

# GYPSUM CAVE

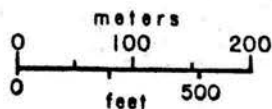
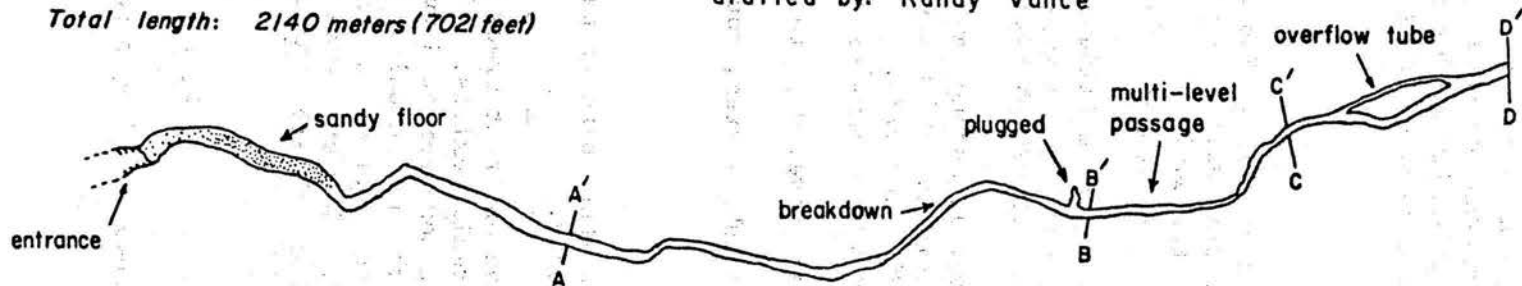
Lincoln County, Idaho

Total length: 2140 meters (7021 feet)

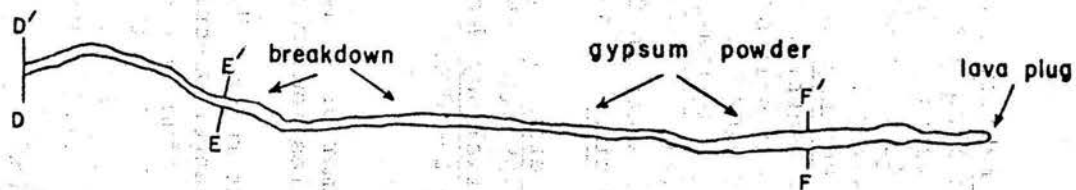
surveyed by: GEM STATE GROTTO

March 19, 1978

drafted by: Randy Vance

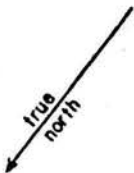


CROSS-SECTIONS:



surveyed by:

B. Colvin  
F. Ireton  
D. Schultz  
R. Vance



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## THE CASCADE CAVER

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Vol. 17 #9-10

THE CASCADE GROTTO OF THE NATIONAL SPELEOLOGICAL SOCIETY

1979 Officers

Chairman: Bob Brown  
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Vice-Chairman: Bill Halliday  
1117 36th Ave. E., Seattle, WA 98112 EA4-7474  
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THE CASCADE CAVER is ordinarily published ten times a year by the Cascade Grotto of the National Speleological Society. Subscription rate is \$4.00 for one year's issues. Full grotto dues are \$4.50, and family memberships (not including subscription) 50¢. All payments should be made to Grotto treasurer Chuck Coughlin, address as given above.

COMING EVENTS

Saturday, February 3. Concrete cave area, rain or shine. Rod Crawford, Bob Brown, et al. By the time you read this, the trip will be history. Whatever the weather, we're determined to get underground!

February 14th. Departure for Cueva de Guacharo, Venezuela. Contact Bill Halliday, EA4-7474.

Tuesday, February 20. Regular monthly meeting at the Hallidays', 1117 36th Ave. E., Seattle. Doors open at 7:55. Once again we request that members bring their slides of the past year's caving. VOTING ON BYLAWS AT THIS MEETING---SEE PAGE 53.

Washington's Birthday, Feb. 24-26. Gordon River limestone cave area on Vancouver Island. We contributed to the VICEG cabin at Gordon River; here's our chance to sleep in it. Contact Bob Brown, (206) 569-2724.

March sometime. A potluck get-together. Come to the meeting and help plan for it.

Tuesday, March 20. Regular monthly meeting, as above, with the first of a series of NSS slide shows.

May, Memorial Day Weekend. Saddle Buttes lava tube system, southeastern Oregon, with the Oregon Grotto.

NEWS AND NOTES

We have a rumor of a cave on Kamiak Butte, in the state park of the same name, some five miles southwest of Palouse, Whitman County.

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Remember that rumored "vent cave" or "pit" in lava on Trout Creek Hill in the Wind River Ranger District? Well, evidently it really exists. After hearing unconfirmable rumors for years, Bill Halliday met some Forest Service people in Vancouver on Jan. 16th, who knew some people who had actually been in it. It was described as an 85 foot drop to the sloping floor of an "inverted goblet". At least two parties are known to have descended. They even gave us the location. This still leaves something to be desired in clarity, but...

NEW MEMBERS

Charles E. and Vera Fair Rt 1 Box 155B, Eatonville WA 98328, (206) 832-3651

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OUR COVER: Gypsum Cave, from the Gem Caver March-April 1978, page 9.

SPECIAL FEATURE:  
A MESSAGE FROM THE CHAIRMAN

A GOOD YEAR AHEAD?

by Bob Brown

As your newly elected grotto chairman, it is my hope that the coming year will provide more activities and opportunities for grotto members to get together. I also hope that we will be able to increase our active membership by encouraging non-grotto cavers to join our club. We can accomplish both these goals by improved programs, well planned and advertised field trips, and increased effort by all of us to accomplish these goals. We must remember that the club will only be as good as we can make it.

The following list of implementations and recommendations should point out both recent improvements and needed improvements:

- I. Current meeting format:

8:00-8:15	Introductions and old business*
8:15-9:15	Program
9:15-9:30	New business
9:30-9:45	Upcoming trips
9:45-10:00	Field trip reports
  
- II. Chuck Fair has been appointed program chairman and allotted the time frame of 8:15-9:15 at the general meeting. He is in the process of ordering NSS slide shows and movies for each of the upcoming meetings, February through December. Any member wishing to schedule this time for a program should contact Chuck at (206) 832-3651. NSS slide shows programmed for a grotto meeting can be pre-empted by a program of equal quality, if a little lead time is given.
  
- III. The following has been requested of the Secretary-Treasurer:
  - a. Provide a treasurer's report at the January, April, July, and November grotto meetings.
  - b. Provide the editor with names, addresses, and phone numbers of all new members as they join the club.
  - c. Provide the editor with a current membership list as of April 15, 1979, so that it can be printed in the May Cascade Caver.
  
- IV. The following has been requested of the Editor:
  - a. List old business, new business, scheduled programs, and any matters acted upon at the grotto meeting in the next issue of the Caver.
  - b. List new members as they join the club.
  - c. Arrange publication of the Caver so that it will be mailed by the second Wednesday of the month.
  - d. Print a current membership list (current as of April 15th) in the May issue of the Caver.
  
- V. If each member of the grotto will make an effort in the following areas, both grotto membership and activities should increase:
  - a. Recruit a minimum of one new member for the club. When was the last time you brought an interested person to a grotto meeting

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\* If the program is less than one hour long (which will be the case more often than not) this time will be used for socializing, etc.---Editor.

- or on a field trip?
- b. Get out on at least one or two more field trips in 1979 than you did in 1978. Include new members on these trips.
  - c. Attend one or two more meetings in 1979 than you did in 1978. Bring interested persons to grotto meetings.
  - d. Write one or two additional field trip reports or articles for the Cascade Caver in 1979. You may win the \$20 grotto field trip report prize.
  - e. Maintain a positive attitude at grotto meetings and on field trips. Let's spend less time talking about what cannot be done, and more time talking about improvements which will work! Give ideas a chance!

A review of the following items indicates to me that improvements are happening:

- I. Grotto slide show now being copied and should be available for members' use by March 1, 1979.
- II. NSS slide shows and movies are being ordered for the grotto meetings of February through December, 1979.
- III. The Cascade Caver has been coming out monthly (12-14 pages) with good quality material.
- IV. Current grotto funds exceed \$260.00.
- V. Membership has been increasing (approximately one new member per month over the last four months) and many of these new members have already been on several trips.
- VI. The grotto New Years' Party had nearly forty people attending, and the auction netted \$120.35. \$60.35 of this auction money was presented to VICEG for their Gordon River cabin.
- VII. Attendance on field trips and at grotto meetings is up over 1977.

With a little extra effort on the part of all grotto members, we can look forward to an increase in both membership and grotto activities during the coming year. Any help or ideas will be appreciated! Let's develop a positive attitude toward our club in 1979.

Good caving!

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VULCANOSPELEOLOGICAL ABSTRACT

Veni, George, 1978. Lunar vulcanospeleology. Texas Caver. vol. 23 no. 3, June 1978, pp. 36-37. Abstr. by W. R. Halliday.

Armed with a five-item bibleography (sic), including the proceedings of the 1972 symposium, and 1970 to 1975 books, the writer tries to con the editor of the Texas Caver into some funding for a lunar field trip. I don't think it would have worked even if he'd included the other pertinent references.

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## TRIP REPORTS

Mt. St. Helens, November 4-5, 1973

by Clyde Senger

I wanted to get away, so I made plans several weeks in advance, and as Friday neared, the weather forecast seemed to be less and less favorable. Things still looked reasonable until I picked up Rod Crawford in Seattle in the middle of a downpour. Being optimistic (or just stupid) we continued and were pleasantly surprised to find that it wasn't raining at the Beaver Bay campground. We set up a tent, threw a couple of well used plastic tarps over some haphazardly tied ropes, had dinner and considered what to do next. There seemed no special reason for a night trip, so I went to bed while Rod did some collecting. Soon the wisdom of our decision was demonstrated when a rather heavy rain started. I fell asleep snug in a warm sleeping bag but with dreams of some very wet and cold trips in the next two days. To our surprise, the storm had passed by morning and the sun was out.

After our usual bat counting, Rod wanted to locate some caves that I had reported years earlier but had not been able to relocate. Our first objective was Manhole Cave in the logged area near Gremlin Cave. We had made several previous sweeps to the east of Gremlin, so this time we started to the west. The entrance was reported to be near one of the scattered remaining trees, so we separated and started a sweep. Of course I felt I was in a more likely track than Rod, but soon he reported a find. My recollection of the cave was that it might be just a large log cast. There was a class of students along on the discovery trip, and we were interested in other things, so I had been in the cave only briefly. A more careful look indicated that this was a true lava tube, but it certainly might have used a cast for part of the cave. There is a short low crawl leading slightly uphill to the west from the entrance, and this apparently connects to another small opening nearby. Other small segments of tubes and trenches in the area suggest at least two channels of flow. The main passage drops as a straight tube about 4 feet in diameter, at an angle of about 45 degrees, for about 30 feet, where it is blocked with breakdown. There are a series of very small flow ledges indicating relatively slow drainage of the last flow, which must have initially filled the whole tube. Worth more careful study at a later time. We surveyed along the surface back to Gremlin Cave to increase the chance of locating the entrance the next time.

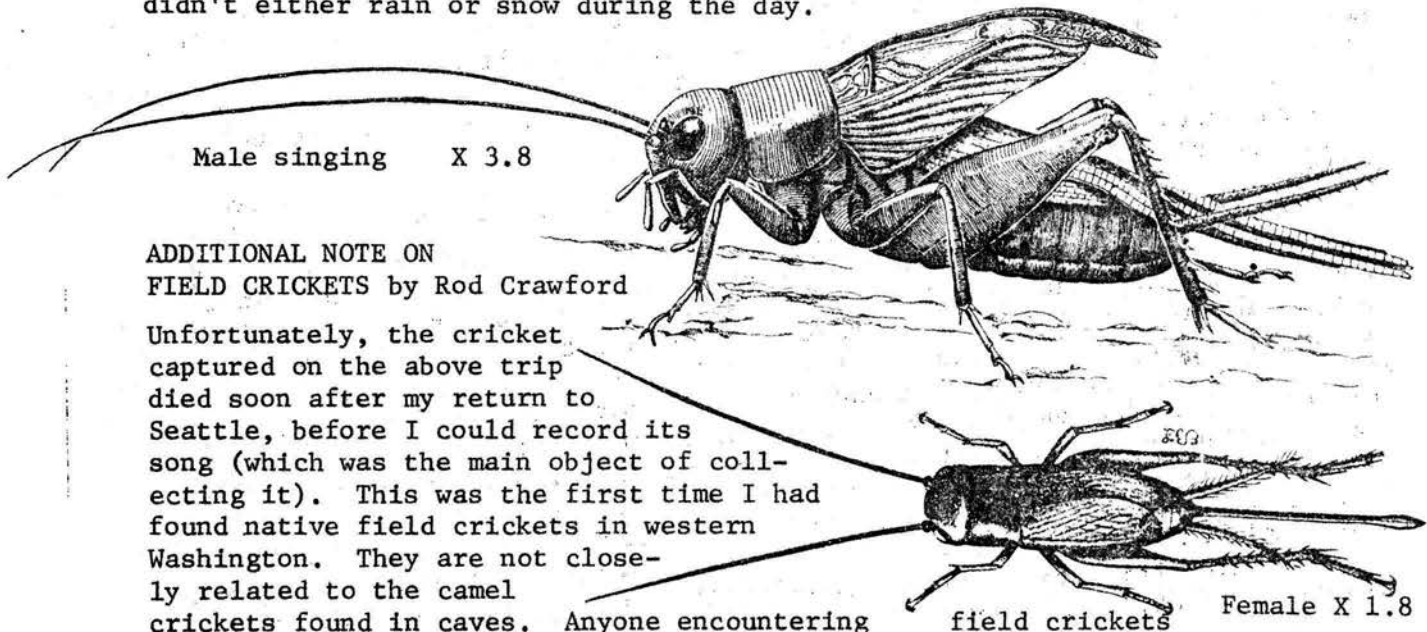
It was still early in the afternoon, so we had a quick lunch and drove to Dry Creek Canyon so I could show Rod some of the lower flow caves. We located Cougar Cave without difficulty, but I am not sure Rod believed me when I indicated you just head for the peak to the west and continue until it is about 45° above you and a certain angle from another smaller peak. While Rod looked for animals in the upper passage, I checked the lower one. On previous visits, including a brief survey with Rick Pope and a couple of his friends in September, we had hurried through the area where stooping is required. This time I stopped and noted a lava spring on the north and a wide low crawl leading up on the south wall. I squeezed in far enough to see that it continued downslope as a passage about 7 feet wide and about a foot high. Worth a look, but on another day. Back on the surface, we surveyed to the three small caves north of the canyon rim. While Rod investigated the crawlways of Beaver Bay Cave, I made a sweep of the surface and then watched a beautiful sunset. I was not as concerned about finding our way back to the

car as I probably should have been. As we dropped almost straight down into the canyon it got dark faster than I expected and the game trail wasn't as obvious as I remembered. Thus, we were both relieved when we reached the creek and, shortly thereafter, the car.

The next day was also clear, and we headed up to another part of the lower flow to look for a cluster of lost caves near a rockpile. I had found them years ago but was unable to relocate them by looking near the most obvious rockpile. On one recent trip back from Green Mountain, we ran into another pile, and that was our objective for the day. As soon as we located it, we found the low caves which must be Rockpile Caves, and, shortly thereafter, Duckwalk and Vine Maple Caves to the northwest. Rod was pleased to complete a surface survey so that they can be located in the future. They all seemed to be mainly crawl type caves with little likelihood of going far, but we probably will be back one of these days to be sure. According to Rod, he now knows about all of the caves which are mentioned by name in my trip reports and there are only about twelve more lost on the flow that were reported by others. I offered to show him a couple of other crawl type caves, but he declined. Guess I will have to give them a name in a future trip report to give him a bad time.

We started back early because Rod thought I wanted to go to Portland and I thought he was in a hurry to get back to Seattle. When we got the communication problem resolved, we decided to spend an hour or so looking for field crickets.

Rod seemed to hear them all over, but I wasn't sure it wasn't something in his canteen. However, I had to admit there might be something to it when he dug up a fine black insect. That one managed to elude both of us, but another one took a wrong turn into a vial. He didn't seem too concerned, though, as he did a lot of chirping on the way home, part of which I could hear. Thus ended one of the few fall field trips I can recall in which it didn't either rain or snow during the day.



ADDITIONAL NOTE ON  
FIELD CRICKETS by Rod Crawford

Unfortunately, the cricket captured on the above trip died soon after my return to Seattle, before I could record its song (which was the main object of collecting it). This was the first time I had found native field crickets in western Washington. They are not closely related to the camel crickets found in caves. Anyone encountering field crickets in western Washington, and willing to get a live specimen to me, is encouraged to do so. Not only is it important to record their song, but they make pleasant pets. They will subsist on water and any vegetable food such as moist bread, peanut butter, or lettuce, and males sing readily in captivity. They are difficult to capture, however--the one mentioned above was already moribund.

VULCANOSPELEOLOGICAL ABSTRACTS

Peterson, Donald W., and Donald A. Swanson, 1977. Formazione dei tubi di lava osservata durante l'eruzione del 1970-71 sul vulcano Kilauea, Hawaii. Atti del Seminario sulle Grotte Laviche: Catania, 27-28 Aug. 1975, Gruppo Grotte Catania. Pp. 127-148. Abstr. by editor.

This is an Italian translation of Peterson and Swanson's 1974 paper, "Observed formation of lava tubes during 1970-71 at Kilauea Volcano, Hawaii" that appeared in Studies in Speleology 2 (6) 209-222.

I here reprint the conclusions of the paper in the original English (p. 221): "Our observations on the formation of the 1970-1971 lava tubes conflict in many ways with the hypothesis of Ollier and Brown (1965) for the origin of lava tubes but agree with ideas of Wentworth and MacDonald (1953), Greeley (1971), and Cruikshank and Wood (1972). "Layered lava" similar to that named and discussed by Ollier and Brown (1965) occurs in the walls of the 1970-71 tubes, but our observations of flowage and deposition of the lava indicate that this "layered lava" represents successive thin flow units and near surface zones of vesiculation within the thin flow units, not internal shearing in thick flows as envisaged by Ollier and Brown. In short, our observations and those of others during the formation of Hawaiian lava tubes clearly prove that large tubes form from surface rivers and advancing pahoehoe toes.

"Lava tubes have long been recognized as an interesting and curious feature of basaltic pahoehoe lava. The observations of the development of the tubes and their continued operation during 1970-71 at Kilauea Volcano show that lava tubes are more than curiosities. They are a major method by which Hawaiian lava is transported to sites far from vents and the only means by which pahoehoe lava can reach such distant sites. In fact, long-continued flow through lava tubes may be one of the fundamental factors governing the gentle slopes of basaltic shield volcanoes."

This paper stands a good chance of becoming one of the classics in its field, and well repays reading in its entirety.

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Ollier, Cliff D., 1977. Lava caves, lava channels, and layered lava. Atti del Seminario sulle Grotte Laviche: Catania, 27-28 August 1975, Gruppo Grotte Catania. Pp. 169-174. Abstr. by editor.

Ollier and Brown, in 1965, proposed a theory of lava tube genesis which involved conduits forming within a flow of what was called "layered lava". More recently this theory was attacked on the basis of field observations which suggest that lava tubes form by roofing over (by one of several mechanisms) of lava rivers (see above). Ollier still believes that his original theory applies in some cases, and separates lava tubes into four categories according to mode of origin (p. 150):

- "1. Minor partings and tubes, little more than super-vesicles.
- "2. Drained pahoehoe toes or flow units.
- "3. Caves formed by roofing over of initially open lava channels.
- "4. Subcrustal lava caves (for want of a better name) with lengths measured in hundreds of meters, arcuate roofs, and not associated directly with channels [or layers or flow units]."

Ollier gives several pieces of evidence in support of the existence of the fourth category. To me, the evidence seems unconvincing and the reasoning unclear.

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Vulcanospeleological Abstracts, contd.

Wood, Christopher, 1977. Factors contributing to the genesis of caves in lava. *Atti del Seminario sulle Grotte Laviche: Catania, 27-28 August 1975, Gruppo Grotte Catania.* Pp. 101-113. Abstr. by editor.

This is a very comprehensive paper, clearly written, and may some day be worth reprinting in its entirety in these pages. Wood devotes several pages each to the physical properties of the magma, to vulcanospeleogenesis proper, and to circumstances inducing drainage of lava tubes. The chart showing in outline form the drainage processes leading to various passage cross-sections as observed in the Cueva del Viento system is reproduced from the B.C.R.A. Transactions, December 1977.

From page 108: "Recent observations of active flows in Hawaii have shown that internal conduits originate either as the result of the roofing of an open channel, or through the retention of movement within pahoehoe toes. Indeed, open lava channels appear to be essential prerequisites for the survival of active flow, for through their construction, enough mechanical energy is conveyed to overcome the friction of the slope, and thermal energy losses to the air and the ground are reduced sufficiently to maintain temperatures which allow continued flow."

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Wood, Christopher, and M. T. Mills, 1977. Geology of the lava tube caves around Icod de los Vinos, Tenerife. *Trans. British Cave Research Assoc.*, 4 (4) 453-469.

The portion of this paper dealing with the mapping of the Cueva del Viento and Cueva de San Marcos has been dealt with in a previous issue. There are also some interesting contributions to lava tube geology:

p. 459: criticism of Montoriol-Pous' concept of "indices planimetrico" and comments on sinuosity of passages.

Fig. 5, p. 464, gives a scheme for morphogenesis of major types of passage cross-section, and is reproduced on the facing page.

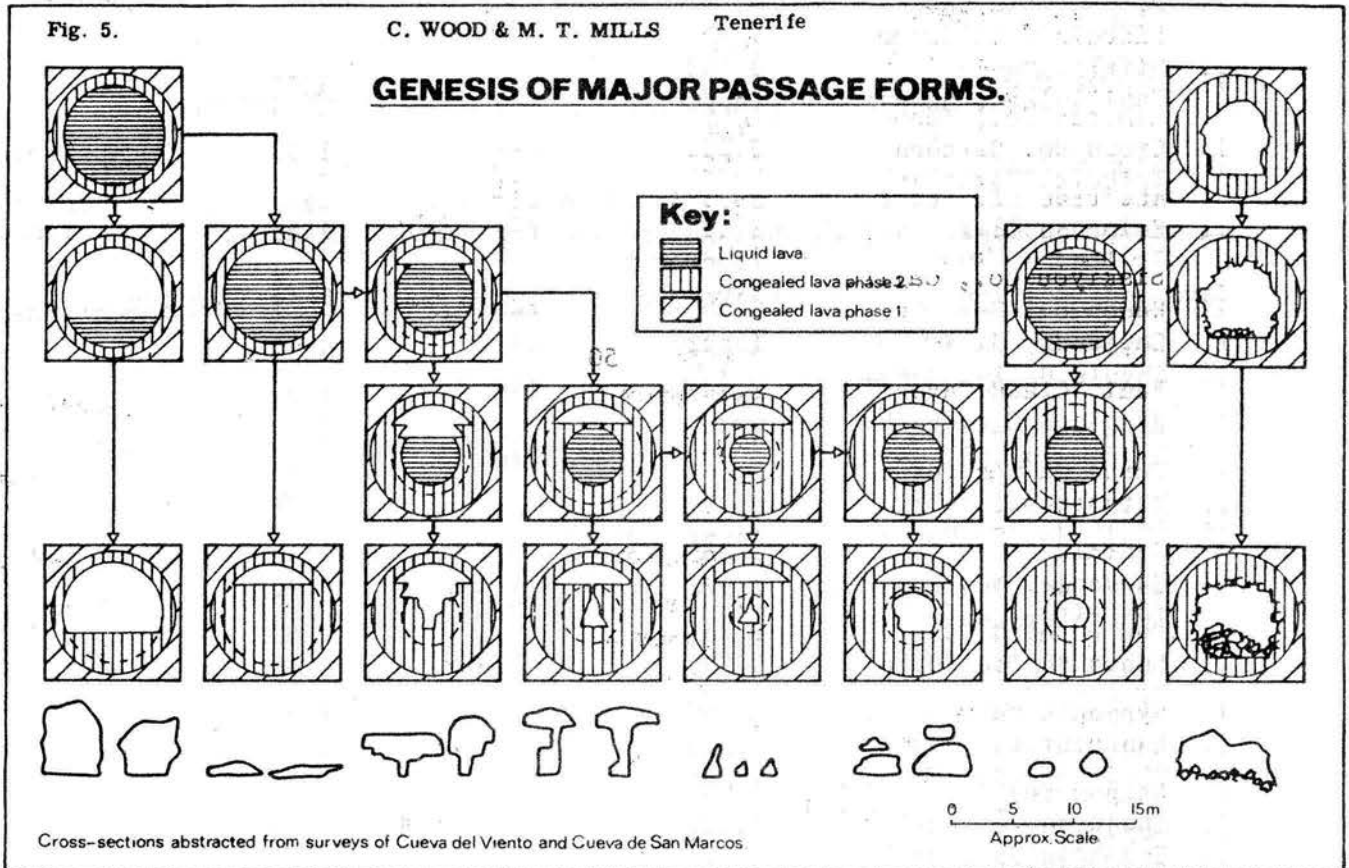
P. 461-462. The authors see the lower cave of Cueva de las Breveritas (see map on cover of *Cascade Caver* v. 17 no. 1-2) as a previously existing cave with one small entrance which captured a small part of the flow in the main cave system which formed later. This point of capture, now a small 4 m pit and lava fall, remains the only connection between the two.

The existence of major parallel passages, connected by high level crawlways opening above the lateral benches, is inconsistent with the Ollier and Brown speleogenesis theory. "Obviously, if the main route and the parallel routes formed as enclosed conduits, connections would not be possible, and so it is suggested that the higher level connecting tubes formed before this part of the Cueva de las Breveritas was completely roofed. The connecting tubes probably originated in flow units caused through either lava overflowing the banks of sub-parallel, or braided, open channels during successive high surges, or overflow through 'skylights' (areas where the roof of an active lava tube has collapsed) from a similar sub-parallel, or braided, lava tube network. Thus, once formed, these subsidiary tubes may have only been used periodically, facilitating the transportation of excess liquid lava during periods of flooding in the main tube."

"Some smaller passage complexes, and parts of the larger complexes, formed as a result of the superimposition, convergence and divergence of tubes carried in individual small flow units [pahoehoe toes]...Such flow units are easily identified at surface exposures of the lava flow above the cave and miniature lava tube networks are found by crawling into units with hollow toes."



Pp. 466-468, a description of the morphogenesis of the Cueva de San Marcos, also by roofing of open channels, and with an intriguing chart (p. 466) of internal movement of lava in this rather complex cave. "In one place in the channel an obstruction caused the flow to pond and lava eventually escaped across the roofed part of the channel immediately downslope, causing the formation of a higher level tube. This lava eventually found its way back into the main channel lower down the flow after crossing the line of the main tube."



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Greeley, Ronald, 1977. Lava tubes on other planets. Atti del Seminario sulle Grotte Laviche: Catania, 27-28 August 1975, Gruppo Grotte Catania. Pp. 181-191.

Author's abstract: "In 1968 it was postulated that many sinuous rilles observed on the Moon surface, might be collapsed lava tubes.

Through a research program on the major volcanic areas in North America and a comparison between lava tubes on Earth and lunar rilles, evidence was drawn that supported this hypothesis.

In this paper a comparison is shown between some pictures of the lunar surface and of some lava tube areas on Earth; the same hypothesis is related to a detail of Mars' surface."

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LIST OF THE WORLD'S LONGEST LAVA TUBES--SECOND REVISION

by Rod Crawford

This list aims to include each unsegmented lava tube cave with 2000 or more meters of passage. See the notes opposite for further information.

<u>Cave and location</u>	<u>Length, m</u>	<u>Depth, m</u>	<u>Length, miles</u>	
1. Leviathan Cave Chyulu Hills, Kenya	11,122	470	6.91	
2. Kazumura Cave Hawaii Island, Hawaii	10,000+	200 (approx.)	6.21	
3. Bilemot Kul Cheju-do, S. Korea	8,000 (approx.)	----	4.97	Unconfirmed
4. Cueva de las Breveritas Tenerife, Canary Is.	7,922	261	4.92	
5. Cueva de Don Justo Hierro, Canary Is.	5,500	----	3.42	Unconfirmed
6. Man Jang Kul Cheju-do, S. Korea	4,550	----	2.83	
7. Ape Cave Skamania Co., Wash.	3,904	210 (approx.)	2.43	
8. Duck Creek Lava Tube Kane Co., Utah	3,674	76 (approx.)	2.28	
9. Offal Cave Maui Island, Hawaii	3,400 (approx.)	----	2.11	
10. Gruta Dos Balcões Terceira, Azores	3,200	---	1.99	Unconfirmed
11. Kalmanshellir Iceland	3,000 (approx.)	----	1.86	Unconfirmed
12. Susan Kul Cheju-do, S. Korea	3,000 (approx.)	---	1.86	Unconfirmed
13. Falls Creek Cave Skamania Co., Wash.	2,797	126	1.74	
14. Cueva de los Verdes Lanzarote, Canary Is.	2,565	29	1.59	
15. Dynamited Cave Skamania Co., Wash.	2,388	107.5	1.48	
16. Pot o' Gold Cave Lincoln Co., Idaho	2,250	----	1.40	
17. Gypsum Cave Lincoln Co., Idaho	2,140	----	1.33	
18. Sochon Kul Cheju-do, S. Korea	2,092	----	1.30	
19. Catacombs Cave Siskiyou Co., Calif.	2,000	----	1.24	

## Notes and Sources for Lava Tube List

1. Leviathan Cave: A recent letter and unpublished vertical profile of the cave from Jim Simons confirm that the cave was in fact originally segmented by collapse at two points, but that the three segments were artificially connected by digging through breakdown. There remains the question of whether it is legitimate to count three caves as one when the connections are artificial. This matter should be resolved by the Commission of the Greatest Caves. Until then, I will provisionally list Leviathan as one continuous cave.  
Data from: C.E.G. of East Africa Newsletter, May 1976, p. 2.
  2. Kazumura Cave: Data from: Pacific Insects, 16 (4): 405, 1975.
  3. Bilemot Kul (Bilremos Gul): Unfortunately, no information is yet available as to whether this figure is the length of a single cave or the total of several segments. An alternate estimate of 8500 m was given by T. Ogawa in Cascade Caver 16 (9-10): 87, 1978.  
Data from: Annales de Speleologie 29 (3): 408, 1974.
  4. Cueva de las Breveritas: This is the longest segment of the Cueva del Viento system, which has 10,002 m of mapped passage in three caves.  
Data from: B.C.R.A. Transactions 4 (4): 454, 1977; see also Cascade Caver, 17 (1-2): 1, 3-7, 1978.
  5. Cueva de Don Justo: Length unconfirmed, as with Bilemot Kul. Data from: Atti del Seminario sulle Grotte Laviche, Catania 1975, p. 170 (publ. 1977)
  6. Man Jang Kul (Manjang Gul): Length given is that of principal segment. Other published lengths, up to 10,068 m, are totals of three or more separate caves.  
Data from: "Korean Caves", a 1970 South Korean government publication.
  7. Ape Cave: Data from Cascade Caver 16 (9-10): 78, 16 (11-12): 91-95, 1978.
  8. Duck Creek Lava Tube. Data from: Inner Mountain News 8 (5) cover, May 1976 (length), Cascade Caver 17 (1-2) 11, 1978 (depth).
  9. Offal Cave. Data from: Pacific Insects, 15 (1): 140, 1973.
  10. Gruta Dos Balcoes. Length unconfirmed, as with Bilemot Kul.  
Data from: Cascade Caver 17 (5-6) 27, 1979.
  11. Kalmanshellir. Length unconfirmed, as with Bilemot Kul.  
Data from: Spelunca, Supplement 2: 38, 1977.
  12. Susan Kul (Susan-Gul). Length unconfirmed, as with Bilemot Kul. An alternate estimate of 4700 m was given by T. Ogawa in Cascade Caver 16 (9-10) 87, 1978. Data from: Annales de Speleologie 29 (3): 409, 1974.
  13. Falls Creek Cave. Data from: Speleograph, 11 (9): 113, 1975.
  14. Cueva de los Verdes: Length given is that of principal segment. The previously published length of 6100 m is the total of four separate caves.  
Data from: "Karst", (Barcelona), 6 (22): 8-9, 1969.
  15. Dynamited Cave. Data from: Northwest Caving 6 (1-2): 3-8, 1975.
  16. Pot o' Gold Cave. Data from: Frank Ireton, personal communication (1978). No vertical survey has been done.
  17. Gypsum Cave. Data from: Gem Caver, 11 (2): 9, March-April 1978. No vertical survey has been done (Ireton, personal communication 1978).
  18. Sochon Kul (Socheon Gul). Length given is that of principal segment. Other published lengths, up to 3074 m, are totals of four separate caves.  
Data from: "Korean Caves", 1970 (see Man Jang).
  19. Catacombs Cave. Data from: NSS Bulletin, 35 (1): 20, 1973.
- Bilcino Kul, South Korea, is omitted here because it is missing from the complete list of longer lava tubes of Cheju-Do published by T. Ogawa in Cascade Caver 16 (9-10): 87, 1978. The similarity of names and lengths indicate that it may be the same as Bilemot or Bilremos Kul.
- Anyone with information for future revisions of this list is strongly encouraged to contact the author, c/o this journal.

C O N S T I T U T I O N  
of the Cascade Grotto of the National Speleological Society, Inc.

I. The name of this organization shall be the Cascade Grotto of the National Speleological Society.

II. The purposes of this grotto shall be the same as those of the NSS with the additional object of organizing members of the NSS in the Pacific Northwest into a group to better promote NSS objects.

III. The entire management and government of this grotto except as otherwise expressly provided shall be vested with the membership.

Section 2. The officers of the grotto shall be: Chairman, Vice-chairman, and Secretary-treasurer, elected yearly by the membership. Their duties shall be those usually associated with each office.

Section 3. The membership shall have complete power to manage the grotto, to make rules relating to subsequent elections, to formulate by-laws, to appoint chairmen of special committees, to raise funds in any manner not inconsistent with the policies of the Board of Governors of the NSS, and to perform all other necessary functions.

IV. General and special business meetings of the grotto shall be held at such times and places as are determined by the membership, and the chairman of the grotto shall have the power to call special business meetings whenever necessary.

Section 2. Decisions reached at special business meetings must be ratified at the next general meeting of the grotto.

V. Membership is open to all persons in the Pacific Northwest interested in the grotto's purposes, but they must join the NSS after one year of continuous membership in the grotto.

Section 2. Only members with their grotto dues paid shall have voting rights in the election of officers or at meetings.

VI. The constitution and by-laws of the NSS shall be binding on this grotto. Any action inconsistent therewith shall be null and void.

VII. Any property held by this grotto shall revert to the NSS in the event of dissolution of the grotto.

Revised constitution unanimously approved January 19, 1970.

B Y - L A W S  
of the Cascade Grotto of the National Speleological Society, Inc.

I. The Cascade Grotto shall have five classes of membership:

Section 1. Regular members shall be those persons who have signified their desire to become members, have paid current dues, live in the Pacific Northwest and are not voting members of other units of the Northwest Regional Association. Regular members receive all Grotto publications and are entitled to vote on all pertinent matters.

Section 2. Family members are relatives of a regular member, who live at the same address and have paid current dues. Family members receive no publications, but those over 15 years of age are entitled to vote on all

pertinent matters.

Section 3. Subscribing members are persons who have paid the current subscription rate for Grotto publications, but do not desire to be active participants in Grotto activities. Subscribing members receive all Grotto publications but are not entitled to vote on any Grotto matter.

Section 4. Associate members shall be those persons who have signified their desire to participate in Grotto activities but either live outside the Pacific Northwest, or are voting members of some other unit of the Northwest Regional Association. Upon payment of current dues associate members receive all Grotto publications, are encouraged to attend all Grotto activities but are not entitled to vote.

Section 5. Honorary members receive life time voting rights and Grotto publications free for one year. Honorary membership may be granted to a person whom the Grotto membership feels has made some outstanding contribution to the Grotto. This category of membership may only be granted to one person in any twelve month period.

II. All grotto dues shall be paid at the time of beginning membership and shall be renewable one year later. Dues for regular and associate members shall be \$4.50 per year. Subscription rate for Grotto publications shall be \$4.00 per year. Dues for family members shall be \$0.50 per year.

III. Nominations for Grotto officers shall be made at the November general meeting; such nominations must be made by a Grotto member with voting rights. The Secretary-treasurer will mail to each member with voting rights a ballot prior to the 10th day of December. The ballot must be returned to the Secretary-treasurer no later than December 31st. The Secretary-treasurer will tally the vote and notify both present and newly elected officers of the results. Newly elected Grotto officers shall take office on the tenth day of January following the election.

IV. A simple majority of voting members present shall prevail at general or special grotto meetings. Approval or amendments to the by-laws or the Grotto constitution, or expulsion of a member shall require a 2/3 favorable vote of those voting after due notification to the Grotto membership; due notification being 60 days written notice. For the purpose of a 2/3 vote, those voting shall include members present, mail and proxy ballots received by the first meeting after due notice.

The revised by-laws were adopted in principle subject to rewording, March 15, 1971. Unfortunately, the proposed rewording never actually occurred, so since 1971 the Grotto has had no valid wording for its by-laws. There have been three different versions in use at different times, for which see the April 1971, October 1974, and October 1975 issues of the Cascade Caver. This lamentable circumstance was brought up by the chairman at the January meeting, and the members present agreed on the above wording, which is hereby submitted to the Grotto for approval. Only 20 days' notice is being given, as in the three previous versions, rather than the sixty days given above, which will take effect only if this version is approved. Voting will take place at the Tuesday, February 20, general meeting of the Grotto. Once the by-laws are approved, any amendments to the present version which seem necessary and proper may be proposed, and will be voted on after a further sixty days' notice.

## THE JANUARY MEETING

Six members attended and discussed and approved the version of the Grotto bylaws submitted herein for the approval of the Grotto. \$18.00 was appropriated to Chuck Fair to order six months' worth of NSS slide shows. Chuck has a year's programs all picked out, so beginning in March we will have a program every month of the quality of an NSS slide show or better. Substitutions are possible, but please contact Chuck BEFORE the meeting at (206) 832-3651.

It was announced that the new Grotto meeting notice cards had been printed. With luck, you will be receiving some with this issue.

## TRIP REPORT CONTEST

Keep in mind that the best trip report published in the Caver this year will win its writer a cash prize of \$20.00. For contest rules see the back page of the "March-April" issue.

THE CASCADE CAVER  
207 HUB (FK-10) Box 98  
University of Washington  
Seattle, WA 98195

Take  
Nothing  
But  
Pictures  
Leave  
Nothing  
But  
Footprints

## PROGRAM NOTES FOR COMING MEETINGS:

February- Caving in the Guads, New Mexico; By Charlie Anderson.  
March- Cave of the Winding Stairs; An outstanding movie from the NSS film library.

THE NEXT GROTTA MEETING IS ON TUESDAY, FEBRUARY 20TH.

## NOTE FOR LIBRARIANS:

The last issue of the Cascade Caver was the "May-June" issue, published in December/January. This included pages 25-36 of vol. 17. The July and August issues were published previously, under the temporary editorship of Dr. Halliday. The July issue was paged T-1 through T-2; the August issue was paged T-2-1 through T-2-2. These count in the volume as pages 37-40. Thus, the present issue begins with page 41. All clear?

This system of bimonthly issues is only temporary, and once I'm all caught up, the Caver will go back to its regular schedule of publishing ten times a year. Hopefully, this will occur in April. (Now why did I say that? O rash! O foolish!)

## JANUARY MEETING (ADDENDUM)

The treasurer reported (by proxy) that our coffers can now boast of \$300.00 (to the penny!)