

Flagstaff Area National Monuments

Wupatki, Sunset Crater Volcano, and Walnut Canyon

National Park Service
U.S. Department of the Interior



Ancient Times

Park News 2007 - 2008



Programs in Partnership

The view is breathtaking from the Arizona Snowbowl, where the ski lift, operating in summer as the Skyride, transports visitors to an 11,500-foot-high-perch on Mount Agassiz. Here, on the state's highest mountain, the air is thin, and plants like the San Francisco groundsel thrive in the alpine tundra, a leftover from the last ice age. Close by, centuries-old bristlecone pines stoop from decades of tortoise-like growth in the ice, wind, and snow. Human visitors, dressed for the warmer temperatures below, shiver in their summer shorts and shirts.

The interpretive ranger posted on the mountain has plenty of material to work with – this is one of the few places on earth where the four primary types of volcanoes (strato, lava dome, cinder cone, and shield) can easily be seen together. A semi-circular view extends north 70 miles to include a horizontal beige stripe that is actually the face of the North Rim inside the Grand Canyon. The panorama stretches west more than 100 miles to Arizona and Nevada mountain ranges along the lower Colorado River. To the south are Oak Creek Canyon and the jagged ridges of Sycamore Canyon, some of our nation's most wild and trea-

sured places. To the east, although not visible from here, are the three Flagstaff Area National Monuments – Wupatki, Sunset Crater Volcano, and Walnut Canyon.

Flagstaff is the only American city with three national monuments on its doorstep. At the same time, it is surrounded by the 1.8-million-acre Coconino National Forest. Elevations range from 2,600' in canyon bottoms to 12,633' at the top of the San Francisco Peaks. These federal lands are managed by two different agencies, but they share many similarities. Forests, wildlife, archeological sites, and other features stretch across this vast landscape, regardless of artificial boundaries.

For the past 18 years, from Memorial Day through Labor Day, seasonal rangers from the National Park Service (NPS) and U.S. Forest Service (USFS) have joined forces in an effort known as the Interpretive Partnership. Partnership rangers don't just work at the top of the ski lift. They also provide weekend campfire programs, informal ranger talks, and nature walks at three popular Coconino National

"Partnership" continued on page 12



top: NPS and USFS rangers and volunteers present interpretive programs at Walnut Canyon, Arizona Snowbowl, and elsewhere.

above: Kim Watson, NPS, (left) and John Nelson, USFS, joined forces to create the Interpretive Partnership in 1990.

4 Meet a Volunteer

Volunteers in Parks (VIPs) donate many hours each year. This one has contributed 28 years.

8 Wildfire

Fire is here to stay. How can we live with it?

11 Bookstore

Western National Parks Association supports educational programs through publication sales.

Visitor Information...3

Recycling...5

Flagstaff Area Map...6-7

Stay Safe...10



left: Clouds form over the San Francisco Peaks, looking west from Bonito Park, near Sunset Crater.

Welcome

Welcome to the Flagstaff Area National Monuments! Walnut Canyon, Sunset Crater Volcano and Wupatki National Monuments are special places that reveal a part of the rich history of the American Southwest. These monuments will be preserved for current and future generations so that their cultural and natural histories can be told.

The preservation of the monuments is a joint venture between the National Park Service and the people who visit the parks. We must all act as stewards of these irreplaceable places and resources if we are to share them with those who come after us.

The mission of the National Park Service (NPS) is "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of future generations." To meet this legislative mandate, we continually evaluate the management of these lands and resources. As one of over 270 million visitors each year to the NPS system, you must also make decisions about using and caring for these pieces of America's heritage. Please begin by treating the parks gently during your visit.

By paying your entrance fee, you support many of our stewardship projects, such as exhibit rehabilitation and trail maintenance.

We thank you for your assistance and support, and hope that you enjoy your visit.

Superintendent and staff
Flagstaff Area National Monuments

People & Parks

Your Entrance Fees

The Federal Lands Recreation Enhancement Act, which took effect on December 8, 2004, allows the Flagstaff Area National Monuments to keep 80% of the entrance fees collected here. This money is used for in-park projects to improve facility maintenance, visitor services, and resource protection. Recent projects have included new exhibits at the Wupatki and Sunset Crater Volcano Visitor Centers, boundary fencing at Walnut Canyon, and restroom improvements.

The Act also provides for periodic fee increases, to keep pace with the Consumer Price Index. At this time, the Flagstaff Area National Monuments are scheduled for entrance fee increases in 2008, following opportunities for public comment.



Are you a VIP?

We're looking for enthusiastic, friendly people committed to assisting park employees in different areas of park management. A variety of volunteer opportunities exist year-round at the monuments. Volunteers-In-Park (VIPs) can work full-time or part-



time. Housing or RV hook-ups are sometimes available. If you have a special interest or skill, chances are we could use your talents. For more information, contact the Flagstaff Area National Monuments Volunteer Coordinator at 928-526-1157 x 221

Support Your Parks with WNPA Membership

Interested in supporting the educational programs of the National Park Service? Consider buying a membership to Western National Parks Association, our nonprofit cooperating association. WNPA members enjoy a 15% discount on bookstore purchases, and memberships are honored throughout the National Park System. An annual individual membership costs \$25. Memberships may be purchased at park visitor centers.



House Rules

Northern Arizona is covered with archeological sites. The dry climate of this region has allowed artifacts and sites of past human activity to survive decomposition and the forces of erosion for hundreds of years.

Our decisions and actions will determine whether these priceless and nonrenewable traces of the past will exist into the future.

As a guest in these homes, please remember these basic house rules:

By Invitation Only

Visit only sites on designated trails. These have been stabilized and reinforced and are better able to withstand visitation.

Stay on designated trails. Walking through and around sites is one of the most damaging impacts; it rapidly undermines wall foundations and crushes fragile archeological objects and deposits.

Off-trail hiking is prohibited.

Keep Your Feet Off the Furniture

Sitting, leaning, walking, or climbing on walls loosens mortar which erodes easily. Walls collapse.

Minimum fine: \$50

Don't Take the Knickknacks

Parks are not the place to collect rocks, fossils, animals, or plants. Imagine the result if each of the half million visitors a year to the Flagstaff Area National Monuments took something home. The parks would be stripped bare.

Minimum fine: \$250

Don't Rearrange the Furniture

Left in place, pieces of pottery and artifacts are valuable clues; rearranged in piles they mean nothing. This behavior deprives other visitors of the thrill of discovering artifacts where they were left generations ago.

Minimum fine: \$250

Sign the Register, Not the Rocks

Adding names or drawings to rock outcrops, rock art panels, or structures dishonors the timeless qualities of these special places. Our visitor centers have guest registers where we invite you to leave your mark.

Minimum fine: \$250



National Park Service
U.S. Department of the Interior

Flagstaff Area National Monuments
Headquarters
6400 N. Highway 89
Flagstaff, Arizona 86004
928-526-1157

Wupatki National Monument
928-679-2365

Sunset Crater Volcano National
Monument
928-526-0502

Walnut Canyon National
Monument
928-526-3367

E-mail us:
FLAG_Information@nps.gov

The National Park Service cares
for the special places saved by the
American people so that all may
experience our heritage.

Catching Glimpses of the Past

Walnut Canyon. Sunset Crater
Volcano. Wupatki. Three national
monuments with very different
landscapes. As we look up at Sunset
Crater's cinder cone, down into
Walnut Canyon, and out across the
Wupatki grasslands to the Painted
Desert, we wonder: how are these
places connected?

NATURAL LEGACY

At all three monuments, the earth's
varied geologic past lies exposed
before us. These landscapes were
shaped by the violence of volcanic
eruptions and by the slow erosion of
older rock layers, which in turn reveal
evidence of ancient seas and sand
dunes. Within canyon walls and in
broad scenic vistas, we glimpse
features from the distant past, and the
diversity of plants and animals that
have adapted to live here today.

GLIMPSES OF THE PAST

For thousands of years, people too
have found ways to live in these places,

adapting to an arid environment and
learning new skills. When Sunset
Crater Volcano erupted in the 1000s,
there were people here to see it; the
event changed their lives, and
influenced settlement at Wupatki and
throughout the region. The pueblos of
Wupatki and the cliff homes of Walnut
Canyon contain information that fuels
archeological theories and confirms
the stories and traditions of present
day American Indian peoples, who still
have strong ties to these places. By
visiting these sites, we can experience
something of the lives of people here
before us—their migrations, living
conditions, conflicts, cooperation,
ingenuity, achievements, and failings.
What can we learn from them?

FOR FUTURE GENERATIONS

Some lessons of the past have not yet
been learned. By preserving and pro-
tecting these landscapes, with their
variety of natural and cultural
components, we are saving information
for future generations.



above: Sunset Crater Volcano, Wupatki and Walnut
Canyon National Monuments protect a variety of
natural and cultural landscapes.

Visitor Information

In Case of Emergency

In case of an emergency, contact a park ranger. If no ranger is available, call 911 or call Park Dispatch at 928-638-7805.

Dates and Hours of Operation

The Flagstaff Area National Monuments are open every day except December 25, from 9 am to 5 pm. Hours may be extended in summer. Please call or check websites for current information.

Reaching the Parks

Walnut Canyon

Take I-40 exit 204, 7.5 miles (12 km) east of Flagstaff. Drive south 3 miles (5 km) to the Walnut Canyon Visitor Center. Be advised that Walnut Canyon's parking lot has a tight turn-around for towed vehicles. Vehicles longer than 40 feet (12 m) are not recommended.

Sunset Crater Volcano

From Flagstaff, take US 89 north for 12 miles (19 km). Turn right at the sign for Sunset Crater Volcano-Wupatki National Monuments. Drive 2 miles (3 km) to the Sunset Crater Visitor Center.

Wupatki

From Flagstaff, take US 89 north for 12 miles (19 km). Turn right at the sign for Sunset Crater Volcano-Wupatki National Monuments. Drive 22 miles (35 km) to the Wupatki Visitor Center.

Entrance Fees

Entrance for adults (16 and older) is \$5.00 per person. Persons under 16 are free. Special fees are charged for commercial tours.

Passes

The Flagstaff Area National Monuments honor National Park Passes and Golden Eagle, Golden Age, and Golden Access Passports. An annual pass for the Flagstaff Area National Monuments is also available. All passes may be purchased at park entrance stations and visitor centers.

Weather and Climate

Expect variable weather conditions. Short afternoon thunderstorms are common July through September. Expect high winds during March and April. At Wupatki, summer daytime temperatures can exceed 100 degrees. In winter months, heavy snowfall is not uncommon at Sunset Crater Volcano and Walnut Canyon.

Pet Policy

Pets are not allowed on trails or in buildings. Pets may be exercised in parking areas and must be leashed at all times. Do not leave pets unattended. Summer temperatures may be fatal to pets left in vehicles.

Contacting the Parks

Walnut Canyon Visitor Center	www.nps.gov/waca	928-526-3367
Sunset Crater Volcano Visitor Center	www.nps.gov/sucr	928-526-0502
Wupatki Visitor Center	www.nps.gov/wupa	928-679-2365
Administrative Headquarters, Flagstaff		928-526-1157

Meet Floy Healer, Volunteer



Volunteer Floy Healer has worked at Sunset Crater Volcano National Monument longer than anyone else.

Is it habit forming to volunteer in a national park? For Floy Healer it sure looks that way. Floy has been volunteering at Sunset Crater Volcano National Monument since before some of his coworkers were born. When he started, Jimmy Carter was president and Mount St. Helens was erupting. Twenty-eight years later, he is still going strong, devoting six months or more each year to this favorite place.

Since 1980, when he donned his first Volunteer-in-Park uniform, Floy has become a fixture at Sunset Crater. On a typical day, you might find him in the visitor center, greeting people and answering questions at the information desk; later, look for him leading a hike on the Lava Flow Trail. In the evening, see his slide program in the campground across the road. Illustrated with his own photographs, it has inspired thousands of visitors to explore this and other national parks across the country. Floy is an expert at all these things and more, and his enthusiasm is contagious.

Floy is also a reservoir of knowledge, a source of continuity in the midst of change. While the National Park Service employees around him transferred frequently to other places, Floy remained. He has worked for three park superintendents and at least six district rangers, and has accumulated many memorable tales. "Once I was almost struck by lightning," he recalls. "I was in a little information building with few windows and it was raining. When lightning struck a tall tree nearby, I couldn't see it – but the sound of wood chips hitting the side of that building was deafening."

The work can be discouraging at times, when picking up trash or repairing

damaged signs. But Floy assures us that most memories are pleasant. "The best things are meeting and talking to people, being able to interpret and protect the park. And we get letters occasionally, especially from school groups, telling us they appreciate what we do."



How did all this begin? Floy was teaching high school math in Robstown, Texas, near Corpus Christi, when he visited Zion National

Park. Through a chance encounter with a volunteer, he learned of the Volunteer-in-Park program. It changed his life. "Coming from the Gulf Coast," he says, "I wanted someplace high, dry and cool. I applied to a lot of parks and was accepted at three: Cedar Breaks (too high, too cold), Capitol Reef (too low), and Sunset Crater, which seemed just right."

In the early years, he volunteered during the summer, when school was out. In 1996 he retired from teaching and began a new career as a full time volunteer. He returns to Sunset Crater each spring, but winters at Fort Davis National Historic Site in Texas. His duties there are varied – you might find him at the computer or in authentic costume, portraying an infantry private in the park's restored barracks.

Would you like to volunteer? You don't need to commit to 28 years. Just take Floy's advice. "Go for it. The Park Service needs your help. It will be the best experience you'll ever have, and something that you'll never forget." To find the place that's just right for you, inquire at your favorite park, or check for possibilities at www.nps.gov/getting-involved/volunteer/index.htm.

Exploring Northern Arizona

The Flagstaff area contains some of the most fascinating natural and cultural sites in the Southwest. From red rock canyons to Hopi's high mesas, lush green forests to rugged desert, northern Arizona has something for everyone.

City of Flagstaff Visitor Center 928-774-9541 Information on lodging, dining, events and area attractions. *Open daily.*
800-842 7293

Local Organizations

Coconino National Forest 928-527-3600 Information on camping, hiking, fishing and other recreational activities. *Open weekdays.*

Hopi Reservation Hopi Tribal Council 928-734-2411 Information on touring Hopiland. *Open weekdays.*

Navajo Nation 928-871-6436 Information on visiting the Navajo reservation. *Open weekdays.*
928-871-7371

Museum of Northern Arizona 928-774-5213 Center for American Indian artifacts and natural history specimens from the Colorado Plateau. *Open daily.*

The Arboretum at Flagstaff 928-774-1442 Explore 200 acres of gardens and natural habitats with over 2,500 plant species. *Open daily, spring through fall.*

Arizona Snowbowl 928-779-1951 From mid-June thru mid-October, ride the Scenic Skyride to the top of the mountain for a view of alpine tundra and desert. *Open daily.*

For information about the Flagstaff Area National Monuments, call 928 526-1157.



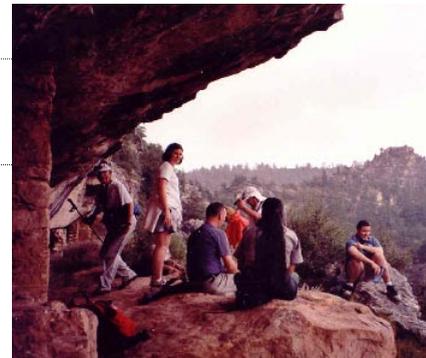
Exploring the Parks

above left: View from Sunset Crater's self-guided Lava Flow Trail.



above right: SCA intern Candace Funk and hikers enjoy a Discovery Hike near Wupatki's Citadel Pueblo.

right: Visitors on a Ledge Hike pause to look out over Walnut Canyon.



Calling All Junior Rangers

Hey, kids ... Can you tell a mano from a metate? What does a ponderosa pine tree smell like? What would a story made from petroglyphs be about?

If you're 6 to 12 years old and think you might have an idea, then you'd make a great Junior Ranger. Ask at any of the three parks for a Junior Ranger workbook—it's full of activities that will help you have fun and learn about nature and people from long ago.



When you're done, bring it back to any visitor center. We'll look it over, then swear you in as a Junior Park Ranger and give you an official badge. Collect a badge at each park!

When you get home, become a Webranger. To sign up, go to www.nps.gov/webrangers.

Check out a Discovery Pack

Become a naturalist for a day. Discovery Packs contain binoculars, a magnifying lens, field guides, sketching materials and more, to help you explore the monuments. There's also a Field Journal with activities and places to record your observations. Although designed with families in mind, this program can be enjoyed by anyone with a sense of curiosity.

You can borrow a Discovery Pack at any of our three visitor centers, then turn it in at the end of your visit. The Field Journal is yours to keep.



Teachers!

Make your science curriculum come alive. *Science in Our Parks* is an in-depth, science-based curriculum for 4th through 6th grade educators and their students, focusing on the natural and cultural history of the Colorado Plateau. Through classroom activities and field explorations in the Flagstaff Area National Monuments, students develop an understanding of the scientific process and park management, while gaining a sense of resource stewardship. For more information, contact the Interpretive Specialist at 928-526-1157 x 271.

Listen! What Was That?

When was the last time you paused at an unfamiliar sound? Birds still sing, crickets chirp, the wind rushes through the trees, but - in this increasingly noisy world - we don't always hear.

Almost everyone associates the national parks with scenery. But there's another aspect to that landscape - it's called a soundscape. Both natural and human-caused sounds (our voices, our machines, our toys, our pets, ...) are part of the total soundscape, but in many places, the human sounds drown out all others. If you live or work near a highway, railroad, airport, or other busy place, you know this daily noise too well. In places like Wupatki, Sunset Crater Volcano, and Walnut Canyon, by contrast, the silence can seem deafening.

You can experience a natural soundscape by listening, in the same way that you view a landscape by seeing. Try it. Take time to:

- Stop. Listen to what's around you.
- Close your eyes. Do you hear other sounds? Do you hear more with your eyes closed?
- Open your eyes and compare the visual landscape with the soundscape. Does the

Greening Our Parks

At the Flagstaff Area National Monuments, we spend thousands of dollars each year on toilet paper, paper towels, janitorial cleaning products and building and office supplies. Whenever possible, we purchase environmentally preferable products from companies that are doing their part to make a difference. What types of green products are we buying and why?

- **Janitorial cleaning products**

We use cleaning products that are safe, biodegradable and made from natural materials.

- **Recycled plastic lumber**

It is sustainable because it does not contain wood from endangered forests.

- **Biodiesel**

Using biobased fuel for our heavy equipment reduces petroleum consumption. Made from vegetable sources, it is renewable and is free of sulfur.

- **100% recycled (recovered after papermaking process) toilet paper and paper towels**

The products we use are "Green Seal Certified," meaning an independent, non-profit organization has given the products the stamp of approval based on recycled content, how the products are packaged, how they are manufactured (not bleached or dyed), etc.

- **Recycled toner cartridges**

We support a local company that employs people with disabilities. They supply us with a great, sustainable product.

- **Low mercury fluorescent tubes**

By purchasing fluorescent tubes with a very low mercury content, we reduce the amount of hazardous waste ending up in the landfill.

- **Low-flow toilets and urinals**

In an area where water is scarce, water conservation is a high priority.

How can you help keep our parks green? Recycle!

Please use the recycling receptacles at visitor centers and trailheads.

We recycle:

- #1 and #2 plastics
- Aluminum
- Paper, including magazines and newspaper
- Steel/tin cans
- Chipboard (i.e. cracker/cereal boxes)
- Cardboard

shape of the land affect the way sound travels to your ear? What is the closest sound you hear? The most distant?

As part of its mission to "preserve the scenery and the natural and historic objects and the wildlife therein," the National Park Service tries to preserve the symphony of natural sounds that make up the natural soundscape. You can help by walking and talking softly, and by listening carefully.

When you visit a national park, you enter a world of memorable sights. When you listen to a park, you enter a world of inspirational sounds.

To learn more about natural sound, contact:

Nature Sounds Society, 510-238-7482

<http://www.naturesounds.org>

National Park Service Natural Sounds Program, 970-267-2116

<http://www.nature.nps.gov/naturalsounds/index.htm>

Living with Wildfire!

Since the beginning of time, nature has dominated this planet. Tsunamis, earthquakes, volcanoes, tornados, hurricanes, and other events continually change the landscape and have, over time, re-sculpted mountains, plains, and entire continents. With 6 billion people now on the earth, such natural events increasingly disrupt vast numbers of human lives as well.

In Arizona, we are experiencing the effects of two natural forces – drought and fire. Each can be devastating, at least from a human perspective, but the two together can bring unimaginable change to everything around us,

and do it with frightening speed. In the southwest, fire can rage wild, shaping the land, growing in size, threatening places of importance...and it's not about to end.

In the past few years, the Flagstaff Area National Monuments have experienced several fires. The Gap fire at Sunset Crater Volcano started in June 2005, when lightning struck a large old growth ponderosa pine tree; the fire spread to 54 acres and burned for almost two months. A few years earlier, the Antelope fire raced through tall grasses at Wupatki, burning 1,400 acres. Other fires, some caused by

hillsides of ponderosa pines, killed by beetles, add to the risk of wildland fire.

We can't do much about the drought and the extreme fire conditions that accompany it. But we can act to reduce the chance of huge catastrophic fires. Perhaps we can learn from history. What have people done historically to share this land with fire? Did they make the right decisions? If not, how can we do better?

Before early settlers arrived in northern Arizona, most fires were low-intensity, burning along the forest floor. In ponderosa pine forests, fires burned every two to twelve years, clearing debris from the forest floor and allowing new life. Pine forests typically had fewer trees per acre. Open meadows provided wildlife habitat and firebreaks, and allowed sunlight to reach the wildflowers that depend upon it. Forests were strong, healthy, and well adapted to fire.

These patterns changed by the late 1880s; fire was seen as a threat to be actively suppressed. Today the forests of northern Arizona present a different landscape than that of 150 years ago. Forest floors are full of dead pine needles, leaves, and debris. Forests are crowded with thousands of small fragile trees, all fighting for space and light. Such forests are like matches waiting to be lit.

Many ecologists consider fire suppression one of the causes of the unhealthy and crowded forests. Ponderosa pines have adapted to withstand the low-burning and frequent fires once common here. They need fire for survival. Many species of bugs, birds, and reptiles also depend on fire for habitat. Some flower seeds need fire to germinate, and some types of pine cones open and spread their seeds only after a fire's heat.

Land management agencies, fire departments, and non-profit organizations are working to reintroduce fire as a natural part of our environment, hoping to restore the historic pattern of frequent light fires. Prescribed



A prescribed fire (above) burns through accumulated forest debris at Sunset Crater Volcano National Monument. This is very different from a full-blown forest fire (below).



burns are used to clear the forest floor of accumulated debris, by purposely igniting fires only under precise conditions of humidity, moisture, wind, and temperature. Forest thinning projects remove small diameter trees to allow larger trees enough space and light to grow.

Fire will always be present; it is a necessary component of the ecosystem and crucial for the health of the forest. Learning to live with fire is our challenge for the future.

by Jenny Jackson, Student Conservation



We Need Your Help!

Remember that conditions here may be very different from those at home. There may be restrictions on smoking, campfires, and other activities. Parks and surrounding forests may be closed during periods of extreme fire danger. Protect yourself and others - keep informed:

- Ask a ranger about current conditions.
- Obey signs and warnings.
- Use your ashtray. Put out your fire.
- Stay on designated roads and trails.
- Think before you act.

human carelessness, have threatened forests, homes, and entire communities.

So, why is this happening? Much of the southwest is in the grip of a decade-long drought, with no end in sight. With too little rain or snow, trees and other plants dry out and sometimes die. At times, the moisture content of standing trees has measured less than that of lumber stacked at the local hardware store. Trees that dry can ignite quickly, and the resulting fires burn hotter and faster than the normal ground fires.

Also, trees stressed by drought are highly susceptible to bark beetles - tiny insects always present in small numbers, which can multiply amazingly in continued dry years. Entire

New Look for Park Trails

Take a hike! If you haven't walked some of our park trails lately – or if you've never been – now's the perfect time. All are short (nothing over a mile) and most are easy, especially if you take your time. Several trails have brand new interpretive displays, and we're working on more. Here's what's new so far:

At Walnut Canyon National Monument, the Island Trail has new wayside exhibits along the entire one-mile loop. Each sign uses custom artwork and/or photographs to tell the story of the canyon's occupants, both past and present. It's easier now to imagine what life may have been like here 800 years ago. The most strenuous of our trails, it begins at 7,000 feet elevation, descends 185 feet into the canyon and, of course, climbs back out again. There are 240 steps.

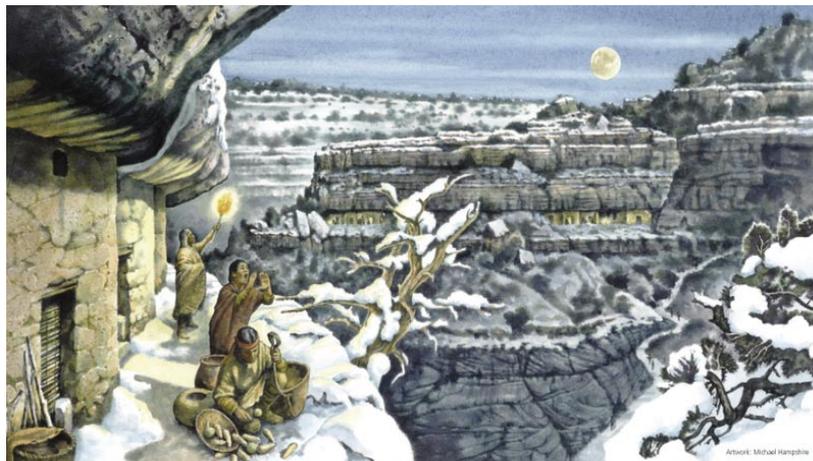
At Sunset Crater Volcano National Monument, the Lava Flow Trail offers a new trail guide booklet, which follows numbered stops along your choice of a short (.4-mile) paved trail or a one-mile unpaved loop. New wayside exhibits

along the paved trail bring the volcanic landscape to life.

At Wupatki National Monument, the trail guide booklet for the Wupatki Pueblo Trail has been revised to reflect our current understanding of the pueblo and its builders. This half-mile loop trail starts behind the visitor center; take time to see the exhibits inside, too.

In all three monuments, watch for new plant identification markers, which include their traditional names and uses by native cultures. We'll be installing these in late 2007 and early 2008.

We hope you enjoy these additions.



On the Island Trail, paintings by Michael Hampshire recreate life in the canyon. Stand on this spot and imagine.



New trailhead signs let hikers know what's ahead.



Installation wasn't easy on steep slopes and bedrock. We had help - a crew of American and international volunteers from American Conservation Experience (ACE).

How Do We Know? The Science behind Interpretation

When did Sunset Crater erupt? For how long? This knowledge is crucial to understanding both the geology and archeology of northern Arizona. For many years, we thought we had the answer: that the eruption began during the winter of 1064-65, and continued for 200 years.

The information came from an exciting discovery almost 50 years ago. If you've ever counted the rings in a tree stump to learn its age, you know part of the story. Scientists discovered that patterns of different width growth rings can be matched from one tree to another, extending back farther and farther in time. In 1958 the new tree-ring dating method was applied for the first time to a volcano, using timbers taken from nearby Wupatki Pueblo to establish the 1064 date for Sunset Crater.



Tree-ring specialist Dr. David Street is investigating the Sunset Crater eruption.

But research methods and technology have improved, and scientists are now challenging those earlier conclusions. New developments in many fields, from tree-ring analysis to chemistry, volcanology, and archeology, suggest new answers to our questions. Most experts now agree that the eruption occurred sometime between 1040 and 1100 and lasted only a few months or

years. This new information is being incorporated into park exhibits and publications.

Other questions abound – How are city lights affecting the dark night skies at Wupatki? What bird species live in the Walnut Canyon forests? How are high desert grasslands and other landscapes changing over time?

This year, 32 research projects are underway in the Flagstaff Area National Monuments, seeking answers to these and other questions. Some findings may lead to new questions and additional research. All will add to our understanding and appreciation of these parks and their place in the world around us.



New wayside exhibits on the Lava Flow Trail interpret the latest scientific findings on the eruption of Sunset Crater.

Stay Safe

For your own safety, you are responsible for knowing and obeying park rules and regulations while visiting the Flagstaff Area National Monuments. If you have any questions, please contact a park ranger. Here are a few things to remember:

Observe posted speed limits

Park roads are not designed for speed. Drive slowly, enjoy the scenery and watch for animals on the road. Be especially careful at dawn and dusk, when animals are most active.

Drive Safely

Buckle up. Seat belts are required by law.

Vehicles and bicycles must remain on designated public roadways. Always use marked parking areas and *never* stop in the roadway.

Hunting and the possession of firearms are prohibited

Do not approach or feed wildlife

Within the parks, animals as varied as javelinas, pronghorn antelope, collared lizards and mountain lions make their homes. Park wildlife is protected by federal law. Remember, this is *wildlife*—keep a safe distance.

Avoid contact

The white-footed deer mouse is a carrier of hantavirus and prairie dogs can carry plague. Use caution and common sense around skunks, bats and other known carriers of rabies.

Hydrate

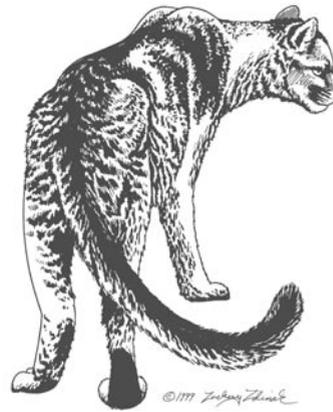
Heat kills. In summer months, prevent dehydration by drinking lots of water. Eat salty snacks. If you will be doing strenuous hiking, take one gallon of water per person, per day.

Avoid lightning storms

Lightning storms are common to northern Arizona in summer months. Avoid danger by seeking shelter at the first indication of lightning. Avoid trees and open areas.

Be careful with fire

Ask about current fire conditions. Protect yourself and your parks by obeying fire restrictions and closures. Discard cigarettes only in ashtrays - never along roads or trails.



Traveling in Mountain Lion Country

Mountain lions live in these parks. Sightings are rare—an **attack is an extremely unlikely event**. There is far greater risk, in fact, of being struck by lightning. However, lions do frequent Walnut Canyon and the potential exists for a hazardous encounter. To avoid danger, it is important for you to know how to behave in mountain lion country. The following advice will allow you to more safely share these parks with a truly spectacular animal.

These actions have resulted in mountain lion attacks:

-  People jogging or hiking alone. It is advisable to travel in groups.
-  Children running or walking unattended by parents. Keep children close and within sight at all times.

What to do if you see a mountain lion:

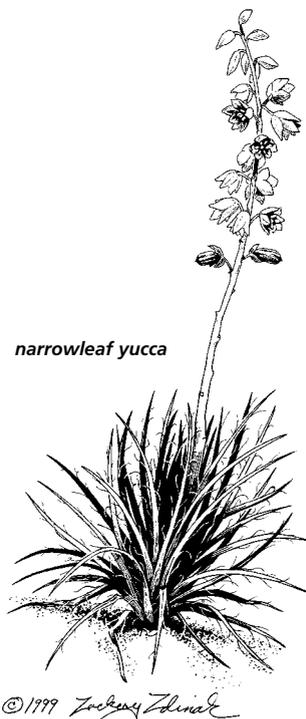
-  Do not run. Do not approach it. Do not crouch down.
-  Stop! Raise your arms and back away slowly, facing the lion. Leave the lion an escape route.
-  Pick up small children. Their size and behavior make them vulnerable.
-  If a lion is aggressive, wave your hands slowly, speak firmly or shout.
-  If attacked, remain standing and fight back!

Park News In Brief

Environmental Management System

The Flagstaff Area National Monuments have developed an Environmental Policy to demonstrate commitment to environmentally and professionally sound practices in daily activities. Each employee is responsible for evaluating and making informed choices in purchasing products and services, using and disposing of products and materials, interacting with natural and cultural resources, and interacting with coworkers and the public.

We are proud that Sunset Crater Volcano, Walnut Canyon, and Wupatki National Monuments are the 3rd, 4th and 5th National Park Service units to have an Environmental Management System registered to the International Standard, ISO 14001:2004.



narrowleaf yucca

Kodak Donates Camera Equipment

In 2005 the Flagstaff Area National Monuments received a donation of digital imaging equipment from Eastman Kodak Company, a Proud Partner of America's National Parks, through a grant from the National Park Foundation.

Some of the images in this and other park publications were created through the use of this donated equipment. We thank Kodak and the National Park Foundation for their generous support.

Civilian Conservation Corps Celebrates 75th Anniversary

Seventy-five years ago, on March 31, 1933, the Civilian Conservation Corps (CCC) was created by President Franklin D. Roosevelt as part of the Emergency Relief Act.

More than three million young men served in the CCC during the depression years, planting trees, fighting fires, building campgrounds, and completing countless conservation projects across the country. At Wupatki, Sunset Crater Volcano, and Walnut Canyon National Monuments, they constructed trails, visitor centers, ranger residences, and other facilities that are still in use today.

We salute the CCCs for their lasting contributions.

Western National Parks Association

The Story of WNPA

Western National Parks Association (formerly Southwest Parks and Monuments Association) was founded in 1938 to aid and promote the educational and scientific activities of the National Park Service. As a nonprofit organization authorized by Congress, WNPA operates visitor center bookstores, produces publications, and supports educational programs at more than 63 parks in 11 western states.

Bookstore Sales

Bookstore sales are WNPA's primary source of income and support for the parks' interpretive programs. The following publications, available from WNPA, are recommended for making the most of your visit to the Flagstaff Area National Monuments.

For additional choices, visit the visitor center bookstores, or browse online at www.wnpa.org.



Introducing the Parks

Official Map and Guides

Specify Wupatki/Sunset Crater Volcano or Walnut Canyon Park maps, safety, regulations, general orientation and introduction to the natural and cultural history of the parks. **\$.25 each.**

Sunset Crater Volcano National Monument

Rose Houk

A look at the youngest of over 600 volcanoes found in the San Francisco Volcanic Field. 16 pages. **\$3.95**

Wupatki National Monument

Susan Lamb

An overview of the natural and human history of Wupatki, from past to present. 16 pages. **\$3.95**

Walnut Canyon

Scott Thybony

Guide to the cultural and natural history of Walnut Canyon National Monument. 16 pages. **\$4.95**

Deutsch translation: **\$3.95**

Guide to Sunset Crater and Wupatki

Scott Thybony

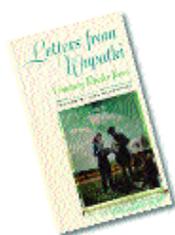
An excellent road guide to the natural and cultural features of both national monuments. 48 pages. **\$6.95**

The Parks In Depth

Wupatki and Walnut Canyon: New Perspectives on History, Prehistory, and Rock Art

David Grant Noble

Research and analysis have provided new insights, presented here in a concise overview. 40 pages. **\$8.95**



Letters from Wupatki

Courtney Reeder Jones

A compilation of letters written to friends and family by the wife of Park Service caretaker Davy Jones during the 1930s. A wonderful glimpse into life at Wupatki in the days before 240,000 visitors a year. 151 pages. **\$16.95**

Cultures of the Southwest

Those Who Came Before: Southwestern Archeology in the National Park System

Robert and Florence Lister

An excellent and comprehensive overview of southwestern archeological sites in the National Park System. 184 pages. **\$16.95**

Prehistoric Cultures of the Southwest Series

Rose Houk

Each booklet in this five-part series provides an introduction to the evolution, achievements, and lasting legacy of a distinct ancient culture. Please specify *Anasazi, Hohokam, Mogollon, Salado, or Sinagua*. 16 pages. **\$3.95 each.**

Geology

Volcanoes of Northern Arizona

Wendell Duffield

An easy-to-understand guide to northern Arizona volcanoes with beautiful graphics and color aerial photographs. Includes several self-guided road tours. 68 pages. **\$11.95**

Highlights of Northern Arizona Geology

Arizona Geological Survey

A compilation of interesting articles on geologic features, side canyons of the Colorado River, petrified wood, and an aerial tour. 34 pages. **\$7.95**

A Guide to the Geology of the Flagstaff Area

John V. Bezy

Descriptions and directions to fascinating geologic features along NPS and US Forest Service roads and trails. 56 pages. **\$7.95**

Roadside Geology: Wupatki and Sunset Crater Volcano National Monuments

Sarah L. Hanson

A geologic road guide for the 34-mile scenic loop road connecting the two national monuments. 32 Pages. **\$6.95**

Roadside Geology of Arizona

Halka Chronic

Explains the spectacular geology of Arizona as seen from specific points along highways throughout the state. 321 pages. **\$18.00**

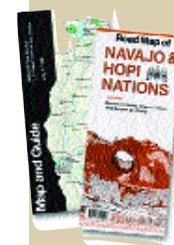
Maps

Guide to Indian Country Map

Covers the Four Corners area outlining Indian reservations, national parks and monuments, and geologic features. **\$4.95**

Recreational Map of Arizona

Detailed travel map with more than 400 recreational sites and 500 points of interest listed. **\$3.95**



Road Map of Navajo and Hopi Nations

Includes detailed maps of Monument Valley, Chaco Culture, and Canyon de Chelly. **\$3.95**

Hiking and Travel Guides

The Guide to National Parks of the Southwest

Rose Houck

Authoritative interpretive guide to 52 National Park Service sites in Arizona, Utah, Colorado, New Mexico, and Texas. Color. 86 pages. **\$12.95**

The Insider's Arizona Guidebook

This Arizona Highways book features Arizona parkways, historic and scenic roads, and America's Byways. 416 pages. **\$22.95**

Flagstaff Hikes

Richard and Sherry Mangum

146 day hikes around Flagstaff, Arizona. 288 pages. **\$16.95**



Placing Your Order

By Phone

We encourage you to order by phone to get the publications best suited to your needs. To place an order, please call 928-526-1157 x 226.

By Mail

Add up the total amount of your order plus shipping cost (see table at right). Include a check payable to WNPA, or credit card number and expiration date. Visa and Mastercard accepted. Send orders to: WNPA, 6400 N. Highway 89, Flagstaff, AZ 86004. Prices and availability subject to change.

Shipping Costs

Item Total	Shipping Cost
Up to \$15	\$7.50
\$15.01 - \$25	\$8.50
\$25.01 - \$50	\$9.50
\$50.01 - \$100	\$10.50
Over \$100	Free

International shipments, add \$1.00.



National Park Service
U.S. Department of the Interior

Flagstaff Area National Monuments
 6400 N. Highway 89
 Flagstaff, AZ 86004



Western National Parks Association
 12880 N. Vistoso Village Dr.
 Tucson, AZ 85737

EXPERIENCE YOUR AMERICA

Partnership

continued from page 1

Forest campgrounds (Bonito, Pine Grove, and Dairy Springs). They give interpretive talks and lead hikes at Wupatki, Sunset Crater Volcano, and Walnut Canyon National Monuments. And they venture into town to present special programs for the City of Flagstaff Visitor Center, summer youth camps, and senior citizen groups.

For the rangers, this variety of locations provides a unique work experience. It's not unusual atop the ski lift to watch the temperature drop to freezing, as summer monsoon storms blow in, bringing hail, snow, and lightning. The next day, however, may take those same rangers to Wupatki National Monument, 7,000 feet lower in elevation and 70 degrees warmer.

What do visitors think when they see National Park Service rangers working in the national forests? Or the Forest Service uniform at an NPS visitor center? They recognize this as a good idea, and wonder why we haven't been doing it all along.

That's what some innovative agency employees thought in 1990, when they came up with the idea. The Interpretive Partnership was created by Kim Watson, then Chief Ranger of the Flagstaff Area National Monuments, and John Nelson, Recreation and Land Staff Officer of the Coconino National Forest Mormon Lake Ranger District. Two seasonal rangers were hired the first year.

Although federal interagency coordination is not new, the Flagstaff idea was different because it provided interpretation of the natural and cultural resources of both agencies. There was some trepidation at first, but it soon became obvious that similar resource issues, and the need for better public understanding, were bigger than either agency. Watson believes that the program has also helped the two organizations to better understand each other. "It was simply good business," he says, "and one of the greatest joys of my career to be involved with

the creation of this program, ... an example of how to do the most good with limited resources."

The partnership has endured, depending each year upon two to four seasonal employees and an increasing cadre of volunteers, to help visitors understand the many stories of northern Arizona.

by John Westerlund, Park Ranger, NPS/USFS Interpretive Partnership



Visitors enjoy a Partnership-led hike on the Lava Flow Trail.