

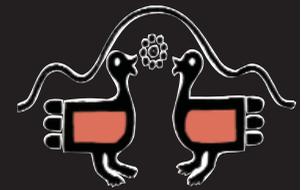


The Tuff Times

(Tuff-consolidated volcanic ash that forms Bandelier's cliffs and canyons)

Bandelier National Monument

Summer/Early Fall 2007 Edition



**Welcome
Bepowave
Ku wat TSE ho pa
Keshi
Bienvenidos**

Thanks to everyone for making our 90th Anniversary celebrations last year such a success! We are equally excited about the projects that we are working on this year. With rising concerns about global warming and environmental sustainability, we are working to make sure that Bandelier sets a positive example. Recycling of paper, cardboard, batteries, and all metals will continue. We are researching ways to replace some of the park vehicles with hybrid fuel vehicles. Los Alamos Country is working with us to set up public transit systems to Bandelier which will reduce the number of cars driven to the park. Solar panels are being installed on some of the park buildings. The visitor center will be renovated in 2009 following LEED guidelines to make it more sustainable. You are invited to help us with our efforts. If you have ideas for "greening"



Bandelier, fill out a comment form in the visitor center.

Darlene M. Koontz
Superintendent

Water is Life

By Park Ranger Cecilia Shields

The oldest memories of Earth are filled with Water
The oldest songs of Life were born of Water
Strong, Powerful,
Peaceful and gentle
Sculpting the Land with an artists' touch

A single droplet is Life
Rain Clouds,
Rivers, Creeks, Lakes and Springs
Morning Dew and Mist
Fog, Ice, and Snow
Puddles that gather after the storm
In all forms, Water is sacred, Water is Life

The Land, Plants and Animals know the oldest stories of Water

Water sustains us,
Water cleanses us,
Water gives us all we need to survive



Lower Falls, Photo by Sally King

Our ancestors learned the prayers, songs and ceremonies to honor Water,
Our ancestors learned to use prayers, songs and ceremonies
to bring blessings to the people

Like a clear, mirrored image on still Water,
We are the reflection of our elders,
our prayers, our songs and our ceremonies continue today

All Life depends on Water,
we are reverent and thankful

The oldest memories of Earth are filled with Water
The oldest songs of Life were born of Water

The Earth knows Water
It Rained and Snowed yesterday, it will Rain and Snow tomorrow,
And the Waters will flow
Strong, Powerful,
Peaceful and gentle
Sculpting the Land with an artists' touch
A single droplet is Life



Evening Primrose After A Rain, Photo by Sally King

Rain Clouds,
Rivers, Creeks, Lakes and Springs
Morning Dew and Mist
Fog, Ice, and Snow
Puddles that gather after the storm
In all forms, Water is sacred,

Water is Life

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Area Highlights

Bandelier Visitor Center

The place to start your visit to Bandelier is here. Rangers are available to provide information, trail advice, and wilderness permits. The free, 10-minute introductory slide show is shown throughout the day.

The museum features exhibits about the Pueblo people in the 1400s and in historic times. The bookstore includes a variety of carefully chosen titles related to the area, and proceeds come directly back to the park. The Main Loop Trail to the nearby archeological sites begins from the back porch. Open seven days/week; closed December 25 and January 1. Open 8 AM - 6 PM from Memorial Day weekend through Labor Day weekend. Hours are shorter during the off season.



Bandelier Visitor Center, NPS Collection

Bandelier Trading Company Gift Shop and Snack Bar

The gift shop features a colorful array of authentic crafts from throughout the Southwest, as well as souvenir items such as hats, shirts, and postcards.



Bandelier Trading Company Gift Shop, NPS Collection

They also carry utility items such as film, disposable cameras, plastic rain ponchos, and batteries. The Snack Bar offers a varied menu including local dishes as well as standards, snacks, soft drinks, and bottled

water. Open seven days/week; closed December 25 and January 1.

Main Loop Trail (Tyuonyi, Long House, Alcove House)

Beginning from the back porch of the Visitor Center, the Main Loop Trail leads to a fascinating group of Ancestral Pueblo dwellings directly up Frijoles Canyon. These are the only excavated sites in the park, providing a good opportunity to imagine what life was like here 700 years ago. The trail is paved and the first quarter mile is wheelchair accessible. Be sure to get the trail guide book; it is

available in English, Spanish, Japanese, French, German, Russian, Braille, and large print. About one mile, one hour. If you choose to, you can continue another 1/2 mile (each way) to Alcove House—a group of dwellings built in an alcove 140 feet above the canyon floor. You can reach the cave by climbing long ladders, or view it from the canyon floor.

Tsankawi

Tsankawi, a large unexcavated Ancestral Pueblo village, is located in a detached portion of the park about two miles north of White Rock along State



Ladder at Tsankawi, Photo by Sally King

enjoy expansive views of surrounding mountains and valleys. Closes at dusk. There is a guide book available on site. A \$12 Park entrance permit is required and available for purchase on-site or at the main entrance to the park.

White Rock Overlook

Standing on the observation platform, you can gaze down at the Rio Grande flowing by in the bottom of White Rock Canyon, over 1,000 feet deep, or look out over the vast panorama of the Jemez and Sangre de Cristo Mountains, the Española Valley, and the Caja del Rio. In White Rock, turn onto Rover Boulevard (at the Conoco Station on SR 4), left onto Meadow Lane, and left onto Overlook Road. Free admission.

Los Alamos Historical Museum and Fuller Lodge Art Center

The Historical Museum features exhibits on the history of the area, from the Jemez Volcano through the Ancestral Pueblo people, homesteaders, and the

Los Alamos Boys School, to the Manhattan Project and the Los Alamos National Laboratory. The neighboring Art Center showcases work of local artists; exhibits change throughout the year, showcasing various styles and media. Both facilities are located next to Fuller Lodge, a historic and distinctive log structure originally built for the Boys School, on Central Avenue near Ashley Pond. Free Admission.

Bradbury Science Museum

Named for Norris Bradbury, the second director of the Los Alamos National Laboratory; its exhibits highlight scientific activities here from the earliest days of the Manhattan Project to the present high-tech, cutting edge work. Located at the corner of Central Avenue and 15th Street in Los Alamos. Free Admission.

Valles Caldera National Preserve

Over a million years ago the huge Jemez Volcano erupted covering more than a hundred square miles with deep flows of volcanic ash. The distinctive canyon and mesa landscapes around Bandelier and Los



Elk at Valles Caldera, Photo by Sally King

Alamos resulted from this volcanism. The mountain collapsed, creating a caldera more than 16 miles in diameter. This caldera is now contained within the National Preserve, an 89,000 acre area which just came into public ownership in 2000. State Road 4 goes through a beautiful and impressive portion of the caldera, the Valle Grande. For information on how to access the Preserve, visit their website at www.vallescaldera.gov.

Pueblos
In the 1500s, people moved from the Bandelier area to villages along the Rio Grande. Today there are 19 pueblos in New Mexico. Taos, Picuris, San Juan, Santa Clara, San Ildefonso, Pojoaque, Nambe, Tesuque, Santo Domingo, San Felipe Cochiti, Jemez, Santa Ana, and Zia are all within about 80 miles of the park. Remember to be respectful when you are visiting. Follow the rules and regulations of the different Pueblos.

Free Programs

Main Loop Walk

Ranger-guided walks along the Main Loop Trail to Tyuonyi Pueblo are offered most days throughout the year, once in the morning and once in the afternoon (staffing permitting). The walk follows a paved path (partly wheelchair accessible) through Frijoles Canyon discussing the lifestyles of Ancestral Pueblo people. Walks last 45 minutes to one hour.



Ranger Guided Tour. NPS Collection

Evening Programs

Free evening programs are offered every Friday and Saturday night between Memorial Day weekend and Labor Day weekend. Sundays too, on holiday

weekends. All evening programs are given at the amphitheater at Juniper Campground. Program times vary depending upon the program topic. Check for this week's schedule at the visitor center.

Nightwalks

Nightwalks are a special evening interpretive program that allow visitors to view Frijoles Canyon in a very special way. This year Nightwalks are on Thursday nights starting at 9:00 PM in May, June, and July and at 8:45 PM in August and September. Reservations are required and there is an additional fee of \$6/adult or \$3/child or person with a federal senior/access pass.

Check at the visitor center for today's menu of events.

Programs for a Fee

Since 1997 Bandelier National Monument has been a part of the Recreational Fee Demonstration Program. As part of this program, Bandelier is charging an additional fee to provide services that otherwise could not be made available. For reservations, call (505) 672-3861 ext. 517.

Special Group Programs

Special guided walks for organized groups can be arranged. Costs vary depending on the details of the specific program. Arrangements can be made by calling (505) 672-3861 x 517.

Self-Guided Walking Tour of the Bandelier CCC Historic District

Available at the WNPA bookstore, this \$1.00 self-guided booklet takes you through the CCC Historic District of Bandelier National Monument highlighting the structures, intricate tin light fixtures, and fine wood carvings.

Programs for School Groups

Park Rangers offer grade-specific programs for school groups visiting Bandelier, and in the classroom.



Chipmunk. Photo by Sally King

If you would prefer to bring your class on a self-guided visit to Bandelier, you may also request materials from the Visitor Center. All groups travelling by bus must make group reservations by calling (505) 672-3861 ext. 534. Only one bus may be accommodated in the parking area at a given time.

Cultural Demonstration Program Schedule

Cultural demonstrations are presented just behind the visitor center. Craft demonstrations can be seen on the back porch of the visitor center while bread is baked in an horno just behind and to the west of the visitor center. Craft demonstrations and bread-baking are from 9:30 AM - 4:30 PM with an hour break for lunch.

Memorial Day Weekend

May 26 - 28 San Felipe pottery by Roger Candelaria

June 2-3

Santo Domingo Pueblo Jewelry/Flint-knapping by Harvey Abeyta

June 9-10

Jemez Pueblo Pottery by Andrea Fragua

June 16-17

San Ildefonso Pueblo pottery by Evelyn Naranjo

June 23 -24

San Ildefonso pottery by Florence Naranjo

4th of July Weekend

June 30th - July 1 - Jemez pottery by Dolores Toya
July 4 - Cochiti drums by Arnold Herrera



Sharon Naranjo-Garcia, Santa Clara Pueblo

July 7 - 8

Ohkay Owingeh artist Arlene Archuleta

July 14 - 15

Jemez Pottery by Josephine Toya

July 21 - 22

Santo Domingo turkey feather blankets by Darris Lovato

July 28 - 29

Hispanic tinwork by Ernesto Burciaga

August 4 -5

Santa Clara pottery by Sharon Naranjo-Garcia

August 11 -12

Ohkay Owingeh artists, the Lockwood family

August 18 - 19

Hopi-Tewa wood carver, Annjeannetta David-Baca

August 25 -26

Ohkay Owingeh artists, the Lockwood family

Labor Day Weekend

September 1 - 3 Santo Domingo Pueblo turkey feather blankets by Caroline and Amanda Lovato

On the Sundays of holiday weekends, Pueblo dance groups perform in the courtyard behind the visitor center. Check at the visitor center for details.

Traditional Bread-baking



Andrea Fragua of Jemez Pueblo

June 17 - TBA

July 2 - Josephine Toya of Jemez Pueblo

August 18 - Evelyn Naranjo of San Ildefonso Pueblo

September 30 - Amanda Lovato of Santo Domingo Pueblo

October 13 - Andrea Fragua of Jemez Pueblo

Ancestral Pueblo Farming: A Way of Life

By Park Archeologist, Rory Gauthier

Bandelier and the surrounding Pajarito Plateau are known for the beautiful, rugged, rocky landscape. It seems hard to believe that, for four hundred years, thousands of people were able to survive by farming in this scenic but inhospitable-looking area. To be successful here, farmers had to overcome many challenges. First was water, one of the most critical ingredients for successful agriculture, which is always a problem throughout the southwest. Farmers in the Bandelier region had to rely on an average of only sixteen inches of precipitation a year, with slightly less than half of that falling during the summer growing season. To make things worse, Pueblo farmers had to weather the periodic droughts that often afflict the region. Second, there is the shortness of the growing season. At this altitude, 6000-7500', early frosts will sometimes destroy entire crops, and frosts have been recorded in all months except July and August. Yet, despite these environmental problems, the Ancestral Pueblo people were able to succeed at farming in this agriculturally limiting environment.

How did they do it?

The Ancestral Pueblo farmers in what is now the Bandelier region were able to succeed by having access to a “special” soil and using several ingenious farming techniques:

Pumice soil

Some fifty-five thousand years ago, the Jemez volcano deposited a thick layer of pumice gravel across the Bandelier region, and even thousands of years later there were areas still covered by blankets of pumice. For farmers, the important quality of this pumice layer was its ability to absorb and hold moisture longer than other types. Pueblo farmers recognized its advantages and quickly settled in areas where it was found. However, a major drawback to using this strategy was that these soils quickly lose their nutrients, and must be left fallow for years before they can be farmed again.



Often hillsides were terraced. Using local stone, terraces were constructed on hill slopes. Terraces prevent soil erosion and slow surface runoff which allows moisture to soak into the ground. NPS Photo

4

Terraces

Pueblo farmers also built ingenious devices that would conserve ground moisture and prevent soil erosion. Often they built contour terraces and check dams – low alignments of stones laid perpendicular to a slope or natural drainage to slow runoff and hold soil that would otherwise wash away. The stones themselves also helped to preserve soil moisture, as their physical presence and the shade they cast slowed evaporation.



Grid gardens are found throughout Bandelier and the northern Rio Grande area. The lines of stone help to prevent soil erosion and also help conserve soil moisture. NPS Photo

Grid Gardens

Often “grid gardens” were constructed by placing rows of stones, partially buried in the ground, in grid patterns. Crops were then planted within the squares, slowing erosion and helping to retain soil moisture. Again, the stones themselves also added to the process. Some grid gardens are quite extensive; many cover several hundred acres. The interiors of the grids were often covered with a layer of pea to egg-sized gravel which further served to conserve soil moisture.

Exploiting differing micro-environments:

In the Bandelier area, the amount of rainfall an area receives is partially determined by elevation. The higher elevation, the more rainfall the area receives; however, higher elevations have a much shorter growing season. Farming in a lower elevation would usually ensure an ample growing season but crop failure from a lack of rainfall was always a possibility. Farmers most likely planted in several different environments, which would spread out their risks – if one field was destroyed by drought and one was destroyed by pests, a third field might produce a good crop.

Frequent moves

Another strategy used by Pueblo farmers was

moving frequently. Archeological surveys suggest that during drought periods, communities shifted to higher elevation areas, while settlements are found in lower elevations during periods of suitable precipitation.



Found adjacent to farming areas, field houses were used for shelter during the growing season. These are often temporary in nature and this example uses a large boulder for portions of the walls and ceiling. NPS Photo

Intensive tending of fields:

Field houses are found at most of the farming areas. Families apparently used these small structures for shelter to enable them to be close to their fields during the growing season. Here, they would carefully tend the fields, weeding and keeping pests, such as rabbits, raccoons, or birds, away from the crops.

In the mid- to late 1500s a severe drought occurred in the Bandelier area which most likely contributed to the people moving away from their settlements here. With an extended drought in addition to the depletion of soil nutrients from generations of use, farming had become more and more risky. By the end of the century, the local groups of Ancestral Pueblo people had moved down to the more reliable water source provided by the Rio Grande.



There are only a few areas in the Bandelier region where actual irrigation was practiced. One of the examples consists of a stone-lined irrigation ditch. NPS Photo

Summer - The Season of Nature's Bounty

Summer, oh what a glorious season. It's a time of nature's bounty, when all of nature seems focused on feeding, reproducing, and rejoicing. Bird songs



Pygmy Nuthatch, Photo by Sally King

fill the air, as mom and dad birds search diligently to fill the waiting mouths of hungry babies. Bird nests, built to protect their precious inhabitants, can be found in a variety of locations. Some birds, like Pygmy Nuthatches and Northern Flickers, spend days or even weeks excavating cavities in standing trees before laying their clutch of eggs. Hummingbird moms (dad hummingbirds don't participate in child-rearing) collect an assortment of plant materials and combine them with stolen spider



Plumbeous Vireo family, Photo by Sally King

webs to make tiny, but flexible nests that support the needs of their growing chicks. Last summer, one brave pair of Cordilleran Flycatchers constructed their nest atop a CCC light fixture at the visitor center. Park visitors were delighted to watch as this pair repetitively brought insects for their bundles of joy.

Summer is not just for the birds. Bandelier National Monument, with its wide range of elevations and microclimates, enjoys a flowering season that begins by March and continues until the first heavy frost (usually in late October). Some flowers like Blanketflower, Western Wallflower, and Paintbrush have wide distribution throughout the park and a fairly long bloom season. Others must be sought out by a keen eye in the proper place and at the right time. These vibrant but short-lived flowers include Little Red Columbine (May), Cane Cholla (late May – mid June), Butterflyweed (June), Pincushion cactus (July – early August), and Chamisa (late summer – early fall). At any given time during the summer, it is the season for many beautiful flowers. Ask at the visitor center desk to discover what's in season now.

Flowering plants attract a variety of insects. The



Pincushion Cactus, Photo by Sally King



Queen Butterfly, Photo by Sally King

most striking of these are the butterflies. Bandelier hosts a colorful assortment of these gossamer-winged beauties, including Monarchs, Queens, Swallowtails, and Hairstreaks. Some are large with wingspans up to 4.5 inches while many are very small with wingspans of less than three-quarter inches. Watch for them as they feed on flowers. Some, like the Admirals, will sit on the low limbs of trees along trails watching for competitors or mates. They will often fly out at you as you approach. Don't worry. They don't bite.



Tarantula Hawk, Photo by Sally King

Another interesting insect found in Bandelier is the tarantula hawk. Females of this orange-winged insect must find a tarantula upon which to raise their young. They fly close to the ground searching for their prey. Once found a tarantula hawk must battle the tarantula delivering a paralyzing blow. The

immobilized tarantula is then dragged back to a burrow where it becomes fresh food for emerging tarantula hawk larva.



Coyote, Photo by Sally King

Summer at Bandelier is an excellent time to see nature in all its true-life glory.

Where Can I Take My Dog?

To protect park wildlife from disease, parasites, and disturbance, pets are not permitted in most areas of Bandelier National Monument. Pets are allowed only in the campground, picnic area, and main parking lot and must remain leashed (leash under 6 feet) at all times. Pets are allowed on Department of Energy (DOE) lands that are posted as open for public use (see map). The entire area, including the parking areas, is closed after dark.

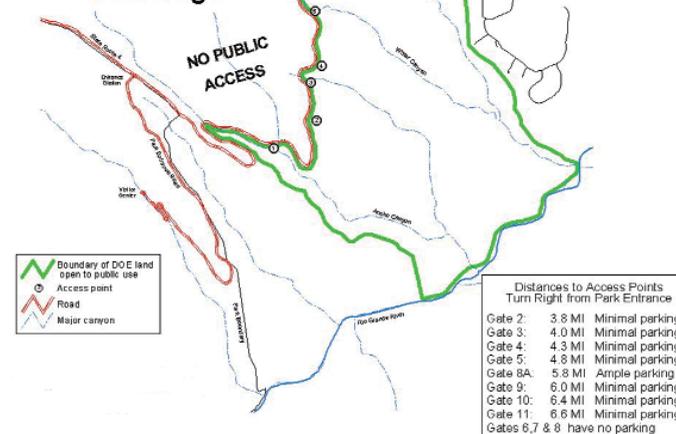
-Pets may not be left unattended (except in a vehicle) and may not be tied to an object (except when staying in the campground).

-Pets left in vehicles must be given enough ventilation to ensure their safety.

-It is the responsibility of the person accompanying the pet to clean up after it. All pet excrement must be picked up and disposed of properly.

Map of DOE Lands

Open to **Hiking with Dogs**



New Program Allows Students to Share Their Heritage

By Park Ranger Cecilia Shields

Every year millions of visitors to our national parks, monuments, and historic sites see natural wonders and places where history was made. They see exhibits and hear presentations from National Park Service staff trained in these topics. However, visitors rarely have an opportunity to hear teachings about the plants, animals, and special places in and around the parks from the point of view of the culture of the people who first lived there, and from a member of that culture group.

The "Place and Native Voice Program" (PNV) was established to create this opportunity for the NPS to culturally enrich its interpretive programs by having staff members from cultural groups indigenous to parks. And it's also a chance for participating Native college students to receive valuable professional and academic training on how to convey the environmental wisdom of their cultures to those visiting places like Bandelier.

The PNV has both a federal employment and academic component. Successful applicants to the PNV will be hired as paid summer interns and be trained by the park interpretive staff to prepare and present programs to the visiting public that incorporate traditional knowledge of places, plants, and animals that interns have learned from elders and family members within their tribe. Based on this training, on the presentations they make, and on other coursework from the college at which they are enrolled, interns will receive graduate internship credit in public administration, and a certification of PNV completion.

This year, Bandelier has selected Donovan Candelaria of San Felipe Pueblo as the PNV intern. Donovan and his family have been part of the Cultural Demonstration Program at Bandelier for a number of years. Through the demonstration program, the Candelaria family has provided valuable insight into Pueblo culture and the connections the

modern Pueblo people have with places such as Bandelier. As a talented potter, Donovan has participated in this program since he was very young.



Donovan Candelaria, Photo by Sally King

Special Events 2007

First Annual Junior Ranger Day

On Saturday, April 28, 2007 the first-ever National Junior Ranger Day was celebrated. Activities included special worksheets, patches, and certificates at Bandelier as well as a special Webranger program on-line. Local schools participated, learning about over 60 national parks across the country by developing pen pal relationships with Park Rangers at those sites. Flat Stanleys, paper cut-out children, were sent to each park, where rangers ensured their two-dimensional visitors had a fun and educational visit. Upon his return to the school, students learned about park resources through logbooks, photos, and

postcards that were sent home with Flat Stanley.



Second Graders at Pinon Elementary with their Flat Stanleys, NPS Photo by Lynne Dominy

Second Annual Fall Fiesta



Bill Lockwood, Okay Owingeh Pueblo artist

On September 30, 2007 Bandelier will host its second annual Fall Fiesta. Last year's Fall Fiesta was on October 1st. It provided a venue for a number of local Pueblo craftspeople to showcase their works, live wildlife demonstrations, and a variety of other activities including baking

bread in an horno and making apple cider in an apple press. Participants in the Fiesta had not only the opportunity to demonstrate their skills but also to sell their creations. Twice during the day a Pueblo dance group performed in the courtyard behind

the visitor center while the warm autumn sun shone from a turquoise sky. Santa Fe Raptor Center brought an assortment of hawks, falcons, and owls that were rescued after being hit by cars. Visitors delighted in this opportunity to see wildlife up-close and to snap a photo of a Red-tailed hawk, the yellow leaves of a turning Boxelder making a colorful background. The enticing smells of baking



Rory Gauthier, Park Archeologist/Flint-Knapper

bread beckoned many a visitor to sample warm bread, fresh-from the outdoor horno. At another booth, Park Archeologist Rory Gauthier, a skilled flint-knapper, shared this disappearing art with visitors. Expectations are that this year's fiesta will be equally fun and educational.

Teacher-Ranger-Teacher Program

The Teacher to Ranger to Teacher (TRT) Program offers teachers a chance to spend the summer working, and often living, in a park. They perform various duties depending on the needs of the park, including developing and presenting interpretive programs to the public, staffing the visitor center desk, developing materials for the park, or taking on special projects. In 2006, 22 National Parks had teachers working in the traditional green and gray uniform.

Last summer, TRT employee Josh Waldman from the Pojoaque School District worked on the VIEWS program, an interactive computer program that links NPS archeological sites throughout the Southwest and will be used by schools. During the school year, these teacher-rangers bring the park into the school by developing and presenting curriculum-based lesson plans learned through their summer experience. This can include field trips to specific park areas targeted to enhance the class's current studies.

Bandelier will host another TRT position this year. This summer elementary teacher Stella Carroll from Aldine School District in Texas will build sections of the park's website for teachers and children.



TRT 5th Grade teacher Tammy Hinkley with her class at Alamo Boundary Trail.

Focus on the Frijoles Rim and Canyon Trail - 13 mi loop, 6 - 8 hours

The Frijoles Rim and Canyon Trail is a great choice for hiking in Bandelier's backcountry. The reasons: a 13 mile loop that both begins and ends at the park visitor center (no worry about vehicle transportation after a long walk), a hike that includes both mesatop views and opportunities to see archeological sites as well as park wildlife and wildflowers, and no exceedingly difficult climbs or descents along the trail's length.

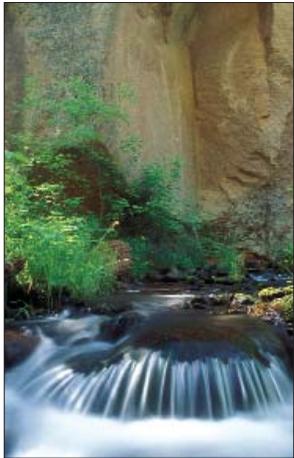


Frijoles Rim and Canyon Trail, Photo by Sally King

Most people follow the trail in the same direction, up either the Frijolito Trail (which switchbacks its way steeply out of Frijoles Canyon and past an Ancestral Pueblo village, Frijolito Pueblo) or the Long Trail (which gently climbs along the slope of the canyon wall), along the mesa rim, and then back to the visitor center via the bottom of Frijoles Canyon. There is a practical reason for doing this: in mid to late summer traveling this direction gets you

off the dangerous mesatops well before the thunderstorms begin booming their way down from the Jemez Mountains.

Poison ivy and stinging nettle are common in the canyon. Long pants or some kind of leg protection are recommended. A walking stick may be handy, especially coming down Frijoles



Upper Frijoles Canyon, Photo by Dale Coker

Canyon where the trail crosses the creek 27 times. Carry plenty of water (4 quarts of water/ person). Treat water from Frijoles Creek before drinking it and watch for snakes. In early summer, ticks can be worrisome hitchhikers so it is wise to do a quick full body check after hiking in the canyon's lush environment.

SEASONAL HIGHLIGHTS

Early Summer (late May – early June)

Rocky Mountain clematis, with its pale pink blooms, and Little Red Columbine are abundant on the slopes and in the side canyons of Upper Frijoles Canyon, where the trail begins its slow descent to the canyon floor. Each twist and turn of the trail seems to



Little Red Columbine, Photo by Sally King

reveal new wonders of nature's bounty. Ferns, Canada Violets, Big Golden Pea, and Valerian each find their niche in these varied micro-climates. Butterflies and bees, attracted by the availability of rich nectar, fly from flower to flower. The raucous cry of a Steller's Jay and the rap, rap, rap of a Northern Flicker excavating a home for its expanding family fill the air. The warm sun and cool pockets of air under towering trees makes one want to hesitate at least a moment to enjoy the solitude of this place.



Northern Flicker, Photo by Sally King

Mid to Late Summer (late June – August)

Bandelier gets much of its moisture from winter snows or the heavy, but isolated rains of summer afternoon thunderstorms. These waters also feed Frijoles Creek, which begins as springs in the Jemez Mountains and ends by joining the Rio Grande some dozen miles below. Along the way, an oasis of vegetation sinks roots into the rich sediments and lift blossom-laden heads to the filtered rays of the sun. Here it is not unusual to find a bevy of Great Spangled Fritillary butterflies partying amongst the flowering cow parsnips or a chipmunk with fat cheeks bulging from collected food.



Great Spangled Fritillaries, Photo by Sally King

Early Fall (September – early October)

Warm daytime temperatures and cool nights make this time of year a favorite for longer hikes. Fall hosts an abundance of clear, turquoise skies and the first hints of autumn color as Virginia Creeper and Poison Ivy are liberally painted with red, yellow, and green. Mesatops boast their own colorful palette as the abundant gold of blooming chamisa contrasts with the deep purple of asters.



Poison Ivy, Photo by Sally King

Junior & Deputy Rangers

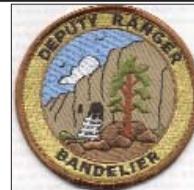
START YOUR COLLECTION TODAY!!

Bandelier National Monument has a Junior (preschool through eighth grade) and a Deputy (ninth grade and up) Ranger program. Junior Rangers can help a squirrel find his food, recreate rock art with a pencil



Junior Ranger Patch, NPS Photo

and paper, describe the life of an animal using words and pictures, and help keep the park clean by picking up trash. Deputy Rangers assist Bandelier by thinking of creative new ways to prevent graffiti and learn to identify plants unfamiliar to them. Both receive an embroidered Bandelier patch and a colorful certificate. The program is free. Children need



Deputy Ranger Patch, NPS Photo

parental approval to participate. If you are interested, inquire at the Visitor Center desk.

Many National Park Service sites across the country offer Junior Ranger programs. Some are free and some charge a minimal fee. All allow you to learn more about the park you're visiting, so feel free to participate in as many Junior Ranger programs as you can. Also check out www.nps.gov/webrangers where you can become a junior ranger on-line.

Friends of Bandelier

Who are we?

The Friends of Bandelier are private citizens who love the monument. A Board of Trustees governs the activities under a formal Memorandum of Agreement with the National Park Service. Park rangers request help on special projects and they try to meet the needs. The membership stays informed of Friends' activities, and of key issues affecting the Monument, through letters, field trips, and announcements in the local newspapers. The mission of the Friends of Bandelier is to provide assistance to Bandelier National Monument. You are invited to join the Friends. Dues start at \$15 per year. (and gratefully accept more). Send to P.O. Box 1282, Los Alamos NM 87544.

What do we do?

The Friends of Bandelier provide support for:

- *Handicapped Access
- *Traditional Crafts
- *Education
- *Special Projects such as trail maintenance
- *Archeology
- *Visitor Amenities like the visitor center water fountain
- *Scientific Research
- *Publications, including this newspaper



Cochiti Storyteller purchased by the Friends of Bandelier for the park's museum collection.

Join the Friends of Bandelier by sending this information with your membership fee or donation to:

Friends of Bandelier
P.O. Box 1282
Los Alamos, New Mexico 87544

annual \$15 _____
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Further details concerning the Friends of Bandelier can be found at www.friendsofbandelier.org.



Abert's Squirrel, Photo by Sally King

HELP KEEP BANDELIER'S WILDLIFE WILD

The wildlife at Bandelier is very, very cute and extremely experienced in begging and scavenging. Please don't give into temptation. Don't feed them. Put all food in a safe place, where animals can't get into it. Don't leave

food unattended. Ravens have been known to tear into plastic bags left in the open back of a pickup truck. Clean up after yourselves. Put all food waste into the bear-proof trash containers. Human food can be hazardous to wildlife and fed wildlife may pose a threat to people.

Western National Parks Association

Western National Parks Association (WNPA) was founded in 1938 to aid and promote the educational and scientific activities of the National Park Service. As a non-profit organization authorized by Congress, it makes interpretive material available to park visitors by sale or free distribution. All net proceeds support the interpretive and research programs of the NPS. For more information about WNPA or memberships log onto www.wnpa.org. Join WNPA and support the preservation of your national heritage.



WNPA Bookstore Employee, Cecilia Burciaga

Volunteers

The National Park Service Volunteers-In-Parks Program (VIP) was authorized by Public Law 91-357 enacted in 1970. The primary purpose of the VIP program is to provide a vehicle through which the National Park Service can accept voluntary help and services from the public. The major objective of the program is to coordinate this voluntary help so as to be mutually beneficial to the National Park Service and the volunteer. For more information, visit

8 <http://www.nps.gov/volunteer> on the Web.

United States Department of the Interior
National Park Service
Bandelier National Monument
15 Entrance Road
Los Alamos, NM 87544-9508

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