominant in the region until long after the Spanish invasion. Along with Athapaskan speakers who became known as Navajo, the Apache and other nomadic peoples formed a strong component of the native occupation of the Southwest. While many contemporary nomadic peoples have maintained little record of their recent history, others, including the Comanche, Pawnee, Cheyenne, and Kiowa-Apache are well-documented. Many were acculturated into Hispanic households. Recorded Protohistoric sites in New Mexico include approximately 2,872 Pueblo sites, 276 Plains sites, 37 Ute sites, 884 Apache sites, and 16,419 early Navajo sites.

While the initial Spanish invasion occurred in 1539-1540 under Francisco Vásquez de Coronado, it was mostly the upper Rio Grande that witnessed the earliest Spanish colonization. Southern New Mexico was subject to intensive raiding by mobile Apache bands, who were able to take horses, other livestock, and food from settlers, or attack travelers almost at will, and then quickly disappear into the vast desert spaces. The Camino Real ("Cameeno Ray-áhl", Royal Road) from Mexico City into the heart of New Mexico was established along existing Native American trails very early in the history of the Spanish *entrada*, and served as a lifeline between the far-flung outposts and the firmly established Spanish communities in Mexico.

The Spanish *entrada* was conceived as an effort to create a whole new world of permanent, Catholic, Spanish colonies in the Southwest. Spanish noblemen, soldiers, clergymen, slaves, servants, and entire families explored "New Spain" in what is now New Mexico as a concerted social and religious revolution for the region. By 1598, under Juan de Oñate's leadership, Spain had established a permanent settlement near present-day Ohkay Owingeh Pueblo north of Santa Fe. Period sites recorded throughout New Mexico include approximately 51 Pueblo Revolt sites, 579 post-Revolt Pueblo sites, and nearly 2,000 Spanish Colonial buildings, structures, sites, districts, and objects, including segments of El Camino Real de Tierra Adentro National Historic Trail, historic plazas, irrigation ditches, mission churches, villages, artifacts, and residences.

Once Mexico gained its independence from Spain in 1821, strict sanctions against foreign commerce were lifted. The colonists living north of what is now El Paso were now part of a new nation. Trade along El Camino Real and the newly-established Santa Fe Trail flourished. There are 239 recorded Mexican period sites in New Mexico, including Santa Fe Trail remnants, distinctive homes, and important commercial properties.

Due to ongoing conflict with the Apache, permanent Spanish settlement around what is now Las Cruces occurred much later than in the northern communities like Santa Fe or Bernalillo. The historic community of Old Mesilla, founded in 1848 just west of present-day Las Cruces, preserves some of the atmosphere of this period. This was the period when New Mexico was annexed by the U.S. as a prelude to the Mexican-American War. The influx of non-Spanish settlers greatly increased.

In an act largely motivated by opportunities for economic gain, the United States declared war on Mexico in 1846. For the next two years, American military presence in New Mexico mounted, followed by an influx of Euro-Americans during the period in which New Mexico was a Territory of the United States (1848-1912). Railroading, ranching, mining, and homesteading occupied many of the newcomers. This era witnessed many changes to existing styles of land ownership, material culture, and architecture. Some 2,956 Hispanic and 12,253 Anglo Territorial sites have been identified across New Mexico. Still, much of south-central New Mexico remained wild and largely unsettled in the nineteenth century, thus it served as an escape route for outlaws such as Billy the Kid, and the bands led by embattled Apache war chiefs such as Geronimo.

The late nineteenth and early twentieth centuries saw the rise of intensive agriculture in the Rio Grande Valley. By the nineteen-teens, the U.S. federal government had developed a series of dams on the river to control flooding and make irrigation water available on a regular basis to the farms in the valley, which formed a major food base for much of the state. Irrigated farming in the river valley remains an important economic activity today.

New Mexico became the 47th state to be admitted to the United States of America on January 6, 1912. Since then, New Mexicans engaged in traditional agricultural, mining, military and ranching pursuits have been joined by health-seekers, outdoor enthusiasts, students, motorists, environmental and heritage tourists, scientists, and artists. Two World Wars, Roosevelt's New Deal, the Cold War, Route 66, new technologies, and international immigration have made New Mexico the diverse, many-faceted cultural landscape and singular destination it is today.

APPENDIX 2:
SPECIAL TOPICS IN ORGAN MOUNTAINS-DESERT PEAKS ARCHAEOLOGY

The proposed Organ Mountains-Desert Peaks National Monument is so rich in potential information about the past that it is important to note some of the topics that prominent researchers in the area have identified as relevant for current and future work. Many of these same research topics will help land managers interpret the past to a wide public audience that has different backgrounds and different ideas of what is important. The following appendix describes a few of the most important areas for archaeological work as noted by Kirkpatrick et al. (2000), a group of researchers who have been involved with southern New Mexico archaeology for decades.

How did the earliest people use the land?
What is the nature of Paleoindian land use in this part of New Mexico? We don't yet have a good sample of sites from this period.

How can we save the earliest cultural remains, those that are the most threatened?
How can we save very early sites, given the rampant unauthorized collecting of Paleoindian points? The Providence Cone area has been especially hard-hit.

Where are the Early Archaic sites in this region?
Were people using the area at that time? We need better samples of sites from this period.

The East Potrillos are "terra incognita."
How can we achieve better understanding of Middle and Late Archaic sites in the East Potrillo Mountains? There are many East Potrillo sites covered in sand dunes, making it difficult to get a good picture of their distribution as the sand covers and uncovers them.

Stone was the most important raw material, but we don't know much about sources.
What can we learn about the Sierra de las Uvas, Rough and Ready Hills, and Sleeping Lady Hills as sources of lithic raw materials? There seem to be many quarry sites and usable rock outcrops in these ranges.

Did ancient southern New Mexicans interact with other cultures?
Is South-central New Mexico Archaic culture connected with Eastern New Mexico and/or West Texas? Some projectile points are stylistically similar in these three areas.

Did ancient people return to certain places to live over time?
Did early farming people locate their villages in places similar to the habitations of their Late Archaic predecessors? Some research suggests this is so.

How did early farmers maximize the chances of getting a crop?
Did later farming people use multiple land forms for agriculture—hill and mountain slopes in addition to river valleys? –and is this because it was wetter at that time? Some research suggests later farming sites were sometimes located in places where people would have had to utilize rainfall only for irrigation.

Where did early farmers fulfill their non-agricultural resource needs?
What other resources did late farming people utilize in the mountains and hills? What does this say about the relative importance of domesticated crops?

Kirkpatrick, David T., Peter Eidenbach, Karl W. Laumbach, and Meliha S. Duran, 2000. *Basin and Range Archaeology: An Overview of Prehistory in South-Central New Mexico.* Human Systems Research, Inc., Las Cruces, New Mexico.

APPENDIX 3:
LATINO/A HERITAGE IN SOUTHERN NEW MEXICO AND THE ORGAN MOUNTAINS-DESERT PEAKS

As the oldest European culture in the United States, the Latino/a heritage of New Mexico continues to thrive and adapt to the challenges of today. Deeply tied to the land, the people of southern New Mexico preserve a lifeway that goes back centuries. In addition to Native Americans who lived in this region for thousands of years, people of Spanish descent have also been part of this landscape for over 400 years. Beginning in the late 16th Century, the descendants of these Latino/a settlers have created a unique culture and society in an isolated region of North America. Part heirloom tradition, part contemporary creation, the culture of twenty-first century southern New Mexico is a rich combination of many peoples in which those of Spanish descent continue to play a major role. A variety of institutions, communities, and individuals in New Mexico preserve the 400 years of Latino/a culture and traditions.

The first Spanish party that explored southern New Mexico was led by Antonio de Espejo in 1583. Espejo's small exploration party gazed upon the arid valley split in two by the Rio Grande that wandered around the landscape like a sidewinder rattlesnake. They saw the steep mountain ranges that flanked the valley to the east and the west. These majestic mountains are part of the proposed national monument.

In the spring of 1598, Don Juan de Oñate's famous colonizing expedition arrived at the Mesilla Valley on its way to northern New Mexico. For the next three centuries, tens of thousands of people passed through the Mesilla Valley traveling on the trail blazed by Oñate, experiencing the stark desert and the tall crests of the Organ Mountains and the Desert Peaks. During the Spanish colonial period, people traveling on El Camino Real stopped at the many parajes (campsites) in southern New Mexico and searched the nearby mountains for game and precious metal. Few settlers stayed due to the harsh desert climate and the Apaches and other Native Americans who roamed the countryside and sometimes made settlement difficult.

When Mexico won its independence from Spain in 1821, several groups of people attempted to settle in the Mesilla Valley. The first group to receive a grant from the Mexican government was led by Juan Antonio García. In 1823, the Brazito Land Grant was awarded to García. Once he received his grant, he lived in the southern part of the Mesilla Valley until ill health forced him to return to Paso del Norte (now Ciudad Juárez) in 1827. Following several attempts by a mysterious woman named Doña Ana María de Córdova to settle with her family at a bend in the river near the Robledo Mountains, in 1839 José María Costales and 115 other men requested a section of land at this spot. Approval for the Doña Ana Bend Colony was delayed for several years, but finally in 1843, Bernabé Montoya led thirty-three settlers to an area north of present day Las Cruces, which became known as the village of Doña Ana. Other settlers quickly arrived in the community.

In April 1846, the United States declared war on Mexico over territorial disputes spawned by American westward expansion. In 1847, Missouri volunteers under the command of Colonel Alexander Doniphan marched down the Camino Real and captured New Mexico for the United States. In 1849, Pablo Melendres, the *mayordomo* (person in charge) of the village of Doña Ana, asked the U.S. Army to help relieve the overcrowding in his small community. Going south about fifteen miles, Lieutenant Delos Sackett laid out a grid of streets using a rawhide rope near a *camposanto* (cemetery) that marked the site of a massacre on the Camino Real. The site that Sackett created was called *El Pueblo del Jardín de Las Cruces* (The City of the Garden of Crosses), or simply Las Cruces. This part of the city, now the Mesquite Historic Original Townsite District, is on the National Register of Historic Places, and has been a traditional neighborhood for Latino/a families ever since.

The Treaty of Guadalupe Hidalgo, which ended the war in 1848, set the international border between Mexico and the United States at the Rio Grande, but the treaty left ambiguous the exact location of the new boundary west of the river. Mexico claimed the west side of the river almost to the village of Doña Ana while the United States wanted the same land. As Mexico asserted ownership over the west side of the Mesilla Valley, some 2,000 Mexican refugees from New Mexico who preferred not to live under the rule of the United States founded the town of Mesilla. Father Ramón Ortiz, a well-known priest in the area, organized colonies like Mesilla and other villages for Mexicans displaced by the war

along the river northwest of Paso del Norte. Despite the best intentions of Father Ortíz and the desire by Mesilleros to continue to live in Mexico as Mexican citizens, the United States wanted to move the border south to make room for the route for a transcontinental railroad. Thus, in 1853, James Gadsden negotiated with Mexican President Santa Anna and secured the Gadsden Purchase (30 million acres in southern New Mexico and southern Arizona) for a cost of $10 million. Some Mexicans stayed in Mesilla and became U. S. citizens while others spread throughout northern Mexico. For years, people in the Mesilla Valley had been part of Mexico, and then suddenly overnight, they became U.S. citizens. Without moving at all, the border passed over them, and for some, cut them off from families and friends in the south.

In 1855, on the Butterfield Overland Mail Trail, the first stage coach traveling from San Antonio to San Diego passed through Mesilla and blazed a route through part of the proposed national monument. Travelers on this grueling thirty-eight day journey across the desert sought relief in the welcoming adobes of Mesilla. At the crossroads of two major transportation routes—El Camino Real (which had become known as the Chihuahua Trail) and the Butterfield Overland Mail Trail, Mesilla was the biggest community in southern New Mexico for the next three decades. Watered by the Rio Grande, agriculture sustained the people. By the middle of the 1850s, the Hispanic farms of Mesilla produced 25,000 bushels of corn, 7,500 bushels of wheat, and 5,000 bushels of beans. For the rest of the 19th century and into the 20th, the Latino/a people of southern New Mexico farmed, ranched, freighted, and used the landscape of the proposed monument in numerous ways. From providing for their families to preserving their heritage, the mountain peaks and desert valleys have created a unique culture.

The United States government has been a partner in the preservation of Hispanic heritage for a long time. During the Great Depression, it targeted Nuevo Mexicano communities for heritage preservation. As historian Suzanne Forrest notes: “a significant proportion of federal funds were channeled into programs designed to assist Hispanic villagers to regain economic independence by augmenting their small-scale agricultural activities with native arts and crafts cottage industries, by modernizing Hispanic village agriculture, and by restoring the fertility of the land.”

Throughout the over 400 years of Latino/a presence in New Mexico, the landscape has played an important and essential role for this isolated outpost of Spain, Mexico, and now the United States. Creating the Organ Mountains-Desert Peaks National Monument will continue to preserve this vital cultural landmark and resource for those who live in southern New Mexico and for the visitors who come to the region.

photo courtesy of Robert Kaiser

APPENDIX 4:
THE WAY TO NEW MEXICO: CAMINO REAL DE TIERRA ADENTRO

by Jean Fulton, Historian, Camino Real de Tierra Adentro National Historic Trail

The Spanish explored and colonized the Americas by following established native paths that had connected indigenous villages for hundreds and even thousands of years. What was to become known as *El Camino Real de Tierra Adentro*, "The Royal Road of the Interior," originally united the Spanish capital of Mexico City with the rich mining districts surrounding Zacatecas and Ciudad Chihuahua.

In 1598, Indian guides led Spanish explorer Juan de Oñate and his caravan of colonists from Santa Bárbara, Chihuahua, near Parral, north across Mexico's remote frontier. They crossed the Rio Grande near San Elizario, traveled alongside the river and across the Jornada del Muerto (near present-day Upham northwest of Las Cruces) to what is now Ohkay Owingeh Pueblo north of Santa Fe.

The initial three-month journey from northern Mexico was undertaken by 129 men, many accompanied by their wives, children, and servants; and a group of Franciscan friars, using 84 heavily-laden carts and herding some 7,000 heads of livestock including sheep, goats, cattle and horses.

This and subsequent caravans emanating all the way from Mexico City negotiated the difficult 1,600-mile trek through some of the most desolate and rugged terrain in Mexico and western North America. Although over time El Camino Real was improved and even cobbled in Mexico, the northern length remained a simple rough trail or series of paths surrounded by sparse and prickly vegetation, occasional springs, inhospitable waterless stretches, erratic climatic extremes, scarce fuel wood, high winds, and intense heat.

Creosote, whitethorn acacia, saltbush, mesquite, and in some places yucca and agave dominated much of the northern Camino Real landscape. Gramma and other grasses provided forage. Near present-day Socorro, canopied forests of cottonwoods with an understory of willows and salt grass lined the river.

Smaller *carretas* or carts made shorter trips between points along El Camino Real. Larger *carros* or wagons featured four iron-rimmed wheels and carried up to two tons. Eight mules pulled a wagon. Eight mules followed to serve as the alternate team. Oñate's caravan stretched nearly two miles long. The creaking of the wooden cart wheels and the clouds of dust could be heard and seen for miles. A trudging twelve miles was a typical daily rate for cart and wagon travel. Chroniclers wrote that the caravan traveled as fast as the slowest hog could trot.

One typical caravan in 1631 included 544 mules, 72 heads of cattle, 200 sheep, 200 heifers, and countless chickens. Bells rang, banners fluttered, and crowds gathered each time a procession approached El Paso del Norte and later Santa Fe. The welcomed caravans arrived with people, information, supplies, sacred ornaments, religious vestments, and foodstuffs.

The Camino Real braided on top of ancient trade routes used for centuries by indigenous peoples to furnish themselves with trade goods vital for spiritual sustenance and survival. Up from the south came marine shells, parrot and macaw feathers, and copper objects; down the trails went turquoise and other semi-precious stones, pottery, salt, and processed bison products.

The first Spaniards encountered more than 130 multi-lingual communities of Indians they described as "Pueblos," which featured sophisticated agricultural practices, several varieties of domesticated animals, locally grown and woven cotton textiles, and deeply-rooted spiritual traditions including the kachina culture.

In addition to new breeds of livestock, the first Europeans brought with them dozens and dozens of non-native vegetables, fruits, and herbs including artichokes, beets, carrots, chile, lettuce, oats, onions, tomatoes, wheat, apples, cantaloupes, peaches, pears, peanuts, oranges, watermelons, grapes, cherries, anise, cumin, dill, cilantro, lavender,

rosemary and saffron. They also introduced blacksmithing, brass and wood musical instruments, weaponry, Catholicism, and the *encomienda* and *hacienda* systems, as well as new diseases.

In early August 1680, numerous factors coalesced — leading to the most successful Native American revolt in the history of the Americas. Some estimate that seventeen thousand Pueblo Indians, speaking at least six different languages, united and killed hundreds of Spanish settlers and priests, looted haciendas, and destroyed mission churches. Nearly two thousand Spaniards, accompanied by hundreds of enslaved or converted Pueblo Indians, fled south along El Camino Real to the relative safety of El Paso del Norte. It took the Spanish nearly 12 years to re-conquer New Mexico.

Freighting had increased dramatically after Mexico gained its independence from Spain in 1821. The nine-month round-trips made every three years by Franciscan expeditions during the 16th- and 17th-centuries to supply the northern missions were replaced by smaller, independent, and more frequent trips, including annual wagon trains, *conductas* or convoys run most often by private contractors.

Mules could carry 400 pounds while covering 12-15 miles each day. During the height of Camino Real travel and trade, an *atajo* of 200 capable (but often recalcitrant) mules was common, with each *arriero* or muleteer managing 40-50 animals.

On any given departure day, a crowd would assemble at the town's plaza. With the local military providing escort, the assemblage would head south towards Mexico, often to take advantage of the medical services in Ciudad Chihuahua, the best in the region. Traders with their piñon nuts, rough wool cloth, tanned animal skins, tallow, pickled buffalo tongues, wines, brandies, and often Indian slaves also readied themselves for the journey. Government officials, friars, and even entire families participated — researchers estimate that between 5 and 10 percent of the New Mexican population periodically made the round-trip trek to Ciudad Chihuahua.

The best-preserved length of the El Camino Real lies just northeast of the Robledo Mountains in an area known as the Jornada del Muerto or "the Journey of the Dead Man." Campsites were known as *parajes*. Leaving the paraje at Robledo at present-day Fort Selden, Camino Real travelers would make the short day's trip to the paraje at San Diego at the very edge of a plain overlooking the river valley several hundred feet below. When travelers reached Laguna del Muerto (near present-day Engle) the livestock would be sent five miles west through a canyon to the Ojo del Muerto, a reliable spring. Later travelers guarded themselves against Apache attacks at this same location.

Segments of the El Camino Real have been used during the War with Mexico, as part of the Butterfield Trail before the Civil War, during the movement of troops in the Civil War, well into the 1870s, and even into contemporary times.

Recent archaeological surveys in the Jornada del Muerto located prehistoric artifacts, what appears to be a hand-notched wooden child's toy, a possible button from a French uniform, and fairly modern car parts. The National Park Service, the Bureau of Land Management, and their local partners installed wayside exhibits in October 2010 to interpret the original Trail trace. Since then, hikers, birders, tourists and outdoor enthusiasts have embraced this area, setting the stage for additional heritage tourism opportunities presented by the proposed Organ Mountains-Desert Peaks National Monument.

APPENDIX 5:
THE UNITED STATES GROWS... AGAIN: THE HISTORIC GADSDEN PURCHASE

THE TREATY OF GUADALUPE-HIDALGO: CONFUSION AND CONFLICT

An alignment of rock cairns situated within the proposed Organ Mountains – Desert Peaks National Monument boundary demarcates one of the most peculiar and important federal land procurements in United States history.

Presented to the public as an inset on a 29" x 22" *Nebraska and Kansas* steel engraving drawn by cartographer J. H. Colton in 1854, the negotiated "Gadsden Purchase" gave the lower continental United States its final form. The rocks marking the Purchase settled years of controversy resulting from the inaccuracies of the official map of the United States cited in the Treaty of Guadalupe-Hidalgo.

The Treaty of Guadalupe-Hidalgo (in Spanish, the *Tratado de Guadalupe-Hidalgo*) is the peace treaty — largely dictated by the United States while its military forces occupied Mexico City — that ended the Mexican-American War on 2 February 1848. Under duress during the negotiation, Mexico ceded 522,568 square miles of land and received $15,000,000 in return (approximately $0.33 per acre).

Before the onset of strife with its northern neighbor in 1846, the Republic of Mexico — a young nation with ancient roots — claimed all of the present U.S. states of Texas, New Mexico, Arizona, Utah, Nevada, California, and portions of Kansas, Colorado, and Wyoming.

Mexican settlement, however, was limited to a few riparian valleys and fertile pockets in a largely inhospitable landscape. The rest belonged to the Comanche, Apache, Navajo, Ute, Hopi, Puebloans, O'odham, River Yuma, Pais, Paiute, and a multitude of groups indigenous to California.

John Disturnell (1801-1877) was a book and map publisher operating in New York. His 1847 map of the United States, later found to be erroneous, served as the official map for the Treaty of Guadalupe-Hidalgo. This set the stage for years of simmering tension between Mexican and American officials and residents.

THE GADSDEN PURCHASE, SEEN AS A SOLUTION

In accordance with the terms of the Treaty, a joint boundary commission was organized to begin the task of surveying a new dividing line between the two nations in July 1849. General Pedro Garcia Conde, the commissioner appointed by the Mexican government, and John Russell Bartlett, the commissioner representing the United States, met in El Paso in 1850.

On-site surveys confirmed suspicions that the Disturnell map mistakenly located El Paso, Texas at a latitude 34 miles north and a longitude 100 miles east of the true position of the city. This meant that Mexico's adjusted border would potentially withdraw five or six thousand square miles from the United States, including the fertile Mesilla Valley and several mining districts.

Although a compromise was reached between Pedro Garcia Conde and John Bartlett, President Franklin Pierce named James Gadsden, a South Carolinian railroad executive, as minister to Mexico to override the Bartlett-Conde compromise and to negotiate a land purchase that would dissolve the boundary dispute and, as an added benefit, provide the United States with a rail route to California.

On 17 August 1853, according to El Paso historian Leon Metz, James Gadsden met with President Santa Anna, outlined the American concept of geographical predetermination, and asserted the United States' need for sufficient and protective boundaries. He suggested that Mexico sell her surplus under-populated regions and accept a natural border outlined by deserts and mountain ranges. Gadsden assured Santa Anna that the United States would pay a fair price.

Santa Anna faced unpaid debts, crushing taxes, and rampant political corruption. Violent forays by American opportunists, a lack of requested support from Spain, France, and Britain, and the unspoken yet understood threat of

possible U.S. force also undermined Santa Anna's powers of negotiation. The United States had money and wanted land. Mexico had land and wanted cash.

The ensuing purchase encompassed 29,640 square miles, of which 27,305 (24 percent) comprises today's southern Arizona. The remainder went to New Mexico, including the 'Mesilla Strip.' The Rio Grande's new point of U.S. entry, where the boundary left the river and struck west toward the Pacific, was three miles north of El Paso at 31 degrees 47 minutes. The boundary moved west for one hundred miles, then south to 31 degrees 20 minutes, west again to the intersection of the 111th meridian, and west to the Colorado River 23.72 miles south of its confluence with the Gila. From there it followed the middle of the stream north to the already established boundary extending to the Pacific.

Both treaties had the unintended consequence of ratcheting up tensions between settlers and the Apache, who were understandably incensed that the United States had negotiated with Mexico rather than with them over possession of their homeland. Raids against Mexicans as well as American miners, settlers, herders, merchants, and travelers increased. U.S. military forts were constructed at strategic points to help safeguard the borderland frontier.

Despite the escalating violence, misgivings regarding shifting national allegiances, and lingering doubts about the accuracy of the boundary markers, troops from nearby Fort Fillmore oversaw a peaceful transition. On 16 November 1854, on Mesilla's central plaza, the Mexican flag was lowered with reverence. Americans cheered, ran up their own flag, and saluted with two ground-shaking rounds of artillery. A military band played "Hail Columbia," "Yankee Doodle," and other tunes. New Mexico's governor David Meriwether delivered a brief presentation welcoming Mexican residents to American citizenship, promising protection from the Apache, and ensuring fairness to all in the courts.

While many residents on the U.S. side of the realigned border adjusted to their newfound status as Americans, Mexico's President Santa Anna spent the $15 million in three months and was forced into exile for more than twenty years for his role in selling off the motherland.

On July 20, 1876, Santa Anna died in Mexico City, poor, friendless, and alone.

More than a hundred and fifty years after an official negotiation that many would describe as a simple land grab, the rock cairns marking the Gadsden Purchase boundary continue to bear mute testimony to a long legacy of mutual greed, distrust, dispute, violence, resiliency, persistence, and resolution.

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APPENDIX 6:
THE ERRONEOUS MAP OF 1847 THAT LED TO THE GADSDEN PURCHASE

APPENDIX 7:
BUTTERFIELD TRAIL - THE CALIFORNIA CONNECTION

The Butterfield Trail was the route followed by the Unites States' first overland mail and passenger service between the Mississippi River and the Pacific Ocean. Entering New Mexico at El Paso, it followed the Rio Grande north to Mesilla, then westward in a southern curve across wilderness deserts to California. The Overland Express also inherited the contract for mail service in passenger coaches between La Mesilla and Santa Fe between 1860 and 1861, on the same El Camino Real de Tierra Adentro route that Juan de Oñate took nearly 300 years earlier.

In response to complaints from residents living in New Mexico, Arizona, and California, weary of the three-month delay in steamboat mail service, Congress authorized the establishment of a federally-subsidized overland mail service between St. Louis, Missouri and San Francisco in 1857. The contract was won by John Butterfield and his partners in what became known as the Overland Mail Company.

Butterfield was a successful, self-made New York entrepreneur and a friend of President Buchanan's. From his start as a dependable stagecoach driver, Butterfield over time acquired numerous mail and passenger stage coach lines, and eventually became a founding director of the American Express Company, which operates to this day. During his youth and adulthood, Butterfield witnessed the construction of the Erie Canal, saw Robert Fulton's newfangled steamboat miraculously chug upstream, watched as the first telegraph lines were strung, and experienced the rumble of the first steam locomotive. Anything seemed possible.

A man of vision and adept managerial skills, Butterfield, along with William G. Fargo and five other investors, arranged the 2,795-mile service within the span of a single year. They and their crews surveyed new sections of road to connect with existing routes, appropriated or constructed corrals, bridges, stations, and sleeping accommodations; dug wells, and hauled spring water.

Butterfield and his team were essentially retracing an earlier wagon route blazed by Kearny and Cooke a decade earlier. General Stephen Watts Kearny and his Army of the West scouted an initial wagon road through New Mexico and Arizona in 1846-1847 during their quest to secure southern California for the United States during the War with Mexico. Soon afterward, Captain Philip St. George Cooke's Mormon Battalion followed on Kearny's heels. These two movements of equipment, soldiers, and supplies transformed a series of footpaths into the wagon road that became the Butterfield Trail.

As part of their final preparations, Butterfield and his partners hired 800 employees, acquired and distributed more than 1,500 horses and mules, stocked stations with hay and feed, and purchased 250 coaches including mail wagons and other necessary equipment. In the likely event of a breakdown or other emergency, the mail was transferred to back-up wagons that pressed on to the next station.

The target start date of 16 September 1858 was met. Service began out of St. Louis, Memphis, and San Francisco simultaneously. "Remember, boys," Butterfield famously admonished his employees, "nothing in God's earth must stop the United States mail!"

One-way trips on the Butterfield Trail cost passengers between $150 and $200 (around $3K by today's standards) and took just under three weeks traveling day and night. Postage for a letter was ten cents, and freight cost a dollar per one hundred pounds per one hundred miles. Brief stops were made only to change horses, repair broken axles, or to consume two daily meals (at an extra cost of fifty cents each) consisting often of hard, flat biscuits, beef jerky, and raw onions served in tin cups and washed down with unsweetened black coffee. Inverted pails or stumps served as chairs.

Wrote *New York Herald* correspondent Waterman L. Ormsby upon his arrival in San Francisco:

> Safe and sound from all the threatened dangers of Indians, tropic suns, rattlesnakes, grizzly bears, stubborn mules, mustang horses, jerked beef, terrific mountain passes, fording rivers... here I am in San Francisco... I almost feel fresh enough to undertake it again.

As an aside, one can't help but wonder if Ormsby was asked (bribed?) by investors to present a favorable review. In any case, way stations—small rough-hewn wood, rock, or adobe buildings with adjacent corrals and a well or a water tank—were spaced at an average twenty miles apart. A guard of six or seven men at each station looked after the horses. The station keeper received a monthly salary.

Butterfield received a cable from President Buchanan after the first eastbound mail delivery arrived in St. Louis on 9 October 1858 proclaiming that it was "a glorious triumph for civilization and the Union. Settlements will soon follow the course of the road, and the East and West will be bound together by a chain of living Americans which can never be broken."

The arrival of John Butterfield's tri-weekly Overland Mail service created a burst of growth in El Paso, which served as the half-way point. Street names in central El Paso today indicate the arrival and departure routes of the stages and their destinations (Santa Fe, San Francisco, and San Antonio Streets). Indeed, each of the towns and villages along the overland route benefitted from the service which brought mail, news, visitors, and those in need of locally-supplied provisions.

The first stop in New Mexico after El Paso was Fort Fillmore, followed by La Mesilla. At that time, the Rio Grande ran east of La Mesilla by about four hundred yards, and west of Fort Fillmore about the same distance. What is now the "La Posta" restaurant at the southeastern corner of the Mesilla Plaza housed the Butterfield Home Station and Headquarters, providing a place to exchange mail and briefly rest after fording the river. The route then continued its way up the valley to the town of Picacho, and from there made an angle westward to the Rough and Ready Station, which at that time was situated some twenty miles from the river.

Renowned Butterfield Trail scholar George Hackler's detailed fieldwork informs us that the Rough and Ready Station, established in December 1858, was located at the gap between Sleeping Lady Hills on the south and the Rough and Ready Hills on the north, in Section 28, Township 22S Range 2W. Archaeological excavations revealed that the station was built of adobe on rock foundations with rock and adobe fireplaces and chimneys. The original Corralitos Ranch headquarters (from around 1912) was built next to the Trail. Although what remains of the station is currently buried, the Butterfield Trail itself remains evident.

Stations next in line heading west were Goodsight, Cooke's Spring, Mimbres, Los Ojos de Vaca, Soldier's Farewell, Barney's, Mexican Springs, and Stein's Peak. Stein's Peak in Doubtful Canyon is about one mile from the Arizona border and was the last station in New Mexico. Each station name tells a story.

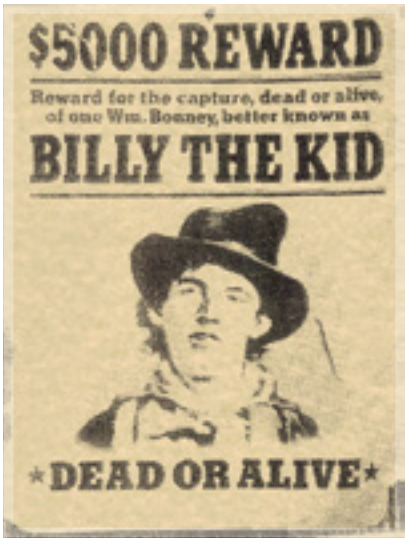
LINKING EL CAMINO REAL AND BUTTERFIELD TRAIL

Although the outbreak of the Civil War in 1861 prohibited further official use of the Butterfield Trail, private stages continued to bring passengers west to Santa Fe and down along the original El Camino Real route south to Mesilla and beyond.

If we imagine for just a moment traveling with the original Camino Real caravans, the slow pace of walking alongside creaking wagons and carts for a twelve-mile day with the freedom of movement in some ways compares favorably with the confinement of between six and nine tightly-packed passengers in a coach built for speed (4-5 miles an hour). Fast, rough, dangerous, these coaches were prone to tipping and harbored passengers plagued by boredom, sleep deprivation, fear of the unknown, and motion sickness.

In 1873, one intrepid family made such a stagecoach trip from New York to Santa Fe, Mesilla and then on to Silver City. Catherine Antrim, her two sons and her second husband William relocated west to find work. Catherine busied herself with running a boarding house. Her husband worked mostly in the mines. Catherine's son William Henry Antrim and his half-brother Josie attended the one-room schoolhouse. A few years later, after his mother died, young William would take the name presumed to have been given to him by his biological father, William H. Bonney. His forced return to Mesilla in 1881 as a young adult and the aftermath of that stay created quite a stir.

APPENDIX 8:
WILLIAM BONNEY, AKA "BILLY THE KID"



The general mayhem between two competing factions struggling for economic dominance in Lincoln County in 1878 created a period of anarchy often referred to as the Lincoln County War. In a letter dated 13 April, 1878 to the Las Vegas, NM Gazette, one mortified visitor observed that, "killing people in Lincoln is the leading industry at the present time." The bloodshed and lawlessness fascinated an international audience, and created a mythic American figure—William H. Bonney.

Bonney, better known as Billy the Kid, was by most accounts a ne'er-do-well, jovial, slightly built, bucktoothed boy who ended up being shot dead in his stocking feet while asking in Spanish several times, "Who is it?" After years of mishaps, deadly adventures, and infamous elusiveness, the Kid was finally captured and brought to trial in Mesilla, NM for participating in the 1 April 1878 mid-morning ambush and murder of Lincoln's Sheriff William Brady.

Now, a Mesilla plaza gift shop north of La Posta restaurant inhabits the building that served then as the Third Judicial District courthouse. Brought there from the end of the rail run at Rincon by a horse-drawn van surrounded by armed guards, the Kid swore to the judge he had not even fired at Brady. He admitted he was trying to kill Deputy Matthews instead. Rapt jurors ignored Billy's plea of innocence. He was found guilty of murder on 13 April. Judge Bristol ordered that he be incarcerated in Lincoln until 13 May when he was to be "hanged by the neck until his body be dead."

The Kid was transferred back to the town of Lincoln, where on 28 April he managed to escape the second-story jailhouse by shooting both of his jailers after a trip to the privy. It is said that a Hispanic sympathizer hid a revolver for the Kid there. According to contemporary accounts, under the watchful eyes of both fearful and friendly onlookers, he casually pounded off his handcuffs and one of his leg irons, collected a rifle and a six-shooter from the Sheriff's office, pocketed ammunition, took blankets, borrowed a horse (later returned) and rode out of town. The Kid remained on the lam for three months.

An article in the 18 July 1881 Las Vegas Daily Optic reported that the Kid's repeated question, "Quién es? Quién es?" just before midnight inside a Fort Sumner household allowed pursuer Sheriff Pat Garrett the time he needed to drive a bullet, "through the center of 'The Kid's' heart." A jury found the incident to be "justifiable homicide," and while most breathed easier, many mourned the loss of this hapless outlaw.

Even Sheriff Pat Garrett remarked that the Kid was, "open-handed, generous-hearted, frank, and manly." Others appreciated his command of the Spanish language. It was said he was a good gambler, an excellent horseman, and a graceful dancer. He had a gift with the ladies. He was also described as a "thieving, murderous, little cowboy-gone-bad."

Standing among the adobe wall ruins at Fort Selden (weatherworn since their original construction in 1865 to safeguard Camino Real travelers) visitors can just make out the tip of "Outlaw Rock" some four miles in the distance. It was a perfect hideout for anyone on the run, rugged and riddled with rattlesnakes. It also afforded a good view of the goings-on at the Fort, particularly if you were interested in raiding or theft. Sure enough, avid researchers recently photographed the name "Bonney" etched into the rock, along with evidence that William Bonney aka "the Kid" was holed up there between May and December 1880 with friends Tom O'Folliard, Charles Bowdre, Dave Rudabaugh, and Tom O'Keefe.

The fascination with Billy the Kid continues. A New Mexico Billy the Kid Scenic Byway leads auto-tourists on a loop tour through San Patricio, Lincoln, and other locations of historical interest. The designation of the Organ Mountains – Desert Peaks National Monument provides additional exciting opportunities to preserve and promote Outlaw Rock, the town of Mesilla, the Kid's boyhood home site in Silver City, several of the Forts he frequented — and points in between — for a national and international traveling public.

APPENDIX 9:
GERONIMO AND THE APACHE WARS: THE CONFLICT OF CULTURES

Despite the success of the Butterfield Overland Express and other efforts at westward migration, the Plains tribes held their ground against displacement until the early 1870s, when the full pressure of the United States military was used relentlessly against them. Their resettlement onto reservations and the virtual extinction of the buffalo signaled the end of open hostilities. Afterward, defeating a few stray Apache bands in southwestern New Mexico proved to be the most long-lasting and difficult military feat of the U.S. occupation.

Historian Leon Metz notes that for a hundred years the U.S.-Mexico border region was a battleground: the Apaches versus Spain, the Apaches versus Mexico, the Apaches versus the United States, and the Apaches versus both Mexico and the United States.

In 1879, Mimbres Apache Chief Victorio and his followers escaped from the San Carlos Reservation. For the next two years they carved a bloody path along the Rio Grande and into Arizona and Mexico. Until his death in 1881 some ninety miles south of El Paso, Victorio was chased in turn by Mexican forces and by American cavalry.

Two years later, Apache leaders Nachez, Cato, Juh, and Goyaaté (kòjà:□é) "one who yawns" jumped the San Carlos fences and vanished into the Sierra Mountains of Sonora, Mexico. Goyaate would later be known to all as Gerónimo. Steady pressure and an open skirmish in May 1883 induced the Apache group to surrender, but the concession was not to last.

In a way of life that considered Mexicans, Hispanos, and Americans as legitimate targets to obtain sources of meat, guns, ammunition, blankets, alcohol, and additional necessities, Gerónimo in particular is still remembered for his patriotism to his people, and for his bravery as a warrior. To be sure, the continuous raiding was out of retaliation and retribution as much as it was a survival technique. It has been said that most Mexican peasants viewed Gerónimo as a devil sent by God to punish them for their sins. Most Anglo settlers were not so introspective.

After a decade of resisting settlement in New Mexico and Arizona, the Apache leader Gerónimo surrendered to General Nelson A. Miles on 4 September 1886 at Skeleton Canyon, thirty miles east of Douglas, Arizona.

With the exception of a handful of fighters who remained in the Sierra Madres and became the "Lost Tribe," Gerónimo and his family and followers were loaded by the Army on to a Southern Pacific train and shipped to court in San Antonio, Texas and then on to years of incarceration in Pensacola, Florida and Vermont, Alabama. Shamefully, the government also captured and shipped loyal Indian scouts back East at the same time. The forced relocation ended the open government warfare against Native Americans.

Much later, in 1904, Gerónimo was photographed in a suit jacket, scarf tie, and moccasins selling bows and arrows at the Louisiana Purchase Exhibition at the World's Fair (St. Louis). Although still a prisoner of war, he had become an astute businessman, had by outward appearances adopted Christianity, and was well aware of white American consumerism. Gerónimo never made it back to his birthplace. On his deathbed, he confessed to his nephew that he regretted his decision to surrender. He was buried at Fort Sill, Oklahoma on 17 February 1909.

It was thought by many that Gerónimo was a shaman who had supernatural powers. One of his supernatural feats, as the story goes, was an escape that took place in the Robledo Mountains. The legend states that Geronimo and his followers entered a cave. The U.S. soldiers waited outside the cave entrance for him, but they never saw him come out. A secret exit has never been found.

APPENDIX 10:
WORLD WAR II AERIAL TARGETS

The 1940 census reported 132 million people in the United States, with just over half a million in New Mexico. The depression had ended, and there were jobs to be had in most of the country. War had already broken out in Europe, and President Roosevelt and Congress directed an unprecedented buildup of the US military-industrial complex in preparation for our anticipated entrance into the war. Southern New Mexico was included in these preparations. The Army Air Corps selected the Deming airfield as one of many bases for training airmen as pilots, navigators and bombardiers. As did the petroglyphs scribed by ancient peoples, the rock cairns piled by surveyors to mark the boundary of the United States following the war with Mexico, the ruins of Butterfield Trail Stagecoach Stops, and gravestones from Apache Raids, the legacy of the Air Corps training effort left a series of unique landmarks across the southern portion of the state, mostly in Dona Ana County. Although the Army Air Corps training program is little-known by current residents, it played a vital role in the allied success over Germany and Japan in the Second World War.

Open House at the Deming Air Field circa 1944

Deming was a sleepy farm and ranch town with a population of 3500 in 1942 when contracts were signed for the construction of the 338th Army Base/Airfield. (It would be two more years before the community elected its first mayor.) Another contract in the amount of $45,225.31 was awarded to Charles Terry, for construction of 24 targets that were to be clearly visible from the air. The targets were located on a rectangular grid across a span of roughly 40 by 50 miles over extremely remote terrain. Construction was to start on 26 October 1942 and be completed a mere 50 days later – it seems there was some urgency to this project. Today Interstate 10 bisects the grid, with 14 sites to the north and 10 to the south.

Each target consisted of four concentric rings, the outermost being 1000 feet in diameter, with a wooden shack resembling a pyramid at the center. Nighttime targets required generators to power a string of lights that formed a large crosshair on the ground. Some of the targets had outlines to simulate the appearance of ships or buildings from the air. The concentric circles were constructed by scraping a shallow, cleared furrow on the ground, sometimes leaving a ring of displaced rocks around the perimeter.

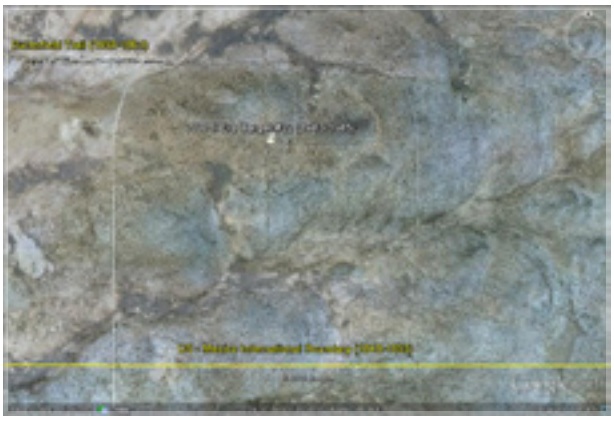
AT-11 Trainer Aircraft Flying over Practice Target

Much as the Spaniards underestimated the ability of the Puebloan people to communicate across vast distances, and as early U.S. soldiers underestimated the ability of Apaches to travel great distances with little food or water, so too captured German officers at the close of World War II revealed that they had severely underestimated the capacity of the Americans to support the logistics of our war effort.

An astonishing number of sorties were flown by the Deming airmen between 1942 and 1945, typically four to five thousand per month – equating to one every 10 minutes, around the clock, day in and day out, for the better part of three years. The training was conducted in Beech AT-11 aircraft, modified with a Plexiglass nose bubble for viewing the ground targets, and nick-named the Kansan. A typical training mission included the pilot, the instructor, and two cadets. The crawl between the pilot and instructor to enter the nose bubble was a tight squeeze, as was the seating arrangement for the instructor, who sat behind the bubble with his feet on an escape hatch. An Air Corps legend tells of an airman who turned around to say something to his instructor, and all he saw was an open escape hatch. So he quickly grabbed a nearby parachute (presumably removed because of the tight quarters) and threw it out the hatch as fast as possible. To everyone's relief, subsequent audits of Army property records indicated no discrepancies in the number of either parachutes or airmen.

Today, when viewed from the ground, the last remains of the targets look like shallow, concentric trenches that are being slowly overtaken by the timeless forces of nature. From the air, the targets bear a remarkable resemblance to alien crop circles. One target in particular, number 22, provides a physical connection with previous chapters of historical significance. Lying just a few miles west of the ruins of Mason's Fort, the northern edge of Target 22 is actually intersected by the Butterfield Trail, while the Gadsden Purchase cuts a line across the southern half of the large oval surrounding the target.

Visible Evidence of Graded Target Ring



Aerial View of Target #22, with Butterfield Trail visible near the top & Gadsden Purchase shown below

An interesting aspect of the bombardier training is associated with the Norden Bombsight. The Norden included a highly sophisticated mechanical computer (an original Norden bombsight resides at the Computer History Museum in Mountain View, California) that used input from the plane's altimeter, airspeed indicator, gyroscopes and autopilot to compute the expected trajectory of the bomb and to control the release point. Norden engineers claimed the bombsight had an error circle of 30 feet from an altitude of one mile, but wartime results were less spectacular; only 24% landed within 3000 feet of the target during the early air campaign over Germany in 1943.

The Norden Bombsight was initially considered "top secret". Some units included thermite grenades to ensure the bombsight melted into a lump of metal upon loss of an aircraft, rather than allow the bombsight to fall into enemy hands. After the war it was learned that plans for the Norden were leaked to the Germans, and both the Germans and British were working on similar designs.

APPENDIX 11:
THE NATIONAL REGISTER OF HISTORIC PLACES:

WHAT IT MEANS FOR SOUTHERN NEW MEXICO

The National Register of Historic Places is America's official list of cultural resources deemed worthy of preservation and further research. Since its inception in 1966, more than 80,000 properties have been listed in the National Register. These records hold information on more than 1.4 million individual resources—buildings, sites, districts, structures, and objects—providing a tangible link to this country's shared heritage at the national, state, and local levels. It is especially important to understand that the laws and regulations protecting cultural resources are applied not only to those properties that are listed in the register, but also those that are eligible for listing. This is an acknowledgement that under many circumstances, it is not practical or feasible to go through the lengthy nomination process for every eligible cultural resource. They are, nevertheless, recognized as resources of high enough significance to receive federal protection and stewardship on behalf of the American public.

THE NATIONAL REGISTER OF HISTORIC PLACES AND DOÑA ANA COUNTY, NEW MEXICO

Although there are many important Doña Ana County cultural resources eligible for listing in the National Register of Historic Places, there are 28 properties currently actually listed in the county. Each property is located at or near one of several communities which would serve as gateway communities to the Organ Mountains-Desert Peaks project area, including La Mesa, Las Cruces, Mesilla, Organ, the Village of Doña Ana, Radium Springs, and White Sands Missile Range. Thus positioned in close proximity to the Organ Mountains-Desert Peaks, these National Register properties increase the value and drawing power of the area as a whole for heritage tourism and economic benefits.

A wide range of historical topics and periods are represented by the National Register properties. The Missile Range sites hark back to New Mexico's military history. Five architecturally significant buildings are located on the campus of New Mexico State University in Las Cruces. This important gateway town also features several significant residences, numerous noteworthy public landmarks, churches, at least one engineering structure, and two historic districts. National Register sites including the Barela-Reynolds House and distinctive historic plazas are located at the nearby villages of Mesilla and Doña Ana. The L. B. Bentley General Merchandise store is located in Organ, NM, and the Summerford Mountain Archeological District is located in the vicinity of Radium Springs.

The following is a complete list of culturally significant Doña Ana County properties currently listed in the National Register of Historic Places that can be experienced by visitors to the Organ Mountains-Desert Peaks area:

PROPERTIES ALREADY LISTED IN THE NATIONAL REGISTER IN DOÑA ANA COUNTY

PROPERTY	LOCATION	PERIOD OF SIGNIFICANCE
Alameda-Depot Historic District	City of Las Cruces	Territorial/Early statehood
Armijo, Nestor House	City of Las Cruces	Territorial/Early statehood
Branigan, Thomas, Memorial Library	City of Las Cruces	Early statehood
Green Bridge at Dripping Springs	City of Las Cruces	Early statehood
Mesquite Street Original Townsite Historic District	City of Las Cruces	Territorial/Early statehood
Our Lady of Purication Catholic Church	City of Las Cruces	Territorial/Early statehood
Phillips Chapel	City of Las Cruces	Territorial/Early statehood
Rio Grande Theatre Downtown	City of Las Cruces	Twentieth-century New Mexico
Doña Ana Village Historic District	Doña Ana	Spanish colonial
San José Church	La Mesa	Spanish colonial
Barela-Reynolds House	Mesilla	Spanish colonial
La Mesilla Historic District	Mesilla	Spanish colonial
Mesilla Plaza	Mesilla	Spanish colonial
International Boundary Marker No. 1, U.S. and Mexico	Near El Paso	Twentieth-century New Mexico
Air Science Building	New Mexico State University, Las Cruces	Twentieth-century New Mexico
Foster Hall	New Mexico State University, Las Cruces	Twentieth-century New Mexico
Goddard Hall	New Mexico State University, Las Cruces	Twentieth-century New Mexico

PROPERTY	LOCATION	PERIOD OF SIGNIFICANCE
Hadley--Ludwick House	New Mexico State University, Las Cruces	Twentieth-century New Mexico
University President's House	New Mexico State University, Las Cruces	Twentieth-century New Mexico
Fort Selden	North of Dona Ana	Territorial
Bentley, L.B., General Merchandise Store	Organ	Territorial/Early statehood
Rio Grande Bridge	Radium Springs	Early statehood
Summerford Mountain Archeological District	Radium Springs	Territorial/Early statehood
Fort Fillmore	South of Las Cruces	Territorial
Elephant Butte Irrigation District	Southern New Mexico	Early statehood
Launch Complex 33	White Sands Missle Range	Cold War Era

THE NATIONAL REGISTER OF HISTORIC PLACES AND LUNA COUNTY, NM

Although there are untold numbers of important Luna County cultural resources eligible for listing in the National Register of Historic Places, there are seven properties currently listed in the county. These sites are located in or near Deming or Columbus, New Mexico; towns that are important to the Organ Mountains-Desert Peaks project area as gateway communities to visitors coming from, or going to, the west and southwest.

The following is a complete list of culturally significant Luna County properties currently listed in the National Register of Historic Places that can be experienced by visitors to the Organ Mountains-Desert Peaks National Monument:

PROPERTY	LOCATION	PERIOD OF SIGNIFICANCE
Deming Armory	Deming	Early statehood
Seaman Field House	Deming	Territorial/Early statehood
Luna County Courthouse and Park	Deming	Territorial/Early statehood
Mahoney Building	Deming	Early statehood
Upton Site	Deming Vicinity	Early statehood
US Post Office Main	Deming	Early statehood
Village of Columbus and Camp Furlong	Columbus	Territorial/Early statehood

In summary, the National Register shows that New Mexico enjoys a rich, complex, and unique history, with evidence from each historic context and period of significance amply represented on the landscape. In addition to the archaeological and historic sites listed in the State of New Mexico's cultural resources database and on the State Register of Cultural Places, there are countless numbers of sites eligible for listing in the National Register of Historic Places. The 35 properties officially listed in the National Register for Doña Ana and Luna Counties are all situated in or near Organ Mountains–Desert Peaks National Monument gateway communities. Because listed properties gain wide publicity and are popular destinations and educational venues, they enhance the whole region of southern New Mexico in which the project area is located. Such sites provide an added draw for tourism they relate to some of the same themes in archaeology and history that are so amply represented in the Organ Mountains-Desert Peaks. Further, the National Register will serve as an indispensible tool for protecting and promoting similar cultural resources in the project area.

APPENDIX 12:
NEW MEXICO, A LAND OF RICH HISTORY

From rock art to rockets, rough-and-tumble lawlessness to late statehood, New Mexico charms long-timers and newcomers alike with its relaxed pace, magnificent vistas, and richly unique heritage.

First crisscrossed by Paleoindian big-game hunters, Mogollon, Anasazi, Jemez, Kiowa, Manso, Navajo, Pecos, Ute, Apache, Comanche, and Pueblo Indian tribes, New Mexico later became home to fortune seekers, trappers, traders, raiders, soldiers, artists, hikers, friars, farmers, miners, merchants, astronomers, conquistadors, and American immigrants. Treaties were made and broken, entire tribes relocated, skirmishes won and lost. With its legacy of clashing cultures, resistance, revolt, resiliency, innovation, restlessness, and success, there is no other state remotely like New Mexico.

Nuevo Mexico, the Spanish name for the upper Rio Grande: "Mexico," an Aztec word, means "place of Mexitli," one of the Aztec gods. Even the state symbol, adopted from Zia Pueblo, fascinates us with its deceptive simplicity. From the circle representing life and love without beginning or end, the four groups of four rays that emanate represent the four compass directions, the four seasons, the four phases of a day (sunrise, noon, evening, and night), and the four divisions of life (childhood, youth, middle years, and old age). Simultaneously exotic and hardscrabble, New Mexico is known for its breathtaking scenery, addictive cuisine, expansive skies and friendly faces, vibrant, Spanish-inspired central plazas, and ancient cliff dwellings.

We listen to water running in centuries-old acequia (irrigation) systems. We hear bells clanging atop historic adobe missions. We witness violent lightning storms. We visit kivas. Hot air balloons waft over battle sites. Whiskey is still sold in dusty and isolated saloons. We feel the rumble of the railroad as the Atchison, Topeka and Santa Fe train passes through town. Townspeople make annual sacred pilgrimages just as their forebears did. Legal land and water disputes carry on to this day. Thousands of years of cultivating the land continues. The past remains with us.

The state's coat of arms is a Mexican eagle grasping a serpent in its beak, a cactus in its talons, shielded by the American eagle with outspread wings, and grasping arrows in its talons; on the scroll, the Latin motto: Crescit Eundo, or, "grows as it goes." In a land that connects ox-drawn carrettas and stagecoaches with the space shuttle landing at White Sands, we are still talking about an unidentified flying object that allegedly crashed near Roswell decades ago.

With more than its fair share of mysteries, mayhem, and momentous occasions, this is where the Pueblo tribes revolt, Geronimo surrenders, Billy the Kid is shot, Civil War soldiers clash, Thomas Edison films a movie, Georgia O'Keefe paints, women win the right to vote, Teddy Roosevelt recruits his Rough Riders, Civilian Conservation Corps inductees construct fire lookouts, schools, and sidewalks; the world's first atomic bomb is detonated. German and Japanese prisoners of war, upon release, return with their families to settle here for good. This is the birthplace of the Navajo "codetalkers" who helped defeat the Nazis. Outlaws were hanged, homesteaders staked their claims, Bataan Death marchers survived to return, Smokey Bear was rescued, health and thrill seekers made their way.

New Mexico is a crossroads and a destination, cursed by dust storms, drought, and blazing heat; blessed by snow-capped peaks, lush river valleys, basaltic volcanic flows, and hot springs. Through its heart run the Rio Grande River and El Camino Real. There is a tranquility now, a tolerance, a "live and let live" attitude that seems to permeate the air we breathe. Protecting New Mexico's landscape and singular *patrimonio* – our shared heritage — is a top priority.

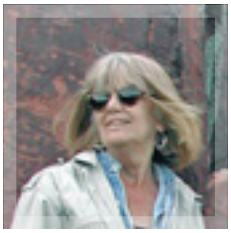
BIOGRAPHIES OF REPORT AUTHORS

REBECCA PROCTOR

Dr. Rebecca Procter has practiced as an archaeologist for 33 years, specializing in the prehistory of the southwestern U.S. Her graduate degrees include a Master of Arts in anthropology and a Ph.D. in anthropology, both from Washington University in St. Louis. Her professional experience in the area of historic preservation encompasses work in the public and private sectors, with state agencies, under contract to state and federal agencies, and as an independent consultant. Special interests include the development of pottery design as a reflection of close interaction among prehistoric potters, and the protection of heritage resources of all time periods. She has performed public service as a volunteer for the New Mexico Archaeology Fair, and as a volunteer educator in the classroom and for scout troops. Currently she serves as the assistant state coordinator for the New Mexico SiteWatch Program, a state-wide group dedicated to monitoring archaeological sites that may be at risk of looting or natural degradation. She also works with the informal advisory group to the Bureau of Land Management for implementing the Galisteo Basin Archaeological Sites Protection Act.

JEAN FULTON

Jean Fulton, Owner, TimeSprings, Inc. (Mesilla, NM) specializes in public history, Historic American Buildings Surveys, Historic Structures Reports, National Register nominations, technical and grant writing, the conservation of earthen (adobe) architecture, economic development through heritage tourism, and community-rooted revitalization projects. She is currently working with New Mexico State University on a database integration project; and with the Branigan Cultural Center, and the Youth Court Center on two upcoming cultural events. Jean volunteers with several local historic preservation projects at the Amador Hotel, Phillips Chapel, and the Lake Valley mining district near Hillsboro, NM. She recently served as the first Executive Director for a bi-national, non-profit *El Camino Real* National Historic Trail (NHT) association.



POLLY SCHAAFSMA

Polly Schaafsma is an archaeologist with a specialty in pre-Hispanic Indian rock art and kiva murals. With an academic background in art history (Mount Holyoke College) and a Master of Arts degree in Anthropology (University of Colorado) her career in the Southwest began in the 1960s with a preliminary organization of the vast rock art data base according to cultures and time frames. Her later work has been focused on the meaning and cosmologies basic to the iconography and the history of pre-Hispanic religions in the Southwest. She has recently been engaged in the Kuaua Murals Re-Study Project at the Museum of Indian Arts and Culture, and as a member of the Cosmo Group at the Santa Fe Institute. Her published works include 10 books and monographs as well as numerous journal articles and book chapters. Her books include *The Rock Art of New Mexico, The Rock Art of Utah, Indian Rock Art of the Southwest*, and *Warrior, Shield and Star.* In addition, she is volume editor of and contributor to *Kachinas in the Pueblo World* and *New Perspectives on Pottery Mound Pueblo*, and most recently co-editor with Kelley Hays-Gilpin of *Painting the Cosmos.*

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* Special thanks to Jon Hunner for detailing the Latino/a history of southern New Mexico and the Organ Mountains-Desert Peaks