

Petroglyph National Monument

Boca Negra Canyon Trail Guide





Petroglyph National Monument protects one of the largest petroglyph sites in North America featuring designs and symbols carved onto rocks by American Indians and Spanish settlers 400 to 700 years ago.

The monument was established in 1990 to protect the petroglyphs and related archeological sites on Albuquerque's West Mesa. It is cooperatively managed by the City of Albuquerque Open Space Division and the National Park Service.

Surveys confirm the presence of more than 20,000 petroglyphs along the volcanic escarpment. Petroglyphs are a valuable record of cultural expression and hold profound spiritual significance for certain contemporary American Indian tribes and for heirs of local Spanish land grants. While some of the petroglyphs have lost their meaning over the centuries, some images possess direct meanings for today's Indian peoples. Whether or not their meanings are clear, all petroglyphs preserve the beliefs of their makers. Those at Petroglyph National Monument are part of the heritage of the American Indian peoples who continue to live here—equally so, they are a part of our national story and heritage.

When you walk the trails of Boca Negra Canyon—and when you visit any part of the monument—we ask that you please help us preserve the petroglyphs for the education and enjoyment of future generations.

Please remember:

1. Federal law strictly prohibits vandalism to petroglyphs.
2. Touching petroglyphs is prohibited. They are fragile, irreplaceable cultural resources which are easily damaged by body oils.
3. Visitors must stay on established trails—for safety and to avoid eroding the escarpment, damaging native plants, and destroying animal habitat.
4. Trash cans and recycle bins are provided for a reason. Loose trash impacts the environment, it is unsightly, and it can choke wild animals.
5. Motorized vehicles and bicycles are only allowed on roads and in parking lots.
6. Pets are not allowed on trails.
7. Glass containers are prohibited in the monument.
8. Consumption of alcoholic beverages is prohibited.
9. Firearms, including pellet guns, BB guns, and paint-ball guns, are strictly prohibited.
10. Collecting and removing items found within the boundaries of national parks are strictly prohibited.

A Volcanic Landscape

About 150,000 years ago, a series of volcanic eruptions began to create Albuquerque's 17-mile long West Mesa escarpment. The first two eruptions were extensive flows of liquid lava, which followed the courses of ancient arroyos, and are now represented by peninsulas on the edge of the escarpment. Lava flowed around hills and higher ground to create natural canyons along the edge of the escarpment. Geologists call this process of former arroyos becoming ridges or peninsulas and former hills becoming canyons "reverse topography." Subsequent eruptions of increasingly thicker lava covered a smaller area. The last eruptions created cinder cone peaks. Today, if you look west from the top of the Mesa Point Trail, you can see the dormant volcanic cinder cones.



The thickness of basalt rock from the volcanic lava flows ranges from 5 feet to over 50 feet. The basalt overlays river deposits that are up to 25,000 feet thick, as "caprock." In the millennia following the eruptions, tributaries of the Rio Grande eroded the sand deposits beneath the basalt caprock of the escarpment. Huge pieces of this caprock, undercut by the force of water, were strewn along the face of the escarpment. Over the years, sun, rain, heat, freeze-thaw cycles, and action by microorganisms have caused oxidation, or rust, of metals and minerals. These forces created thin layers of desert varnish, or patina, on the boulders' surfaces. The makers of the petroglyphs found they could produce high-contrast images on the rock by carefully chipping off the desert varnish with a hand-held rock or chisel stone, to expose the lighter color of the rock's interior. After centuries of exposure, older petroglyphs begin to oxidize and this darkening confirms their great age.

A host of desert creatures thrive along the escarpment. Its absorbent sandy soils and the tumbled rocks provide a richer and more protected habitat than the surrounding open desert. You may see hawks, turkey vultures, road-runners, coyotes, rabbits, squirrels, snakes, lizards, and millipedes among native four-wing saltbush, sagebrush, rabbit-brush, snakeweed, Indian rice-grass, and other plants.



Petroglyphs

The majority of these petroglyphs were made by the ancestors of modern Pueblo people. The Ancestral Puebloans made petroglyphs by striking a basalt boulder with stones, in much the same way a hammer and chisel are used, to peck off the desert varnish on the boulder's surface. Archeologists refer to these images as being made in the "Rio Grande style."

This style developed rather suddenly around the year 1300 and continued until the year 1680—coinciding with a dramatic increase in local population and the construction of many pueblos (villages) along the Rio Grande. Elements frequently seen in Rio Grande style images are human figures, such as flute-players or dancers with upraised arms; masks, and masked figures; animals, including serpents, mountain lions, birds,

reptiles, and insects; human hands and feet; animal tracks; spirals; four-pointed stars; and geometric designs.

Although archeologists are only now developing methods to determine the exact ages of petroglyphs,



they can estimate age in several ways. They study relatively dark areas and re-oxidation; they compare the style, content, and execution of petroglyphs to those of surrounding areas; and they compare designs with other, similar designs on dated pottery or painted murals. The superimposition of one petroglyph over another provides another means of relative dating. Archeologists, currently using relative dating methods along the escarpment, are arriving at the conclusion that the petroglyphs were created between circa 1000 B.C. and the 1700s. Many contemporary American Indian peoples in this region believe that the petroglyphs are as old as time.

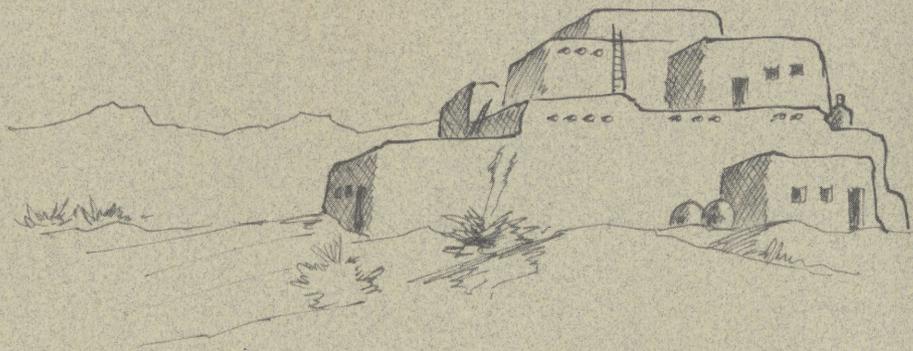
We cannot say for certain what all of the petroglyph images represent. Although some can be identified on the basis of contemporary anthropological studies, it is usually not appropriate to reveal meanings of some images. American Indian tribes have different versions of meanings. For them, any one image may have complex or multiple meanings that depend upon the placement of the images. Also, their interpretations of petroglyphs may also take into account their own tribal membership, not that of the original petroglyph maker.



The People

Severe droughts struck the Southwest between the years 1275 and 1300. People gravitated toward areas providing a permanent supply of water and good farmland, such as the Rio Grande Valley. Between 1300 and 1540, more than 40 pueblos were built on both sides of Rio Grande between Bernalillo and Belen (about 40 miles). Archeologists estimate that more than 1,000 people lived in several of these pueblos. Made from adobe, some pueblos were two or three stories high and had several hundred rooms built around an open plaza.

The Pueblo Indians who settled there planted and harvested corn, beans, and squash from fields along the Rio Grande. They built agricultural terraces along parts of the escarpment to build up soil and slow down runoff. They trapped and snared rabbits and birds, and also hunted deer, elk, and antelope. Domesticated dogs and turkeys were a common sight in the pueblo villages.



Like other Indian peoples, the Pueblos established extensive trade networks with various cultural groups throughout the Southwest and beyond. They created jewelry from seashells traded from the Pacific Ocean. They exchanged turquoise from the mines of Cerrillos, south of Santa Fe, for bells cast of copper from the interior of Mexico. They used the long, colorful tail feathers of macaw parrots, native to the rainforests of Mexico, in ceremonial dances. Archeologists have discovered depictions of macaws in kiva murals from the Rio Grande area, and found remains of macaws in the Puebloan ruins at Chaco Canyon and elsewhere in the region. Contemporary Pueblo Indian groups use colorful macaw feathers on masks and headdresses. Petroglyphs along the Macaw trail depict this exotic bird.

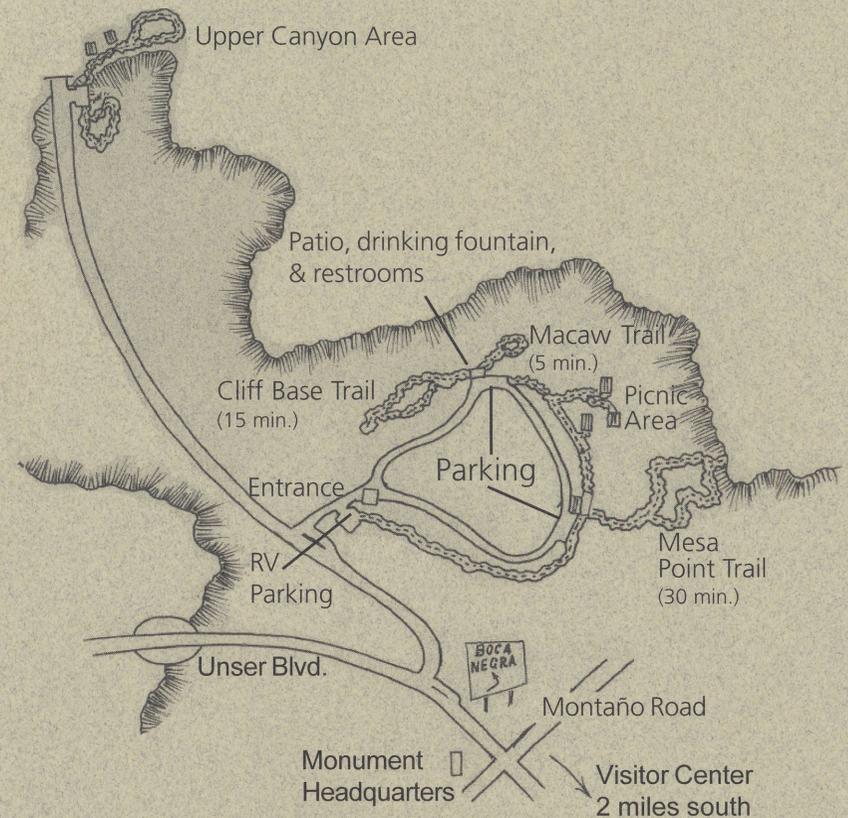
Pueblo people expressed their culture in many ways. One was the many thousands of petroglyphs they carved onto rocks. They developed their own unique pottery style—Rio Grande glazeware—which added to the early tradition of pottery making in the Southwest. They also painted colorful murals on the interior plastered walls of their kivas. Many of the petroglyph images are also found painted in murals. This suggests that new ideas were being incorporated into Puebloan religion and social organization by distant cultures.



In 1540, Francisco Vazquez de Coronado became the first European to contact the pueblo villages along the Rio Grande. He and his expedition wintered at Kuaua pueblo. While there conflicts broke out and the Spaniards destroyed several of the pueblo villages. Many Pueblo people fled during this time but returned in 1542, after the Spaniards left the area. In 1598, Juan de Oñate brought colonists to settle in New Mexico. Between 1610 and 1680, more Hispanic settlers came to the middle Rio Grande valley, and much of what had been formerly Indian land was divided into land grants. *Haciendas* (farmsteads) were founded along the river valley and missions were established in many Indian communities.

In the 1600s Indian populations decreased due to relocation, epidemics, crop failures, and Spanish colonial practices. In 1680, Indians across the region united in the Pueblo Revolt, driving the Spaniards south to present El Paso, Texas. This was the first time a major European power was defeated and exiled from a North American territory. The Indians remained independent until 1692, when the Spaniards reoccupied the area.

The Town of Atrisco in Albuquerque's South Valley was first established in 1692. The Atrisco community retains ties to lands that include part of the escarpment and mesa top in Petroglyph National Monument. Atrisqueño shepherds probably created many of the historic petroglyphs in the monument depicting crosses, animal brands, and ornate letters.



The Trails

Boca Negra Canyon contains only four percent of all the petroglyphs found in the monument. The trails are designed to offer you fine examples of petroglyphs. They are also designed to reduce human impacts on the resource. Please note that although all Boca Negra Canyon trails are partially paved, they are not level due to the rough terrain. Therefore, strollers and wheelchairs are not recommended. You may have to step over or around small boulders in some areas, and some trails narrow significantly in spots.

Mesa Point Trail

This moderately strenuous trail climbs to the top of the lava flow and will take approximately 30 minutes to walk. The elevation at the top of the trail is one mile (5,280 feet) above sea level. Sandia Crest is 10,678 feet above sea level, and downtown Albuquerque is at 4,950 feet above sea level.

As you begin to walk this trail, look for a boulder bearing numerous designs, including a square enclosing a step-shaped cloud and a four-pointed star with a zigzag line. Look around the boulder for other designs, including handprints, animal figures, and a mask placed on the corner of the rock (perhaps so it can see in both directions).



You will also come upon grinding sites throughout the escarpment area. You can identify them by the presence of smooth, light-gray patches on the basalt rock. These grinding areas may have been used to sharpen tools, grind corn or seeds for food, make pigments, or prepare medicines used during healing ceremonies.

Farther along the trail, look for several petroglyphs depicting two small animal figures and crosses. The outlined cross is an authentic American Indian

petroglyph that symbolizes the four cardinal directions. The non-outlined Christian-style crosses and crucifixes may have been made by Hispanic shepherders in the 1700s and 1800s, and closely resemble Latin crosses of the patriarchal style (with two horizontals, both ending in crosslets). Continue down the trail to view a mask petroglyph and a grinding spot.

Notice the cleared area surrounded by low, stacked rock walls at the top of the trail. No artifacts were found here, so this rock structure cannot be conclusively identified. Might it be an ancient ceremonial area, or a sheep corral? Several of these east facing structures have been found on escarpment promontories, and may hold importance for contemporary Pueblo peoples. Similar structures found outside Petroglyph National Monument were known to have been used as sheep pens by Hispanic shepherds during historic times.

From the mesa top, you have an excellent view of the cinder cones to the west. These are known locally as Albuquerque's Volcanoes. To the Indian people, they are the mothers of this volcanic landscape. The volcanoes last erupted about 150,000 years ago and are now classified as dormant.

Enjoy the beautiful views of the Sandia Mountains to the east; the Sangre de Cristo Mountains of Santa Fe to the northeast; the Jemez Mountains to the north; and on a clear day, Mount Taylor to the west. These mountain peaks have importance to the Pueblo people.

Macaw Trail

This easy trail is located to the east of the patio and will take approximately 5 minutes to walk.

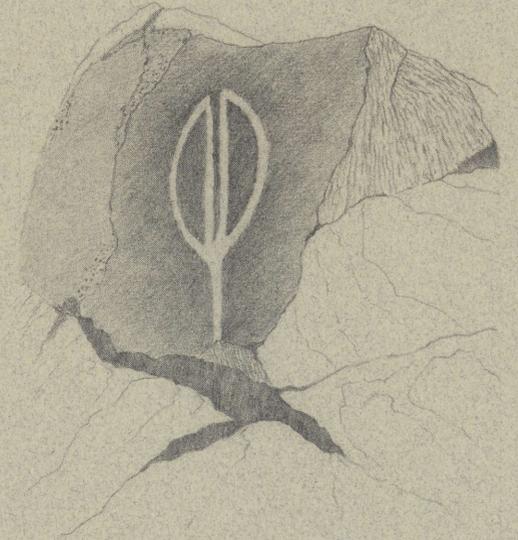


Two petroglyphs depicting macaw parrots are responsible for the name of this trail. Identifiable by the long-plumed tails, macaws are native to the rainforests of southern and eastern Mexico and Central America. Parrots were valuable trade items for the Pueblo people.

Their colorful feathers were used during

ceremonial dances. Parrots and their feathers are shown prominently in kiva mural paintings made during the same time period as petroglyphs (circa A.D. 1300 to 1600). Contemporary Pueblo Indian people continue to use macaw feathers in headdresses worn during ceremonial dances. Note that the smaller macaw appears to be trapped in a cage. Perhaps it depicts the story of how people brought macaws from the rainforests to the desert southwest. Two other petroglyphs visible along this trail may represent yucca seed pods. Early Puebloans used all parts of the yucca plant, much as contemporary Pueblo Indians continue

to use them today. The root of the yucca can be used for making soap. The flowers, fruits, and seeds can all be roasted in pits for food. Yucca leaves are ideal for basket weaving, paint brushes, and the points of the leaves can be used as needles.



Cliff Base Trail

Located to the west of the patio, this easy to moderate trail will take approximately 15 minutes to walk.

As you walk along this trail, look for petroglyphs showing masks and human-like figures. Take note of the differences in head ornamentation. The four-pointed star has a mask, a feathered headdress, and bird talons.

Archeologists are only now developing methods for dating petroglyphs. One means of relative dating is the presence of a newer petroglyph pecked over an older one. Notice how the right-hand point of the four-pointed star is superimposed over part of a human figure to the right of it. You will also notice that, sadly, one eye of the star image has been vandalized—a federal offense.

Also note how the grayish color of the recent vandalism contrasts with the light brown patina that has developed over the centuries since the original petroglyph was created.



The human figure with upraised arms behind a shield may represent a warrior. Archeologists suggest that upraised arms and a circular, open mouth may portray an individual who is praying or singing.

Upper Canyon Area

This area is located 1/4 mile north of Boca Negra Canyon's main entrance. Two picnic tables with trash receptacles are available. A moderately strenuous trail leads down a stairway into the canyon. The few petroglyphs represent human existence in the area from the late Archaic (1000 B.C.) to the 19th century.

Petroglyph or Pictograph— Do you know the difference?

A petroglyph is an image that was pecked or carved onto a boulder's surface. A pictograph is an image that was painted on a boulder's surface with yucca fiber brushes and natural pigments made from native plants and animal blood.

Notes:

Common Desert Plants

AGAVACEAE-Agave family
Soapweed yucca (*Yucca glauca*)



ANACARDIACEAE-Sumac family
Lemonade Bush, Squawberry, Limitas (*Rhus trilobata*)

ASTERACEAE-Composite family
Prairie sunflower (*Helianthus
petiolaris*)
Purple aster, Hoary tansyaster
(*Machaeranthera canescens*)
Snakeweed (*Gutierrezia sarothrae*)
Sand sage (*Artemisia filifolia*)



BRASSICACEAE-Mustard family
Spectacle pod (*Dimorphocarpa wislizenii*)

CACTACEAE-Cactus family
Prickly pear (*Opuntia polyacantha*)

CHENOPODIACEAE-Goosefoot family
Winterfat (*Eurotia lanata*)
Four-wing salt bush (*Atriplex canescens*)

FABACEAE-Legume family
Broom dalea, Purple sage
(*Psoralea scoparius*)



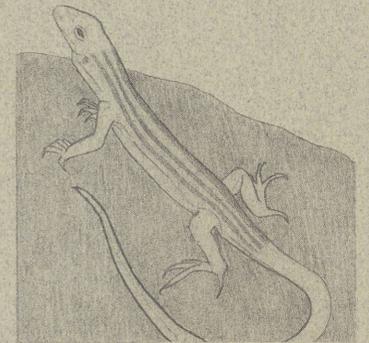
Common Desert Animals



MAMMALS-
Black-tailed Jackrabbit (*Lepus
californicus*)
Coyote (*Canis latrans*)
Deer Mouse (*Peromyscus
maniculatus*)

Desert Cottontail (*Sylvilagus auduboni*)
Kangaroo Rat (*Dipodomys spp.*)
Rock Squirrel (*Citellus variegatus*)
Whitetail Antelope Squirrel (*Ammospermophilus
leucurus*)
White-throated Wood Rat (*Neotoma albigula*)

REPTILES-LIZARDS
Eastern Fence Lizard
(*Sceloporus undulatus*)
Great Plains Skink
(*Eumeces obsoleta*)
New Mexico Whiptail
(*Cnemidophorus neomexicanus*)



REPTILES-SNAKES
Bullsnake, Gopher Snake
(*Pituophis melanoleucus*)
Coachwhip (*Masticophis flagellum*)
Striped Whipsnake (*Masticophis taeniatus*)
Western Diamondback Rattlesnake (*Crotalus atrox*)
Western Prairie Rattlesnake (*Crotalus viridis*)

Petroglyph National Monument is cooperatively managed by:

Open Space Division
Parks and Recreation Department
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103
(505) 452-5200



and

National Park Service
Petroglyph National Monument Hdqtrrs.
6001 Unser Blvd. NW
Albuquerque, New Mexico 87120
(505) 899-0205



The Las Imágenes Visitor Center is located at:

Unser Blvd. NW at Western Trail
Albuquerque, New Mexico 87120
(505) 899-0205 ext. 331 or 335

Drawings by R. E. Kriese

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