ECHOES
from the EARTH

Inside...

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Petroglyph National Monument is pleased to announce that the construction of the new amphitheater is nearing an end. By fall, Petroglyph National Monument will offer programs to the public at the new structure. Without doubt, the amphitheater opens a new chapter for Petroglyph National Monument in its services to the visiting public and our neighbors. The amphitheater offers an opportunity for visitors to enjoy open air evening and day time lectures and presentations, cultural demonstrations, and impromptu programs. Special groups inclusive of students from neighboring schools within Albuquerque Public Schools and other school districts around the state will be welcome at the new facility.

Additionally, the amphitheater will allow for tiered stadium-style seating. Truly, there is not a bad seat in the place! The new structure adds flexibility to our programs. With it, we can move our programs away from the visitor center patio, although the patio will be used for different programs that don’t require an amphitheater such as book signings. The location of the amphitheater, moreover, provides more isolation from the city’s ambient lights and sounds and allows for a more open air environment under our New Mexico sky. The use of new media technology marks a new approach to the presentations at Petroglyph National Monument. The amphitheater, for example, will feature large visual aids, visually interactive programs, and large screen presentations. Future plans will include live streaming of programs that can be viewed by anyone across the country as well as by students utilizing long distance learning. These technological amenities at the amphitheater place Petroglyph National Monument more in the league with other National Parks that do have amphitheaters.

Petroglyph National Monument’s Federal Fire Plan

Every year wildfire dangers increase with each successive drought. It looks like this year will be no different. It is important to know that Petroglyph National Monument has a Fire Plan that spells out the responsibilities of the Park Superintendent, the Chief Ranger, as our key fire management contact persons, and other City of Albuquerque, Bernalillo County and State authorities. There are two fire control agencies with direct jurisdiction and responsibility within Petroglyph National Monument. They are the Albuquerque Fire Department and the Bernalillo County Fire Department. Effective in May of 2011, a Mutual Aid Agreement was signed between these two fire departments and the National Park Service’s Wildland Fire Four Winds Group, located in Grants, NM. This defines the responsibilities for general fire control and initial attack.

The Albuquerque Fire Department has full suppression and control authority over all fires that occur within Albuquerque’s city limits. Should a wildland fire incident occur within Petroglyph National Monument, a Unified Command will be set up with the Albuquerque Fire Management Officer and the initial attack agency per jurisdiction. The NPS Fire Management Officer of the Four Winds Group will be notified and the federal Albuquerque Zone Dispatch will send personnel and equipment, if necessary, to assist. An After Action Review (AAR) of any wildfire will be completed to assess fire origin and cause determination. Included with this AAR, an NPS Natural and Cultural Resource Advisors damage assessment report will be completed and if arson or negligence on the part of an individual and or commercial entity is identified, the responsible parties will be held accountable according to law.

One additional effort carried out by Petroglyph National Monument, within the Federal Jurisdiction of the Monument, has been to clear debris and undergrowth from the boundary line as much as possible. To that end, we continue to remind our neighbors that the cleared areas are not trails, but act more of a firebreak along the boundary.

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Nestled on the west side of Albuquerque is Petroglyph National Monument which is considered a sacred place to the Pueblo peoples of the Rio Grande valley of New Mexico. The rich concentration of petroglyphs in this place is considered to be a cultural and sacred landscape as they are associated with the volcanoes, marking the place of emergence to the Pueblo people of the area. This place is also significant to geologists as it is also known as the Rio Grande rift, one of three rift zones in the world. Many different cultural groups recognize this place as a special place from ancient times to today.

As a Pueblo person residing in Albuquerque, the Petroglyphs have always been a point of reference throughout my life from my childhood into adulthood. I always knew I was home when I saw the Rio Grande and the black cliffs of what is now Petroglyph National Monument. As a science educator of seven years in a local public middle school, it is this sense of place that I see lacking with many of my students. This is attributed to two main factors.

One of these factors is the age of technology and video games. When I ask my students, if they have been to the Albuquerque volcanoes, some were unaware that there are volcanoes in New Mexico. The volcanoes, which appear as hills on the horizon, are often dismissed as just hills on the horizon and never given a second thought. Unfortunately, with today’s technology, many young people would rather spend their time in doors playing video games.

Another factor is loss of language and culture. Both indigenous and hispano people of the Rio Grande Valley have experienced loss of language and culture. As a child, I remember hearing stories told by my grandfather about this place. This was a place that was to be respected. During the period of Americanization of the 1920’s, the people of the Rio Grande Valley suffered greatly as they were forbidden to speak their languages in schools and public places. Children were punished in school if caught speaking any language other than English. This shift of language did away with many of the traditional stories associated with places like the petroglyphs.

Today’s youth are faced with a lot of challenges. Many come from non-traditional families and must deal with many hardships throughout their education. It is my hope, that through an integrated curriculum, students are able to learn to appreciate such a rich cultural, historical, and scientific place as the Albuquerque Petroglyphs.
Very often, the most common question that we receive at Petroglyph National Monument is in regards to the meaning of the petroglyphs. Sometimes the question is very basic, such as, "Hey ranger, do we know what the petroglyphs mean?" But in many instances the question isn't based upon whether or not we know the meaning of the petroglyphs, but a request to have the meaning of the petroglyphs revealed to them. We feel that a lot of visitors expect us, as rangers, to be able to lead them to a 4-inch thick, dusty, leather-bound codex sitting upon a stand in the corner of the visitor center and assist them with deciphering the meaning behind any petroglyph that they may have seen while in the park. Unfortunately, no such codex exists, as the images carved here upon the rocks at Petroglyph National Monument 400 to 700 years ago are not hieroglyphics, or a written language.

Rather, the images that were carved here into the rocks by Native Americans and by early Spanish colonial settlers, each hold their own secrets and stories, that were certainly known by the person creating the petroglyph and perhaps not readily accessible to those of us who live in the 21st Century. Many different groups claim heritage to these images today, and different groups have different meanings for different petroglyphs. One group may call an image of a bird a macaw, while another group may call it a mourning dove. It is not the place of park rangers to choose who is right and which animal the image represents. So when we, as rangers, are asked whether or not we know the meaning behind the petroglyphs, we must answer no.

Well, at least that is the answer most of the time. While many of the images here at Petroglyph National Monument hold their secrets closely, there may be some that researchers can convince to give up their meaning. Approximately 30 of the 28,000 images here at the monument are believed to represent brands left by early Spanish settlers. Brands, unlike other imagery, are legally registered images that date back to a tradition to the middle ages. Preliminary research on some of these images has traced the use of brands back to the 1850s in the area of the monument, but it may be possible to trace these brand images back to the 17th and 18th centuries. Research is ongoing to determine if the early Spanish colonial records contain references to livestock brands similar to those that are carved upon the rocks in the monument.

So what does this all mean? Does it mean that soon when a visitor asks what a petroglyph containing a brand means, that the ranger will be able to give a complete history of that image? Once again, unfortunately no. Tracing a brand petroglyph back to the ranch and land grant that registered it may let us know the origin of the image, but it still won't tell us why this person at the ranch carved the image, or more importantly why.

And that's really the crux of the whole matter. Knowing that a brand petroglyph is derived from 400-700 years ago to carve them, and because the descendents of the land see their heritage here among the rocks, and this place is important to them. Tracing the origin of these brand images will not tell us the 'why' of the matter, but it can remind us that these images were important to real people at the time that they were carved, and that they are not abstract designs without meaning and despite not knowing that meaning they still remain important to all of us today.

These abstract images may represent brands inscribed by Spanish Colonial settlers. Unlike other petroglyph images, it may be possible to trace the history of brands through early Spanish records.

Petroglyphs of letters and Christian crosses, such as these in Rinconada Canyon, represent images carved by Spanish colonial settlers and their descendents.
**Why Earthscope? Because Shift Happens**

By Susanna Villanueva

Petroglyph National Monument is located along the western edge of the Rio Grande Rift. Its ancient volcanic flows are the direct result from the rift's activity over the last 30 million years. Continental rifts are created when Earth's crust stretches and thins creating an elongated valley on the surface. The Rio Grande Rift runs south to north from Chihuahua, Mexico to Leadville, Colorado. Rifts like the Rio Grande form basins that fill with sediments over millions of years. In Albuquerque, the basin sediments are three miles deep.

Rift movements can be caused by relative tectonic plate shifting, gravity, and rising magma bodies. Here we have two of the three processes causing a little movement; the slight rotation of the micro tectonic plate called the Colorado Plateau, located just west of the Rio Grande Rift; and the rising of a large magma body that is under Socorro, New Mexico (90 miles south of Albuquerque). How much movement and shifting are we talking about? Is Albuquerque going to have a large-scale earthquake or a volcanic eruption? This is where EarthScope comes into the picture.

EarthScope is a nationwide effort that applies the latest science and technology to explore the structure and evolution of the North American continent and understand processes that cause earthquakes and volcanic eruptions. The western United States is a prime target area for EarthScope to investigate processes that result in elevated topography, earthquakes, and volcanism because it's hot, literally. The crust under the western U.S. is young, hot, and restless. That’s why we have such diverse topography, from some of the highest mountain ranges to the lowest desert flats.

How is EarthScope studying the Rio Grande Rift? A team of scientists from the University of Colorado and the University of New Mexico, with funding from the National Science Foundation, are collecting data on how much the Rio Grande Rift is moving by setting global positioning systems (GPS) in a grid system that runs from the central Colorado Rockies into southern New Mexico.

The team is using GPS instruments, which rely on satellites for their measurements, to measure the miniscule movements of the Rio Grande Rift. Results have confirmed that the movements of the rift are small and slow, only between 0.5 and 2 millimeters per year.

**Graphic by Larry Crumpler, Ph.D., NM Museum of Natural History and Science**

EarthScope is a collaborative project whose partners include the National Science Foundation, the USGS, and NASA. For more information on EarthScope visit www.earthscope.org

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**Ongoing Discovery**

By Ronald C.D. Fields

Archaeological Technician

Frequently we think of our local National Parks or National Monuments as static, changeless and little to nothing new happening. Yet nothing could be further from the truth. At Petroglyph National Monument we are always making new discoveries and adding more to the rich and diverse cultural history of the area.

A case in point is when one of the Monument’s buildings was affected by rainwater. It was decided that some alterations to the landscape may deflect the rain water away from the building. Given the location of the building and its modern use as a residence, it was thought that the likelihood of discovering any historic or prehistoric cultural material would be nonexistent.

However, such was not the case. During the review or survey of the area we discovered a basalt projectile point. This point is classified as a Jay or Rio Grande and dates from around 11,000 B.P. to 8,000 B.P. (years before the present). This projectile point dates back 8,000 years! It is not an arrowhead. This point was used on a spear-shaft and was thrown using a device called a spear-thrower or atlatl.

Shortly thereafter, we discovered other chipped stone artifacts suggesting that this point wasn’t lost during a hunt but rather was left behind in a camp or a site where the prehistoric First Americans were manufacturing stone implements. What is known about sites of this period is that they “...are thought to be seasonal occupations. Most are on cliff tops at canyon head locations with others established at mainly basalt raw outcrops. The overall technology expressed in assemblages linked to the Jay phase requires future study...” as stated by Noel Justice in his 2002 Stone Age Spear and Arrow Points of the Southwestern United States.

Fortunately for us, we have this projectile point to tell us how old the site is, without it we would be clueless. This shows how important it is to leave artifacts in place or in-situ in their original context so that they may provide all of us a complete narrative of our ancestors and the use of the landscape at that moment in time. The Monument staff has subsequently registered this site with the State’s Archaeological Records Management Section and will avoid disturbing the site in the future.

Who knows what other stories this site may provide to us in the future regarding our past?
Volcanoes Day Use Area
- Unpaved trail system with several scenic miles of hiking
- Water is not available, carry plenty of water
- Pit restroom facilities available at the trail head
- Pets allowed but must be on leash at all times
- Free trail guide available at the visitor center
- There are no petroglyphs at the volcanoes
- Hikes range from one to three miles round trip

Boca Negra Canyon
- Developed trail system
- Restrooms and drinking fountain
- 3 short trails, partly paved
- Trails are not wheelchair or stroller accessible
- Pets are not allowed on the trails
- Parking fee per vehicle:
  - $1 weekdays/$2 weekends
- Interpretive trail guide available at the monument’s visitor center for $0.75.

Rinconada Canyon
- Undeveloped trail system
- 2.2 miles round-trip on a sandy, dirt path
- Takes approx. 1 1/2 to 2 hours to complete the loop
- See approx. 500 to 700 petroglyphs
- No water is available, carry plenty of water
- Pit restroom facilities at the trail head
- Lock vehicles; set alarms, do not leave valuables in your vehicle.
- Pets allowed but must be on leash at all times
- Parking lot gate locks at 5 pm.
- Free trail guide available at the visitor center

Piedras Marcadas Canyon
- Undeveloped trail system
- 1.5 miles round-trip on a sandy, dirt path
- Takes approx. 1.5 hours to complete the out and back trail
- Water is not available, carry plenty of water
- No restroom facilities
- See approx. 400 petroglyphs
- Pets allowed but must be on leash at all times
- Free trail guide available at the visitor center
More Fun in the Sun!
The Importance of Outdoor Education
By Allison Martin
Interpreter

Today, children spend three hours a day watching television and playing video games. Not only is the lack of mobility detrimental to their overall health, but it is also limiting their vast minds to the endless knowledge that can be gained from being outdoors.

Petroglyph National Monument offers numerous outdoor experiences to help children connect to the outdoor world. Educating our children about the importance of stewardship by being a part of our monument’s past, present and future is a great way to continue to pass down history, tradition, and culture.

Stewardship is something we value here at Petroglyph National Monument. By gathering together and protecting the monument, children are not only getting a sense of personal pride and accomplishment, but they are also keeping our monument’s history alive for future generations to enjoy.

By scheduling a tour at Petroglyph National Monument and using the monument as an outdoor classroom, young students and adults alike can gain an understanding of the history, culture and traditions of Ancestral Puebloan and Spanish Colonial lifestyles; the use and purpose of native plants; an appreciation of climate change; and facts on mammals, reptiles and birds of the area.

Students will also come into contact with breath taking views, understand our ecology and geography by hiking our fun and exciting trails, and gain a sense of community and personal responsibility for the protecting of this and other special places. And of course, exercise is a key component to our children’s overall health and well being!

Stewardship will allow children to gain a sense of pride, competence, and importance in their role of protecting and preserving this park and other geologic formations around the world. So let’s work together and get children outside and educate them about the wondrous world around them!

Here at Petroglyph, our ranger-guided education programs are offered all year long and are available to a wide range of different groups including all grade and age levels. Just call 505-899-0205 ext. 332 and schedule your tour today!

Oh, and don’t forget the sunscreen!
Las Imágenes Visitor Center, once the home of Dr. Sophie Aberle and William Brophy, was purchased for use as the Petroglyph National Monument Visitor Center in 1991. This adaptive reuse of an adobe home created an instant place for visitors to learn about the monument’s resources. Shading of the patio and use of shade ramadas helps keep the visitor center cool in the heat of the summer while the massing of the adobe structure historically keeps the temperatures warmer in winter.

Sustainable landscaping adds beauty and helps maintain a special sense of place. The native vegetation planted in front of Las Imágenes Visitor Center, together with the interpretive signage, not only helps to inform visitors about native plants, but also their traditional uses by Native Americans and early Spanish settlers. Additionally, the plants help conserve water and minimize weeding or mowing. The National Park Service seeks to maintain a natural landscape as much as possible, an effort which works to ensure a successful stewardship...taking care of the resources for present and future generations.

Petroglyph National Monument staff does not use herbicides, pesticides or fertilizers because of their impact on the natural environment. A drip watering system has been installed to help some plants survive long periods of drought. Some plants, especially those that have been here a long time, may experience damage by small animals but that is part of the natural process.

An energy audit was conducted a few years ago, and since then the staff has replaced existing lighting with energy-efficient equivalents using natural lighting whenever possible (solar tubes were installed in roofs), installed motion detectors on entrance way lights and solar lights in the parking lots, and directed outdoor lighting downward to help reduce light pollution.

Environmentally responsible green cleaning practices help protect park resources by reducing or eliminating the release of harmful chemical pollutants into the environment. Here, park managers use fewer and safer cleaners and more energy efficient maintenance equipment. You may smell the fresh scent of citrus; know that the center is cleaned entirely with “green” products! As might well be expected, Petroglyph National Monument staff reduces the unnecessary consumption of natural resources by reducing waste and purchasing environmentally preferable products, using paper products with post-consumer recycled content, and buying products with reduced packaging.

Throughout the park, you will see recycling centers. We recycle plastic, aluminum, and glass. Recycling, along with proper disposal of food wastes and trash, can reduce litter and pest problems in the park. Using the easily identified recycling receptacles for waste will reduce the amount of garbage sent to the local landfills. So help us think green!
Kids Corner

Are you interested in exploring? Do you like art, science, history or nature? How about plants and animals, sailing ships, dinosaurs or trains? Would you like to learn more about the National Parks that belong to you? Then becoming a Junior Ranger could be for you!

Many National Parks offer visitors the opportunity to join the National Park Service family as Junior Rangers. Interested students complete a series of activities during their park visit, share their answers with a park ranger and receive an official Junior Ranger badge or patch and Junior Ranger certificate.

Children grades K-6 can learn more about Petroglyph National Monument by participating in our Junior Ranger program. Ask at the visitor center desk for your Junior Ranger booklet so you can earn your badge, patch and certificate.

New at Petroglyph National Monument is the Senior Ranger Program. Designed for anyone over the age of 12, the Senior Ranger Program explores the natural and cultural resources of the monument at a more challenging level. If you are interested in participating in this program, please ask at the information desk for a Senior Ranger booklet, a monument brochure and a geology brochure. Those completing the Senior Ranger Program will earn a patch, pin and postcard.

There are hundreds of parks that offer Jr. Ranger programs, how many can you earn?

NPS photo by Diane Souder

Remember kids, even bugs, like this stink bug, are under Ranger Protection inside National Parks and Monuments.

NPS photo by Diane Souder

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There are hundreds of parks that offer Jr. Ranger programs, how many can you earn?
A National Park Southwest Guide
There are over 50 parks within a single day’s drive of Albuquerque!

Passes to Your Next Adventure!
Annual and Lifetime Federal Lands Passes

No matter who you are, there is a Federal Recreation Lands Pass available for you! For the general public, the Annual Pass is $80 and is good for 12 months. For those age 62 and over, the Senior Pass is $10 and is good for life! Disabled citizens are eligible for the free Access Pass which has no expiration date. And new to the pass program is the free Military Pass, available for active duty military members and their dependents and is good for 12 months as well!

Petroglyph National Monument does not charge any federal fees for access or use, but a portion of funds collected from lands pass sales at the visitor center do stay in the monument for local improvements. Your recent pass sales, under the Federal Lands Recreation Enhancement Act, have helped fund monument improvements such as the rehabilitation of the Rinconada trail head parking area (pictured below) and the new amphitheater located at the visitor center.
Regulations and Safety

- All visitors must stay on existing trails to avoid damage to fragile desert vegetation.
- Pets are allowed (except in Boca Negra) but must be on a leash 6 feet in length or less, must be under the control of the handler at all times, and have their waste removed to a trash receptacle.
- Motorized vehicles (ATVs, motorcycles) are only permitted in parking lots.
- State firearms laws apply. The discharge of any weapon is prohibited. Target practice, sport shooting, traps and hunting are prohibited. The carrying or shooting of BB/air soft/pellet guns, sling shots or paintball guns is prohibited.
- All fireworks are prohibited.
- Camping is not permitted anywhere within the park.
- Please pack out any trash you may have with you during your hike.
- All physical and cultural objects (plants, rocks, animals, petroglyphs, and other archaeological remains) are protected by law.
- It is prohibited to excavate, remove, damage, or otherwise alter or deface any archaeological resource.
- Damaging or altering fences or signs is prohibited.

FOR ALL EMERGENCIES DIAL 911

To Report Violations Call:  
National Park Service  
505-899-0205  
OR  
City of Albuquerque  
Open Space Dispatch  
505-452-5206  
Open 7am to 6 pm

Park Hours:  
Visitor Center - 8 am to 5 pm  
Boca Negra Canyon - 8 am to 5 pm  
Rinconada Canyon - 8 am to 5 pm  
Volcanoes - 9 am to 5 pm

Petroglyph National Monument is jointly managed by the National Park Service and the City of Albuquerque

Don’t leave valuables unattended!