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February 18: Oregon Grotto General Meeting, 7:30 p.m. at the Southwest Washington Research Unit, 1918 N.E. 78th Street, Vancouver, Washington (¹/₄ mile east of Interstate -5 on 78th St.)

February 19: Symposium on Risk Evaluation and Risk Management in Cave Management. At the Marshall Center in Vancouver, Washington. See schedule in this issue.

February 19–21: Speleo-Educational Seminar in La Cresenta, California. Modestly billed as the "Western Passage to the Worldwide Underground. For further information come to next grotto meeting, or call (213) 248-2546.

MAKE A BUNDLE FOR THE GROTTO

by Mark Perkins

The grotto has a chance to pick up some loose change. All we have to do is to save our labels from Flavor-pac and Santiam products. We get 3 cents per label. Generally these products are on sale at or below most other brand name prices, at least in Oregon. Mark Perkins will collect them at grotto meetings. The turn-in date is in October, 1983. If you purchase these products please save the labels for us. You may also mail them to Mark at 5130 S.W. Idaho, Portland, Oregon 97221.

COVER

George would be rolling over in his grave if he knew that his namesake "The Washington Monument" in Oregon Cave was once known as "Zane Grey's Pine Cone." This excellent photo is from a Patterson postcard in the Silver collection.

Money Wrench

DUES/SUBSCRIPTIONS DUE DECEMBER Grant, Bruce Talent, Steve Grant, Jack

DUES/SUBSCRIPTIONS DUE JANUARY Benedict, Lyle Mixon, Bill LaLond, Mike Nieland, Jim, Libby Lindgren, Paul

DUES/SUBSCRIPTIONS DUE FEBRUARY Ackley, Lee Schoonover, Keith La Marche, Clara, Roger Vehslage, Gene Roth, Norm

DUES/SUBSCRIPTIONS DUE MARCH Davis, Bob Klinger, David Kenty, Dean Paul

DUES/SUBSCRIPTIONS DUE APRIL

Block, Ed, Kathy	Nelson, Bob
Chevalier, Roy	Nelson, Steve
Dicky, Fred	Piccininni, John
Jacoby, Ed, Pat	Senger, Clyde
Moser, Michael	Stevens, Charles

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.

UNMASKED CAVE LEADS III: THE LOWER FALLS (McKENZIE RIVER) CAVE

by Craig Skinner

"In the face of the nearly vertical cliff in the intracanyon lava on the east side of the valley at Lower Falls are exposed numerous nearly horizontal lava beds, and about half a mile above the falls there is a large lava tube in the cliff through which an ancient river of lava flowed."

H. Stearns, 1929.

Now, I ask you, does that sound like a sure thing? The quote above appeared in a U.S. Geological Survey publication authored by Harold Stearns, a quite respectable geologist of the period. After running across this paragraph while researching the literature on the recent lavas of the McKenzie Pass region, I thought that surely, this time, I might find something notable.

The search for the elusive Lower Falls (also known as McKenzie River) Cave had begun a few years before I read the USGS piece. I had just moved to Eugene, acquired a copy of Named Caves of Oregon (Bookout 1965) and also run across one of Charlie Larson's "Find-A-Cave" articles (Larson 1979). Larson placed the cave about half a mile above Lower Falls (this is an outdated name; the falls is now know as Tamolich Falls), while Bookout's location was even more vague. Off and on, for the next two years, whenever I was in the area I would walk down into the Upper McKenzie River canyon to see what I could find in the Holocene lavas there. The basalt flow in the canyon is probably the lowest-elevation post-glacial example of volcanic activity in Oregon, often making it the only place that I could study recent volcanic landforms very early, or very late in the season.

The Holocene, pahoehoe basalts that I was looking at here originated on the north flank of Belknap Volcano, flowed westward for several miles, crossed the present site of Highway 126 and then plunged steeply into the Upper McKenzie River canyon. The flows turned sharply south when they reached the bottom or the canyon and followed the valley bottom another two miles before finally coming to a halt. The McKenzie River was dammed by the lavas near the lower end, creating Tamolich Falls. Radiocarbon dates of 1400 ± 100 years B.P. and 1590 ± 160 years B.P. are associated with the flow (Taylor 1965) and place it as among the most recent volcanic activity in Oregon.

The lava flow can best be characterized, after it enters the canyon, as a labyrinth-like maze of lava channels, rafted blocks and lava tubes that collapsed while the lava was still plastic. Many collapse depressions are found throughout the flow, but intact tubes seem to be almost non-existent.

Found with these collapsed lava tubes- no more than crusted-over channels that subsided as the eruption of the basalt ceased—is an unusual type of lava cave. Because the tubes collapsed while still plastic, open and intact segments of tube are not found between the collapse

depressions. Instead, the crust sagged down into the channel where it sometimes parted along internal shear zones, leaving a cavity along the sides of the collapsed tubes. Many of these small caves can be entered, but I didn't notice any longer than approximately 75 feet.

But...I've strayed from the original topic, the Lower Falls

Cave. After walking many miles over much of the overgrown and moss-carpeted basalt in the canyon, I ran into Stearns' mention of the cave. It appeared that it was located not in the very recent lavas on the canyon floor, but in the older Pleistocene basalts exposed in the sheer cliffs on the east side of the canyon. Finally, on a hike into Tamolich Falls, I found a good viewpoint and there, up the canyon about half a mile from Tamolich Falls and 60 feet up the layered basalt cliff was a dark holethe entrance to the cave.

After several false starts in trying to climb the wall below the entrance, I found what looked like a faint track that followed ledges up the cliff. At last, after three years of sporadic searching, there was the cave. As many of you know, though, what appears at a distance to be a promising cave, even to an experienced geologist's eye, may turn out to be only a fifteen-foot deep rockshelter. Which, of course, is what the Lower Falls Cave is. Nice view, though.

REFERENCES:

- Bookout, John. 1965. Named Caves of Oregon. Portland: Oregon Grotto Misc. Pub.
- Larson, Charles V. 1979. Find a Cave: Leads West of the Cascades. Speleograph 15:78-79.
- Stearns, Harold. 1929. Geology and Water Resources of the Upper McKenzie River Valley, Oregon. U.S.G.S. Water-Supply Paper 597-D.
- Taylor, Edward M. 1965. Recent Vulcanism Between Three-Fingered Jack and North Sister, Oregon Cascades Range. Ore Bin:27-121-47.

BLUE RIVER CAVE ON A BLUE SKY DAY

Well, Christmas is over and Rick Perp and Mark Popkins have nothing better to do than go caving. The night before we left, Rick calls Mark and asks "How far is the cave from where we park? It might rain tomorrow." I nicely replied that even if it poured, you only had to spend about 10 minutes out in the rain, because the cave was less than 500 ft. from the parking area. Well that sold him on taking the 5-hour round trip drive.

7:15 a.m. Mark drops off Andrew at the day care center. AHA! The pope is nowhere to be seen, so he sneaks off to the donut shop for a junk food breakfast.

7:30 a.m. Rick sees Mark pull out of the donut shop, and gear and donuts are loaded. The sun is already up and both are happy. On the way to Eugene we discuss the weather, the potential of the cave, and the long trip. At 8:48 a.m., as we pass Wah Chang and the paper mill the conversation turns to discussions on odor and anatomical parts of Oregon. We haven't noticed the number of hawks that are usually seen along this stretch, but blackbirds and starlings seem to flock around the farmhouse areas and near dead things on the freeway.

9:26 a.m. Eugene-Springfield has fog and ice decorating the landscape. We take the scenic shortcut, courtesy of the author, and see the dregs of the area. Now only about 40 minutes to the cave.

10:23 a.m. Arrive at cave parking area and no snow. After the usual comments on cold and old coveralls and lamp adjustment, we hike up to the "easy entrance," a nice 14-in. diameter skylight. We drop the "pit" (6 feet American) and pass down gear. We immediately note the lower entrance, a low crawl which is somewhat bigger, but easier to get gear through. [See map of Blue River Cave in this issue.]



Rick Pope passing through one of the entrances to Blue River Cave. From a transparency by Mark Perkins.

The second thing I noticed was two bats: *Plecotus* townsedii hanging about. They were surrounded by dozens of moths. We began the survey/exploration dodging bats, moths, crickets, spiders and loose rocks. Despite the fact it took us about 4 hours to map and photograph about 180 feet of passage (Pope's guess), most of which was tight or smaller. When we left no bats had aroused.

Traffic through the cave was apparently light since summer. The only change I noted was a Skoll can and a bag I dropped in June of this year. We removed both. The biota counted consisted of 19 bats (all *P. townsendii*), at least 4 species of moths (about 12 dozen counted), 5 crickets, about a dozen harvestmen, and 1 white millipede. An old pack rat nest was also noted, but no fresh dung or urine marks were evident. We also saw a couple of mold patches that were nice touches to the cold and mud of the rocks.

2:09 p.m. Back at the car and eating a cold lunch. Ice is still standing in the sun, so the air temperature still

isn't very high. We had encountered three entrances to the cave, and our longest survey shot was 18 feet.

We returned home mulling the fact that we spent 5 hours on the road for 4 hours of cave surveying, and I wondered if I would ever find a "new" cave longer than 200 feet and with walking passages.

Blue River Cave is a talus-fault type with much breakdown. Overhead rocks are very unstable and the flooring is weak in spots. Most passages are slot-like low crawls and vary from 8 to 20 inches. Due to the bats, visits to this cave should be limited from April to October. Work is under way with Oregon Dept. of Fish and Wildlife to formulate a policy on the cave as it is on public lands.

NOTES ON MOUNT ST. HELENS

by Mark Perkins

Between Christmas and the previous Thanksgiving, my brother-in-law (Skip Towhill) and I took quick trips through Ape and Lake Caves. Sand deposits appeared about the same as I noted in the summer, but there were spots on the paved road where the mud had started across from previous rains. We checked entrances for bats, but none were found. It appears that the few bats Clyde found have been extirpated due to the heavy recreational use of Ape Cave. We checked for the grylloblattids but noted only three carbide dumps: one in Ape Cave and two in Lake Cave!

I pointed these out to Skip and when he found out spent carbide was a killer for the cave invertebrates, he recommended punishment that was not fit to mention in a family newsletter. No new grafitti appeared in Lake or Ape Caves, but we collected several beer bottles and cans. Why is it people have to drink beer in caves? You would think that a soft red such as Baron de Rothschild's Mouton Cadet, served at room temperature, or a local Reisling cooled in the stream passage would seem more civilized. Of course these yokels would probably use the situation to propose a toast and break the glasses instead of the bottles on the rocks. Is there no cure (other than the death penalty) for these twits?





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SYMPOSIUM ON RISK ASSESSMENT AND RISK MANGEMENT IN CAVE MANAGEMENT

DATE: Saturday, February 19, 1983

LOCATION: Marshall Community Center, 1009 East McLoughlin Blvd., Vancouver, Washington. Tel: (206)-696-8236.

LOCAL CONTACT: Charlie and Jo Larson, 13402 N.E. Clark Road, Vancouver, (206) 573-1782.

Tentative Program (as of January 26, 1983)

(as of sanuary 20, 1500)

- 8:30 Welcome and Introductory Remarks. William R. Halliday—Western Speleological Foundation. Charles V. Larson—Western Speleological Survey. (unconfirmed)—Portland State University.
- 8:40 Nature, Frequency and Impact of Accidents in Caves. Kathy Williams—San Jose State University, presented by Toni Williams.
- 9:00 Discussion.
- 9:10 Mammoth Cave, California, and the "New Mexico Cave Management Plan." Charles Larson-Western Speleological Survey.
- 9:30 Discussion.
- 9:40 Risk Management on the Cave Basalt Flow: an Object Lesson. William R. Halliday—Western Speleological Foundation.
- 10:00 Discussion.
- 10:10 Break.
- 10:20 Cave Risk Management in British Columbia. Phil Whitfield—Cave Management Section, National Speleological Society.
- 10:40 Discussion.
- 10:50 The Gifford Pinchot National Forest Prescription for Cave Management. Charles V. Larson–Western Speleological Survey
- 11:10 Discussion.
- 11:20 Quantifying Geological Hazards in Lava Tube Caves: Some Very Preliminary Thoughts. Christofer Newhall-U.S. Geological Survey. Bruce Rogers-National Speleological Society.
- 11:40 Discussion.
- 11:50 Lunch Break.
- 1:30 Basic Principals of Risk Evaluation and Risk Acceptance. James A. Wise—University of Washington.
- 1:55 Discussion.
- 2:05 Risk Management and the Scientific Community. John Eliot Allen-Portland State University.

- 2:30 Discussion.
- 2:40 Political Aspects of Risk Management. David Stevens-Office of the Governor.
- 3:05 Discussion.
- 3:15 Break.
- 3:25 The U.S. Geological Survey Approach to Volcanic Hazards Assessment at Mount St.Helens. Christofer Newhall-U.S. Geological Survey.
- 3:50 Discussion.
- 4:00 Seismic Hazards in Volcanic Cave Areas. James E. Zollweg–University of Washington.
- 4:25 Discussion.
- 4:35 Panel Discussion: Where do We Go From Here? (panelists unconfirmed)
- 5:00 Adjourn.

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