

The Post



DEVILS

POSTPILE

NATIONAL

MONUMENT

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Meteorological Station Arrives

New unit will provide real-time data and reveal trends

Until recently, accurate weather and climate data for the Middle Fork of the San Joaquin and Devils Postpile area were difficult to obtain. A combination of snow pack surveys beginning in the 1930s and regional weather station data provided an approximation of information, but gaps in historical records and less sophisticated methods of information gathering persisted. This shortfall of accurate weather measurements--and the necessity it created for a more advanced source of long-range weather monitoring at the Postpile--came to an end last August with the installation of a new meteorological or "met" station.

A collaborative effort led to the met station's arrival at the Monument. Funding and technical support was provided by the Scripps Institution of Oceanography at the University of California, San Diego, the National Park Service, the U.S. Geological Survey, and the California Department of Water Resources as well as the State of California's Public Interest Energy Research program, which supports energy-related environmental research. While energy and weather may seem unrelated topics, they are closely intertwined. As Douglas Alden, a Development Engineer with Scripps explained, "The project's objective is to establish long-term hydro-climate monitoring so that seasonal patterns and fluctuations may be established." Hydroelectric power is highly dependent on water supplies; therefore the data gathered from the met station will prove useful for managing California's energy resources in the future. The station, Alden continued, "offers implications for the way water resources are distributed and managed," allowing for more effective applications not only in terms of energy consumption, but agricultural and household use as well. This will result in a net gain for California in conservation of vital water resources.

In addition to measurements like air temperature, barometric pressure, relative humidity, surface radiation, and precipitation, the new station is equipped with snow pillows -- devices used to measure the snow's weight and depth. The unit also features two transmitters, one that relays data over a phone line while the other sends it via satellite. The phone line, described Alden, "has the potential to send information hourly, which is closer to being real-time data." The more comprehensive and accurate the data, the better managed water resources in California can be.

Comprehensive coverage is achieved one weather station at a time. The new installation joins a network of several other met station sites throughout the Sierra Nevada range. "The Postpile station fills a critical void in the upper San Joaquin basin," explained Dan Cayan, a Climate Researcher at Scripps and the U.S. Geological Survey. "Collaboration is a key ingredient in maintaining this project over the long term." Observations made throughout the Sierra Nevada, including the Postpile, will be invaluable for climate studies, particularly in identifying and understanding climate change.

Climate research, and more specifically, global climate change, has received increasing attention from both the scientific community and the media in the last few years. When one takes into account the latest statistics, it is easy to understand why. According to the IPCC (Intergovernmental Panel for Climate Change), in the last century, the earth's mean surface air temperature has risen by approximately 1 degree Fahrenheit (0.6 degrees Celsius). The Sierra Nevada's average temperature has increased by 1 to 2.5 degrees Fahrenheit (0.6 to 1.5 degrees Celsius) in only half the time. While a one degree difference may not seem significant, it is when one considers that there is only a 10 degree difference that separates today's climate from that of an ice age one. In fact, the years 1990, 1995, 1997 were the warmest years on record over the course of the past six centuries. Explained Alden, "On average, climate models are predicting longer and hotter summers," which could mean an increase in fire intensity and droughts.

With its elevation variances, diverse habitats, and isolated areas, the Sierra Nevada is particularly sensitive to these changes. Glacial retreat has been observed throughout the mountain range, with 497 glaciers and perennial ice features affected. The trend of late has been warmer, milder winters with an earlier spring melt. By the end of the century, the San Joaquin River is predicted to experience peak stream flows thirty days earlier than its current run-off period. This could significantly impact a state whose economy is largely driven by agriculture: an activity that remains highly dependent on water supplies. A drier climate with warmer temperatures may result in grasslands and shrublands overtaking historically coniferous zones. Native birds such as woodpeckers and chickadees may alter their summer and



Frank Gehrke, Chief of the California Cooperative Snow Surveys Program, installs the satellite connection for the new unit.

winter ranges in response to vegetation alterations.

Environments and ecosystems will change, as they have in the past, so we should anticipate and prepare for it. Since current changes are human-caused, people and parks can play a significant role in mitigating the ongoing effects. With so much at stake -- be it California's agricultural potential, the ability to provide energy on a reliable basis, or the State's unique wild places and wildlife it harbors -- monitoring of the region's weather data remains critical. The new met station will provide further insight into the seasonal ebb and flow of the area's climate. Whether information gathered is applied to research on Sierra Nevada hydrology, statewide weather patterns, or global climate change, Devils Postpile's met station will supply crucial information and inform resource management strategies.

For the latest met station weather data, please visit the following website: http://meteora.ucsd.edu/weather/observations/sio_other/sites/stn_32-2.html

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Experience Your America!



A Message from the Superintendent...

Welcome Visitors!

While enjoying the natural beauty of the Monument, please take a moment to appreciate the cultural history of the area and the importance of the 100th Anniversary of the Antiquities Act and how it shaped the future of Devils Postpile.

One hundred years ago in 1906, progress occurred in protecting America's natural and cultural resources that were being ravaged by widespread looting. The passage of the Antiquities Act by Congress legislated a President could designate National Monuments, defined as "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest," from public lands owned by the federal government. Because it took an Act of Congress to designate a National Park that often required a slow process of negotiations, the Antiquities Act could prevent possible irreparable damage that may have occurred during deliberations.

The timing of this legislation was critical to the future of this area, which, at that time, was immersed in stormy struggles over its fate. As in many other parks that were designated near the turn of the century, pressures to remove the protections that a Park endowed were widespread. In this region, mining, logging and hydroelectric interests had removed more than 500 square miles from Yosemite National Park in 1905. The area included in this removal extended from the Minarets down to the upper Middle Fork of the San Joaquin River as well as the Postpile and Rainbow Falls. With its removal from park boundaries, the acreage in question lost its protection from Yosemite.

Fortunately, the vision of dedicated citizens resulted in the designation of this National Monument in 1911. Additionally, in the first ten years of the Antiquities Act, thirty other monuments were designated throughout the United States. However, several parks still faced an uncertain future, thus Congress recognized that a greater sense of management direction was needed if parks were to survive. In 1916, the Organic Act established the National Park Service to preserve these areas "unimpaired for present and future generations."

The vision of past generations created the National Park System that inspires our present generation. Our mission is to carry on this legacy so that present and future generations will continue to enjoy our national treasures "unimpaired for future generations."

- Deanna M. Dulen, Superintendent of the Monument



Why the Need for Shuttle Buses?

Devils Postpile National Monument and the Reds Meadow Valley are only accessible by vehicle through a steep and winding road (Reds Meadow Road). For the first two and a half miles, the road is only single-lane with sporadic turnouts. Until 1978, the route was unpaved. This discouraged enough visitors to keep the area free of congestion and other related problems. When the road was paved to reduce dust, however, vehicle trips into the valley increased as a result of improved accessibility. Due to a shortage of parking spaces, the valley was unable to accommodate the number of cars driving down the road.

Concerns over visitor safety, traffic congestion, significant resource damage, limited parking capacity, and the quality of the visitor experience in the valley compelled the Inyo National Forest to implement a mandatory shuttle bus system in 1979. The shuttle bus has been in operation for 27 years. Revenues generated through passenger fares are used to operate the system. Under the new Federal Lands Recreation Enhancement Act, passed by Congress in 2005, the Reds Meadow Transportation System was designated as an expanded amenity fee site. While Golden Passports and National Park Passes are still valid for standard amenity sites, they are no longer accepted for expanded ones which include items like transportation systems.

From mid-June through September, the shuttle operates from 7:00 am to 7:30 pm daily, during which time day users to the area are

required to take the bus into the valley. Visitors driving in before or after these hours, who are camping, who are staying at Reds Meadow Resort over night, hauling stock trailers, bringing in small watercraft for use in the lakes, or who can provide proof of physical handicap are permitted to drive their personal vehicles on the road.



The shuttle system has been effective at limiting the number of vehicles on the road, reducing traffic congestion and accidents, as well as alleviating resource damage while allowing more people to experience the beauty of the valley. Without it, vehicles entering the valley on a daily basis would need to be limited due to a significant lack of parking.

Monument, Forest, or Wilderness?

While there are two land management agencies in the vicinity of Devils Postpile, there are three different kinds of land.

The Monument is part of the National Park Service, an agency of the Department of Interior, which strives to preserve pristine landscapes, as well as natural and cultural resources. Land outside of the Monument belongs to the Inyo National Forest, part of the Department of Agriculture. The Forest Service manages land under the concept of multiple use, providing services and commodities that may include lumber, grazing, minerals, and recreation.

Both of these agencies also manage wilderness areas. For example, parts of Devils Postpile National Monument and the Inyo National Forest are designated as the Ansel Adams and John Muir Wilderness areas. Monuments, forests, and wilderness areas may incorporate different rules to accomplish their management goals. Be sure to check with a Park Ranger to determine what activities are permitted in different areas.

Partners in Parks

Sequoia Natural History Association This non-profit membership organization provides support for interpretation and sells books and other educational materials at the Ranger Station. This year's printing of The Post was entirely funded by SNHA. (559) 565-3759 / www.sequoiahistory.org



California Geographic Alliance The Alliance helps teachers prepare children to embrace a diverse world, succeed in a global economy, and steward the planet's resources. It also funded and supported the educational activities in this newspaper.



Friends of Devils Postpile Created in 2001 with the support of the Sequoia Fund, this organization is dedicated to supporting the care of resources, interpretive programs, and exhibits.

Yosemite Conservation Corps, California Conservation Corps, and the Student Conservation Association Every year, these groups provide labor and funding to assist in important trail work, facility maintenance, resource management, and visitor services.

National Park Service The agency oversees all aspects of this Monument. Park Rangers provide services including a Ranger Station, educational programs, and emergency response. Additionally, the NPS maintains all facilities and park resources. www.nps.gov



Did you know?

Approximately fifty-five percent of all columns in the Postpile formation are six-sided.

Listening to the Land

Soundscape research reveals unique resource worth protecting

The distant call of a great horned owl, the thundering of a waterfall, the cry of a far off coyote, the wind singing through the pines...

Natural sounds and natural quiet are a valued resource at Devils Postpile National Monument. They are just as important as the native plant and animal communities and unique geological formations in the area.

Natural sounds and natural quiet comprise part of a park's *soundscape*. The term soundscape refers to the total acoustic environment in a particular area, including sounds people experience. This consists of both natural and human-caused sounds. The natural soundscape is managed as a park resource with a truly unique and inherent value, and as an important element of the National Park experience. As you explore Devils Postpile, take some time to listen to and enjoy the Monument's unique soundscape.

The Organic Act of 1916 states that National Parks were established "to conserve the scenery, the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The soundscape of a National Park, like water, scenery, or wildlife, is a valuable resource that can easily be degraded or destroyed by inappropriate sounds. As a result, soundscapes require careful management if they are to survive unspoiled for years to come.

So how do non-natural sounds affect Devils Postpile National Monument? Airplanes, cars, buses, boom boxes, car alarms, park operations, motorized equipment, and vehicles all create noise that may compromise a visitor's experience. These sounds carry easily, and can be heard a fair distance away.



Soundscape researchers inspect equipment during a ski patrol last winter.

Inappropriate soundscapes also affect the wildlife community. For example, studies have shown that songbirds that live in noisy places must sing louder than areas that are quieter. Birds forced to sing at a higher volume have to expend increased levels of precious energy to attract a mate or warn of predators. Acoustic ecology is an emerging science, and we are just beginning to understand that the acoustic niche of many wildlife species' vocalizations have an interconnected relation to each other. Think of it as the "orchestra of nature."

As visitation to parks has increased dramatically in the past 25 years, the effects of noise and the significance of a natural soundscape have become more apparent. Between 2005 and 2006, the National Park Service conducted acoustic monitoring within the Monument to determine the nature of its soundscape. The results from the study will provide park managers with information to better manage Devils Postpile's soundscape, as well as to ensure these important resources are left "unimpaired for the enjoyment of future generations."

For more information about the Natural Sounds Program, visit www.nature.nps.gov/naturalsounds.

Keeping Wildlife Wild...

Many people visit National Parks to enjoy wildlife viewing. It is a rewarding experience to see wild animals in their native environment. It is also our duty to observe wildlife responsibly. And while some animals may appear friendly and approachable, it is important to remember that these animals are wild and can still be dangerous. Treat all wildlife with caution and respect. We can safeguard the welfare of animals by never feeding or approaching them, for this will help ensure they will continue foraging for natural food in natural areas.



...And Being Bear Aware!

Seeing a bear in the wild is usually a memorable experience at Devils Postpile. Bears, however, are commonly sighted in human areas, usually in search of a free meal. They soon learn to identify coolers, bags, and cans by smell and appearance. Once they have located the scented items, little deters them—even the seemingly impenetrable metal of a car door.

It is a pattern that is difficult to break. Bears remember that human areas provide food rewards, and it is a challenge to return them to their natural diet. These bears then begin to lose their natural fear of humans and may become aggressive during an encounter. Remember, a fed bear is a dead bear. So what can we do to help the bear situation?

In Campgrounds:

- Proper food storage is required both day and night in the campground. Place all scented items (food, toiletries, etc.) in the bear-resistant food lockers provided.
- Keep a clean camp; give no reasons for bears to investigate.

While Day Hiking:

- Use the bear-resistant food locker next to the Ranger Station.
- Dispose of all refuse in the bear-resistant trash cans and dumpsters.

What to do if you encounter a bear:

- If you see a bear while hiking on the trail, make some noise and back up slowly; give the bear some space and the option to leave the area.
- If a bear is sighted in a campground, make lots of noise (clap, yell, bang pots) and stand together in a group if possible. Report all bear sightings to a Park Ranger.

For more information about bear awareness, please visit www.SierraWildBear.gov as well as www.KeepMeWild.com.

The Enduring Resource of Wilderness

Recognizing a Fundamental Experience

"I only went out for a walk, and finally concluded to stay out till sundown, for going out, I found, was really going in." So wrote conservationist John Muir, noting the connection between wild places and the inner-self.

Wilderness means different things to different people, but for many it is a special resource. Wilderness values are nearly unlimited, including ecological, recreational, scientific, historical, inspirational, and educational.

In 1964, Congress enacted landmark legislation that permanently protected some of the most natural and undisturbed places in America. President Lyndon B. Johnson signed the Wilderness Act into law on September 3, 1964, "to secure for the American people of present and future generations the benefits of an enduring resource of wilderness."

Defined by the Wilderness Act of 1964, wilderness, "in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." The Wilderness Act goes on to describe wilderness as a place "retaining its primeval character and influence" where there are "outstanding opportunities for solitude."

Over ninety percent of Devils Postpile National Monument is designated wilderness, making it an excellent area to explore. To learn more about wilderness areas in the Sierra Nevada go to: www.sierranevadawild.gov.

Wilderness Permits and Regulations

Wilderness permits are required for all overnight backcountry trips adjacent to Devils Postpile National Monument. Overnight backpacking is not permitted within the Monument itself. Permits are available at the Devils Postpile Ranger Station, the Mammoth Lakes Ranger Station, or from the Inyo National Forest's

Wilderness Permit Office at (760) 873-2485. Trail quotas are in effect from May 1 through November 1 for the John Muir and Ansel Adams Wilderness areas. For more information about wilderness permits, please visit: www.fs.fed.us/r5/inyo/recreation/wild.

While we have many opportunities to recreate in the wilderness, we also have the responsibility to help protect these special areas. Educate yourself and your group on proper wilderness ethics and regulations. Follow these simple guidelines to help "Leave No Trace" during your backcountry visit:

- Bear-resistant canisters are mandatory for overnight travel in most of the Ansel Adams and John Muir Wilderness areas. They are available for rent at all ranger stations and most sporting good stores.
- Stay on designated trails to prevent erosion of slopes.
- Pack out everything you pack in.
- Always camp on durable surfaces, at least 100 feet or more away from meadows, streams, and lakes.
- Bury human waste at least 6" deep and 100 feet away from campsites, water, and trails.
- Limit group size to no more than 15 people.

For more information about backcountry ethics and the Leave-No-Trace Program, visit www.lnt.org.



Did you know?

Mice have been heard on sound recordings drumming their feet on the ground to warn of danger.

Discover Day Hiking!

There are lots of places to explore, both in and out of the Monument. Here are a few suggestions to help you make the most of your visit:

Devils Postpile

Take a short walk (0.4 miles) to the base of this unique geologic formation. A short loop trail at the Postpile leads you to the tops of these vertical columns for a birds-eye view of the area.

Soda Springs

This is a good sidetrip on the way to the Postpile or a short walk (0.3 miles) from the Ranger Station. These highly carbonated mineral springs are evidence of the volcanic activity in the area.

Minaret Falls

A moderate 1.5 mile hike leads to the bottom of this large cascade located along the Pacific Crest Trail. You may have to cross a number of streams along the way, so be prepared.

Rainbow Falls

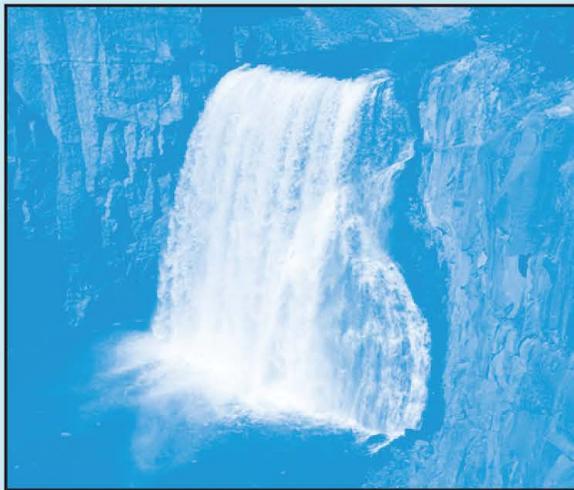
Walk one mile from the Rainbow Falls trailhead (Bus Stop #9) or 2.5 miles from the Ranger Station (Bus Stop #6) to visit the 101-foot waterfall. By starting at the Ranger Station and ending at the Rainbow Falls trailhead, a convenient 3.8 mile loop can be made. Bring plenty of drinking water and be sure to read about the Rainbow Fire at the first viewpoint.

John Muir Trail

This trail offers great views of the Postpile from the west side of the river and is easily accessible from the Ranger Station. This may be a good option if you are looking for a more challenging day hike.

Important Safety Tips:

- Avoid climbing on wet, slippery rocks in areas near water. Swimming is not recommended due to fast currents and cold temperatures.
- Heat exhaustion is a real threat in the height of the summer. Carry and drink plenty of water while hiking. Bring along snacks as well.
- Sunscreen and a hat are recommended. Some parts of the Monument offer little shade, including the trail to Rainbow Falls.
- Know your limits and avoid over-exertion. Acclimate yourself gradually to strenuous hikes and to the higher elevations of the mountains.
- Get a map of the area and trails you plan to hike, and avoid hiking alone. Tell someone your planned route and return time.
- Stay on established trails and observe designated overlooks.
- Check the Ranger Station and bulletin boards for current maps and park information



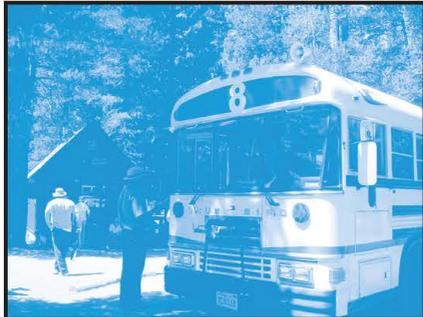
Rainbow Falls

Starkweather Trail

This steep but scenic hike follows part of the old Starkweather road from the top of Minaret Vista down to Starkweather Lake (Bus Stop #2). Stunning views of the Minarets make this 2.5 mile (one-way) hike worthwhile.

Agnew Meadows Wildflower Walk

Best enjoyed at the peak of the wildflower season (mid-June through the end of July), this short 1/2 mile loop trail (Bus Stop #1) winds its way along easy terrain through a variety of impressive flowers.



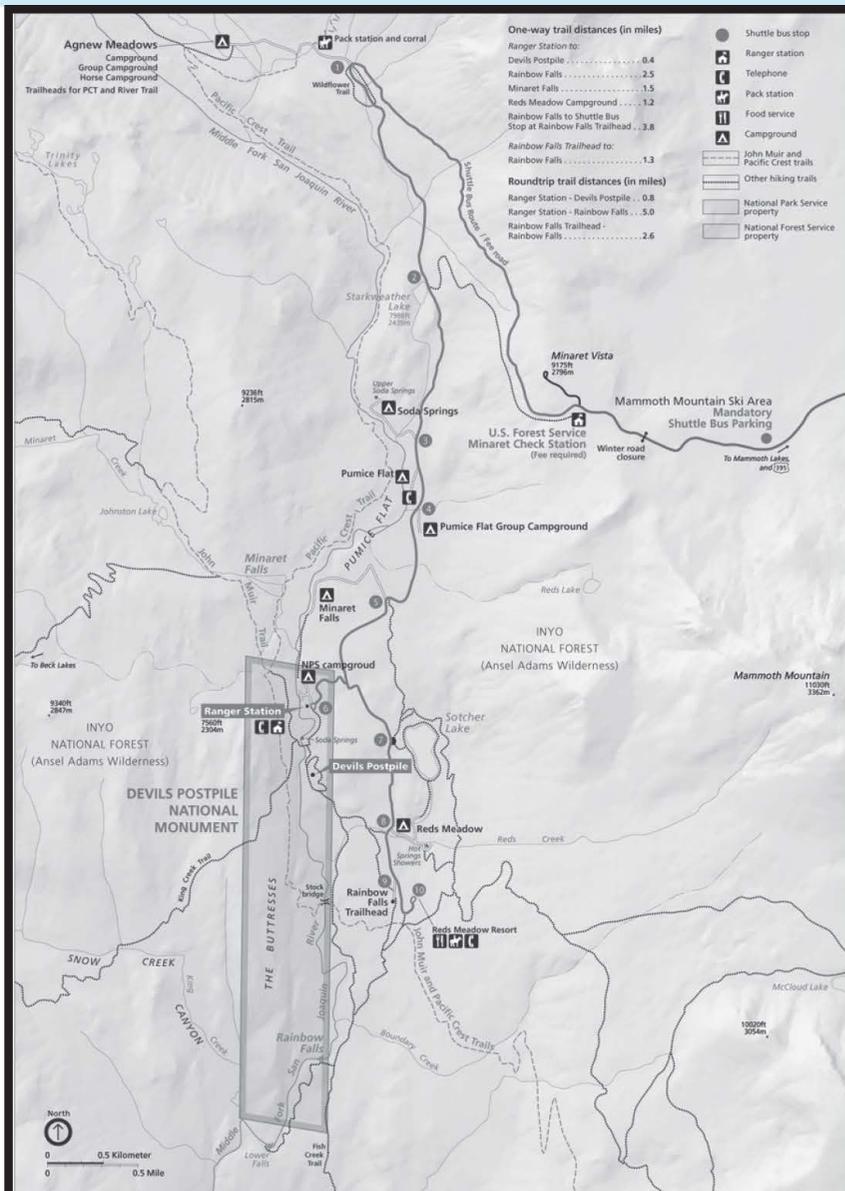
Shuttle Information

The mandatory shuttle bus runs every summer season from mid-June through the end of September. The cost is \$7.00/adults and \$4.00/child. Golden Passports and National Park Passes are not accepted. Buses run with a frequency of every 20 or 30 minutes from 7:00am to 7:30pm daily.

For More Information...

Visit our website www.nps.gov/depo or write us at:

Devils Postpile National Monument
P.O. Box 3999
Mammoth Lakes, CA 93546
(760) 934-2289



Regulations

The resources here belong to everyone. Please help protect and preserve the Monument by following these regulations during your stay.

Proper food storage is required for both day users and those staying overnight. Bear-resistant food boxes are available in all campsites. An additional locker is located next to the Ranger Station for day use.

Removing or disturbing plants, animals, rocks, or other natural features is against the law. Only dead and downed wood may be collected for campfires. No chainsaws may be used in the Monument.

Bicycles are not allowed on any trails in the Monument. They are permitted only on established roads.

Do not litter or leave fishing hooks and lines along the river. These can harm wildlife.

Pets are allowed on trails but must be on a leash within the Monument at all times. Owners are responsible for cleaning up after their pets.

Fishing is regulated by state law and requires a valid California sport fishing license for people 16 years of age and older. The daily bag limit is five and the possession limit is ten.

Hunting is prohibited within the Monument. Firearms may be transported through the park only if they are unloaded and cased.

Do not feed the wildlife, including ducks and squirrels. Wild animals can become dependent upon unnatural food sources and lose their ability to forage.

Climbing on the columns and the talus rock pile at the base of the Postpile is prohibited.

Interpretive Activities

Naturalist programs are offered mid-June to September. Check bulletin boards for updated schedules and topics.

Naturalist Walks Join us for an hour long walk to the Postpile. Learn about the Postpile's fascinating geology, the evidence glaciers left behind in the area, and much more. Meet at the Ranger Station at 11:00am, daily.

Evening Campfire Programs Join a Ranger for a slide show by the campfire on Wednesdays, Fridays, and Saturdays at 8:00pm, late June through Labor Day weekend. Meet at the amphitheater near the Ranger Station.

Junior Ranger Programs Earn an official badge and certificate by completing the activities in our Junior Ranger booklet available at the Ranger Station.

Ranger Station Hours 9:00am - 5:00pm daily, from the end of June through mid-September.

Did you know?

Many of the songbird species who nest in the Monument fly to Central and South America for our winter.