



# The Cascade Caver

Official Publication of the  
CASCADE GROTTO N. S. S.

# Vol. 11 #4



Volume 11, no. 4

Editor: Dr. W.R. Halliday

April 1972

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## COMING EVENTS

April 15-16. Mt. Adams area trip. Call Anderson, MA2-3848 days

April 17. Regular grotto meeting, Hallidays, 1117 36th E. @ Madison, 8PM.

Every weekend in April and May various field trips. Call Roberts, PR8-8503

May 15. Regular grotto meeting, as above.

May 27-29. Papoose Cave convention preparation trip.

July 4 weekend. Northwest Regional Convention, Vancouver Island.

August 12. Pre-Convention field trips begin.

Please refer to schedule in March Caver for other coming events.

## BELIZE SPELEOLOGICAL SURVEY NEEDS HELP

by Barbara McLeod

Dave Albert has returned to the U.S. and by now is perhaps off on another Peace Corps assignment. I understand that the Peace Corps is now casting out its net in search of another caver for this project, which is desperately needed as I am not going to get much mapping or exploration done alone. In the meantime, however, a lot is getting done because of fortuitous visitations by friends, friends of friends and now my brother, an avid caver, who will be here for about two months. Two cavers on their way here were recently turned back at the British Honduras border because they hadn't enough money.

I now have a 17-foot aluminum canoe and with the dry season upon us I've been getting a lot done. The project is still essentially to investigate caves for tourist and archeological potential, mapping those with high priority. Unfortunately my Brunton is graduated in mils so I have to do all those blasted conversions. Any idea how I can get a compass dial graduated in degrees to replace the one I have so I don't have to do all those blasted conversions? My Peace Corps jeep has its idiosyncracies but hasn't failed me utterly yet.

Dave and I found the rest of St. Herman's Cave, to the downstream siphon. With the aid of two people from the Forest Department I mapped that last month. That ties into the Blue Hole, 1 mile from the St. Herman's entrance and 7400 feet underground.

3# 11-10U

A big question remained: what happened to the Blue Hole stream after it emerged and disappeared (a siphon 50 feet inside a cave)? At first we thought there might be a resurgence along Caves Branch but I walked all the way down that stream to its disappearance - another story. It's even doubtful that Caves Branch is even at base level because it sinks in places, meanders crazily and reappears from under rocks and out of slime bogs. Finally that whole watercourse dives underground (very deep water at this point) 5 miles downstream from the road crossing, for 2 1/2 airline miles by the map.

So we made two recent expeditions into the Caves Branch disappearance. Just 300 feet inside we came to a T-junction at which another stream joined Caves Branch. Aha! I said to myself, thinking of the St. Herman's-Blue Hole stream. It comes from that direction. Downstream in our first canoe expedition, we found it breaks out onto the surface once and goes underground for another thousand feet, then there is the biggest siphon I've ever seen: a huge lake with a veritable log jam floating on it.

The next trip we took inner tubes upstream past two more surface reappearances before getting to a really fantastic section now called Blowout Passage because of a slight accident on sharp rock. The cave continues on back toward St. Herman's-Blue Hole, now just some 5 miles away. Blowout Passage has 5 to 10 feet of water throughout, with few gravel bars but about where we had to turn around for lack of time and loss of inner tubes we began to run into interesting upper levels with slender columns some 50 feet high and only a few inches in diameter, beautiful rimstone pools and other features. It really goes.

We also found the missing section of Mountain Cow Cave, a large and pretty one near St. Herman's, a large passage 1000 by 80 by 60 feet with a spectacular shield, fine flowstone and huge stalagmites. Lots of leads remaining.

On one of several less exciting trips, I took a group of high school students into St. Herman's. The science teacher was wearing my orange hard hat with the evolution of man depicted on it. One of the students got panicky and grabbed the teacher and down went the hat, in seemingly bottomless water as I found when I tried to dive for it. Never thought the water was that deep.

May soon disappear into the bush with my brother Ross for two weeks; have lots of tall tales to chase.

\* \* \* \* \*

#### AND UP IN THE GOOD OLD NORTHWEST

Improving weather permitted the Coughlins and the Lanes to visit Boulder Cave March 19. The giant ice speleothems at the entrance were fallen, however.

\* \* \*

At the March 20 meeting, the proposed by-law change was defeated. Grotto Chairman Bob Brown is proposing an alternate change, included in this issue. There will be a mail vote on this; this issue is serving as formal notice.

PROPOSAL FOR AN  
ALPINE KARST GEOLOGICAL AREA

Located in and immediately adjacent to the Mount Baker National Forest is an outstanding example of well-developed karst topography occurring in the alpine and subalpine zone. "Karst" is a geological term referring to a well-defined type of land wasting through the development of subterranean drainage through soluble rocks. Its features differ markedly depending on the climatic zone and stratigraphy and regional geomorphology.

In the case of the proposed ALPINE KARST GEOLOGICAL AREA, the limestone in which the karst is developed is a beautiful light-gray crystalline rock exposed in karstic pinnacles, ledges and cliffs as well as in sinks, pits and small caves. It crops out in heather and grassy meadows interspersed with subalpine forest, and forms cliffs on the west side of Blue Lake. The area in question is mostly above 4,000 feet, rising to 6,210 feet at Dock Butte. The base levels are Wanlick Creek (N), at about 2,500 feet, the Baker River (E), at about 1,000 feet, and the south fork of the Nooksack River (W), at about 2,000 feet. The possibility of pit caves deeper than any now known in the western hemisphere therefore exists. Heavy snow pack during the past summer season has hindered study of this area and many known sinks remain uninvestigated. It is clear, however, that no similar example is known elsewhere on Forest Service lands in the Pacific Northwest. The following Forest Service lands should be incorporated into this ALPINE KARST GEOLOGICAL AREA:

T36N, R8E: section 5. (This includes the summit of Dock Butte and the southern half of the Dock Butte karst area)

T37N, R8E: section 32. (This includes the northern half of the Dock Butte karst area, Blue Lake and its limestone cliffs and scattered, little known additional karstic areas extending toward and perhaps beyond Tuckway Lake)

Section 31 south half. (This is a very steep, little known area of potential resurgences of both the Dock Butte and Washington Monument karstic areas)

T36N, R7E: section 1. (This includes the Washington Monument saddle karst area, the northwestern spur of Washington Monument, a little-known ridge leading west from the karst area in the saddle and a potential resurgence area below the saddle)

Section 2, eastern 3/4. (this is a very steep slope with potential resurgences)

T37N, R7E: section 36, south half, and section 35, SE 1/4. (Similar)

Total acreage: 5 sections (3200 acres). The addition of section 6, T36N, R8E, now private land, would also be desirable.

\*

Endorsed by the Cascade Grotto of the NSS March 18, 1972 and distributed widely through NSS and regional conservation channels. Other groups are urged to expedite supporting statements to the U.S. Forest Service, Bellingham, Washington.

## PROPOSAL FOR A

### LAVA CAVES GEOLOGICAL AREA

Subsequent to the public "input" meeting of March 11, 1972 at the Bonneville Building in Portland, we - William R. Halliday, M.D. and Charles Larson - hereby formally propose a LAVA CAVES GEOLOGICAL AREA under Regulation U-3 of the United States Forest Service.

We are aware of the boundaries presently planned for management of this area under multiple use planning, involving for example a 1/2-mile buffer zone west of the cave-bearing lava flows. We believe these to be proper and support them. Similarly we believe proper all the proposed management program for this area, with one exception: the use of snowmobiles west of the Swift Dam-McBride Lake road which endangers the caves and speleologists alike.

The scientific values of this area are broadly recognized as being exceptional. The area is so unique that it will be a major site of field trips of the 1972 national convention of the National Speleological Society. It contains Ape Cave - longest lava cave in the United States and perhaps the world - and numerous other smaller caves which demonstrate many rare and significant features vital to comprehension of the rapidly developing discipline of vulcanospeleology.

Because of the history of "fluctuation" in boundaries of at least the Indian Heaven "Area" acknowledged at the March 11 hearing, it is essential that this superlative area be given formal standing under Regulation U-3 so that "fluctuation" of its boundaries cannot occur without due notice and procedure, nor "fluctuation" in its uses. Under this regulation, the exceptional geological values of the area would be given proper regulation, and incompatible uses controlled and eliminated, so that its paramount values will be preserved for all time.

We recognize the difficult problem arising out of the presence of private lands owned by Weyerhaeuser and by Burlington Northern within this area. We regret their existence and urge that land exchange be expedited to the maximum here. Designation of the LAVA CAVES GEOLOGICAL AREA should NOT await this exchange.

We and our colleagues in the Oregon and Cascade Grottos of the National Speleological Society are intimately familiar with this area. We will be pleased to supply additional information at any time.

\*

Endorsed by the Cascade Grotto of the NSS March 18, 1972 and distributed widely through NSS and regional conservation channels. Other groups are urged to send supporting statements to U.S. Forest Service, Vancouver, Washington as soon as possible.

PROPOSAL FOR A  
BIG LAVA BEDS GEOLOGICAL AREA

Subsequent to the public "input" meeting of March 11, 1972 at the Bonneville Building in Portland, we - William R. Halliday, M.D. and Charles Larson - hereby formally propose a BIG LAVA BEDS GEOLOGICAL AREA under Regulation U-3 of the United States Forest Service.

We believe that the area shown as Study Area #32 (on the prospectus for that meeting) is proper for delineation of this area with the proviso that the boundary be drawn to the precise edge of the lava beds especially along adjoining roads. We are particularly concerned about this because along N604, the lava beds have been invaded for use of road-building materials and this process must halt.

The full scientific values of this area are not yet fully known, but even superficially, are seen to be notable. No other sequence of flows even slightly resembling these are known in the Washington Cascades. Interesting lava trenches are present and the possibility of major lava tube caverns exists. Opportunities for interpretive trails are exceptional.

Because of the history of "fluctuation" in boundaries of the nearby Indian Heaven "Area" acknowledged at the March 11 hearing, it is essential that this notable area be given formal standing under Regulation U-3, so that "fluctuation" of its boundaries and permitted uses cannot occur without due notice and procedure. Under this regulation, the exceptional geological values of the area would be given proper recognition and incompatible uses controlled and eliminated, so that its paramount values will be preserved for all time. Because of the fragility of parts of the area, the use of trail bikes and off-highway vehicles would be excluded except as necessary for furtherance of geological or speleological study. At present, we see no need for limitation of snowmobile travel, although the later discovery of fragile features might require this eventually.

We and our colleagues of the Oregon and Cascade Grottos of the National Speleological Society have some familiarity with parts of the area. If we can be of service in any way at any time, please do not hesitate to call on us.

\* \* \*

The above proposal was endorsed by the Cascade Grotto at the March 20, 1972 meeting and has been distributed to regional conservation organizations and NSS Conservation Committee for joint action.

COMING VICEG EXPEDITION TO NORTHERN BC LAVA TUBES  
--Terry Boorman

During the past year, I have been studying a lava flow in the north part of our province with which I believe contains some lava tubes. It has taken me some time to collect information, but I feel sure that a party exploring that area will find several tubes, and a chance of finding lots of tubes. We of VICEG do invite any of you Vulcanospeleologists to join us the weekend of Sept. 2-4, at Tsawwassen on the way north. Details later.

## MAINLAND B.C. SPELEONEWS

- Clarence Hronkek

Laurence D. Melton returned to New Zealand during the summer of 1971. He tried to get a caving club started at Simon Frazer University in Burnaby. Only two trips were made, one a scouting trip and the other to Gold River on Vancouver Island where we were to take a plane to Tahsis, but the plane was fogged in. To date, I still have not seen Coral Cave, the goal, only slides of it that were taken the day the loggers discovered and partly explored it in 1962.

Cave of Bears may still be in NW B.C. and not Alaska. Will keep you informed.

\* \* \*

Yr editor owes an apology to the Oregon Grotto and this is it. In the last Caver, I spoke of Oregon Grotto cave files being sequestered from most of the membership. It turned out that I was misinformed; these are not Oregon Grotto files but data which were collected by individual members and have always been separate from the grotto files. My apologies. Especially to Ben Buisman, new chairman. As Ben suggests, let's go caving!

\* \* \*

### LETTER TO THE EDITOR

"...The brotherhood of cavers is something very real. Many cavers spend most of their time with other cavers, not even in caves, either. The numerous social activities which are attended almost exclusively by cavers show how few other organizations or hobbies can command so much of the time of their members. I'm not sure that I'm average, but I have few friends from circles outside of caving and my job. Furthermore, what value that NSS car plate has. Using this, one can pick a caver out of a crowd of anonymous motorists. I know of a case where a Huntsville caver saw the NSS plate on a Wisconsin in caver's car in Illinois and struck up a conversation with him. I myself when home in Washington, D.C. at Christmas saw a car coming in the opposite direction; after it had passed, I saw in the rear-view mirror the NSS tag. Starved for a caver to talk with, I turned the car around and pursued him, but he was too far ahead.

Brotherhood is real."

Sincerely yours,  
Joseph W. Saunders  
1142 Erin Street  
Madison, Wisconsin 53715

## CHAIRMAN'S NOTE

As most of you know, I'm very much in favor of raising our dues to \$4.50 per year. This will help make the Region stronger as well as making us a better grotto. It is interesting that those who can least afford to pay the additional \$1.50 per year have supported the rise, while a few who can easily pay have been against it. With a mail ballot everybody will be able to vote. I strongly urge everybody to vote and if you want a better grotto, to vote yes. The information below might help influence your decision. Current dues for other NW caving groups: VICEG \$8.00 per year; Xanadu Grotto \$5.00 per year, Gem State Grotto, \$5.00 per year, Oregon Grotto \$5.00 per year.

- Bob Brown

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## LETTER TO THE CHAIRMAN FROM THE REGIONAL CHAIRMAN

Many thanks for letting me have your club's views on the items of business raised in my circular letter of March 6th. As I think I explained in the letter, my object is to discover the outlook of Regional members toward matters of common interest. I don't regard any club's opinions necessarily as final at this stage, so I hope no one feels that he cannot change his mind about anything replied on the questionnaire.

In this connection, but without wishing to meddle in Cascade's internal affairs, I would like to express the hope that your grotto will reconsider the question of taking out a bulk subscription to **NORTHWEST CAVING**. In my opinion, this quarterly is a first-class publication on caving, and I think a good case can be made for a club's placing a bulk order, even if its membership rates have to be raised to cover the expense. One of my foremost reasons for encouraging bulk subscriptions is to try to awaken individual cavers in all Regional clubs to the existence and potential of the NWRA. Even NSS members tend to limit their caving horizons to the grotto level, partly because the national organization may seem too vast and remote to permit active involvement. The NWRA, however, is a caving unit large enough to contain a wide variety of caving experiences, yet small enough to permit considerable internal travel, personal contact, and direct exchange of ideas and information.

Those who are active cavers will find the Regional quarterly a guidebook to activities throughout this conveniently sized unit and a useful organ of communication with the caving clubs and individuals around them. Less active cavers will receive more value for their memberships by being able to view their club's activities on a larger stage, and they are sure to find interesting the articles and reports on caving areas adjacent to their own. In short, I think that those interested enough in caving to join a club would find that **NORTHWEST CAVING** enriches their experience and makes them feel more involved than ever with the latest developments in caving in this part of the world.

I realize that there may be some reluctance to fork out any extra money in order to obtain a bulk subscription, but the amount is surely not excessive, even for the most poverty stricken cave bum. The present \$1.50 per

person yearly bulk rate is less than the cost of one two hour film and about the same as three (Imperial) gallons of gasoline (petrol! - Ed.), three packages of cigarettes, or ten cups of coffee in a cafe. Unlike these rather transitory joys, however, a year of NORTHWEST CAVING provides many happy hours of reading about CAVES, and may be referred to again and again with unending pleasure until the dog-eared copies must be preserved in plastic for the edification of generations of cavers yet unborn (or something). If this last argument has not triggered an overwhelming vote in favour of a bulk order, I might mention that it might be possible to lower the bulk rate still farther if enough subscriptions are obtained. Remember however that the sooner every club enters the scheme, the sooner the rate may be dropped, so hanging back in hopes of a lower rate only hinders any possible reduction. (I shall write to the Nielands for confirmation of the possibility of this lower rate - I believe I discussed it with them at New Year).

Rather than intending to twist anyone's arm in this cause, I am hoping to convey to your grotto some of the enthusiasm I feel for NORTHWEST CAVING and the regional concept as a whole. As I have said, the NWRA has a great potential to enrich the caving experience of every caver within its bounds, and the establishment of good inter-club and Regional communications is a first step toward realizing this potential. I urge you, therefore, to poll your grotto's entire membership, repeating some of my arguments and urging them to reconsider the question of a bulk subscription.

I should mention in closing that VICEG, Xanadu and Oregon have already taken out such bulk orders, and, though I have not yet heard from the remaining members, I am optimistic that their replies will favour the plan.

Please let me know Cascade's feeling after a renewed appeal. Good caving!  
-- Phil Whitfield

\* \* \*

Editor's note - Not having been at the March meeting at which the proposed dues increase was discussed and voted down, I don't know what reasons were given. I do know that the previous issue (not the recent BC issue) caused a figurative bad taste in some Seattle cavers' mouths. If this indeed was a factor in the negative vote, I would urge readers to note the marked change in editorial policy, not only obvious in the BC issue of NORTHWEST CAVING but now confirmed by Phil above.

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#### LOUISVILLE GROTTA SPONSORING KENTUCKY SPELEOFEST

On May 19-21, the Louisville Grotto of the NSS is sponsoring a regional meeting at Camp Sky-Hi in Otter Creek Park, Ky., 10 miles west of Fort Knox in one of America's greatest overlooked cave areas. Within an hour's drive are 5 of the 6 largest cave systems in the US, and many lengthy but virtually unknown caves are within minutes of the site. Scheduled trips include: Webster Cave (large, unknown length, 4 mile long lake); Boot Hill Cave (large cave with many formations and 130 foot pit); Clancy's Cave (large stream cave with formations); Boone's Mill Cave, Indiana, (small but beautiful cave being commercialized); Great Wonderland Cavern (large dry cave with huge passage); Big Bat Cave (large system with 13 miles surveyed) and Lockard's Cave (large stream cave with large blind fish). Yr editor has more information.

## MAIL BALLOT ON PROPOSED BY-LAW CHANGE

One month after mailing of this issue of the Caver, a ballot similar to the one below will be mailed to all voting members of the Cascade Grotto. In order to be counted, envelopes containing those ballots should be postmarked not later than one week after the date of the postmark indicating the date of mailing.

This is a proposal to change the grotto dues, and involves the following changes in Article II of the By-laws:

Dues for Regular and Associate members shall be \$3.50 per year.  
(Yes or no)

Dues for subscribing members shall be \$3.50 per year.  
(Yes or no)

The Grotto will provide all regular and associate members with the regional newsletter. (Yes or no)

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## PIPING CAVES IN SOUTHERN SASKATCHEWAN

In December while we were in Galway, Dave Drew (formerly at the University of Saskatchewan) mentioned having studied piping caves up to 500 feet long, just north of the Montana boundary in Canada. The location is Big Muddy Valley, close to the 105th meridian. The longest was about 500 feet long. This is the type of cave described in the July 1970 NSS Bulletin which just arrived, but examples of this size are rare. (WRH)

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## GLACIER CAVES IN BRITISH COLUMBIA

From recent correspondence:

...'' The major problem with mounting an expedition to look at these features (in Greenland) is probably their impermanence. There was a rather nice glacier cave nearer at hand to you in 1967. In the Bugaboos near to Pigeon Spire. I went into it for about 200 feet and it seemed to go on for a bit after that, but I had only my climbing head torch...''

-- Noel Dilly to WRH

...'' I visited last summer one glacier cave in Llewelyn Glacier, British Columbia and I am writing an article on this. Here in Finland people are not interested in these problems...''

--Matti Seppälä<sup>o</sup> to G. McKenzie

## GLACIOSPELEOLOGICAL ABSTRACT

Summit Firn Caves Research, August 1971, Mount Rainier National Park, Wash. Kiver, Eugene P & Steele, William K. Paper presented at Rocky Mountain section, Geological Society of America, 1972, May.

Detailed study of the ice-filled west crater disclosed a cave system much less extensive than that in the east crater. Heat and steam rising between the crater floor and overlying ice has melted about 1000' of passages in the west crater and over a mile in the east crater.

Both craters have a relatively horizontal perimeter passage probably related to arcuate fractures. Numerous side passages lead upward to the surface and a few lead to deeper parts of the craters. A passage in the west crater descends 156 feet below the main entrance to a room 170 feet long containing a crater lake of undetermined depth. A topographic depression exists in the east crater but subsurface access to the suspected crater lake there has not yet been found.

The crater ice density is between .5 and .6g/cc and is considered firn ice. Ice temperature is about 0°C except for the uppermost five meters which is -2°C to -4°C. Maynard Miller (personal communication) reports near surface ice temperatures of -10°C. Cave air temperatures are 2 to 4°C and fumaroles are as warm as 76°C.

Subsidence of the crater ice and melting of cave ceilings in equilibrium. Ablation rates in the caves are 6 to 10 feet per year and maximum ice thicknesses are 500 feet in the east crater and 150 feet in the west crater. If these ablation rates are typical, then the crater ice is replaced every 50 to 80 years in the east crater and 15 to 25 years in the west crater. Changes in ablation rates or morphological features of the caves should be carefully monitored because of their relation to thermal changes in the dormant volcano.

(E.P.K.)

\* \* \*

## WASHINGTON STATE GLACIER CAVE PLANNING

- Jan Roberts

One of the post-convention trips is scheduled to go to the Paradise Ice Caves of Mount Rainier. Because of the heavy snowfall this year, these caves may not be open in August - they were closed at that time last year because of equally heavy snowfall.

So alternate glacier caves should be investigated. And this will require considerable field work (and cavers) several weeks before the convention. Here are some likely candidates:

1. Big Four Ice Caves.
2. Lake 22 glacier
3. Goat Lake glacier
4. Columbia Glacier
5. South Cascade Glacier. All are known to have caves and/or streams at the snout, and all are accessible by trail. My phone is 778-8503 10AM to 10:30 PM.

RECENT TRANSMISSAL LETTER

Forest Supervisor  
Mount Baker National Forest  
Bellingham, Washington.

March 20, 1972

Dear Sir:

Enclosed find our formal proposal for an ALPINE KARST GEOLOGICAL AREA located in the Dock-Butte-Washington Monument area of the Mount Baker National Forest. As the proposal indicates, this is an exceptional area of yet-unplumbed geological values. Almost entirely at high elevation, it is virtually free of commercial values, roads or other disruption of the natural scene. The only apparent limitations on present multiple use management of the area which would be desirable for the protection of its geologic values would be exclusion of hunting (to protect scientific investigators whose prime season coincides with the hunting season) and exclusion of motorized travel except as necessary in geological and/or speleological investigations.

If we can supply additional information, please do not hesitate to inform us.

We are bringing this proposal to the attention of the Northwest Region of the National Speleological Society, the NSS' Conservation Committee and regional conservation organizations in the hope that we can thus demonstrate broad support for this proposal before your rapidly-nearing deadline.

Sincerely yours,  
Charles Coughlin, Sec. -Tr.

Cascade Grotto of the  
National Speleological Society  
1117 36th Avenue East  
Seattle, Wash. 98102

