



# THE CASCADE CAVER

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C A S C A D E C A V E R

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The CASCADE CAVER is published 10 times a year by the Cascade Grotto, a member of the National Speleological Society.

Meetings: 7:00 pm on the third Tuesday of each month at the University of Washington in the basement of Johnson Hall, either in Room 6 or Room 53.

Mail: The Cascade Grotto, P.O. Box 75663, Seattle, WA 98125-0663.

Dues: Membership in the Cascade Grotto plus subscription to the Cascade Caver are \$7.50 per year. Dues for family members is \$1.00. Subscription to the Cascade Caver only is \$7.50. Send to Grotto Treasurer, Al Lundberg, at: 19221 38th Place N.E., Seattle, WA 98155.

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Cover: Mark Grapelle on rappel in Yorkshire Pot, British Columbia. - Drawing by Linda Heslop.

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D U E S

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Please note your mailing label for the month your dues expire.

Overdue:	05/86 Rohrer, Jay	06/86 Gunsalus, Jerome	06/86 Rockwell, Julius
	07/86 Kiver, Dr. Eugene		
Coming Up:	10/86 Gillard, Jeff	10/86 James, Richard	11/86 Martin, Robert
	11/86 Sherman, Mark	11/86 Tasker, Art	

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UPCOMING EVENTS

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Sept 13-14 Dock Butte scouting trip. Contact Bob Brown at 569-2724.

Sept 16 Grotto meeting at the University of Washington.

Sept 27-Oct 4 Tentative date for work at Bighorn Cave in Montana. Contact Bob Brown at 569-2724.

Oct 11-12 Trout Lake area caves, camp at Goose Lake. Contact Bob Brown at 569-2724.

Oct 21 Grotto meeting at the University of Washington.

Nov 8-11 Vancouver Island scouting trip. Contact Bob Brown at 569-2724.

Nov 18 Grotto meeting at the University of Washington.

Dec 16 Grotto meeting at the University of Washington.

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CHANGE OF ADDRESS

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It has come to our attention that at least one organization has been contentedly mailing all of their publications to an address that we quit using in December, 1984. The first two issues in 1985 neglected to make any mention of the grotto mailing address which is just as well because the Post Office restructured all of the box numbers at our branch in May, 1985. Since then the address has faithfully appeared inside the cover of every issue. We hate to miss any of your exchange publications, letters, or articles to be printed so check your records for the following address:

The CASCADE GROTTTO, P.O. Box 75663, Seattle, WA 98125-0663

The following people have joined or changed addresses since the last list was published in the May issue:

new:	Hoyt, Howard	133 N. 78th, Seattle, WA 98103	(206) 782-4567
change:	McTigue, Larry		(206) 226-5357
new:	Stitt, Rob	1417 - 9th Avenue West, Seattle, WA 98119	(206) 283-2283
new:	Thompson, Gerald	6111 - 88th S.W., Mukilteo, WA 98215	(206) 355-4900
change:	Tompkins, Ben	18010 - 1st Ave N.W., Seattle, WA 98177	(206) 546-8025

MEETING NOTES

JULY - The first half hour was spent figuring out which room we were scheduled to be in. After getting that straightened out, the meeting began with 17 people in attendance. Al Lundberg, in his treasurers report said that we have \$94 in the bank.

The upcoming Speleofest (Aug. 23-30) and this year's Regional (Aug. 30 to Sept 1) on Vancouver Island was discussed. It was mentioned that you should plan to bring a supply of water for yourself if you are going.

There were trip reports given by Mark Sherman and Bob Brown on this year's Bighorn trip and on Bob's trip to the NSS Convention in New Mexico. Jeff Forbes and Larry McTigue discussed the preliminary results of a dye trace in Newton Cave on Cave Ridge and about the new entrance into Hellhole Cave which was dug open.

Rod Crawford gave a slide show on Senger's Talus Cave which is located just south of Bellingham. This multilevel talus cave has approximately 1/2 mile of mapped passage and an extensive collection of critters. The meeting

came to an halt earlier than planned when the projector bulb died during Jeff Forbes' slides about Hellhole and a trip to Vancouver Island. We now have something else to look forward to for the August meeting.

AUGUST - There were 14 people at the August 19 meeting at the U.W.

A suggestion was made that the log "ladder" in Little Red River Cave should be removed to cut down on some of the vandalism. (Was there any discussion, volunteers?)

The May issue of the VICEG News has a list of all surveyed caves on the Island with the corresponding quadrangle map. Jeff Forbes is considering making such a list for Washington Caves. There was some discussion about including the quadrangle. Some people felt that it would make it too easy to find the caves. The majority of those present didn't think it would matter.

Bill Halliday has donated about 170 assorted maps and drawings to the grotto library.

A request was made to have the grotto librarian and map librarian listed on the grotto

MEETING NOTES, continued

page of the Cascade Caver along with the officers.

A number of trips were reported. Jeff and Scott Forbes plus three Canadians mapped a fair portion of Newton Cave and reported a preliminary depth figure of 462 feet.

Bob Brown went to Deadhorse and JaR Caves and found a couple of small caves in the Twin Lakes area.

Dan and Theresa McFeely, Yosh Shimono, and Mark Sherman made a trip to Cave Ridge.

Larry McTigue and the three Lewis brothers went digging again on Cave Ridge.

Sheila Balsdon gave an excellent program on her caving in Mexico. She and several others started work on Sistema Purificacion in the 1970's and it currently has over 60 km of passage.

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ACCIDENT AT THANKSGIVING CAVE

Ben Tompkins

The Vancouver Island Speleofest at Thanksgiving Cave came to a painful end with the death of a British Columbia caver after a fall in the cave.

Glen Peppard, 22, of Sparwood, fell about 30 feet while bridging in a passage upstream from the Staircase Entrance.

The rescue efforts began immediately under the direction of Phil Whitfield and benefited from the large number of experienced cavers already gathered for the weekend. A stretcher and more rescue equipment were flown in by RCMP helicopter and were already in the cave on their way to the patient when he died.

Several Cascade Grotto members were involved including Jeff Forbes and Ben Tompkins. Bob Brown, Jim Harp, and Jerry Thompson also arrived during the operation.

I gave all of my notes and radio logs to Phil for his report so I won't say much more until I get them or a copy of the final report back.

MOUNT ST. HELENS REPORT

William R. Halliday, M.D.

The following is a report of the Mount St. Helens Caves Conservation Task Force of the National Speleological Society.

Part 1 - Cave Basalt Lava Flow

On Friday, July 4, Jim Nieland, Troy Locati, Marcia and Patricia Halliday, and I conducted further observations on and around the Cave Basalt Lava Flow. The sand tongue in the upper entrance of Sand Cave showed further

reworking with additional aggradation in the small grotto-like remainder of this cave. The surface of the Hopeless Cave mudflow showed minor degradation and reworking as did the upper end of the Gremlin Cave mudflow. Along road 81 an enlarged gully was noted trending toward Little People's Cave. The current state of that cave needs investigation and documentation, soon.

The remainder of this trip was a partial investigation of the purported boundary of along the southeast margin of the Mount St. Helens National Volcanic Monument, just east of Ole's Cave. Questions had been raised about whether the newly surveyed boundary line conformed to the intent of Congress as expressed in the law creating the national monument. Further, the reported existence of major tree casts with running water at the bottom somewhere near this line raised the possibility of an important erosional cave beneath the flow that might not be within the monument boundary.

The intent of Congress, as understood by speleological and environmental groups, was for the monument to include the entire Cave Basalt Lava Flow and a hundred-foot margin on its southeast margin, east of Ole's Cave. On June 6, 1986 I xeroxed the official map in Washington, D.C. It specifies that in the southern part of this disputed area (in section 2C, T7N, R4E) the boundary is to be exactly that: "100 feet east of the Lava Caves Basalt Flow." We could not confirm our exact position until I later studied aerial photographs and the new USGS Mt. Mitchell Quadrangle map and our field work covered only a little of the survey line in section 20.

We determined, however, that on purported boundary marker just south of the north edge of section 20 is NOT 100 feet east of the lava flow but actually on a forested swallet area of



MOUNT ST. HELENS, continued.

the Cave Basalt Lava Flow itself.

In section 17 immediately to the north a different but equally major problem was found. Here the official map indicates that the boundary is to follow the "shallow draw" which leads roughly northeast from the forested flat with the swallet survey point just mentioned. On the aerial photos this gully appears to lie more than 100 feet east of the edge of the flow. On the ground, however, it is obvious that this appearance is deceiving. Part and perhaps all of this gully is within the forested parts of the Cave Basalt Lava Flow. At Wram Spring, about 1/4 mile north of the south edge of section 17, we found that the upper entrance of Wram Spring Cave is east of the newly surveyed line and thus supposedly outside the national monument while the lower entrance is to the west of this line and inside the monument.

Just up slope from the upper entrance is a stream course on aggraded materials ponded by a tongue of the lava flow. At the edge of the flow it sinks into an impenetrable orifice of the flow. Then it can be seen in the upper entrance of the cave and followed in the cave (and on the surface by looking down tree casts) to a point where it leaves the main passage and enters a low, watery crawl which we did not force at this time. Over the course of the next 1/4 mile down the gully there are several resurgences and swallets.

This erosional cave is largely beneath the Cave Basalt Lava Flow and has charcoal exposed in the walls as a result of charring of roots by the flow. Although small, this cave is of exceptional speleological and geological importance, and its biological values have unique potentials.

Also in section 17 on the broad eastern slope of this gully we observed the most beautiful moss gardens I have ever seen anywhere, far surpassing the famous ones on the un-forested parts of the flow. Their preservation should receive a high priority because of both visual and biological values. Their existence is being brought to the attention of the Mount St. Helens Protective Association.

Regarding the boundary marker problem, the Mount St. Helens Caves Conservation Task Force of the NSS is asking the manager of the monument to confirm these findings and when con-

firmed, to reject this survey and have it done correctly.

Because a change in the position of this part of the monument boundary would severely impact the planned "Canal" timber sale just outside the monument, and vice versa, the task force will also ask that the planning of the sale be halted until the correct boundary can be identified and agreed upon. Good reasons exist for dropping this sale entirely and adding its 50 acres to the national monument. The task force has not yet reached a conclusion on whether this would be the preferred alternative.

## Part 2 - Spirit Lake Pseudokarst

On Saturday July 5, 1986, a 19-person party from the W. S. S. conducted comparative observations of the Spirit Lake pseudokarst. Five of the party were members of the Clark County Amateur Radio Club to provide communications as required by the U.S. Forest Service regulations. Oran Ewing again performed the thankless job of providing a base station. These kind folks are much appreciated. Without their generous help, none of our 6-year studies in the Red Zone would have been possible.

Year-to-year changes in the Spirit Lake pseudokarst continue to be dramatic. Further degradation of the pyroclastic slopes and flats again was prominent with equally rapid aggradation continuing in closed depressions which is altering the relief. Because of the degradation and aggradation, vegetation continues to be more than 99.99% absent in the study area.

Pyroclastic Cave in 1985 had been slumped in at each end. It had been reopened in 1986 by seasonal stream flow but was in an advanced state of decay. The once-small skylight now served as the gaping main entrance with the cave truncated at each end. The passage was segmented into a minuscule down-slope natural bridge and a 25-foot hands-and-knees crawl. No other sizeable cave was found.

Clusters of large vertical pipes, some with stream-cut widening at the base, continue to be prominent near Pyroclastic Cave and also immediately northeast of Brownwater Sink (Originally called Sink 3458). Some of the latter pipes appeared to be more than 20 feet deep despite the degradation but none could be safely entered. Those near Pyroclastic Cave were wider but half as deep. Vertical sections of

MOUNT ST. HELENS, continued.

deep but very small vertical pipes were exposed in the walls of stream gullies.

Ice Sink continues to enlarge dramatically. A complex "boil" of moist earth several meters long was present on its floor near the locus glacialis of 1984.

Muddy water was again present in Brownwater Sink and relatively clear water in Greenwater Sink (formerly Sink 3446). A little muddy water was also present in the unnamed larger sinks at the SW and SE margins of the study area. The later is a confluent trefoil structure resulting from surface integration through headward erosion. Its margin is now minimally breached by 1986 overflow into a tributary gully of the Brownwater Sink.

Before evacuating the area, the Army Corps of Engineers or its contractors performed extensive surface modifications along the northeastern and northern edges of the study area including the large shallow northwesternmost sink which is now largely a flat with long parallel ridgelets of artificially reworked foreign materials. Similar artificial ridges were left along the width of the old Corps of Engineers road and nearby flats. East of the trefoil sinks is a strong odor of petroleum fumes indicating the spill of enough chemicals to warrant concern about contamination of the Spirit Lake basin on the east and the Brownwater Lake subbasin on the west. The Mount St. Helens Protective Association will be notified about this. A search for additional contamination of this research environment appears badly needed.

#### REPLY FROM MONUMENT ON MOVING MARKERS

In a development related to Part 1 of the preceding Mount St. Helens report, the Monument Manager of the Mount St. Helens National Volcanic Monument has stated to the Forest Supervisor of the Gifford Pinchot National Forest and to W. R. Halliday in a letter dated August 5, 1986, that some of the boundary signs are in the wrong locations, particularly in Sections 16, 19, and 20 of T7N, R4E, W.M., of Skamania County. The letter adds that Halliday and a Monument employee have both noted discrepancies and that the boundary in these areas will be checked or surveyed and corrections

made in accordance with the Monument legal descriptions.

#### IT'S YOUR CLUB Bob Brown

One of the discussions at the August meeting started me thinking about the current state of the grotto. I have seen the grotto go through a number of up and down cycles since I joined in 1964. On the low side we had maybe one or two people at each meeting and on the high side we averaged twenty or so with several field trips each month. I think that the grotto is on the up-swing again.

We are all interested in caving and the grotto exists to promote caving. It was formed to enhance the goals of safe and conservation-oriented caving. We all need to spend some of our caving energy on assuring the well being of the grotto as well as on our own caving pursuits. Here are some observations and suggestions. Let's give them some thought and discussion.

The first observation is that the bigger the grotto gets, the more caving trips we go on. Ways to promote a larger grotto include planning interesting trips, bringing relevant and interesting presentations to the meetings, and making the meetings easier to attend.

From year to year there are about 50 NSS members in the state of Washington and 30 of these live in the Puget Sound area. About half of this 30 live far enough from Seattle to make it inconvenient to attend meetings during the week. Of the 50 or so grotto members listed in the May, 86 Cascade Caver, most live in Seattle and most are not NSS members. Now for some suggestions:

1. Let's have the grotto meetings on Friday nights. The Oregon Grotto does this and they normally have more than 20 people attending even their smaller meetings. They go out for beer and pizza after their meetings to divide the meeting between business and socializing and give people more options about how long they stay. They have people who regularly drive a long ways to attend.
2. We should arrange several months in advance

YOUR CLUB, continued.

for the presentations to be given at the each meeting so that the schedule can be printed in the Cascade Caver. The NSS slide shows are not always wonderful but the increasing level of membership and caving activity should make more local material available.

3. Names and phone numbers of new members should be printed in the Cascade Caver so that we can make them welcome and include them in our caving plans. The grotto membership list should be available at the meetings for handing out to new members.
4. Make sure that dues notices and renewal forms are sent out well in advance of dropping members from the list.
5. Plan one or two gatherings per year where we make a special effort to draw all grotto members, former members, and all NSS members in the area. One could be a caving trip and one a party of some sort.
6. A few field trips should be planned each year where all grotto members are encouraged to attend. A field trip committee could be appointed to plan these events so that they attract as many grotto members as possible.
7. During the caving season we should plan at least one grotto field trip per month. Most of our trips begin with someone standing up at a meeting and announcing a trip they have planned and inviting anyone interested to give them a call. Let's have some official grotto trips that are planned in advance so that some of them are good for beginners, some for hard cavers, some close to home, some farther afield, etc.
8. Let's get the treasury back up. The things that we regularly spend money on including

the Cascade Caver, the cave register program, and presentations at meetings are very important to the well being of the grotto and the local caving community. We have raised a good deal of money in the past with rummage sales and have had good results with members hiring a group of grotto members to help with home improvement projects.

9. The Cascade Caver needs everybody's support. It is the glue that holds the grotto together by telling us about upcoming trips, past trips, events at our meetings, and much more. As a person who hates to write, I can understand why more grotto members do not contribute articles but think about what you would like to see in the Caver and consider ways of encouraging the submission of that kind of material. Things that we don't see much of that might be valuable to reprint, write yourself, or find a knowledgeable person to write about include trip reports, equipment evaluation, safety tips, and caving techniques. Remember that the people typing, editing, printing, and mailing the Caver are doing a great deal of work every issue so let's support them.
10. Let's also support the other grotto functions like the cave register program, grotto store, libraries, etc. All of these programs provide a service to the grotto and make it special. Let's see updates from those in charge of these functions printed in the Caver from time to time and let's see the rest of us helping them out.

So let's remember that the grotto is only as good as WE, meaning both YOU and I, are willing to make it. We all have our special caving projects and our groups of established friends but let's remember that the overall welfare of the grotto and its other members is also important.