THE CASCADE CAVER

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

Vol. 14, No. 6 | General Editor: Curt Black | June, 1975
This Issue Edited by: Rod Crawford

AFTER B. MACLEOD

PROPOSED NEW GROTTO EMBLEM

COMING EVENTS

July 4 - 6. Trout Lake with Bob Brown. This trip has occurred.
July 13. Jefferson Ridge (Olympic Peninsula) with Stan Pugh. This trip has occurred.
July 19-20. Tentative Washington Monument or Jackman Creek (Concrete area) trip. Call Dave Walker, 232-1698, or Jan Roberts, 778-8503.
July 21. Regular meeting at the Hallidays' house, 8:00 P.M.
July 27. Joint Cascade/Xanadu grotto vertical practice/picnic/slide show. 6:00 P.M., Ravenna Park at 20th Ave. NE, Seattle. Contact Ken Byrd, 633-0775, or Don Tubbs.
July 26-27. Mt. St. Helens climb with possible steam caves. Call Coughlin, 772-1170, for this and subsequent mountain climbs.
August 2 - 3. Mt. Adams climb.
August 9-10. Mt. Rainier, to Camp Muir to stow gear for next weekend.
August 15-17. Joint meeting at Trout Lake with Oregon Grotto; meeting Friday evening, caving all weekend.
Aug. 16-17-(18). Mt. Rainier summit steam caves. Participants should have been on at least two of the previous climbs.
Aug. 18. Regular meeting.
Aug. 23-24. Mt. Baker climb with Gene Kiver, to see just what is really going on up there.
Aug. 30 - Sep. 1. Labor Day: Regional convention (maybe) at Nakimu Caves, B.C.
Aug. 31 or Sep. 1. Possible Cave Ridge trip with Stan Pugh, SK9-6211 (Tacoma).
Some indefinite time: N. E. Washington limestone area. Call Coughlin.

NEWS AND NOTES

Bill and Ross Halliday, Bill Capron, Chris Miller, and Bruce Unger were all at the Angels Camp convention. Capron reports visiting some nice caves.

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Xanadu Grotto visited Cave Ridge on Independence Day weekend. They found Cascade and Red Caves open; Hellhole "open" (if you have a wetsuit); and Lookout buried but accessible through a small firn cave!

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Some persons in the Oregon Grotto recently published a thinly-veiled account of their exploration of the Vancouver sewers. The explored length of their "Kanaka Indian Village Cave" works out to about 9,200 feet of 4' diameter passage. Members of the Cascade Grotto have now tentatively mapped, in what we might as well call the "University of Washington Geothermal Cave System," about 15,070 feet of walking passage. Needless to say, there is much more to be discovered, and the side passages have hardly been touched. Little further exploration is expected until next winter, however.

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Luurt Nieuwenhuis will be at Trout Lake, camped at the Community Park, (almost) every weekend this summer, doing field work for his Master's thesis on the Trout Lake lava tubes. He will be mapping, tracing connections, and discovering new caves. He and Jim Nieland have already traced connections between Big Cave and the Big Trench, and between Jug Cave and the Cave Creek Road Cave System. For all this, he needs, and will appreciate, lots of help!

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A note of interest for those who wonder about some of those obscure caves: Mike's Cave, Christmas Tree Cave, and the Coyote Trench Cave System are segments and a synonym for the Cave Creek Road Cave System.

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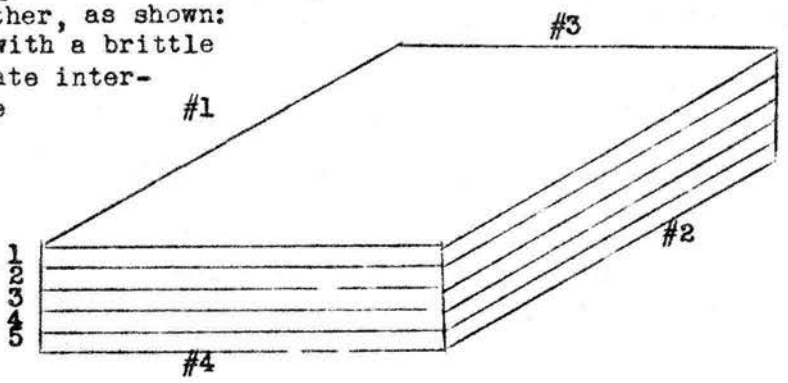
Found: In Deadhorse Cave, a marvelous mechanism belonging to a caver whose initials are E.C. Apply to the editor (R.C.).

SIMULATED KARST TOPOGRAPHY

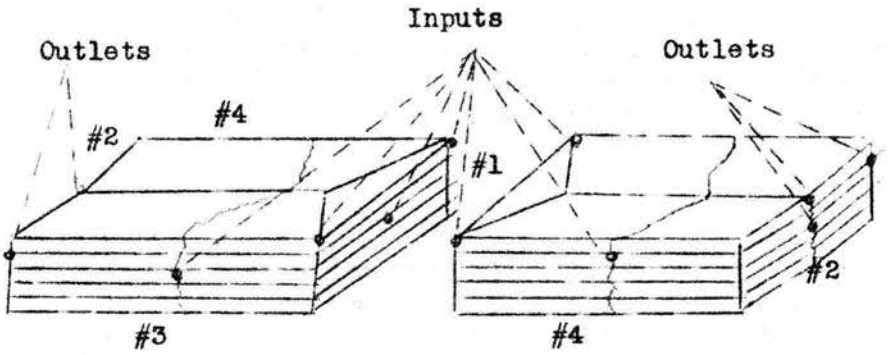
by Eric H. Binker

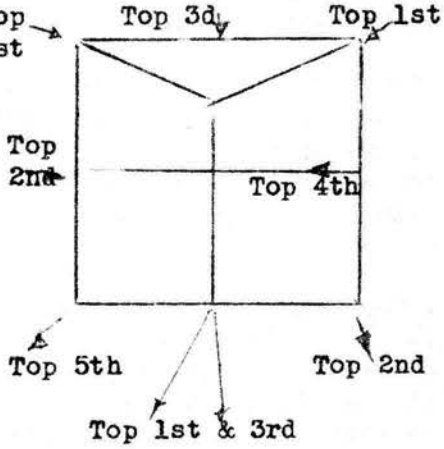
PROBLEM: Devise a model to approximate the action of karst topography in a dynamic situation so that quantitative as well as qualitative measurements can be made on its development stages and features.

PROPOSED PROCEDURE: Place five (5) layers of rock salt, each 1" thick by 4' by 4', one on top of another, as shown: Paint each layer with a brittle paint to approximate interbedded impermeable shale layers.



Tilt side #1 of the pile above #2 by 5". By application of a concentrated shearing force, fracture the set of layers as follows:





This approximates fracturing of limestone by faulting and other earth movement processes. On top place a layer of fine mud about 1/2" thick. Inject water into the system at an extremely slow, controlled rate (about 1 to 10 drops per minute) at various layers as indicated in the previous figures. Place emission points as indicated. Collect all water from the three collection points separately to determine outlet flow and approximate amount of salt carried away in solution at each of the three points. Take pictures of topography at regular intervals to record surface erosional features present.

Continue controlled entry of water at various points until an arbitrary per cent (say 10%) of the total amount of salt has been dissolved and transported from the system through the emission points. At this point, cut off all water supplies and allow time for all water to evaporate from the layers. Then inject a highly fluid resin or other suitable slow setting casting material, which doesn't dissolve salt, into the system at emission points until a volume of casting material equal to the removed salt has entered the system. Finally, dissolve the remaining salt

of the system with hot water to expose the interior channels of the system. An exact cast of all passages and waterways is now present and visible for relatively easy study of its structure.

Some questions to be answered by examination of the system and its data:

1. What is the relationship of passages to the original fracture areas in the salt planes?

2. What effect did the impermeable paint layers have on restricting water flow to certain areas between layers?

3. What is the relationship of passage size to amount of water transferred through it?

4. Were there any indications of redepostion of the salt?

5. Do similar features show up on both #3 and #4 sides which were caused by similar processes?

6. What per cent of passage volume is formed below water table? It will be necessary to formulate methods of determining just where the water table is at a given point.

7. Does a repeat of the experiment under as nearly identical conditions as possible yield a pseudo-karst topography like the first one? Thus, are the results reproducible?

8. If two or more successive "runs" of the same conditions yield the same results, how does changing one of the variables affect development (temperature, volume of water, slope, fracturing, thickness of paint and location of water entry and exit points)? Other questions could be asked which would only arise by actually carrying out this experiment, but these are perhaps some of the more obvious ones.

RESULTS & RELEVANCE: Since this is an idealized system which in reality doesn't exist--but only (hopefully) approximates some aspects of limestone karst development--it may be too much to assume that all inferences and information obtained will apply to the real life situation. However, it will at least be a step in the direction of better understanding of the actual situation. Economically, it is very important that we learn more about underground water mechanism so that better management of our water resources can be obtained along with the control of pollution. With the ever increasing cry for more water, it could be a vital step in the understanding of how best to utilize the ground water potential we now have.

CONCLUSION: The above approach appears to have a sound enough basis to warrant its use to obtain information on karst development by ground water and ground water mechanism. It is an experiment involving enough variables to warrant a full term or more of work on it alone.

Personally, I will be, on a small scale, attempting to carry out the rudimentary steps of this experiment, time permitting. However, for proper treatment refined techniques must be developed; perhaps a whole new approach to the problem is needed (use of other materials). Nonetheless, useful information can be obtained at any level of refinement.

Reprinted from The Speleograph, 6 (6) 46-8, June 1970.

TRIP REPORT SECTION

Memorial Day Weekend at Mt. Adams
by Stan Pugh

It is not often that a peon such as myself gets to go camping in a 27-foot Open Road motor home, but this was the day! With kids squealing for joy, we "lumbered" out onto the freeway about 3 P.M. to join the "sunseekers" lined up bumper to bumper on I-5 South. If you recall, we had a humdinger of a southwest wind that day. However, we managed to stay upright long enough to pull into the Trout Lake county park about 9:30.

Luurt (beardless*) and Jeanette Nieuwenhuis came in sometime during the night, so about ten the following morning, we took a liesurely stroll through New Cave ...the lower end of course!

Later Gregor Erickson and his lovely family arrived to do some scouting of the area for his [Luurt's, I presume--ed.] thesis.

Sunday morning we all headed for Cheese Cave to check out the "racks", and later Luurt and I went to Wildcat Cave to take some photos of the trenches.

Monday we loaded up and headed home, managing 9.4 miles per gallon, which isn't bad for a big motor home...so I am told.

Albright Cave, June 6 - 8
by Stan Pugh

For all the enthusiasm which came forth at the last grotto meeting for a trip to Albright Cave, very few showed much interest when it came down to leaving... namely Curt Black and myself! ...so I thought.

On Friday about 4 P.M., my family and Curt piled into the Wagoneer and headed for Omak via the North Cascades Highway. Let me tell you that is the long way to Omak. The scenery was great, but I thought that we'd never get off that pass. We pulled up to a fellow O.D.'s home about ten P.M. After spending the night, attending church and eating a great meal, we took off for Conconully to check out those "cave/mine" notations on the map. They all turned out to be mines and more mines. In fact, that country looks like swiss cheese, it has so many holes in it! We checked with the county sheriff and local police for knowledge of any caves other than Albright..."nothing."

Sunday morning, Curt and I headed out to the Tugaw ranch--hoisted our packs--hopped over the fence--and headed up Rattlesnake Mountain. Having been warned that we might see some "you know whats," we kept our eyes peeled. About one-third of the way up the hill, as I was about to put my right foot down, we heard the "you know what." Turning an about face while in mid-air, I beat a hasty retreat. While it was somewhat less than six feet, it was enough to convince me that Curt should take the lead for a while. Even though we were climbing during the "lush" time of the year for that part of the country, it still looks rather stark when compared to the trail to Cave Ridge. Just as we neared the top of the ridge, I saw a fellow standing atop a knoll. I turned to Curt: "You won't believe this, but there's someone up here."

"You're kiddin'."

"Howdy...what do ya see up there?"

"Nothin'...nothin' but a bunch of snake holes." Now who else do you know that looks for snake holes??...We still couldn't figure out his identity...the heat

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*The beard is back now--Ed.

must have been affecting our brains!

As we came closer, I said to myself, "...that sure looks like the 'snake man'." Curt didn't have his contacts on, so he wasn't seeing too well.

"Curt, is that you?" Dave Walker called.

We couldn't have planned it better, for Robert Tower, Chuck Coughlin, and his dog were nearing the peak from the other side. What a surprise!

If you want to know what the entrance looks like, go to Caves of Washington. There's more foliage now, but it looks the same as ever. The only thing I didn't figure on was the size of the "room" upon entering the opening. One "switch-backs" his way down the "trail" to the ten foot wooden ladder, one foot wide. We reached the bottom in less than ten minutes.

At least we got to see some "real, live Washington flowstone."

No "rattlers" were seen on the way down as we all hiked together. We even drove home in tandem. Of course we had to check out some of the mines at Blewett Pass, which was good for a laugh or to...depending on who got wet.

[Editor's note: Robert Tower reports that extensive scouting in the Riverside limestone deposit on this trip yielded nothing but a few rockshelters.]

Report on the Marathon Trout Lake Expedition
June 14-22, 1975
by Rod Crawford

The recent nine-day expedition, complete with luxurious trailer, has been long in planning, but finally came to fruition with Hank Ramsey, his parents, and me driving down to Peterson Prairie Campground on the weekend of the 14th. Preceding us, and camped at Deadhorse Cave, were Curt Black, Bob Brown, Jasper, Bill and Ruthie Capron, Dave Walker, Ed Crawford, and Russ Patterson. The latter octet spent most of the weekend going through Deadhorse three times---including Jasper, who had to be pushed over the 10' ledge after cheerfully scrambling through the Rat-hole. Hank and I met with them at Ice Cave on Sunday; shortly thereafter everyone but the two of us departed.

Sunday evening was spent at Slime Cave and the Upper Conepickers' Caves. The latter, located NW of Dry Creek Cave, are much more interesting than we had been led to believe, with some complexity and interesting flow features, as well as a rudimentary form of Larson Phenomenon.

Monday, June 16th. A search for Mike's Cave, supposedly the largest of the group SW of Trout Lake, revealed only a tiny surface tube hardly leaving twilight. The afternoon was occupied by a liesurely exploration of Thanks Cave, a cave obviously much used by mammals. Quills and many droppings point to regular use as a porcupine den; pika droppings were also noted. Skeletal material, of a Ruffed Grouse and a Snowshoe Hare, at least 300' from the entrance, point to the presence of a predator, possibly a fox or a young cougar.

Tuesday, June 17th. Late morning and part of the afternoon were occupied in scouting for new caves between Ice Cave and Ice Rink. We succeeded, however, only in losing each other. When we finally got together again around 4:30, we explored Ice Rink. The ice floor is covered with about 4" of ice cold water! Lucky thing we had rubber boots. The pool is very interesting from a biological standpoint, since many creatures fall into it from the ceiling. We found crickets, Grylloblattids, harvestmen, Campodeids, and a spider floating or immersed. Some of them were still alive.

Wednesday, June 18th. It rained. The few dry periods were spent looking for and exploring (yes, we found it) the long-lost Todd's Cave. More on Todd's elsewhere.

Thursday, June 19th. The "small caves" in a roadcut near Deadhorse, mentioned in the '72 convention guide, were looked for but no holes could be seen. Most of the day was spent exploring the Smoky Creek Cave System (see map in the Speleograph 10 (12) 176-177). The upper cave of the system is very pretty and pleasant. A nice siliceous stalactite was noted in Goose Cave. The entrance sink for this cave

is very treacherous, as I discovered when a misstep plunged me into an unintentional somersault.

After this, I visited Snowpatch Cave to confirm its location, but did not enter.

Friday, June 20th, was our first time through Deadhorse. The main route was terrific, though the Lake and Balcony passages were gooey disappointments. The siphon was thoroughly unsiphoned, the Rathole big enouth for the Monster that Devoured Cleveland. Lots of little white things were crawling around in the river. We found Ed Crawford's "caver surprise" gadget in the River Passage, but unfortunately the battery was dead. Sorry, Ed!

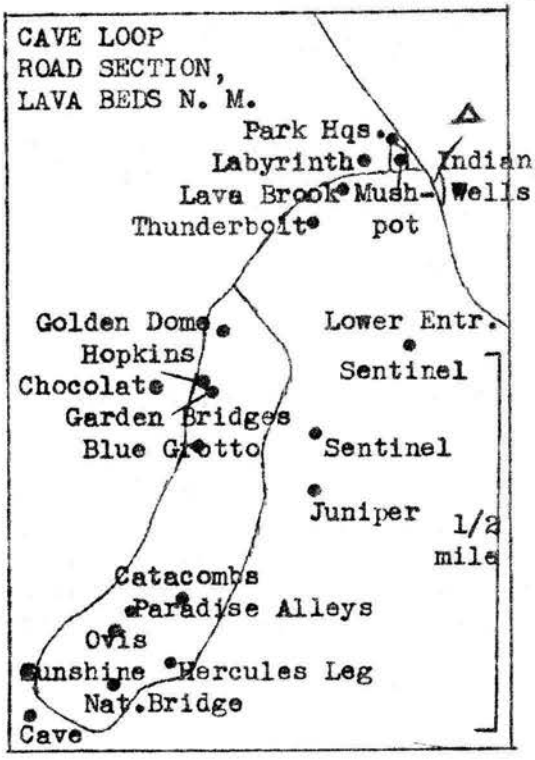
Saturday, June 21st. No other cavers joined us for the second weekend, so we did the Poachers' - Red Cave complex by ourselves. The Poachers' area is a very interesting vertical and horizontal complex. Debris left by poachers---including a mattress, many boards, old clothes, deer and rabbit skeletons, etc., support a very extensive troglophillic biota, including harvestmen, springtails, beetles, millipeds, spiders, and a slug.

Sunday, June 22nd. On the way home, we decided to confirm the location of White Salmon Cave, the southernmost in the Trout Lake area. Our directions told us to cross a bridge over the White Salmon River. What they didn't tell us was that this bridge has been mostly washed out for years, leaving only a couple of rotten, nail-studded beams crossing the river. One look at the churning cauldron below dissuaded us from crossing.

The following air temperature data, in degrees Fahrenheit, may be of general interest:

Upper Conepickers' Cave	40°	Candle Cave	34°
Conepickers' Cave	42°	Asher's Cave	34°
Thanks Cave	34°	Goose Cave	38°
Ice Rink Cave		Deadhorse Cave	37°
(just beyond ice)	30-31°	Poachers' Cave (upper level)	45°
Todd's Cave	34°	Red Cave (middle)	41°

Lava Beds National Monument, June 27-28
by Stan Pugh



On my way home from Reno, where I spent two weeks attending an Army Reserve school at the University of Nevada, I met my family in Tulelake, California.

It is a real shame how the vandals have marred the ancient Indian petroglyphs which are located in a section of the Monument. The Tule Lake "sump" is a haven for wildlife and waterfowl...if you can stand the smell.

The monument headquarters is 26 mi. off Highway 139, most of which is good asphalt road. The monument is also the "home" of the Bighorn Sheep...none of which I was able to see. Compared to most other National Monuments, this one can be aptly described as "primitive", with a minimum of staff and facilities. While the area in general looks a lot like the Craters of the Moon in Idaho, there are a lot more caves...291 to be exact ...or should I say "inexact"! The ranger will

give visitors large flashlights to explore the lava tubes...I took one figuring that if I got lost they could care less, but they would never sleep with one of those lights missing!

In general, the tubes are much smaller than those in Washington, but are more complex. Passages go in all directions in many of the tubes, and the diversity in color is refreshing. One of the rangers told me that one of the tubes has "seven different levels," but would not reveal its location.

Needless to say, I didn't quite make it into all of the caves. One of the caves, Indian Wells, has a distinct odor since the Monument's staff homes are built nearly above the cave.

It was fortunate that the area was in the grips of a cold snap, with morning temperatures in the mid-thirties, afternoon temperature about 70°. One would literally "cook" out there if it was 90° or above.

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REVIEW

by William R. Halliday, M.D., NSS 812

International Glaciospeleological Survey Bulletin #3, 1974. 53 pp. (Actually 62 pp.). 25 photos, maps, sketches. Available from IGS, P.O. Box 12659, Seattle 98111, for $2.00.

With this extremely handsome issue, the IGS Bulletin is beginning to come of age. While still reflicting the problems of volunteer production on a shoestring budget, this issue appears destined to become a collector's item as well as a must for all concerned with current progress in this exploding speleological subspecialty. The lead article is Gene Kiver's first major published article on the exciting geothermal caves of the crater of Mount Baker. A recent press report suggests that these may have been temporarily destroyed by a steam eruption believed by one aerial observer to have formed a new crater lake, and the area is clearly destined for intensive future research. Much of the remainder consists of reprints of old and recent articles pertaining to glacier caves, in accord with the editor's intent of producing an archival resource for ready availability. These include Tyndal's account of Agassiz' first descent of a moulin, an 1897 Journal of Geology article on Greenland, two articles by Charley Anderson and myself on the Paradise Ice Cave system (unfortunately the attribution got left off the one from National Parks Magazine) and others.

With the progressive improvements in this publication and the growing importance of this field, a lot of speleologists and institutions are going to regret not having obtained copies of these early issues while these small runs are still available.

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VULCANOSPELEOLOGICAL ABSTRACT

Nelson, Russell, 1975. Hitting the Underground Trail. Northwest Magazine, the Sunday Oregonian, June 1, 1975, pp. 4-5.

An illustrated popular account of the main Mt.St.Helens cave system, featuring Little Red River Cave, narrating a trip there in early spring of this year. The gate is not mentioned. The author is fairly well informed and the article contains a strong safety and conservation message. Much of his information appears to have come from Bernie Dunn, a Willamette Valley Grotto member. In my opinion, it remains to be seen whether such publicity is consistent with cave conservation.

Thanks to Bob Tower for finding this article---R. Crawford

REPORT ON TODD'S CAVE
by Rod Crawford

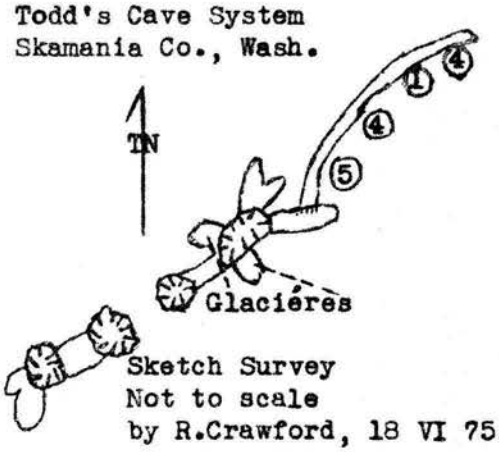
The locations and relations of the caves in the Ice Rink Cave area (6-7 miles west-southwest of Trout Lake) have always been very poorly known, but Todd's cave is the least known of them all. Its early history is unknown to me. The first reference to it that I can find is a report on a visit to it, mentioning no details, in 1969 (Cascade Caver 8 (9/10). A scrap of paper in Charlie Larson's files states that it was "named by Don Olson". Anyone knowing more about the early history of Todd's is encouraged to contact the author.

So far as I can discover, the 1969 trip was the last occasion on which anyone in the Cascade Grotto had anything to do with Todd's. No member I spoke to could tell me where it was. Dr. Halliday could only say that the area was a little confusing. This confusion is reflected in Todd's Cave's absence from the 1972 convention guide.

When Clyde Senger rediscovered the cave in June 1971, he thought it was Ice Rink. After finding the real Ice Rink Cave, he briefly reexamined it in September 1972. However, it was still not identified with Todd's Cave (see Speleograph 8 (10) 119).

On June 18, 1975, Hank Ramsey and I, armed with some moldy old directions (undated) supplied by Charlie Larson, succeeded in finding the cave, hopefully once for all. We also followed Senger's directions and wound up at the same cave; Hank, when looking for Ice Rink the previous day, had even rediscovered it independently. As a result of our explorations, I present the following account and sketch survey.

Todd's Cave System
Skamania Co., Wash.



Sketch Survey
Not to scale
by R.Crawford, 18 VI 75.

Todd's Cave, Skamania County, Washington, is located south of Ice Rink Cave, at an elevation of 2960'. It is not identical with Apple Cave, COG Cave, or Tooth Cave. For exact location see Speleograph 8 (10) 119.

The system as presently known consists of four sinks, trending NE, with associated caves. Two pairs of the sinks are connected by short, 50-100', breakdown-strewn cave segments. In addition, several small holes lead to large breakdown chambers off the sides of the sinks, perhaps indicating that the uncollapsed cave may have been very large. Two such chambers contained ice, one with some nice stalagmites, when visited. One of the breakdown chambers off the NE end of the lowest sink leads to an upper level passage, several hundred feet long, which is the only recognisable lava tube passage in the system. It contains no breakdown, and is stooping height through most of its length. Fifty feet from the end is a stomach crawl over sand; the extreme end is blocked by a sand fill. One nice "sand castle" is present at the entrance of this passage.

At the end was a pile of pine cone chips deposited by some animal, long ago--some had lava tube slime growing on them. There was a sparse growth of slime elsewhere in the cave. Other biota included moss in the twilight areas; spiders in webs between breakdown blocks; pika droppings with grass sprouts and springtails; and Grylloblattids in the southern glaciére. Air temperature was 34° F.

The cave has never been surveyed--Jim Nieland please note.

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LOST: One pair of brown cotton gloves, above the second ladder in Lake Cave. Finder please remove them as they are littering the cave--RC.

THE BIOLOGIST'S CHAMBER
by Rod Crawford

REVIEW: Nixon, Stuart E., 1975. The Ecology of Deadhorse Cave. Northwest Science, 49 (2) 65-70.

Stu Nixon's report on his studies in Deadhorse has at last appeared, and I thought some comments on it might be appropriate to this department.

The paper presents the results of three visits to the cave in 1973 and 1974, along with some related lab work. It appears that most studies during these visits were conducted in the vicinity of the lower pool, with one excursion to the River Passage.

Among the most interesting of the results given are chemical analyses and bacterial counts for the water in the lower pool. Among other things, these indicate that in October the water had a dissolved oxygen content nearly twice as high, and a bacterial count seven to eight times as high, as in March. No doubt these facts are interrelated. The discrepancy in oxygen content may be due to increased turbulence when the water is lower in October. No conclusion can be reached as to whether these changes are really cyclic on the basis of just three visits.

The remainder of the paper is concerned with the cave's fauna. A large number of flatworms (Polycelis) were collected swimming in pools. They show some differences from surface Polycelis, but the significance of these differences is not yet clear. Also collected were the troglobites Troglotyla skamania (a milliped) and Stygobromus elliotti (an aquatic amphipod crustacean), recently described from this cave by Nell Causey and John Holsinger respectively. Three Grylloblattids (unfortunately not including a male) collected represent the first record of this family from Deadhorse Cave. Some measurements on the specimens are given. The amphipods and flatworms were reared in the laboratory, with what result the author does not say.

It is good to see people doing biological research in Washington caves. At the same time, I must confess some disappointment in this particular study. The text contains little discussion of the data; the author's more popular article in the March Speleograph is much more exemplary in this respect. The title is too ambitious for the scope of the article; many things, such as energy sources, etc., of importance to an ecological study, are omitted. And three visits are not nearly enough for a full study of a cave's fauna. For example, the cave's commonest troglobite, the aquatic isopod Asellus sp. (see figure below) was never collected--possibly because it is mostly found in the swift section of the river, where little or no collecting was done. Most unfortunate is the inclusion of the cave's location in a form that should enable almost anyone to find it; this seems to me not entirely consistent with a concern for the cave's ecology. Nonetheless, the information presented is of considerable interest, and it is to be hoped that this study will be followed up in a more thorough fashion later.

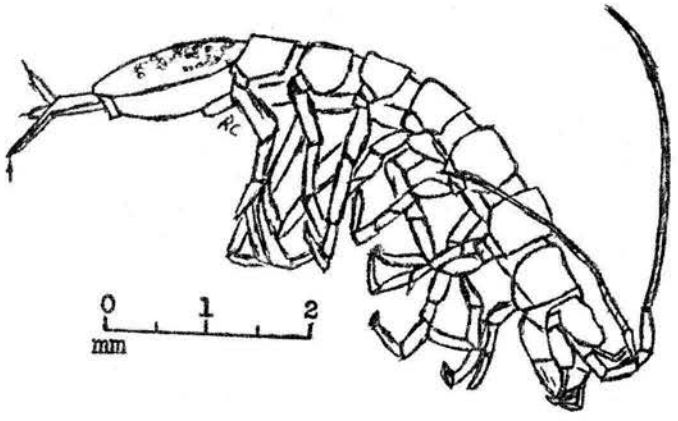

Fig. 1. Deadhorse Cave isopod, Asellus sp., x 12.
Collected crawling on river bottom 50' below spring, 20 June 1975.

VULCANOSPELEOLOGICAL ABSTRACT:
THE LONGEST LAVA TUBE

Gagné, Wayne C., and Francis G. Howarth, 1975.
The cavernicolous fauna of Hawaiian lava tubes, 6. Mesoveliidae or water treaders (Heteroptera). Pacific Insects 16 (4): 399-413.

The authors describe a very interesting troglobitic water treader, with many interesting biological notes. They still refer to lava tube slime as a fungus, however. By the description, their slime is probably rather similar to ours. The following passage may be of general interest:

"Kazumura lava tube is the longest known continuous lava tube in the world, with approximately 10 km [6.21 miles] of surveyed passage and with still unexplored portions. The cave slopes gently between 250 m and 450 m in elevation. All of the 15 known skylights were apparently formed while the lava was still flowing in the system. Most are characteristically offset on upper levels.

"The upslope 6 km of passage alternates between high, narrow, meandering passage, usually keyhole-shaped in cross section, as much as 8 m high by 4 m wide, and low tunnel-like passages 2-3 m in diameter. There are a few large rooms, approximately 60 m long, 10 m high, and 9 m wide. The overburden (thickness of ceiling rock) is shallow, between 1 m at some skylights in high passages and perhaps 7 m in lower level tunnels. The downslope cave trends toward a bigger and deeper passage. The overburden approaches 15 m in places.

"The solidified lava stream forms the floor surface of the cave and varies from smooth pahoehoe to a very rough, clinkery aa. Piles of spalling blocks are common...

"The age of the cave is not known but must be less than 20,000 years, since the lava flow covers the 20,000-year old Pahola ash. The lack of soil on the cave floor is significant and indicates youth. As a first approximation, the cave may be 1000-2000 years old and perhaps younger." --- R. Crawford

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Gas analyzers watching for Mt. Baker eruption

UNIVERSITY OF WASHINGTON DAILY
FRIDAY,
MAY 16, 1975
NINE

by Mike Prager

Will Mt. Baker erupt? Probably not, but the head of the UW research team studying the active volcano said yesterday a gas analyzer planted on the mountain last week may help predict new activity.

Returning from the mountain last night, University Geophysics Researcher Steve Malone, director of the project, said gas analyzers have detected changes in gases coming from Hawaiian volcanoes just before they erupt. Though the team cannot be sure, it hopes the instrument will do the same on Mt. Baker.

"We don't know if there will be an eruption," Malone said. Rather than an eruption, the analyzer is more likely to detect a mud flow, he added.

Malone also said the five-man team — including a seismologist, glaciologist, geologist, geochemist and a climber — feels a mud flow will probably endanger only those on or very near the mountain. Malone said a flow otherwise "wouldn't be a lot of hazard."

Because of those dangers, the Forest Service has closed Sherman Crater to the public, as well as the Boulder Creek drainage and campground.

This latest expedition follows an earlier effort last month when the team placed seismographs on the mountain. The seismographs and the gas analyzer are monitored in the geophysics building here.

According to Malone, heating inside the mountain is causing the new activity. Consequently, he said Sherman Glacier, which flows from the summit to the crater 1,000 feet below, shows new crevassing and "looks very broken up." Also, a lake in the crater has formed underneath a covering of ice, he added.

Steam vents carrying hydrogen sulfide gas are another cause of the increased activity, Malone said. The biggest "fumarole" has an estimated five meter hole with a cloud that "goes 500 to 600 feet in the air at times," he said.

Malone said the team hopes to continue monitoring the mountain through the summer and into the winter. The icy wind and corrosive hydrogen sulfide are very hard on the monitoring equipment, limiting the time the present effort will remain in operation, he added.

If anyone is interested, we have recieved a rumor of an "Ackerman Cave" seven miles out of Clarkston. Which direction "out" is, the rumor saith not. Sounds more like Gem State territory than ours, but still...

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You may not believe this, but Northwest Caving is actually in press as I type this. In fact, regular Cascade members should be recieving their copy with this issue. On the other hand, if you're not a regular member.....

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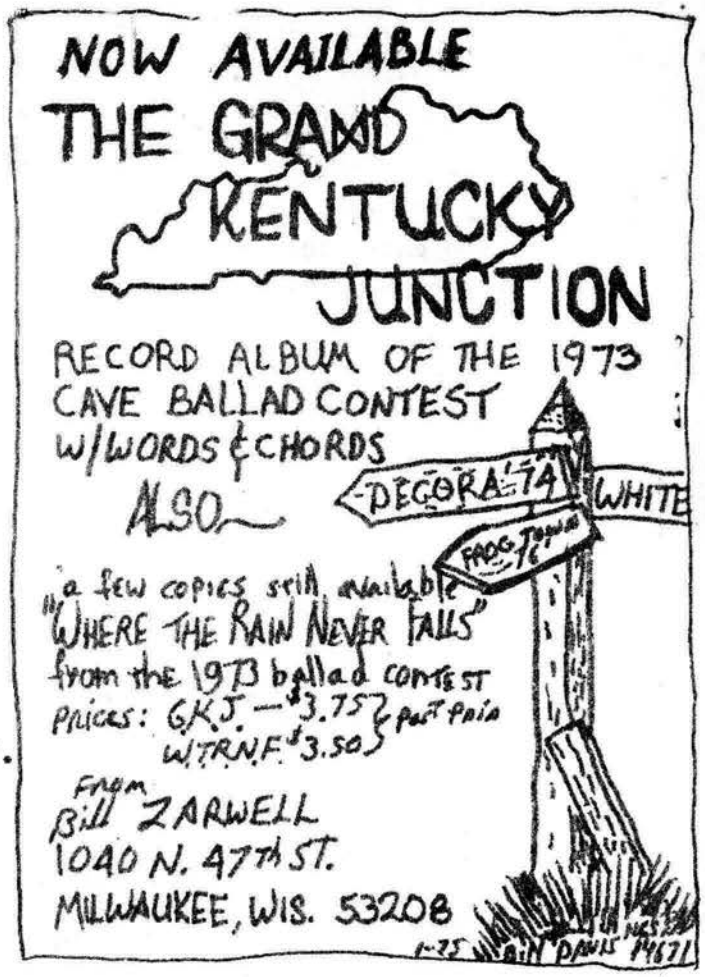

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