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THE WRITING ON THE WALL: A CULTURAL LANDSCAPE STUDY AND SITE MANAGEMENT RECOMMENDATIONS FOR INSCRIPTION TRAIL LOOP, EL MORRO NATIONAL MONUMENT

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A THESIS In Historic Preservation Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements of the Degree of MASTER OF SCIENCE IN HISTORIC PRESERVATION 2009

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Abstract

Located on an ancient east-west trail in western New Mexico, a great sandstone promontory rises from the landscape. A naturally occurring pool at its base served as the only reliable water source for miles in either direction. The rock would have remained otherwise anonymous if not for the records left by those who dwelled and passed time there. Made of soft sandstone, over 2,000 signatures, messages, petroglyphs and pictographs cover the rock. Today it is known as "El Morro," or the headland, as it was called by Spanish explorers. As the second National Monument in the United States, designated in December 1906 by Theodore Roosevelt, El Morro has over a century of administrative history. Efforts to interpret and preserve the site's resources, particularly the inscriptions, began almost immediately after its designation. The original protective mandate for El Morro valued the Spanish inscriptions above all other aspects of the site. This translated over the years into a management regime stilted toward Eurocentric values and undermined other significant resources and values of the site. Although policy and programs have evolved and expanded to embrace broader values, an overarching general management strategy has not been instituted at El Morro. Therefore, a holistic appreciation and awareness of the broader context has been slower to appear through interpretation and preservation methods. A cultural landscape approach to El Morro will attempt to recognize the inter-relationship between culture and nature. This thesis addresses a portion of the overall Monument, the primary visitor path of Inscription Trail Loop.

Comments

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Taryn Marie D'Ambrogi

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In

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Presented to the Faculties of the University of Pennsylvania in
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2009

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Introduction

On the arid landscape of far western New Mexico a great sandstone promontory rises from the desert floor. Visible from a far distance, the rock served as the mid-way point on an ancient east-west trail. The rock served not only as a topographical marker, but also signaled the only natural source of water for thirty miles in either direction. The water is what lured centuries of humans to dwell and spend time at the rock, but it is what they left behind that ensured its place in history. Today the site is known best as El Morro and is protected under the U.S. National Park Service as a National Monument.

[Figure 0.1]

The first inhabitants of the area were the Ancient Puebloans and later their ancestors, today's Pueblo tribes, followed by the Spanish entradas into the area, and finally the westward expansion of Anglo-America. In this way, El Morro reflects the wider history of the Colorado Plateau Region. What makes the site unique, however, is the intertwining of these cultures through over 2,000 petroglyphs, pictographs, signatures, proclamations, and poetry carved into the sandstone face of the rock. Over time, the writings on the rock became as much of a draw as the natural pool of water at its base – perhaps even more so.

Very early in the site's history an editorial viewpoint was taken towards the rock. The first Spanish inscription left in 1605 by Don Juan de Oñate, the first governor of colonial New Mexico, was carved directly over an existing petroglyph. The reason for this location is unknown, but the choice asserts a dominance of one culture over another.

Over 300 years later, control over the rock's content would also be wielded with a heavy hand under the National Park Service. In the early 1920s, El Morro custodian Evon Z. Vogt ordered the removal of all carvings and writings occurring after 1906, the year the site came under legislative protection. The ensuing century of site management reveals an awareness of the site's value that has evolved over time. This thesis examines the changing approaches and views of El Morro's significance and how it has affected management policy towards site interpretation and preservation.

El Morro offers a unique opportunity to examine these two management tenants because of its rich history as a protected site. As the second National Monument in the United States, designated in December 1906 by Theodore Roosevelt, El Morro has over a century of administrative history. Efforts to interpret and preserve the site's resources, particularly the inscriptions, began almost immediately after its designation. The archives of El Morro and the Southwest Regional office of the National Park Service offer a trove of photographs, letters, management reports, memos, interpretive materials, scientific studies, archaeology reports, and other resources offering a window into El Morro's site stewardship.

The original protective mandate for El Morro valued the Spanish inscriptions above all other aspects of the site, including those left by Americans. Little attention was paid to the Ancestral Puebloan resources aside from their value as novelties or curiosities. This translated over the years into a management regime stilted toward Euro-centric values and undermined other significant resources and values of the site. Through the benefit of

distance and evolving concepts of historic and cultural significance, an expanded set of values has been recognized by El Morro's management as part of their broader stewardship. These values include the considerable collection of prehistoric rock art, the settlement of Ancestral Puebloans above and around the rock, the site's cultural and spiritual ties to the Pueblo community, the rich topography and vegetation, the isolated setting and vistas, and its importance as a National Park System designed landscape, in addition to the inscriptions.

Although policy and programs have evolved and expanded to embrace these values, an overarching general management strategy has not been instituted at El Morro. Therefore, a holistic appreciation and awareness of the broader context has been slower to appear through interpretation and preservation methods. In 2008, El Morro National Monument entered an agreement with the University of Pennsylvania to create a Cultural Landscape Report (CLR) for the site. The CLR will help to define a direction for management and, in particular, serve as the primary treatment document for the overall landscape and as a tool to guide long-term management.¹ While there have been numerous studies of El Morro emphasizing archeological resources, preservation issues, vegetation, and general site history, none have taken a holistic view that connects both the natural and cultural history of the site. A cultural landscape approach to El Morro will attempt to recognize the inter-relationship between the two.

¹ Page, Robert R., Cathy A. Gilbert, and Susan A. Dolan. A Guide to Cultural Landscape Reports: Contents, Process, and Techniques. Rep. Washington, DC: National Park Service, 1998.

This thesis addresses a portion of the overall Monument, the primary visitor path of Inscription Trail Loop. This portion of the site is the most trafficked by visitors and receives the most interpretation and emphasis by the National Park Service. It is also representative of the issues El Morro faces as a larger site.

Although it is only one character area of the overall Monument footprint, the Inscription Trail Loop is directly tied to the overall setting and history of the site. Chapter One details the broader context of the Monument, including its historical and cultural significance, physiographic, geology, climate, vegetation, and general setting. Chapter Two describes the historic landscape development within the Monument's current boundaries, with a focus on events and features found within the Inscription Trail Loop area. The chapter is organized by the periods of significance that define El Morro's development: 1) the Ancestral Puebloan period (A.D. 900 – A.D. 1300); 2) the Zuni hunting and gathering period (A.D. 1300 – A.D. 1541); 3) the period of Spanish exploration into the New World (A.D. 1542 – A.D. 1774); 4) the period of Mexican Independence and commerce with California (A.D. 1775 – A.D. 1848); 5) the period of American exploration and western emigration (A.D. 1849 – A.D. 1860); 6) the period during the American Civil War and the expansion of the western frontier (A.D. 1861 – A.D. 1905); 7) the National Monument and New Deal period (A.D. 1906 – A.D.1936); and 8) the period of expansions and improvements to the Monument as a protected site (A.D. 1937 – present). The site history chronicled in this chapter is organized by defining periods of settlement and activity for El Morro and the greater region. A general

historical overview is provided for each period along with the significant landscape features and characteristics relevant for the Inscription Trail Loop area.

Chapter Three takes a look at the elements of Inscription Trail Loop through written and graphic documentation of existing landscape conditions, features, and systems. These characteristics are defined in the National Park Service's *A Guide to Cultural Landscapes Reports*.² Current and potential threats to the overall condition and integrity of the trail are also examined. Chapter Four details the change in views of the site's significance over time and how it is reflected in changing management attitudes. A history of the interpretation and preservation efforts at El Morro is discussed along with various administrative programs and policies illustrating these approaches. The final chapter offers recommendations for both interpretation and preservation efforts based on a holistic view of the site's significance. The overall goal of this chapter is to enhance the ability of El Morro National Monument to conserve the values that give the site significance and preserve them for today's visitors and future generations.

² *Ibid.*

Chapter 1 – Project Context

Introduction

The context of Inscription Trail Loop is best understood through the broader milieu of the overall Monument.

Historic & Cultural Significance

The significance of El Morro National Monument is a product of its natural, cultural, and historic landscape. In its entirety, the Monument and its boundaries represent a vast record of the geological, cultural, and ecological record of the Southwestern United States. This corner of present-day New Mexico, and El Morro specifically, has witnessed the passing and interaction of Ancient Puebloan, European, and American cultures all within the shadow of the great rock. The rock would have remained otherwise anonymous, however, if not for the records left by those who dwelled and passed time there. Made of soft sandstone, over 2,000 signatures, messages, petroglyphs, and pictographs cover the rock, giving rise to its Anglo name of “Inscription Rock.” To the descendants of the Ancient Puebloans it is “A’ts’ina,” or place of writing on rock. Today it is more widely known as “El Morro,” or the headland, as it was called by Spanish explorers.

Recognizing the historic significance of the inscriptions, President Theodore Roosevelt designated El Morro as the second National Monument in the United States under the Antiquities Act of 1906. Over time stewardship of the site has moved beyond valuing only the European inscriptions. The current protective scope of the Monument includes

the long-standing presence and settlement of Ancestral Puebloans above and around the rock, the rich topography and vegetation, and its relatively isolated setting complete with vast, un-impeded views of the surrounding landscape and night sky. It is also valued as an example of an early National Park System designed landscape through the efforts of the Civil Works Administration and the Mission 66 program.

El Morro also holds special significance for Native Americans in New Mexico as a prominent feature on their wider sacred landscape. In particular, El Morro is considered part of the traditional homelands of the Zuni, Acoma, Laguna, and Navajo tribes. All four tribes have continuously used the area around El Morro for utilitarian, cultural, and religious purposes since late prehistoric times.³ The ruins at the top of the cuesta are widely considered to be a predecessor of today's Pueblo communities and the Zuni, Acoma, and Laguna all acknowledge an ancestral connection to the site. The Zuni revere the ruins as Heshoda Yal'ta, one of the stopping places described in the Zuni origin and migration story. They regard A'ts'ina and the surrounding ruins as an ancestral Zuni village.⁴ The Acoma creation story also includes a connection to the ruins at El Morro. The Acoma also see a link between their current pueblo, known as Sky City, and A'ts'ina, as both are located on prominent mesa tops.⁵

³ Zedeño, Maria N, et al. *Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument*. Report. Denver: Intermountain Region Support Office National Park Service, 2001.

⁴ Ferguson, T. J. *A Zuni atlas (Civilization of American Indian)*. New York: University of Oklahoma P, 1985.

⁵ Zedeño, Maria N, et al. *Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument*. Report. Denver: Intermountain Region Support Office National Park Service, 2001.

Unlike the Puebloan tribes, the Navajo were organized in smaller communities and moved across the countryside. The Navajo near El Morro are referred to as the Ramah Navajo. Their traditional land use area extended to and included the area around El Morro.⁶

Geography

The Monument sits immediately south of an ancient trade route connecting the Pueblos of Acoma, Zuni, and Laguna, known today as the Acoma-Zuni Trail. El Morro is considered to be the half-way point between the pueblos and was the only natural source of water along the route. The trail was a vital part of Puebloan life, used for economic, communicative, social, and cultural purposes. It also connects the tribes to various sacred and religious sites. A portion of the trail falls within the Monument's current boundaries and traces of the well-worn path are still visible on the landscape. Portions of this trail, including the stretch passing El Morro, were later used by Spanish explorers and Anglo-American military, survey, and emigrant expeditions.

The area is often referred to as the Cibola region, a reference to Coronado's search for the seven golden cities of Cibola. In truth, these cities turned out to be the historic Zuni pueblos of the present-day Colorado Plateau. Over time, the word Cibola has taken on broader meaning and now refers to the area surrounding Zuni Pueblo and reservation, which includes El Morro.⁷

⁶ *Ibid.*

⁷ LeBlanc, Steven. 1983. El The Cultural Heritage of Cibola. In Noble, David Grant, editor. *Zuni El Morro, Past and Present*. Exploration, Annual Bulletin, School of American Research, SAR Press, Santa Fe, 1983.

The Monument is located directly south of New Mexico State Highway 53, the primary means of transportation access. By car, the Monument is approximately 120 miles west of Albuquerque, New Mexico, fifty-five miles southeast of Gallup, New Mexico and forty-two miles west of Grants, New Mexico. The closest town is Ramah, ten miles to the west. Nearby sites of natural and cultural significance include Cibola National Forest, El Malpais National Monument (shares National Park Service management with El Morro), and the Pueblo of Zuni. [Figure 1.1]

The land surrounding the monument is part of the Ramah Navajo Indian Reservation. Most of the immediate adjoining land, however, is owned by private landowners.⁸

Geology & Physiography

El Morro National Monument is located within the El Morro Valley in west-central New Mexico, immediately west of the Continental Divide. Geographically, it is best understood in the broader context of the nearby San Juan Basin and Zuni and Defiance Uplifts.⁹ The Monument is sited on the southwest flank of the Zuni Mountains, approximately forty miles east of the Arizona border. On the northeast side of the Zuni Mountains, the range's gently sloping Paleozoic and Mesozoic rocks incline toward the San Juan Basin. On the southwest side, the strata are abruptly bent into a monoclinial flexure that flattens out under the desert floor near El Morro.¹⁰ The summit of the Zuni

⁸ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

⁹ Kiver, Eugene, and Harris David. *Geology of U.S. Parklands*. 5th ed. New York: John Wiley & Sons, Inc, 1999.

¹⁰ *Ibid.*

Mountains reaches 9,000 feet above sea level, approximately 1,800 feet above the top of El Morro.¹¹ [Figure 1.2]

El Morro is a cuesta, or an inclined mesa created by the erosion and weathering of tilted layers of bedrock.¹² Consisting of two flanks, the rock comes together to form a large outcrop at the central, northeast point (also referred to as, “the point”). Standing in front of the rock, El Morro appears to be a solid mass. Ascending to the top, however, the rock reveals itself to be a hollow “V” with a large box canyon situated in the middle. [Figure 1.3] The southeast flank is marked by dramatic sandstone cliffs; the northwest flank slopes gently towards the subsurface.¹³ Located at an elevation of 7,219 feet, the highest point of El Morro reaches another 200 feet above the desert floor.

El Morro is composed primarily of two kinds of stone: a base of cream-colored Jurassic Zuni Sandstone extending upwards for over 200 feet and a thirty-foot cap of Cretaceous Dakota Sandstone.^{14,15} Zuni Sandstone is argillaceous stone primarily composed of uniform quartz sand grains, with a lesser component of feldspars.¹⁶ Clay minerals, largely chlorite and kaolinite, hold the grains together.^{17,18} This composition creates a soft sandstone with a smooth surface that is easily carved upon, but also renders the stone

¹¹ *Ibid.*

¹² Cross, Stephen Aaron. *Stratigraphy, sedimentology, and surface water quality at El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1996.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ Chronic, Halka. *Roadside geology of New Mexico*. Missoula, MT: Mountain P Pub. Co., 1987.

¹⁶ *Ibid.*

¹⁷ Oliver, Anne B. "The variable performance of ethyl silicate: consolidated stone at three national parks." *APT Bulletin* XXXIII, no. 2-3 (2002): 39-44.

¹⁸ Burris, Christina A. *The Analysis of Sandstone Deterioration at the Northeast Point of Inscription Rock at El Morro National Monument*. Thesis, University of Pennsylvania Masters Program in Historic Preservation, 2007.

vulnerable to deterioration and weathering. Iron oxide cements also occur within the Zuni Sandstone as bands and nodules, as pore-filling cement along bounding surfaces, or as encrustations along joint surfaces.^{19,20} The Dakota Sandstone is a result of deposits left along an advancing sea during the Cretaceous period, and is approximately 30 million years younger than the Zuni Sandstone. Harder and more weather-resistant than the Zuni Sandstone, the Dakota Sandstone is made up of larger particulate and a less well-rounded and sorted granular structure.²¹ This provides a protective cap to the cuesta and has helped shape its striking form.

No sizeable faults run through the El Morro area, but joint patterns in the rock have resulted in fractures. The joints serve as points of weakness within the rock along which erosion occurs. In some joints, ferruginous precipitation has created case-hardened, iron-stained surfaces.^{22,23}

The rock outcrop loses material in three primary ways: granular disintegration, wholesale wasting, and spalling.²⁴ The loss of cementing agents causes granular disintegration, or the separation of individual or small clumps of grains. Wholesale wasting, or the detachment of coherent blocks of rock, occurs due to freeze/thaw processes and strain

¹⁹ Austin, George S. *Geological and Hydrological Assessment of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1994.

²⁰ Cross, Stephen Aaron. "Weathering of the El Morro Inscriptions." *CRM* 20, no. 10 (1997): 30-32.

²¹ Chronic, Halka. *Roadside geology of New Mexico*. Missoula, MT: Mountain P Pub. Co., 1987.

²² Austin, George S. *Geological and Hydrological Assessment of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1994.

²³ Cross, Stephen Aaron. "Weathering of the El Morro Inscriptions." *CRM* 20, no. 10 (1997): 30-32.

²⁴ *Ibid.*

loads. Spalling is usually caused by the interplay of moisture and the formation of salts within the rock.²⁵

The bulk of the rock art and inscriptions contained within the Monument's boundaries, and all of the inscriptions included along the Inscription Trail Loop, are contained within the Zuni Sandstone portions of the rock. Ancient Puebloan rock art appears predominantly on the iron-stained joint surfaces, while European and Anglo travelers preferred to carve into the more friable parts of the sandstone.

Hydrology

As well-known and significant as the cuesta is the permanent pool of water at its base. It was the presence of the reliable water source that likely drew the Ancient Puebloans to settle here and was the reason El Morro became a stopping point for centuries of travelers. The pool lies on the east face of the rock, directly below the Ancient Puebloan Ruins on top of the mesa. Known as a pothole formation, the pool was created by summer storms and snowmelt pouring down from the top of the precipice, carving a hollow cavity in the bedrock below.²⁶ The pool held thousands of gallons of water without damming or other human intervention and has been a reliable source of water since Ancient Puebloan times.

Early reports describe a deep basin ringed with sandy banks. [Figure 1.4] Attempts to dam the basin to increase capacity and other more aggressive control efforts undertaken

²⁵ *Ibid.*

²⁶ Kiver, Eugene, and Harris David. *Geology of U.S. Parklands*. 5th ed. New York: John Wiley & Sons, Inc, 1999.

by the National Park Service since the 1920s, however, have drastically affected the look and feel of the pool over time. These alterations have changed the size and shape of the basin and the surrounding terrain. Today the pool measures fifty feet across, twelve feet deep, and is controlled by a concrete dam that retains approximately 200,000 gallons of water.²⁷ [Figure 1.5] Despite these alterations and no longer being used as a water supply, the pool still retains both historical and cultural values and significance.

Although sandstones are usually highly permeable, the clay-sized material within the pores of the Zuni and Dakota Sandstones has reduced the permeability of the rock of the cuesta. This allows rain and snowmelt to collect on top of the rock in tinajas, or natural, shallow reservoirs. Based on various sources, the Ancient Puebloans likely capitalized on the rock's ability to hold water by also carving various channels, cisterns, and other features into the rock to manage water collection.²⁸ Any precipitation not caught by the top of the rock cascades down the side of the mesa and concentrates into a central drainage on the valley floor.²⁹

The water table at El Morro is below the Zuni Sandstone and drainage is predominantly underground, with surface streams appearing more frequently as the distance increases from the Continental Divide.³⁰ The nearest river is the Zuni River to the west, which

²⁷ Greene, Jerome A. *Historic Structure Report - El Morro, The Historic Pool*. Report. National Park Service, 1978.

²⁸ Watson, Patty Jo, Steven A. LeBlanc, and Charles L. Redman. "Aspects of Zuni Prehistory: Preliminary Report on Excavations and Survey in the El Morro Valley of New Mexico." *Journal of Field Archaeology* 7 (1908): 201-18.

²⁹ Austin, George S. *Geological and Hydrological Assessment of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1994.

³⁰ Kiver, Eugene, and Harris David. *Geology of U.S. Parklands*. 5th ed. New York: John Wiley & Sons, Inc, 1999.

merges into the Little Colorado River just south of Petrified Forest National Park in Arizona.

Climate

At an elevation of 7,219 feet, El Morro is subject to a semiarid climate featuring warm summers and cold winters. The Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture positioned a weather station at El Morro to collect data on rainfall, snowfall, average temperatures, and the growing seasons.³¹ Through the NRCS, analysis data is available for the site for the thirty-year period from 1961 to 1990.

The average snowfall at El Morro is approximately 50.8 inches per year, with an average of thirty-eight days with at least one inch of snow on the ground. The heaviest amount of snow falls in January (12.6 inches), with snow observed from October into April, and sometimes May. Precipitation, including rain and snowmelt, averages 15.34 inches annually. The rainiest months are from July to September with the most rain usually falling in August (2.79 inches).³²

The warmest months are July and August, with high temperatures around eighty degrees and low temperatures around 66°F. The coldest months are December and January, with

³¹ The most recent weather reports with aggregate climate data were published in 2002.

³² "National Water & Climate Center - Climate Information." NRCS National Water and Climate Center. www.wcc.nrcs.usda.gov (accessed March 16, 2009).

average daily temperatures ranging between 28°F and 33°F degrees. The most extreme temperatures on record are 104°F and -32°F.³³

Due to hazards from snow and ice during the winter, portions or all of the Headland Trail (ascending to top of the rock) are often closed to visitors. The Inscription Trail Loop usually remains open throughout the year.

The section of the Monument most vulnerable to the elements is the northeast corner of the rock, or the point of the “V.” The unique geometry of the rock at this location, render it the most vulnerable to wind, rain, and sun. The combination of these environmental factors creates an accelerated cycle of wetting and drying, freeze-thaw, and wind exposure throughout the year.³⁴

Vegetation

El Morro National Monument is situated at the intersection of the mountainous area of the Zuni Mountains and the semi-desert province of the lower El Morro Valley. This distinction is best viewed from the top of the cuesta from where one can see the pinion, juniper, and desert vegetation of the valley floor give way to the fir and ponderosa pines covering the plateaus and mountains in the distance.³⁵

³³ *Ibid.*

³⁴ Burris, Christina A. The Analysis of Sandstone Deterioration at the Northeast Point of Inscription Rock at El Morro National Monument. Thesis, University of Pennsylvania Masters Program in Historic Preservation, 2007.

³⁵ Noble, David Grant. 1983. El Morro: A Special American Place. In Noble, David Grant, editor. Zuni El Morro, Past and Present. Exploration, Annual Bulletin, School of American Research, SAR Press, Santa Fe, 1983.

Four main vegetation types are present within the boundaries of the Monument—pine-oak woodland, piñon-juniper woodland, transitional juniper-savannah, and grass-shrubland.³⁶ The location of these ecologies is influenced by the availability of water, soil structure, and microclimate. Woodland species such as Colorado piñon and one-seed juniper are found at the top of the cuesta and on slopes where water has collected in cracks between the rocks. On the north cliff-sides and box canyon, pine-oak woodlands are present. In these areas, ponderosa pine, Gambel oak, alligator juniper, and Rocky Mountain juniper are interspersed with Colorado piñon and one-seed juniper. As the elevation slopes toward the valley floor, the soil is sandier and junipers and shrubs dominate juniper-savannah ecology. The grass shrubland contains primarily fourwing saltbush, rabbitbrush, horsebrush, snakeweed, sand sage, winterfat, wolfberry, blue grama, and sand dropseed. Cheatgrass, a non-native grass species, and fourwing saltbrush are typically found in previously disturbed areas and indicate past use or the presence of archeological resources.^{37,38} Non-native species are also presently abundant throughout the Monument's boundaries.³⁹

Prior to the arrival of Spanish explorers, little is known about the specific vegetation patterns and biogeography surrounding El Morro.⁴⁰ Spanish descriptions of the area

³⁶ National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument. Report. Ramah, NM: El Morro National Monument, 2002.

³⁷ McCallum, D. Archibald. *The vegetation of the Zuni Mountain Region in historical perspective with special reference to El Morro National Monument*. Report. El Morro archives: Prepared for NPS Southwest Regional Office, Division of Natural Resource Management, 1981.

³⁸ Schackel, Sandra. *A century of change: a photographic history and analysis of vegetation conditions, El Morro National Monument, 1891-1983*. Report. El Morro archives: Unpublished final report, 1984.

³⁹ Salas, David and Cory Bolen. 2008. Vegetation Classification and Mapping Report – El Morro National Monument. Unpublished final report, 2008.

⁴⁰ National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument. Report. Ramah, NM: El Morro National Monument, 2002.

noted the presence of pines, junipers, and suitable grasses for grazing in portions of the surrounding valley floor. Later American accounts also noted the presence of large pines, junipers, grassy meadows, grasslands, and widespread sagebrush.^{41,42}

The vegetation surrounding the Monument has been most affected by the practice of grazing. Grazing animals were first introduced to the El Morro valley during the 16th century, although no evidence of this remains on the landscape other than the damaged vegetation. Intensive grazing, however, began in the mid-19th century and continued until the establishment of the Monument in 1906. Photo evidence of surrounding vegetation is available beginning in the late 1800s and early 1900s and illustrates a noticeably decreased presence of pinion and juniper around the Monument than is currently found. [Figure 1.6] It is possible that overgrazing, wood collecting, and lack of wildfires created an environment that favored the proliferation of pinion and juniper pines over the previous grasslands.⁴³ This is a typical vegetative reaction to overgrazed land and an unnaturally long period of fire suppression.⁴⁴

The current levels of pinion and juniper around the Monument have created a potentially disastrous amount of fuel load in the case of a wildfire.⁴⁵ Since 2001, limited efforts have

⁴¹ McCallum, D. Archibald. *The vegetation of the Zuni Mountain Region in historical perspective with special reference to El Morro National Monument*. Report. El Morro archives: Prepared for NPS Southwest Regional Office, Division of Natural Resource Management, 1981.

⁴² Schackel, Sandra. *A century of change: a photographic history and analysis of vegetation conditions, El Morro National Monument, 1891-1983*. Report. El Morro archives: Unpublished final report, 1984.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

⁴⁵ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

been undertaken to reduce the build-up of fuels by thinning the pinion and juniper in limited areas of the Monument.⁴⁶

Erosion control is also an ongoing concern and effort for El Morro's management. Attempts to control erosion under the stewardship of the Park Service include the construction of check dams, infilling the arroyo below the historic pool, and planting the area with grasses and shrubs to help control the wearing away of the soil around the rock.⁴⁷

Site Boundaries

In total, the El Morro boundaries, as designated by Congress, cover approximately two square miles of land, including 1,039.92 acres of Federally-owned land and two private inholdings of 240 acres.⁴⁸

The grounds include a visitor center and parking, two paved public trail routes, a public campground, administrative offices, storage and maintenance facilities, private access roads, and staff housing. [Figure 1.7] The structures relating to Inscription Trail Loop – the visitor center and paved trails – are detailed further in the proceeding chapters. Other structures of contributing or significant value will be detailed in the final Cultural Landscape Report.

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

⁴⁸ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

Inscription Trail Loop Boundaries

The Inscription Trail Loop, the focus of this thesis, begins just past the current visitor center, leading visitors first to the historic pool and then following a path around the northeast point of the rock, ending just before the ascent to the Headland Trail. The Headland trail leads visitors on switchbacks to the top of the rock past the Ancient Puebloan ruins and back down to the visitor center. [Figure 1.8]

More information regarding Inscription Trail Loop and its features is detailed in Chapter Three.

Management Context

The Monument is owned and managed by the National Park Service (NPS) and, more specifically, is under the management of the El Malpais/El Morro NPS office. Within the National Park Service, both El Morro and nearby El Malpais are under the supervision of the Southwest Regional Office, located in Santa Fe, New Mexico.

Chapter 2 – El Morro Physical History

Introduction

The following site history is based on archived materials found at the El Morro office, primary and secondary sources, and information collected by the Southwest Regional Office of the National Park Service for the El Morro Cultural Landscape Inventory report.⁴⁹ While this thesis focuses specifically on the inscriptions, and in particular the current Inscription Trail Loop, their history is directly tied to the broader evolution, use, and development of the site. The following physical history of the Monument aims to provide a chronological narrative of the site’s evolution, which can be used as a basis for the cultural landscape analysis and evaluation.

Periods of Significance

In total, the Monument represents vernacular landscapes associated with the development and settlement of the Ancestral Puebloans, the Spanish entradas, the colonization of the New World, the westward push of American expansion, and the designed landscape associated with the early establishment of the National Parks and Monuments systems. The site history chronicled in this chapter is organized by the defining periods of settlement and activity for El Morro and the greater region:⁵⁰

- Ancestral Puebloan, A.D. 900 – A.D. 1300
- Zuni Hunting and Gathering, A.D. 1300 – A.D. 1541

⁴⁹ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

⁵⁰ These differ slightly from the periods of significance identified in the Cultural Landscape Inventory; the period of significance entitled “National Monument Status and the New Deal Era” has been extended by one year, from 1906-1936, to coincide with the full tenure of Evon Z. Vogt, El Morro’s first custodian.

- Spanish Exploration, A.D. 1542 – A.D. 1774
- Commerce and Mexican Independence, A.D. 1775 – A.D. 1848
- American Exploration and Emigration, A.D. 1849 – A.D. 1860
- Civil War and Frontier Expansion, A.D. 1861 – A.D. 1905
- National Monument Status and the New Deal Era, A.D. 1906 – A.D.1936
- Expansions and Improvements at the Monument, A.D. 1937 – Present

Ancestral Puebloan, A.D. 900 – A.D. 1300

Historical Overview

The Ancestral Puebloans are one of the four major prehistoric and historic Native American cultures to inhabit the greater Colorado Plateau, the region centered on the Four Corners area in the present-day Southwest United States (including the El Morro area). It is widely believed that the Ancient Puebloans are the ancestors of the modern Puebloan tribes. Therefore, El Morro is considered a prominent feature in the larger cultural and religious landscape for Native Americans in and around western New Mexico. It is located within the traditional homelands of the Zuni, Acoma, and Laguna Pueblos and each group claims ancestral ties to the settlements on and around the site. Use of the site by these tribes stretches back for centuries for secular, religious, and cultural purposes. El Morro also falls within the traditional homeland of the Ramah Navajo, although they do not have an association with the Ancient Puebloan culture.⁵¹

⁵¹ Zedeño, Maria N, et al. *Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument*. Report. Denver: Intermountain Region Support Office National Park Service, 2001.

The entwining history of these groups with the land and resources around El Morro has led to complexities in understanding and interpretation of the site. All groups are recognized for their associations with the area by the Monument and the National Park Service. From the beginning of the Monument in 1906, El Morro's management has made formal and informal agreements with the tribes to allow for continued traditional uses of the site.⁵²

The history of the Ancestral Puebloans is generally defined by the Pecos classification, an archeological framework that provides a chronological timeline of Ancestral Puebloan history. The classifications include Basketmaker II (100 B.C. – A.D. 500), Basketmaker III (A.D. 500 – A.D. 700), Pueblo I (A.D. 700 – A.D. 900), Pueblo II (A.D. 900 – A.D. 1100), Pueblo III (A.D. 1100 – A.D. 1300), and Pueblo IV (A.D. 1300 - A.D. 1500). Each period is characterized by building techniques, settlement patterns, horticultural and hunting practices, and related material culture, most notably the development of pottery and the use basketry.

Based on archaeological findings in and around the current Monument boundaries, the greater El Morro area was settled by Ancestral Puebloans during the Pueblo II and Pueblo III periods.⁵³ It is thought that the reliable source of water at the base of the cliffs was the impetus for settlement. During this time period, the historic pool would have held thousands of gallons of water – more than enough to support a large population.

⁵² *Ibid.*

⁵³ Young, Jane, and Nancy L. Bartman. *Rock art of the Zuni-Cibola Region*. Zuni, NM: Pueblo of Zuni, 1981.

Pueblo II Period

El Morro Valley was initially settled around 900 or 1000 A.D. during the Pueblo II period. A small amount of pithouses were built along the upper valley margins within the pinion-juniper zone. These were little small block, or unit pueblos, occupied by one to several families.⁵⁴

Little is known about this period of occupation.⁵⁵

Pueblo III Period

A brief period of abandonment occurred at the site, but it was later resettled during the Pueblo III period around mid-1200 A.D. During this time, the Ancestral Puebloans experienced a rapid population increase and communities began moving to higher elevations.⁵⁶ Around 1260 A.D. several cluster sites were built on or near the top of the cuesta, consisting of seven to twenty small pueblos, totaling approximately 200 to 300 rooms. These pueblos were vacated shortly after construction.

Around 1276 A.D. several larger pueblos were built on or near the previous cluster sites.

A'ts'ina and the unexcavated "North Ruin" both date from this period. The location

⁵⁴ Watson, Patty Jo, Steven A. LeBlanc, and Charles L. Redman. "Aspects of Zuni Prehistory: Preliminary Report on Excavations and Survey in the El Morro Valley of New Mexico." *Journal of Field Archaeology* 7 (1908): 201-18.

⁵⁵ Zedeño, Maria N, et al. *Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument*. Report. Denver: Intermountain Region Support Office National Park Service, 2001.

⁵⁶ This is similar to settlement patterns observed in other Ancestral Puebloan populations within the Colorado Plateau region during this time period. Source: Zedeño, Maria N, et al. *Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument*. Report. Denver: Intermountain Region Support Office National Park Service, 2001.

offered a defensible position and also took advantage of concentrated surface runoff and water collection at the top and base of the rock. Unlike the previous building campaign, these pueblos were much larger. A'ts'ina measured approximately 200 by 300 feet, was composed of several stories, contained over 500 rooms, and housed between 1,000 and 1,500 residents.⁵⁷ Oriented around internal plazas and kivas, the pueblos were enclosed by a high wall.

Significant Landscape Characteristics of the Period

Archaeological Sites

The most visible archeological ruins from this period are those of A'ts'ina. In 1954 archeological investigations of A'ts'ina were lead by Dr. Richard Woodbury, a professor and archaeologist from Columbia University. Woodbury oversaw the excavation of ten rooms, one square kiva and half of one large round kiva.^{58,59} In 1961, the National Park Service managed the excavation of an additional six rooms.⁶⁰ Today, nearly 500 rooms remain unexcavated.⁶¹ The excavated ruins are currently visible and interpreted for public as part of the Headland Trail. [Figure 2.1]

⁵⁷ *El Morro: Official Map and Guide*. Washington, DC: National Park Service and U.S Department of the Interior.

⁵⁸ Vivian, Gordon. *Ruins Stabilization Report, the South Ruin, El Morro National Monument, Valencia County, New Mexico*. Mobile Unit, Southwestern National Monuments, 1954.

⁵⁹ Woodbury, Richard. *Preliminary Reports on Archaeological Investigations at El Morro in the Summers of 1954 and 1955*. El Morro archives: Unpublished final report, 1955.

⁶⁰ Shiner, Joel L. *Stabilization of Atsinna Ruin, El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1961.

⁶¹ Noble, David Grant. 1983. El Morro: A Special American Place. In Noble, David Grant, editor. *Zuni El Morro, Past and Present*. Exploration, Annual Bulletin, School of American Research, SAR Press, Santa Fe, 1983.

Across from A'ts'ina, and also located on the top of the cuesta, is the unexcavated North Ruin. [Figure 2.2] This large pueblo, similar to A'ts'ina remains unexcavated and is not currently interpreted for the wider public. Smaller settlements were also scattered on the valley floor surrounding the rock, mostly along the existent basalt flows. These are not accessible to Monument visitors.

During his excavations at A'ts'ina, Woodbury also noted the presence of “pecked” cisterns into the mesa immediately adjacent to the pueblo ruins.⁶²

Pictographs & Petroglyphs

The earliest markings on El Morro rock are the prehistoric petroglyphs and pictographs. Petroglyphs were created by engraving into the stone and pictographs were created by painting onto the stone. It is believed that all of the prehistoric rock art sites are ancestral Zuni, from the Pueblo II and III periods and are likely concurrent with the occupation of A'ts'ina. A comprehensive survey and documentation of the prehistoric markings conducted by Melissa Martin in 1986 identified and recorded thirty rock art sites within the Monument's boundaries.⁶³

Based on the Martin report, there are twenty-five identified petroglyph sites, three pictograph sites and two sites with both forms.⁶⁴ It is believed that the sites represent the

⁶² Watson, Patty Jo, Steven A. LeBlanc, and Charles L. Redman. "Aspects of Zuni Prehistory: Preliminary Report on Excavations and Survey in the El Morro Valley of New Mexico." *Journal of Field Archaeology* 7 (1908): 201-18.

⁶³ Martin, Melissa A. *Site survey of the petroglyphs and pictographs at El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1986.

⁶⁴ *Ibid.*

“cultural life” of the ancestral Zuni and do not represent a language based on written symbols.⁶⁵ The bulk of these identified sites fall outside of the Inscription Trail Loop. A few petroglyphs, however, are visible from the trail and are noted in the Monument’s interpretation materials. [Figure 2.3]

Circulation

Hand and toe holds scaling the cliff faces are visible from both the outer walls of the cuesta and from inside the box canyon. A hand-and-toe-hold trail also appears leading from the base of the pool to the top of the rock is also visible. [Figure 2.4]

Zuni Hunting & Gathering, A.D. 1300 – A.D. 1541

Historical Overview

By early A.D. 1300, climate shifts and drought forced the abandonment of A’ts’ina and the surrounding settlements. Motivated by a shortened growing season, the Ancestral Puebloans moved to lower elevations closer to the Zuni River.⁶⁶ One theory suggests that the move from A’ts’ina and the other large pueblos was gradual; useful objects were removed from the rooms first and which were then later filled in with trash.⁶⁷ The period between A.D. 1300 and A.D. 1500 is also known as the Pueblo IV period.

⁶⁵ *Ibid.*

⁶⁶ Zedeño, Maria N, et al. Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument. Report. Denver: Intermountain Region Support Office National Park Service, 2001.

⁶⁷ *Ibid.*

Descendants from the earlier inhabitants likely continued to use the area for hunting grounds, resource gathering, and ceremonial purposes.⁶⁸

Significant Landscape Characteristics of the Period

Pictographs & Petroglyphs

In her report, Martin also notes that some of the pictographs and petroglyphs might date from this period.⁶⁹

Circulation

An exact date for the origin of the Acoma-Zuni trail is unclear, although the path was in use during this period.

Spanish Exploration, A.D 1542 – A.D. 1774

Historical Overview

The next period of significance is defined by Spain's exploration of the New World from present-day Mexico. Spanish explorers crisscrossed North America from Florida to Vancouver Island. New Mexico, due to its early settlement and larger population, represents the heartland of Spanish exploration in the New World.⁷⁰

⁶⁸ National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument. Report. Ramah, NM: El Morro National Monument, 2002.

⁶⁹ Martin, Melissa A. *Site survey of the petroglyphs and pictographs at El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1986.

⁷⁰ Kessell, John L. *Spain in the Southwest A Narrative History of Colonial New Mexico, Arizona, Texas, and California*. New York: University of Oklahoma P, 2003.

The first written report of El Morro appeared in 1583, followed by the first identified European inscription in 1605. This marks the beginning of written inscriptions left upon the rock to lay territorial claim, assert authority and, sometimes, to simply leave a marker of passage.

Spanish exploration into the New World was, in part, driven by the desire to find the fabled seven cities of gold, or the seven cities of Cibola.⁷¹ By the time the Spaniards arrived in present-day New Mexico, the descendants of the Ancient Puebloans had settled in the locations of current pueblo communities. The Puebloan communities closest to El Morro were the Zuni to the west and the Acoma to the east. Equipped with horses and metal weapons, the Conquistadors must have appeared as aliens on the landscape to the Puebloan people who had previously seen neither.⁷² The resulting clash of cultures would define this era for both El Morro and the broader New Mexico region.

Francisco Vázquez de Coronado, A.D. 1540

The first large Spanish entrada into New Mexico began with Francisco Vázquez de Coronado's expedition of 1540. Searching for the golden city as reported by previous travelers, Coronado headed north from Mexico, arriving first at the Zuni Pueblo of Hawikuh on July 7, 1540. Based on written reports from Coronado's expedition, it is possible they crossed by or very close to El Morro.⁷³ Disappointed at not finding the mythical cities of gold, Coronado committed to pushing forward in hopes of finding

⁷¹ *Ibid.*

⁷² Murphy, Dan. *El Morro National Monument*. Tucson, Ariz: Western National Parks Association, 2003.

⁷³ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

other riches to justify the large cost of the expedition. Instead, he and his parties found the pueblos of the Hopi, the Grand Canyon, the Rio Grande river valley, and present-day Kansas. In 1542 Coronado returned to Mexico, again passing through the vicinity of El Morro.⁷⁴

Antonio de Espejo, A.D. 1583

In the years following Coronado's return to Mexico, interest in further exploration waned as efforts were concentrated once again on settling New Spain. Reports from a small, religious expedition into the Cibola region led by Fray Agustín Rodríguez and Francisco Sanchez (known as Chumascado) from 1580-1582 revived interest in the area. The first confirmed foreign visitors to El Morro occurred shortly thereafter on March 11, 1583. A return mission to the region was undertaken in response to reports of the deaths of two Franciscan friars left at the Pueblos during the Rodríguez-Chumascado expedition. Antonio de Espejo, a Spanish explorer and naturalist, led the excursion. In the log from his journey, Espejo noted they camped at "El Estanque de Peñol," or the pool by the great rock.⁷⁵ This is the first written documentation of El Morro, and no known inscriptions were left by this expedition.⁷⁶ The first identified inscription would appear on the rock some twenty years later during the first major Spanish attempt to colonize the greater New Mexico region.

⁷⁴ Slater, John M. *Inscription Rock, New Mexico: the rock itself, the inscriptions thereon, and the travelers who made them*. Los Angeles: The Plantin P, 1961.

⁷⁵ Murphy, Dan. *El Morro National Monument*. Tucson, Ariz: Western National Parks Association, 2003.

⁷⁶ *Ibid.*

Don Juan de Oñate, A.D. 1598 – A.D. 1605

Don Juan de Oñate crossed into New Mexico in 1598 and established the first Spanish settlement in the New World at San Juan Pueblo on the upper Rio Grande river, near present day Santa Fe. He brought close to 1,000 settlers and 7,000 head of livestock with him.⁷⁷ During this journey he visited El Morro and noted it in his travel journal as “Agua de la Peña,” or Water of the Rock.⁷⁸

A member of Oñate’s party also wrote about the pool, albeit a more dramatic account and description. After becoming lost and separated from his party, Gaspar Pérez de Villagrà came upon the pool at El Morro by chance.⁷⁹ Villagrà, a captain in Oñate’s party, also served as the official scribe for the expedition and later recounted the journey in his epic poem, *Historia de la Nueva México* (1610). His relief at finding the pool at El Morro is vividly retold:

*Passé aquel trago amargo, y fui siguiendo
El golpe de fortuna que acabaua
La miserable vida que vivia,
Hasta que por gran fuerte fuy llegando,
Al pie de vnos peñascos lebantados,
En cuió assiento y puesto vi que estaua,
Vn apazible estanque de agua fria,
Sobre cuios cristales casi ciego,
Apenas fuy venciendo la gran furia,
De la insaziabile sed que me acabaua,*

⁷⁷ *Ibid.*

⁷⁸ Hammond, George and Agapito Rey, eds. *Don Juan de Oñate, colonizer of New Mexico, 1595-1628*. Albuquerque: University of New Mexico P, 1953.

⁷⁹ Villagrà, Gaspar Perez de. *Historia de la Nueva Mexico, 1610*. Albuquerque: University of New Mexico Press, 1992.

*Quando temblando todo estremecido,
El humido licor lançe forçado*⁸⁰

I had drunk that bitter draft, and was awaiting
The blow of fate which would end
The miserable life which I led,
When by great effort I arrived
At the foot of some lofty cliffs
At which I sat down, and then saw that there was
A quiet tank of cold water
Above whose crystalline [waters], almost blind,
I was with difficulty conquering the great madness
Of the insatiable thirst which overwhelmed me,
When trembling, all exhausted,
The wet liquor injected strength.⁸¹

During his stay at the rock, Oñate received word of a surprise attack at the Acoma pueblo killing thirteen Spanish soldiers, including his nephew, Juan de Zaldívar.⁸² This would set off a chain of reactions that would resonate to the present day.

In retribution for his nephew's death, Oñate sent instructions to punish those of fighting age, "as you deem best, as a warning to everyone in this kingdom." After a return attack on Acoma, Oñate had all residents of the pueblo arrested and tried the captured Acoman warriors in Spanish court. In handing down the final judgment, Oñate issued the following punishment: children under twelve were placed in the guardianship of

⁸⁰ *Ibid.*

⁸¹ Translation provided in: Slater, John M. *Inscription Rock, New Mexico: the rock itself, the inscriptions thereon, and the travelers who made them*. Los Angeles: The Plantin P, 1961.

⁸² Hammond, George and Agapito Rey, eds. *Don Juan de Oñate, colonizer of New Mexico, 1595-1628*. Albuquerque: University of New Mexico P, 1953.

missionaries; those between twelve and twenty-five were sentenced to twenty years of servitude; the elderly were entrusted to another tribe and forbidden to leave the pueblo; and, most harsh of all, males over twenty-five were to have one foot cut off and submit to twenty years of servitude. The severity of the punishment was so great that it even drew protests from the Spanish colonists.⁸³

Oñate would again pass by El Morro seven years later; this time, however, he would leave a tangible marker of his passing and possibly provide the impetus and inspiration for centuries of passers-by to do the same. In 1604 he left New Mexico on an expedition to the Gulf of California and the Pacific Ocean, which he proclaimed as the “South Sea.”⁸⁴ On his return a year later, he remembered the watering hole at the base of the distinctive rock and made camp there on April 15, 1605. During this visit Oñate became the first person to leave an inscription on the rock.

It is not known if the inscription was carved by Oñate himself or a member of his party.⁸⁵

Commemorating his voyage, inscribed upon the rock is this:

*“Paso por aq(u)i el Adelanto don Juan de Oñate del descubrimiento
del Mar del Sur el 16 de abril de 1605.”*

⁸³ In 1612, Oñate faced charges for the excess of his punishments to the Acoma from his political opposition. He lost his landholdings, investments, was heavily fined and was banished from New Mexico. Today, Oñate is honored by some as the colonizer of New Mexico and vilified by others for his cruelty. In 1998, a statue of Oñate in Española, New Mexico was vandalized by cutting off the right foot and a note left behind saying, “Fair is fair.” Although the statue was restored, the seam of the repair is still visible. In 2007 the city of El Paso, Texas erected a thirty-four foot tall statue of Oñate over the protests of Acoma tribe members. The controversy was the subject of a documentary, *The Last Conquistador*, which aired on PBS in 2008.

⁸⁴ Murphy, Dan. *El Morro National Monument*. Tucson, Ariz: Western National Parks Association, 2003.

⁸⁵ *Ibid.*

“Here passed by the Governor-General Don Juan de Oñate, from discovery of the South Sea, the 16th of April, 1605.”

The inscription is carved directly over a pre-existing Ancestral Puebloan petroglyph. [Figure 2.5] Oñate’s choice of words has also been prophetic for El Morro. Countless Spanish inscriptions left afterwards have begun with the words, “paso por aqui.” The phrase has become synonymous with the site.

Governor Don Juan de Eulate, A.D. 1620

One of the longest inscriptions left at El Morro is believed to have been left by Governor Don Juan de Eulate. In the years following Oñate’s demise as governor of New Mexico, Santa Fe was established as the capital and a quick succession of governors followed. In 1618, Don Juan de Eulate became governor and held the position until 1625.⁸⁶ Although the carving is difficult to make out, the following inscription, left in 1620, is attributed to him.⁸⁷

“Soy Capitan-General de las provincias del Nuevo Mexico por el Rey nuestro Senor. Paso por aqui de buelta de los pueblos de Zuñi a los 29 de Julio ano de 1620(?) y los puso en pas a su pedimiento pidiendole su favor como basallos de su magistad y de nuebo dieron la obediencia todo lo que hiso con el agasaxo selo y prudencia como tan

⁸⁶ Slater, John M. *Inscription Rock, New Mexico: the rock itself, the inscriptions thereon, and the travelers who made them.* Los Angeles: The Plantin P, 1961.

⁸⁷ Murphy, Dan. *El Morro National Monument.* Tucson, Ariz: Western National Parks Association, 2003.

*christianisimo [XXXXXXXX] tan particular y Gallardo soldado de
inacabable y loada mem [XXXXXXXX].”*

"I am the captain General of the Providences of New Mexico for the King our Lord, passed by here on the return from the pueblos of Zuni on the 29th of July the year 1620, and put them at peace at their humble petition, they asking favors as vassals of his Majesty and promising anew their obedience, all of which he did, with clemency, zeal, and prudence, as a most Christian-like (gentleman) extraordinary and gallant soldier of enduring and praised memory."

Not everyone shared the sentiments of the author, however, as several words – including gentleman – have been excised from the face of the rock. [Figure 2.6] Based on later documentation of this part of the rock, the deliberate scratch-through was done before 1849.⁸⁸

Captain Francisco Manuel de Silva Nieto, A.D. 1629

In 1629 Captain Francisco Manuel de Silva Nieto was appointed Governor of New Mexico. As part of his administration, he undertook a religious campaign to the El Morro region, following the trail between Acoma and Zuni. Along the way, one missionary was installed at Acoma and three were left at Zuni. Soldiers were also left behind at both pueblos for the missionaries' protection.⁸⁹ On Silva Nieto's return, he and

⁸⁸ The obliterations appear in Richard H. Kerns drawings of 1849.

⁸⁹ Slater, John M. *Inscription Rock, New Mexico: the rock itself, the inscriptions thereon, and the travelers who made them*. Los Angeles: The Plantin P, 1961.

his caravan stopped at El Morro where he left the following inscription, the only one in verse found on the rock:

*“Aqui [llego el Senor] y Gobernador
Don Francisco Manuel de Silva Nieto
Que la ynpucible tiene ya sujeto
Su Braco yndubitable y su Balor
Con los Carros del Rei nuestro Señor
Cosa Que solo el puso en este Efecto
De Agosto [y Mil] Seiscientos Beinte y Nueve
Quesbyen A cuni Pase y la Fe lleve”*

“Here arrived the Senor and Governor
Don Francisco Manuel de Silva Nieto
Whose indubitable arm and valor
Have overcome the impossible
With the wagons of the King our Lord
A thing which he alone accomplished
August 5, 1629

That one may well go to Zuni and carry the Holy Faith”

Passages of the inscription have been erased through vandalism or erosion and several of the words are difficult to make out. [Figure 2.7] Later drawings from 1849 reveal where the inscription has been obscured.

One of the friars left behind by the Silva Nieto expedition, Fray Francisco Letrado, was killed several years later by members of the Zuni pueblo. A inscription appearing approximately a month after the friar’s death reads:

*“Se pasaron a 23 de marzo de 1632
aftos a la venganza de muerte del Padre Letrado Lujan”*

“They passed by here on the 23rd of M...of the year 1632
[on the way to] avenging [the] death of the father Letrado
Lujan”

General Don Diego de Vargas, A.D. 1692

Throughout the mid 1600s relations between the Spanish and the Pueblos continued to decline. By the 1680s, growing resentment against Spanish colonialism and conversion attempts grew within the various Pueblo tribes. During the Pueblo Rebellion of 1680, the Spanish were driven back towards Santa Fe and later towards El Paso, where they would remain for the greater part of twelve years. In 1692 an organized reconquest was lead by General Diego de Vargas Zapata Luján Ponce de León. De Vargas is credited for giving the rock the name, “El Morro,” or “the headlands.”⁹⁰ Following in the tradition of Spanish conquistadors before him, de Vargas left the following inscription [Figure 2.8]:

*“Aqui estuvo de General Don Diego de Vargas, quien conquisto a
nuestra Santa Fe y a la Real Corona todo el Nuevo Mexico a su
costa, Ano de 1692”*

“Here was the General Don Diego de Vargas, who
conquered for our Holy Faith, and for the Royal Crown,
all of New Mexico at his own expense, in the year of
1692”

⁹⁰ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

In the roughly one-hundred years following de Vargas' visit, the region continued to be defined by the difficulties between the Spanish and Native Indian populations, although no further large, violent uprisings occurred. The last known Spanish inscription was left at El Morro in 1774.

Significant Landscape Characteristics of the Period

As the Spanish explorers were only itinerant figures on the El Morro landscape, they did not leave many markers of their presence aside from the inscriptions and giving the site its current name. Some Spanish reports during this time period do, however, report the presence of Navajo around the site.⁹¹

Spanish Inscriptions

The tradition of carving one's name into the rock either to mark their presence or to make a political statement was ushered in by the Spanish explorers into New Mexico. Unlike the Ancient Puebloans before them who pecked into the rock or painted directly on the surface, the Spanish carved written messages into the rock with swords or other tools. They also preferred the softer, friable sandstone surfaces over the rock faces hardened by iron oxides. Many of the Spanish inscriptions are made up of elaborate script and some include decorative signs of the cross.

⁹¹ Blanchard, Kendall. *The Ramah Navajos: A Growing Sense of Community In Historical Perspective*. Navajo Historical Publications Historical Series. Ser. 1. Window Rock, Arizona: Navajo Tribe, 1971.

Commerce & Mexican Independence, A.D. 1775 – A.D. 1848

Historical Overview

By the late 1700s, the Spanish interest in the region began to wane and few expeditions through the El Morro area occurred. New Mexico had become a drain on Spanish coffers as it never delivered on the promise of cities of gold or other riches. Instead, it suffered from poor governing and energy-draining struggles with the Pueblo and Navajo populations.⁹²

In 1821 Mexico obtained its independence from Spain, putting a final stop to further Spanish travel into New Mexico. Although a burgeoning trade enterprise developed between New Mexico and the growing California region, this time period did not produce any notable accounts of El Morro and only a few new inscriptions on the rock.⁹³

Significant Landscape Characteristics of the Period

Little to no new landscape features exist from this period.

American Exploration & Emigration, A.D. 1849 – A.D. 1860

Historical Overview

Following the Mexican War in 1848, the United States acquired territory in the present-day states of New Mexico, Arizona, Nevada, Utah, and California. The discovery of gold in California that same year prompted a strong government interest in the region. An

⁹² Slater, John M. *Inscription Rock, New Mexico: the rock itself, the inscriptions thereon, and the travelers who made them*. Los Angeles: The Plantin P, 1961.

⁹³ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

overland route through the Southwest to the Pacific was actively pursued. Expeditions to the El Morro region during this time period can therefore be categorized into three purposes: explorations of newly-acquired territory, military exercises against the Native Americans, and westward emigration.⁹⁴

This period would see the first Anglo inscriptions on the rock, the first graphic documentation of the site, and the first published inventory of El Morro's inscriptions and rock art.

Lt. James H. Simpson and Richard H. Kern, A.D. 1849

In August 1849, U.S. First-Lieutenant James H. Simpson of the Corps of Topographical Engineers was directed to survey the New Mexican landscape as part of a greater expedition into the Navajo territory between Santa Fe and Canyon de Chelly. Simpson took two artist-topographer brothers with him, Richard and Edward Kern. Edward served as topographer while Richard was tasked with drawing “portraits of distinguished chiefs, costumes, scenery, singular geological formations, petrifications, ruins and facsimiles of ancient inscriptions.”⁹⁵

Their travels spanned forty-one days and covered over 600 miles.⁹⁶ The result of their work – Simpson's written account and Kern's images, would capture the spirit of New

⁹⁴ Slater, John M. *Inscription Rock, New Mexico: the rock itself, the inscriptions thereon, and the travelers who made them*. Los Angeles: The Plantin P, 1961.

⁹⁵ Weber, David J. *Richard H. Kern expeditionary artist in the far southwest, 1848-1853*. Albuquerque, NM: University of New Mexico Press for the Amon Carter Museum, 1985.

⁹⁶ *Ibid.*

Mexico's landscape and make it accessible to a wider audience for the first time. Simpson would also give the rock its Anglo name of "Inscription Rock."

Simpson was encouraged to visit El Morro by a "Mr. Lewis," a trader with the Navajos who was familiar with the local landscape. Lewis offered "his services as a guide to a rock upon the face of which were, according to his repeated assertions, half an acre of inscriptions, many of them very beautiful, and upon its summit some ruins of a very extraordinary character." Simpson took a camp-hand and Kern with him as they followed Lewis to the site.⁹⁷

Working from noon to sundown, Kern and Simpson made reproductions of the most prominent inscriptions and noted the Spanish names and dates inscribed in the rock. [Figure 2.9] In the evening, Lewis guided them to the top of the rock to view the ruins of "the old Pueblo of Moro"⁹⁸

In total, Simpson's team recorded over forty inscriptions, primarily Spanish names and dates. In addition to drawing the inscriptions themselves, Kern also depicted the ruins up top, shards of pottery, Puebloan rock art, and general landscape views of the rock and cliffs. [Figure 2.10] Kern's drawings were later rendered by a lithographer and included in Simpson's reports with English translations of the inscriptions. The collection became

⁹⁷ Simpson, James H. *Navaho expedition journal of a military reconnaissance from Santa Fe, New Mexico to the Navaho country made in 1849*. Norman: University of Oklahoma Press, 2003.

⁹⁸ *Ibid.*

the most comprehensive published inventory of the inscriptions until the twentieth century.⁹⁹

Kern also left his mark on the rock. Just before leaving El Morro the next morning, he carved his epitaph on to the rock:

“Lt. J.H. Simpson U.S A. & R. H. Kern, Artist, visited and copied the inscriptions, September 17th 18th 1849.”

This is the first Anglo inscription on the rock. [Figure 2.11]

Kern made a return visit to El Morro in 1851 under Brevet-Captain Lorenzo Sitgreaves for the Corps of Topographical Engineers on an expedition to explore the Zuni River.¹⁰⁰ He again left his name on the rock – twice. Once on the north face near his original inscription and again on the northeast face near Sitgreaves’ own inscription.¹⁰¹

Lt. Edward Fitzgerald Beale, 1857 A.D. – 1858 A.D.

Between 1857 and 1859, El Morro was witness to one of the more unique moments in United States military history. Lieutenant Edward F. Beale was tasked with two missions: to chart potential of wagon roads leading to the Pacific Coast and to oversee a military experiment evaluating the effectiveness of camels over horses and mule trains. The

⁹⁹ Weber, David J. *Richard H. Kern expeditionary artist in the far southwest, 1848-1853*. Albuquerque, NM: University of New Mexico Press for the Amon Carter Museum, 1985.

¹⁰⁰ Sitgreaves, Lorenzo. *Report of an Expedition down the Zuni and Colorado Rivers*. U.S. 32nd Congress, 2nd Session, Sen. Exec. Doc. 59, 198p., 1853.

¹⁰¹ Weber, David J. *Richard H. Kern expeditionary artist in the far southwest, 1848-1853*. Albuquerque, NM: University of New Mexico Press for the Amon Carter Museum, 1985.

expedition began at Fort Bliss, Texas and headed north towards Albuquerque along much of the same route used by Oñate centuries before. On August 23, 1857 the caravan arrived and made camp at El Morro. On the return journey in early 1858, the group once again stopped at the rock.^{102,103} Several inscriptions from each leg of the journey are attributed to Beale and his men.

Despite their success as excellent and fast pack animals, the experiment was discontinued as the camels frightened the horses and mules. The route charted by Beale would go on to become a popular western emigrant route.

Westward Migration

The route surveyed by Beale was often used for emigrant wagon trains bound for the West Coast. Along what was known as “Beale’s Route,” El Morro provided a comfortable, well-watered respite a few days journey past Albuquerque. Led by a former guide from Beale’s survey party, a group of Missouri residents headed for California were the first to test the course.

The group was the first large-scale settler party to leave their mark on the rock. In total, twenty-six known inscriptions belong to the wagon train, including some of the few known inscriptions left by women.¹⁰⁴ [Figure 2.12] As they neared the Arizona-California border the settlers were besieged by hostile Mojave Indians and a battle ensued. Lives

¹⁰² Beale, Edward Fitzgerald. *Wagon Road from Fort Defiance to the Colorado River*. U.S. 35th Congress, 1st Session, Vol. 13. H. Exec. Doc. 124:1-87, 1858.

¹⁰³ Stacey, May Humphreys. *Uncle Sam’s Camels: The Journal of May Humphreys Stacey*. 1929. Harvard University Press.

¹⁰⁴ Dodge, Bertha S. *The Story of Inscription Rock*. Canaan, New Hampshire: Phoenix Publishing, 1975.

were lost on both sides and the group decided to head back towards Albuquerque on foot for the 600 mile journey. On their return, they once again stopped at El Morro. The journal of John Udell, a member of the group, has provided detailed information on their travels.¹⁰⁵

Despite the unfortunate luck experienced by Udell's group, several additional wagon trains followed the same path shortly thereafter. Some turned back and others successfully reached California. El Morro was a stopping point for all and many marked their presence on the rock.

Significant Landscape Characteristics of the Period

Like the Spanish before them, the American visitors to El Morro used the site primarily as a campsite or resting place on part of a longer journey. The most lasting imprint left on the landscape during this time period remains the addition of new inscriptions.

The Historic Pool

It is estimated that shortly after the Simpson and Kern visit a cedar-post-and-rock dam was built at the pool to increase its capacity, likely to supply increased visitor traffic.¹⁰⁶ Remains of this dam were later found in the 1920s in an attempt to clear out the pool,

¹⁰⁵ Udell, John. *John Udell Journal: Kept during a trip across the plains, containing an account of the massacre of a portion of his party by the Mojave Indians in 1859*. Los Angeles: N.A. Kovach, 1946.

¹⁰⁶ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

although no evidence of this dam remains today. The dam would not have affected the overall characteristics of the pool as ringed by a sandy base.¹⁰⁷

Also during this period the water in the pool was routinely assumed to be fed by a spring – an incorrect assumption that would later be repeated throughout references and accounts of El Morro for many years to come.¹⁰⁸

Inscriptions

Inscriptions were left by American travelers of all purposes – from military expeditions to westward migrations. Inscriptions were made using tools and the level of skill found across all periods relating to American inscriptions varies from amateur chiseling to work of professional stone carvers. One of the most skilled inscriptions from this period comes from E. Pen Long, a member of Beale’s party. [Figure 2.13]

Civil War and Frontier Expansion, A.D. 1861 – A.D. 1905

Historical Overview

The years during the Civil War produced few inscriptions along the rock, with one notable exception. A number of inscriptions occur around 1863 that are believed to be from Christopher ‘Kit’ Carson and his unit in charge of suppressing the Navajo Indians in New Mexico. Carson was notorious for his role in the conflicts between the United States Army and the Navajo, who rebelled against being confined to a government-imposed reservation. In 1863 Carson led a campaign to devastate the Navajo

¹⁰⁷ Greene, Jerome A. *Historic Structure Report - El Morro, The Historic Pool*. Report. National Park Service, 1978.

¹⁰⁸ *Ibid.*

economically by marching through their territory and destroying their much of their crops and livestock. In 1864 nearly 8,000 Navajo tribe members surrendered to Carson's company at Canyon de Chelly in Arizona. The captured Navajo were then forced on the 300-mile "Long Walk" to Fort Sumner, New Mexico; there they suffered under harsh imprisonment until 1868, when they were allowed to return to a reduced reservation area by treaty with the U.S. government.¹⁰⁹

Following the end of the Civil War, travel across New Mexico increased with settlers headed west to California. The Union Pacific Railroad organized a survey team in the greater New Mexico area and in 1868 several members left inscriptions upon the rock. The survey team was charged with laying a railroad route to California; instead, the Santa Fe Railroad built a line that passed twenty miles north of El Morro, near present-day Interstate-40.¹¹⁰ This negated the need for a route bypassing El Morro and thus signaled the end of western emigration and other parties passing by the great rock.

Resettlement and New Settlement

During this period the Navajo returned to the area surrounding El Morro. It also believed that local Hispanic settlers began introducing domestic livestock to the area, and ranching and some farming was also established. Finally, the town of Ramah, ten miles to the west of El Morro was established by Mormon settlers.¹¹¹

¹⁰⁹ Dunlay, Thomas W. *Kit Carson and the Indians*. Lincoln: University of Nebraska P, 2000.

¹¹⁰ Murphy, Dan. *El Morro National Monument*. Tucson, Ariz: Western National Parks Association, 2003.

¹¹¹ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

Recognition of the Historic Landscape

In the late 1800s, El Morro began attracting attention for its historic and cultural value. The most public plea for its protection came from Charles F. Lummis, a journalist and folklorist, who stoked interest in the American Southwest through his popular book, Some Strange Corners of our Country. Chapter Eight of the book details Lummis' trip to El Morro or, as he dubbed it, "The Stone Autograph Album."¹¹²

"It is the most precious cliff, historically, possessed by any nation on earth, and, I am ashamed to say, the most utterly uncared-for...it is a shame that we are neglecting that noble stone book of the Morro. A few more years and a few more vandals, and nothing will be left of what now makes the rock so precious. The government should protect it, as it would be protected in any other civilized land; and when some of you get into Congress, I hope you will look to this and other such duties. Otherwise the next generation will awake only to find that it has lost a unique and priceless treasure."

– *Charles F. Lummis*, Some Strange Corners of our Country, p. 181-82

It is unknown if Lummis' writings spurred the Federal Government to action, but by the late 1890s two governmental departments were interested in El Morro: the General Land Office and the Department of the Interior. The Smithsonian first brought the historic significance of El Morro to the attention of the General Land Office, which, in turn,

¹¹² Lummis, Charles F. Some strange corners of our country : the wonderland of the Southwest. New York: The Century Co., 1892.

conducted a study of the area and recommended it be set aside and reserved. Based on this recommendation, in 1901, the Department of the Interior immediately withdrew El Morro and the parcel of land surrounding it from public settlement and activity pending “determination of the question of the advisability of setting the tract apart as a national park.”¹¹³ Official action would not be taken for several years.

Significant Landscape Characteristics of the Period

The Historic Pool

Throughout the 1800s it appears that the pool at the base of the rock retained its original form as a water basin surrounded by a sand bank.¹¹⁴ The documentation of over forty inscriptions left on the rock wall at the rear of the pool lends credence to this theory.¹¹⁵

Inscriptions

The inscriptions appearing during this period are mainly from Kit Carson’s unit and railroad survey teams. The inscriptions from the Union Pacific Railroad expedition are located primarily at the northeast point of the rock. Carson’s inscription is no longer on the rock as it was accidentally removed by Monument staff in the 1920s.

¹¹³ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument. Report.* El Morro archives: Unpublished final report, 1995.

¹¹⁴ Greene, Jerome A. *Historic Structure Report - El Morro, The Historic Pool.* Report. National Park Service, 1978.

¹¹⁵ Slater, John M. *Inscription Rock, New Mexico: the rock itself, the inscriptions thereon, and the travelers who made them.* Los Angeles: The Plantin P, 1961.

National Monument Status and the New Deal Era, A.D. 1906 – A.D. 1936

Historical Overview

Creation of a National Monument

In 1906 then Secretary of the Interior, E. A. Hitchcock, suggested to President Theodore Roosevelt that El Morro become a National Monument under the Antiquities Act.¹¹⁶ The passage of the Antiquities Act in 1906 by Congress gave the President the authority to set aside areas of historic, archaeological, or scientific value as National Monuments. This first use of this act was to create Devil's Tower National Monument in Wyoming in September 1906. El Morro followed as the second National Monument in the nation's history in December of the same year. Through presidential proclamation 160 acres were set aside for protection and warning was expressed to all persons "not to appropriate, excavate, injure or destroy said monument or to settle upon any of the lands reserved." The Monument was later enlarged to 240 acres in 1917 and again to 1,280 acres in 1950.

The establishment of El Morro as a National Monument has brought about the greatest change in land use patterns on the site. As a National Monument, El Morro was brought under the broader management of the federal government. After 1906, agricultural and grazing activities were slowly eliminated from the protected area.¹¹⁷ The National Park Service's mandate to protect the resources within the Monument's boundaries and to provide visitor access created permanent changes to the landscape.

¹¹⁶ *Ibid.*

¹¹⁷ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

From 1906 to 1916, El Morro remained under the management of the General Land Office. In 1916 all national parks and monuments, including El Morro, were brought under the jurisdiction of the newly created National Park System. The creation of the National Park Service ushered in a new era of professionalization to the management of parks and monuments.

Evon Z. Vogt

Evon Z. Vogt, a Ramah rancher and amateur historian, was appointed the first custodian of El Morro in 1916. In this role Vogt was influential in the early development of El Morro, particularly in providing for the preservation of inscriptions and making the site accessible to visitors.

Under Vogt's direction, a visitor cabin, several footbridges to help maneuver over the arroyos found near the base of the rock, and fencing were erected to help protect the inscriptions. Small interpretive signs translating some of the Spanish inscriptions were also put in place. Vogt took a serious interest in the preservation of the inscriptions. His concern demonstrates an early understanding of the impermanence of the inscriptions and the Monument's role in their preservation. In management reports, Vogt asserted that the main problem connected to the Monument was the protection of the inscriptions and complained of vandalism by visitors – either through carving their own name or chipping away parts of the rock as souvenirs.¹¹⁸

¹¹⁸*Ibid.*

During this period Vogt received both monetary and labor support through the Civil Works Administration (CWA), established in 1933 under the Franklin Delano Roosevelt's New Deal programming. Fifty-eight workers arrived at El Morro in 1934 to assist with creating trails and improving roads coming into the Monument.¹¹⁹ The programs also provided support for completing the portion of Route 66 between Grants to Gallup, thus indirectly improving access to El Morro. Funds and manpower were also used to build a rangers/visitor shed, assist with erosion control efforts, provide new materials for inscription preservation, and hire an extra ranger to assist Vogt onsite.¹²⁰

This money is also responsible for the regular printing of the *Southwestern Monument Monthly Reports (SMMR)*, which have provided great insight into management policies, decisions and everyday life at the Monument from 1934 to 1942.

During this time, visitors either came to El Morro on a day trip or camped overnight at the Monument. There was no designated location for setting up camp; instead, overnight campers were directed towards various coves, nooks, and other sheltered places around the rock.¹²¹

¹¹⁹ Vogt, Evon Z. August, 1934. *Southwestern Monument Monthly Report*. National Park Service.

¹²⁰ Vogt, Evon Z. April, June, and July, 1934. *Southwestern Monument Monthly Report*. National Park Service.

¹²¹ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

Significant Landscape Characteristics of the Period

Inscriptions

In the early 1920s, Vogt made a managerial decision to systematically erase all inscriptions and markings after 1906, deeming these more recent inscriptions as graffiti rather than historic artifacts. While a few inscriptions dating from this period remain, many more were excised from face of the rock. Vogt also instituted the first interpretation and preservation efforts, focused primarily on the inscriptions, which are further detailed in Chapter Four.

Fencing

By 1934 a fence encircled the exterior boundary of the Monument to prevent cattle from entering and rubbing against the rock face or polluting the pool's water supply.¹²² The design and materials used to create the boundary fence are unclear. Cattle gates were also erected at the entrance roads to further deter livestock from entering the Monument.

To discourage visitors from defacing the inscriptions or getting too close, Vogt built fences and guardrails along the rock. The fences were made from locally found Gambrel oak and were placed five feet from the rock face. Vogt also planted Spanish Dagger, or yucca plants, as a barrier between the fence and the rock to combat the temptation to get too close to the inscriptions.¹²³ [Figure 2.14] Yucca plants growing along the wall are also

¹²² *Ibid.*

¹²³ Davis, Joann, Patti Merrill, and Paul Davis. Interviewed by A. Dudley Gardner, June 1993 [Ramah, New Mexico]. As reported in: Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

depicted in some of Richard H. Kern's drawings published in the Simpson military expedition reports.

Trail Systems

Vogt took advantage of both the funding and labor provided through the CWA to implement needed maintenance and general improvements to the Monument. Of these, the trails are one of the more lasting remnants of these efforts. Charles Richey, a landscape engineer, was hired in 1934 to create a trail system following the base of the rock to view the inscriptions and later ascend the mesa to see the A'ts'ina ruins.¹²⁴ The current trail system today follows much of his same plan and layout. The design for the trail differed based on the location. Lower trails were laid through paving, while trails ascending and on top of the cuesta were carved directly into the rock.

According to Richey, the trails were constructed to, "give the best views, easiest ascent, with occasional levels to enable the ranger to regroup his party and point out the wonderful views of the enormous, unpeopled region of mountain and mesa country in every direction."¹²⁵ The bulk of the trail construction was completed by CWA laborers by the end of 1934. The original trails were made of packed earth, gravel, and/or slick rock. In several places steps were carved directly into the rock. At the top of the cuesta, trails were carved directly into the rock through "sled" marks. [Figure 2.15] Concrete was also

¹²⁴ During Vogt's tenure, both A'ts'ina and the North Ruin were referred to simply as "Indian ruins."

¹²⁵ Attributed to a passage from a 1934 *Southwest Monuments Monthly Report* as cited in: Gardner, 1995.

used to make improvements to a series of steps leading from the trail to the top of the *cuesta*.¹²⁶

The Historic Pool

This period witnessed a dramatic transformation of the historic pool. The pool likely remained unchanged in the early 1900s from its appearance during the previous century. By 1916, however, a large arroyo had formed immediately east of the pool, evidence that the pool was part of an active waterway. Upon his arrival, Vogt described it as, “fifteen feet wide and fully that deep,” with erosion predominantly occurring by runoff from the pool.¹²⁷ Visitors to the Monument in 1899 recalled the arroyo as small enough to span easily, even at its widest point.¹²⁸

Vogt was convinced the pool was fed by a spring and decided to enlarge the basin in hopes of providing more water for the Monument and nearby ranchers. His first attempt to increase capacity was to enlarge the pool through the removal of dirt and debris in 1923. In 1926 a large concrete dam was constructed to further increase the pool capacity.¹²⁹ [Figure 2.16] Thereafter, the pool provided drinking water for the Monument and nearby residents. By the 1930s, however, issues began to arise from the pool’s tendency to become stagnant, creating a breeding ground for mosquitoes and less-than-potable drinking water. Despite these changes, certain aspects of the historic pool

¹²⁶ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

¹²⁷ Greene, Jerome A. *Historic Structure Report - El Morro, The Historic Pool*. Report. National Park Service, 1978.

¹²⁸ *Ibid.*

¹²⁹ According to the Historic Structure Report, the idea of the dam was discussed as early as 1923, but it is unclear the exact date the project was begun.

remained. Into the mid-1930s a sand bank surrounding the pool continued to appear during dry seasons.¹³⁰

By the early 1930s the arroyo in front of the pool had grown to fifteen-feet deep and thirty-feet wide. It is believed that the erosion was created by runoff prior to the dam's construction.¹³¹ Described as an "ugly scar" on the landscape in front of the pool, Vogt hoped to use the CWA labor to restore the area to its previous appearance during the Spanish exploration. In 1933 Vogt, twenty men, and twelve teams of horses worked for eight days to fill the arroyo. Vogt described the process in the *Southwest Monuments Monthly Report*:

"By blasting down the sides with dynamite, the men soon made two crossings passable to teams which then pulled in great quantities of dirt into the arroyo. It is planned to use the dirt from both sides and thus create a gentle valley where, through careful planting of gramma grass protected by a nurse crop of some kind, we may be able to restore the sod."¹³²

Over 15,000 cubic yards of fill were used to erase the arroyo.¹³³ [Figure 2.17 and 2.18]

¹³⁰ Greene, Jerome A. *Historic Structure Report - El Morro, The Historic Pool*. Report. National Park Service, 1978.

¹³¹ *Ibid.*

¹³² Vogt, Evon Z. January, 1934. *Southwestern Monument Monthly Report*. National Park Service. As cited in: Greene, 1978.

¹³³ Vogt, Evon Z. August, 1934. *Southwestern Monument Monthly Report*. National Park Service.

Erosion Control Efforts

CWA laborers were also used to help create a series of check dams to control erosion around the base of the cliff. Many of these dams are still evident in the landscape and have continued to help control erosion, including to the east of the pool and near the northeast point.¹³⁴ [Figure 2.19]

Buildings

Because Vogt maintained permanent residence near Ramah, no homestead was built at the Monument. Instead, in 1925 a visitor shelter was constructed on the north side of the cuesta.¹³⁵ [Figure 2.20] It was later moved in the 1930s closer to the pool.¹³⁶ In 1934 a tool house and blacksmith shop were built next to the ranger cabin; these were later dismantled and moved to a hidden spot near the north entrance to the monument.¹³⁷

Expansions & Improvements at the Monument, 1935 A.D – Present

Historical Overview

This period of significance witnessed the further professionalization of El Morro's management policies. It also encompasses the largest shifts in the overall landscape with the in-depth excavation of A'ts'ina, better roads leading to the Monument and the Mission 66 improvements. It also included the shift of preservation methods from Vogt's experimentation to ones based in scholarly and scientific research and methods.

¹³⁴ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

¹³⁵ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

¹³⁶ Sievers, Douglas W. *El Morro: A unit history*. Report. El Morro archives: Unpublished report, 1970.

¹³⁷ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

Robert L. Budlong

In 1936, Vogt retired and Robert L. Budlong took over as the El Morro custodian. Unlike Vogt, Budlong came from within the Park Service, having previously worked at Canyon de Chelly. Budlong helped professionalize the Monument and its management policies. Overnight campers were regulated to specific areas and visitors were under strict instructions to keep only to the trails.¹³⁸ Budlong also put a halt to mass removal of newer inscriptions, although any further inscriptions on the rock were considered vandalism and were removed.

While Vogt had retained his home on his ranch in Ramah, Budlong lived on Monument grounds. The former visitor was turned into a cabin for Budlong and his wife. The space was small, cramped, and cold in winter. Due to Budlong's appeals to greater National Park Service management the cabin was expanded in 1938 and construction on a completely new residence began in 1939.

Visitor Boom

In the years following the Second World War, visitor traffic to El Morro rose sharply with over 1,500 visitors in 1946 – a more than 300-percent increase from the previous two years. At the same time, however, El Morro's budget continued to decrease. This pattern of increased visitorship coupled with decreased funding was typical of the Park Service nationwide. From 1946 to until present day, visitor attendance has continued to

¹³⁸ Joann Davis, Patti Merrill and Paul Davis. Interviewed by A. Dudley Gardner, June 1993 [Ramah, New Mexico]. As reported in: Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument. Report*. El Morro archives: Unpublished final report, 1995.

increase each year with only a few exceptions. Current annual visitation to El Morro is above 90,000 visitors a year.

Mission 66 Directive

In 1955 the National Park Service began work on a system-wide plan to reinvigorate the Park Service and bring all parks and monuments up to modern standards in time for the organization's fiftieth anniversary in 1966. Dubbed "Mission 66," the program had long-lasting effects throughout the Park Service, most notably in the area of visitor services. El Morro's Mission 66 prospectus and plan was submitted by the Santa Fe regional office in 1958. Under the plan, El Morro hoped to increase Monument facilities and "assure the fullest possible degree of protection, both to visitors and resources."¹³⁹

Over the years, increasing numbers of visitors taxed the Monument's limited staff. At the time, the superintendent was the only full-time employee – charged with administrative duties, leading tours, and protecting the rock from vandalism. The Mission 66 plan for El Morro called for increasing the staff to five permanent employees and six seasonal personnel. This not only helped to ensure a better visitor experience, but also provided more supervision and monitoring of the rock art and inscriptions' protection.¹⁴⁰

¹³⁹ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

¹⁴⁰ *Ibid.*

Significant Landscape Characteristics of the Period

Inscriptions

Budlong put a permanent stop to Vogt's policy of mass erasure of post-1906 inscriptions. He also undertook a series of efforts to aid in inscription preservation which are further detailed in Chapter Four.

Trail Systems

In the 1940's the trail system along the base of the rock was fully surfaced, including the portions along the inscriptions on the east side of the rock and connecting the paths around the northeast point. The paving by Clark and Company was praised by Budlong for its inconspicuousness.¹⁴¹ By the next year, however, the trail required repeated repairs and the surface was frequently penetrated by weed growth.¹⁴² During the 1950s and 1960s asphalt with aggregate was used to repave the trails. This was replaced in 2000 with the tinted concrete trails that are currently in place. The 2000 repaving helped to stabilize the trail ways and slightly modified the original 1934 design plan by Charles Richey.¹⁴³

Fencing

At some point, possibly in conjunction with the trail repaving, the previous fences were replaced with fences of a new design, although one that still uses local materials.¹⁴⁴

¹⁴¹ Budlong, Robert L. March-July, 1940. *Southwestern Monument Monthly Report*. National Park Service

¹⁴² Budlong, Robert L. May, 1941. *Southwestern Monument Monthly Report*. National Park Service.

¹⁴³ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

¹⁴⁴ Conversations with Monument season staff indicated that some of the current fencing may have been erected as part of a local Boy Scout Eagle Badge project.

The Historic Pool

A dramatic and permanent change occurred to the pool in August of 1942 during a huge rock fall from the top of the cliff. Approximately 1,000 cubic yards of sand, rock and debris came crashing down into the pool, destroying the 1926 dam. [Figure 2.21]

The resulting clean-up efforts took eight months and over 1,100 truckloads of rock were hauled from the pool.¹⁴⁵ Some of the debris was used as fill for erosion control around the Monument, but the rest was spread out in the swale just below the dam. The rock fall also damaged the water supply lines running from the pool to the custodial residence and diminished overall storage capacity of the reservoir.

A new dam was constructed in the summer of 1943. The original plan was to replace the demolished dam, but in the spirit of cost efficiency, a new concrete face was built inside the current structure. When complete, the refinished dam was fifty feet long by thirteen feet high by fourteen inches thick and held an increased capacity of up to 197,500 gallons. This was the last major alteration to the historic pool area.¹⁴⁶ One of the large rocks from the fall, however, still remains in place near the pool.

In 1974 restoration of the pool to its historic state was identified as the “top priority physical and historical resource project at El Morro.” The project was approved by the

¹⁴⁵ Greene, Jerome A. *Historic Structure Report - El Morro, The Historic Pool*. Report. National Park Service, 1978.

¹⁴⁶ Greene, Jerome A. *Historic Structure Report - El Morro, The Historic Pool*. Report. National Park Service, 1978.

New Mexico Historic Preservation Officer and plans began to move forward. As no precise documentary evidence of the pool's original appearance existed, the restoration project instead aimed to return the pool to a "semi-naturalized" state. Water retention basins in nearby pueblos were looked to as guides for the design. The end plan sought to eliminate "surface evidence of modern materials" and a juniper post and rail fence was put up for protection.^{147,148}

Due to these alterations, the pool does not reflect the descriptions included in early accounts. Discussions of reinstating the pool to a more historical appearance continued to be entertained until 2000 when an environmental assessment determined that restoration was unfeasible due to lack of specific data on size, depth, and location of the pool at its original levels.^{149,150}

Buildings

In 1939 a New Deal era residence was constructed as the primary home for the site custodian. [Figure 2.22] Made from stones taken from "old Indian ruins," the style is an example of 'Park Service Rustic' design.¹⁵¹ While the original custodial cabin used by Budlong was demolished in 1960, this 1939 residence is still in existence and is used as

¹⁴⁷ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument. Report.* El Morro archives: Unpublished final report, 1995.

¹⁴⁸ It is unclear if at this time the current paving stones around the pool were installed.

¹⁴⁹ Padgett, A. and Kaisa Barthuli. 1995b. "Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A." In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992.* Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

¹⁵⁰ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument.* Report. Ramah, NM: El Morro National Monument, 2002.

¹⁵¹ *Ibid.*

administrative offices for Monument staff. During Mission 66 improvements a maintenance facility was added on the north side of the building.

Most building from this period is a result of the Mission 66 directive. Of these changes, the most visible landmark from the Mission 66 efforts at El Morro is the visitor center. Planning for an increasing number of visitors to the Monument, the new visitor center offered a central point for parking, orientation, visitor and staff facilities, and a central means to direct visitors onto the trails. The center, designed by Cecil Doty, was actually an addition to the existing superintendent's residence. Using the residence as the design impetus, Doty created a structure that hailed the modernization of the Monument but also gave tribute to local materials, building techniques, and the overall beauty of the surrounding landscape.¹⁵² [Figure 2.23]

A small museum was created within the visitor center to help educate visitors about the Monument and its history before they visited the rock itself. National Park historian Robert Utley created the exhibit text while an artist and other experts designed the exhibits. The focus of these exhibits included the Ancient Puebloans at A'ts'ina, the Spanish explorers, and American military expeditions. Many of these designs and concepts are still part of the current museum programming.¹⁵³

¹⁵² Carr, Ethan. *Mission 66 Modernism and the National Park Dilemma*. New York: University of Massachusetts P, 2007.

¹⁵³ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

Under Mission 66 the Monument also sought to obtain three inholdings within the El Morro boundaries. Two of these were obtained. The third inholding, part of the Navajo land allotment, was not able to be purchased. Other new building occurring during the Mission 66 efforts included staff housing and improvements to the water system.¹⁵⁴

Monument Access

In 1939, the north entrance to the Monument was closed, and a new entrance was opened to the east of the original entrance and in better sight of the park staff.¹⁵⁵

¹⁵⁴ *Ibid.*

¹⁵⁵ *National Park Service Cultural Landscapes Inventory: El Morro Landscape, El Morro National Monument*. Report. Ramah, NM: El Morro National Monument, 2002.

Chapter 3 – Existing Conditions Documentation

Introduction

This chapter includes written, graphic, and photographic documentation of the existing landscape condition of the overall Inscription Trail Loop within El Morro National Monument. The information is based on available documentation, various maps, and on-the-ground work conducted during the 2008 University of Pennsylvania summer field school. The purpose of this section is to provide an overview of landscape features and systems associated with Inscription Trail Loop. After the visitor center, this area of the Monument receives the most visitors, is the most accessible, and is the primary emphasis of the visitor experience at El Morro. It is also the most heavily interpreted and the most acutely threatened because of both natural and human activity.

Visitors to El Morro are welcomed at the visitor center and are encouraged to walk the Inscription Trail Loop before visiting other sites within the Monument, particularly the A'ts'ina ruins at the top of the Headland Trail. Upon admission, visitors are provided with a complimentary guidebook for use on the Inscription Trail Loop. The following inventory and description catalogs the typical approach and route on the Inscription Trail Loop and details the various features found within.

Site Description & Existing Conditions

Inscription Trail Loop is the primary visitor path that makes up the bulk of the Monument's interpretation program. It includes the initial entrance from the visitor center, the main trail path, the historic pool, and the rock art and inscriptions found along

the base of the rock as you encircle the northeast point. Smaller-scale features found in the area include the pathway itself, benches, fencing, small water control features, and interpretative signage.

Overall Organization

Visitors enter the park through the main entrance off of Highway 53 and are directed to the visitor center parking lot. The only options for deviating from this route are a roundabout servicing the public camping grounds and a pull-off area for a scenic vista of El Morro in the foreground. [Figure 3.1] A road leading to Monument staff housing veers off to the left near the visitor center, but is not open to the wider public.

At the Mission 66 visitor center, visitors are welcomed at the front desk where they must pay an entrance fee to move beyond the visitor center and onto the main trail. Inside the visitor center is a gift shop and small museum. [Figure 3.2] Information regarding the history, layout and interpretation of these features will be included in the larger Cultural Landscape Report.

The Inscription Trail Loop begins in earnest once the visitor passes through the visitor center and exits into what was once the courtyard for the custodial residence. Although under-interpreted, from here the visitor can admire the exterior of the original residence or stop and enjoy a final moment protected from the sun before stepping onto the trail. Once on the main trail, visitors have the choice of taking the Inscription Trail Loop route

to the right or bypassing it and ascending directly to the top of the rock near the A'ts'ina ruins via the trail on the left. [Figure 3.3]

Monument visitors, particularly those visiting for the first-time, are strongly encouraged to view the majority of the historic inscriptions along the prescribed path of the Inscription Trail Loop. A complimentary guidebook offered with park admission provides anecdotes and information on twenty-plus numbered sites along the route. The stops include information on the historic pool, natural flora and fauna, preservation management, and, of course, the rock art and inscriptions.

The Inscription Trail Loop path is approximately half a mile long and is primarily a paved trail with gradual, intermittent slopes. Allowing time to read the interpretive signs and take in the inscriptions, the trail takes the average visitor about forty-five minutes to complete. The trail leads first to the historic pool and then follows the rock face along and around the northeast point. Just past the northeast point, the trail climbs slightly and then ends with the option to continue further on the Headland Trail or double back to the visitor center. The Headland Trail leads up to the top of the rock, past the Ancient Puebloan ruins of the North Ruin and A'ts'ina Pueblo and back to the visitor center. Combined with the Inscription Trail Loop path, it is approximately two miles in length and takes approximately two hours to complete. The grade for this hike is much steeper and part of the path is directly on the rock itself, rather than on a paved trail. Once visitors ascend to the top of the cuesta, the Civil Works Administration trail way is

embedded directly into the rock through carved steps and impressed “sled” marks that define the path.

A handicap-accessible route to the point is also available from the visitor center, leading up the slope towards the cuesta.

Natural Features

The natural environment of El Morro is one of the primary draws to the site. Most of the key landscape features and overall environment remains little changed from Ancestral Puebloan times. The distinctive large rock cuesta, the historic-pool, the wide views of the valley stretching towards the Zuni Mountains, and the local flora and fauna all remain relatively intact.

The general east-west directional approach to El Morro remains in place, although today that route is Highway 53. The rock still rises dramatically from the landscape and is visible from far distances as you approach the Monument. [Figure 3.4] Even without the signs denoting the site as a National Monument, passers-by would likely still be struck by the unique rock formation rising from the desert.

Once on the trail, visitors must walk a bit before they catch a glimpse of El Morro’s original historic draw: the natural pool of water at the base of the rock. The Inscription Trail Loop has a purposeful overlook sited near the historic pool to provide visitors with a chance to see the pool from a distance, stop to admire it, read the interpretational

signage, and take photos without holding up other visitors along the trail. [Figure 3.5] The trail then proceeds to the pool and then parallels the rock face where the bulk of the inscriptions are located. Throughout the trail visitors are afforded views of natural vegetation and geologic formations; this is especially true, however, once they reach the north east point of the rock.

Uses & Activities

The wider area surrounding the Inscription Trail Loop is primarily used by the National Park Service for visitor services, interpretation, undeveloped open space, administrative, and service/supply/storage purposes. The landscape features and areas associated with each of use include the following:

- Visitor Services – Visitor center, parking lot, and campgrounds
- Interpretation – Visitor center museum and Inscription Trail Loop
- Undeveloped Open Space – Areas surrounding the Inscription Trail Loop expanding outwards from the rock face, which also have archaeological resource and research value
- Administrative – El Morro Monument staff offices and visitor center
- Service/Supply/Storage – The north end of the staff offices are used as a service, maintenance, and storage area

In accordance with private agreements between the Monument and associated Native American tribes, the area in and around the Inscription Trail Loop is also used occasionally for ceremonial, religious, or other cultural activities.

Buildings & Structures

The primary buildings and structures present within the context of the Inscription Trail Loop are the visitor center and connected staff and supply/storage areas. Once on the trail, the view of the visitor center fades and no other buildings or structures are incorporated into or are visible from the trail. This changes, however, when the landscape is viewed from the heights of the Headland Trail at the top of the rock.

Circulation

Visitor access to the inscriptions is strictly limited to the Inscription Trail Loop route and they are strongly discouraged from veering off the path. In fact, no other trails are currently available for visitor use beyond the Inscription Loop and Headland Trails.

The path is paved with a smooth-finished concrete tinted to match the natural color of the soil. In some areas, the pathway is bordered by a paving of local stone. To help channel and direct water runoff, water channels paved with the same stone border the path. [Figure 3.6] This type of paving is primarily used on the Inscription Trail Loop and is not found on the upper Headland Trail.

Disabled access to the Inscription Trail Loop is done in reverse, with disabled visitors accessing the trail through the rear loop that leads visitors back to the visitor center.

Small-Scale Features

Site Furnishings

- Wood-slat benches
- Wood-slat and metal-frame benches
- Stone benches

Site furnishings along Inscription Trail Loop primarily consist of various bench seating. Immediately outside the visitor center are both wooden benches and wood-slat and metal-frame benches. Additional seating is located at the historic pool overlook and at several spots throughout the trail. There are no spots for picnicking or other recreational activities along Inscription Trail Loop.

Signage

- Directional and regulatory signage
- Small metal interpretive signage
- Large wayside interpretive plaques

The visitor experience is closely controlled throughout the Inscription Trail Loop through the use of a single pathway and various signage. The signage falls into two categories: directional/regulatory and interpretive. Signage regulating behavior, such as

keeping dogs on-leash, staying on the trail, and warning against the defacement of the rock, are placed at the beginning of the trail and then intermittently throughout. [Figure 3.7] Directional signage dictating the starting point and length of the trail is found at the beginning and end of each path.

As is true for all National Park sites, interpretation is one of the key missions for El Morro. The main interpretation material is the complimentary guidebook for the Inscription Trail Loop. The guide book is supplemented by small interpretive signs and larger wayside plaques. The smaller interpretational signs are primarily focused on native vegetation and ecology. [Figure 3.8] The larger interpretational plaques offer supplemental information that goes beyond what is in the guide book. The plaques detail the periods of site significance, the establishment of the monument, history and significance of the natural pool, and an overview of preservation efforts. [Figure 3.9]

Small-scale Features Associated with Boundary Demarcations

- Split-rail fencing
- Vegetation

The primary boundary demarcation features found along the trail are the wooden split-rail fencing that separates visitors from the rock face. [Figure 3.10] Along the trail, native plants have been used for both erosion control and landscaping purposes.

Views and Viewsheds

Historic views comprise a key component to the visitor experience at El Morro. The first view is the impressive figure of the rock as visitors approach from Highway 53. The distinctive rock outcrop can be seen from far distances when travelling both the east and west. Once inside the Monument, the visitor experience is also shaped around taking full advantage of views of the rock and the surrounding landscape. On Inscription Trail Loop one viewshed is particularly noteworthy, that of the surrounding landscape at the northeast point of the rock. From here, visitors are able to look out across the landscape and see the El Morro Valley and the Zuni Mountains in the distance. [Figure 3.11]

This view is further revealed as visitors ascend the switchbacks up to the top of the mesa. The summit of the cuesta offers a 360-degree view of the surrounding valley and mountain landscape, including the box canyon. These views are a significant resource and have both intrinsic ecological and cultural significance. Aside from the intrusion of Highway 53 and scattered development in the hills of the Zuni Mountains, the views remain relatively unchanged from Ancient times. In addition, several vistas fall in direct sightline with other sites of religious and cultural significance to current Pueblo tribes.

Archeological Resources

Archeological resources abound throughout the Monument, and the area along the Inscription Trail Loop is no exception. According to Monument records, there are approximately 141 archeological sites within the El Morro boundaries. Of these, eighty-

seven are believed to be Ancestral Puebloan, sixteen are affiliated with the Navajo and thirty-eight are historic Anglo sites.¹⁵⁶

Because this area is heavily trafficked and interpreted it is not likely that archaeological investigations will occur here in the future. Conversely, any improvements undertaken would need to be cognizant of archaeological resources and plan accordingly.

Boundary Demarcations

Visitors are strongly discouraged from veering off the trail. In fact, no other walk trails are currently in use for visitors beyond the main path. The boundaries of the Inscription Trail Loop are visually reinforced through the definitive trail way and physically by a split-rail fence construction that separates the visitors from the rock face.

Cultural Traditions

Given the long Ancestral Puebloan history at El Morro, the site is part of the larger sacred landscape of Native Americans within the Colorado Plateau region. Physically, El Morro is sited within the traditional homelands of the Zuni, Acoma, Laguna, and Navajo tribes. The ancestors of these tribes use the site for both secular and religious purposes and it retains a strong connection to contemporary religious and cultural practices.¹⁵⁷

¹⁵⁶ Zedeño, Maria N, et al. *Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument*. Report. Denver: Intermountain Region Support Office National Park Service, 2001..

¹⁵⁷ *Ibid.*

Throughout its history as a National Monument, El Morro custodians and management have made both formal and informal agreements with tribes to continue certain traditional practices within the Monument's boundaries. These practices and the sites associated with them are protected under confidential agreements.

Current & Potential Threats

Erosion & Weathering

The qualities of the sandstone that make it an easy surface for carving also make it vulnerable. Eventually most, if not all, inscriptions will be erased by weathering, erosion, clay silting, insect damage, biological deterioration, and rock falls.

As evidenced in 1942, the threat of damaging rock falls at El Morro is an ever-present possibility. Unexpected falls throughout the rock face have the potential to severely mar or permanently destroy the rock art and inscriptions. Portions of the rock identified as vulnerable are carefully monitored, but the area of the overall rock surface is too large to closely monitor throughout the site.

Vandalism

Current visitors are not immune to the same impulse that inspired centuries of travelers to carve a piece of immortality on the rock. Because of the close access afforded to visitors, the rock face and inscriptions are also vulnerable to vandalism. To help stem visitor curiosity a giant Zuni Sandstone slab is available outside the front entrance of the visitor center for visitors to try their hand at inscription carving.

Encroaching Development

From the Inscription Trail Loop, the bulk of the historic view sheds across the El Morro Valley remain intact. Encroaching development in the form of residences, increased traffic, or commercial buildings is always a possibility. Sales of inholdings and construction around the Monument and within the Zuni Mountains pose a direct threat to El Morro's viewsheds of the natural environment and open night sky.

Natural Events

The over-abundance of unchecked vegetation throughout the Monument, and particularly near the Inscription Trail Loop, may pose a large risk in the case of wildfires. Any fire along or near the rock face at El Morro would likely be fatal to affected inscriptions and rock art.

Lack of Comprehensive Management Plan

Comprehensive and strategic action planning is greatly needed to help the Monument respond, stem, and solve the above threats. The lack of an overall, coordinated general management plan poses a risk if the Monument faces an acceleration of any of the above listed conditions.

Chapter 4 – Site Management: Interpretation & Preservation

Introduction

So called “newspaper” rocks are a common site in the Southwest, but the intertwining of cultures present at El Morro makes it unique.¹⁵⁸ The intricate cultural heritage combined with the sheer number of inscriptions found within a relatively small span of rock face presents a particularly challenging set of dilemmas for El Morro’s management. In particular, these challenges are focused on two main areas – how to interpret and preserve the historic rock art and inscriptions.

View of Significance

El Morro’s interpretation and preservation programs have always been driven by how the significance of the site is viewed. In particular, the inscriptions have dominated management direction and decision-making. In its earliest days, the Monument’s protective mandate valued the European inscriptions above all other aspects of the site. This attitude eventually grew to include the inscriptions related to the western expansion of the United States. The importance of the Ancestral ruins, Puebloan culture, and the overall ecological resources often remained overlooked and under-interpreted. The overwhelming focus on the European and Anglo values reveals an inherent bias present in the early Parks and Monuments system. Although the view of the Monument’s management has expanded over time, this early bias created an approach that has often ignored the other important physical and cultural values the landscape.

¹⁵⁸ Noble, David Grant. 1983. El Morro: A Special American Place. In Noble, David Grant, editor. *Zuni El Morro, Past and Present*. Exploration, Annual Bulletin, School of American Research, SAR Press, Santa Fe, 1983.

A 1917 report created by the National Park Service for the Department of the Interior providing general information about all of the National Monument sheds insight into how the resources at El Morro were viewed during the Monument's early development.¹⁵⁹

The report describes the inscription by Juan de Oñate as the “most important” historical aspect of El Morro. This distinction is followed by an additional nineteen Spanish inscriptions of “almost equal importance” (although the exact list of inscriptions is not provided). No mention is made of either the Ancient Puebloan rock art or the American-made inscriptions. The presence of Ancient Puebloan ruins is noted as, “another feature of interest.” The report goes on to acknowledge that the ruins may hold greater interest in the future, but only as a curio or novelty feature: “At some distant day it may be desirable to excavate these ruins and thus add to this historic spot attractions for the scientist as well as the general public who are interested in scenic and natural curiosities.” A small portion of the entry portrays the natural features of the site, including the natural pool (mislabelled as a spring) and the box canyon in the middle of the rock.¹⁶⁰

This view is markedly different from the viewpoint of the Monument's current approach to site management. The present view of El Morro's management as stewards of the site's resources can be seen in the 2007 *Centennial Strategy* report prepared in advance of the National Park Service's 100th anniversary in 2016.¹⁶¹ The report is part of the Park Service's overall strategy “Centennial 2016,” an agency-wide effort to increase public

¹⁵⁹ Department of the Interior, National Park Service. *General Information Regarding the National Monuments Set Aside Under the Act of Congress Approved June 8, 1906*. Washington, DC: Government Printing Office, 1917.

¹⁶⁰ *Ibid.*

¹⁶¹ *First Annual Centennial Strategy for El Morro National Monument*. Ramah, NM: El Morro National Monument, U.S. National Park Service, August 2007.

awareness of Park sites and ensure their preservation.¹⁶² The report contains special resonance for the Monument as it was drafted immediately following El Morro’s own centennial birthday in 2006. Noting this event, the report notes that the “collection of petroglyphs, inscriptions, and Ancestral Puebloan sites [is] beginning a second century as a treasured and protected part of the American landscape.” The vision statement for El Morro stresses the need to both “preserve the most threatened inscriptions and archeological sites” and “look hard at natural and cultural landscape restoration possibilities.” The report asserts the responsibility of the Monument, and the broader Park Service, to serve as guardians of the site’s resources on all levels and to interpret and protect them for the wider public benefit.

The aspirations and goals expressed in the *Centennial Strategy* report reflect a holistic view of the Monument’s broader landscape, seeking to integrate natural and cultural resources and native and non-native values. These changes in acknowledged values of the site also parallel the shifts in the broader approaches to site interpretation and preservation efforts at El Morro.

A history and current summary of site interpretation and preservation programs, with a focus on the Inscription Trail Loop, follows below.

¹⁶² *National Park Service Centennial 2016*. Washington, DC: National Park Service and U.S Department of the Interior, Undated.

Interpretation

Interpretation History

While guided by the protective mandate established through the Antiquities Act, early site management and interpretation efforts at El Morro were largely dictated by the interests, opinions, and views of its custodians (later called superintendents). In the early stages of the Monument, management decisions were left up to the site custodians and updates to higher National Park supervisors were made only after projects and initiatives were completed.¹⁶³ The interpretive tone and approach at El Morro was strongly influenced by two early, committed stewards, custodians Evon Z. Vogt (1917-1936) and Robert L. Budlong (1936-1942). While they came from different backgrounds and were brought by different circumstances into the Park service, both were devoted to ensuring that El Morro was accessible to the public.

Monthly management reports required by then National Park Service superintendent of southwestern monuments, Frank Pinkley, were published in the *Southwestern Monuments Monthly Report (SMMR)* from 1934 to 1942. These reports, dating from both Vogt and Budlong's service, offer information on visitation totals, prominent visitors, commentary on the weather, reports of construction, and colloquial reports from the field. They also provide insight into the El Morro's early struggles with site management – particularly the difficulties of working in a remote area with limited facilities.

¹⁶³ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument. Report.* El Morro archives: Unpublished final report, 1995.

From his arrival in 1907 until the 1930s, Vogt personally led the majority of tours of El Morro.¹⁶⁴ As the custodian of El Morro, Vogt took it upon himself to become knowledgeable about New Mexico history and greater Cibola region. By 1917, Vogt had created the first form of visitor interpretation. In addition to erecting fences around the base of the rock, Vogt erected accompanying interpretive signs. According to oral interviews with Vogt's children, small signs of translations for the "more important inscriptions" by Spanish explorers were erected.¹⁶⁵ Vogt also began the practice of "darkening" some of the inscriptions with graphite pencils.¹⁶⁶ [Figure 4.1] The purpose of this was twofold: to make the inscriptions easier to see and because Vogt believed it would help ensure their preservation. This treatment was selectively applied to inscriptions deemed most important – usually the Spanish inscriptions.

Vogt also had a keen interest in the Ancient Puebloan ruins around the Monument, even if he did not have the historical training to interpret them. He frequently commented and ruminated on the significance and use of prehistoric foot-and-toe-holds, the A'ts'ina ruins, and other remnants of Pueblo culture found around the monument in the *SMMR* reports. Whether these aspects of the park were interpreted to the public by Vogt is unknown. What is known is that in 1921 Vogt made two interpretation-related requests to the Director of the National Park Service. First, Vogt stated the need for publishing a brochure "covering the interesting facts about El Morro" to distribute to visitors to

¹⁶⁴ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument. Report.* El Morro archives: Unpublished final report, 1995.

¹⁶⁵ Davis, Joann, Patti Merrill, and Paul Davis. Interviewed by A. Dudley Gardner, June 1993 [Ramah, New Mexico]. As reported in: Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument. Report.* El Morro archives: Unpublished final report, 1995.

¹⁶⁶ Vogt, Evon Z. April, 1934. *Southwestern Monument Monthly Report.* National Park Service.

further “advertise its features.” Second, Vogt recommended the excavation and restoration of the A’ts’ina ruins to help “increase tourist interest.”¹⁶⁷ Unfortunately, Vogt would see neither initiative take place during his tenure.

In July of 1921, Vogt made one of the most controversial interpretation decisions in El Morro’s history. Considering all inscriptions and carvings after the Monument’s founding as vandalism, Vogt instructed staff to remove all inscriptions post-1906. At this moment the inscriptions made the transition from historic to being considered as graffiti. A mass erasure took place, often using axes to scap the rock surface.¹⁶⁸ [Figure 4.2] The result created a mottled and oddly-textured surface that presents an unnatural appearance; the effects of these erasures are still visible today and are a frequent source of visitor inquiry.¹⁶⁹ In addition to having a large impact on the overall feeling of the site, this decision has had severe consequences for inscription protection and preservation.

This process was ended under the reign of Robert Budlong, the following Monument custodian. As mentioned in Chapter Two, Budlong ushered in a new era of professional site management through his previous experience with the Park Service. Like Vogt, he led the bulk of the visitor tours and also lobbied for the production of a park brochure for visitor use. Unlike Vogt, Budlong was successful in getting the brochures published. In May 1941 the first mention of a formal pamphlet appears in the *Southwestern Monument*

¹⁶⁷ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

¹⁶⁸ Padgett, A. and Kaisa Barthuli. 1995b. “Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A.” In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

¹⁶⁹ El Morro seasonal staff. Personal communication.

Monthly Report. Budlong received 15,000 copies of a sixteen-page illustrated guidebook he designed, published by the Department of the Interior. The guide provided history on El Morro, the surrounding region, the inscriptions, and general Monument information.¹⁷⁰

A pamphlet published in 1942 provides information on the Spanish conquest, the colonization of New Mexico, the Mission period, the Pueblo rebellion of 1680, and the American westward expansion. There is only brief mention of the “ruins of the Zuni Indian pueblos” at the top of the cuesta. The historic pool is denoted as the “Old Spanish Reservoir.” El Morro is promoted as a day trip from the towns of Grants or Gallup (during good weather). The trail map included reflects the current trail layout and the location of both the North and A’ts’ina ruins are noted.¹⁷¹

Before the excavation of A’ts’ina in the 1950s, visitors were able to hike to the top of the rock and see the ruins visible from the unexcavated ground. After the excavation, visitors were allowed broad access to the ruins and could even to go inside¹⁷² – a practice that is no longer available to the public. [Figure 4.] As this thesis is specifically about Inscription Trail Loop interpretation history for the ruins will not be discussed in depth. In terms of overall site interpretation, the excavation of A’ts’ina provided an opportunity for the Ancient Puebloan presence to play a bigger role in the Monument’s visitor and educational programming.

¹⁷⁰ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

¹⁷¹ El Morro National Monument, New Mexico. Brochure. Nashville, TN:U.S Department of the Interior, 1942.

¹⁷² Park, Edwards, and Willard Culver. "El Morro: Story in Stone." *The National Geographic Magazine*, August 1957: 237-244.

As discussed in Chapter Two the period of the late 1950s to mid-1960s were marked by the preparations for and programs as a result of Mission 66. Placing a strong emphasis on the visitor experience, Mission 66 provided an opportunity for El Morro to formalize their interpretational programming through the visitor center museum. While notable during its time period for officially recognizing several aspects of the Monument's significance (Ancient Puebloans, European explorers, Anglo-American settlers and military, and the natural environment), by today's standards the exhibits seem out of date and ineffectual at conveying all of the elements that truly make El Morro unique.

The next major shift in interpretational policy occurred in the late 1980s and early 1990s as the Monument began moving towards a more comprehensive management policy that attempted to view all parts of the site as a complete system. The 1992 *El Morro National Monument Statement for Management* identified interpretative objectives as: to provide a varied and balanced program emphasizing natural and cultural aspects of the site, in addition to the continuum of history indicated by the inscriptions at El Morro; and to enhance visitor understanding of and interest in the Puebloans, Spanish-Americans, and Anglo-Americans and their relationships to the past, present, and future.¹⁷³ In terms of the physical interpretation aspects, the Monument prioritized safe trail access, with a minimum of intrusion on the cultural and natural resources.¹⁷⁴

¹⁷³ Anonymous. *El Morro National Monument, Statement for Management, 1992*. Report. U.S. National Park Service, Southwest Regional Office, Santa Fe, New Mexico, 1992.

¹⁷⁴ *Ibid.*

Also in 1992, a new interpretive brochure discussing Ancient Puebloan, Spanish, and Anglo use of the site was published. New interpretive signage was added along the trail (“wayside” exhibits) to emphasize different aspects of the cultural and natural resources both in and outside of the Monument.¹⁷⁵ There was also an interest in creating positive community relations with the associated Native American tribes. For example, in 1992 a Navajo speaking class constructed a bridge along the main trail to make it ADA accessible.¹⁷⁶

Current Interpretation

As detailed in Chapter Three, visitors are strongly encouraged to view the majority of the historic inscriptions along a prescribed path, stopping first at the historic pool and then curving around the north point of the rock. An updated version of the guidebook, published in 2007, is offered free with park admission and provides anecdotes and information on over twenty numbered sites along the route. The guide covers the geology of the rock, natural vegetation, the Ancient Puebloan rock art, Spanish and American inscriptions, a brief history of El Morro and selected inscriptions, and limited background on management and preservation efforts at the site. The guidebook is also offered in Spanish. Less-detailed information brochures are also available at the front desk in various languages. A few plaques also appear along the route with limited interpretive information.

¹⁷⁵ Padgett, A. and Kaisa Barthuli. 1995b. “Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A.” In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

¹⁷⁶ *Ibid.*

In general, El Morro staff are encouraged to walk the trail in reverse in order to come into contact with as many visitors as possible.¹⁷⁷ Guided tours of the site are available for groups and by special request. The Monument also offers various special event tours during the summer such as plant and vegetation lectures and evening tours.

The Monument recently underwent a comprehensive interpretation planning process to examine various creative and interactive ways to engage visitors. During the summer of 2008 an ongoing comprehensive visitor survey initiative was underway. Results from both of these programs should yield insight as to where the interpretation program is successful and where there is opportunity for expansion or refinement.

Preservation

The qualities of the sandstone that make it an easy surface for carving inscriptions also make it vulnerable. Eventually most, if not all, inscriptions will be erased by weathering, erosion, clay silting, and rock falls. The rock face is also vulnerable to environmental factors and vandalism. For this reason, preservation policies play an integral role in the management of Inscription Trail Loop.

Recognizing the value, and to some extent the impermanence, of the inscriptions, efforts to document and preserve the rock face predate the site's legal protection with Richard H. Kern's hand-drawn engravings in 1849. After the creation of El Morro National Monument, preservation efforts were legally mandated and generally concerned with the preservation of the inscriptions above all other aspects of the site.

¹⁷⁷ Baumann, Steven. Personal communication.

Preservation History

A thorough history of preservation efforts was compiled by Anne Oliver and Antoinette Padgett on behalf of the Santa Fe Intermountain Support Office of the National Park Service in 2005.¹⁷⁸ In addition, the archives at El Morro's headquarters contain a vast collection of management reports, photographs, studies, and other records of preservation activities during the Monument's history. This section summarizes the evolution of the preservation program at El Morro and the more notable preservation initiatives to date.

Much like with interpretation management, preservation efforts have largely been directed by the changing notions of inscriptions' significance in relation to other aspects of the site's significance and the interest and willingness of the supervising custodian or superintendent.¹⁷⁹ To an even greater extent than the interpretation, the approaches to preservation showed a distinct early bias towards the European inscriptions, resulting in neglect and sometimes destruction of non-European resources. Early preservation efforts were also largely dictated by the lack of funds available, the remoteness of the site, and the interest of its caretakers.

Preservation efforts began shortly after Vogt signed on as custodian. Throughout the first half of the twentieth century little guidance or scholarly studies were available to direct management's preservation efforts. Therefore, preservation efforts were largely

¹⁷⁸ Oliver, Anne B. and Antoinette Padgett. *A History of Inscription Preservation at El Morro National Monument 1849-2005*. . Report. El Morro archives: Unpublished final report, 2005.

¹⁷⁹ *Ibid.*

directed through well-meaning efforts based on trial-and-error and experimentation, which sometimes brought disastrous results.

Mass Erasure

As mentioned in the discussion on interpretation, Vogt oversaw a now-controversial policy of erasing all inscriptions left after 1906. According to the Director's Report from 1921, all "modern names, dates, and initials carved by unthinking visitors and tourists were carefully erased by chiseling and patient buffing of the stone face of the cliff by hand rasps."¹⁸⁰ Other accounts of this mass erasure describe a more forceful (and destructive) approach with axes being used to scrape away the more recent messages and carvings.¹⁸¹

In addition to giving a jarring new appearance to the rock face, unsupervised removal led to the loss of many historic inscriptions. The most regrettable of these include inscriptions by Kit Carson and Jean Baptiste Lamy, the first Bishop of New Mexico. At other times, the rasps and axes came precipitously close to endangering to older inscriptions. Due to incomplete documentation from this exercise, it is unknown how many inscriptions or rock art were lost during the erasure.¹⁸²

¹⁸⁰ Gardner, A. Dudley. *Wind, water and stone: the evolution of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1995.

¹⁸¹ Budlong, Robert L. Letter to Frank Pinkley, Superintendent, Southwestern Monuments. 8 Aug. 1938. El Morro National Monument, Ramah, New Mexico.

¹⁸² Padgett, A. and Kaisa Barthuli. 1995b. "Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A." In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

Budlong discontinued the practice when he arrived at El Morro in 1936. His shock at the practice led him to appeal to Frank Pinkley, the superintendent of Southwestern Monuments, for an immediate office order prohibiting any, “improvements or alterations by any Park Service field men, myself included, unless such alterations are authorized by the proper department concerned...I protest against all ‘improvements’ of this sort most strongly, unless this work is first properly authorized.”¹⁸³

Darkening of Inscriptions

While well-intentioned, some preservation methods have actually been damaging to the inscriptions. Vogt, Budlong, and later site managers darkened the inscriptions with graphite pencils to make them easier to view and photograph.¹⁸⁴ Some inscriptions were also “deepened” in hopes that enhancing the groove profiles would negate the effects of weathering.¹⁸⁵ These preservation methods were used selectively on the inscriptions thought to be the most important or historic. In his search for a less invasive technique, Budlong introduced the practice of painting inscriptions with ‘Rising Sun Stove Polish’ and a sable brush in 1938. Both the graphite and stove polish (and sometimes both) have bonded to the rock surface.¹⁸⁶

Over time, these practices have lead to the degradation of the inscriptions’ integrity. The most contentious example of this is the Oñate inscription. Based on who was doing the

¹⁸³ Budlong, Robert L. Letter to Frank Pinkley, Superintendent, Southwestern Monuments. 8 Aug. 1938. El Morro National Monument, Ramah, New Mexico.

¹⁸⁴ *Ibid.*

¹⁸⁵ *Ibid.*

¹⁸⁶ Burris, Christina A. *The Analysis of Sandstone Deterioration at the Northeast Point of Inscription Rock at El Morro National Monument*. Thesis, University of Pennsylvania Masters Program in Historic Preservation, 2007.

pencil work, the inscription either read 1605 or 1606. Oñate passed by El Morro in 1605.¹⁸⁷

It is unclear when the policy of darkening inscriptions fell out of use at the Monument.¹⁸⁸

A 1957 National Geographic article, however, mentions the practice.¹⁸⁹

Consolidants

Consolidants have been used at the Monument since 1925 under Vogt. A test panel still exists far off the standard Inscription Trail Loop. This inscription reads, “Colourless coverings save old inscriptions,” on which a different product was tested for each word.¹⁹⁰ [Figure 4.4] Based on the test results, ‘Driwall,’ a paraffin solution from the United States Bureau of Standards, was selected and used for several years.¹⁹¹ The paraffin was applied yearly before the onset of winter, with the more well-known and higher-valued inscriptions receiving the treatment. The treatment procedure is last mentioned in reports from the 1940s, although it is not known exactly when this process was discontinued. Today, many of the inscriptions treated with ‘Driwall’ appear to be in

¹⁸⁷ Padgett, A. and Kaisa Barthuli. 1995b. “Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A.” In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

¹⁸⁸ *Ibid.*

¹⁸⁹ Park, Edwards, and Willard Culver. "El Morro: Story in Stone." *The National Geographic Magazine*, August 1957: 237-244.

¹⁹⁰ Padgett, A. and Kaisa Barthuli. 1995b. “Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A.” In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

¹⁹¹ Vogt, Evon Z. 1925. Unpublished letter on file. El Morro National Monument, New Mexico.

good condition – although this could also be attributed to their location, the yearly application, or other factors.¹⁹² [Figure 4.5]

As the process was described by Vogt, “...it is always somewhat alarming to paint those hallowed old inscriptions with paraffin paint for at first the inscription is so changed-looking. But in a few hours the paraffin preservative sinks into the sandstone and dries so that a natural appearance is given.”¹⁹³

Various uses of consolidants continued throughout the 1960s, particularly on the Spanish inscriptions.¹⁹⁴ A new consolidation program was undertaken in the early 1960s using ‘Dareweld’ and ‘Daracone.’ These were applied with a brush to adjacent sections of the rock and then monitored over a four year period. No difference was observed between treated and untreated areas.¹⁹⁵ In 1964 a synthetic resin called ‘Pencapsula’ was tested along the base of the rock, in an area not visible to the public. The resin was not applied to inscriptions but to “cuts” in the rock – possibly incised prehistoric engravings.¹⁹⁶ In 1965, a combination of ‘Pencapsula’ and thinner was applied to two faded pictographs. A second combination was applied with a spray gun to the Oñate inscription. One year

¹⁹² Padgett, A. and Kaisa Barthuli. 1995b. “Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A.” In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

¹⁹³ Vogt, Evon Z. April, 1934. *Southwestern Monument Monthly Report*. National Park Service.

¹⁹⁴ Padgett, A. and Kaisa Barthuli. 1995b. “Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A.” In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

¹⁹⁵ *Ibid.*

¹⁹⁶ *Ibid.*

after the tests, both sections exhibited no damage or erosion.¹⁹⁷ In 1992, the testing site with the two pictographs was located and examined. The pictographs suffered from micro spalling, although it is unclear if this is a result of the consolidation efforts.¹⁹⁸

Inscription Identification & Documentation

All inscription documentation and information is organized based on an identification and catalog system developed by Channing Howell and superintendent Irving McNeill in 1955. In order to complete a photographic documentation (the first comprehensive survey at El Morro of its kind), the rock was divided into lettered sections. Beginning to the right of the pool and continuing along the Inscription Trail Loop, these sections begin at A and continue through Z before the northeast point, where the series begins again with AA through ZZ. Over time, as more inscriptions were discovered, the system began moving from the left of the pool with an alphabetical series denoted at –A through –Z. Within each section, individual inscriptions were given panel numbers (i.e. A1, A2, etc.). The result of the Howell-McNeill survey was series of black and white photographs and negatives that provide the earliest, comprehensive documentation of the inscriptions. The survey only recorded a few examples of prehistoric rock art, as the primary focus of the project was the Spanish and American inscriptions. No report or photo log was produced for the survey. The photographs and negatives are currently stored in the El Morro archives and are a useful baseline for monitoring current erosion and other changes to the rock face.

¹⁹⁷ *Ibid.*

¹⁹⁸ *Ibid.*

The Howell and McNeil identification system has been used as the basis for many of the subsequent preservation and monitoring projects. Later surveys have also recorded the location and condition of the prehistoric rock art. As new rock art or inscriptions are found, they are assigned an identification number based on the Howell-McNeil system. Brass discs have been placed around the base of the rock marking the beginning of each section, although some are currently missing. Unfortunately, no good key exists for the placement of each inscription panel within the overall section. For inscriptions that have severely weathered or are completely gone, it is currently difficult to locate them on the wall without significant effort and research.

Documenting Ancient Puebloan Rock Art

As previous survey efforts were focused primarily on the inscriptions, in 1986 a comprehensive survey of Ancient Puebloan rock art was conducted. The final report documented over thirty sites within the Monument's boundaries. The survey cataloged site descriptions and created a standard form for documenting rock art at El Morro. Rates of natural deterioration, vandalism, sketches, and locations were all noted.¹⁹⁹

Formalizing the Preservation Process

By the late 1980s and early 1990s, management acknowledged that more emphasis should be placed on the deterioration methods and possible solutions. Coinciding with increased formalization of the preservation and conservation field, the Monument advanced a more formalized preservation program that involved conservation experts and advanced a

¹⁹⁹ Martin, Melissa A. *Site survey of the petroglyphs and pictographs at El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1986.

scientific approach to conservation. The result was the El Morro Inscription Preservation Program (EMIPP, 1992-2004), a series of interrelated projects directing documentation, research, scientific experimentation, treatments, monitoring, and maintenance of the inscriptions.²⁰⁰

In 1992 the Park Service sponsored a project to document the inscriptions, assess the deteriorative processes, examine rates of erosion, and make preservation recommendations. The project also provided the opportunity to examine and catalog all existing site documentation, something that had not been done before.²⁰¹ Between 1992 and 1994 over ninety percent of the inscriptions were photographed and assessed, following the identification system laid out by Howell and McNeill and recreating many of their photographs. This survey led to the development of a standard assessment form and rating system that prioritized inscriptions for monitoring and treatment, created a record for all identified inscriptions, and began an electronic database and recording system. This considerable project established a second baseline of condition by which rates of change to the rock face could be measured.²⁰²

Although not an expressed part of the EMIPP directive, Puebloan rock art was also studied.²⁰³ In 1994 El Morro held planning sessions with representatives of the Zuni

²⁰⁰ Oliver, Anne B. and Antoinette Padgett. *A History of Inscription Preservation at El Morro National Monument 1849-2005*. Report. El Morro archives: Unpublished final report, 2005.

²⁰¹ *Ibid.*

²⁰² Barrow, Jake and Anne B. Oliver. *The El Morro Inscription Preservation Program: An Overview, 1994-2004*. Report. El Morro archives: Unpublished final report, 2004.

²⁰³ Padgett, A. and Kaisa Barthuli. 1995b. "Paso por aqui: A history of site management at El Morro National Monument, New Mexico, U.S.A." In G. Ward and L. Ward (eds.), *Proceedings of Symposium H, Management of Rock Art Imagery, Second International Congress of the Australian Rock Art Research Association, Cairns, 1992*. Occasional AURA Publication No. 9, Melbourne, pp. 26-33.

Pueblo to discuss conservation and preservation efforts. The representatives expressed the view that the prehistoric rock art should be left to weather without treatment.²⁰⁴ Out of respect for their views, the Native American rock art has been documented but has not received conservation treatment.²⁰⁵ It has been discussed, however, that the tribes may not be opposed to natural or organic-based treatment efforts that would slow deterioration.²⁰⁶ Consultation with affiliated tribes continues to be an ongoing site management policy, including on areas of preservation.²⁰⁷

The program also conceived of an ongoing monitoring program that Monument staff would carry out. The monitoring process was directed in the EMIPP management plan.²⁰⁸ Several El Morro staffers were trained on how to conduct and record the monitoring observations.²⁰⁹ Due to high staff turn-over, however, the institutional knowledge of how the program worked was not passed on. Currently, the monitoring system set up under EMIPP is not in use.

Scientific Studies

Under the broader mandate of the EMIPP program, several studies were conducted to help inform and guide preservation recommendations. One of the first was to create a geological and hydrological assessment of El Morro. This study provided a basic geologic

²⁰⁴ Barrow, Jake and Anne B. Oliver. *The El Morro Inscription Preservation Program: An Overview, 1994-2004*. Report. El Morro archives: Unpublished final report, 2004.

²⁰⁵ Oliver, Anne B. and Antoinette Padgett. *A History of Inscription Preservation at El Morro National Monument 1849-2005*. Report. El Morro archives: Unpublished final report, 2005.

²⁰⁶ Matero, Frank G. Personal conversations.

²⁰⁷ Oliver, Anne B. and Antoinette Padgett. *A History of Inscription Preservation at El Morro National Monument 1849-2005*. Report. El Morro archives: Unpublished final report, 2005.

²⁰⁸ *Ibid.*

²⁰⁹ Oliver, Anne B. Personal conversations.

map of the rock outcrop; descriptions of the types, compositions, and conditions of the sandstones upon which the inscriptions are located; and how the hydrology of the rock and surrounding area affects the inscriptions.²¹⁰ In 1996 a more in-depth geologic study was undertaken to better understand the attendant modes of deterioration of the rock face. Extensive samples were taken to test permeability, analyze particle size, determine porosity, mineral size, and cement characteristics. The results of this study provided further understanding of the deterioration observed in the assessment projects.²¹¹

Several studies examined the current state of the pool. Based on these reports the NPS determined that no further study of the pool was needed, although several recommendations for mitigation were promoted.²¹² In 2003, the effects of vibrations from foot and highway traffic were evaluated, particularly at the northeast point. The study concluded that the vibrations from Highway 53 are not a current threat, but could be in the future if the road is expanded or the current condition deteriorates (although the vibrations did have a greater affect on the A'ts'ina ruins).²¹³

Current Preservation Efforts

In 2006, in conjunction with the Monument's centennial anniversary, an examination of previously documented panels was undertaken. The project focus was twofold: to

²¹⁰ Austin, George S. *Geological and Hydrological Assessment of El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1994.

²¹¹ Cross, Stephen Aaron. *Stratigraphy, sedimentology, and surface water quality at El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1996.

²¹² See Sayre 1997, Pranger 2002, and Martin 2002 as discussed in: Oliver, Anne B. and Antoinette Padgett. *A History of Inscription Preservation at El Morro National Monument 1849-2005*. Report. El Morro archives: Unpublished final report, 2005.

²¹³ King, Ken and Elaine King. 2003. "El Morro National Monument, preliminary vibration study." Unpublished final report, El Morro archives.

reassess selected inscription panels and to conduct an experimental trial of treatments for removal of lichen growth. The examined panels were chosen based upon one or more of the following parameters: 1) those that had been given the highest combined priority rating in an earlier survey; 2) those which had been photographed in both 1955 and in 1992-94 and offered an opportunity for a visual comparison over time; and 3) those which had a deterioration description of “spalling” or “unstable.”²¹⁴

The results of the 2006 report identified particular panels that merit priority conservation efforts. However, the question arose as to where to focus these efforts as treatment priority ratings change and the natural environment of Inscription Rock continues to alter the condition of all panels and inscriptions. Given the Monument’s limited resources, it was noted that criteria beyond condition should be considered to determine how to best address the panels which carry the highest historical and cultural significance.²¹⁵

Current Preservation Strategies

While all are vulnerable, some inscriptions are weathering at faster and more dramatic rates than others.²¹⁶ Through the changes implemented in the 1990s, the Monument’s approach to preservation has shifted to more of a reactive preservation strategy with interventions usually directed at areas of the rock perceived to be at the most risk. In some cases, assigned values of significance and at-risk overlap, but this is not always the

²¹⁴ Fix, Karen. *The Centennial Project: Inscription Monitoring and Biodeterioration Investigation at El Morro National Monument*. Report. El Morro archives: Unpublished final report, 2006.

²¹⁵ *Ibid.*

²¹⁶ Cross, Stephen Aaron. *Stratigraphy, sedimentology, and surface water quality at El Morro National Monument*. Report. El Morro archives: Unpublished final report, 1996.

case. Large-scale preservation programs are currently on hold as the Monument looks to create a General Management Plan to help direct their efforts by 2010.

Chapter 5 – Management & Treatment Recommendations

Introduction

Since becoming a National Monument in 1906, and later coming under the management of the National Park Service in 1916, El Morro has been viewed in varied ways, according to the idiosyncrasies of its site managers and prevailing government policy. This view has shifted from one that privileged the European inscriptions above all else, to one that is cognizant and inclusive of the broader significance and values of the site. Despite a more holistic appreciation and awareness of the broader context, this has been slower to appear in tangible form on the ground through visitor interpretation and preservation approaches.

Substantial opportunities exist for preserving, restoring, and interpreting elements of El Morro. The following assessment of current challenges and suggested recommendations seeks to balance historical accuracy and cultural awareness with the reality of the current needs of a National Park Service site.

Current Challenges

Interpretation and preservation policies and programs that are holistic and are comprehensive with regard to the many aspects of the site's significance will take time and careful planning. The following challenges are currently taking shape or are on the immediate horizon for El Morro.

Interpretation

One of the largest challenges for the interpretive program at El Morro is the need to reinstate and maintain the sense of discovery when moving through the site. There is a palpable feeling of awe in early accounts of El Morro that undoubtedly propelled it forward as a landmark site worthy of protection. The current configuration and makeup of the Inscription Trail Loop impinge upon the feeling of coming upon the historic pool and inscriptions for the first time. To some extent, due to the nature of El Morro being a managed, protected site, such impacts, like the need for protective barriers, are unavoidable. Other aspects, such as the condition of the trail, surrounding vegetation, various site features, and interpretive programming are within the Monument's purview.

Other factors, mostly outside the bounds of the Monument's control include future developments along Highway 53 and on federal and private inholdings visible from the Monument. Because of uncertainties about adjacent lands not under NPS control, it is especially important for El Morro to create and protect an isolated, natural setting for the overall site, to the extent possible. This is particularly pertinent for the viewsheds from the northeast point for both Inscription Trail Loop and the views from the top of the cuesta.

Preservation

As historic preservation and conservation science has developed as a field, more is known about the causes of deterioration at El Morro Monument and how to approach them. With this knowledge, however, comes a greater complexity in preservation management

policies. As a conservation site El Morro compounds preservation challenges: a large surface area that is completely exposed to the elements; different parts of the rock deteriorate in different ways; and the certainty that deterioration will continue to occur – the best preservation can do is to slow the process. In addition, it is unfeasible both monetarily and managerially to protect all parts of the cuesta equally, so the Monument must prioritize where and how to expend its efforts and resources across all areas of the rock. Ideally this would be weighted towards proactive preservation to stave off larger issues. El Morro, however, has several sites that frequently require remedial attention – often causing the Monument to chose reactive rather than proactive preservation strategies. In addition, as preservation efforts are not mandated under a broader management plan, efforts have only been undertaken when there are the funds and interest to do so. This has resulted in a start-and-stop approach that frequently repeats efforts, creates more administrative and logistical ramp-up, and sometimes fails to make successful connections to previous efforts.

Recommendations

This study has resulted in several recommendations—some related to the entire Monument, followed by several specifically regarding the Inscription Trail Loop.

Overall Setting & Sense of Place

Circulation

The current circulation through the Inscription Trail Loop currently follows two historical precedents. It creates an approach to the inscriptions that first stops at the

natural pool – the historic origin of why people have visited this spot for hundreds of years. It also closely follows the visitor approach put into place after the custodian’s residence was built and later formalized by National Park Service trails. As it has historical significance, the current circulation pattern should remain relatively unchanged.

The current trail of tinted cement, however, is distracting and not fitting with the otherwise remote feeling of the site. The “sled” trails at the top of the cuesta provide a much less intrusive solution and merge more seamlessly with the surrounding environment. While the same design application may not be appropriate for the Inscription Trail Loop, an approach with similar results should be considered. A path that appears to be naturally worn into the earth around the base of the cuesta may fit this goal. Any change in trail design, however, should be weighed against erosion and other concerns.

Trail Environment

Building on an idea from Evon Z. Vogt, El Morro should consider reintroducing native plant species along the trails, particularly between the trails and the rock face, to deter visitors from getting too close. In addition to plants such as the yucca, strategic placement of boulders and larger rocks could also deter access to the rock face without impinging on the visitors’ ability to experience the inscriptions.

Design alternatives for fences should also be considered. While the current use of local materials for fencing does retain a sense of place, a design more in line of those originally

built by Vogt may be more in tune with the setting. Samples of fencing or traditional barrier techniques used by associated Puebloan and Navajo tribes should also be considered.

Vistas & Viewsheds

The vistas and viewsheds from both the Inscription Trail Loop and the Headland Trail should be carefully protected by the Monument. While factors affecting encroaching development may be beyond NPS's control, every effort to assess threats, build partnerships, and affect potential outcomes should be made.

El Morro should first make a map of the surrounding lands and note the various parcels and inholdings that may be targets for development. These sites should then be evaluated for importance to the overall viewshed and ranked in order of priority. The Monument should identify applicable third-parties and conduct educational outreach about the value of protecting these viewsheds. Many of the viewsheds include other sites that play a prominent role in Puebloan religious and secular cultural traditions.²¹⁷ The Monument should work with consultants from the tribes to map and identify these locations. There is a strong possibility these other sites have a similar vested interests in protecting the same areas. El Morro should work with these sites to create a broader coalition to leverage against potentially harmful development.

²¹⁷ Consultations should be held with associated tribes to map important viewsheds and to catalog corresponding sights along the horizon.

Interpretation

El Morro Archives

El Morro has a vast wealth of resources in its archives. Photographs, drawings, writings, and personal correspondence about the Monument are all available and tell a compelling story about the Monument's history in ways that other resources cannot. Better coordination and cataloging of its holdings can help the Monument improve utilization of its in-hand historic materials. Updating and revisions to the visitor center museum may provide an excellent opportunity for this. Particular focus should be given to the writings and reports of early site custodians, life at a remote National Park Service site, and the Civil Works Administration crews and projects.

Creative Ways to Engage Visitors

Through recent interpretation strategy planning processes, discussions have begun about how to promote El Morro's resources through new channels. New media for interacting with visitors include downloadable podcast tours, web tours, and an online database of El Morro's archival information. As this area may be considered a lower priority for the Monument, management should look to other NPS sites of similar size and resources that have had success with new media efforts and learn from their best practices.

Visitor Center Museum

The current visitor center museum is woefully out of date and deserves modernizing. The age of the current exhibit is, in some ways, fortuitous for the Monument's current management. Based on visitor feedback collected during the 2008 summer season,

management has a perfect opportunity to address identified interpretive needs. In particular, rethinking and redesigning the museum may be an opportune way to introduce the less obvious aspects of the park into the interpretation before visitors head out on to the trails. This way, visitors can be better prepared to appreciate and recognize the site as a complex landscape.

Site Branding

The current title of “Inscription Trail Loop” does not accurately represent the full breadth of resources present on and around the trail. The rebranding of the trail would require larger coordination of reprinting materials and creating new signage. During visits to El Morro with consultants from various associated Pueblo tribes, it was noted that negative impacts to the site can stem from visitors’ lack of knowledge about the related Native American values and cultural significance of the site. The consultants also felt that interpretive signs, brochures, and programs should be revised to include a give greater weight to the Native American perspective on places and resources.²¹⁸

Rock Art & Inscription Management & Preservation

Remedial and preventative interventions are currently needed. All interventions should be done within the broad context of the cultural landscape. In addition, enhanced coordination between research archives, materials, and study results is needed.

²¹⁸ Zedeño, Maria N, et al. *Overview and Inventory of Ethnographic Resources for Petrified Forest National Park, El Malpais National Monument and National Conservation Area, and El Morro National Monument*. Report. Denver: Intermountain Region Support Office National Park Service, 2001.

Prioritization

It is essential for El Morro to re-evaluate the current priority system for inscription management and preservation. Currently, the predominant prioritization method used is based on the inscription condition as opposed to overall historic and cultural significance. This has led to a preservation system that is reactive rather than proactive.

Going forward, it will be critical for El Morro to monitor inscription panels deemed to be the most historically significant and the most at risk. Currently, priority is only given to panels based on their condition. As recommended in the 2006 *Centennial Report*, future efforts at preservation should be directed to those panels which are determined to be of highest historical and cultural significance to help the Monument best utilize available resources and funding. This is not a decision the Monument should make on its own. A core group of experts and stakeholders should be consulted to create a master list of high-priority inscriptions based on both threat of deterioration and historical and cultural significance.

Ongoing Monitoring

Despite what treatments will be undertaken in the future, it is paramount for the Monument to implement and maintain an ongoing monitoring program. Vulnerable to erosion, weathering, insect damage, biological growth, instability, and the potential of unforeseen rock falls, no inscription is absolutely secure. At the very least, bi-yearly

monitoring of inscriptions should be performed, as described in the *El Morro Inscription Monitoring Program* set forth 1997.²¹⁹

Currently only the inscriptions with the greatest risk of deterioration or loss are monitored. Based on notes in the *Monitoring Program* binder, the last complete monitoring survey was performed in 2006. The original goal of the program was to train Monument staff to perform the monitoring. At least one staff member received training from outside consultants; high seasonal staff turnover, however, has made it difficult to ensure the continuity of the program.

Because the monitoring program has not been used in several years, now is a good time to revisit the program and make updates. In particular, the following strategies are recommended to streamline and organize future monitoring processes:

- Determine responsibility for carrying out the monitoring process, either the Monument or an outside consultant (Monument staff is preferred for greater cost efficiency);
- Decide which set of photos should be used for baseline comparisons (the inscription list from the 1997 and 2006 survey should be used and the subsequent photographs used for comparisons);
- Mandate the use of digital photography over film for all monitoring projects going forward to provide greater ease of use and flexibility;

²¹⁹ Oliver, Anne, T. Scott Kreilick and Karen Fix. 1997-2004. *Inscription treatment project, El Morro National Monument, 1997* (rev. 1997, 1998, 1999, 2000, 2003 and 2004). Unpublished final report, El Morro archives.

- Digitize past monitoring photos and surveys for comparison and archival purposes;
- Create a new schedule for monitoring of at least twice a year – and stick to it.

Inscription Data Management

Data management has taken the form of several software since the early 1990s, most of which are currently considered technically obsolete. The current status of the inscription database is unwieldy, difficult to understand, and hard to use.

In an attempt to solve this problem, the data was incorporated into a master database system developed by the Santa Fe regional office called the Inscription Resource Monitoring System (IRMS). Unfortunately, the network systems in the El Morro offices are not powerful enough to handle the database and it is too large to be placed on a single computer. The result is a database that has been split across several computers and no longer works together. This has resulted in several issues, most important of which is a system that no longer functions as a whole and is under-utilized by the Monument. It has also created the possibility of not capturing and synchronizing collected data for future evaluation. As much of the data is currently available in Microsoft Access, a fairly accessible program, this format should continue to be used for both efficiency and economy. The current Access database only reflects efforts before 2000 and therefore needs to be updated through the 2006 survey efforts.

An additional schedule for the regular back-up of photographic and other data collections should be done on a regular basis to a server in the Southwest Regional office in Santa Fe.

Inscription Data Mapping

For most of the preservation and conservation-focused studies at El Morro, data about the status of various inscription panels is primarily collected in charts or other database formats. Because of the large area of the rock, it is hard to understand the rate of deterioration or other factors affecting the inscriptions and rock art from a broader perspective. To supplement the monitoring and recording efforts, it would benefit El Morro to create a map of the rock face as seen from the perspective of the trail. Having a two-dimensional representation of the stone surface would allow the data to be mapped so that sections and panels could be read together across the rock. To some extent this has already begun via the condition survey forms used during the 2006 Centennial study. The survey data, however, was never compiled into an overall map of the site and instead remains specific to one panel or section.

To enable this process, the Monument should create a rectified photographic representation of the rock face, particularly the area along Inscription Trail Loop. During the 2008 field school the northeast point was photographed and a rectified photomontage was created as a test run. Creating rectified photomontages of a greater portion of the rock face would also allow for data to be examined through mapping software such as ArcGIS.

Vegetation Control & Removal

The presence of mature trees along the inscription wall, particularly pinion pines and juniper, is problematic for inscription preservation. At certain points along the wall, shade from trees slows the stone's evaporation process to the detriment of nearby inscriptions. In other spots, particularly at the northeast point, the shade from trees opposite the path may promote lichen growth. In addition to increased weathering and erosion, an over-abundance of vegetation near and along the Inscription Trail Loop poses a potential fire danger.

As of 2006, the Monument has begun a slow removal of large vegetation around the base of the rock.²²⁰ Removing the trees at once or over a short period could “shock” the rock and increase the possibility of damage; therefore, the Monument is slowly pruning back and removing the trees over several years while monitoring the rock face for any sudden changes.

When removing vegetation, however, it will essential for the Monument to also keep in mind the available views of the rock and surrounding landscape from the trail. Care should be taken to not reveal intrusive views of the visitor center or other Monument facilities when removing vegetation, to whatever extent possible.

²²⁰ Kendrick, James W. and Steven M. Baumann. *Interdisciplinary Approach to the Preservation of the Historic Inscriptions at El Morro National Monument, New Mexico – Paper Presentation for the Intermountain Resources Stewardship Conference*. Report. El Morro archives: Unpublished final report, 2008.

Promoting Preservation

The inscription management and preservation program at El Morro has high potential for increased interpretation. Currently there is one way-side exhibit detailing current and past preservation efforts on site. Going forward, there is a high chance that conservators will be working in view of visitors. This, coupled with El Morro's interesting preservation history (inscription removal, wax coatings, and graphite pencils), makes a compelling narrative and should be promoted further through interpretation efforts.

El Morro can also create a more interactive approach to explaining preservation management. Using the wealth of historic drawings and photographs in their archives, El Morro can create "monitoring" cards for visitors to take into the "field" with them and compare and contrast how the inscriptions have changed over time.

Conclusion

El Morro is more than a natural landscape. The historic and physical evidence of the Ancestral Puebloan, Puebloan, Spanish, and American cultures, and the National Park Service give the environment of El Morro symbolic and cultural meaning. How this meaning has been viewed is filtered by a range of values and beliefs. Bringing these views together is an intricate balancing act that can pose many challenging dilemmas for El Morro's stewards. Doing so, however, will not only benefit the thousands of visitors to El Morro but also help to better ensure the site's sustainability over time. Fortunately, with over a century of site management efforts, the Monument is poised at a moment in time where it has the scientific, historic, and cultural awareness to do so. The other

component to reaching this goal will be careful, strategic planning and management to bring all three together in a holistic way. Inscription Trail Loop offers an ideal medium through which the values of the El Morro cultural landscape can be illuminated to the public. As the most highly visited area within the overall site, Inscription Trail Loop should be a primary focus of any El Morro management plan as changes to both interpretation and preservation efforts occurring within this character area can be broadly translated to other sections of the Monument.

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Related Figures



Figure 0.1: View of El Morro looking west. *Source: T. D'Ambrogi, 2008.*

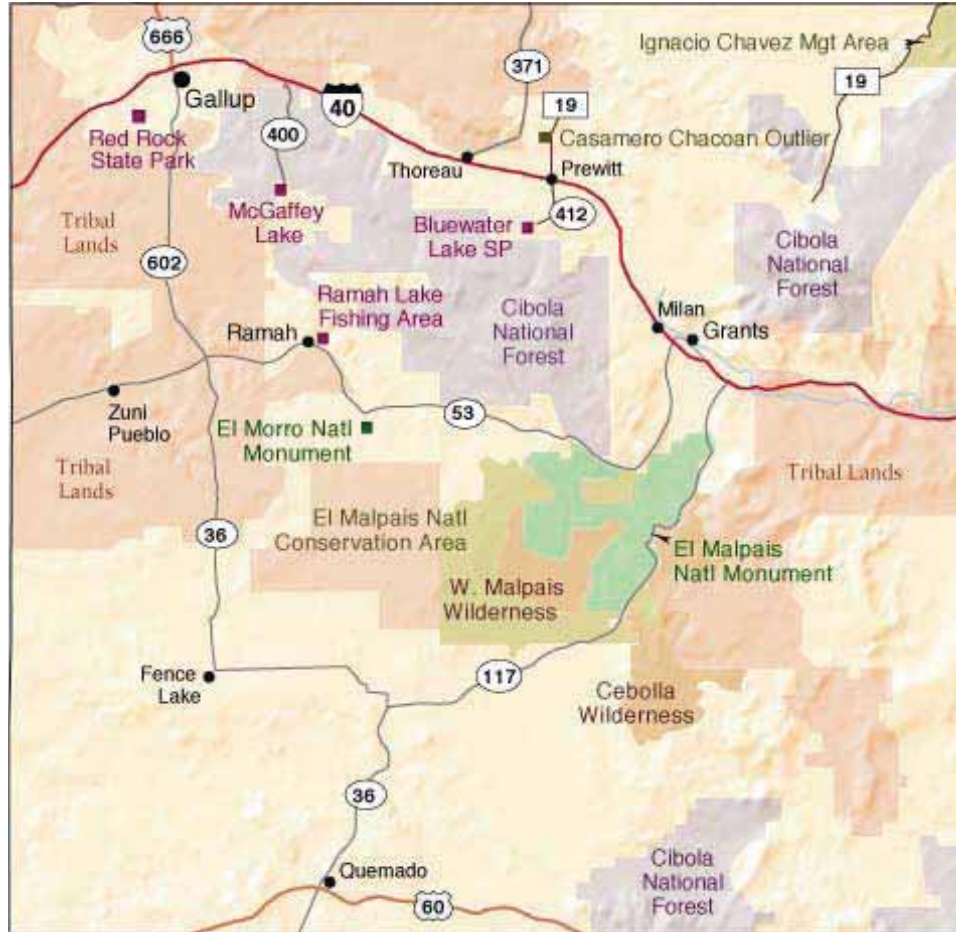


Figure 1.1: Location of El Morro in relation to other sites of natural and cultural significance. *Source: Public Lands Information Center <http://www.publiclands.org/explore/quadrant_map.php?plicstate=NM&quad=5&PublicLandsDOTorg=8f3c3d3336264e09f9c7a8e928ab30fd3>. Obtained March 2008.*

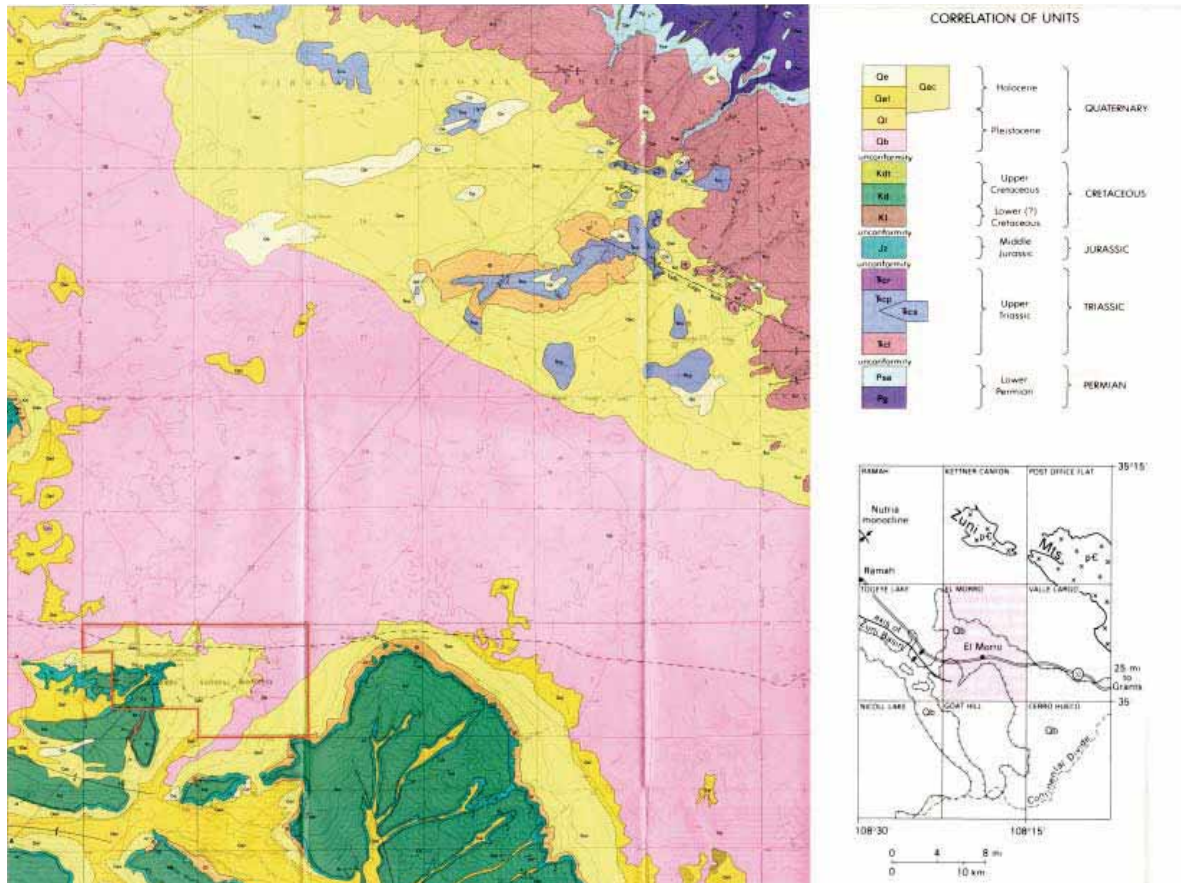


Figure 1.2: Geology of the El Morro quadrangle, Cibola County, New Mexico. *Source: Anderson, O.J., and C.H. Maxwell. 1991. Geology of the El Morro quadrangle, Cibola County, New Mexico. New Mexico Bureau of Mines and Mineral Resources Geologic Map GM-72, scale 1:24,000.*



Figure 1.3: Aerial view of the cuesta and box canyon looking northeast. *Source: El Morro National Monument, n.d.*

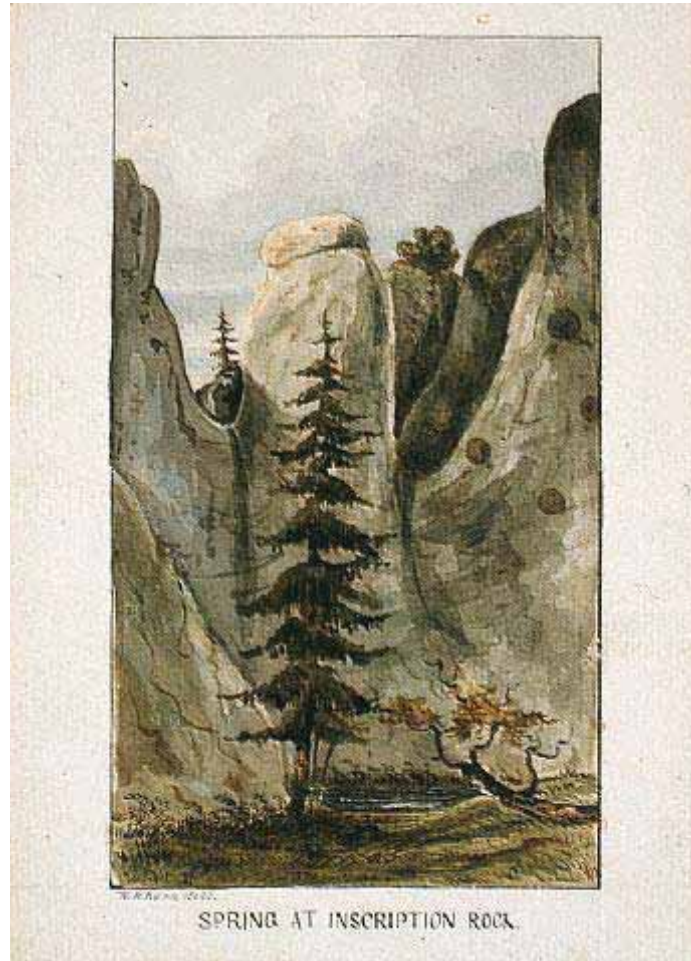


Figure 1.4: Drawing of the historic pool as it appeared in 1849 at the time of Lieutenant James H. Simpson's visit. *Source: Lithograph by Richard H. Kern, in S. Ex. Doc. No. 64, 31 Cong., 1 Sess., 1850.*

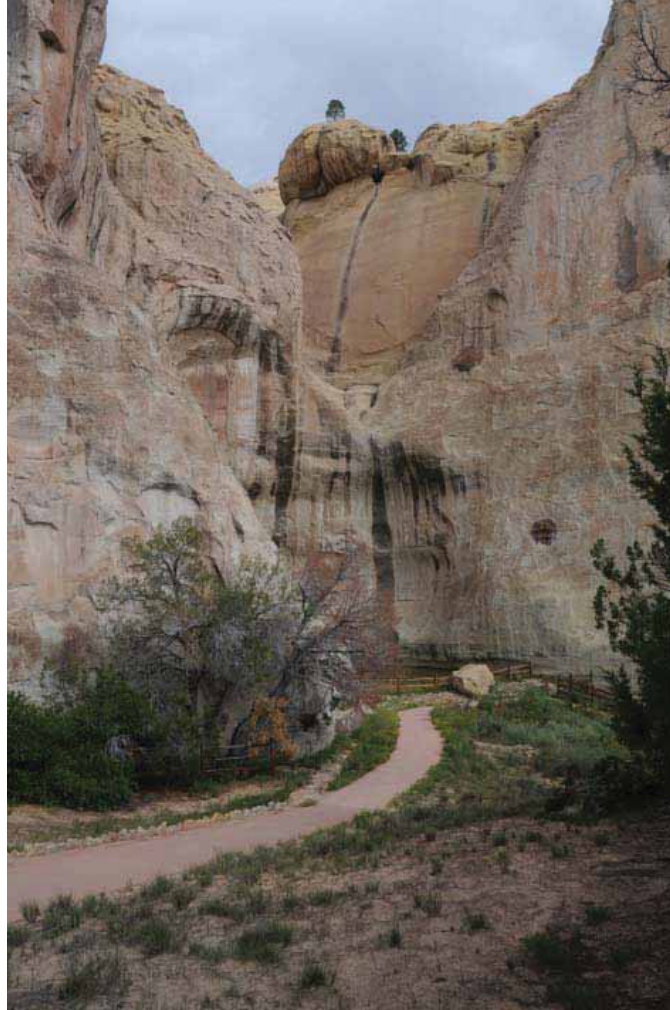


Figure 1.5: The historic pool as it appears today.
Source: T. D'Ambrogi, 2008.



Figure 1.6: A comparison of vegetation around the northeast base of the cuesta in 1891 and 2008. *Source: Southwest Museum, Los Angeles, California, Charles F. Lummis, photographer (1891) and R. Mason (2008).*

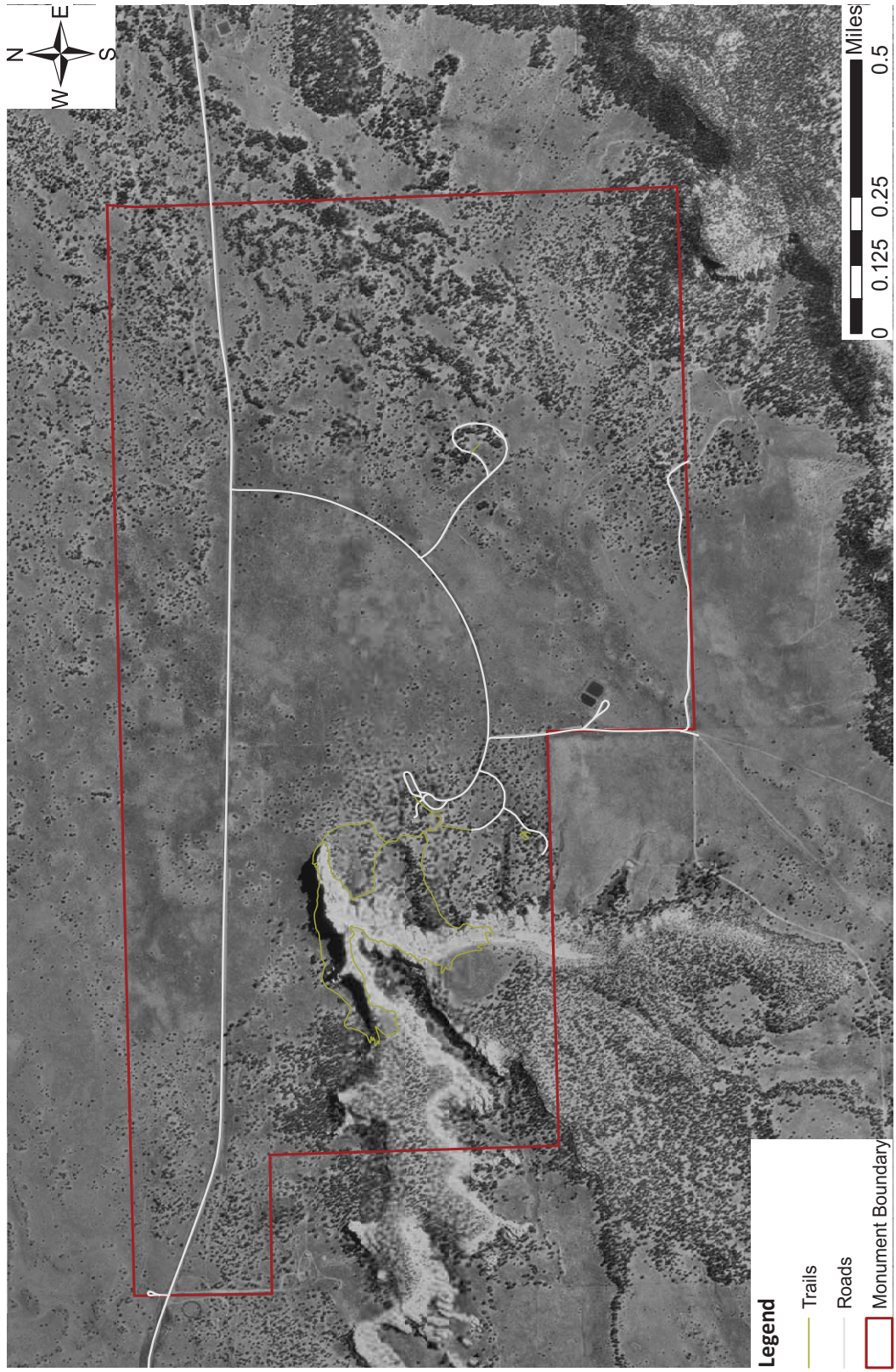


Figure 1.7: Birds-eye view of El Morro National Monument boundaries, roads, and trails. *Source: El Morro National Monument.*

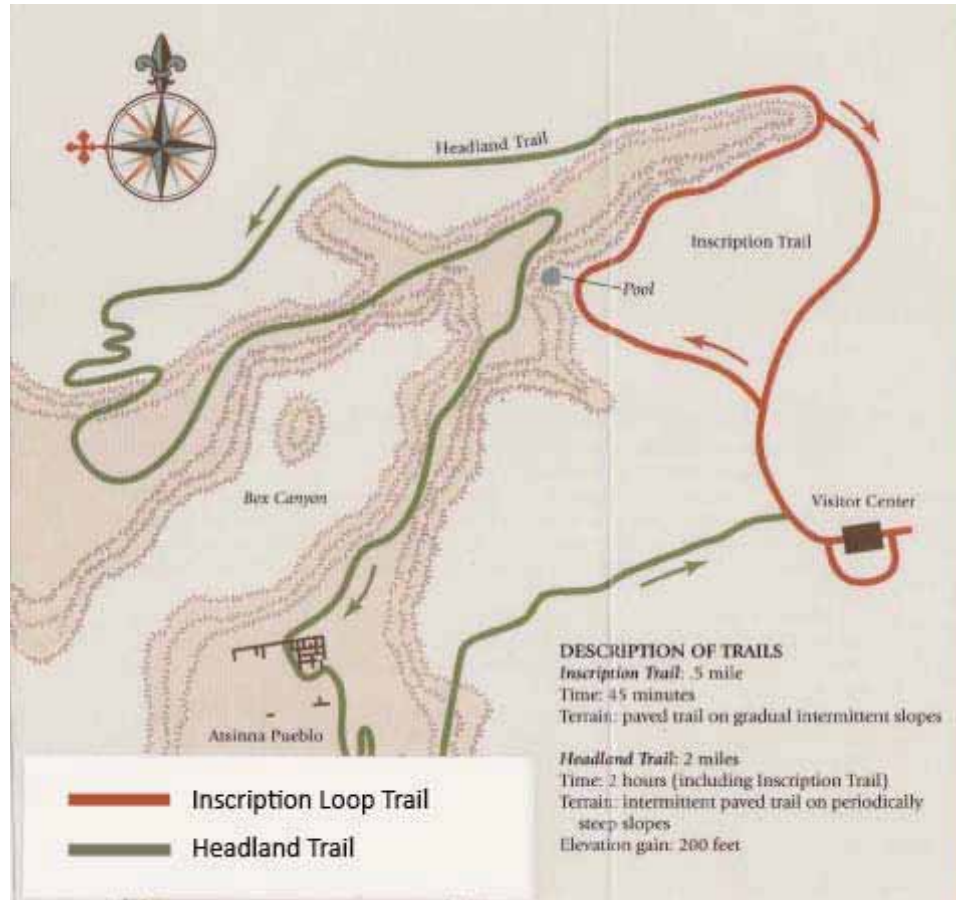


Figure 1.8: Current configuration of Inscription Trail Loop and Headland Trail. *Source: El Morro National Monument.*



Figure 2.1: The excavated portions of A'ts'ina, looking north. *Source: T. D'Ambrogi, 2008.*



Figure 2.2: Looking northwest across the box canyon from A'ts'ina towards the unexcavated North Ruin. *Source: T. D'Ambrogi, 2008.*



Figure 2.3: Examples of Ancient Puebloan petroglyphs found along Inscription Trail Loop. *Source: T. D'Ambrogi, 2008.*

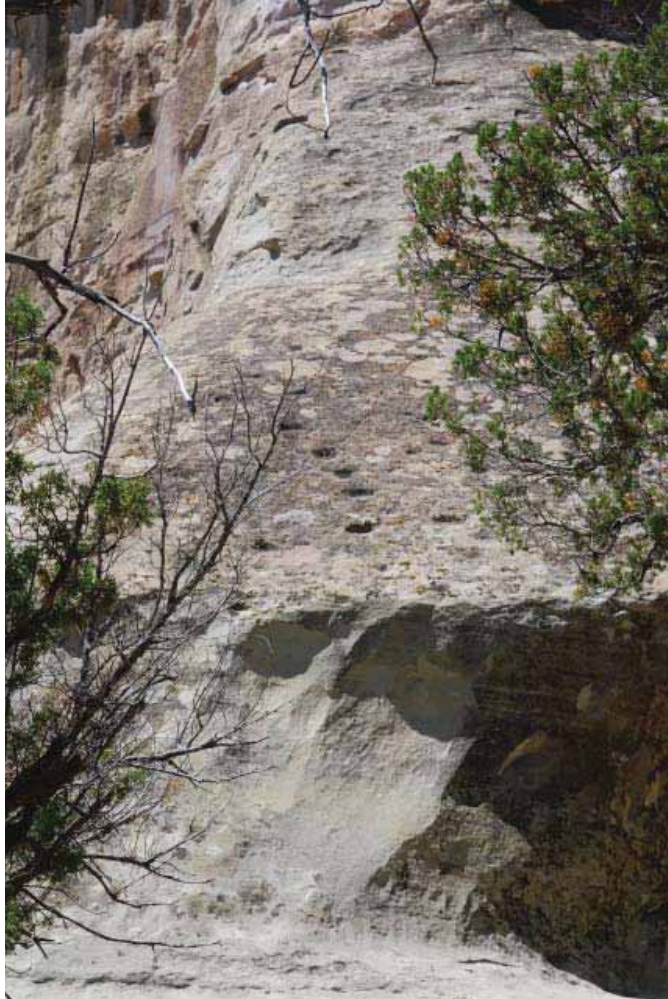


Figure 2.4: Ancient Puebloan hand-and-toe-hold trail leading from the top of the cuesta to the historic pool. *Source: K. O'Meara, 2008.*

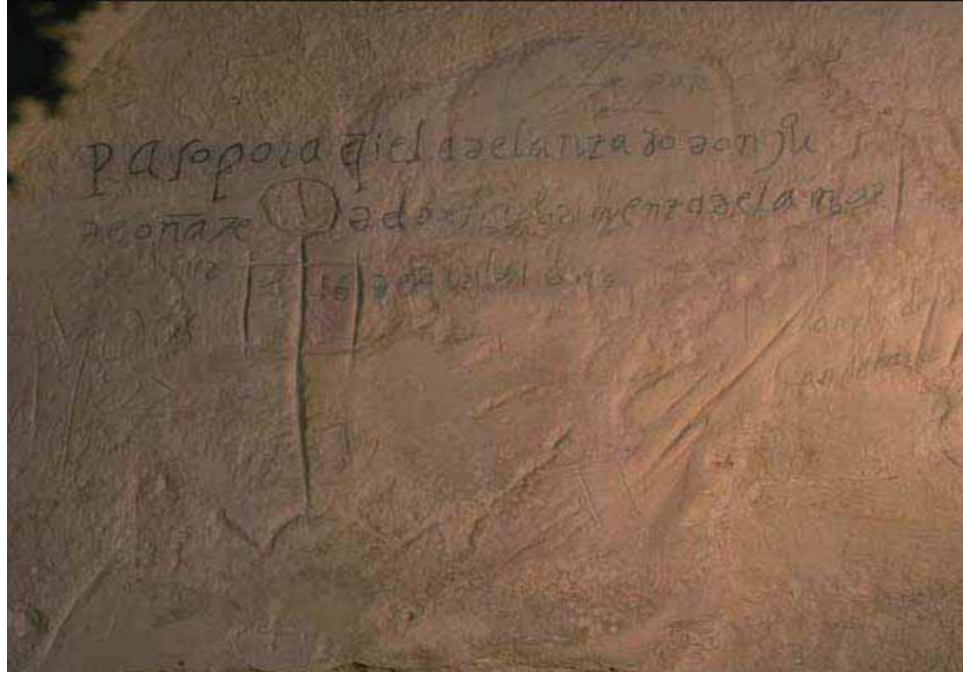


Figure 2.5: Inscription left by Don Juan de Oñate (1605). *Source: El Morro Inscription Survey, 1993-94.*

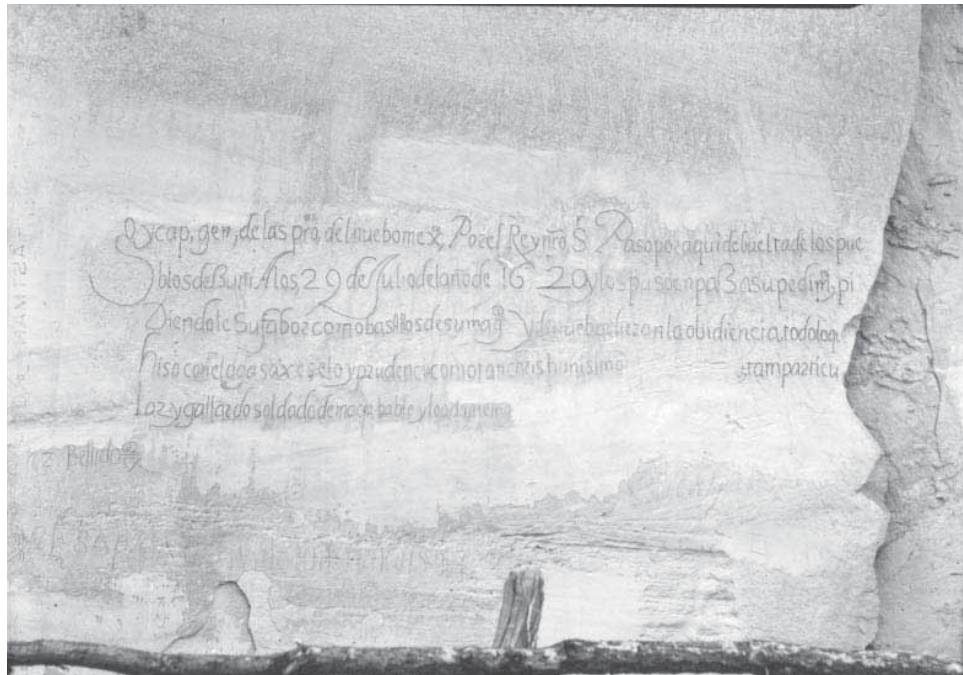


Figure 2.6: Inscription left by Don Juan de Eulate (1620). *Source: George A. Grant, 1929, El Morro Archives.*

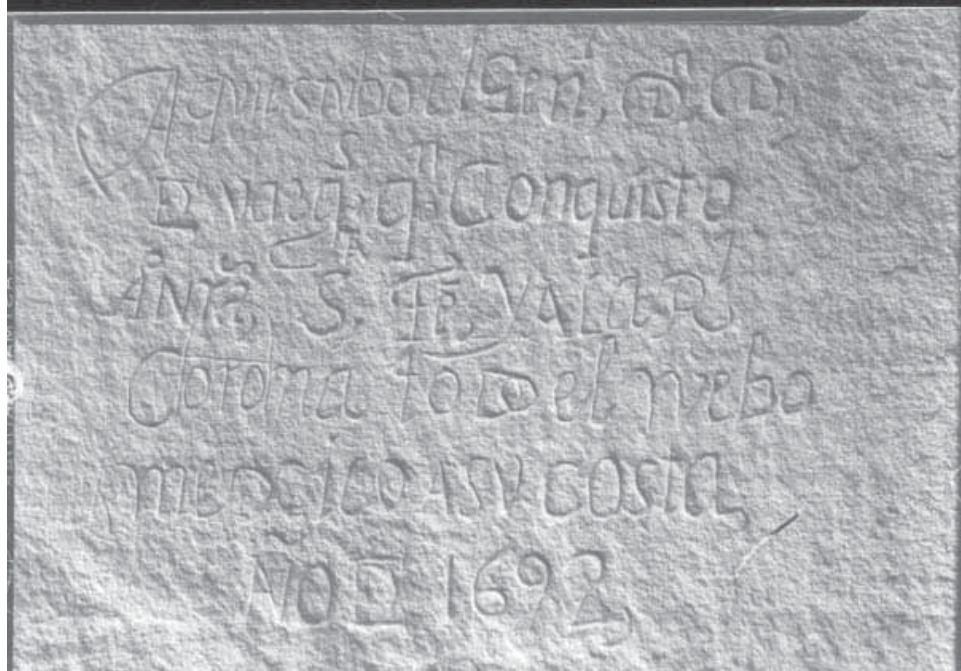


Figure 2.7: Inscription left by Francisco Manuel de Silva Nieto (1629).

Source: George A. Grant, 1929, El Morro Archives.

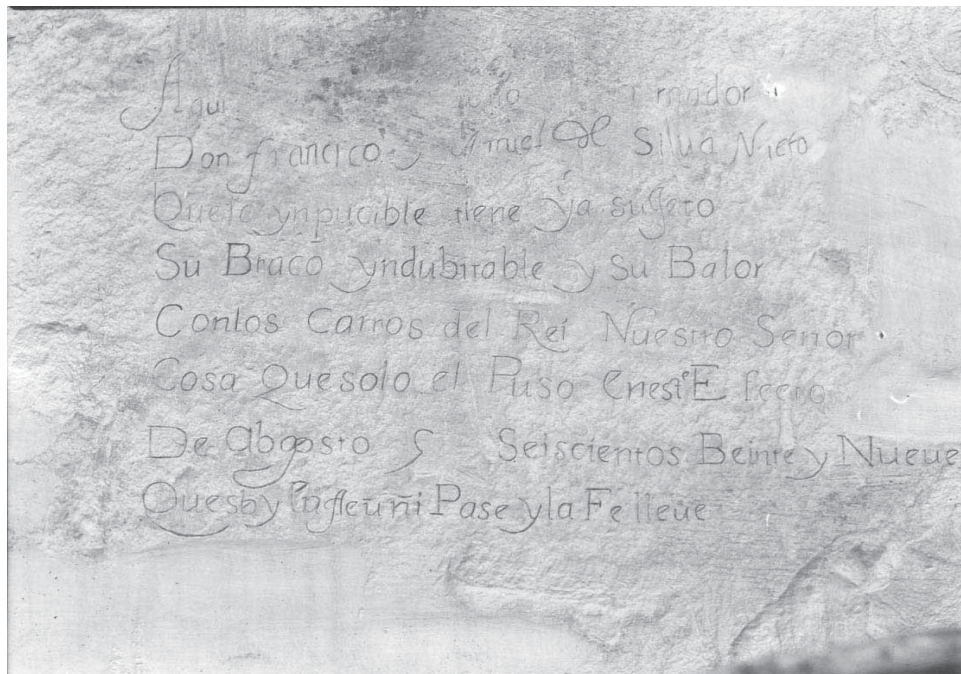


Figure 2.8: Inscription left by Don Diego de Vargas (1692). *Source: George A. Grant, 1929, El Morro Archives.*

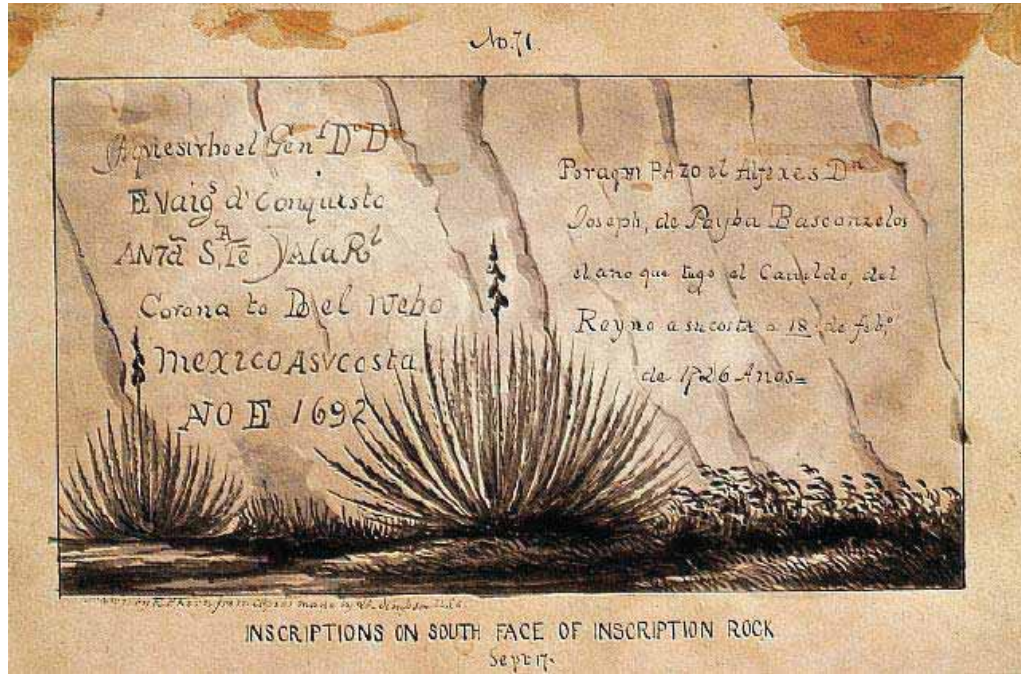


Figure 2.9: Richard H. Kern's drawing of Spanish inscriptions . *Source: Lithograph by Richard H. Kern, in S. Ex. Doc. No. 64, 31 Cong., 1 Sess., 1850.*

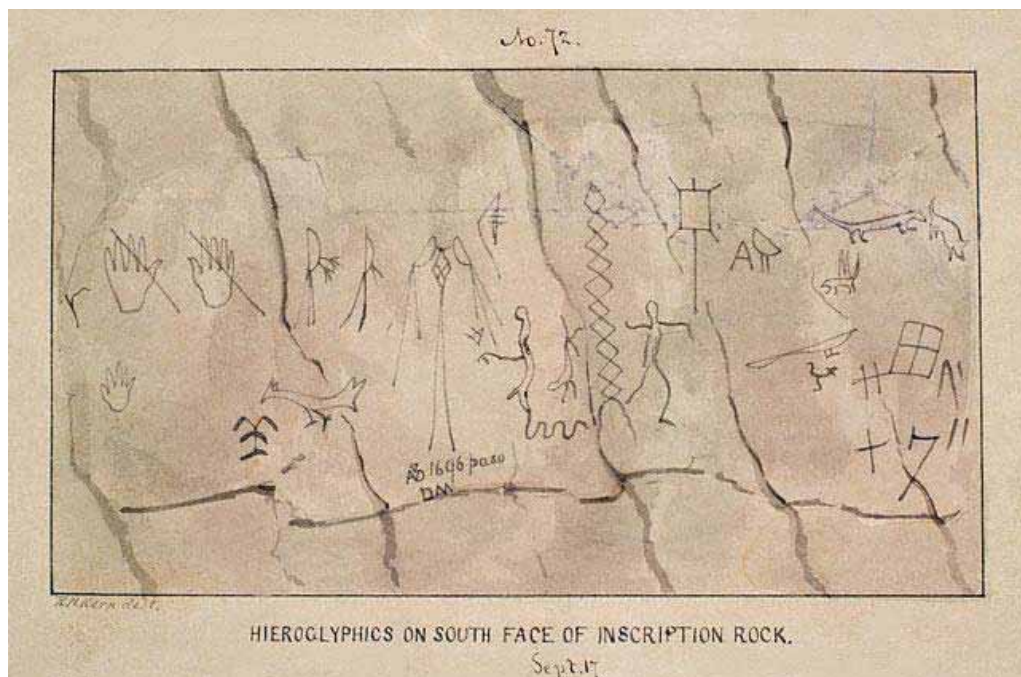


Figure 2.10: Richard H. Kern's drawing of Ancestral Puebloan rock art. *Source: Lithograph by Richard H. Kern, in S. Ex. Doc. No. 64, 31 Cong., 1 Sess., 1850.*

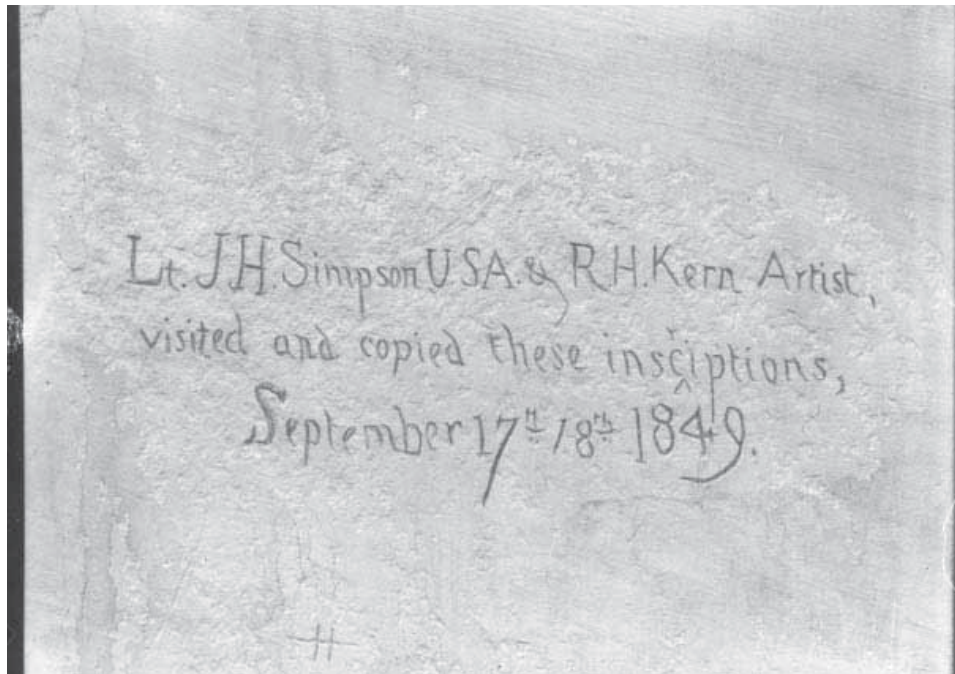


Figure 2.11: Inscription left by Lt. James H. Simpson and Richard H. Kern, the earliest American inscription at El Morro. (1849). *Source: George A. Grant, 1929, El Morro Archives.*

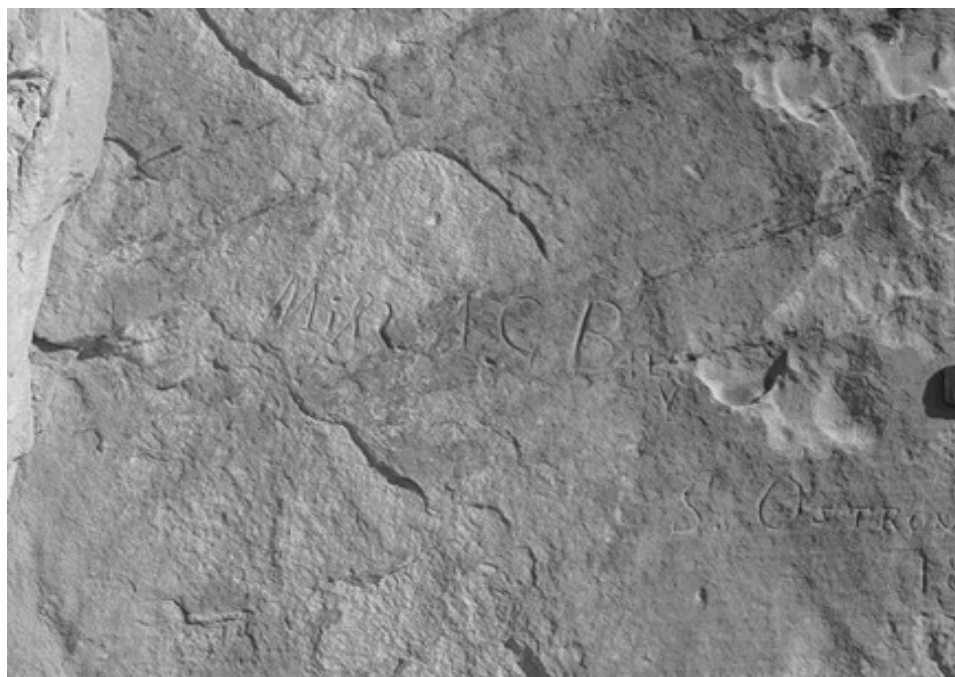


Figure 2.12: Inscription left by Miss A. E. Baley, one of the few left by women at El Morro. Amelia Baley and her sister, America, were part of John Udell's wagon train to California (1858). *Source: El Morro Archives, n.d.*



Figure 2.13: Inscription by E. Pen Long, a member of Lt. Beale's party, later returned and left this elaborate signature on the rock (1859). *Source: T. D'Ambrogi, 2008.*

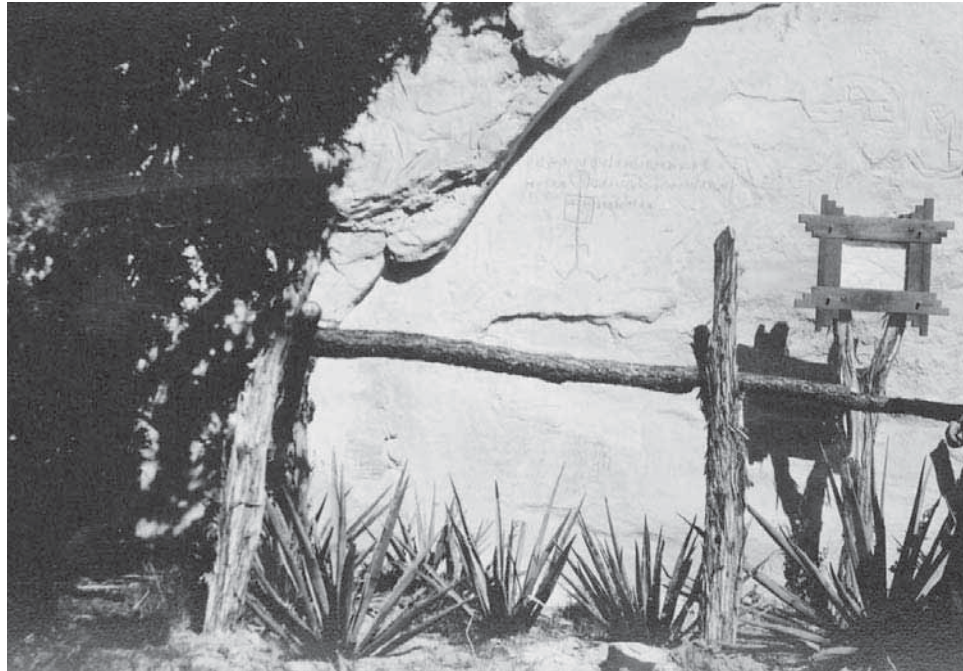


Figure 2.14: Fencing, interpretational signage, and barrier plants erected under Vogt's administration. *Source: Vogt Photos, El Morro Archives, n.d..*



Figure 2.15: “Sled” tracks as path markers along the top of the cuesta as part of the CWA-created Headland Trail. *Source: K. O’Meara, 2008.*

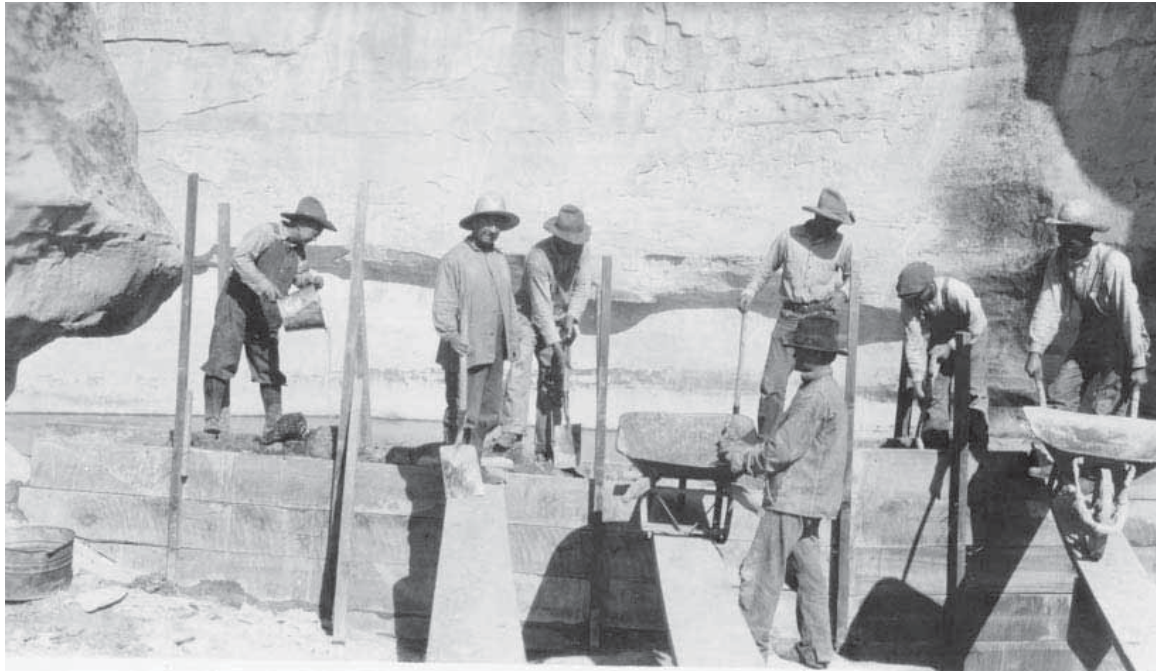


Figure 2.16: Vogt and his workers building a concrete and stone dam to increase the pool’s capacity. Following construction of the dam, the pool provided drinking water to the Monument and local ranchers. *Source: Vogt Photos, El Morro Archives, c. 1926.*



Figure 2.17: CWA workers doing erosion control work in the arroyo below the dam. *Source: Vogt Photos, El Morro Archives, c. 1933-34.*

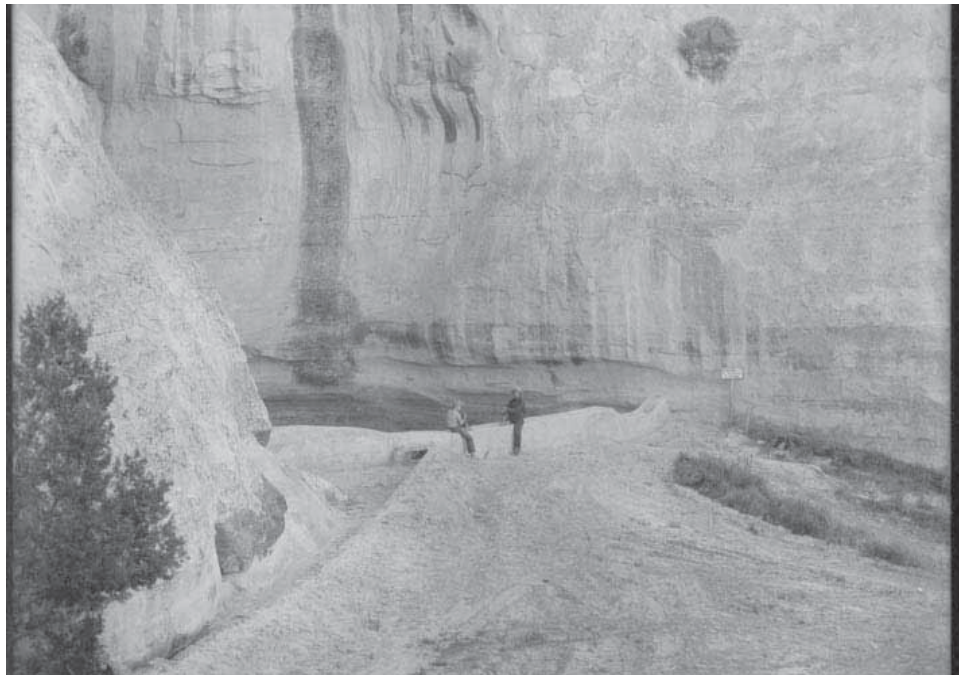


Figure 2.18: View of the pool and concrete dam after the arroyo was filled. *Source: George A. Grant Photos, El Morro Archives, September 1934.*

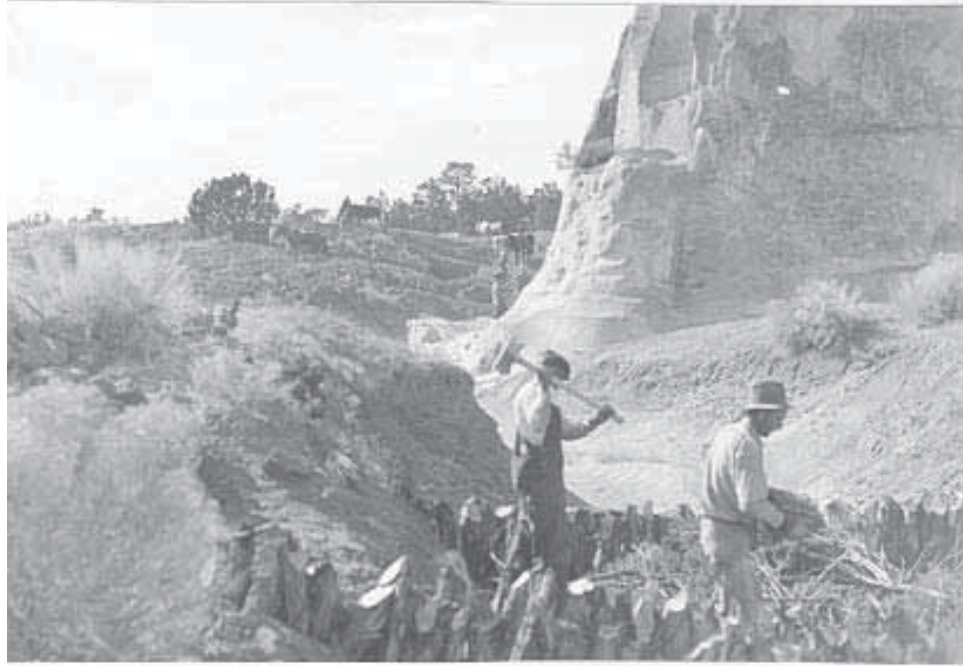


Figure 2.19: Juniper post check dam near the northeast point. *Source: Vogt Photos, El Morro Archives, c. 1933-34.*

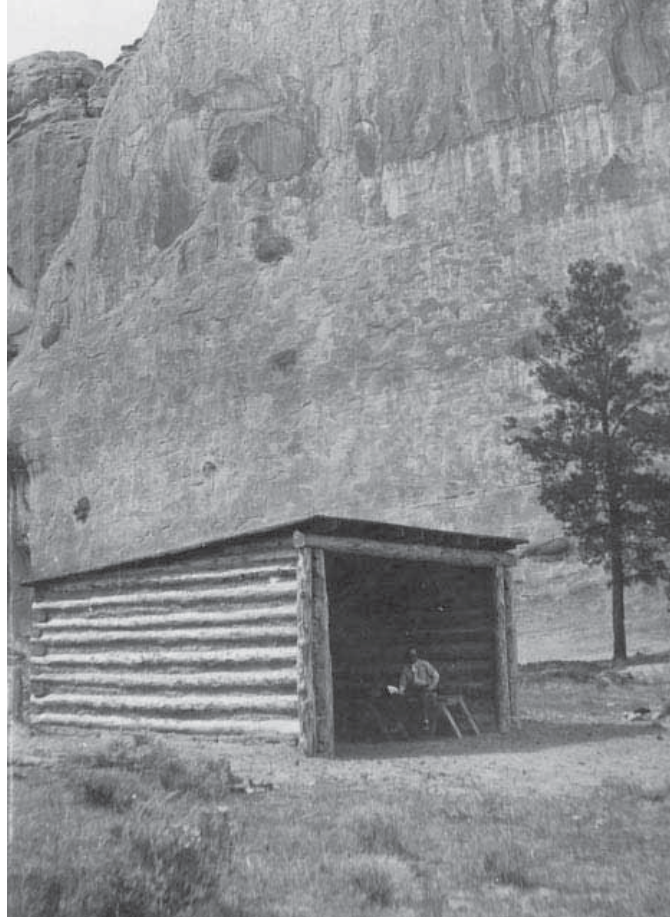


Figure 2.20: Original visitors shelter. The structure was later converted into a cabin for R. Budlong.
Source: Vogt Photos, El Morro Archives, n.d.

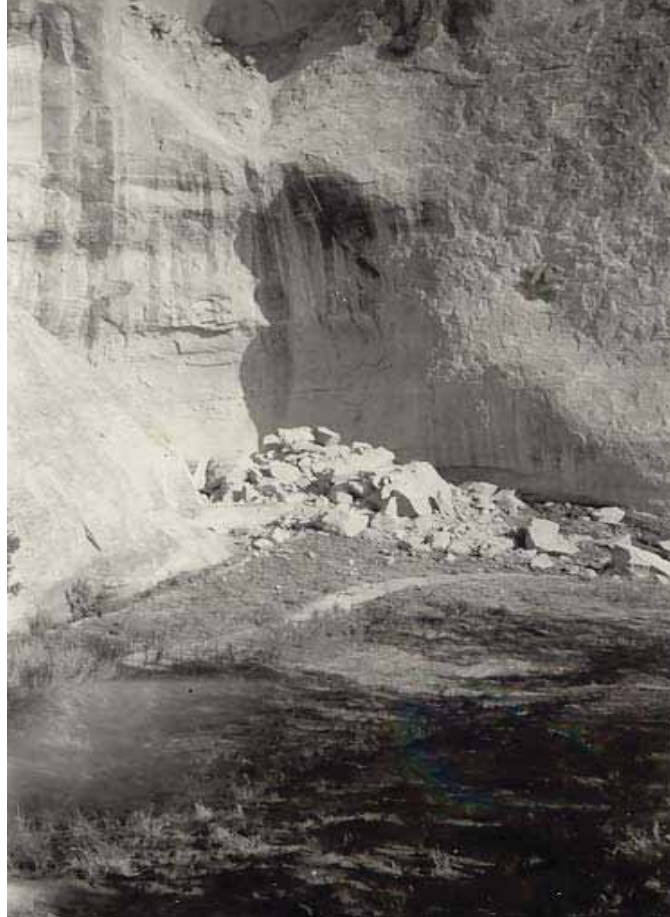


Figure 2.21: Rock fall at the pool which destroyed the concrete dam. *Source: Baxter Photos, El Morro Archives, 1942.*



Figure 2.21: Custodian residence, built in 1939 using 'Park Service Rustic' style. *Source: George A. Grant Photos, El Morro Archives, 1940.*



Figure 2.23: Mission 66 Visitors Center, designed by Cecil Doty. *Source: T. D'Ambrogi, 2008.*



Figure 3.1: Scenic pull-off and interpretive plaque along the entrance road to the Monument. *Source: T. D'Ambrogi, 2008.*

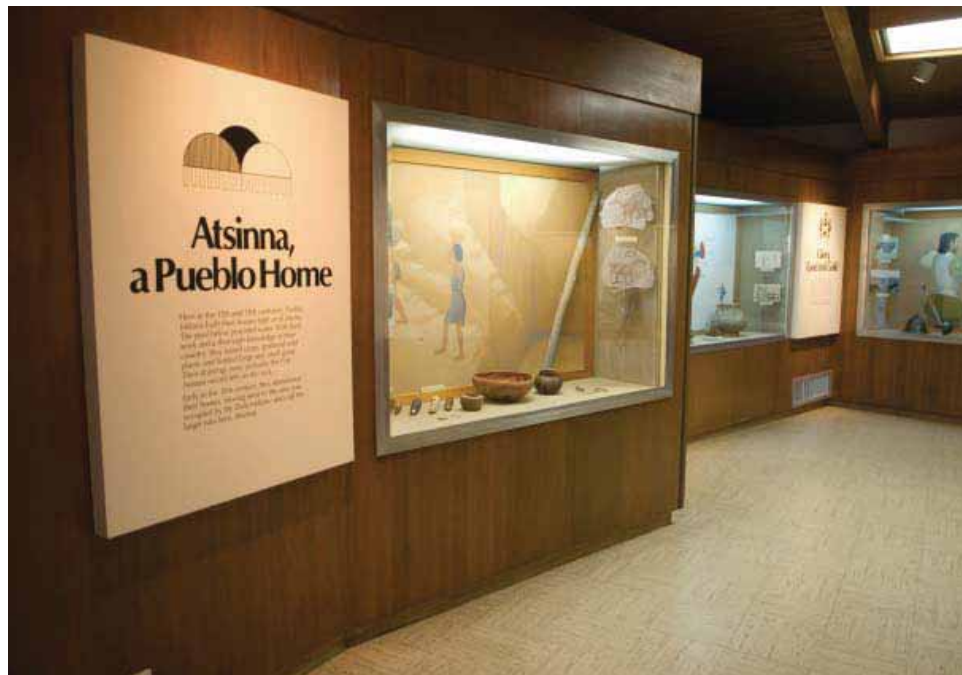


Figure 3.2: The visitor center museum. *Source: K. O'Meara, 2008.*



Figure 3.3: Visitors have the choice of two trails: Inscription Trail Loop or the Headland Trail. *Source: K. O'Meara, 2008.*



Figure 3.4: The western approach to El Morro from State Highway 53. *Source: K. O'Meara, 2008.*

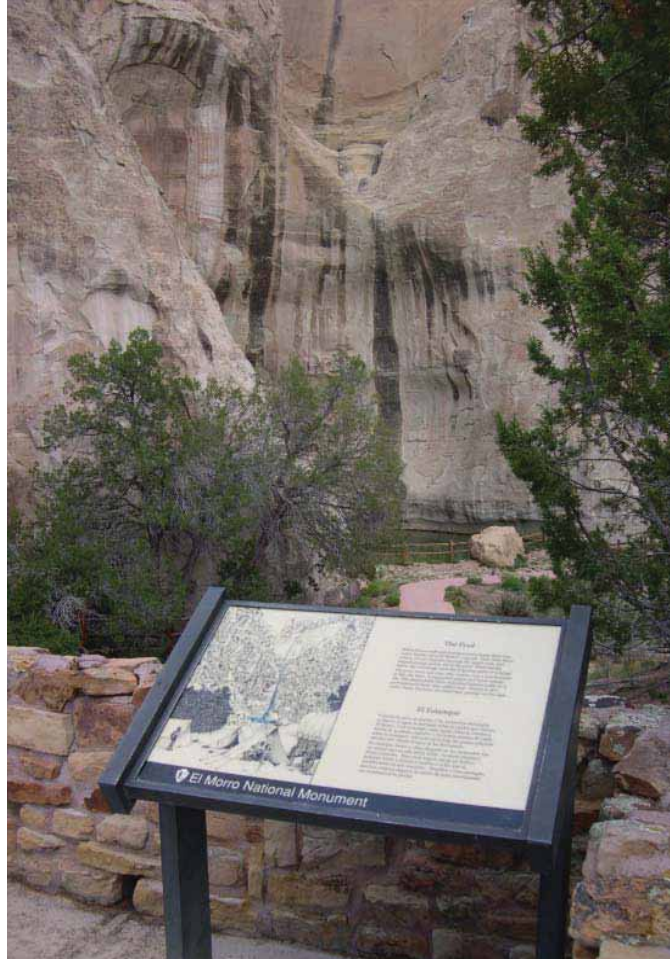


Figure 3.5: Overlook of the historic pool. *Source:* R. Mason, 2008.



Figure 3.6: Water channel features along Inscription Loop Trail. *Source: K. O'Meara, 2008.*



Figure 3.7: Example of directional signage found along the trail. *Source: K. O'Meara, 2008.*



Figure 3.8: Example of small-scale interpretational signage. *Source: K. O'Meara, 2008.*

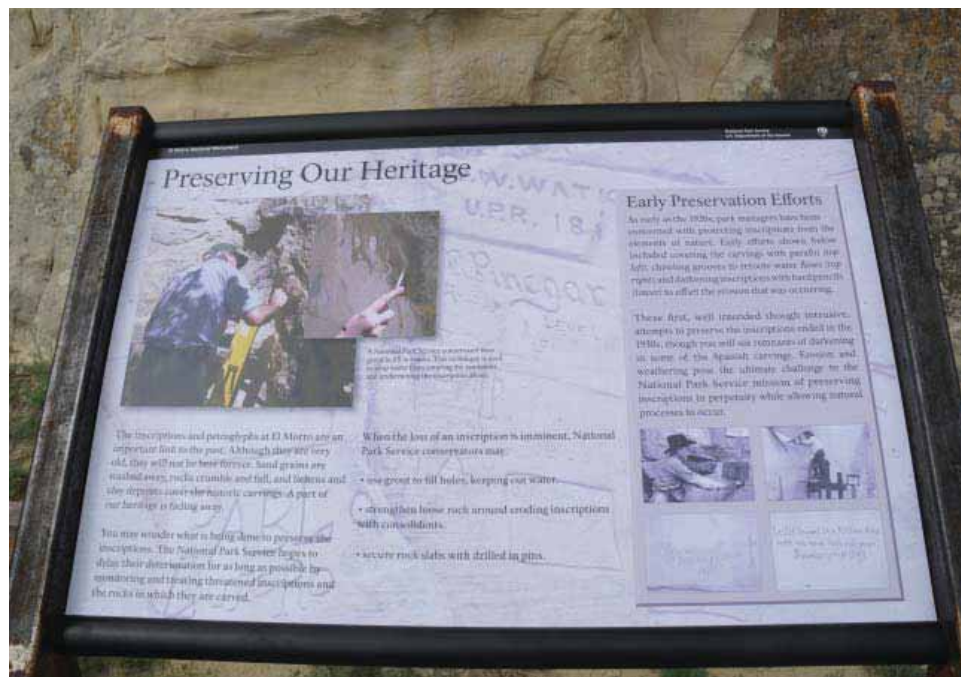


Figure 3.9: Example of large-scale interpretational plaques. *Source: K. O'Meara, 2008.*



Figure 3.10: Current fencing and tinted concrete paths. *Source: K. O'Meara, 2008.*



Figure 3.11: View of the surrounding landscape from the northeast point. *Source: K. O'Meara, 2008.*

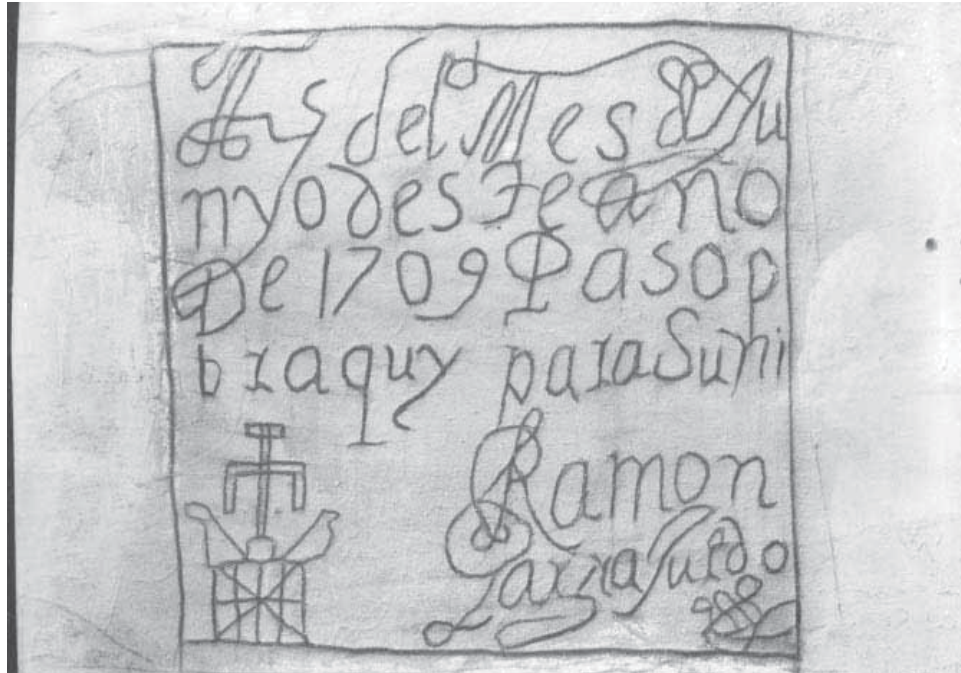


Figure 4.1: Example of Spanish inscription darkened through graphite pencils. *Source: George A. Grant, 1929, El Morro Archives.*



Figure 4.2: Remains of post-1906 inscription “erasures” create a mottled appearance on the stone face. *Source: Vogt Photos, El Morro Archives, n.d.*



Figure 4.3: Shortly after the excavation of A'ts'ina visitors were allowed to climb into the ruins. *Source: National Geographic, August 1957.*



Figure 4.4: Off the main trail, Vogt created an inscription that read “Colourless coverings save old inscriptions” to test various consolidants on the sandstone. *Source: Vogt Photos, El Morro Archives, n.d.*



Figure 4.5: Vogt coating inscriptions along the trail with consolidants. *Source:* *Vogt Photos, El Morro Archives, n.d.*

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Appendix – Presidential Proclamation 695

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

[No. 695—Dec. 8, 1906—34 Stat. 1264]

WHEREAS, it is provided by section two of the Act of Congress, approved June 8, 1906, entitled, "An Act for the preservation of American antiquities", "That the President of the United States is hereby authorized, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected";

AND WHEREAS, the rocks known as El Morro and Inscription Rock in the Territory of New Mexico, situated upon public lands owned by the United States, are of the greatest historical value and it appears that the public good would be promoted by setting aside said rocks as a national monument with as much land as may be necessary for the proper protection thereof;

NOW, THEREFORE, I, Theodore Roosevelt, President of the United States of America, by virtue of the power in me vested by section two of the aforesaid Act of Congress, do hereby set aside as the El Morro National Monument the rocks aforesaid and for the proper protection thereof do hereby reserve from settlement, entry or other disposal, all those certain tracts, pieces or parcels of land lying and being situate in the Territory of New Mexico, and within the boundaries particularly described as follows, to wit:

The south half of the north-east quarter and the north half of the south-east quarter of section six, township nine north, range fourteen west, New Mexico Meridian, as shown upon the map hereto attached and made a part of this proclamation.

Warning is hereby expressly given to all persons not to appropriate, excavate, injure or destroy said monument or to settle upon any of the lands reserved by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 8th day of December, in the year of our Lord one thousand nine hundred and six, and of the Independence of the United States the one hundred and thirty-first.

THEODORE ROOSEVELT.

By the President:
ELIHU ROOT,
Secretary of State.

Appendix – El Morro Visitors Guide, 1942



Inscription Rock from the east

EL MORRO
National Monument
NEW MEXICO

Appendix – El Morro Visitors Guide, 1942

El Morro *National Monument*



United States Department of the Interior
Harold L. Ickes, Secretary



National Park Service, Newton E. Drury, Director

Important watering place on the trail to Cibola, where Indians, Spaniards, and Americans left their inscriptions on the sandstone cliff.

El Morro, or Inscription Rock, is a massive mesa-point of sandstone, which derives its name from the Spanish word "morro" meaning "headland" or "bluff." Rising some 200 feet above the valley in which it is situated, the rock forms a striking landmark. From its rugged summit rain and melted snow drain into a large natural basin below, creating a constant, dependable supply of water. The route from Acoma to the Zuni pueblos led directly past the mesa. It became a regular camping spot for the Spanish conquistadores and, later on, for American travelers to the West, all of whom found in its sheltered coves protection from Indian attack, and at the pool plenty of good water in a region where water was scarce.

Many of the travelers left a record of their passage, cutting inscriptions into the soft sandstone. Two years before the founding of Jamestown, and 15 years before the Pilgrims landed at Plymouth Rock, the first Spanish in-

scription was made by Don Juan de Onate in April of 1605.

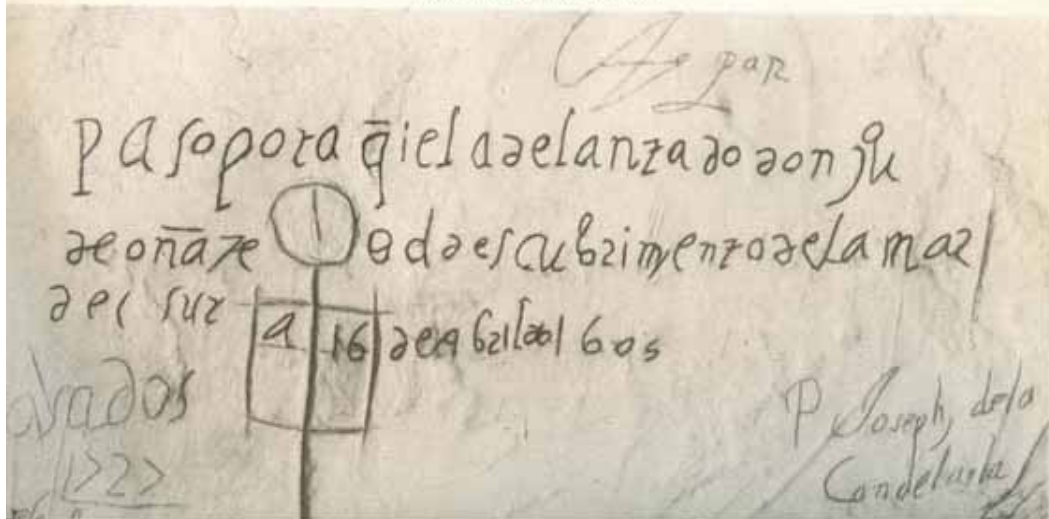
On the very top of El Morro lie ruins of Zuni Indian pueblos, abandoned long before the coming of the Spaniards. Broken pottery is strewn about. These ruins, as yet unexcavated, are covered with the growth of centuries, but here and there a bit of wall, still standing, speaks of the culture that once flourished here. Carved on the rock itself are also hundreds of petroglyphs left by these ancient people.

The inscriptions carved in stone at El Morro are the heritage of the modern Indian, Spain, Mexico, and the United States. As such, it symbolizes the basis upon which this Nation and those of Spanish America may meet upon common grounds of culture and history to illustrate the unity of the Western Hemisphere.

The Seven Cities of Cibola

In the years following the conquest of Mexico, stories reached the Spaniards

Onate's Inscription of 1605



Appendix – El Morro Visitors Guide, 1942

of seven golden cities far to the north, called Cibola. The actual basis for the rumor was simply the six villages of the Zuni Indians, whose own words for themselves and their country today are words not unlike Cibola. The story of the seven cities was stimulated especially by the arrival in Mexico of Alvar Nunez Cabeza de Vaca in 1536, after 8 years of wandering westward from the gulf coast of Texas, during which he heard of the pueblos of New Mexico and especially of Cibola.

In 1539 a Franciscan, Fray Marcos de Niza, traveled north up the West coast of Mexico in search of Cibola, guided by Cabeza de Vaca's companion, the black slave Estevan. Estevan traveled far ahead of Fray Marcos and was killed by the Zunis. Word of his death reached the friar somewhere in southern Arizona. Historians disagree as to whether Fray Marcos himself actually reached Cibola.

The following year, Fray Marcos accompanied the famous expedition north of Francisco Vasquez de Coronado, which on July 7, 1540, took Hawikuh, the first or southernmost of the six Zuni towns of Cibola, and spent the rest of the summer there before going east to the Rio Grande, probably passing El Morro en route to Acoma.

The first post-Coronado expedition that of Chamuscado and Rodriguez in 1581, came up the Rio Grande and then

across to Zuni by way of Acoma and, probably, El Morro. The expedition of 1583, headed by Antonio de Espejo and Fray Francisco Beltran, also came from Acoma to Zuni, certainly by way of El Morro, which is mentioned in the journal of Diego Perez de Luxan, as "El Estanque del Penol."

The Founding of New Mexico

In the summer of 1598 the expedition of Juan de Onate came up the Rio Grande, and founded, beside San Juan pueblo, the first actual Spanish Settlement in New Mexico. Onate immediately made rapid trips to all the New Mexico pueblos, going to the Zuni and Hopi (Moqui) towns in the fall of 1598, and passing El Morro en route. It was at El Morro (called El Agua de la Pena) that Onate, on the way back from Hopi and Zuni, learned of the dramatic fight at Acoma in which 15 Spaniards were killed by the Indians.

In 1604, Onate finally made the trip westward beyond the Hopi villages, which he had planned for 6 years, crossing western Arizona to the Colorado River and descending that stream to its mouth. On his way home, in the spring, he stopped at El Morro and carved on it the earliest known inscription: "Passed by here the Adelantado Don Juan de Onate, from the discovery of the Sea of the South, the 16th of

View from the top of the mesa



Appendix – El Morro Visitors Guide, 1942

April of 1605." The "Sea of the South" was the Gulf of California.

The Mission Period

In 1629 a reinforcement of the corps of friars made possible the extension of the missionary sphere to include on the east the Salinas pueblos ("Gran Quivira," now a national monument, Abo, and Quarai) and on the west the Zuni and Hopi pueblos. Establishment of Franciscan missions at Hawikuh and Halona (the surviving pueblo of Zuni) in August 1629 is commemorated on El Morro by a poem carved in praise of the strength and valor of Governor Don Francisco Manuel de Silva Nieto, who alone made it possible to carry the faith to Zuni, according to his modest statement.

Neither the Hopis nor the Zunis took kindly to conversion. Within a few years the priest of Awatovi, the major Hopi mission, was poisoned; and the priest of Hawikuh and another friar on his way west from Zuni were killed and scalped. The Zunis fled for refuge to the top of Towayalane (Corn Mesa).

Within a few months a punitive expedition came to Zuni from Santa Fe, and left this inscription on El Morro: "They passed on March 23, 1632, to the avenging of the death of Father Letrado.—Lujan."

In October 1672 there was another violent martyrdom at Hawikuh, when

raiding Apaches sacked the church and brutally murdered Fray Pedro de Ayala, who had been assigned there only 2 months before.

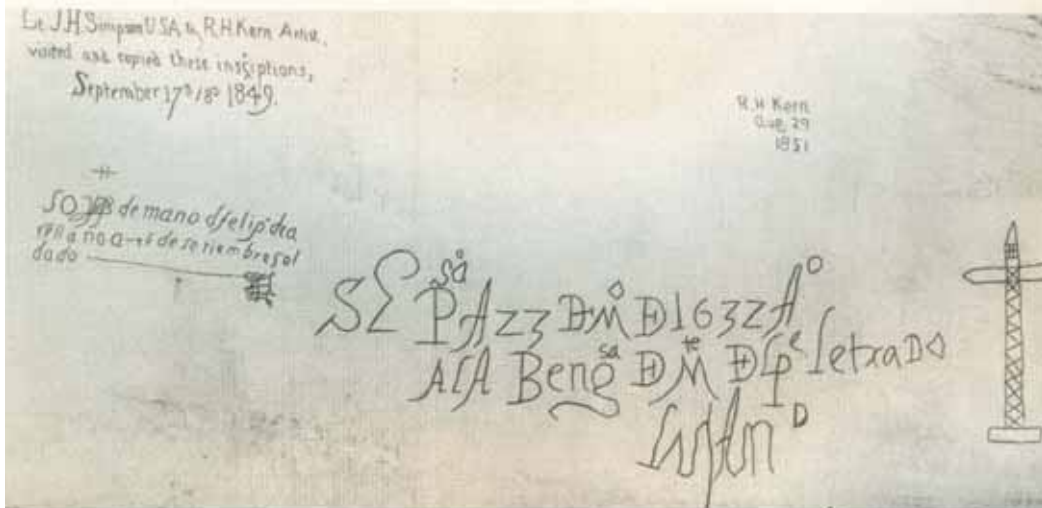
Rebellion and Reconquest

The final violence, the third martyrdom, occurred at Halona (Zuni) and was one of a group of simultaneous killings. Spasmodic native resistance to the Spanish conquistadores culminated in a deep-laid plot by which, in August 1680, all the pueblos rose in revolt, killing priests and laymen at the pueblos. Fray Juan del Bal was killed at Zuni, and the church was burned.

The first stage in the Spanish reconquest came in 1692, when Don Diego de Vargas, with a small force, visited all the pueblos and, without bloodshed, received their resubmission to the Spanish crown. Vargas followed the usual route from Acoma via El Morro to Zuni, where the people were again atop Towayalane, and on to the Hopi villages; then back via Zuni to El Morro, but on leaving El Morro struck out directly southeastward for Socorro and El Paso. Perhaps it was just before taking this new route that Vargas carved on the rock a record of his passage and his reconquest of New Mexico.

Upon actual reoccupation of New Mexico after his initial expedition, Vargas encountered resistance among the pueblos despite their supposed sub-

Inscriptions of Spaniards and early Americans



Appendix – El Morro Visitors Guide, 1942

mission. For several years there were strife and trouble.

The last incident of the reconquest was the unsuccessful campaign of Governor Don Feliz Martinez against the Moqui (Hopi) villages in 1716. Don Feliz also left a message on El Morro as he followed the usual route, which he might have done well to erase on the way back, for he did not accomplish "the reduction and conquest of Moqui."

The eighteenth century was a relatively quiet period in Spanish New Mexico. Various travelers passed by El Morro and left their names, notably the Bishop of Durango on his way to Zuni in 1737 on some ecclesiastical inspection in connection with his claim to authority over the New Mexico missions. The last Spanish inscription is dated 1774

The Anglo-Americans

Soon after the occupation of Santa Fe by the army of General Kearney in August 1846, American Army officers were traveling west in New Mexico. The first of them to visit El Morro was Lt. J. H. Simpson, accompanied by the artist R. H. Kern, who copied the early inscriptions.

After Simpson's visit, many other names, including those of emigrants, traders, Indian agents, soldiers, surveyors, settlers were added to the rock. One of special interest is that of Lt. E. F. Beale, who commanded Uncle Sam's

camel corps. In 1856-57 a number of camels were imported from the Near East as an experiment in transportation in the arid West. In 1857, Lieutenant Beale established a wagon route to California across New Mexico, which passed El Morro. The first emigrant party to follow the new route reached El Morro on July 7, 1858, and camped overnight. On the rock appear many names carved by its members.

Location and Administration

El Morro National Monument, established by Presidential proclamation in 1906, is 60 miles by road southeast of Gallup, N. Mex., and 40 miles west of Grants, N. Mex. Roads to El Morro are unsurfaced, impassable in winter or in very wet weather. The road from Grants particularly should not be attempted by inexperienced travelers except in fine weather.

No accommodations or other tourist facilities are available at the monument, but visitors can make the trip from Gallup or Grants, take a guided trip around the rock, and return in less than a day. There is a year-round resident custodian at the monument. A guide fee of 25 cents is charged each visitor over 16 years of age. All inquiries and communications should be addressed to the Superintendent, Southwestern National Monuments, Santa Fe, N. Mex.

Custodian's office and residence



Appendix – El Morro Visitors Guide, 2008

The cultural, natural, and archeological resources at El Morro National Monument are fragile, irreplaceable, and a significant part of our cultural heritage. Please help us to protect your monument for future generations.

1. Stay on the designated trails.
2. Insects and petting are prohibited—it is illegal to disturb them or to feed your own.
3. Report vandalism to a uniformed employee.
4. Puerko junco walls are fragile—please do not walk, climb, stand, sit, or lean on them.
5. Collections of pebbles, artifacts, plants, or animals is prohibited anywhere in the monument.
6. Children should remain with the guardian responsible for their safety.
7. Pets are allowed on the trails but must be on leashes and under control at all times. Please clean up after your pet.

WARNINGS

Badgers and other snakes are occasionally seen in the area. If you see one, do not disturb it.

Lightning storms can occur unexpectedly throughout the spring, summer, and fall seasons. Visitors walking along the Headland Trail during these episodes should seek shelter in the visitor center. Do not attempt to walk out storms under trees or rock shelves.

DESCRIPTION OF TRAILS
Inscription Trail: .5 mile
 Time: 45 minutes
 Terrain: paved trail on gradual intermittent slopes

Headland Trail: 2 miles
 Time: 2 hours (including Inscription Trail)
 Terrain: intermittent paved trail on periodically steep slopes
 Elevation gain: 200 feet

LOAN COPY
 Please return to the visitor center
 or drop in the drop-box.



Inscription Rock Trail

The hike past the inscriptions and back to the visitor center is 1/2 mile and takes about 45 minutes.

DON'T BUST THE CRUST!

Biological soil crusts thrive beyond the trail. They are living soils made up of very small plants, such as lichens, mosses, bacteria, and algae. Microorganisms and other very, very small materials are also part of the mix. Biological soil crusts look like brownish lumpy patches. The crusts help to protect the soil and are critical to the survival of plants. If you step on the crust, you will destroy it. In arid places like El Morro, it can take 250 years to grow back!



A SANDSTONE BLUFF juts above the surrounding landscape. From here you can see how this spot came to be known as El Morro, which is Spanish for "the headland" or "the bluff."

Let your eyes adjust to the light and notice the waves of color that ripple through the rock before you. Rusty reds, rich blacks, and sandy yellows swirl together in a geologic calendar that marks the passage of not just thousands but millions of years. Contained within this calendar is the record of ancient seas and sand dunes, uplifts, and wild, flowing rivers.

Centuries of wearing away by wind and water have also left their mark, rounding and smoothing once sharp and craggy edges. Minerals and microscopic life carried in by weather have added their touch to the palette, striping the bluff grey and green through years of accumulation.

Humans have also left centuries-old marks. Look up and to your left. Bricks from the more than 700-year-old pueblo we call Añsinna are visible—a tantalizing first glimpse at the human stories contained at El Morro.



THE CHANGING LANDSCAPE is most evident in the juniper trees that surround you. Though attractive and sweet smelling, the piñon-juniper forest you see now only started creeping across the valley when grazing and then a century of fire suppression cleared its way.

When the pueblos on the bluff were at peak population—approximately A.D. 1275 to 1350—much of the landscape around El Morro was high elevation grassland, dotted with shrubs such as rabbitbrush and salibush. For the estimated 1,500 people who lived here, the water below was life-sustaining. At that time, ponderosa pine and oak grew on the north side of the rock, as they have for centuries. The piñon-juniper community you see today is encroaching on the surrounding grassland, altering the historic landscape. National park managers are using a variety of methods, such as thinning and pile burning, to restore El Morro's environment.



WHY TRAVELERS STOPPED at El Morro lies before you. For centuries people found their way here to drink from these reliable waters.

There is no spring. The pool is fed largely by rainfall in July, August, and September, and by melting snows. The black stripes that ribbon down the cliff face are the "spillways" where water from the bluff's top funnels into the pool. When full the pool is about twelve feet deep and holds about 200,000 gallons of water. The pool never empties but evaporation can shrink it from its banks until it is refilled by precipitation.





YOU CAN IMAGINE

how word of this wet rarity might have spread near and far, making El Morro an important rest stop for thirsty travelers. Ancient trade routes between pueblos depended on El Morro's water.

Hundreds of years after the Ancestral Puebloans moved on, Spaniards came by here. Antonio de Espejo's journal from 1583 gives us the first European record of a visit to what he called *El Estanque del Peñol* (the Pool by the Great Rock), and marks the start of nearly two hundred years of visits by Spanish travelers. Two hundred and sixty-six years after Espejo's visit, members of the United States Army surveyed the area for a new route west, beginning the next wave of visitors as part of America's westward expansion.

Each group left small bits of their story, inscribed in stone, reminding us that they stood by this pool just as you do today. The pool was rimmed by a sandbank in the early days, and people could walk or ride their horses around its circumference. In the 1920s park managers deepened and dammed the pool to provide more water for area ranchers and their stock. In 1942, a heavy rock fall destroyed the dam and filled the waterhole. After removing 1,125 truckloads of rock, workers reinforced and lined the dam with concrete. This dam is what you are standing on today.



HUMANS ARE NOT the only creatures to appreciate this rare and precious resource. The mud formations on the face of the rock above the pool are the work of cliff swallows. Each spring these birds nest and raise their young at El Morro. When the pool is calm and clear, you might spot a tiger salamander. Sometimes mistaken for catfish, these grayish-brown amphibians live here year-round.



BOTH WOMEN AND MEN passed by El Morro, but very few women left their inscriptions. Miss A. F. Bailey was one of the exceptions. America Frances Bailey and her sister Amelia were part of a wagon party headed from Missouri to California in 1858. The group followed the route newly surveyed by the U.S. Army and at the time known as Beale's Wagon Road, which passed by El Morro.

If America Bailey had known what she would encounter later in the journey she may not have continued. Just east of the Colorado River, eight hundred Mojave Indians attacked the sixty Anglo travelers. The Mojave killed nine and injured seventeen while suffering eighty-seven casualties themselves. The pioneering caravan retreated to New Mexico to wait out the winter in Albuquerque or Santa Fe. The Bailey sisters eventually made it to Fresno County, California.

PETROGLYPHS cover the sandstone bluff, a testament to the many hundreds of years people have lived or stopped here. As you walk, you will see them interspersed with inscriptions.

Each group of travelers—American Indian, Spaniard, and Anglo—left its mark in its own way. Petroglyph makers incised or pecked into the sandstone. They incised the petroglyphs by pecking into the rock using an animal antler or a harder rock called a hammerstone. Spaniards used daggers or horseshoe nails to inscribe their names and messages. Pioneers and other settlers along the trail of westward expansion probably used hammer and chisel, knives, nails, or other tools.



Miss A. F. Bailey inscription, stop 5

MORE THAN 2,000 petroglyphs

and inscriptions cover Inscription Rock. Leave your own mark on the designated rock in front of the visitor center or in the visitor register.

E. PENN. LONG of Baltimore, Maryland, chiseled this elegant-looking inscription. Long was a member of a U.S. Army expedition led by Lt. Edward F. Beale to find a wagon route from Fort Smith, Arkansas, to the Colorado River. The group, which first passed by El Morro in 1857, was also testing the usefulness of camels in crossing the deserts of the Southwest.



Though Beale wrote positively about the camels in his journals, the Army abandoned the experiment at the onset of the Civil War.

Long and two other members of Beale's group probably made their inscriptions during a second visit to El Morro in 1859. "Mr. Engle" is in block print and "Mr. Bryn" in script. Engle was Beale's second-in-command.



P. (PEACHY) BRECKINRIDGE was the man in charge of the twenty-five camels used by Lieutenant Beale in 1857. After his work with Beale, Breckinridge returned to his home state of Virginia and fought in the Civil War. He was killed during a skirmish at Kennon's Landing, Virginia in 1863.

Breckinridge inscription, stop 8



MANY SPANISH INSCRIBERS wrote *pasó por aquí*, or "passed through here." In Spanish, the inscription before you says:



*"A 25 del mes de Junio, año de 1709
pasó por aquí para Zuni—
Ramón García Jurado."*

TRANSLATION:

"On the 25th of the month of June, of this year of 1709, Ramón García Jurado passed through here on the way to Zuni."

From the time Ramón García Jurado moved to New Mexico as a colonist in 1693 until his death at the age of 80 in 1760, he was witness and participant in the Spanish settlement of New Mexico. It is likely that he was on a campaign against the Navajos during his visit to El Morro in 1709.



Ramón García Jurado inscription, stop 9

Pedro Romero inscription, stop 9



To the right of García Jurado's inscription is a blackened inscription which translated reads, "Pedro Romero passed through here on the 2nd of August, year of 1751." These inscriptions are examples of early well-intentioned but intrusive attempts at preservation work. Early park managers darkened the inscriptions with graphite, also known as no. 2 pencils, so that they would be more visible and last longer. They ended this kind of preservation in the 1930s.



THE LAST INSCRIPTION from Spanish colonial times is by Andrés Romero. He wrote, "Andrés Romero passed through here in the year 1774." Romero's visit was followed by turbulent times. Mexico gained independence from Spain in 1821. Then, following the U.S.-Mexican War from 1846-1848, the Treaty of Guadalupe Hidalgo ceded large areas of land from Mexico to the United States. This new land, the New Mexico Territory, opened the way for the Americans—the last of the inscribers—to come through El Morro.



NOTICE THE PETROGLYPHS, particularly the bighorn sheep and the bear paw. Many petroglyphs depict animals that were once familiar fauna in the region. Their compelling shapes and actions invite us to pause and imagine why people may have pecked them into the bluff.

The Spanish inscription above the bighorn sheep petroglyphs reads:

Pasamos por aqui el Sargento mayor y el Capitan Ju[an] de Arechuleta y el ayudante diego martin barba y el alferes Agustin de ynojos año de 1636.

TRANSLATION:

We, Sergeant Major and Captain Juan de Arechuleta and Adjutant Diego Martín Barba and Ensign Agustín de Ynojos, passed by here, in the year of 1636.

The "Sergeant Major" was not an enlisted man as now — he was an officer in direct command of troops. The ensign was the standard bearer. Arechuleta was among the first colonists to come to New Mexico with Don Juan de Oñate in 1598. Arechuleta and Martín Barba were implicated in a plot to assassinate the colonial governor and were beheaded on Santa Fe's plaza in 1643.



Petroglyphs, stop 11



ONE OF THE OLDEST and more famous inscriptions at El Morro—that of the first governor of New Mexico, Don Juan de Oñate—was inscribed in 1605, fifteen years before the Pilgrims landed at Plymouth Rock.

In 1604, Oñate left the settlement of San Gabriel with thirty men in search of the “the South Sea” (the Pacific Ocean). During their trip, the group visited the Gulf of California as well as the South Sea. On his return, Oñate left this inscription:



Oñate's inscription, stop 12

Paso por aq[ui] el adelantado Don Ju[an] de Oñate del descubrimiento de la mar del sur a 16 de Abril de 1605.

TRANSLATION:

Governor Don Juan de Oñate passed through here from the discovery of the Sea of the South on the 16th of April, 1605.

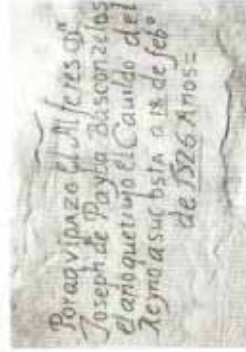
The inscription was not made on Oñate's first visit to El Morro — on December 13, 1598, he passed here from Zuni with a group of Spanish soldiers, traveling to the Rio Grande via Acoma. Below the Oñate inscription is an inscription that reads:

Por aqui paso el Alferes Don Joseph de Payba Basconzelos el año que trujo el Cabildo del Reyno a su costa a 18 de febo de 1726 Años

TRANSLATION:

The Ensign Don Joseph de Payba Basconzelos passed through here on the 18th of February 1726, the year he returned, at his own expense, the members of the cabildo to the kingdom [of New Mexico]

Basconzelos, a cabildo (council) member, paid for expelled council members to return to Santa Fe from Mexico City after a 3½ year banishment by New Mexico's governor.



Basconzelos inscription, circa 1934

R. H. ORTON is just one of many inscriptions along the cliff here. You can see a church, some



stars, crosses, petroglyphs, and a cavalry flag. R. H. Orton became adjutant-general of California after the Civil War. In the early years of the Civil War, the California Column, as it was known, was sent to New Mexico to reinforce Federal troops expecting Confederate hostilities. Orton held the rank of captain when the First Cavalry was mustered out from March to October of 1866. He may have made his inscription as he returned to California.



Orton inscription, stop 13

THE HIGH INSCRIPTION NAMES a frontier governor whose is well-known in New Mexico.



Aquí estubo el General D[omi]n Diego de Vargas, D[omi]n Diego de Vargas, q[ui]en en Conquistó a N[uest]ra S[an]ta Fe y a la R[ep]u[bl]ica Corona todo el Nuevo Mexico a su costa, Año de 1692.

TRANSLATION:

General Don Diego de Vargas, who conquered for our Holy Faith and for the Royal Crown, all of New Mexico, at his own expense, was here, in the year of 1692.

Diego de Vargas inscription, stop 14, circa 1692



In 1680, the Pueblo Indians revolted against their conquerors. Many Spanish men, women, and children were killed and the remainder fled to El Paso. In 1692, newly appointed governor of New Mexico, Don Diego de Vargas reestablished Spanish control of the pueblos. After the end of his first term as governor he was imprisoned for three years in the governor's palace for alleged wrongdoings among the settlers. He was exonerated and restored as governor for a second term in 1702. He died in Bernalillo in 1704 at the age of 61.

MORE THAN 150 years later, below Vargas's inscription, three men added their own inscriptions. P. H. Williamson, Isaac Holland, and John Udell were members of the first emigrant train to try this route to California in 1858. The original caravan consisted of forty families and was led by L. J. Rose, who was born in Germany but made his fortune in dry-goods in Iowa. At El Morro, they left their inscriptions and then moved on to the Colorado River, where they were attacked by Mojave Indians.

Thanks to journals kept by the immigrants, we know that survivors of the attack, including Rose, the Bailey sisters, and Udell and his wife who were both in their sixties, walked most of the way back to New Mexico to wait out the winter. Some of the party started again for California in 1859 in the company of Lt. Edward F. Beale.

ANOTHER INSCRIBER MARKED

his passage by El Morro with this:

In the year 1716 on the 26th of August don Feliz Martínez,

Governor and Captain General of this Kingdom, and the reverend Father Antonio Camargo, Custodian and Ecclesiastical Judge, passed by here to the conversion and conquest of the Moqui [Hopi]



THE PERSON MEMORIALIZED by an inscription may not have been the person who did the inscribing. Here could be an example of just such a case. Because they were carved on the same day and seemingly in the same handwriting, we presume this inscription and the one to the west were inscribed by the same man.

The first one says:

The 28th day of September of 1737, Licentiate (Bachiller) Don Juan Ignacio of Arrasain arrived here.

The second reads:

The 28th day of September of 1737, the illustrious lord Don Martin de Elizacochea, Bishop of Durango, arrived here, and the day following went on to Zuni.

The event records one of the first visits to this territory by a bishop from Durango, Mexico.



After leaving the inscription, Governor Martínez—an interim governor—found the Hopi unwilling to accept Spanish domination. After two months of quarreling, the expedition returned to Santa Fe. When the time came for Martínez to relinquish the office of governor, he refused until pressed by adversaries. Martínez died in Mexico City in 1731, leaving a large debt.



Martínez inscription, stop 17, circa 1934



THE ONLY POEM on the rock reads:

*Aquí [llegó el Señor] y Gobernador
Don Francisco Manuel de Silva Nieto
Que lo imposible tiene ya sujeto
Su brago indubitable y su balar
Com los carros del Rey Nuestro Señor
Cosa Que solo el puso en este efecto
De Agosto 5 [Mil] Seiscientos Veinte Nueve
Que se Bien a Zuni pasa y la Fe lleve.*

TRANSLATION IN PROSE:

The Lord and Governor Don Francisco Manuel de Silva Nieto came this far with our Lord King's wagons. With his indubitable arm and valor, he has already overcome the impossible, a thing which he alone accomplished 5 august 1629 so that one may well proceed to Zuni and carry the Holy Faith.

Governor Manuel de Silva Nieto was a knight of the Order of Alcántara. He was appointed governor in 1628 and served from 1629 to 1632. Scholars differ on their opinion of Governor Silva Nieto. Some say he was fair and well-liked, while another uncovered a report that he was so disliked that he was murdered by his own servant!



Nieto inscription, step 19, circa 1934

George A. Grant was the first Chief Photographer for the National Park Service. He visited El Morro in 1934 to document the inscriptions. Can you see any changes in the inscriptions from then and now?

AFTER EL MORRO was designated a national monument in 1906, early park managers tried to preserve and protect the inscriptions and petroglyphs in a variety of ways. One planted the yuccas you've seen growing along the trail to encourage visitors to keep a safe distance from the wall. Oils from human hands increase the rate of erosion on petroglyphs and inscriptions. In the 1920s, the first superintendent decided to erase any inscriptions added to the wall after 1906 because they were graffiti and unlawful. You can see the large smooth areas where inscriptions were removed here. Today, managers struggle with the dilemma of preserving inscriptions and petroglyphs while allowing nature to take its course.



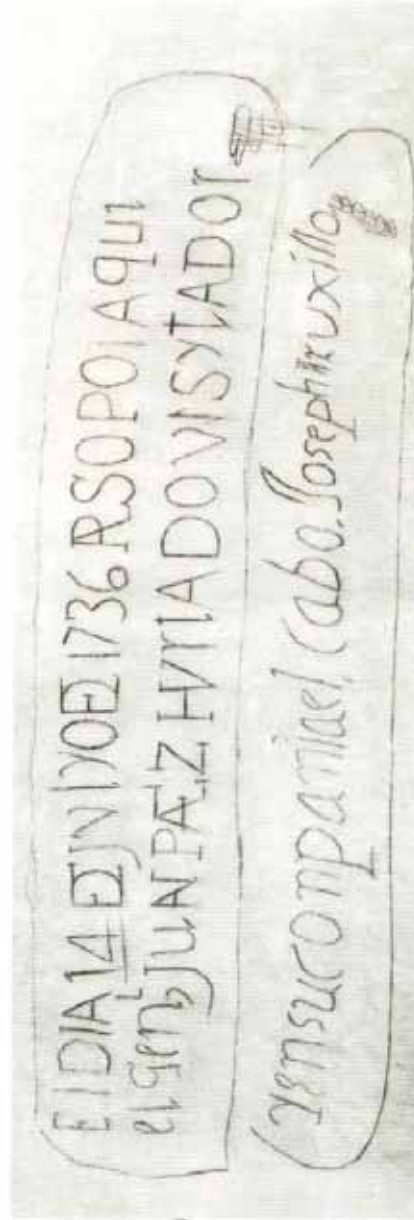
HERE IS A FUN INSCRIPTION that invites us to imagine what may have happened. The first two lines of the inscription read:

The 14th day of July 1736, General Juan Paez Hurtado, Inspector, passed by here.

Underneath it reads:

And in his company,
Corporal Joseph Trujillo!

Perhaps Corporal Trujillo added his own inscription. History does not reveal what happened to him.



Trujillo inscription, step 21, circa 1934

THE LONGEST INSCRIPTION
is attributed to Governor Eulate:



The governor and captain general of the provinces of New Mexico for the King, our lord, passed by here, returning from the Zuni pueblos on July 29, 1620; he left them in peace, at their request: asking his favor as vassals of his majesty, they again rendered their obedience; he did all this with attention, zeal, and prudence, as such a particularly Christian gentleman and gallant soldier of unending, praiseworthy memory.

The word crossed out appears to have been "gentleman."



LT. J. H. SIMPSON, an engineer for the army, and Mr. R. H. Kern, a Philadelphia artist employed by the army as topographer, were the first English-speaking people to make a record of Inscription Rock. They spent two days copying the inscriptions and petroglyphs, and their reports of the visit show that not a single English inscription could be found on the rock. Recall the word "gentleman" crossed out at Stop 22? Kern's drawing faithfully shows the word crossed out just as you saw it. Though they were so careful to duplicate that historical editorial remark, they made a blunder of their own. Look carefully and you'll see that they inscribed "inscription" rather than "inscription," forever immortalizing in stone their own spelling error.

The Spanish inscription below was added by one of three Spanish soldiers left to "guard" two thousand Zuni Indians in 1699. It reads:

I am of the hand [that is, written by] of Felipe de Arellano on the 16th of September, soldier.



Eulate inscription as drawn by R. H. Kern in 1849, stop 22

TO THE RIGHT of Arellano's inscription is a message left in Spanish colonial shorthand:

SE P[ia]sa A 23 DE M[at]z- or M[ay]-[o] DE
1632 A[ños]
A LA B[er]g[an]sa DE M[uer]te DEL
p[adr]e Letrado LUJAN

TRANSLATION:

On the 23 of March [or May] of the year
1632 we travel to avenge the death of
Father Letrado-Lujan.

In the year 1629, Father Letrado built the earliest mission chapel at Gran Quivira, which today is part of Salinas Pueblo Missions National Monument (near Mountainair, New Mexico, southeast of Albuquerque). He was transferred to Zuni in February 1632 and was killed just one week later. On hearing the news, the governor sent a punitive expedition of soldiers, one named Juan Lujan, from Santa Fe to Zuni to pacify the Zunis.



Millions of years of geologic processes formed the bluff which has witnessed centuries of human passage and habitation. The inscriptions and petroglyphs left behind are reminders of our past—a Southwest history set in stone.



The Headland Trail

This is the end of the inscription portion of the trail.

You may either return to the visitor center or continue to the top of the bluff. On top, you will be rewarded with a visit to the Ancestral Puebloan dwellings and spectacular views.

The trail to the top ascends 200 feet by way of several steep switchbacks. You should have water and good walking shoes. The weather can change quickly. If you see lightning in the area, quickly seek shelter in the visitor center. Obey trail closures.

The 1.5 mile trip will take an hour.



Guide to the Inscription Trail

EL MORRO NATIONAL MONUMENT,
NEW MEXICO



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Please return to the visitor center
or drop in the drop-box.