

El Morro Trails

EL MORRO NATIONAL
MONUMENT, NEW MEXICO

PRICE: 20 CENTS IF YOU TAKE THIS BOOKLET HOME



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Inscription Rock, El Morro National Monument

Introduction

In the year 1540, Francisco Vasquez de Coronado came up from Mexico with some 350 Spanish soldiers and crossed southeastern Arizona to Zuñi, a pueblo 30 miles west of El Morro. Breaking up into several groups, they went eastward 70 miles to Acoma Pueblo and thence to the Rio Grande. At least one of the groups probably passed El Morro enroute.

The first known historical mention of El Morro is found in the journal of Diego Pérez de Luxán, chronicler of the Espejo expedition of 1583. Luxán stopped here for water on March 11 of that year.

For some 300 years, hundreds of Spanish soldiers and priests, enroute between Santa Fe and Zuñi, and the Hopi villages farther north, passed El Morro. Many left names and notations about themselves carved into the soft sandstone.

After 1849, American soldiers, emigrants, freighters, and adventurers camped here because of the never-failing waterhole. In 1906, El Morro was set aside as a National Monument and additional name carving was prohibited.

The name "El Morro" simply means "the headland" or "the bluff," and refers to the appearance of this mesa-point from a distance.

KEEP AMERICA BEAUTIFUL

El Morro Trails

INSCRIPTION ROCK TRAIL

The trail begins directly behind the Monument headquarters, and climbs gradually toward the rock. Just follow the arrows and *do not hurry*. It is 7,200 feet above sea level here, and the altitude may bother some of you. The hike past the inscriptions and back to the office normally takes from 40 to 60 minutes.

After viewing the inscriptions, you may, if you wish, continue up over the top of the rock and visit two large prehistoric Indian ruins. This extra hike will take you another $1\frac{1}{2}$ to 2 hours.

Starting near the base of the mesa the trail has been marked with numbered stations which match the numbered paragraphs in this booklet. Read and enjoy yourself as you walk.

No one has ever been bitten here, but watch along the path for rattlesnakes.

Please leave the Monument as neat as you found it.

1. If you look closely at the rock, about 12 feet above the ground, you will see some notches cut into the sandstone. These are footholds. Probably most Indians came to the pool by the long, safe way, but others, caring more for their thirst than their lives, came down from the mesa top through the high notch to the right and above you.

Do not, under any circumstances, try coming down this short way—the rock is extremely slippery. If you go to the top, stay on the marked trail.

2. Now you see why travelers stopped here. There is no spring; the pool is fed largely by rain falling in July, August, and September, and by melting snows. When full it is about 12 feet deep and holds about 200,000 gallons of water.

DO NOT THROW ANYTHING INTO THE POOL!

If you look closely around the walls at about eye level, even on the far side, you can see names carved into the rock. Most of these date from 1850 to 1900, and were the work of emigrants and soldiers.

How did they get over there? In the early days, there was probably a sandbank around the edge, and carvers could ride their horses around the pool. In 1942, a heavy rock fall filled the waterhole. When it was cleaned out the sandbank was removed and a modern dam constructed.

Do not write or carve on the cliff, and please avoid touching the inscriptions.

The mud formations on the face of the rock above the pool are the nests of cliff swallows. These birds come to El Morro each year to nest and raise their young.



The waterhole

3. Along the base of the mesa are examples of the predominant types of trees found in the Southwest. From left to right these are: (1) One-seed juniper (*Juniperus monosperma*), which is used for fenceposts and fuel.

(2) Pinyon pine (*Pinus edulis*), noted for its edible nuts which are harvested each fall.

(3) Ponderosa pine (*Pinus ponderosa*), which is an excellent wood for construction and building purposes.

Watch for black sage (*Artemisia tridentata*) along the right side of the trail. This is the purple sage of western fiction and is recognized by the silvery down on the leaves and the purplish color of the shaggy bark. The strong aromatic odor of sagebrush is especially noticeable after a rain.

4. This signature of Mr. Long is the prettiest one on the rock. It appears to have been carved between 1850 and 1862, probably with a knife after being sketched. This man is entirely unknown—is your name Long? Perhaps you can give us a clue. Just to your right, around the corner, note “Mr. Engle” in block print and “Mr. Byrn” in script — they also are unknown.

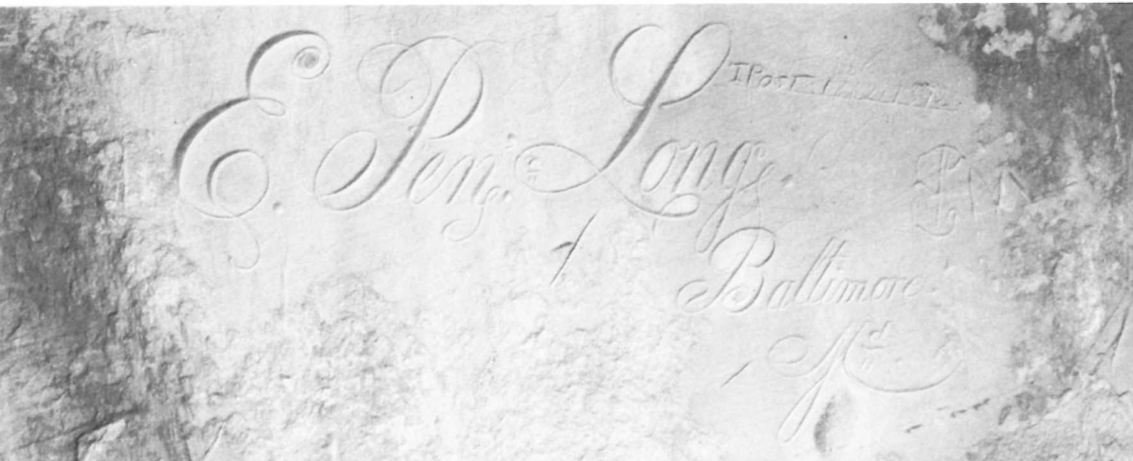
5. We have a very good account of Mr. P. (Peachy) Gilmer Breckenridge from the Virginia Historical Society. He graduated from Virginia Military Institute, and as a young man rode all the

way across the plains to California.

In 1857 Lt. Edward Beale was in charge of an expedition testing camels for use in the American deserts. Breckenridge was in charge of the 25 camels used by Beale when they passed El Morro.

Remaining there only a short time, he rode back to Virginia just in time to get into the Civil War. He was killed in a skirmish at Kenner's Landing, Virginia, in 1863.

6. Here you observe a number of very faint Spanish inscriptions which have never been completely studied. Note the word “año”



E. Pen Long inscription

(year) 1646. To the right is a lamp-blackened inscription reading "Paso por aqui Miguel Alfaro." (Passed by here, Miguel Alfaro). A date is not given, nor is the man yet known to us. Scholars, dating the inscriptions by letter style, say it was done about 1700.

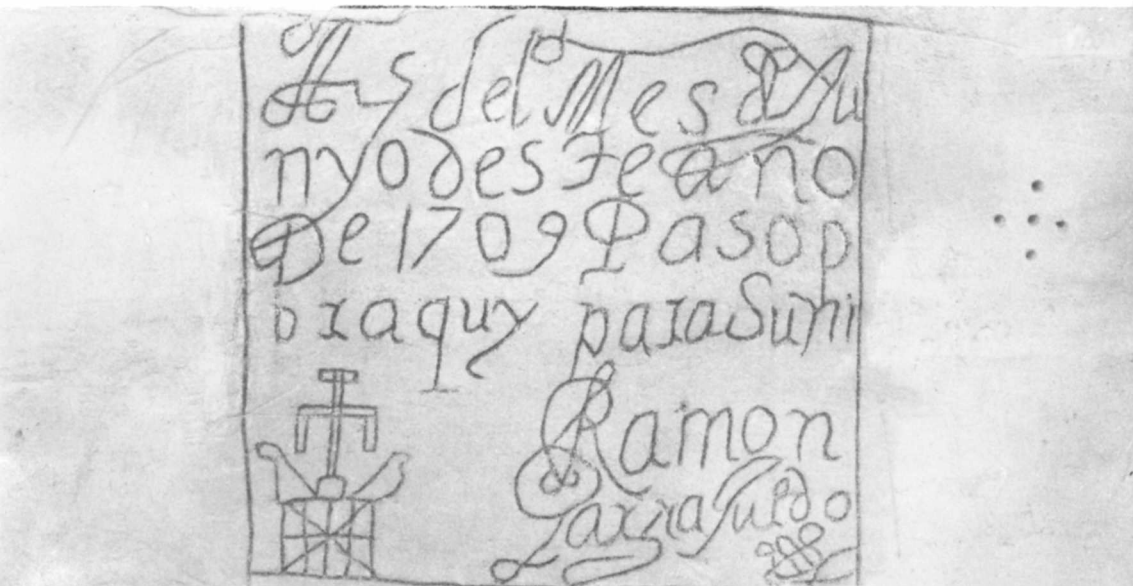
The round black discs along the bottom of the rock are section markers. Each one is lettered and they divide the face of the cliff into sections so the inscriptions can be easily located and recorded.

It is best to return to the path at this point. Return to the rock at the arrow.

7. In Spanish, this inscription says: "A veinticinco del mes de junio, año de 1709 paso por aqui para Zuñi —Ramon Garcia Jurado." Translated, it reads:

"On the 25th of the month of June, of this year of 1709, passed by here on the way to Zuñi —Ramon Garcia Jurado."

Ramon Garcia Jurado inscription, 1709



You can find Señor Jurado's name in old Spanish documents. In 1728 he was the "alcalde mayor" of the Keres district, not far south of Santa Fe.

To your right is a blackened inscription which reads, translated, "By here passed Pedro Romero on the 22nd of August, year of 1751." We do not know who this Spanish gentleman was.

8. "By here passed Andres Romero, of the year 1774." This Spaniard is unknown. The date is important because it is apparently the last Spanish inscription before the coming of the Americans in 1849.

9. At this station notice the excellent petroglyphs. These are Indian, of course, and are far older than the beautiful Spanish inscriptions above them. It is generally believed in the Southwest that Indian petroglyphs are not intended to convey any particular meaning.

The Spanish inscription reads:

"Pasamos por aquí el Sargento Mayor y el Capitan Juan de Archuleta y el Ayudante Diego Martin Barba y el Alferez Agustin de Ynojos año de 1636."

Translated, it reads:

"We passed by here, the Sergeant Major and Captain Juan de Archuleta and Adjutant Diego Martin Barba and Ensign Agustin de Ynojos, the year of 1636."

The "Sergeant Major" was not an enlisted man, as now — he was the officer in direct command of the troops. The ensign was the standard bearer, corresponding in grade to a second lieutenant.

Barba and Archuleta were accused of aiding a rebellion during one of the numerous civil disturbances that plagued the Spanish in New Mexico. In 1643 they were beheaded.

10. Here we have the oldest and most famous inscription at El Morro. It was done by the first governor of New Mexico, Don Juan de Oñate, in 1605, 15 years before the Pilgrims landed at Plymouth Rock.

In 1604, Oñate rode south with 30 men to the Gulf of California. On his return the next year, he made his inscription, which reads:

"Paso por aquí el adelantado Don Juan de Oñate del descubrimiento de la mar del sur a 16 de Abril de 1605."

The translation reads:

"Passed by here the Governor Don Juan de Oñate, from the discovery of the Sea of the South on the 16th of April, 1605.

By "Sea of the South," Oñate meant Gulf of California, an arm of the Pacific Ocean. He was not the first Spaniard to see it, of course.

Pa sopora qiel aaelanza do aonjū
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 æer sur | a | 16 | æa bælæ | 605

Juan de Oñate inscription, 1605

This was not Oñate's first visit to El Morro—on December 13, 1598, he passed here from Zuñi with a group of Spanish soldiers, enroute to the Rio Grande via Ácoma.

Below the Oñate inscription, partly hidden by the yucca plant, is an inscription that reads:

"By here passed the Ensign Don Joseph de Payba Basconzelos, the year he brought the cabildo of the realm at his own expense the 18th of February, of the year 1726."

What Basconzelos actually meant is not clear to us.

11. To the left of the trail are many markings of various times. Note the little cavalry guidon (flag), a church sketch, stars, crucifixes, and finally, a very prominent inscription by R. H. Orton. This man was the Adjutant-General of California after the Civil War. Many other names along here are those of unknowns. Note the many Indian petroglyphs. They are high up, because erosion has since lowered the ground level.

12. We begin here with the highest set of inscriptions. The ground level was higher here, as shown by this tree, which surely did not begin growing on top of a mound! This inscription, done by one of the most famous frontier governors New Mexico ever had, reads:

"Aqui estuvo el General Don Diego de Vargas, quien conquisto a nuestra Santa Fe y a la Real Corona todo el Nuevo Mexico a su costa, Año de 1692."

or:

"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, year of 1692."

Twelve years earlier, in 1680, the great Pueblo (Indian) revolt had taken place. Approximately 400 Spaniards and 23 priests lost their lives. The remaining Spanish, about 1,100 in all, fled to El Paso. De Vargas came back in 1692 and restored order. Later, he was imprisoned for 3 years in the governor's palace; still later he was released, restored as governor, and died in Bernalillo in 1704.

Below the de Vargas inscription are three names, "Williamson," "Holland," and "John Udell," all with the same date of 1858. These men were members of the first emigrant train to try this new route to California.

A good account of the trip can be found in the *Journal of John Udell*, a Baptist preacher who, with his 64-year-old wife, decided to visit his children in Sacramento. The party, consisting of 40 families and their equipment, finally reached the Colorado River, only to be attacked by the Mojave Indians. Several of the group were killed and practically all of their equipment stolen or burned.

The survivors, including the elderly Udell and wife, returned to Albuquerque, walking most of the way. They passed El Morro en-route, arriving in Albuquerque, nearly starved, in November 1858. Remaining there for the winter, Udell and some of the others again started for California in 1859 in the company of Lt. Edward F. Beale, famous for his camel caravan of 1858, which also came west by way of El Morro.

They had no difficulty reaching California, and finding their children in Sacramento. Mr. Udell is known to have died in the Golden State, a very old man.

13. The first emigrant train (mentioned in station 12) was led by Mr. L. J. Rose. He was born in Germany and moved to New Orleans in 1830. He later moved to Iowa where he became wealthy in the dry goods business.

Rose was wounded by the Mojave Indians in the attack mentioned by Udell. After recovering from his wounds he went to Los Angeles and became one of its leading citizens.

14. Some of the high carvings have the letters "U. P. R." written after them. In 1868, the Union Pacific Railroad ran a survey through here, but the project was never carried out. The development of the Santa Fe Railroad 25 miles to the north effectively ended the use of El Morro as a stopping place.

There is good reason to believe that practically all of the names you see here on the point date *after* 1850. Note the fancy rope carving on the north side.

Looking west along the rock, you will note that the inscriptions end about where the small juniper is growing. Probably the rough surface beyond the little tree discouraged carving.

But don't stop here! Some of the best of the early Spanish inscriptions await you up the path. Just loaf along up the steps.

15. To your right, several miles away, is a pretty colored mesa named *Los Gigantes* (The Giants). It is composed of the same material as El Morro, was formed about the same time, and is approximately the same height. The brighter colors are caused by thin films of iron oxide around the sand grains, which are not conspicuously present in El Morro, lack of water kept the early travelers from stopping there.

16. The writer of this inscription "counted his chickens before they were hatched," as we say. He tells us:

"Year of 1716 on the 26th of August passed by here
Don Feliz Martinez, Governor and Captain General
of this realm to the reduction and conquest of the Mo-

A no de 16 a los 26 de ag^o Paso por aqui D^o Feliz Martinez Govern^r y Cap^o Ten^o deese R^{no}
ala Zeduni y cono de magul y chailodap POR P^r Fr^o Antonio Camargo Custodio y Juez eclesiastico

Don Feliz Martinez inscription, 1716

qui (Hopi) and (in his company?) the reverend Father Friar Antonio Camargo, Custodian and ecclesiastical judge."

Governor Martinez found the Hopis in no mood to accept Spanish domination, and after about 2 months of quarreling (mostly with words and fist-shaking) the expedition returned, quite unsuccessful, to Santa Fe.

Continue on up to the next landing—this is as high as you need go unless you wish to continue on this trail to the mesa top and the ruins.

17. Because they were written on the same day and seemingly in the same handwriting, we presume that this inscription and the one to the west were written by the same man. The first one says:

"The 28th day of September of 1737, arrived here the Bachelor Don Juan Ignacio of Arrasain."

The second reads:

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

The good "Bachelor" was a Bachelor of Laws, not necessarily a single man. The event records one of the first visits to this territory by a Bishop from Durango, Mexico.

Don Martin de Elizacochea inscription, 1737

Día 28 de Sep de 1737^a
Llego aqui El Hñmo S^r D^o M^rn
de Elizacochea Obpo de Durango
Y el día 29 paso a
Zuñi

Aquí llegó el Señor y Gobernador
 Don Francisco Manuel de Silva Nieto
 Que lo imposible tiene ya sujeto
 Su Brazo indubitable y su Valor
 Con los Carros del Rey Nuestro Señor
 Cosa que solo el Puso en este efecto
 De Agosto 5 Seiscientos Veinte y Nueve
 Que se Bien a Zuñi Pase y la Fe lleve

Don Francisco Manuel de Silva Nieto poem, 1629

18. Inscriptions on the north side are difficult to photograph, because the sun shines around here only a couple of hours per day during the summer. Here is the only poem on the rock:

"Aquí (llegó el Señor) y Gobernador
 Don Francisco Manuel de Silva Nieto
 Que lo imposible tiene ya sujeto
 Su brazo indubitable y su valor
 Con los carros del Rey Nuestro Señor
 Cosa que solo el puso en este efecto
 De Agostos 5 (Mil) Seiscientos Veinte Nueve
 Que se Bien a Zuñi pasa y la Fe lleve."

The poem, of course does not rhyme when translated into English.

"Here arrived the Señor 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 put into this effect
August 5, 1629 that one may well to Zuñi
pass and carry the faith."

19. If you are a serviceman, you'll appreciate this one. The first two lines of the inscription read:

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

The second two lines, no doubt added when the good general's back was turned, read:

"And in his company, the Corporal Joseph Trujillo!"

Well now, we wonder what ever happened to Corporal Trujillo!

20. You are now looking at the longest and one of the most interesting inscriptions on the rock, supposedly done by Governor Eulate

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

The word crossed out appears to have been "gentleman." Somebody who knew the old boy apparently took exception to all this high-flown praise. (That the erasure was done before 1849 can be proved, see Simpson, next).

21. Lt. J. H. Simpson, an engineer for the army, and Mr. R. H. Kern, a Philadelphia artist who rode around with the army drawing pictures, were the first English-speaking people to make a record of Inscription Rock.

Eulate inscription, 1620

Y cap, gen, de las pro^{as} del muebomex, Pozel Reynro, S Pasoporaquidebuel tade lospu
blos de Bum Mos, 29 de Juliodelañode 16 20 y lospu so enpa Sasupedim pi
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fiso comelagasax eselo yprudenci comotanche isthanisimo stampazicu
Laz y gallaz do soldado demaca bable y loadamemo

Lt. J.H. Simpson USA & R.H. Kern Artist,
visited and copied these inscriptions,
September 17th / 18th 1849.

Simpson and Kern inscription, 1849

They spent the 2 days shown copying the inscriptions, and stated that when they were here, not a single English inscription could be found on the rock.

Recall the word "gentleman" crossed out back at Stake No. 17? Mr. Kern's drawing faithfully shows the word X'd out just as you saw it.

The Spanish inscription below was done by one of three Spanish soldiers left to "guard" 2,000 Zuñi Indians in 1699. It reads:

"I am of the hand (that is, written by) of Felipe de Arellano on the 16th of September, soldier."

In 1700, the Zuñis apparently thought the odds in their favor were good, so they murdered the three Spaniards.

To the right of Arellano's inscription is a marvel of Spanish "short-hand." A good scholar translated it for us. Here it is in both Spanish and English:

"Se pasaron a 23 de marzo de 1632 años a la venganza de muerte del Padre Letrado.—Lujan"

The translation reads:

"They passed on the 23rd of March, 1632, to the avenging of the death of the Father Letrado.—Lujan"

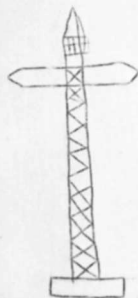
About the year 1629, Father Letrado built the earliest mission chapel at what we call today Gran Quivira National Monument (near Mountainair, New Mexico, southwest of Albuquerque).

He was transferred to Zuñi in February of 1632 and was murdered just a week later. On hearing the news in Santa Fe, Lujan and a party of soldiers reached Zuñi in remarkably fast time, but there is no historical record of what they did when they got there.

From here, the end of the inscription part of our trail, you may

idea
resol

SE^{sa} PAZZ DM D163ZA^o
AA Beng^{sa} DM D^{te} Sp^e letxado
Lujon^D



Lujan inscription, 1632

retrace your steps back to headquarters. Or, if you wish, you may continue your hike on up over the mesa top (1½ to 2 hours), past the ruins, and down to headquarters by the return trail on the other side.

Please stay on the trail

TRAIL TO THE TOP OF THE ROCK AND RUINS

The first stake is some distance along the trail, so keep walking and watch for it.

1. The cave-like depressions in the side of the rock are created by water. Rain falling on the top of the mesa enters cracks in the rock, runs down the cracks (called joints), and comes out of small openings on the side of the mesa. The force of water coming out of the opening gradually wears away the rock. The freezing of the water in winter and thawing in summer helps to weaken the sandstone.

The tall trees in the vicinity of this stake are ponderosa pine (*Pinus ponderosa*). They are readily identified by the needles, which grow two or three to a cluster. These trees grow in well-watered, protected areas within the Monument. The larger ones are somewhere between 200 and 300 years old.

2. Here you can stop and catch your breath before beginning the steep climb. While waiting, look up to your left near the top of the mesa and you can see very clearly two different formations of rock. The lower is the sandstone called Zuñi formation and the higher is the Dakota formation. The line between these two formations represents a time interval of between 25 and 30 million years. More about this later.

Just behind the numbered stake you will see a Gambel oak (*Quercus gambelii*). It grows along the base of the rock, and is commonly associated with ponderosa pine. It is the most abundant oak of the

low mountains and plateaus of the Southwest. It is characterized by its deeply-lobed leaves, and its habit of growth. It ranges from a shrub to a tree in size, and is often seen in dense stands, which give it the name of "scrub" oak in certain localities. Deer and livestock browse this tree, and small animals use its acorns for food.

3. The policy of the National Park Service is to keep the parks looking as natural as possible. Since it is natural for dead trees to be in a forest the ones you see in this area will not be cleaned up. When a tree falls in a National Park Service area it will lie where it fell and eventually will decay and supply nourishment for future trees.

4. Take a break here and look at the valley between Los Gigantes and the higher parts of the Zuñi Mountains. This valley was formed by water gradually wearing away the softer rocks of the Chinle formation. The harder sandstones of El Morro and Los Gigantes on the southwest and the sandstones and limestones of the higher slopes resisted such erosion.

During the last few million years, while the Zuñi Mountains were being gradually pushed up to their present height, more than 10,000 feet of sedimentary rocks have been removed from what you see. This has been done by running water and wind, carrying away the rocks a few particles at a time. Before that, about 100 million years ago, this entire area, as far as you can see in any direction, was under the water of an ancient ocean. Forty million years before that, the sands of El Morro were accumulating on a broad, desert-like plain, built up by sand deposition of sluggish, wandering streams, and re-sorted by wind into large dunes.

Before continuing along the trail, you will notice many small trees around you which are called pinyon (*Pinus edulis*). These pine trees have two needles to a cluster and are never tall like the ponderosa pine. They are usually less than 35 feet in height, and have a rounded, compact crown. Pinyons are seldom found growing in pure stands but are associated with various kinds of juniper. Because of the nature of their growth, heavy stands of pinyon and juniper are often called pigmy forests. The pinyon produces edible nuts which are abundantly used by local residents as well as marketed commercially elsewhere in the United States.

5. Here you can see at close hand the difference between the dark, upper layers of ocean sands and the light color of the lower and earlier stream and dune sands. Look here at the cliff face to your right. The lower is Jurassic sandstone, and forms the bulk of El Morro. The upper is Dakota sandstone of Cretaceous age, representing beach deposits of the ancient sea which covered all the area. The contact surface between these two units represents a time interval of between 25 and 50 million years.

6. Now you are at the top of the mesa. This stake, next to a post, is just about at the corner of one of the ruins. The second post is straight ahead along the trail. In fact, there are four of these brightly

colored posts located at the approximate four corners of the village. You can see the outlines of the walls. A rather large structure, don't you think? It was possibly two or three stories high, but after the Indians left, the roofs collapsed and the walls fell. Then the sand blew in, weeds began to grow, and you see the result.

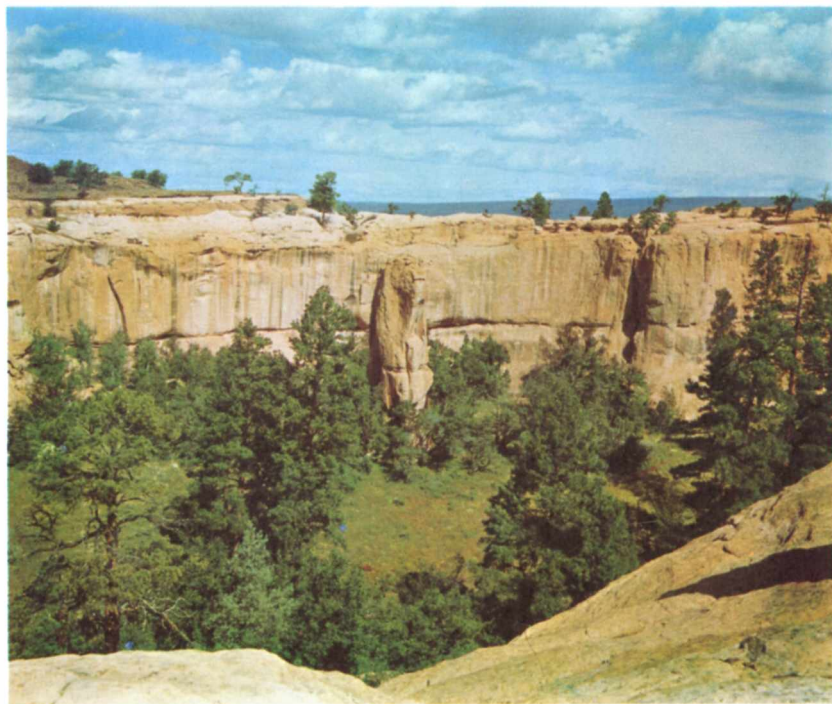
The prominent peak on the horizon to the south is called *Sierra Alta*, which is Spanish for high mountain. This peak is a volcanic cinder cone.

7. Looking at the cliff wall across this pretty box canyon, you can see a definite horizontal line about half way down. The materials above and below the line were laid down about the same time, but the line represents a layer of softer material which has weathered away faster. Above all this, notice the uneven top of the brown sandstone upon which the Dakota formation rests.

The reason for the unevenness is that stream channels cut into the underlying sandstone, and then, as the land slowly settled to allow the sea to encroach, the channels filled up with sand. The sands were reworked by waves on the beach and the tops smoothed out and leveled. Small lagoons and swampy areas formed along the coastline. As you climb the steps at No. 10, you will cross a small seam of coal-like material which was formed from one of these swamps.

If you look directly across the box canyon, you will see the ruins of

The geological disconformity described at Stake 7



another village. It was occupied about the same time as the one on this mesa.

From here the trail has been marked with two parallel lines and by yellow footprints. Follow these footprints and stay between the lines.

STAY ON THE TRAIL

8. The boulders of different colors sitting up on the points of the sandstone mounds belong to the Dakota formation. If you look closely, you will see a layer of Jurassic rocks, a layer of Dakota, a layer of Jurassic, etc.: what happened was that the Jurassic rocks were undercut by wave action on the beach and later the grooves and caves were filled in on the same seashore by the Dakota.

The steps cut in the rock were constructed by the National Park Service. They are not the work of prehistoric Indians.

9. This line, extending through the rock on both sides of the mesa, is one of the principal causes of the development of the box canyon. After El Morro was buried by several thousand feet of younger rocks, some 60 million years ago, it was subjected to great pressures from the weight of the overlying rocks and the movements which caused the Zuñi Mountains to project so far above sea level. These pressures caused the sandstone to crack into the long openings which we call joints. As running water and wind gradually removed the overlying rocks, the waters were able to run down into the joints and, alternately freezing and thawing, broke up the rock into small fragments which could be washed away.

If you stand on this line and look down the box canyon to the west, you can see that each steep canyon wall is simply one side of a joint, while the material on the other side has been eroded away. If you look eastward towards the headquarters area, along this joint line, you can see how El Morro maintains its vertical walls by breaking into blocks which fall away from the main mass of the sandstone and leave a vertical joint face. This joint line is different from the others which you may have noticed in climbing over the rock because it goes so far and cuts through the rock so deeply.

10. The dark colored splotches are dead lichens. A lichen is composed of two different organisms, an alga and a fungus, living together and supporting each other. The fungus furnishes the moisture for the alga, and the alga the food for the fungus. This coexistence is known as symbiosis.

As you walk from No. 9 to 10, you will pass several potholes that become pools of water after a rain. Some of these were artificially enlarged by the Indians who lived on the mesa top, to serve as supplementary sources of water.

11. The dark color here is caused by carbonized remains from the plants which grew in the ancient swamps. Coal is formed in much the same way, but there is too much inorganic material in this seam to produce coal. This is the coal-like seam mentioned at No. 7. On the very top, the dirt is from the Mancos formation of Cretaceous age, and is composed of marine shales deposited in the ancient sea which

covered the area. It was originally much thicker, and is younger than any of the other rocks exposed here.

Immediately ahead and extending to the right for nearly 300 feet is the ruin called *Atsinna*, a Zuñi word referring to the "writing on rock."

12. *Atsinna*, the larger of the two ruins, is approximately 200 by 300 feet, the size of some city blocks. Like the other village, parts of it probably were three stories high, mainly along the north side. It was terraced down toward the south, thus providing a southern exposure.

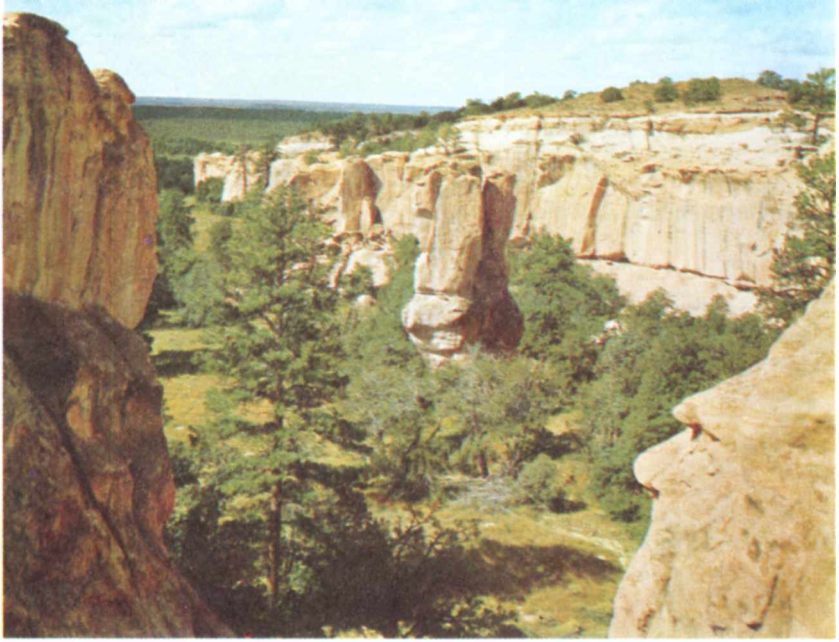
The Indians obtained most of their water from the pool at the base of the rock, as did the later Spanish and American travelers, but they also caught as much water on the mesa top as they could.

13. Over to the right, or west, is a round room, called a *kiva*. *Kivas* were built primarily for religious ceremonial reasons, but had other purposes, just as the large halls in any of our cities today are used for exhibits, concerts, lectures, and other activities. In addition to religion, these rooms were used for workrooms, playrooms, general meeting places, fraternal society meetings, etc. One man very aptly described them by saying that to him they were a cross between a church and a pool hall!

Now contrast this round *kiva* with the square *kiva* across the trail toward the northeast. Both *kivas* served the same functions, but they represent two different architectural styles or traditions in use at approximately the same time. In general, square *kivas* are characteristic

A portion of Atsinna. Part of the square kiva is shown at lower left





The box canyon as seen from its eastern end looking west

Looking out over Inscription Rock from the south



of areas to the west and south of here, and round kivas are common to the north and east.

Atsinna was occupied during the 12th and 13th centuries. The reason for the abandonment of this site is not definitely known. Perhaps the Indians found that the growing seasons were too short at this elevation and they had too many crop failures. Apparently these people moved to the west, where they founded the several Zuñi villages known in historic times. There, around the present pueblo of Zuñi, the growing season is slightly longer and irrigation can be practiced, and possibly the soil is more fertile.

14. The stones you see at this station were used for grinding corn after it had been dried and stored. The corn was placed on the large stone called *metate* and ground with the smaller stone called *mano*.

15. The trail now descends from the mesa top back to the Monument headquarters. We hope that you have enjoyed your trip over Inscription Rock. Should you have any questions, the ranger on duty will be happy to be of assistance.

CONSERVATION — YOU CAN HELP

If you are interested in the work of the National Park Service and in the cause of conservation in general, you can give active expression of this interest, and lend support by alining yourself with one of the numerous conservation organizations, which act as spokesman for those who wish our scenic heritage to be kept unimpaired for the enjoyment of future generations.

Names and addresses of conservation organizations may be obtained from the ranger.

