

OREGON CAVES

UNDERWORLD

THE NEWSPAPER OF OREGON CAVES NATIONAL MONUMENT

VOLUME EIGHT, 1995-1996

GETTING TO THE MONUMENT

CAVE JUNCTION

The community of Cave Junction, Oregon, located at the junction of Highway 199 (Redwood Highway) and Highway 46 (Caves Highway), is the gateway to Oregon Caves National Monument. Cave Junction is a full service community providing gas, food, and lodging. Cave Junction is a ninety minute drive from Crescent City, California and a forty-five minute drive from Grants Pass, Oregon.

HIGHWAY 46

The Monument lies 20 miles east of Cave Junction at the end of Highway 46. The drive from Cave Junction to the Monument takes about 45 minutes. The final 8 miles of Highway 46 are narrow, steep, and winding. Trailers are not advised and may be parked at the Illinois Valley Visitor Information Center (see below). Gas is not available beyond Cave Junction.

VISITOR CENTER

For important information about travel conditions, tours, and facilities at Oregon Caves National Monument, please stop at the Illinois Valley Visitor Information Center before proceeding to the Monument. The Center is located in the community of Cave Junction, Oregon, one-half block up Highway 46.

INSIDE...



- Hiking Trail Map
- Junior Rangers!
- In the Line of Fire

BACK PAGE...

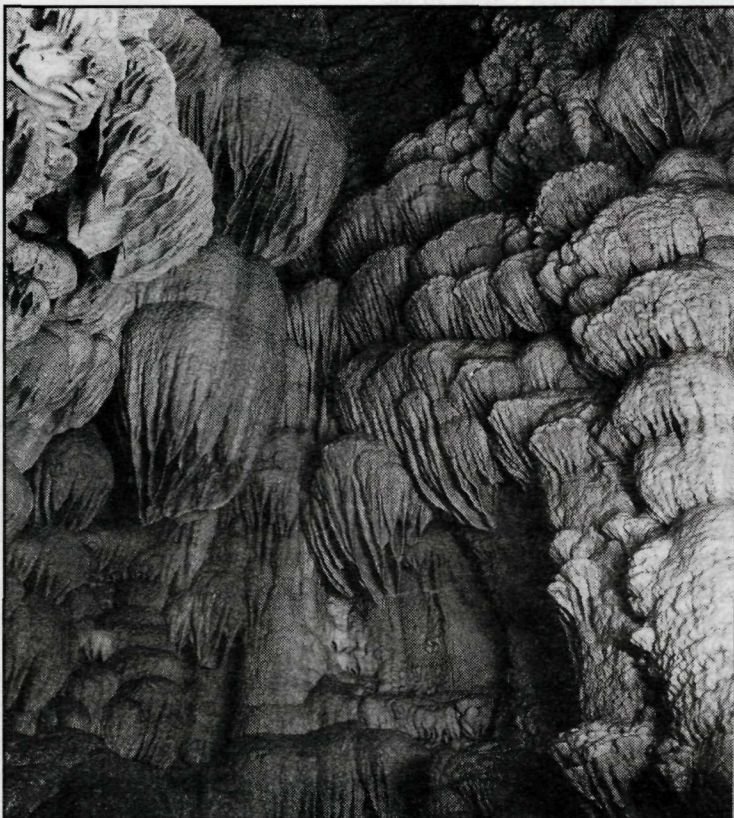
- Visitor Services
- Guided Cave Tours
- Naturalist Programs

THE OREGON CAVES UNDERWORLD

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Edited and Designed by:
Sheri Forbes, National Park Service

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Cascading draperies in Paradise Lost, Oregon Caves.

IN GOOD COMPANY WITH OTHER PARK SERVICE CAVES

DID YOU KNOW that Oregon Caves is one of eight National Park Service areas designated specifically to protect limestone or marble caves? Isn't this a bit much? Isn't one drippy, dark, underground cavern just about the same as another?

Not so! Each of the Park Service caves, including this one, is special. Each protects a unique underground ecosystem that provides an incomparable wilderness experience to park visitors. And each has its superlative quality, whether it's based on size, depth, or geologic feature.

Match the following "best features" with the appropriate cave park (answers on page 2):

SUPERLATIVE FEATURES:

1. Known for having the biggest rooms and huge swarms of bats that exit the cave at nightfall. The park also includes Lechugilla Cave, one of the deepest known caves in the United States.
2. Has the most extensive large crystal display. The crystals that typically cover the walls of the cave occur in six inch thick layers.
3. At over 350 miles (known so far), it is the longest known cave in the world.
4. Has the best archaeological site. It holds beneath its surface the record of at least 9,000 years of human life on this continent.
5. Has the greatest concentration of helictites, spiral formations that look like gravity-defying stalactites.
6. Has the most extensive display of box work, thin, honeycomb-shaped structures of calcite that protrude from the walls and ceiling. Stalactites and stalagmites are rare here.
7. Most famous for the rare structures called shields. Shields consist of two roughly circular halves, almost like flattened clam shells.
8. Known for having the most diverse rocks; all of the world's major rock types are exposed in the cave.

NATIONAL PARK SERVICE CAVES:

- A. Wind Cave National Park, SD
- B. Timpanogos Cave National Mon., UT
- C. Russell Cave National Monument, AL
- D. Oregon Caves National Monument, OR
- E. Mammoth Cave National Park, KY
- F. Jewel Cave National Monument, SD
- G. Great Basin National Park, NV (formerly Lehman Caves)
- H. Carlsbad Caverns National Park, NM

AND THE LIST CONTINUES

Several other Park Service areas, although not designated specifically for caves, do contain caverns (e.g. Crystal Cave in Sequoia National Park.) Other areas contain lava tube caves (e.g. Lava Beds National Monument.) Surprisingly, of the 368 Park Service areas, nearly one in seven contains a cave or rock shelter!

Oregon Caves, while in the company of other great Park Service caves, is unique in its own right. It is perhaps the only place on Earth where such a diverse assortment of rocks is exposed in a single cavern open to the public. This amazing feature, combined with the historic buildings and old growth forests, make a trip to Oregon Caves a superlative experience.

THINGS TO KNOW

EMERGENCY: DIAL 911

For medical, fire, or law enforcement emergencies, dial 911 from any public phone.

TOURING THE CAVE

Entrance to Oregon Caves is by guided tour only. See the back page for more information.

NO FUN FOR DOGS

National Park Service areas like Oregon Caves are not great vacation destinations for pets. Pets can only go where cars can go, roads and parking lots, and are not allowed on trails or in the cave. The parking lot is not shaded for most of the day.

Pets must be attended and must be kept on a leash at all times. Although pets are not allowed on any trails in Oregon Caves National Monument, nearby Forest Service areas will permit pets in designated areas.

THE WEATHER

Summers are characterized by warm, sunny days and cool nights with an occasional afternoon or evening thunderstorm. The winters are moist and cold with an average yearly snowfall of 14 feet.

WINTER TRAVEL

The final 8 miles of Highway 46 may be covered with snow or ice from November to April. When these conditions exist, tire chains are advised. The Monument's developed area lies at approximately 4,000 feet. Two feet of snow normally accumulates near the cave entrance. The nearby trails may have patches of ice and should not be used during cold, snowy, or windy weather unless you are well prepared.

KEEP WILDLIFE WILD

Please do not feed the wildlife. Although the birds and rodents at Oregon Caves National Monument will try to convince you otherwise, their dependence on human food is not a healthy lifestyle.

KEEP YOUR DISTANCE

Rodents are capable of carrying diseases that make humans ill:

- Bites, beside being painful, carry the possibility of transmitting rabies.
- Hantavirus, a recently diagnosed illness that is potentially fatal, can be transmitted by contact with rodents or their droppings.

NATIONAL PARK SERVICE



OREGON CAVES NATIONAL MONUMENT

JUNIOR RANGERS!

Take the time to learn some wonderful things about Oregon Caves National Monument and earn a Junior Park Ranger badge! Junior Rangers are special people who help National Park Rangers do their job of keeping Oregon Caves National Monument a beautiful and enjoyable place. Junior Rangers also learn some interesting things about Oregon Caves which they can share with their friends at home.

TO BECOME A JUNIOR RANGER, complete tasks #1 and #2 below AND all the activities listed under your age group. THEN, turn in your work at the Ranger Office in the main parking lot, the Tour Registration Booth, or the Illinois Valley Visitor Information Center to earn a badge that looks just like the ones Rangers wear on their uniforms.

1. **HELP KEEP THE MONUMENT CLEAN.** Pick up any litter you see and put it in a trash can where it belongs. Recycle aluminum in special containers. Be careful of traffic in the parking areas!

(adult sign here when completed)

2. **TRY THIS SCAVENGER HUNT!** See how many of these you can find during your stay here.

- ☐ Black-tailed deer
- ☐ Stellar's jay
- ☐ Smiling Cave Guide
- ☐ Squirrel
- ☐ Animal tracks or scat
- ☐ 3 different kinds of flowers
- ☐ Stalactite
- ☐ Stalagmite
- ☐ Building covered with bark
- ☐ Marble fireplace
- ☐ US flag
- ☐ Waterfall
- ☐ The Big Tree
- ☐ Bat

Your Name: _____

Your Age: _____



Which is Which?

Put a T on a stalactite, an M on a stalagmite, and a C on a column.



Junior Ranger Pledge:

"I promise to protect the plants, animals, and rocks of Oregon Caves National Monument, to hike safely, and to keep this wilderness beautiful forever."

AGES 9 TO 12:

- a. Complete items #1 and #2 above.
- b. Do **Which is Which?**
- c. Go on a guided cave tour *.

(Cave Guide signs here when completed)

d. Write answers in the space provided:

Describe one way that people have changed the cave:

If that change has harmed the cave, how can we fix the problem?

In what ways are old forests important for wildlife?

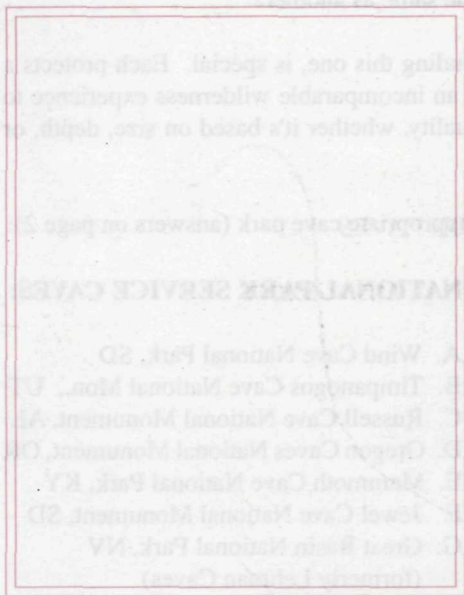
AGES 6 TO 8:

- a. Complete items #1 and #2 above.
- b. Do **Which is Which?**
- c. Go on a guided cave tour *.

(Cave Guide signs here when completed)

d. Look high into the branches of trees.

In the box below, draw a picture of an animal you would expect to see there:



UNDER AGE 6:

- a. Complete items #1 and #2 above.
- b. Do **Who Lives at Oregon Caves?**
- c. Animals do the strangest things! Act out an animal you have seen in the park. Have an adult guess what you are.

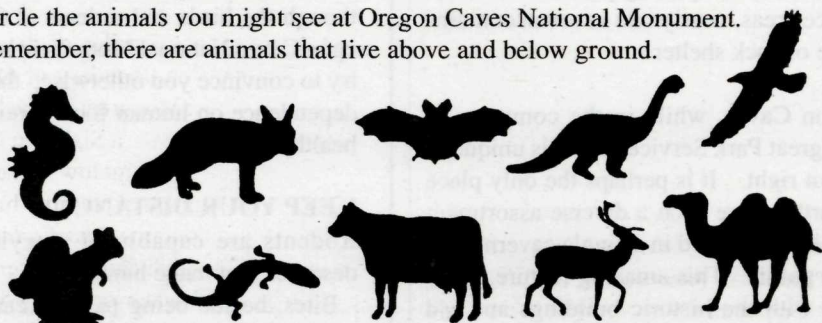
(adult names animal here)

* Note:

If a child age 6 to 12 is unable to attend a cave tour in order to fulfill the requirements for a Junior Ranger badge, please stop by the Ranger Office in the main parking lot. We will describe alternative activities which will allow the child to earn a badge.

Who Lives at Oregon Caves?

Circle the animals you might see at Oregon Caves National Monument. Remember, there are animals that live above and below ground.



Answers to IN GOOD COMPANY (from page one), matching the superlative feature to the correct National Park Service cave:
1-H, 2-F, 3-E, 4-C, 5-B, 6-A, 7-G, 8-D.

MICROBES MAGNIFIED

by John Roth, Resource Management Specialist

Sometimes, the smallest do the biggest jobs. Microbes play crucial roles in most places, especially in caves where the amount of organics (dead and live material) and the number of levels in food chains are low. Microbes also may be the first critters in a cave to be affected by human impacts. Just walking through a cave can rearrange clay particles, increase access to attached nutrients, and, thus increase microbial activity.

A recently completed census has helped the park understand the role of cave microbes and human impacts on them. First, the bad news. People going on cave tours have reduced some bacteria in Oregon Caves. "Cave slime", a type of bacteria native to Oregon Caves, looks like white spots of very thin lichen on walls. It is made up mostly of actinomycetes bacteria. Cave slime, which is adapted to low-energy foods, is nearly absent near the cave trail. Instead, unnatural numbers of other bacteria are found. These other bacteria are adapted to the high-energy foods, such as clothing lint and skin cells, common near the cave trail. They may be outgrowing and out competing the slow-growing cave slime.

Rounded "clay worms" are more common near the main trail, while the more complex forms of these clay lines on cave walls are more common farther from the trail. Analysis of the rounded clay worms show high amounts of lint and cyanobacteria not native to the cave.

There is some good news. Deposition of lint, skin, and hair in Oregon Caves doesn't

appear to affect aquatic microbes as much as in some other National Park caves. There is little difference in aquatic microbe activity, the number of microbes, or dissolved organics near and far from the cave trail. This is probably due to the relatively high natural organic input in Oregon Caves, which comes from nearby soils of old growth forests. Unlike deeper and drier caves, such as Wind Cave in South Dakota, there is not a major difference between natural and human-caused organic inputs except on the trail itself.

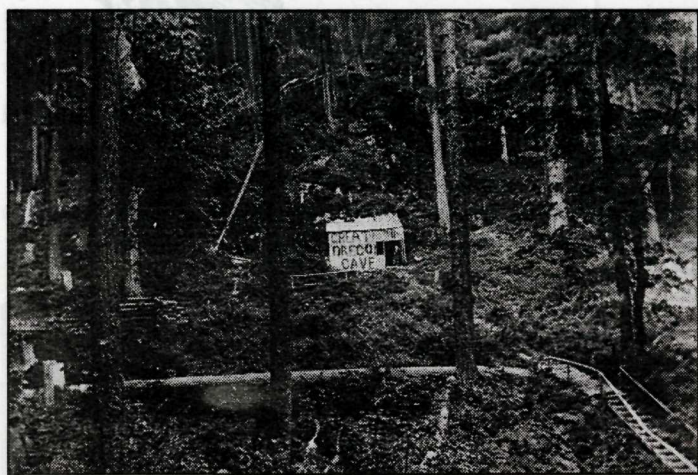
These studies also allow us to understand the features that make Oregon Caves unique. They suggest that Oregon Caves has some of the most active and numerous microbes of any cave in the West, in part because of the close connection between surface and cave environments. The microbes appear to go through a cycle in which winter rain brings the organics into cave pools. Supplied with this new and rich food, the microbes rapidly reproduce. With summer drought comes a slow decline in microbes as most of the organics are used up until the coming of rains in winter.

How does this research affect management at Oregon Caves? The rounded clay worms will be removed as they appear to be mostly caused by lint and artificial lights. The new trail is designed so that lint is trapped and will be periodically removed from the cave. Finally, the study helps us understand that our actions above and below ground may affect the smallest creatures, and in turn alter the entire cave ecosystem.



IN THE LINE OF FIRE

by Sheri Forbes, Park Ranger; Al Augustine and Chris Chiverton, NPS Fire Managers



At the turn of the century, the trees near the main entrance of Oregon Caves were more widely spaced than they are today.

The early 1920's was a turning point at Oregon Caves National Monument. At that time, the first buildings in the area were erected, and the last significant fire burned in the forest above the cave. According to research completed in 1990, we are now in the longest fire-free period in over 300 years.

Scientists have learned that altering the natural fire frequency can change the tree species of a forest. Other results of removing fire from a forest are easily seen at Oregon Caves: increases in the down and dead fuels and shading that prevents herb growth. The National Park Service (NPS) mission is to preserve ecosystems while making

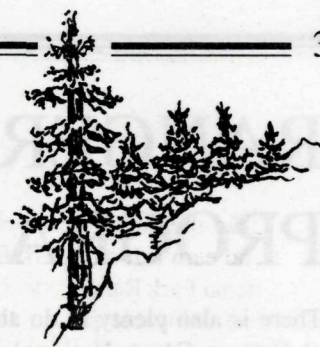
them accessible to the public. Fire is one of several natural processes that make up the forest ecosystem at Oregon Caves. Due to the Monument's small size, it cannot contain a natural fire cycle within its boundaries. In a developed vacation destination such as this, fire becomes a controversial issue due to safety, property, aesthetic, and emotional concerns.

NPS Fire Managers have a plan to deal with the safety and ecosystem concerns we face at Oregon Caves. The Monument's hazard fuel reduction program strikes a balance between maintaining safety and ecosystem health. The goals of the program include

protecting property, reducing unnatural fuel loads, and reintroducing fire into the forest.

This project has already begun in the Cave Creek canyon below the historic Chateau. This area had the highest fire frequency in the past, partly because fire has a tendency to move up canyons. A hike down the trail below the Chateau today reveals a forest relatively open and free of fuels. In the last couple of years, live and dead vegetation has been removed by hand and placed in piles to be dried and burned in a controlled setting. This labor-intensive technique not only reduces the potential for an intense fire to reach the Chateau from below, but it also enriches the nutrient-poor soil with ash. The ecological effects of the fires will be monitored and similar projects may be proposed for other parts of the 480 acre Monument.

The fire-dependent forest atop Oregon Caves has been denied fire for nearly 75 years. The controlled reintroduction of fire not only acknowledges the natural role of fire in the forest ecosystem, but also reduces the potential threat of fire to people and property. The hazard fuel reduction program is a true testimonial to the friendly role of fire in a natural environment.



HIKING TRAILS

Hiking these trails is a great way to see first hand what makes old-growth forests different and unique. For additional information, ask a ranger in the National Park Service office adjacent to the main parking lot.

NO NAME TRAIL

Length: 1.1 mile (1.75 kilometers)

Duration: 45 minutes to 1 hour

Elevation gain: 400 feet

The No Name Trail leads past tumbling mountain streams, mossy cliffs, and dense mixed forests.

CLIFF NATURE TRAIL

Length: 1.0 mile (1.5 kilometers)

Duration: 45 minutes

Elevation gain: 400 feet

Trail-side signs describe some of the natural features. Also, you'll see tall conifer forests, marble rock outcrops, and vistas of the western Siskiyou Mountains.

BIG TREE TRAIL

Length: 3.3 miles (4.8 kilometers)

Duration: 2 to 3 hours

Elevation gain: 1,100 feet

See not only the largest-diameter Douglas-fir tree known to exist in the state of Oregon, but also excellent examples of the four basic ancient forest structural components. This loop trail meanders through a beautiful section of old-growth forest to striking vistas of the surrounding mountains.

TIPS FOR DAY HIKERS

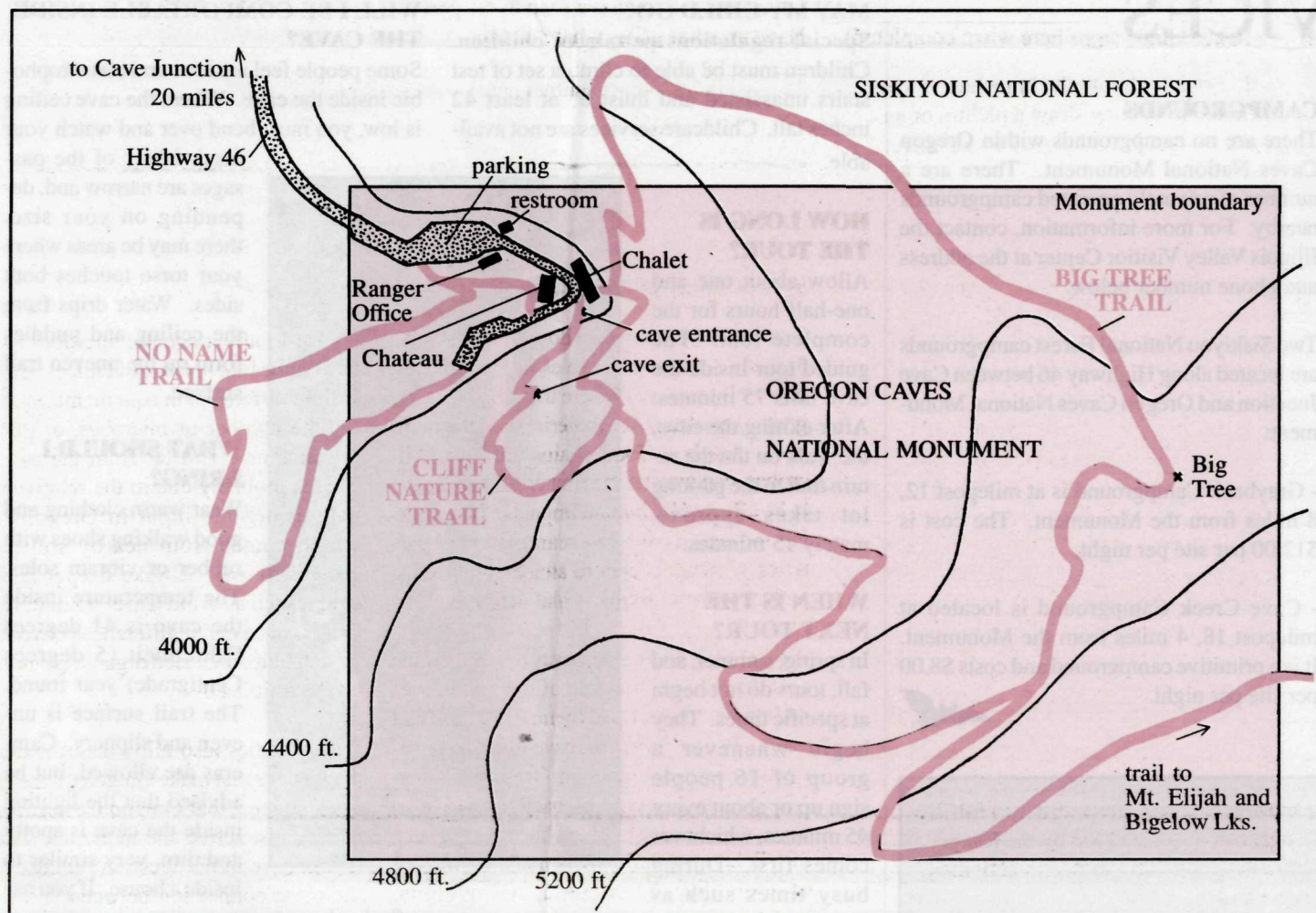
For your safety and for the preservation of the natural environment, please observe the following when hiking on Monument trails:

- Bring water and wear good hiking shoes.
- Stay on marked trails.
- Do not litter. If you pack it in, be sure to pack it out.
- Pets are not permitted on trails.
- Camping and fires are not permitted.
- Smoking is not permitted on any of the trails.
- Hunting, trapping, and/or the possession of weapons or firearms is prohibited.

BACKCOUNTRY HIKING

There are 5 miles of day hiking trails within the boundary of Oregon Caves National Monument. The Big Tree Trail connects with a Siskiyou National Forest trail to Bigelow Lakes, a popular overnight backcountry hike. Surface water contains *Giardia lamblia*, a protozoa which can cause serious disease. Treat all water or carry your own. Due to the potential for wildland fires, campfires are allowed only in designated areas. Stop at the Siskiyou National Forest Ranger Station in Cave Junction for maps and additional information on backcountry travel.

Hiking trails of Oregon Caves National Monument.



CRATER LAKE NATURAL HISTORY ASSOCIATION

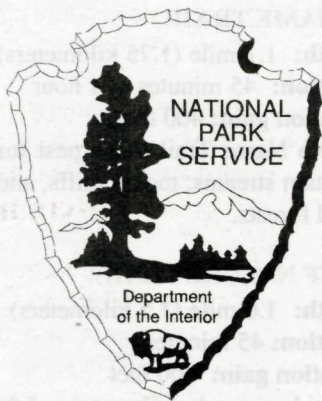
The *Oregon Caves Underworld* is published for park visitors by the Crater Lake Natural History Association in cooperation with the National Park Service. The Crater Lake Natural History Association is a nonprofit organization working with the National Park Service to provide programs of education, interpretation, and research in Crater Lake National Park and Oregon Caves National Monument.

To help visitors to Oregon Caves better understand, appreciate, and protect the Monument, an Association sales outlet at the Illinois Valley Visitor Center in Cave Junction offers selected publications, maps, price lists, order forms, and applications for membership in the Association. Or write to: Crater Lake Natural History Association
PO Box 157
Crater Lake, OR 97604

RANGER NATURALIST PROGRAMS

There is also plenty to do above ground at Oregon Caves National Monument! National Park Service naturalists offer a variety of programs in summer which highlight the natural and cultural history of the area.

For more specific titles, times, and descriptions, inquire at the Illinois Valley Visitor Information Center in Cave Junction or at the Information Booth in the Oregon Caves National Monument parking lot. Also, look for naturalist program flyers on bulletin boards at the Monument, Cave Creek Campground, and Grayback Campground. The following programs are offered in summer only:



CHATEAU EVENING PROGRAM

Nightly in the lobby of the historic Oregon Caves Chateau. 9:00 pm through mid-August, 8:30 pm mid-August through Labor Day. This is a 45 minute slide show or other interpretive activity about the human or natural history of the Monument.

NATURALIST'S CHOICE PROGRAM

2:00 pm daily through Labor Day. Meet at the upper fish pond in front of the Chateau. The format may be a walk, a talk, games for children, demonstrations, etc. Topics and duration of programs are posted on bulletin boards.

GRAYBACK CAMPGROUND PROGRAM

Friday and Saturday nights only. 9:00 pm through mid-August, 8:30 pm mid-August through early September. These slide shows or informal talks last approximately 45 minutes and deal with anything from forests to flowers, mammals to monuments. Grayback Campground is located at mile 12 on Highway 46, approximately 8 miles from Oregon Caves National Monument. The campground amphitheater is near the picnic area.



GUIDED CAVE TOURS



Guided tours of Oregon Caves are offered year round (except December 25) by the concessionaire, the Oregon Caves Company. Guides lead you through 0.6 miles of marble cave passage and discuss natural and cultural history topics related to the cave and its preservation.

PLEASE NOTE: The cave is an environment that contains natural hazards such as uneven walking surfaces, steep grades and stairs, and low rock ceilings.

FOR YOUR OWN SAFETY, PLEASE EXERCISE CAUTION.

WHAT ARE THE HOURS?

Hours of operation change with the seasons. You may register for tours in person at the following times:

Spring - May 1 to May 31

8:30 am to 5:00 pm

Summer - June 1 to September 4

8:00 am to 7:00 pm

Fall - September 5 to September 30

8:30 am to 5:00 pm

Winter - October 1 to April 30

Set times between 9:30 am and 4:00 pm.

Please call for times or stop at the Illinois Valley Visitor Information Center.

(closed December 25)

Note: In winter, tours start at set times. In spring, summer, and fall, tours do not start at set times. Please read "When is the Next Tour?"

HOW MUCH DOES IT COST?

Rates for tours are as follows:

Adults: \$5.75

Children under age twelve: \$3.50

Seniors w/ Golden Age cards: \$5.00

Prices are subject to change.

Note: Special restrictions apply to children. Please read "May My Child Go?"

Note: Golden Age cards now cost a one time fee of \$10.00 and can be purchased by any US resident that is 62 years of age or older. They may be purchased at any NPS area that charges an entrance fee. (There is no entrance fee at Oregon Caves National Monument.)

VISITOR SERVICES

CONCESSION SERVICES

The Oregon Caves Company, a subsidiary of the Estey Corporation, operates concession services at Oregon Caves National Monument. Services include a lodge, dining room, coffee shop, gift store, and cave tours. The Oregon Caves Company serves the public under a contract with the National Park Service. Call 503-592-3400 for information about these concession services.

PICNICKING

Two wooded picnic areas are located just off the main parking area at Oregon Caves National Monument.

LOST AND FOUND

Lost and found items should be reported to the National Park Service at the Information Booth or office building located adjacent to the main parking lot.

CAMPGROUNDS

There are no campgrounds within Oregon Caves National Monument. There are a number of privately operated campgrounds nearby. For more information, contact the Illinois Valley Visitor Center at the address and phone number below.

Two Siskiyou National Forest campgrounds are located along Highway 46 between Cave Junction and Oregon Caves National Monument:

- Grayback Campground is at milepost 12, 8 miles from the Monument. The cost is \$12.00 per site per night.

- Cave Creek Campground is located at milepost 18, 4 miles from the Monument. It is a primitive campground and costs \$8.00 per site per night.



MAY MY CHILD GO?

Special regulations pertain to children. Children must be able to climb a set of test stairs unassisted and must be at least 42 inches tall. Childcare services are not available.

HOW LONG IS THE TOUR?

Allow about one and one-half hours for the complete tour. The guided tour inside the cave lasts 75 minutes. After exiting the cave, the walk on the the return trail to the parking lot takes approximately 15 minutes.

WHEN IS THE NEXT TOUR?

In spring, summer, and fall, tours do not begin at specific times. They begin whenever a group of 16 people sign up or about every 45 minutes, whichever comes first. During busy times such as holiday weekends, tours fill up more quickly than they can enter the cave, creating a backlog. During these times, you may have to wait up to two hours for an available tour.

HOW STRENUOUS IS THE TOUR ROUTE?

The cave tour is considered strenuous and is not recommended for people with heart, breathing, or walking problems. The entire route, including cave passage and exit trail, is nearly a mile in length. The route includes over 500 stairs, most of which are steep and wet. The exit trail is at a 16% grade.

WILL I BE COMFORTABLE INSIDE THE CAVE?

Some people feel anxious and claustrophobic inside the cave. Where the cave ceiling is low, you must bend over and watch your

head. Many of the passages are narrow and, depending on your size, there may be areas where your torso touches both sides. Water drips from the ceiling and puddles form on the uneven trail surface.

WHAT SHOULD I BRING?

Wear warm clothing and good walking shoes with rubber or vibram soles. The temperature inside the cave is 41 degrees Fahrenheit (5 degrees Centigrade) year round. The trail surface is uneven and slippery. Cameras are allowed, but be advised that the lighting inside the cave is spotty and dim, very similar to inside a house. If you use

a flash, please point your camera away from visitors and your guide so that they are not temporarily blinded.

WHAT IS NOT ALLOWED?

Please do not bring food, beverages, gum, or tobacco products inside the cave. These are potential food sources for animals which upsets the balance of the normally low-energy cave ecosystem. Canes, staffs, and tripods are also not allowed in the cave. The delicate cave formations may be damaged by these items. Please do not touch or lean on any of the cave walls or formations. Formations are easily worn down, stained by skin oils, and are very fragile.



FOR MORE INFORMATION ABOUT...

...the Monument in general:

National Park Service
Oregon Caves National Monument
19000 Caves Highway
Cave Junction, OR 97523
503-592-2100

...lodging or dining at the Monument:

Oregon Caves Company
20000 Caves Highway
Cave Junction, OR 97523
503-592-3400

...lodging and food services in the area, other public lands:

Illinois Valley Visitor Center
201 Caves Highway
Cave Junction, OR 97523
503-592-2631

...Siskiyou National Forest:

US Forest Service
Illinois Valley Ranger District
26568 Redwood Highway
Cave Junction, OR 97523
503-592-2166