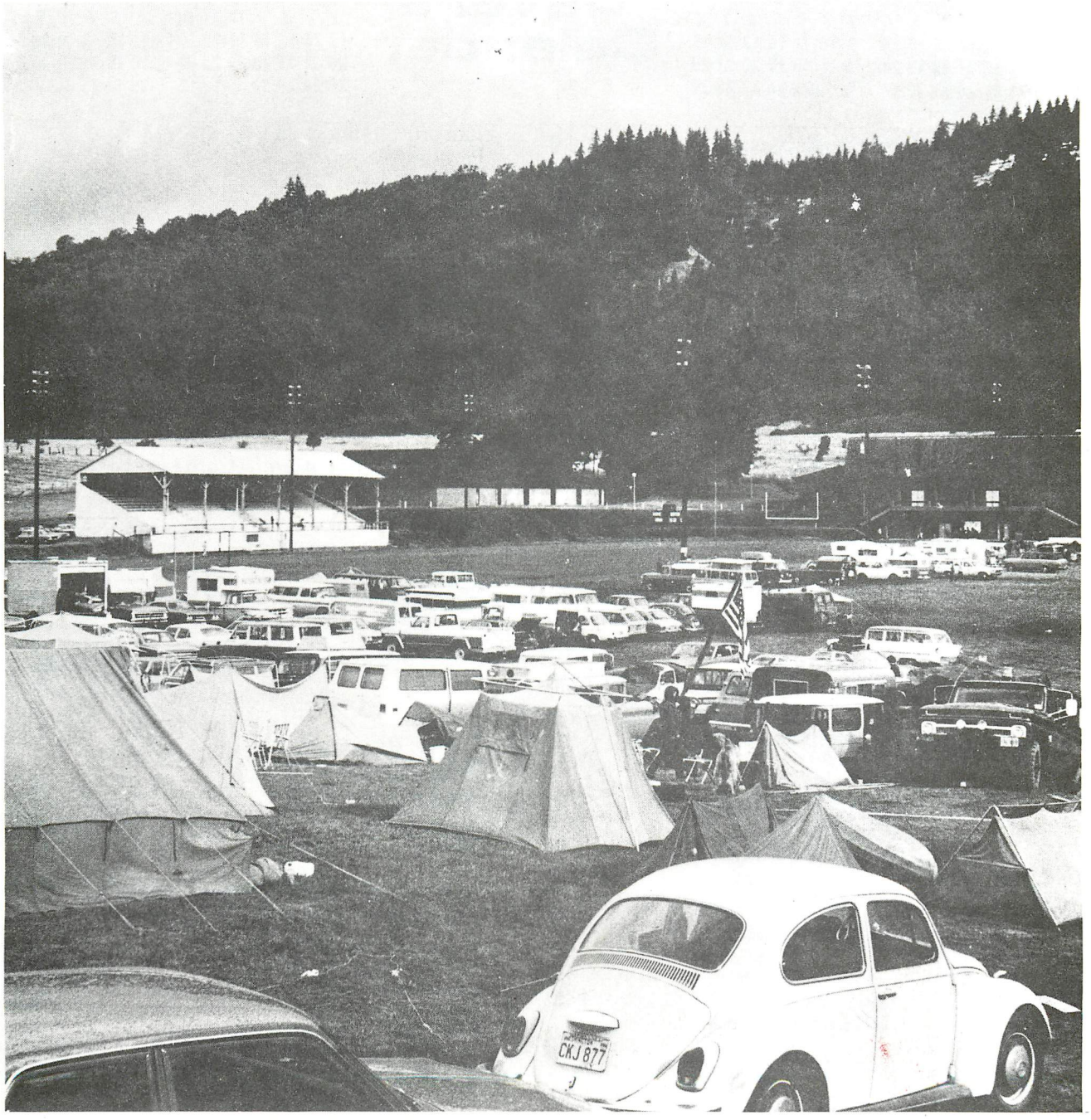
# THE SPELEOGRAPH

PUBLISHED BY THE OREGON GROTTO OF THE NATIONAL SPELEOLOGICAL SOCIETY

*Vol.18, No.4* *April 1982*



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Oregon Grotto general **MEETINGS** are held on the 3rd Friday of every month, at 7:30 P.M., and until further notice, will be held at the Southwest Washington Research Unit, 1918 N.E. 78th St., Vancouver, Washington. (¼ mile east of Interstate-5 on 78th St.)

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1982 **APRIL** 1982

| SUN | MON | TUE | WED | THU | FRI | SAT |
|---|---|---|---|---|---|---|
| F.Q. 1st 30th | F.M. 8th | L.Q. 16th | N.M. 23rd | | 1 | 2 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | |

1982 **MAY** 1982

| SUN | MON | TUE | WED | THU | FRI | SAT |
|---|---|---|---|---|---|---|
| F.M. 7th | L.Q. 16th | N.M. 22nd | F.Q. 29th | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 30 | 24 31 | 25 | 26 | 27 | 28 | 29 |

# Cavers Calendar

1982 **JUNE** 1982

| SUN | MON | TUE | WED | THU | FRI | SAT |
|---|---|---|---|---|---|---|
| F.M. 6th | L.Q. 14th | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | N.M. 21st | F.Q. 28th | |

1982 **JULY** 1982

| SUN | MON | TUE | WED | THU | FRI | SAT |
|---|---|---|---|---|---|---|
| F.M. 6th | L.Q. 13th | N.M. 20th | F.Q. 27th | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

April 16, Oregon Grotto General Meeting, 7:30 p.m., at the Southwest Washington Research Unit, 1918 N.E. 78th Street, Vancouver, Washington. (¼ mile east of Interstate-5 on 78th St.) Program: Free-for-all convention slide show. Bring your slides of past NSS conventions, especially of the 1972 Convention.

May 7, Oregon Grotto Executive Committee Meeting, 7:30 p.m., hosted by Rick Pope/Becky Taylor.

Labor Day Weekend, NWCA (old NWRA) Annual Meeting, hosted by VICEG on Vancouver Island.

May 1, Tentative start of Ape Cave Trail Project, contact Mark Perkins for further information.

May 3, Tentative start of Ape Cave Guide Program, contact Rick Pope for further information

### COVER

Part of the campground at the 1972 NSS Convention in White Salmon, Washington. From a black & white by Dave McClurg.

## Money Wrench

DUES DUE IN MARCH

Davis, Bob. . . . . .3-3-82

DUES DUE IN APRIL

Block, Ed & Kathy . . . . . 4-17
Chevalier, Roy. . . . . 4-18
Nelson, Bob. . . . . 4-2
Reinke, Art, Family . . . . . 4-20

DUES DUE IN MAY

Benedict, Earl . . . . . 5-12
Eide, Stuart. . . . . 5-21
Larson, Charlie & Jo . . . . . 5-21
Perkins, Mark . . . . . 5-19
Smith, Dave & Dianne. . . . . 5-21
White, Mary & J.R. . . . . 5-21

DROPPED

Buisman, Family
Wolff, Jim

SUBSCRIPTIONS DUE $6.00

Crawford, Rod . . . . . 12-81
Kamp, Bill. . . . . 8-82
Waters, Dave . . . . . 3-82
Whitfield, Phil . . . . . 10-81

SUBSCRIPTIONS PAST DUE $12.00

Beardslee, Vern . . . . . 2-81
Brown, Bob. . . . . 7-80
Gruber, Esther. . . . . 10-80
Miller, Doug . . . . . 6-81
Smolin, Becky. . . . . 10-80

SUBSCRIPTIONS WAY PAST DUE $18.00 to be current

Harter, Russ . . . . . 6-79
Papke, Bill. . . . . 9-79
Silver, Suzanne . . . . . 2-80
Stoel, Peter . . . . . 1-80
Tower, Robert. . . . . -3-80

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MEMBERSHIP DUES are: Individual, $6.00/yr. Family of two, $7.00/yr. Family of three or more, $8.00/yr. Please make checks payable to Oregon Grotto and mail or give to Jo Larson, Membership Chairman, 13402 N.E. Clark Road, Vancouver, Washington 98665. If you wish a receipt or membership card mailed to you, please include a stamped, self-addressed envelope.

# TRIP PLANNING MADE EASY IN THE GREAT NORTHWEST

***(Or how your hosts are "bend"ing over backwards to show you a good time in '82!)***

By Trip Coordinator Dennis Glasby & Publicity Chairman Becky Taylor

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*So, you plan to attend the 1982 Convention in Bend, Oregon, but you're curious about the CAVES! And maybe you're curious about where to go and what to see on the way to or from the Convention site in Central Oregon. Well, be no longer troubled, because there are no only a great variety of planned trips before, during and after the Convention — there are also many interesting stops that may be made on your own self-guided tours. We hope that the following pages will be helpful in planning your schedule; please contact the trip leaders or convention personnel if you have any questions about the information.*

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## PRE-CONVENTION TRIPS

### CANADA - British Columbia

The caves of **Vancouver Island,** although usually small, offer variety and challenge coupled with beautiful scenery. These are wet caves of limestone and include possible ropework. The excursion, led by Phil Whitfield, will leave Nanaimo on June 26th and spend the day seeking out and exploring Thanksgiving Cave, among others. For additional information, contact Phil before June 19th at 521 W. Innes Street, Nelson, British Columbia, Canada, V1L 3J2.

### IDAHO

**The Hell's Canyon Trip** takes you to the scenic Park and Dam site on the Snake River on June 26th. The nearby caves are of limestone, but do not require vertical gear as they are small. For more information, or to reserve your place, contact Dave Hagen, 3801 Taft, Boise, Idaho 83703. Phone (208) 344-9549.

**Papoose Cave,** near Riggins, Idaho, is a highly decorated limestone cave of about 7,500 feet. The average temperature is 36 degrees F. at 95% humidity. Add to this an 800 foot vertical extent with drops of 60 and 40 feet, and you can easily see that this caves requires thermal protection and experience in vertical work. This trip is planned for Saturday, June 26th and Sunday, June 27th. Tent type camping will be set up at the cave and the trip leader requests that he be contacted for information and reservations by June 1st. Write or phone Steve Klug, 2324 Pendleton, Boise, Idaho 83705, (208) 336-5598.

**Pot O'Gold Cave,** a well-decorated lava tube of about 1.5 miles in length, will require six hours of exploration time, basic caving and hiking gear, water and a lunch (for you - the cave is fed by attendents). The trip will begin at the Shoshone City Park and will encompass both Saturday, June 26th and Sunday, June 27th. A local KOA Campground offers campsites at a moderate rate and is located at the turnoff of I-84 and Shoshone. If you wish more information or would like to reserve your spot, contact trip leader Frank Ireton by June 15th at Box 356, Mountain Home, Idaho 83647, (208) 587-7105.

### OREGON

The traditional **Geology/Biology Field Trip,** Sunday, June 27th, emphasizes "Volcanic Landforms of Central Oregon." You'll visit truly outstanding cinder cones, aa and pahoehoe lava flows, spatter cones, obsidian flows, maars, lava tubes and a vast caldera of a stratovolcano. You will also receive assistance in identifying the major vegetation and cave invertebrates. The Geology/Biology Field Trip Guidebook is being bound with the Convention Guidebook and will be easy to obtain and utilize. A full day begins with pre-boarding coffee and stop number one at Mountain View High School. Buses leave promptly at 8:00 a.m. and return before 10:00 p.m. Cynthia Fiak and her field kitchen will provide both lunch at Newberry Caldera and dinner at Fort Rock State Park. Bring caving lights, warm clothing and good footwear to explore two cold, horizontal, wild lava tubes. For surface travel, bring lightweight summer clothes and a hat or scarf, as the weather is changeable. You'll need a jacket against the wind, as well since Paulina Peak is nearly 8,000 feet above sea level! Space is limited to 78 persons, so pre-register now with a deposit of $20.00, and the balance of not more than $7.50 due at the registration tent when you arrive at Mountain View. Use the form provided in the March issue of the **News.** For further information, contact the trip leader, Ellen Benedict at 8106 S.E. Carlton Street, Portland, Oregon 97206, (503) 774-1233.

**Malheur Cave** is a lava tube located near the headwaters of the Malheur River, Princeton, Oregon on Highway 78, is privately owned, on Saturday, June 26th, there will be a guided tour including a boat trip on its lake, which begins 1,700 feet from the entrance and is about 1,300 feet long The broad, flat-floored approach to the lake is warm (about 58 degrees) and pleasant. Tours will begin at 9:30 a.m. and reoccur approximately every two hours at the cave entrance. For complete directions to the cave and additional information regarding the tours, contact trip leader, Susan Lindstedt before June 19th. Malheur Field Station, P.O. Box 260E, Princeton, Oregon.

WASHINGTON

**Mt. St. Helens Caves.** The Mt. St. Helens restricted zone was recently moved back to the base of the mountain on the south side. So, here is a good opportunity to discover for yourself the effects of the recent volcanic activity on the local landscape and on the cave environment. A field trip is planned to the cave area of Mt. St. Helens Saturday, June 26th, and will cover the cave system 2-3 miles from the base of the mountain (volcano allowing) where there are plenty of geographic changes due to the eruptions. This area features many unique lava caves including the longest unitary tube in North America. Mention will be made of the studies conducted in the area and especially around the Ape Cave vicinity, where the trip will begin at 8:00 a.m., and the Gremlin and Hopeless Cave mudflows. Because this trip will be a full day, participants are encouraged to bring not only basic hiking and caving gear (no vertical necessary) but drinking water and lunch as well. The trip will start at Ape Cave Parking Lot, at 8:00 a.m.. This cave is well marked and easily found by driving east past Cougar, Washington, on Highway 503 to just past the Swift Resrvoir Overlook, where the turnoff to Ape Cave is well marked. (9:00 a.m. on July 4th) Since the number of participants is limited, and you should reserve your spot by contacting Dennis Glasby before June 17th at 3580 S.W. 104th, #l, Beaverton, Oregon 97005, (503) 644-1066.

## CONVENTION TRIPS

### MONDAY, JUNE 28TH

**Cave History Trip**
Register upon arrival at Mountain View for this interesting trip featuring the human use of lava tubes in the Arnold Cave System. A car pool will depart Mountain View High School at 9:00 a.m. to visit 4-5 of these caves, one of which is almost completely closed by ice, while another features indian pictographs. You will need caving gear and warm clothing for cave temperatures which will average about 40 degrees, lunch and drinking water. The group will return in time for the Howdy Party. Trip leaders are Jim and Libby Nieland, 12178 Lewis River Road, Ariel, Washington 98603.

**Lavacicle Cave Trip**
This cave cannot be visited without pre-arrangement because it has been gated by the Forest Service. The guided tour is highly recommended, since Lavacicle, discovered in 1959 by firefighters, has the largest concentration of drip form stalactites and stalagmites in the Northwest. Participants will meet at 11:00 a.m. at Mountain View High School and car pool to the remote cave area, returning before the Howdy Party. The tour is limited, and those interested are encouraged to sign up promptly at the registration desk upon arriving at the high school. Basic caving gear is all that is required. Bring your camera and flash unit.

### TUESDAY, JUNE 29TH

**Cave Biology Trip**
Hardcore biologists will have the opportunity to carpool to caves southeast of Bend, leaving Mountain View High School at about 2:00 p.m. following the Biology Section Luncheon and returning about midnight. Bring caving gear, a sack dinner and drinking water. For further information, contact Mark Perkins, 5130 S.W. Idaho, Portland, Oregon 97221, (503) 244-6613.

Cave Exploration Trip I
This trip will primarily consists of tracking down some hot cave leads and exploring uncharted wild caves (some ice caves). So be prepared for lots of hiking and some crawling and digging. Otherwise, your basic caving gear, warm clothing, water and lots to eat is all you need. During the day, the trip will include one small but highly decorated lava tube found recently, on a trip just like this one. This trip will leave Mountain View School at 8:00 a.m., by car pool and return about dusk. Sign up before or during the convention at the registration booth. Trip leader is Dennis Glasby, 3580 S.W. 104th St., No.1, Beaverton, OR 97005.

### WEDNESDAY, JUNE 30TH

**Lavacicle Cave Trip**
Same as Monday's, except that the carpool will department Mountain View at 1:00 p.m.

### THURSDAY, JUNE 31ST

**Crater Lake Trip**
Are you a non-caver? Or maybe you'd just like a break. In any case, this low-key, non-caving trip leaves Mountain View School at 7:00 a.m. and returns by 5:00 p.m. in time for the Photo Salon. There may be a boat trip on the lake itself, and you will want to bring your camera to capture the unique beauty of extinct Mt. Mazama's mammoth, water filled caldera. Plan to carry a lunch and beverage as well as warm clothing since elevations are over 7,000 feet. Space is limited to 46 persons, so it is strongly advised that you pre-register by sending a deposit of $10.00. The balance will be payable at the registration tent prior to the trip. Leader is Gale Beach, 488 Oak Court, Menlo Park, California 94025. (415) 324-2908.

**Cave Exploration Trip II**
Same as Tuesday's trip.

### FRIDAY, JULY 1ST

**Cave Geology Trip**
This carpool trip, scheduled for 8:00 a.m., will leave Mountain View and return in time for the Banquet. Bring caving gear, a sack lunch and drinking water. Sign up at the registration desk at the Convention.

**Sheridan Mountain Caving Trip**
Participants in this excursion will visit caves in the high plateau area 15 miles due west of Lava Lands Visitors' Center. Two of the caves contain ice, and one is a very nice alpine setting lava tube that requires some basic vertical skill. You will explore a newly discovered system. Bring warm clothing, caving gear and hiking equipment. Drinking water and lunch are also necessary. A car caravan will leave Mountain View High School at 8:00 a.m. and return in time for the banquet. You may sign up for this trip at the registration table before or during the convention.

## POST CONVENTION TRIPS

### CANADA - BRITISH COLUMBIA

The VICEG Grotto is providing trips to **Vancouver Island's Limestone Caves.** No vertical gear required. Sign up at the convention registration booth or contact trip leader Terry Boorman, 2064 Allenby Street, Victoria, B.C. Canada Z8R 3C1

### CALIFORNIA

This trip will concentrate on the **Gaping Holes and Powder Hill Systems** just southwest of Lava Beds National Monument. A car caravan will leave the convention site

Saturday, July 3rd at 9:00 a.m. for Lava Beds National Monument for caving and camping Saturday and Sunday. Cavers will need camping gear, warm clothing, drinking water, caving gear (including kneepads), and some basic vertical gear. Registrations will be accepted up to June 30th at the convention site, but pre-registration is encouraged by June 20th. Contact trip leaders Jim and Liz Wolff, P.O. Box 865, McCloud, California. (916) 964-3123.

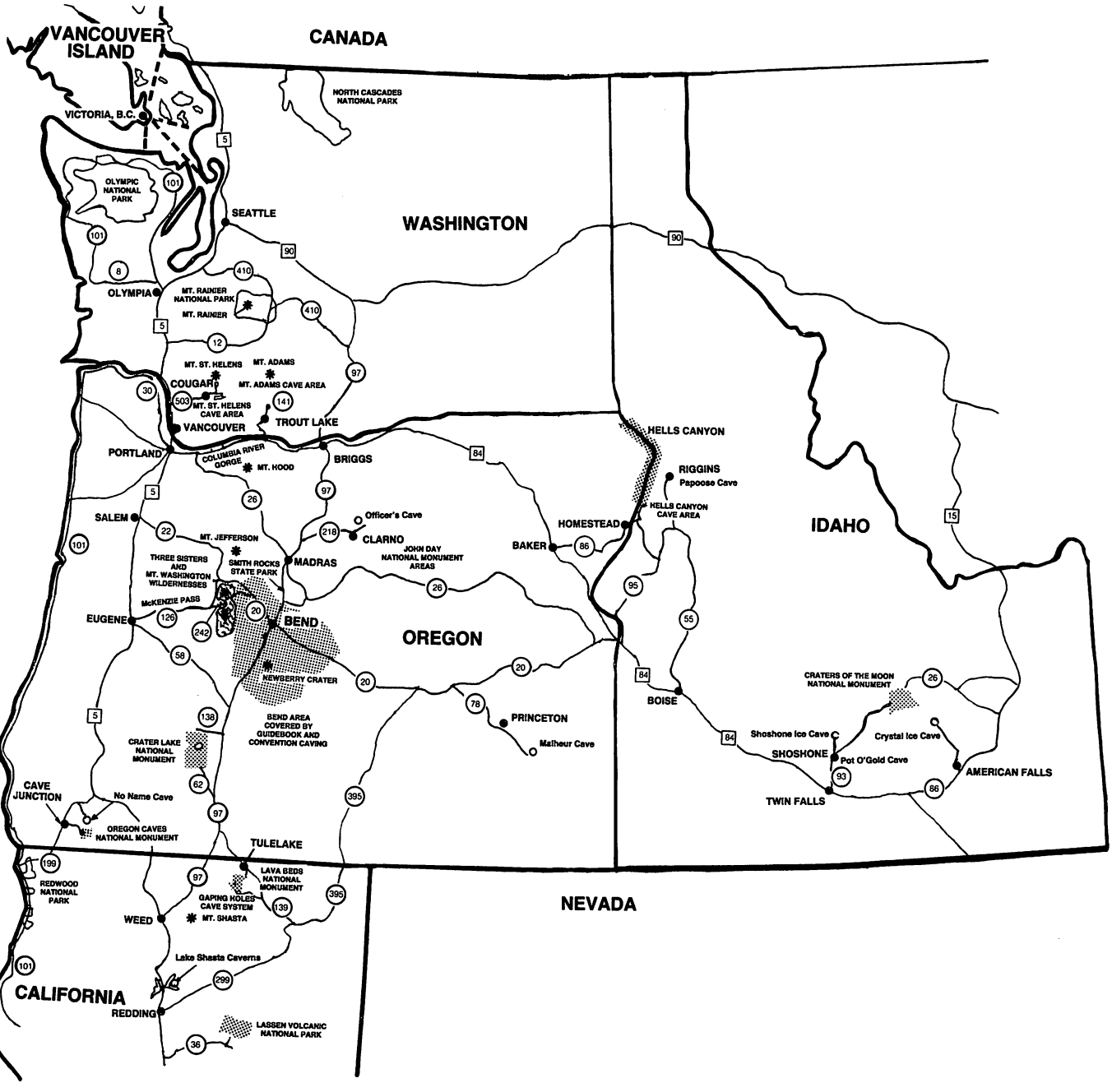
**IDAHO**

**Pot O'Gold Cave Trip** will be a repeat of the one presented Saturday, June 26th and Sunday June 27th (see pre-convention trips). New dates: Saturday, July 3rd and Sunday, July 4th. Register before June 27th. Contact Frank Ireton, Box 356, Mountain Home, Idaho 83647, (208) 587-7105

**Papoose Cave Trip** will be a repeat of the June 26th and 27th trip (see pre-convention trips). New dates: Saturday July 3rd and Sunday, July 4th. Register before June 28th. Contact Steve Klug, 2324 Pendleton, Boise, Idaho 83705, (208) 336-5598.

**WASHINGTON**

**Mt. Adams / Trout Lake Caving Trip.** On Saturday, July 3rd, a car caravan will be leaving the convention site for Trout Lake, Washington. It's goal: two days of lava tube



caving July 4th and 5th. Most of the caves are described in the 1972 Convention Guidebook, which will be on sale at the Convention this year. The trip leader will set up camp at Dead Horse Cave, an intricate lava maze containing a small river, two entrances and varied biota. The group will then visit nearby caves including Dead Horse and Dynamited - one of the most spectacular lava caves in the Northwest with pitches of 25 to 40 feet (vertical skills and equipment needed for the 40 foot drop). Register at the convention, or contact trip leader Bob Brown, P.O. Box 2, Elbe, Washington 98330, (206) 569-2724.

**Snoqualmie Pass Caving Trip.** On the weekend of July 10th, there will be an alpine climbing, limestone caving trip to the Snoqualmie Pass area. Vertical gear is required for this excursion. Sign up at the convention registration tent or contact trip leader Bob Brown, P.O. Box 2, Elbe, Washington 98330, (206) 569-2724.

**Mt. St. Helens Airplane Sightseeing.** On July 3rd, arrangements have been made with a charter airplane service out of Vancouver, Washington to provide group rates for cavers to fly around Mt. St. Helens. The trip will take a little over an hour and the pilot will concentrate on the north side of the mountain providing excellent opportunities for pictures of the devastated zone. Rates are: 10—25 people, $25 each; 25 and up, $24. If you want to take this flight, sign up before June 12 so that the group rate can be calculated. Otherwise, sign-ups will be taken at the convention. For information, or to reserve your seat, contact Dennis Glasby, 3580 S.W. 104th St. No.1, ton, Oregon 97805. (503) 644 - 1066.

**Mt. St. Helens Caving Trip.** This trip will be a repeat of the June 26th excursion (see pre-convention trips). It will be made more interesting, however, if the participants have seen the presentation on St. Helens at the convention. The July 4th trip will leave Ape Cave parking lot at 9:00 a.m. For more information, contact Dennis Glasby, 3580 S.W. 104th, #1, Beaverton, Oregon 97005, (503) 644-1066.

# RECOMMENDED SELF-GUIDED TOURS

## ON YOUR WAY TO AND FROM THE 1982 N.S.S. CONVENTION

### NORTHERN CALIFORNIA:

In the south, your first stop might be **Lassen Volcanic National Park,** which is something like Yellowstone in that there are active "volcanoes" everywhere - geysers, steam vents, mud pots and glory holes. There are also several nice lava tubes including the large and renowned Subway Cave.

In the same general area is **Lake Shasta Caverns.** This commercialized, limestone cave is beautifully decorated and maintained. It is accessable via a scenic boat ride across Lake Shasta from O'Brien Landing. Discounts to convention attendees.

Just to the northeast of Mt. Shasta is **Lava Beds National Monument,** an area thick with interesting lava tubes, only moderately "tamed." Arrangements have been made to direct convention attendees to the lesser-known caves in and outside of the monument. Brochures will be available at the convention.

A "must-see" for those coming from the south is the **Giant Redwood Groves** on the California coast between Ukiah and Crescent City on Highway 101. They are almost gone in Oregon and this area of California is the last stand of these majestic trees.

### OREGON:

After viewing the redwoods, a trip underground may be in order, and the **Oregon Caves National Monument** is close at hand. An intricate, three-dimensional maze with 15,000 feet of passage, the "caves" is really only one limestone "cave." Although not considered extensively decorated, it does contain great beauty in places. There are rooms available in the guest chateau, and restaurant facilities in the same building. You may camp on the way in to the cave, but not on the Monument.

Nearby is a smaller limestone cave called **No Name.** It is reached by turning off Highway 199 at Wilderville and traveling about nine miles along secondary and unimproved roads to within 100 yards of the entrance. Trip coordinator Dennis Glasby can provide detailed directions, should you decide to make this cave a part of your self-guided tour.

Northeast about 100 miles from the Oregon Caves is famous **Crater Lake,** which is actually water existing in the caldera of extinct Mt. Mazama. There are no accessable caves here, but the area encompasses some of the most unusual and representative lava and volcanic formations in the world. Brochures are available at the convention.

Due north of Crater Lake and inside the convention area is another lake-filled caldera called **Newberry Crater** with an interpretive center at **Lava Lands Visitors Center.**

On the western edge of the Convention area are the **Mt. Washington and Three Sisters Wildernesses.** These areas are a hiker's and backpacker's dream containing everything from western old growth fir and glaciers to some of the youngest lava flows in the Pacific Northwest, should you wish to continue west over **McKenzie Pass.**

Twenty-five miles north of Bend, near the town of Terrebone, rock climbers will discover the most popular climbing area in Oregon - **Smith Rocks State Park.** Most of the rock is rhyolitic and offers a wide degree of climbing difficulties.

To the northeast of the Bend area are the **John Day Fossil Beds Monument Areas.** The Monument and surrounding areas include everything from high plateau desert fossil beds to attractions similar to Arizona's painted desert. **Officer's Cave,** in the John Day Formation, is the largest known piping cave (cave in pseudo-karst) in North America. With over 2,000 feet of mapped passage, it is growing at the rate of 2,700 cubic feet per year. There are also several small caves in the **John Day River Canyon** near Clarno, in Wasco County. Many show signs of habitation, like smoke-blackened ceilings, bones, arrowheads and occasionally, pictographs.

Just approximately 25 miles east of Portland, visitors will find the **Columbia River Gorge,** in an area created by vast outpourings of Miocene basalts. If any lava tube caves have survived here, they have not been located to date, although a more recent lava field west of **Parkdale** has yielded some rift system caves. Over 30 waterfalls are easily accessible along the gorge, including the impressive **Multnomah Falls.** Stop to examine the rocks in the walls of the Lodge at Multnomah Falls. Yakima black basalt, Cascade or Boring gray basalt, Troutdale quarzite boulder and Eagle Creek petrified and opalized wood may all be identified. Be sure to visit the Forest Service Information Center where an excellent geological exhibit can be seen. The falls is 620 feet in all and drops across three basalt flows, a fourth causing the lower falls. The name "Multnomah," as a point of interest, is believed to mean "down river."

## IDAHO:

Consider stopping at **Crystal Cave,** if you are traveling through Idaho. It is one of the largest ice caves in the northwest and is commercially maintained. Backtrack from the junction of I-84 and I-86 to the town of American Falls and then take highway 39 across the Snake River to N. Pleasant Valley Road and follow the signs. Temperature is about 32 degrees and brochures are available at the convention.

**Craters of the Moon National Monument,** an area where the N.A.S.A. crews trained for hiking on the moon, is an interesting and informative stop. It is a totally volcanic landscape including caves, rifts and formations of great variety.

Nearby is the **Shoshone Indian Ice Cave.** Like Crystal Cave, it sports formations year 'round, an average temperature of 32 degrees and is commercially maintained.

Right on the Idaho/Oregon boundary is spectacular **Hells Canyon,** a Grand-Canyon-like geologic stop for the camera buff. Raft tours are also available by pre-arrangement.

## WASHINGTON:

**North Cascades National Park** is a spectacular combination of high alpine, snow-covered slopes and large, man-made lakes. The long commercial boat ridge on **Lake Chelan** and **Lake Ross** are a vacationer's delight.

Southwest of Seattle is the **Olympic National Park** which exhibits incredible variety for the hiker and backpacker — from the coast, to rain forests, and to lofty peaks sporting mountain goats and marmots. Many campgrounds are available for use.

Further to the south and east is **Mt. Rainier National Park** which contains the largest dormant volcano in the continental U.S. The area exhibits many varied geological formations including some of the best alpine scenery in the Pacific Northwest -- and premier skiing under good conditions.

To the surprise of none, the most active volcano in the North American Continent is the best stop on the self-guided tour menu. The large mud-flows of May 18th 1980 eruption can be seen by driving up the **Toutle River Valley** on the north side of Highway 504. The road is currently blocked about 15-20 miles west of the mountain and the crater is only partially visible from this distance. The south side of the volcano can be approached within about one mile on highway 503 and unimproved forest service roads which may or may not be washed out by mudflow at convention time. This side of the mountain also contains an extensive cave system including the well-marked **Ape Cave** (see St. Helens Guided Pre and Post Convention Trips).

# MOUNT St.HELENS AFTER THE MARCH GROTTO MEETING

by Willaim R. Halliday, M.D.

The mountain blew during the March 19 Oregon Grotto meeting and again late at night. But the caves are out of the Red Zone now, so Clyde Senger, Bob Baker, and I went happily to the area to find out how much tephra had fallen in our study area. Surprise! The gate was back. Our old friend Ron Fields was manning the gate and explained that there was a "fallback line" nobody had ever heard of before. He had instructions that he was to allow nobody through the gate except cabin owners, he said, and the instuctions came from the office at the supervisor at the Gifford Pinchot National Forest.

Welll—it just so happened that on Monday, in Washington, D.C., I had talked with some of congressman Sid Morrison's staff about what to do if the supervisor and his staff began obstructing our research again, and it seemed that some of congressman Morrison's staff (unlike that of most of congress) work on Saturday.

So back to the Cougar Store and its telephone. First a call to Charles Caughlan, at the GPNF Emergency Coordinating Center. He expressed sympathy and understanding, but indicated that we could not go past the gate. So a call to Congressman Morrison's office in Washington, and about 20 minutes later, Mr. Caughlan called back to say they had decided we could go to our study area.

Beginning near the start of the Ape Cave road there was about an inch of fluffy, extra slick snow on the road. About 100 yards downhill from the parking lot, Clyde's car spun to a halt. We looked back to Bob's 4x4 and saw right behind it a Skamania County Sheriff's rig. A deputy clumbed out and wanted to know how we got there and what we were doing there since there weren't any cabins up that way. It took about 10 minutes to get that straightend out; if I had not made notes on the telephone calls, it would have taken longer—meanwhile, Bob towed us up the hill and into the parking lot and we went hunting for the new tephra which supposedly had fallen here. An hour later, we concluded that it hadn't. Contrary to what we heard in Cougar, there just wasn't any tephra fall anywhere from the parking lot to the hairpin curve.

So we went on up toward the upper caves, in Bob's rig. At the parking area at the edge of the N81 mud flow, there was a light peppering of tephra fall under the new snow but nowhere near a measurable accumulation.

But we found something else. In striking contrast to the skimpy tephra, we found quite a few small bits of pumice that had melted small holes in the new snow. Most were small, flat chunks but we found several the size of chicken eggs and one the size of a duck egg: the only ones from all the eruptions—sofar—that would have been a problem in the cave area.

As for other observations, there was mostly too much snow. But at last we got a chance to see how much tephra actually fell in our study area after an eruption.

# UNMASKED CAVE LEADS II: The Loma Vista Cave - More Cracks in the High Desert

By Craig Skinner

Not long ago, as I was planning a field trip to some of the recent lava fields and prehistoric obsidian quarries of Central Oregon, I ran across a feature on the map labeled, "Ice Cave - Pothole" (OSHD 1971). Aha, what's this? Checking back through my files, I came across a reference to a Loma Vista Cave located in the same section as the cave shown on the map (Bookout, 1965). Elsewhere (Larson, 1977), the cave was designated as a "lead."

A few months later found me cruising the back roads of the Upper Fort Rock Basin, billowing great clouds of the well-known, all-penetrating desert dust, in search of the Loma Vista Cave. As usual, the real roads and the map roads were at some variance. But at last, there it was, not 60 feet from the road, a mysterious fissure in the ground. Next to it was, yes, a pothole, actually a dimple created by sand slowly draining into a small hole.

Back to the car for a flashlight and it's down the narrow entrance crack. I've never quite shaken the feeling when I first crawl into a new and little-known cave that just around the corner will be miles of sandy-bottomed passage festooned with fantastic speleothems, steaming thermal pools, and undisturbed paleo-Indian sites. This time is no exception.

The first 20 feet could best be called the "garbage squeeze." Like so many cracks and holes in this part of the country, this one, too, has proven a convenient and unobtrusive dump. Ah, adventure—the glamour of cave exploring. A feet first vertical slide through broken glass, dirt, rusty cans and miscellaneous detritus. Surley this will be an archaeological bonanza of the far future.

Once at the bottom of the refuse slope, it's clear that this is a fault cave, an unfilled manifestation of some former extensive tectonic event. From the air, many north-northwest trending fault scarps and traces can be seen running through this region. This area of activity, sometimes called the Brothers Fault Trend (this includes the Brothers Fault Zone, a narrow band of *en echelon* faulting a bit to the north of here), links three late Pleistocene or early Holocene (12,000 years or less in age) basalt flows that are close by. The faulting also appears related to the extensive recent volcanic activity to the northeast at Newberry Volcano. The Loma Vista Cave was probably created at about the same time as the nearby basalt fields. At least two other similar, but more extensive, fault caves are located in this region, Crack-In-The-Ground (Peterson and Groh, 1964), and the Squaw Ridge Rift System (Skinner, 1980). A third cave, or caves, the Steigleder Ice Caves, are also reported not far to the northwest and southwest of here and are also probably of a fault origin (Bookout, 1965).

Once at the bottom of the entrance fissure, there's not a whole lot to see in the hundred feet or thereabouts of passageway. The temperature is noticeably lower in the cave than at the surface, but there is no sign of ice. Also, no apparent biota. There may be more cave to those willing to crawl through the cold, slime-like mud that coats the rocks, but today I'm not interested.

The nearby and now non-existent townsite of Loma Vista, one of many that sprang up in the early 1900s in the Fort Rock Valley, provided the name for this particular cave.

I should mention that Oregon Highway maps of the desert demand a *caveat emptor* attitude

on the part of the user. Roads, caves, and numerous other features aren't always quite where they appear to be. With any luck, though, and a full tank of gas, you too can locate the deservedly obscure Loma Vista Cave.

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# TROUT LAKE ICE SURVEY

by Rick Pope

According to the old calendar on the wall it was time for my annual late winter Trout Lake caving and ice formation survey trip. If you don't believe it's annual, look in your past *Speleographs*! Due to the unsettled weather and fluctuating freezing level and snowfall zones we were unsure as to what to expect so Becky Taylor and I began to list the equipment necessary for the expedition. (1) Four-wheel-drive vehicle, complete with chains and winching gear, (2) sets of cross-country skis and winter woolies, (2) packs full of caving gear including electric headlamps with spares, flashlights, hardhats, rubber gloves, gorp, bat detectors, (2) cameras, (2) strobes, (4) lenses, (1) tripod, (1) large sack of high energy food (including gorp), survival equipment such as maps, firestarter, gorp, (1) itinerary list filed with a reliable rescue coordinator, and, of course, a bag of gorp in case I get the munchies. Whew! I was exhausted by the time the car was packed.

We arrived in downtown Trout Lake about 10:00 and found a fresh dusting of snow on the ground. As we continued west towards the national forest and began to climb there was quite a bit of snow sticking to the trees but the road was plowed and I was still in two wheel drive. At the county line a large pullout was plowed out and shortly after came the end of the line. There was about a foot of snow at this point and we were only about a mile from Campground Ice Cave. While we unloaded the car (which seemed like forever) another car showed up with 3 cross country ski types. However, we had the time advantage (If only I could lift my pack) and we started up the road ahead of them and never saw them again.

We made good time as the snow was firm and needed little "breaking" by the leader. arriving at the turnoff to Campground Ice, we noted with relief that the day-old snowmoble tracks led on down the main road and we were the first in some time to head towards the cave. The sun had come out (for the last time that day) and I took a few pictures as large clumps of snow landed around us like mortar fire. Soon, we were at the top of the stairway leading down into the sink and from what little we could see from here it looked like a good year for ice formations. Switching from skiing mode to caving mode, we grabbed the camera packs and kicked steps down the icy stairs to a large snow cone at the floor. Gazing up and down tube showed us a tremendous display of columns and stalactites (plus a bewildering collection of miscellaneoustites). I hardly knew where to start. The east appeared to be the better - decorated so I set up the tripod and began to photograph my way into the cave. Becky and I, shared the tripod and flash duties and after an hour we were still only 60 feet from the entrance. Incredibible!

Our progress to the end of the passage was nearly barred by a thin ice pond that filled the room. We both broke through and got slightly damp feet before finding a route along a ledge that kept our feet off the ground. The traverse was well worth it for the last room had an impressive collection of stalagmites that got our photographic attention. On our way back past the ice pond we amused ourselves by stepping on the edge of the ice and watching water spurt up through the hole where we first broke through.

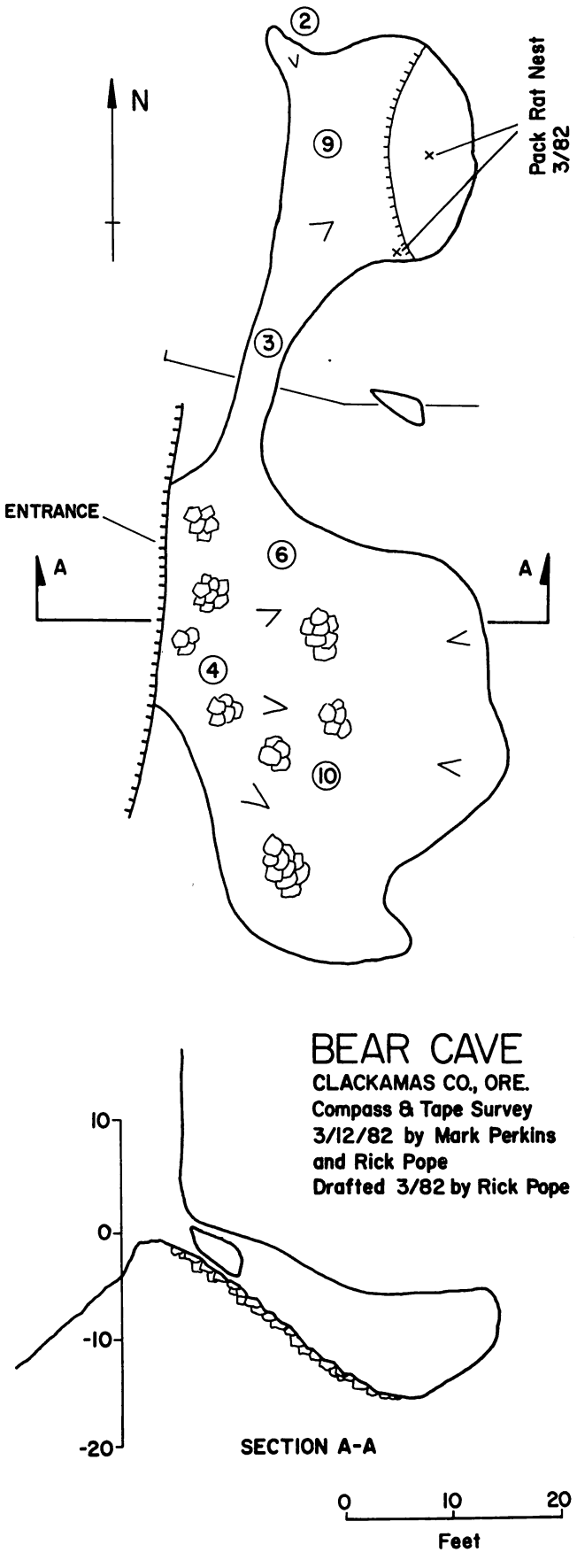
Back at the entrance, I climbed up to the surface for a minute to check our gear and the latest weather conditions. It was snowing lightly and we ate lunch on some bare rocks just under the entrance lip and watched the flakes drift in and settle on the ground. Then it was time to explore the west passage and we quickly toured

the first section without camera gear sizing up photo sites. Finding that the best formations were near the entrance, we set up for a few more shots.

By this time it was about 2:30 and if we wanted to see Ice Rink Cave we would have to move along. Just as we were packing up, a family of four showed up and we warned them of the delicate nature down below (and of course that thin floor) and then made tracks back to the main road.

Checking carefully for snowmobiles, we crept out onto the road and headed west. Arriving at the spur road, the skiing became slow and difficult due to soft, wet snow. Because of our slow progress, we felt some concern about reaching the cave while there was still any light (or any energy to return), and so I set a time limit on my alarm watch. As the watch "beeped," we were within sight of the sink. Dropping our skis, we descended through the soft snow to the south entrance, carrying only camera gear and one heavy-duty Burns Brothers rubberoid flashlight. There was time only to photograph the first room (which had a dozen large columns) and speed back to our waiting skis. We hopped on and I found a sure-fire shortcut through a never-ending maze of small, carnivorous trees. Finally,breaking loose from the clutches of the last tree, we emerged on the spur road and picked up our ski tracks (which we had previously dropped).

Turning on to the main road, we discovered that the ski tracks had been obliterated by a finky snowmobile. Being as turn about is fair play, we hopped into his tracks and followed them back to the car in a blinding snow storm. Our day was complete when I found a quarter on the road that helped pay our toll at the Bridge of the Gods on the way home.




# TRIP STUMBLE AND FALL REPORT

by Mark Perkins NSS 7016

Friday, March 12: This day began what ended up as a two day saga of the search for the elusive hibernating bats and a visit to some of Oregon's tighter talus caves. About 9:00 am I drove to the infamous Rocky Butte Quarry. I began by searching a couple of tunnels under the road and then stopped by the Grotto to talk to people from the monastery, asking if they ever noticed

any bats. The priest gave a recitation of the work that they did for the local birds that had arrived, but said that they had never noticed any bats.

I checked the mining adit and then moved northeast to the talus pile to check the 93rd Ave. Cave. It had been 14 years since I'd been in this one and despite an hour search, I couldn't find either entrance. Perhaps it's been filled in by mud from slides, or by the junk thrown off the upper roadway. With this good sweat worked up, I climbed up and checked Tracy's Cave. Needless to say, half a day gone and no bats.

At 1:00 pm I crossed the river to Rick Pope's and we again headed east to Sandy to check and map Bear and Kiwanis Caves (see map). We found no bats, but did note millipedes, crickets, packrat nests and harvestmen all at Bear Cave. Although I had been here before, the nests were all I had seen.

We had about one or two hours of daylight left so we drove over to Troutdale Cave. Lots of mud, water, nettles, but very little cave and no bats. So much for Friday!

Saturday morning I picked up R.P. and Becky Taylor (almost on time) for a trip to Grant's Park Cave. We arrived at the owner's on time and rapped with Jeff Pratt (owner's son) as we prepared our gear for the hike to the cave. We spent the next three hours crawling and clambering about the cave exploring and looking for bats. We couldn't find any, so we exited out one upper entrance to cut across the hill to look for bats at another upper entrance. Precisely at this time I daintily stepped into a previously unknown entrance uttering 'Oh, gosh! Rats! and Oops!' Amid giggles, I was asked if I was alright. I think that it was too early to tell, as the wave of embarassment had concealed any owies. Fortunately this new entrance added 100ft.+ to the length of the cave.

We then returned to the main entrance (through the cave) and while R. & B. checked a maze at the entrance, Jeff and I walked over the hill (again) to check another cave for bats. Eureka! A long-eared Myotis hung high up on one wall. I chimneyed up and down to retrieve it, and we returned to R. & B. where we sexed, measured, banded and released the bat.

We then traveled to Estacada where I ingested a Bob & Rolph burger while R. & B. ate a good looking lunch. We drove into Mount Hood Nat. Forest looking for a nearby mine tunnel, but it was most likely caved (ref. 30 yrs old).

Turning around, we returned to Carver, and stopped at the caves behind the tavern. We slimed, crawled, and squeezed into and out of a total of three caves. No bats again, but we spotted harvestmen, crickets, and a salamander.

With some light left, we headed for Canby and an assault on the dreaded Canby Cave, but by the time we arrived, and thought we had found it, everyone was too tired to get out of the car and really look.

After dropping off R. & B. I drove the short distance home, and began rewinding my camera to get the film in the mail. I noted with some other Oh goshes, the film hadn't advanced at all. Oh well, call up Rick and beg some copies. Its really tough to do everything right after 30.

# A PALEOECOLOGICAL STUDY OF THE NORTHERN GREAT BASIN OR RAT AMBER, TEPHRA, & FOSSIL POLLEN

by Ellen M. Benedict, NSS 14037F

During the past two years I've had the opportunity to help in a very small way with a paleoecological study of the Northern Great Basin of southeastern Oregon and northern Nevada. A paleoecological study is something like putting together the pieces of a jigsaw puzzle when you have to go and find the pieces—ashes from volcanic eruptions, muds from the bottoms of lakes, pollens from flowering plants and conifers, growth rings from trees, and fossilized urine from packrats. Now let me explain how I got involved with the study.

"Ellen Benedict, come to the front desk, please." This rather common call came over the P.A. System in the Burns District Office of the Bureau of Land Management where I held a temporary appointment between April and December 1980, as the Diamond Craters Project Coordinator. My primary duties were collection,

organization and documentation of data required to support permanent protection and management of the 16,656 acre Diamond Craters Volcanic Complex. One aspect of this job involved meeting all sorts of people and discussing with them their interest in Diamond Craters. I discovered that Diamond Craters is used as an outdoor classroom and laboratory by approximately 7,000 visitors per year who are interested in volcanic landforms and/or the survival of biota in semi-arid environments. Visitors include field trip groups touring the adjacent Malheur National Wildlife Refuge and the Steens Mountain Recreational Area, students from the Malheur Field Station, scientists studying various problems of the Northern Great Basin, and local residents sight-seeing with visitors. Visitors of all ages come not only from all parts of the United States but from foreign countries. Three scientists were waiting for me at the front desk on that June afternoon of 1980;

Dr;.Peter Mehringer, Jr., Professor of Geology and Anthropology at Washington State University, and his two doctoral students, Pete Wigand and Ken Petersen. Mehringer, a world renowned paleoecologist, has worked in Egypt. the Sudan, the Devil's Hole part of Death Valley in Nevada, the Lost Trail Pass of Montana and the La Plata Mountains of Colorado. Now he was studying the Post-Pleistocene ecological history of the Northern Great Basin (the past 12,000 years), as part of the Steens Mountain Pre-History Project.

Also working on the Steens project are Dr. Melvin Aikens of the University of Oregon and Dr. Donald Grayson of the University of Washington who were tracing the movements of humans in the Basin by examining archaeological sites, while Mehringer reconsturcted the ecological history. A couple of years earlier Mehringer and his students had cored the sediments beneath Malheur Maar at Diamond Craters. Since Diamond Craters is a proposed Outstanding Natural Area, they needed permission to collect plants there as part of their study. Wherever Mehringer and his associates take samples, they record the vegetation of the study site by collecting pollens and by pressing plants for identification by the WSU Herbarium so that the present day vegetation can be compared with that of the past. They may also take increment cores of the growth rings of trees to determine the year by year flucuations of moisture at a specific location. The growth rings also reveal long term climatic changes; e.g., tree rings from conifers on Steens Mountain provide data on the re-invasion of trees since the melting of the montaine ice at the end Pleistocene.

When Mehringer learned of my speleological studies, he immediately asked if I had seen rat amber in the caves of Diamond Craters? He told me that I would recognize the black, 'shiny deposits of the tar-like rat amber because they "smelled like rat and tasted like urine!" Pack rats *(Neotoma spp.)* forage *only* within a hundred yards of their den. They carry the twigs from the plants, which they have cut, into the den, piling the material into huge middens. They defecate and urinate on the middens, and the material hardens into rat amber. Rat amber deposited in a dry cave or protected crevice may be preserved for thousands of years. Mehringer collects part of the rat amber, being careful to preserve the layers because the individual layers of midden can differ significantly in age. The samples are carefully labelled and transported back to Mehringer's laboratory at WSU for analysis. At the lab the plant macrofossils are separated out by soaking in water—rat amber is water soluble—and the plant fossils are identified to species. Certain macrofossils are carbon-14 dated; This tells Mehringer which plants grew within a hundred yards of the den at a specific time in the history of the Northern Great Basin—the data is correlated from site to site. While we collected rat amber, I asked Mehringer where he was when Mount St. Helens lost its top?

On May 18, 1980, Mehringer relaxed at his home in Pullman, Washington, when he noticed darkening clouds and hurried outside to mow his lawn, only to discover that volcanic ash or tephra was falling all around him. He rubbed the pale grayish powder between his fingers and tasted it—yes, tiny particles of glass ground between his teeth. It was definitely tephra! He rushed inside calling his wife Mary Ann to help set out on the lawn some flat pans of water. What an opportunity! He could measure tephra fall-out during an actual Cascade eruption! His later analysis revealed that the tephra contained a high percentage of pine and fir pollens-it was early spring in the Cascades and the conifers were shedding pollen!

As palynologists ("the study of pollens and sediments"), Mehringer and his students identify the plants of the past by studying the layers of pollen and other deposits preserved in the muds of the bottom of a lake. A core of the mud provides a sensitive sedimentary column with layer upon layer of pollen, soil, tephra, algal cells, decaying plant and animal remains, etc.—a record of the climatic and ecological history of the region. All sorts of interesting information can be derived from such a study. For example, cored sediments from a lake in Montana established that Mazama ash fell there over a two and

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a half year period of time. Mt. Mazama in southern Oregon (Crater Lake) catastrophically erupted nearly 7,000 years ago blanketing vast areas of the western U.S. with tephra. They found sagebrush pollen in some layers of the Mazama tephra and saltbrush and greasewood pollens in other layers. Since sagebrush blooms in the fall and saltbrush and greasewood bloom in the spring, all they had to do was to count the layers with each type of pollen to know the length of the Mount Mazama eruptions.

They cored three lakes during the Steens Mountain Pre-History Project, finding tephra in all three.Wildhorse and Fish Lakes on Steens Mountain itself had two thin layers of Mazama ash plus four younger tephras. The same four tephras occurred in Malheur Maar, a six-ft. deep and 200-ft. diameter, spring-fed lake in an explosion crater at Diamond Craters. Apparently their 50 ft. long core hadn't gone deep enough to recover Mazama ash in Malheur Maar, as the oldest material was dated at approximately 6,500 years old. Dr. Larry Kittleman, formerly at the University of Oregon Natural History Museum, helped identify the tephras. I also met him at Diamond Craters!

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