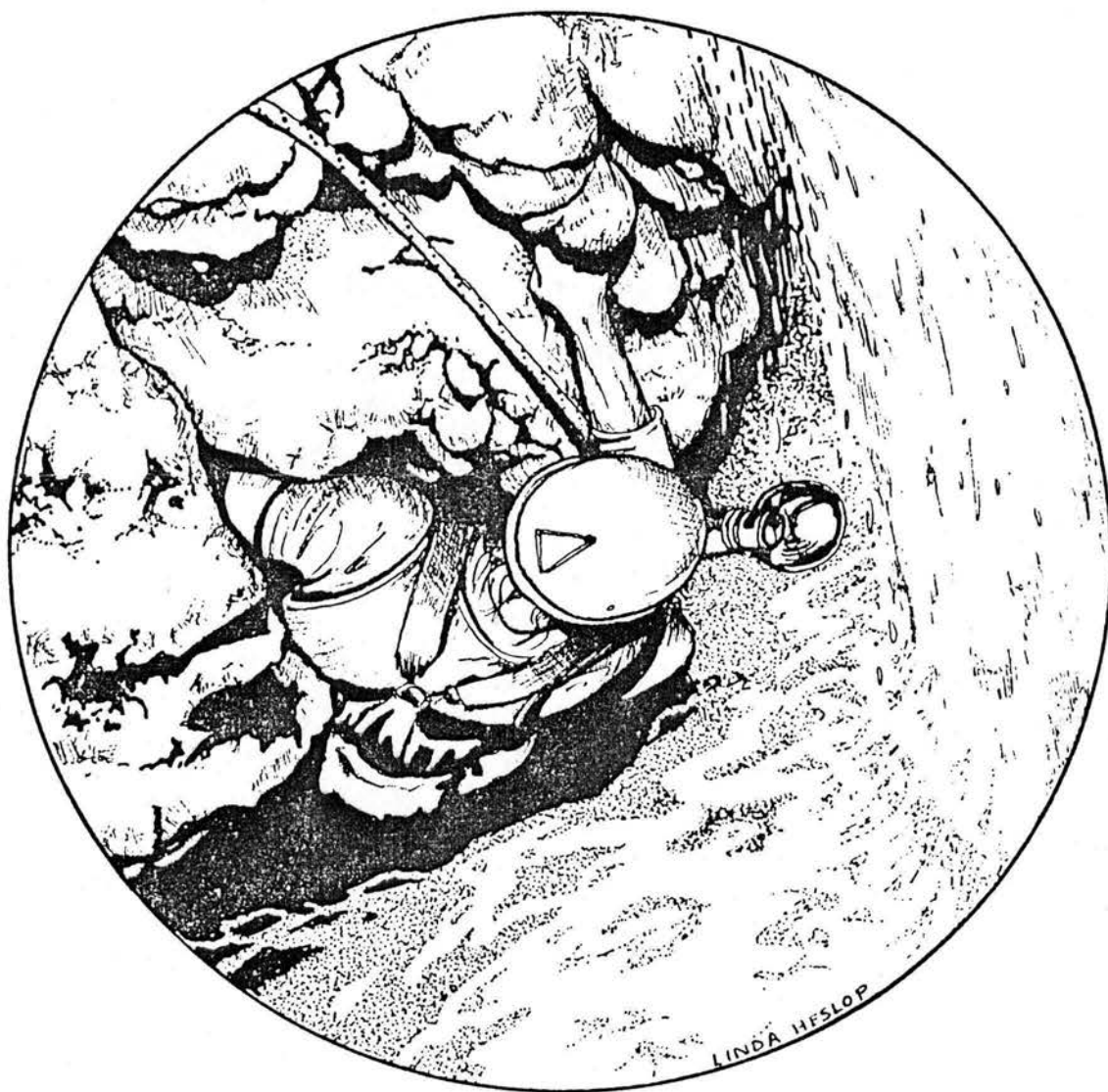


Cascade Caver

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Cascade Caver

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All material to be published, subscription requests, renewals, address changes, and exchange publications should be sent to the Grotto address.

Subscription, 1 year \$7.50
Grotto membership and subscription, 1 year . \$7.50
Additional family membership \$1.50

Cover This month's cover is another Linda Heslop drawing from a photograph by Carol Vesely. This one is in Cerro Blanco Cave, Mexico.

Cascade Grotto

Chairman	Jim Harp	206 745-1010	Regional Rep	Ben Tompkins	206 546-8025
Vice Chairman	John Benson	206 877-5751	Book Librarian	open	
Sec/Treasurer	Ben Tompkins	206 546-8025	Map Librarian	Rod Crawford	206 543-9853
Editor	Mark Sherman	206 524-8780	Program Coordinator	open	
Editor	Ben Tompkins	206 546-8025	Trip Coordinator	Mark Wilson	206 283-3369

Mailing Address Cascade Grotto; P.O. Box 75663; Seattle, WA 98125-0663.

Monthly Meetings Regular grotto meetings are held monthly at 7:00 pm on the third Friday of each month at the University of Washington, Room 6, in the basement of Johnson Hall.

Business meetings Business meetings are held on the first Monday of even-numbered months at 7:00 p.m. The location varies so contact a grotto officer for specifics.

Dues Members and subscribers please note the date on your mailing label that indicates when your dues expire.

Dropped: Keith Schoonover, Sue Brenner

Overdue: John Day, Robert Martin, Art Tasker, Scott Williams, Phillip Erickson, Mike Wagner.

Due: Jeff Forbes, Bob Henderson, Chris Henderson, Bill Holmes, Rob Lewis, Karl Steinke, Kay Wilhight

Coming Up: Chuck Crandell, Andrew Dayton, Jim Harp, Shaun Larson, Alan Lundberg, Molly McBride, Mark Wilson, Monte Curry, Roger Cole, John Collins, Robert DeWolf, Jerry Thompson, Randy Vance, Richard Walter, Kevin Greenwood, Peter Henry, Boyd Benson, Bob Brown.

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Grotto Notes

Upcoming Events

Here is our current list of planned and proposed trips. Call the trip leader or Mark Wilson, grotto trip coordinator, for more information. Any other trip ideas are also welcome, contact Mark at 283-3369.

- Feb 16 GROTTO MEETING
- Feb ?? Bonanza Queen Mine. Vertical experience mandatory. Alan Coakley, 271-1962.
- Mar 16 GROTTO MEETING
- Mar 17 St. Helens or Trout Lake trip. Mark Wilson.
- Apr 1 Deadline for applications for the NCRI projects in the Pryor Mountains or at Jewel Cave.
- Apr 1 Andrew Foord "memorial" April Fools Day trip to Cave Ridge. Steve "the fool" Sprague, 652-6489.
- Apr 2 Grotto Business Meeting
- Apr 20 GROTTO MEETING
- Apr 21 Senger's Talus Cave. Rod Crawford, 543-9853.
- May 18 GROTTO MEETING
- May 19 Gardner Cave gate planning trip. Mark Wilson.
- May 25 (May 25-28 Memorial Day weekend)
 - a. Northwest Caving Association (NCA) Regional gathering in Utah. There are some nice caves in this area and lots of other things to see on the way. It's a bit of a drive but plan ahead

- and carpool or caravan. Ben Tompkins, 546-8025.
- b. Vancouver Island, Cascade Cave. Jerry Thompson, 355-4900.
- c. CRF project at Lava Beds National Monument, CA. Rod Crawford, 543-8953.
- Jun 4 Grotto Business Meeting
- Jun 15 GROTTO MEETING
- Jun 16 Gardner Cave gate construction trip. Mark Wilson.
- Jun 17 NCRI Pryor Mountains Project. Spend four days in the mountains of Montana looking for new caves, relocating previously-known caves, and surveying. Contact John Buchanan, project coordinator, at (509) 359-7493 or in the Seattle area contact Ben Tompkins. (June 17-20)
- Jun 23 Third year of the NCRI Jewel Cave Project and final year on the existing contract. Eighty-some miles of mapped cave. Take part in inventory, writing route descriptions, reflagging trails, and radio location work. Contact Steve Sprague at (206) 652-6489. (June 23-30)
- Jul 1 Lava Beds Nat'l Monument restoration trip. Rod Crawford, 543-8953. (July 1-7)
- Jul 9 NSS Convention in Yreka, California. (July 9-13)
- Jul 20 GROTTO MEETING

- Jul 28 Mt. Index Ice Caves. Howard Hoyt, 782-4567.
- Aug 6 Grotto Business Meeting
- Aug 11 Deadhorse Cave, Trout Lake area. Bob Brown, 569-2724. (Aug 11-12)
- Aug 17 GROTTO MEETING
- Aug 31 Papoose Cave, Idaho. Jim Harp, 745-1010. (Aug 31-Sep 3 Labor Day weekend)
- Sep 22 Cave Ridge. Jim Harp, 745-1010.
- Oct 6 Windy Creek Cave. Jerry Thompson, 355-4900.
- 1991 a. NSS Convention in Cobleskill, NY
b. NCA Regional in Idaho (tentatively).

1990 Officers

The ballots for 1990 Grotto officers were counted in January. The 1990 officers are:

Jim Harp, Chairman
John Benson, Vice Chairman
Ben Tompkins, Secretary/Treasurer

There were 65 ballots were mailed and 11 returned. A couple of write-ins were received for Chairman while the other positions were unanimous.

January Grotto Meeting

The grotto meeting on January 19 saw a good turnout. It was opened by Jim Harp, Grotto chairman for 1990.

Rod Crawford described his trip to Lava Beds National Monument in California with the Cave Research Foundation. The next CRF trip to Lava Beds is on Memorial Day.

The berms on the road to Windy Creek Cave have been reportedly been removed, which should allow driving closer to the cave

Steve Sprague described the upcoming projects by the Northwest Cave Research Institute in the Pryor Mountains of Montana and at Jewel Cave in South Dakota.

The remainder of the evening was devoted to planning trips for the coming year.

February Business Meeting

The February 5 General Business Meeting was held at Howard Hoyt's house. Among those attending were Jim Harp, Chairman, and Ben Tompkins, Secretary.

1. Ben Tompkins asked if anyone thought the portions of the Operating Policy concerning the grotto store should be deleted since we no longer have a grotto store but no one thought so.

2. Ben Tompkins proposed a \$100 donation to the Northwest Cave Research Institute for their upcoming Jewel Cave and Pryor Mountains projects. Passed.

3. Howard Hoyt requested that the business meetings be moved to another night because of other commitments for the first Monday of the month. Jim Harp proposed holding the next business meeting on April 20 at the U.W., 10 minutes after the close of the April general grotto meeting, in the same room.

4. Ben Tompkins requested being allowed up to \$50 for binders and file boxes for the grotto library. Passed. Ben reported that no further action had been taken on the library in the last month. A Librarian is still needed to oversee the cataloging and reunification of the library. Steve Sprague has volunteered space in Arlington for the archives.

5. The cave register program was discussed and a list of caves containing grotto info signs and registers was obtained from Bob Brown by phone. Means of affixing the new grotto address on the signs was discussed.

Treasurer's Report for 1989

The following is the Treasurer's report for the period beginning January 1 and ending December 31, 1989.

INCOME	
Dues	455.00
Savings account interest	17.64
Sale of Grotto property	154.12
Total Income	626.76
EXPENSES	
Cascade Caver	150.00
Checking account fees	11.90
Library	40.00
Post Office box	28.00
Programs	69.06
Total Expenses	298.96
GAIN	327.80
Beginning balance Jan 1989	531.66
Ending Balance Dec 31, 1989	859.46
OUTSTANDING INCOME	
Unpaid dues as of 12/31/89	120.00
Total	120.00
CAPITAL EQUIPMENT	
None	0.00
Total	0.00
OUTSTANDING DEBTS	
Cascade Caver	0.00
Total	0.00
Total Outstanding	120.00
Current Assets	859.46
Net Worth	978.89

1990 NCA Regional Meet

The Northwest Caving Association will hold its 1990 annual meeting in eastern Nevada over Memorial Day (May 26,27,28) hosted by the Utah Grottos. The campground is on Baker Creek about a mile south of Lehman Cave in the Great Basin National Park. Because Memorial Day weekend is the Park's busiest time of the year all camp spaces must be reserved. Pre-registration by cavers will thus be required. Unfortunately, the campground's sites are small and will not accommodate most trailers or RVs. The number of sites is also limited.

A guidebook is being prepared which will include maps and road logs to most of the larger, well-known caves including Antelope Springs (UT), Baker Creek System, Cave Valley, Crystal Ball (UT), Goshute, Indian Burial, Lehman, Leviathan, Old Man's, Rose Guano, Snake Creek, and Whipple Caves. Many, many other smaller caves are also nearby.

More information will be distributed at the end of February. In the interim, more details can be obtained from Dale Green, 4230 Sovereign Way, Salt Lake City, UT 84124, phone (801) 277-6417.

1990 Pryor Mountains Cave Survey

A preliminary project description

John Buchanan

During the week of June 17-21, 1990, the Northwest Cave Research Institute is proposing a field camp convened in the Pryor Mountains of Montana, just before the Jewel Cave Project embarks on its week-long field camp in the Black Hills.

Objectives - There are three goals for the 1990 field camp in the Pryors: 1) Locate all known caves in the area that have been described in reports, 2) Assess the accuracy of the few cave maps that have been published for these known caves, and 3) Locate additional caves and perform reconnaissance for future work.

Background - As some of you remember, the 1969 NSS Convention was held in the Big Horn-Pryor Mountains region. The guidebook published for this event lists or describes about 25 caves and provides maps for eight. The largest cave described is Little Ice Cave and it contains about 3,000 feet of mapped passage (1969). Caves of Montana, published in 1978, mentions about 35 caves in the Pryors. During a Labor Day trip to the Pryors last year it was discovered that many of the reported cave locations are inaccurate. Additional leads are currently being investigated, primarily from local grottos and cavers, the U.S. Forest Service, and the Bureau of Land Management.

The cavernous unit in the Pryor Mountains is the Mission Canyon (Madison Limestone) Formation, which incidentally is the same unit in which the Bighorn Caverns and other caves on Little Mountain are developed. The potential for discovery of new caves in the Pryors is enormous. The karst terrain extends from canyon bottoms, into thickly forested slopes, and higher to the alpine plateau environment. Typical cave entrances occur in frost-shattered collapse sinkholes.

Environment - The area that we will be working in lies at a higher elevation than the camp at Armpit used during the Bighorn Caverns Project. Elevations will range from 6,500 to 9,000 feet. Base camp will be at the Big Ice Cave Campground at 7,600 feet and is easily accessible by 2WD vehicles, although 4WD's will be necessary for access to some of the karst terrain. Running water for drinking and bathing lies within a five-mile drive at the Sage Creek Campground (elevation 5,500 feet). Snow drifts will likely persist at high elevation into the week of the project. Most caves in the Pryor Mountains contain large amounts of ice year round and the average cave temperature is accordingly within a few degrees of freezing. The message is clear -- dress warmly if you wish to go underground, especially when mapping.

Preparation - The terrain we will be working in is quite complex and dissected with steep canyons so orienteering skills will be a prerequisite for this project. Precise location of all cave entrances is very important! Aerial photographs and topographic maps will be acquired and provided to all project teams. A good review would be the chapter on orienteering skills in the popular book Mountaineering - Freedom of the Hills, or other similar books, to brush up on how to read compasses, maps, and altimeters.

Information - For more information on the NCRI Pryor Mountain Cave Survey contact John Buchanan, Department of Geology, Eastern Washington University, Cheney, WA, 99004, (509) 359-7493. The assistant coordinator is Matt Wilkin and logistics are being handled by Bob Brown.

1990 Jewel Cave Project

by Steve Sprague

Jewel Cave is the second longest cave in the United States. It is most famous for its size and the extensive lining of its walls with calcite crystals. Jewel Cave also contains many varied formations, including some that are extremely rare and delicate. Passageways vary from small crawlways to large rooms. Jewel Cave is considered a dry cave but surface water seepage throughout parts of the cave contribute to the development of a variety of cave formations.

The third NCRI Jewel Cave Project will be held June 23-30. This is the final year of the current contract with the National Park Service at Jewel Cave National Monument. We will be making more challenging trips

this year as most of the territory close to the elevator has been done and we work deeper into the cave. The work will be focusing on areas of the cave that require hours of travel time to reach the work site. Our work, as in the last two years, will include inventory, radio location, and photomonitoring.

Our Jewel Cave inventory includes noting the characteristics and contents of the cave passages. Inventory teams are also upgrading the flagging that marks the routes in the cave. Last year's inventory teams covered 17,300 feet (3.3 miles) of cave passage. The first year's total was 3.1 miles.

Radio location of points in the cave involves transporting a radio transmitter and large, folding antenna to a point in the cave and locating the transmitted signal with a receiver on the surface. Accurately done, this establishes a point on the surface directly over the point underground and can also determine the depth. Eight radio points were established last year. We set 13 the first year working closer to the elevator.

The photomonitoring project establishes markers in the cave adjacent to cave features that are good indicators of cave use or to study the development of particular speleogens. Photographs are taken at periodic intervals and compared for changes. The photomonitoring team established 7 sites the first year and another 14 photo sites last year.

For more information on the NCRI Jewel Cave Project contact Steve Sprague, project coordinator, P.O. Box 456, Arlington, WA 98223, (206) 652-6489.

News Brief - Hawaii

From the backpacking section of a computer news network, Jan 11, 1990: "A visitor from Washington state died while exploring a steam filled lava tube in the Puna district of the Big Island (Hawaii). This area is approx. 11 miles from the current volcanic activity of Kilauea. A resident (sic) showed Rodney Armout, 55, and his wife the entrance to the cave. They became separated in the maze of narrowing tubes which contain steam. Recovery workers could only work in 20 min shifts. Stay on the trail!"

International Vulcanospeleology Symposium By William R. Halliday

The 6th International Symposium on Vulcanospeleology will be held in Hilo, Hawaii August 5-11, 1991. Co-sponsors of the symposium to date are the National Speleological Society, the Western Speleological Survey, the University of Hawaii - Hilo Branch, and the Lyman Museum; other organizations are expected to join this list.

Sessions on August 5 and 6, 1991 will include the vulcanospeleology of Hawaii, of the mainland U.S.A., and of the world in general, theoretical vulcanospeleology, and the biology and conservation of lava tube caves. Field excursions to lava tube caves and other notable features of eastern Kilauea and southeastern Mauna Loa volcanoes will be August 7-11.

In part depending on participant's desires, a pre-symposium field excursion to pre-Quaternary lava tube caves of Oahu may be scheduled on Saturday August 3, 1991, and possibly other events in Honolulu August 2-4.

Special events in Hilo are expected to include a tour of the Lyman Museum narrated in English and in Japanese, a welcoming reception, and a swimming pool party.

National Speleological Society vice-president Tom Rea has volunteered to edit the proceedings of the symposium. In absentia papers will be accepted, read, discussed, and published as time and space permit. Personal attendance is strongly urged.

Arrangements will be low-budget. Special hotel and car rental rates are being negotiated. Helicopter and fixed wing volcano flights can be arranged at moderate cost.

So that we can obtain an approximate count of persons likely to attend, please send a non-binding statement of interest or likely attendance to the address below, as soon as possible. To those responding at this time, further information will be supplied as it becomes available. My (temporary) address is: William R. Halliday, Chairman; 6530 Cornwall Court; Nashville, TN USA 37205