

Vol. 14 #10
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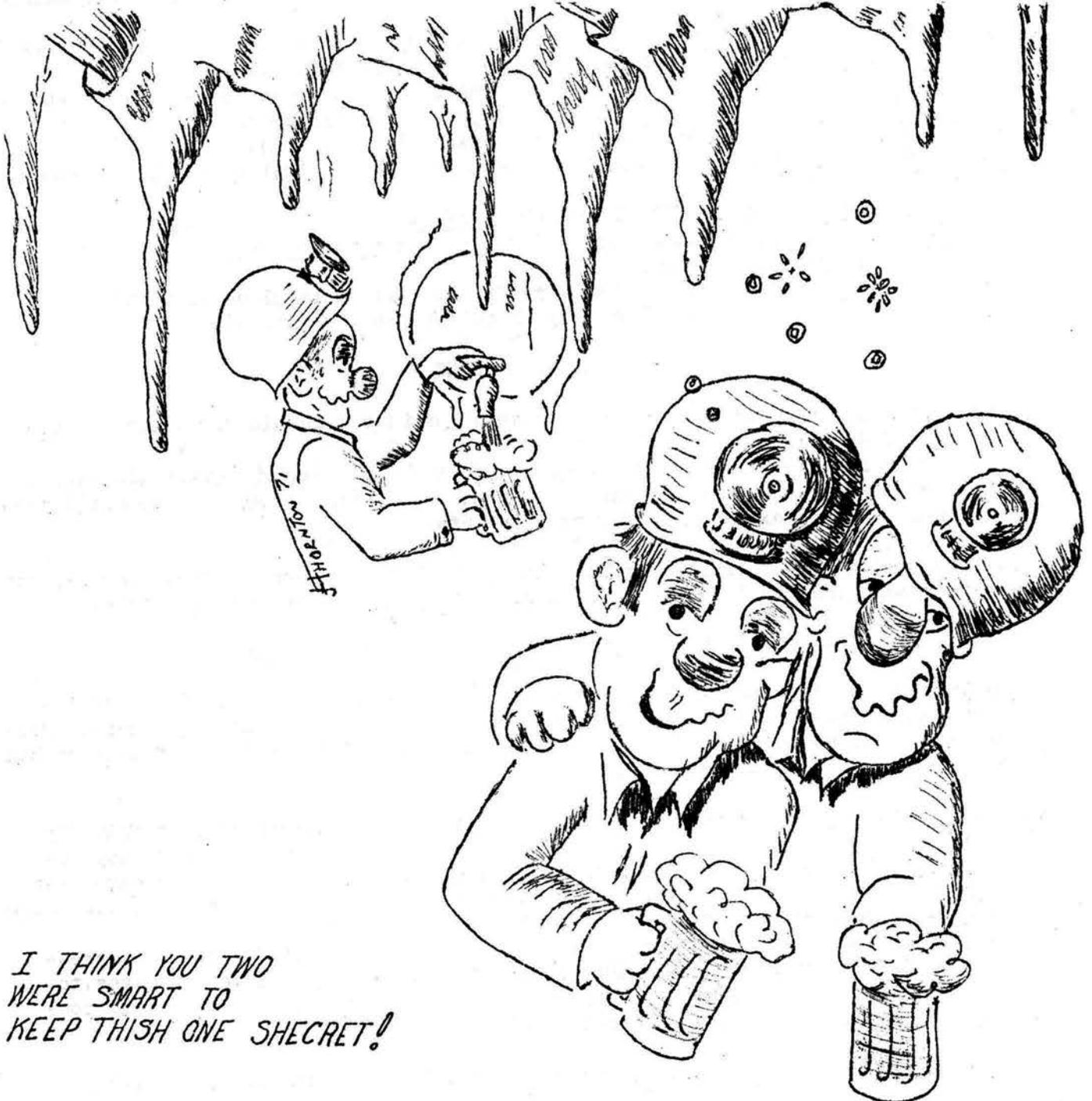
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CASCADE GROTTO N. S. S.



Volume 14, No. 10

Editor: Rod Crawford

October, 1975



*I THINK YOU TWO
WERE SMART TO
KEEP THISH ONE SHECRET!*

This cover is affectionately dedicated to the
Oregon Grotto

COMING EVENTS

VETERANS' DAY (October 26-28)

Dynamited and Deadhorse Caves with Kanadu Grotto. Call Don Tubbs, 632-7048.

Biological trip to Trout Lake cave area. Call Clyde Senger, (206) 734-1360.

Windy Creek Cave trip probably cancelled due to snow, but call Bob Brown, (206) 569-2724.

Quigee trip to Concrete caves. Call Bill Capron, 525-2260.

November 1, Saturday. Oregon Grotto Party at Mary White's house in Vancouver Wn., 1310 NE 34th St (turn rt after taking 134th St exit). 7:30 PM to GOKW; BYOB.

Biological trip to North Chuckanut Talus Caves (if it doesn't rain). Call Charles Ross, 324-9349.

November 2, Sunday. Special Meeting of Dock Butte/Washington Monument Geological Area Task Force. At the Hallidays', 1117 36th Ave. E, 3:00 P.M.

November 15. North Chuckanut Caves. Call Ross, Senger, or Rod Crawford, 543-1668.

November 17. Regular meeting at the Hallidays'. Last chance to nominate next year's officers. Also voting on bylaws amendments (see p. 116).

November 28-30, Thanksgiving. Mt. St. Helens speleobiological trip. Call Senger or Crawford.

December 1. DEADLINE FOR NOVEMBER/DECEMBER CAVER.

December. Cascade Grotto Party does not yet have a time and place. Volunteers please contact Crawford, evenings.

December 31-January 1. Larsons' New Years' party will take place as usual in Vancouver, just up the street from Mary White's house (see above).

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NEWS AND NOTES

Please note that the address on the back cover of this issue is now valid through September 1976. At least. * * * * *

If anyone receives a defective Caver---and it can happen; the automatic compiler isn't perfect---with a page missing or only one side printed, don't keep quiet about it; we usually have extra pages for replacements.

* * * * *

Bob Tower and a friend visited Prince Albert and Bat caves on the 4th. Bob reports that they were the first people to sign Dave Jones' new cave register there.

* * * * *

Truman Sherk will shortly be abandoning us for a new job at Yale.

* * * * *

Greg Cady was in the town of Lester, eastern King County, on Sept. 27th, and inquired about a cave said in an old rumor to be a quarter mile north of there. Several people had heard about it, but no one could locate it. A logger friend of his who lives there is checking further.

* * * * *

How the other half lives department: the latest issue of "Brand X" (our friendly rival) contains, O great wonder, trip reports---indicating that on Labor Day the Mischkes and Blalacks discovered and explored a new 1000 foot limestone cave near Colville. Also reports discovery of a lot of new passage in Newton Cave, including a new 90-100 foot pit. * * * * *

All concerned cavers are hereby called upon to support (preferably by correspondence) U.S. House Resolution 6882, adding the Mineral King area and caves to Sequoia National Park, and H. R. 8021, which would permit the NSS and other non-profit organizations to engage in political lobbying.

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John Torkelson has a new address, but unfortunately neglected to give it to me.

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FEATURES

PLASTIC GARBAGE BAGS--FOR COMFORT AND SURVIVAL

by Don Davison, Jr.

Have you ever been forced into inactivity within a cave and felt helpless as you chill (e.g. at the bottom or top of a deep or wet drop, while belaying a technical aid climb, in a rescue situation)? Have you been in this condition because the change of clothes or extra chest clothing was left behind as too bulky and inconvenient? Or was it because you had worn too many layers of garments and too late noticed that they had become damp with perspiration of active caving and lost much of their insulating power? An inexpensive, compact, disposable, multi-use solution to the problem may be found in the plastic garbage bag.

Each "Glad" brand "Disposer Trash Bag" [2'6" x 3'1"] weighs only two ounces, costs about 12 cents and may be carried flat or rolled into a cylinder, 4.0 inches long and 1.25 inches in diameter, with a volume of only 5.0 cubic inches (22% of the volume occupied by an 8 ounce baby bottle). It is strong and, although some care is desirable if moving through tight places, the tears from snagging usually result in relatively minor holes.

Many a caver has waited for those before him to finish ascending from a deep pit, while the inactivity, waterfall spray and breeze contributed to his overall chilling. Several of these factors may be reduced through the use of the garbage bag, in one of several configurations. The caver could: (1) cut a tight neck hole and wear the bag over his upper torso, with no arm holes; (2) place the bag over his head and upper body in a tent-like fashion (with a small hole in the top of the bag to allow slow air circulation through chimneying); (3) if some activity is required, cut arm and neck holes and wear the bag like a sweater or shirt. Holes should be made carefully and as small as possible. If situations are anticipated before entering the cave, the modifications may be made and the edges reinforced with ducting tape. Using these arrangements, mist and spray is kept off the caver's clothing, the chill factor associated with a breeze is all but eliminated from the covered areas, and an insulating layer of, in essence, non-moving air is formed, reducing heat lost through convection and evaporation.

A carbide caver, when producing his own tent, as in method 2, might: (2a) place a second garbage bag on a rock and, sitting on it, face his carbide lamp towards himself and place it on the ground between his thighs. Thus, he has produced a space heater for his tent. The amount of heat may be controlled by adjusting the flame and the size of the chimney hole. The chimneying of the hot air, up the front of the caver's body, will dry the clothing of the chest, thighs, and arms--the heat of evaporation provided by the carbide lamp, not the caver's body. By opening the shirt and trousers front, the drying of undergarments may be enhanced and some of their insulating power regained.

Garbage bags may also be used in a more preventive mode. Several more cavers might be alive today, if they had worn garbage bags while in wet drops; instead, they are hypothermia statistics*. When moving through or near waterfalls, or in areas of heavy drip: (4) the bag is placed over the head and upper torso and then the helmet is positioned on top. The chin strap is positioned and a breathing hole is immediately pinched open. A mouth hole and two eye holes may be formed or a single face opening. Arm holes are then added. In this manner, the neck and back are protected from water running off the rear of the helmet and from heavy spray or splatter, which would chill the sensitive rear neck area and run into the chest garments. This arrangement has worked very well with "Glad" brand garbage bags,

*Keider, Marlin B., 1967. Physical and physiological factors in fatal exposures to cold. NSS Bulletin, 29 (1) 1-10.

while in Ellison's Cave, Georgia, while entering through waterfalls and descending in and near them, when the cave was in full flood.

Although the aspects of comfort are dealt with almost exclusively in the preceding information, it should be clear that the wise use of plastic garbage bags can enhance the probability of survival in exposure cases by stabilizing a victim's condition while awaiting rescue. The early signs of exposure can be treated and possibly reversed while the victim conserves his energy and waits for assistance. This, as opposed to a panicky headlong effort to reach the entrance and leave the cave--while often compounding the problem. But of greatest importance is the prevention of even the initial phases of hypothermia--a task made easier by the plastic garbage bags.

[The above is stolen from the Huntsville Grotto Newsletter, Feb. '75, by way of the Gem Caver, May/June '75.]

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Is old cave mystery to remain well-guarded secret?

by Florence Bartholomew
May, 1969

Every so often unsolved mysteries are revived and speculation runs high for a time. Then, they are gradually forgotten until someone brings them up again.

This story was first printed in the *Seattle P.I.* in 1936. But that was many years after the remains of a skeleton were found deep in a cave at the foot of Mt. Adams, a 12,307-foot, snow-covered mountain.

It seems that Fred Smits, an itinerant miner who roamed the Mt. Adams region in the latter part of the 19th century, returned to civilization one fall with a hair-raising story.

Miners, like fishermen, are inclined to embroider the truth a bit. But Fred Smits was wise enough to bring quite a few pieces of concrete evidence to prove his tale.

It seems Mr. Smits was in the process of bringing in his summer supplies to a quicksilver claim he was working near the foot of Mt. Adams. He had both his burros as well as himself loaded heavily. Suddenly the thought came to him that there must be a shorter route to his destination. So, he decided to strike off his beaten path and skirt closer to the base of the mountain. It was new territory to him so he took it slowly, stopping often to examine likely looking spots that might harbor silver, gold or quick-silver outcroppings. He had found quite a few spots that looked promising and needed further investigation when he concluded he had better quit fooling around and get

from the *Ruralite* (Forest Grove, Oregon).

on to his claim. Spring comes late and fall early in high altitudes so there were only a few weeks in the year that he could work his mine.

He had not gone a hundred yards when he rounded a cliff that showed evidence of a winter slide. Even though he was in a hurry he noticed there seemed to be an opening to a small cave at the foot of the cliff. Against his better judgment he decided to take one last look before pushing on.

He had some difficulty squeezing in the opening but after getting inside he was surprised to find himself in a large, underground vault.

He looked around and noted there seemed to be traces of a faint path on the rock strewn floor.

"I better be careful," he thought. "Best get my gun and a light. Could be animals here. Don't smell any though. Must be another opening ... the air's good and there's a breeze coming through."

After getting a light and his gun, Mr. Smits re-entered the cavern. As he started down the lava tube he was surprised to find the floor nearly level for a quarter of a mile, before it began to climb steeply.

"After about a half mile I come to a drop-off. I shined my light down and saw there was an old ladder leading down to the next cavern. I tested the ladder and she seemed solid but just in case, I took my rope and put a good hitch around a good, solid rock before I started down. The air was damp but it was clean and I thought I could hear water running. I took it slow but I kept going and then,

around a bend, I came to a little underground stream. I followed it a bit and came to an old sluice box. I was getting pretty excited by then so I held my light up and on the other side I saw a stove, a table and a bed. And on that bed, its head a-laying on the pillow, was a skull grinning out from under the blankets!

"I ain't a-feared of death but I can tell you, that kinda give me the cold shivers for a minute!"

Mr. Smits said under the mouldering quilts lay the bones of a big man. On the walls hung a rusty muzzle-loading rifle and a single-shot pistol. Dishes and pans, a sack of flour and other foods, green with age, stood on the table. A shovel, pick, axe and other tools leaned against the wall.

"There was a big trunk and a suitcase full of stuff. And that wasn't all. There was a Bible and a lot of other books scattered around as well as some tin-types of a man and some children. Probably his.

"In the suitcase I found legal papers. One was a deed for a plot in Spokane county dated February 10, 1881--and signed and sealed in Tekoa, Washington territory. Other papers from Virginia were dated 1878. There was one book I noted that was dated over 110 years ago. But there were no letters so I don't know the man's name. I thought maybe the name on the deeds was his."

So, there's the mystery. Who was the man? What caused his death? What happened to Fred Smits? Just where is the cave? Your guess is as good as mine.

TRIP REPORT SECTION

VISIT TO SHERMAN CRATER, SEPTEMBER 4-7, 1975

by Eugene P. Kiver and William K. Steele

Our group from E.W.S.C. included Eugene Kiver, William Steele, Fred Munich, and Roger Hughes. Other participants were Gerard Bloem (chemist), his wife Trudy (Vancouver, B.C.), Allen Rohay (U.W.), and Steve Malone (U.W.).

Bill Steele and I were impressed with the considerable change in topography of the crater ice since our last visit on March 31, 1975. Large seracs, crevasse blocks, and a vertical ice pit have formed in response to sub-ice melting, by new or increased thermal emission. Equilibrium between the new thermal emission and ice morphology may take another year or two to develop if the present pattern and intensity of heat release continues. Considerable collapse of ice blocks from vertical or overhanging ice walls in the lake pit (central pit), the northeast wall, and some of the cave entrances was observed. Extreme caution should be used in these areas because no warning is usually given before collapse occurs. No collapse from the ice walls was observed in the east breach, but the jumble of ice blocks there testifies that frequent collapse does occur.

Most of the collapse results from enlargement of the underlying geothermal ice cave system. Although certain sections of cave on the east side of Sherman Crater have melted away or collapsed since we first explored them in August 1974, some new cave sections have formed in the central and northeast parts of the crater. Thus, the total length of ice cave passages is probably still about 1,220 m.

The caves permit access to the lake at the bottom of the ice pit. A very active vent is submerged just north of the lake center that causes lake water to churn actively immediately above. At least three smaller vents occur in the football field-size lake. On the north edge of the lake, water flows into a fumarole and is blown violently back out of the 8 cm orifice. A large area of thermal activity occurs near this fumarole and a smaller thermal area is located against the south wall of the ice pit. The pH of the lake is 2.5, and the temperature is 31°C about 60 cm from shore. The lake temperature is undoubtedly greater farther out. Water flows through a syphon on the east side of the pit and emerges in the east breach. The lake area should not be visited during warm afternoons, when collapse of ice blocks is most likely to occur.

Fumarole gases from the west rim and the cave air were analyzed using detector tubes, but the measurements have not yet been corrected for fumarole temperature and elevation. Therefore, the following are minimum values. CO₂ in one fumarole exceeds 19 per cent and H₂S 4 per cent. No SO₂, Cl₂, HCl, NO, or NO₂ were detected. The cave atmosphere exceeds 60 ppm H₂S, 700 ppm CO₂, and 2 mg/l H₂O.

Fumarole velocities were measured on the west rim and along the edge of the lake in the central pit using a pitot-static tube and manometer. Preliminary results indicate that west rim fumarole velocities range from 13 m sec⁻¹ (minimum detection level) to 52 m sec⁻¹ (117 mph and 0.067 m³ sec⁻¹). The maximum fumarole velocity measured was 74 m/sec (166 mph and .34 m³ sec⁻¹) from the fumarole along the lake edge. The larger east gap and southwest pit fumaroles were not measured. The pitot tube system appears to be an excellent method of quantitatively studying fumarole fields. Total heat emission could be estimated with more complete measurements and fume velocity changes could be readily and accurately determined.

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CAVING IN SOUTHERN OREGON

by Bob Tower

At the risk of being counted a heretic by our Grotto, here is a multi-trip report about caving in the area of Oregon Caves (O.C.).

It really starts with a visit to Oregon Caves on March 15, when I was privileged to hear the official presentation to the Park Rangers by Steve Knutson of the results of some 5 years of exploratory work in Oregon Caves by Steve and his cospeleologists (extensive mapping, air and stream flows, slides and many other bits of research). After the 2-1/2 hour presentation and lunch, Steve, Gene and Steve Johnson, Dick Pope, Dave Jones and I whistled through the commercial tour portions of O.C. (have you ever tried following Steve?) and into unfamiliar (to me) portions of the south complex. Fluorescein dye tests were conducted in two small streams to trace their passage through the cave.

Aside from my nearly becoming a permanent plug in the "Rat Hole", all went well, and as the muddy six reverse whistled out with carbide lights a blazin', a poor, bewildered female tourist was heard to gasp, "What was that???" Threatening weather when we entered O.C. had turned into about 8" of new snow on the ground and much more in the air, so I retreated to the safety of the lowlands, with plans to return later in the season.

So from July 22 to 26, I again was back at O.C., this time with wife, Janette in a nicely redecorated room at the main lodge. First I was resolved to locate a "cave" I had seen 15 years ago on an old prospector's map of the area around O.C. Not far from the man made exit of O.C. there was a small tortuous passage that "goes", but not for big me. A refreshing breath of cool air emanated, indicating connection with bigger chambers below. But the really far out scene was in the adjoining rock shelter, where a spelunkin' deer with fuzzy antlers very reluctantly gave way to my examination of his heretofore private quarters -- and me without my camera. A search along the contours to the deep ravine at the southwest side of the Park revealed neither limestone nor caves.

Then began the "Kerby Research Caper". Driving around in the dusty roads, I encountered two loggers who shared their knowledge of local cave locations and took me to meet their boss, Glen Young in Kerby, who had a fascinating tale of three government geologists who had spent "days underground, ending up under Grants Pass" !! (in the sewer, maybe). He referred me to the BLM in Medford. Well, I couldn't pass up investigating, "the cave that dwarfs Carlsbad", so to Medford we went, getting sidetracked in Ashland for "Charlie's Aunt" and "Henry VI" performances. Theatergoers kept asking my wife, "Why does he hear that crazy cigarette lighter on his hat?"

Bob Goodrich of the BLM in Medford was most pleasant and cooperative, but looked a little bewildered at the talk of a cave "miles in length". However, he did supply some enlarged contour map photocopies with cave locations around "Lime Rock" spotted in, and the notations were intriguing like, "Apparently has not been entered". The BLM surveyor apparently was a non-caver.

So the research was over and the exploration began. I finally found Lime Rock near Kerby, but without a regular contour map for orientation, finding the caves was something else. A small cave at the base of Lime Rock had muchos graffiti,

virtually no decoration and soon terminated in a diminishing upward corkscrew. One more area remains to be checked near the top of Lime Rock. Several more hours of hiking in 100° F heat failed to turn up the other caves noted on the map. So back to the Lodge and a commercial tour of O.C. to cool off and enjoy a real cave. One evening was spent with Steve Knutson comparing notes and hearing about some far out new finds of his in California. Also learned from Greg Evans, NSS member and head guide of O.C. that my prospector's map cave's existence was substantiated by former residents of the area who Greg hoped would visit O.C. this summer and clue us in.

Ray Ritter of Gold Hill, manager of properties for Ideal Cement, was also on my contact list, but his wife advised my timing was extremely poor for requesting permission to look for caves on their properties. It seems he and the sheriff were trying to discourage hordes of local would be cave explorers, the kind with bare heads and candles, from trespassing on Ideal's quarry to invade "Marble Mt. Caves", which had a recent four page spread in the Grants Pass "Daily Courier" complete with pictures and detailed instructions of how to get there. In almost every news photo accompanying the article, the stalactites are broken off near their bases. A copy of the article was mailed to Charlie Larson, who planned to make appropriate comments to the Courier. End of Round Two.

The more I reviewed the BLM's enlarged contour map and compared it with a CGS contour map, the more confident I became about finding those caves. So on September 4, my older daughter Sue and I arrived back at O.C. again to hunt 'em down! The map notation said, "near the creek", but how near is near? Heading south about 200 yards west of the creek, we hiked 1.2 miles through thick brush and found only one outcropping, which wasn't limestone! It was well over 100° F in the shade, so we retreated to the creek to cool off, and head back along the creek bed. About a half mile from where we had started south above the creek, Sue discovered a nice limestone outcropping on both sides, and eureka -- a cave!! It fitted the brief description on the BLM map. Non-caver Sue accompanied me a short ways in to observe several stalactites and stalagmites also cave coral, then retreated while I delved deeper. From the entrance, the passage is 3-4 ft. in diameter and descends left 10-15 ft. on a 20° slope to some small rooms 4 ft. high; then the passage narrows due to a mud slide going upward toward the right at about 40°. Next a tight crawlway, then a squeezeway, a rock obstruction and lo and behold a stand up chamber, heartshaped about 7 ft. high and 15 ft. across. And complete with flying bat, soda straws, other speleothems, incoming fresh air -- what more could one ask? I know -- more cave, but that was it. The mud had nearly plugged the small openings going farther, through which the air was entering. But there was no evidence of the cave ever having been entered, just like the map notation read, and though small, it was a big day for us to enter a new cave.

The following day, we cased the slope on the far side of the canyon southwest of O.C. Park, but no limestone. Then via logging roads, we intersected The Limestone Trail which leads into the Park on the south by southwest portion, and hiked into the Park with many side trips. After squeezing innumerable drops of HCl on promising rock outcroppings and seeing zip reaction, we rechristened it, The Unlimestone Trail, and concluded that our Prospector's Cave must be in some other direction than southwest of O.C.

Has anyone heard of "Manzinitas Cave" south of Murphy? We've put it on our 1976 agenda, and we're still hopeful about Prospector's Cave near O.C.

REPORTS RECEIVED FROM GREG CADY

Bonanza Queen Mine Trip
 Sept. 27-28
 Gregory Cady and Steve Heifner

A reported limestone cavern on the middle level of the Bonanza Queen Mine (Silverton, Wash.), has proved to be very difficult to reach. The cavern is on the second level of the mine, according to a report on the mine from the 1960s. In order to reach the mine's second level, one must either climb 280 feet of very wet vertical ladders leading up from the first level (we made it 5 ladders, about 50 feet up). The ladders appear to be fairly well constructed, but have been subjected to several years of water pouring down on them from above. The second method of reaching the middle level is to climb the side of Long Mountain to a point about 980 feet above the first level portal, locate the third level entrance adit, and descend 280 feet from the third to the second level. On a subsequent trip to the mine, we reached a ledge 50 feet below the third level entrance, but because of the weather conditions, were forced to turn back at that time. The mountain itself is very difficult and time consuming to climb, and those wishing to pursue the matter further should allow themselves at least eight hours of daylight to work with.

Dynamited Cave Trip, Sept. 13
 Gregory Cady; Al and Mel Kortlever

We arrived in the Trout Lake area at about 5:00 P.M. and located "Dynamited" with no trouble, our goal being to photograph the Sand Castles or Badlands area. After rigging the 15 foot ledge, the three of us descended into the lower level tube and began our trek through heavy breakdown. After about twenty minutes, we reached the large room containing the "Badlands," a most beautiful sight to behold. The room itself is about forty feet long and fifteen to twenty feet wide. The floor is almost completely covered with sand, in some places up to five feet deep. Water dripping from the ceiling has caused many unusual formations, and the Sand Castles definitely live up to their name. These formations are very fragile, and it should be noted that many of them have become victims of some careless caver's feet. After taking several photos of the area, we ascended the cave with no difficulty other than a fractured lantern lens, caused by my careless footing on loose breakdown, which is a common characteristic of this lava tube.

Little Red River Cave, Sept. 14
 Gregory Cady and Steve Heifner

Arriving early in the morning near the "Ape Cave" area, we located L.R.R. with no difficulty, this being our third trip to this cave. After passing the Forest Service gate at the entrance, you begin a slow descent down two fifteen foot ladders before entering the main part of the lava tube. A steep downward slope leads through many interesting speleothems, including one 2 1/2 foot stalactite of unusual design. After crossing moderate breakdown and down two slides, the Little Red River begins, coming through 16 - 20 cracks in the walls. The colors in this area range from dark reds to bright yellows. The river flows about 700 feet to the end of the cave, where it forms a small lake. All in all, this cave is fairly easy going, with lots to see. On this trip one bat was noted near the entrance as we were leaving.

(Note: On another trip to this cave on Sept. 26-27, at 2:30 A.M., 5 or 6 bats were noted near the entrance, just beyond the ladders.)

NORTH CHUCKANUT TALUS CAVES, WHATCOM COUNTY
by Clyde M. Senger

On 4 October 1975, Chuck Ross of Seattle, Stan Senger, and I set off for the North Chuckanut Caves. We planned to check a new possibility Chuck had located last spring and to look in on the moths he has been studying. For a change, we took the west trail up and over Chuckanut Ridge from Cleator Road. It was a very pleasant day, with sun and enough breeze to dry off the brush after the previous night's rain.

It had been five years or so since I had taken that trail, and things seemed a lot different. When we reached the top of the ridge, we went north looking for a particular path down the east face of the cliff. After a while, it was obvious that we had gone too far north, and we backtracked to a gap where the trail dropped down for about 100 feet in a series of slides and treeholds. At the first bench, brush that I think we used to walk over was now a real challenge to penetrate. All the old landmarks seemed to be covered by the newly extended branches of small fir and hemlocks. Even when we reached the opening of Vice Cave, which I regularly visit, I didn't recognize the trail.

We struggled on to Laboratory Cave and checked out the new lead. Chuck dropped ten feet or so down into the crack and under another rock, and began working on the loose material at the bottom, where he could see a continuation. I went on down into Laboratory Cave and into the passage leading in his direction. I was not too surprised to find that I could see his light, but he was further south than I expected. I could drop into the crack below him from Laboratory, and had been there years before. It drops down another ten feet, then runs horizontally for ten feet under a plug of loose boulders and on into the large, deep room. On my last trip, on the way out, one of the rocks I was using as a handhold above my head had slipped a bit, giving me quite a thrill. By the time I had gotten into the passage up to the hips, I looked at the rocks, thought of the previous trip, and decided I had investigated the cave adequately then. I will be glad to show it to more adventuresome types.

We dropped on down to the valley to check for moths in The Chute. Not only were they present, but a number had the fungal infection already. Chuck is reconsidering some of his ideas about the fungus situation. We started back uphill to Vice Cave, checking out some of the other small caves along the way.

I was trying to get positioned for pictures of the crickets and harvestmen in Vice when Stan commented about the cold air coming out of a crack and started digging. Soon he reported that he could get his head into the opening and could see at least ten feet, and that the horizontal passage seemed to go on. I quickly started helping to dig. It became apparent that I wasn't likely to be able to fit anyway, so I went on outside and started looking around where I thought it might lead. I found a likely place under and between a pair of large rocks, and started removing the debris bridging the crack. Soon I heard voices behind me, and found Stan coming out of Laboratory Cave. They had come out of a crack which led south from the main entrance. I knew it was there, and had looked into it a bit, but don't recall really trying to push the matter very much. Stan's connection and Chuck's addition to Laboratory and Vice Caves makes them one of the larger complexes in the area, with about 200 feet of passage and rooms, and at least three levels. Immediately to the north is the large rock some 100-150 feet long and 30-50 feet wide. I still think there is a cave under and behind it which might be connected to Laboratory Cave. About 50 feet southwest of Vice Cave is Two Boys Cave, which is probably as large as the Laboratory-Vice complex and also may be connectible. That will have to wait for later.

We continued on up the cliff and checked Cliff Cave, a complex which starts at the top of a rock and works down as a series of interconnected rooms, some of which

open on a 30-foot high cliff. Packrat nests seemed to be everywhere, and I collected seven for recovery of fleas. It was time to be leaving, so we went on up, thankful for the relatively dry soil on the slides. I decided to take the old trail down the logging road, which was a mistake. The brush which used to be about head high and excellent for wetting down clothing was now a real jungle about ten feet high. We soon retreated uphill to the ridgetop trail and on home.

A very good trip, a few new finds, some unexplored possibilities, and a few biological specimens and notes to work on.

Our next trip into the area will probably be about 15 November for those who might be interested in a different kind of caving.

Windy Creek Cave Surveying Trip, 27-28 September
by Bill Capron

On the morning of 27 September a surveying party consisting of Clarisse and Jerry Broadus (!), Bob Brown, Chuck Coughlin, and Ruth and Bill Capron left the parking area at the beginning of the Dock Butte/Blue Lake trail. Left behind was our arachnologist, Rod Crawford, to nurse his broken arm and collect spiders. The surveyors took the Dock Butte Trail to the base of the Butte and then skirted about it on the north side. Mt. Baker was out in splendid fashion, and the edge of the valley was soon reached. A short lunch was enjoyed by all, interrupted only by a brief altercation between our two canine companions, who shall remain nameless. The party descended a short chute and continued down into the valley. Near the bottom of the valley, camp was set up. It took roughly 3 1/2 hours to get to the campsite.

It was decided to have a substantial meal and then cave into the night, it being late afternoon already. Our larger canine companion was left behind to protect (?) our female companions who were also left behind. The walk to the cave took about an hour. As we neared it, we found out that the extra compass and tripod adapter had fallen out of their pack. Just before arriving we were surprised to see the other canine galloping up behind us.

After putting on an incredible amount of wool clothing, long johns, and wetsuits, we entered the cave. Broadus and Coughlin were primary surveyors, and they immediately began doing just that. Brown and Capron checked out the maze section before the pool. After inspection of the pool, they decided it was an unnecessary obstacle. An ingenious network of canals, aqueducts, and earthen (mudden?) dams was constructed. Soon the pool assumed its current name, "Ex-Pool." During the construction, the surveyors had passed through, heedless of the near freezing water. The other two followed and were greeted by an unbelievable sight - a real cave in Washington. There is a splendid collection of speleothems in a crawlway just past the pool. Shortly thereafter, the stream is encountered.

The product of the surveyors appears on the opposite page. After the current end of the survey, there is some more passage followed by a breakdown room. There are numerous leads from this room, most of them unchecked. Some are close to the surface as evidenced by roots. There are strong possibilities for a second entrance. One of the leads goes into a formation room, containing a little of everything - columns, moonmilk, flowstone, bacon, stalactites, and stalagmites. The most striking (---almost, but fortunately not...) animal life observed was two or three bats, in flight. The caving is easy, but cold.

We returned to the entrance and were warmed by a fire in the sheltered area formed by the rock face and overhanging roots of a tree. It's quite a sight, and a most welcome one after the cold cave.

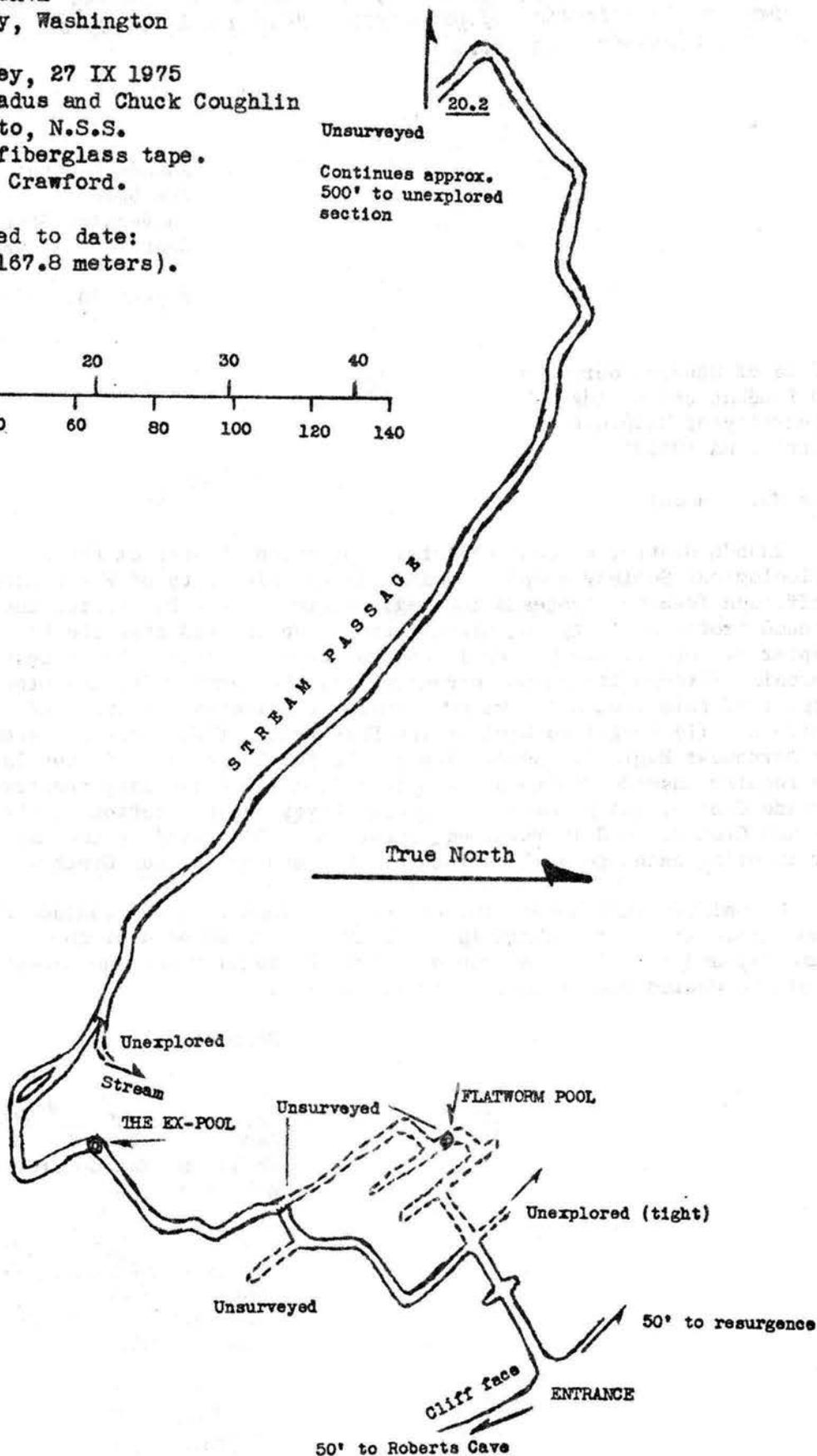
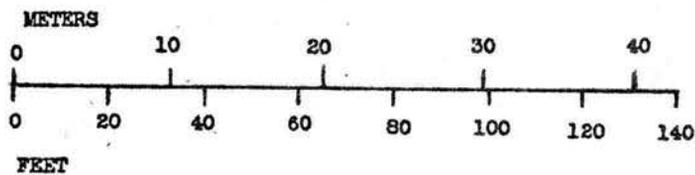
We found camp with only a little trouble, and slept through the night to the accompaniment of raindrops. The next morning, we put our mud and rain soaked gear in the packs and hiked out, likewise in three hours.

* * * * *

WINDY CREEK CAVE
Skagit County, Washington

Partial survey, 27 IX 1975
by Jerry Broadus and Chuck Coughlin
Cascade Grotto, N.S.S.
Brunton and fiberglass tape.
Drawn by Rod Crawford.

Total surveyed to date:
550.5 feet (167.8 meters).



The following curious document, and that on the facing page, have recently come to the attention of yr editor. They are here reproduced for their intrinsic historical value...

Xanadu Grotto
Box 5044
University Station
Seattle, WA 98105

August 20, 1975

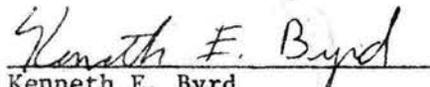
Office of Student Services
300 Student Union Bldg.
University of Washington
Seattle, WA 98195

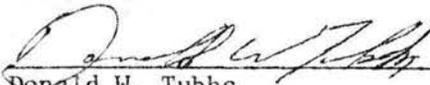
Dear Ms. Braden:

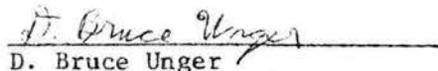
Xanadu Grotto, a local University-oriented chapter of the National Speleological Society composed primarily of University of Washington students, staff, and faculty, protests the registration of the University chapter of the Cascade Grotto as a student organization. We contend that the University chapter of the Cascade Grotto is controlled by persons outside the University community through its parent organization, the regular Cascade Grotto. In support of this contention we note that the University chapter of the Cascade Grotto has (1) sought to host at the University of Washington a seminar of the Northwest Regional Association of the N.S.S., an association including the regular Cascade Grotto but not including the University chapter of the Cascade Grotto, (2) printed the Cascade Caver, a publication of the regular Cascade Grotto, on University equipment, and (3) served as the mailing address for incoming exchange publications of the regular Cascade Grotto.

We believe that unless the University chapter of the Cascade Grotto can demonstrate that its membership is restricted to members of the University community and that it is autonomous from the regular Cascade Grotto, it should be denied use of University facilities.

Respectfully,


Kenneth E. Byrd
Chairman, Xanadu Grotto
ASUW #7322378


Donald W. Tubbs
Treasurer, Xanadu Grotto
ASUW #6932296


D. Bruce Unger
Editor, Xanadu Grotto
ASUW #7331989

UNIVERSITY OF WASHINGTON
 Adviser to Student Organizations
 300 Student Union Building

STUDENT ORGANIZATION REGISTRATION CARD

Date October 10, 1975

Name of Organization University of Washington Chapter of the Cascade Grotto

Mailing Address 350 HUB (EK-10), Box 98/99 Phone 632-7048

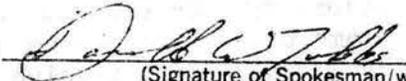
Statement of Purpose It shall be the purpose of this organization to organize and foster communication among the caving members of the University of Washington academic community.

Requirements for and limitations on membership Evident interest in cave conservation and demonstrated competence in safe caving techniques.

National connection (if any) Informal ties to National Speleological Society.

I have received a copy of the Manual of Policies and Procedures for Voluntary Student Organizations, and have read and understood the regulations governing use of University facilities and services by registered student organizations.

Approx. Number of Members 15


 (Signature of Spokesman/woman)

PRESENT OFFICERS: List principal officers or designated representatives of the organization who will be authorized to reserve facilities and sign University documents in the name of the organization.

NAME:	POSITION:	ADDRESS/PHONE:
<u>Don Tubbs</u>	<u>Chairperson</u>	<u>4034-12th NE 632-7048</u>
<u>Ken Byrd</u>	<u>Vice-Chairperson</u>	<u>5022-9th NE 634-1088</u>
<u>Liz Hamiltten</u>	<u>Treasurer</u>	<u>5022-9th NE 634-1088</u>

Adviser (if retaining one) Name _____ Faculty Status/Department _____

Campus Address _____ Mail Stop _____ Telephone _____

By resolution at the Special Business Meeting on October 10th, a correct copy of the Cascade Grotto Bylaws is here printed. This, rather than the Bylaws printed in the October 1974 Cascade Caver, is the official version. Any changes needed to make these Bylaws current will have to be passed as amendments.

BYLAWS OF THE CASCADE GROTTA
OF THE NATIONAL SPELEOLOGICAL SOCIETY

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

Section 1. Regular members shall be those persons who have signified their desire to become members, who have paid current dues, who live in the Pacific Northwest and who 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 of the grotto 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 subscription rate for Grotto publications but do not desire to be active participants in grotto activities. Subscribing members receive 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 become members but who live outside the Pacific Northwest, or are voting members of some other unit of the Northwest Regional Association. Upon payment of current dues they shall receive all publications of the grotto, are encouraged to attend all grotto activities, but are not entitled to vote.

II. All grotto dues shall be paid at the time of beginning membership and shall be renewable one year later. Dues for Regular, Associate, and Subscribing members shall be \$4.50 per year. The subscription rate for the Cascade Caver shall be \$3.00 per year. Dues for Family members shall be \$1.00 per year.

III. Nominations for officers shall be made at the October and November general meetings; such nominations must be made by a grotto member with the right to vote. Elections will be held at the December general meeting, or by mail, and the new officers will take office on the first day of the following January.

IV. A simple majority of voting grotto members shall prevail at general or special grotto meetings. Approval of amendments to by-laws or the grotto constitution, or expulsion of a member, shall require a 2/3 favorable vote after due notification to the grotto membership; due notification being 20 days' notice.

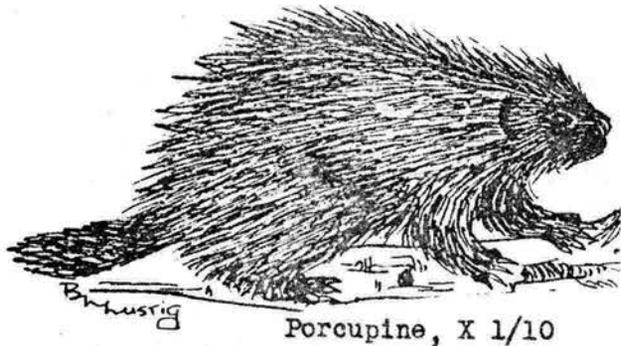
Due notification is hereby given for the following amendments, passed or tied at the Special Business Meeting, which may be ratified at the November meeting.

A. Amend Article II making Dues \$6.00 and Subscription \$4.00. (passed).

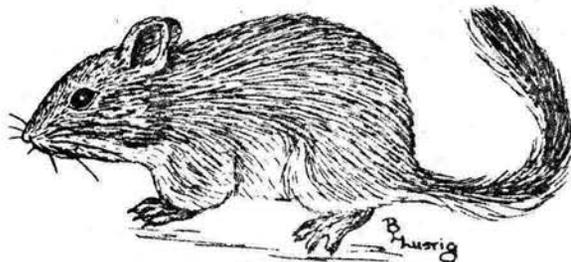
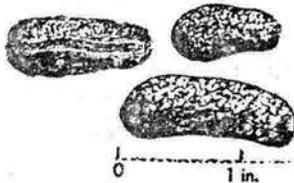
B. Add a Section 5 to article I reading: "Honorary members shall be those persons elected by the grotto to lifetime memberships in recognition of outstanding services or achievements. No more than one Honorary member may be elected in any one year. Honorary members pay no dues, receive all grotto publications, and are entitled to vote on all pertinent matters." Passed.

C. Strike Section 4 of Article I, and the phrase in Section I stating, "...and who are not voting members of other units of the Northwest Regional Association." This amendment would abolish the Associate Membership category, allowing any person to become a regular member. Tied.

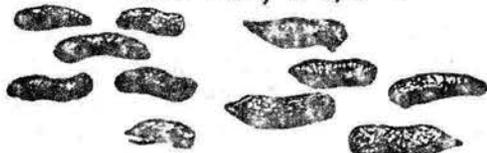
If the above Bylaws contain any other discrepancies, we would appreciate hearing of them.



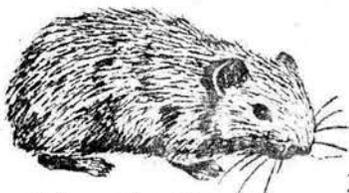
Porcupine, X 1/10

Porcupine scats,
X 2/3;Above: soft
type.Right: hard
type.

Pack rat, X 1/4



Pack rat scats, natural size.



Pika, X 1/5

Pika scats,
natural size.Bat guano
(Myotis).Above:
nat. size
Below:
enlarged.

THE BIOLOGIST'S CHAMBER:
PIKAS, PACK RATS, AND PORCUPINES
by Rod Crawford

Mammal remains of several species have been found in Washington caves (see the "Chamber," April/May '75), but most records are probably accidental, unrelated to the animals' normal habits. Some larger mammals, such as bears, can hibernate in caves, but there are only two or three records of this in Washington. Many of our caves, however, are regularly occupied by bats, porcupines, pikas, and pack rats. The latter three constitute this month's subject.

The porcupine (Erethizon dorsatum) is a rodent and so distinctive in appearance that it needs no description. Adults are about the size of a house cat and weigh 20 to 40 pounds. They are herbivorous, feeding on herbs and shrubs in late spring and summer, tree bark and shoots (they are excellent climbers) during the rest of the year. They commonly den in caves when available, but are variable in their dwellings and also inhabit rockslides, burrows of other animals, tree hollows, or simply rest in a particular tree. One or two young are born in May or June. For obvious reasons, they have few enemies.

Porcupines are rare west of the Cascades but fairly common in Eastern Washington, where they are known from several lava tubes in the Trout Lake area. No nest is made, but a den area is easily recognized from the accumulation of spines. The feces (or "scats," to use the usual euphemism), are also characteristic (see figures). These are 1 - 2" long; in spring, they are softer, cylindrical, and greenish; at other times they are brownish and oval.

The pack rat or bushy-tailed wood rat (Neotoma cinerea) is a large (1' or so in length), greyish-brown rat easily distinguished by the bushiness of the tail (see figure). They feed on all sorts of things, including vegetation, seeds, insects, etc. Like porcupines, they choose a variety of nesting places; besides caves, mines, and crevices, they nest in rockpiles, woodpiles, trees, in and under buildings, or out in the open. Their large "stick piles" are very conspicuous, and probably constitute a sort of storage dump for winter food, but often include practically anything else

they can carry, including dried horse or cow manure, tin cans, mattress stuffing, bones, etc. They are well known for their habit of stealing and hoarding small objects such as watches, glasses, fruits, knives, et al. left in the open by campers and cavers. Generally the stick-pile is not inhabited by the animal; the true nest, placed in a sheltered location, is cup-shaped, made of finely-shredded plant material, and softly lined. There are one or two litters of three or four young per year. Mated pairs tend to cohabit. Their enemies include owls, foxes, coyotes, and snakes.

Pack rats are almost ubiquitous in Washington, and if a cave is neither too wet nor too cold, signs of their occupation are usually to be found. The true nests are better hidden than the often seen stick piles. The animals produce a characteristic musky odor from abdominal glands. The scats are dark brown or grey, oblong-cylindrical, and a half-inch or so long (see figure). A softer type of scat can accumulate into a sort of "pack rat flowstone" which might be termed "neotomite." It is especially noteworthy in Hells Canyon caves. Budding geologists sometimes bring in specimens as "some strange mineral."

The pika, pronounced pee-ka, (Ochotona princeps), is about the size of a guinea pig, with brownish fur, no tail, and rounded ears. Their cry is a characteristic nasal squeak. They are not rodents like the porcupine and pack rat, but are related to hares and rabbits. They are much more restricted in their lifestyle, living almost exclusively in talus. They are better adapted for rock-running; their densely fur-padded feet prevent slipping or abrasion. The feet of the porcupine and pack rat are merely heavily callused. The pika's talus habitat preference makes it well suited for inhabiting the entrances of lava tubes and the surfaces of recent lava flows, as well as, of course, talus caves. They are rarely found in limestone or other caves. Pikas consume most kinds of plant materials. A talus area containing a pika colony will have a number of "haystacks" or food-storage areas interconnected by well-beaten paths. Each individual has a defended territory within the talus, with a central nest. There is one litter of one to five young in May or June. The animals are very vulnerable to a number of predators when away from their home talus.

Pikas are common in all Washington lava tube areas, and probably most large entrance sinks have their colonies. The animals are only occasionally seen; I spotted one at the entrance of Dynamited Cave this August. Their nests and haystacks are in the entrance talus rather than in the cave itself, but they make excursions for considerable distances into caves, as indicated by the piles of small, spherical scats (see figure). The as yet unexplained "Larson Phenomenon," discovered in Prince Albert Cave, consists of piles of pika scats set atop remarkably similar-looking accretional lava stalagmites.

The art of identifying mammal scats is better developed than one might expect. A good introduction to the subject is to be found in O. J. Murie's Field Guide to Animal Tracks, in the Peterson Field Guide series. A reference collection of the harder or pellet-like types of scats can be made by drying, varnishing, and suitably packing specimens to retain their shape.

As noted in last month's column, the contribution of these animals to the cave's ecology is considerable. Pack rat "stick piles" may support a large amount of cave life. Nearly all scats will grow mold, which forms the basis for an association of springtails and other insects which are in turn eaten by predatory cave animals.

* * * * *

Sign seen in a University basement:

VOTE YES!
ON MT. BAKER ERUPTION

Mt. Baker to blow its stack? UW scientists remain puzzled

By Mike Prager

Efforts on the face of smoldering Mt. Baker are winding down now as University scientists have completed the installation of monitoring equipment that shows new changes occurring inside the mountain.

But the big question still looms, will Mt. Baker unload part of its rocky mass in either molten or muddy form?

Dr. Steve Malone, UW geophysicist on the Mt. Baker team, said this week that data from gravity detecting devices "confirms that the increase in steam activity first observed in March is indicative of a fundamental change in the volcano."

"However, there is no reason to suspect that an eruption is imminent," he added.

Yet, according to the gravity readings, something is happening inside Mt. Baker. Either steaming Sherman Crater has gained four feet of elevation, or the mass inside the mountain below the crater is decreasing.

Scientists are unable to explain the changed gravity readings. Tilt meters on the mountain show no indications of a vertical uplift, and there have been no outpourings of molten rock.

Tilt meters used on Kilauea in Hawaii have shown changes on the mountain prior to eruptions. Since Mt. Baker is a different type of volcano, scientists cannot be sure tilt meters on the mountain's flanks will work in the same way as on Kilauea. But, Malone said, seismographs on the mountain should detect increased earthquake activity prior to an eruption. Five seismographs are being monitored here in the geophysics building.

Of prime concern to scientists now is the continued operation of sensitive equipment on Mt. Baker in the face of oncoming winter storms. Pacific Ocean winds of up to 100 mph will buffet and ice-coat the instruments. Besides the seismographs and tilt meters, analyzers and thermometers are also being monitored.

Recently, Malone and others made their way through the ice caves in Sherman Crater to the shore of the acidic lake formed by the mountain's heating. There they found that fumaroles (hole near volcano discharging vapor) are releasing steam and hydrogen sulfide gas at temperatures above the boiling point.

Also, the speed of gases coming from other fumaroles was clocked at 166 mph by an Eastern Washington State College group.

Earlier this year the Forest Service closed the Boulder Creek area and Baker Lake. But contrary to some reports, the Mt. Baker ski area will remain in operation this winter.

Woodland Zoo goes batty

UNIVERSITY OF WASHINGTON DAILY

THURSDAY, OCTOBER 9, 1975

By Jim Wambold

Vampire bats—those of the mammal class and not the species found in a Bela Lugosi movie—are the newest tenants of Woodland Park Zoo.

The bats and other night stalkers will be available for public viewing in about one month when construction on the zoo's new Nocturnal House is completed.

The only basic characteristic common to vampire bats and to vampires from myth and legend is they feed exclusively on blood. Vampires like the ones popularized in Bram Stoker's 1897 "Dracula" novel were spirits of the dead that came out at night attacking human victims. Vampires used huge fangs to dig into their victim's neck and sucked a diet of blood.

Zoo naturalist Gary Ballew says the bats usually prey on cattle. "They don't have large fangs and they don't use canine teeth to suck blood," Ballew said. "These bats land on their prey and use their tongues to lap up blood once a blood flow has started."

Vampire bats usually gather in groups of four or five and nourish on an animal's open wounds. The Woodland bats will be fed pork blood from a local slaughtering house.

Mexico and parts of the southwest United States are the natural habitat for this species of bat. They have less than a five-inch wingspan.

The bats are currently in quarantine. All new

zoo animals go through this 30-to-90 day observation period to guard against disease and injury. Ballew says all 22 bats are doing fine.

Woodland is one of a very few zoos having vampire bats and it acquired them almost by accident. Ballew said a search for bats lasting several months proved fruitless. Lee Werle, keeper of the Nocturnal House, heard about the bats from a radio announcement while driving to work one morning.

The announcement said experiments using bats in Ft. Collins, Colo., had been completed by Colorado State University. The research involved a type of sonar navigation in which bats bounce sound waves off of nearby objects. The vampires came to Seattle from Colorado about two weeks ago.

While not familiar with specific results of Colorado experiments, Ballew explained "less emphasis is being placed on sonar in bats now. We've found bats do much of their navigation by sight and smell, and spend a great deal of time on the ground rather than in flight."

Woodland will have its own "batcave" where the vampires will live. The cave, enclosed inside the Nocturnal House, will give the animals much more room and it will resemble natural conditions more than most other zoo facilities do.

Also living in the Nocturnal House will be sloths, porcupines, and lorises.

