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GROTTO NOTES

DEC. 20 Grotto Meeting 8:00, 1117 36th Ave. East, Seattle
DEC. 31 Election ballots must be to Alan Lundberg by this date.
JAN. 17 Grotto Meeting 8:00, 1117 36th Ave. East, Seattle

At the November meeting, the Grotto voted to contribute \$75.00 to the NSS Building Fund. The money from this fund is being used to pay off the new addition to the NSS office. We are also asking for donations from Cascade Grotto members to try and match this \$75 during the next two months. Please send your donation to:

Alan Lundberg
19221 38th Place NE
Seattle, WA 98155

Since you have to mail your ballots to Al, you might as well stick a check in with it.

1983 Fiscal Grotto Fiscal Report

Prior Balance (6/30/83)		\$301.24
Income (to 11/15/83)	Dues	\$ 67.50
	Sale	\$100.00
Expenses (to 11/15/83)		\$ 25.00
Pending Liabilities	Caver Report Contest	\$ 50.00
Working Balance (as of 11/15/83)		<u>\$393.74</u>

CHANGE OF ADDRESS

Maurice M. Magee
P.O. Box 175
Scotts Mills OR. 97375

TRIP REPORTS by Tom Miller

Arch Cave, Vancouver Island May 7, 1983 Time Underground: 9 hours
Party: Tich Morris, Eric Von Vorkampff, Peter Thompson, Tom Miller (R)

From our Nimpkish River Camp at the northern end of the island, we drove the 30 miles to the Arch Cave area. The objectives were to finish off the upper end of the B-Creek series and to check out the pit with the waterfall that I had found past Cannonball Crawl during the recent Christmas trip.

Eric had found the waterfall up the B-Creek series to be low enough a few weekends ago to allow him to travel up to the area visited by Alf Latham and Dave Crann of McMaster University last summer on the initial discovery trip. Rather large branches and other organic debris indicated a close entrance. With the VICEG maypole, Tich, Eric, and Peter clanked stolidly through the canyons to the high ceiling hole at which Eric had been stopped. Meanwhile, I had headed to the cave bottom, about 300 meters down, to check out my own lead, which had the promise of significantly extending the depth of the cave. Aware that the other party was breaking the cardinal rule of caving -- "Never go with more than two persons", I had shrugged my shoulders in resignation and left them to their folly with a solemn warning to remember the fate of Floyd Collins.

The way to the bottom followed the entrance stream most of the way. Several other streams joined it, falling over three major pits of about 40 meters each, and three or four shorter pitches. At the bottom, the main passage continued for 1000 meters as a large breezy phreatic tube large enough to walk in. It ended at a boulder choke. My lead was at the top of a major lift tube (where water had risen over twenty meters uphill under the force of an immense hydrostatic pressure), up a slick climb from Cannonball Crawl. The crawl was named for the polished shape and size of the large spherical cobbles transported by seasonal floodwaters. I could tell by new debris that the area had been under 15-20 meters of water since our Christmas trip but the pitch I was interested in turned out to have been above the recent high water mark. The pitch was located at the point where the floor dropped out of a narrow rift. There were no natural anchors close by or else they were hidden by the thick coat of old mud covering the walls, so I put in a couple of bolts and abseiled down. Unfortunately, the stream I had heard from above disappeared immediately in the mud. Its source was a large tube, a continuation across the pit of the canyon with the floor hole. Without aid, the climb up into this tube looked too hairy to do alone and I had left the bolt kit at the top of the rope. I decided to return sometime when I had assistance.

Back at the junction with the B-Creek series I went up to see how the others had fared. After 400 or 500 meters I found Eric's ceiling hole, but no maypole. Somewhat surprised, as it must have apparently not gone, I then headed for the entrance, exiting about 9 p.m.

At the car, the others were waiting impatiently, fretting lest the Port McNeill pubs be shut before they could down a few brews. After slapping the maypole up into the hole, they had smelled fresh air. Within 60 meters they emerged into daylight at an entrance less than 100 meters from the other!

Glory Hole, Vancouver Island July 6, 1983 Time Underground: 10.5 hours
Party: Ian Drummond, Chas Yonge, Ian McKenzie, Tom Miller (R)

This trip was a combined photography and bottoming out trip to this approximately 300 meter-deep cave on the north end of the island. The trip was one of several made during the week-long "First Annual B.C. Speleofest" sponsored by the newly-formed Vancouver Caving Club.

We entered the cave about 1 p.m. and moved slowly down to the intermittent sump taking pictures. At the sump we met another party, headed by Tich Morris, coming out. Past the semi-sump the cave became a fine vadose canyon wandering pleasantly along until it began to drop swiftly down the half-dozen or so pitches near the end of the cave. In spite of several deep pools, I was quite comfortable wearing my Gomex waterproof suit from France. For this type of wet cave it is infinitely superior to a wetsuit as it keeps the wearer completely dry.

On the way out I looked into an unchecked stream lead near the Coke Room (So called because of moonmilk resembling the powder, not the liquid) and found it leading to over a hundred meters of fine virgin passage. It obviously needed mapping, so we turned around at this point and exited at 11:30 p.m.

Glory 'ole, Vancouver Island July 8, 1983 Time Underground: 2 hours
Party: Chas Yonge, Ian McKenzie, Tom Miller (R)

Part of the stream entering the huge Mexico-sized entrance of Glory 'ole disappeared into a cave with a 10 meter entrance pitch shortly before the rest of the stream pours over into Glory 'ole. Tich Morris and Ian Drummond stood idly by while the other three of us rigged the pit, descended, and began to map the virgin passage below. Tich followed us until it became apparent that he would have to get dirty. A climbable 8 meter pitch was followed by 16 meter and 6 meter rope drops, then 100-150 meters of tight canyon eventually emerging in a known side lead in the upper part of Glory 'ole. Exit time was 4 p.m.

Arch Cave, Vancouver Island July 9, 1983 Time Underground: 9 hours
Party: Ian Drummond, Paul Griffiths, Peter C(?), Jeremy (?), Tom Miller (R)

We had been forced to go to Glory 'ole on short notice the previous day but the logging road to Arch was now clear. We made the hour-long drive from our camp on the Nimpkish River and found that the felled logs had been removed. It was an easy 5-minute walk to the entrance. We took the streamway, rigging both the 4 meter pit and the 40 meter pit. At the bottom, Paul showed me and Jeremy a lead overlooked by everyone else, which turned out to be a 30 meter rappel into the top of Window Aven, some distance into the cave. While Paul and Jeremy surveyed down to follow me, I met up with Peter and Ian, who had come down the normal way. The three of us climbed down the slot lead I had found at the exit end of the Triple Pot Series in March. This led us to a window emerging high in what was apparently the B-Creek series, coming down from the second entrance that had been connected in May.

Back we went to meet Paul and Jeremy finishing the surveying. Ian, Jeremy, and I teamed up to check out a blowing lead in the Triple Pot series found a few days before by Ian and Chas Yonge. A 7-meter drop only 15-20 meters into the blowing lead, which we dug out, dropped us into the B-creek series upstream from the other lead. Ian rappelled last, bringing up the rope, and we climbed the waterfall further down to come out the connection into the main part of the cave. From here, we went to the Mudfinger area to find Paul and Peter. They had come up with a new lead, a high vadose canyon leading in fossil passage to the top of a window 30 or 40 meters above what was apparently the main stream. Peter and I managed it, and found that it lead to an amazingly complex fossil series of phreatic tubes overlying a deep canyon with running water at the bottom. Lacking time and ropes, we regretfully left over a half-dozen virgin leads behind. The Mudfinger Series has grown in a few short months from a minor, ignored lead to one of the most promising sections of the cave. The passage added to Arch on this trip brings it to about 3 kilometers, perilously close to being the longest on the island. Perhaps another 1 or 2 kilometers remains to be surveyed, most of which ends in virgin passage. We exited about 9 p.m.

Q-5, Vancouver Island July 13, 1983 Time underground: 7.5 hours
Party: Kevin Ecock, Eric Von Vorkampff, Tom Miller (R)

The previous day I had made the 900 meter climb from the valley near Gold River to the ridge crest where Q-5 lay. Kevin, a master's student, and his assistant Eric, both from McMaster University, had been camped in horrible, wet, cold weather on the ridge for a month. In the morning wood had to be chopped and the rounds made of the rain gauges so it was 4:30 p.m. before we climbed down the ladder into the snow-filled entrance. Several nice ice columns remained here where the elevation is about 1100 meters. Q-5 has over 3 kilometers surveyed and for some years was the longest surveyed cave on the island. Like Arch and Glory 'ole, it is 300 meters in depth, with major depth extensions being only a matter of time. Much of the depth comes immediately in the form of a 60-meter pit called "Deep Mother", a beautiful free drop into a large chamber. Two passages diverge here, one to the sump which presently terminates the cave at the end of a tight and nasty vadose canyon. The other leads down several dry drops to the "Valley of the Dolls" area which is where we headed. At the extreme end was virgin canyon down an unclimbed drop. The drop was easily negotiated and we sailed on down more drops and through very tight water crawls in the 0.5 deg C water. Occasionally it was necessary to remove some of the more objectionable sections to get through at all. The passage ran straight along a fault, but all to soon ended in a sump. Eric, the only one of us to have seen it before, said that previously there had hardly been any water, and the sump we found may have been only intermittent. The passage was so steep that it was likely that it ended at about the same elevation as the main stream. We exited about midnight.

Q-5, Vancouver Island July 14, 1983 Time underground: 5 minutes
Party: Kevin Ecock, Eric Von Vorkampff, Tom Miller (R)

In the early afternoon, with the temperature finally rising to above 5 deg C, we marched through the forest down the east side of the mountain to check some known risings at the limestone contact. On the way we looked into the numerous

dolines covering the forest floor. From the bare ridge crest for hundreds of meters down the mountainside were literally hundreds of sinkholes and shafts. I found two in this unchecked area. One dropped immediately down a pit that we estimated in excess of 3 meters deep, judging from the stone that Kevin threw in. The other led to a ceiling canyon, which could be chimneyed out over another drop. The potential for more deep caves in this area is impressive and this is only the northern-most karst area. The other area has had only one reconnaissance trip and it turned up a 200 meter-deep cave which has never been bottomed or revisited.

Gros Ventre Mountains, Wyoming August 13-21, 1983
Party: Tom Miller (R), Pete Shifflett, Craig _?_

Pete is a caver presently from southern California. I met him and his friend Craig in Jackson Hole, Wyoming. Our object was to check out some promising leads that Pete had found on air photos at the 3000 meter elevation. We headed up the Granite Creek drainage, noting minor karst features in the valley floor area, then crossed over a pass into the Flat Creek Drainage. In the morning of the 18th, we day-hiked over to the West Fork of the Crystal Creek drainage and examined several square kilometers with abundant surface karst. In spite of numerous sinking streams, we were stymied by a phenomenon that plagued most of the trip. Frost shatter and remnant snow cones filled nearly every pit that showed promise. We returned to camp after dark.

The morning of the 19th saw us break camp and start toward the head of the Crystal Creek drainage. The wet, cold weather that had plagued the area for several days closed in as dense fog. Pete and Craig decided to head back, the more so as Craig's knee was swollen. We split up equipment and I continued alone over the pass to Crystal Creek.

This region was considerably more promising than that of the previous day. There were more pits and more sinking streams which were considerably larger. Unfortunately, there was the same problem of frost shatter and unmelted snow. Half a dozen of the plugged sinks seemed worth digging at. The remainder of the 19th and all of the 20th were spent following the mile-wide shelf of limestone to its southern terminus. Most of the meltwater streams on the karst emerged briefly from beneath the talus or ran out into the limestone from the Tensleep Sandstone of the area. The Madison Limestone and the Bighorn dolomite were the major karst formers but neither hosted any streams for very long before they were swallowed.

On the 21st I hiked out over the mountain crest and down to Granite Hot Springs. It and a large nearby coldwater spring of larger size are the most likely resurgences for the waters of the Crystal Creek drainage. Two not-fully-checked leads and several promising digs make this area worthy of a more intense visit.

Jack Creek Spring Cave, Wyoming
Party: Tom Miller (R)

August 26

Time Underground: 1 hr

After looking at air photos of the area, and following leads given by Chris Albers of the Jackson area, I drove south and east to the upper part of the Hoback River drainage. A large spring is shown on topo maps of the area in the upper part of the Jack Creek watershed. According to Chris it comes from a cave, but at the time he visited it, there was too much water to enter.

I parked at the head of the ranch road leading up the creek, crossed the creek, and hiked the seven miles leading to the cave. It turned out that I could have forded the creek in my pickup and driven at least half the distance I walked.

The cave was a low, one-meter entrance out of which about half the flow of the creek came, perhaps 0.3- 0.4 cubic meters/second. After donning my wetsuit, I crawled, finding the roof lowered to about 15 cm above the water. In a short distance the roof rose to form a small chamber. The stream came out a small hole on the other side. I followed the rumble ahead up a short climb, then dropped down the far side to another chamber. The full flow of the stream welled up out of a sump 3 meters up and plunged into a deep pool filling the room from side to side. I followed another crawl up into the largest chamber I had seen in the cave, perhaps 15 meters or more in length and 3-4 meters high. A crawl at the far end led to a deep blue pool, apparently the upstream end of the sump behind the waterfall. I found no other leads of any promise, so left and hiked back to my truck in the dark.

The Tosi Karst, Wyoming
Party: Tom Miller

August 27-29

The waters of Jack Creek Spring appeared most likely to have come from the mountain range directly above it. North of this range, headed by Tosi Peak, was the enormous karst area of the Tosi Creek Basin, on the other side of the river divide from the Jack Creek Spring. The Jack Creek Spring flows to the Snake, while the Tosi Basin was in the Green River/Colorado Drainage. I drove east to the Green River, then north. After parking at the mouth of Rock Creek, I hiked upstream as far as I could, until dark. On the 28th I took only a cave pack and finished my trek up to the basin which lay at 3000 meters elevation. I was rewarded with beautiful views and warm sunny weather. In addition I found literally dozens of shafts, up to 15 meters or more in depth, many sinking streams, some large fossil cave fragments, and some small caves. A dozen fascinating dolines of large size had filled with water and formed perfect swimming holes. Having only the one day I was lucky to cover 1/4 to 1/3 of the entire area. Definitely a promising area worth a revisit. I returned that evening to my camp on Rock Creek and hiked out the following day.

Rocky Mountain Regional Convention, Wyoming
September 2-5

Natural Trap Cave September 3
Party: Tom Miller, Steve Knutson

After a morning spent discussing and cussing speleopolitics, Steve (who was working for the summer in Casper, Wyoming) and I joined the numerous others dropping the visually impressive pit entrance to Natural Trap Cave. At the bottom we admired the view for a while, then did the obligatory trip to the large breakdown room some hundreds of meters back in.

Bighorn Caverns, Wyoming September 4 Time Underground: 8 hrs
Party: Tom Miller, Miles Hecker, Steve Knutson, and 3 others

We entered the cave about 10 a.m., abseiling the 19 meter drop into the entrance hallway. Four or five passages led off from here. We went north, heading for the most remote section of the cave, which paradoxically begins to approach the Horsethief section of the combined Bighorn-Horsethief System. Until now the caves are connected at only one point.

It took us nearly two hours to find our way with the map available from the National Park Service. The map was made by NOLS (the National Outdoor Leadership School), a private organization which uses the National Park caves to conduct a profit-making business. Whether the use of a fragile, public-owned resource to make money for a private enterprise is in the best interests of the NSS, the public, or the caves is a topic the NSS should address. Certainly the quality of the maps I have seen turned out by the group in Wind Cave and Bighorn is no argument for their continued permission to exploit these caves -- without exception they were extremely poor. In addition, until protests were made to the Park Service, NOLS at one point had obtained nearly all possible spaces allocated to the public for the several week periods during which they conducted their "training" sessions in cave leadership. Be that as it may, we found our way to the end of the map. I was impressed by the extent to which the cavern resembled Wind Cave, South Dakota, in form, complexity, and extent, even considering that they both occurred in the limestone formation. Not only did they look alike, but there were several tantalizing breezes coursing through the area. Although no more than 8 miles have ever been mapped in the system, there are rumors of up to 20 miles being known. It certainly seems plausible that a major world-class-sized system of 40-50 miles exists here, obscured only by its isolation. After locating many promising leads and passages not shown on the map, we left to tour other trunk passage in the cave and exited at 6 p.m.

Kane Caves, Wyoming September 5 Time underground: 1 hr.
Party: Tom Miller

After driving down the steep, rocky road that had led up to the convention area, I reached Highway 14A with some relief, only to turn off on the dirt road leading south to the gorge cut by the Bighorn River into the Sheep Mountain Anticline. My goal was the Lower Kane Cave, which involved parking at the end of the road and walking up the railroad grade to the axis of the anticline.

The cave was small, only 300 meters in length, but geologically interesting, being apparently an abandoned hot springs. The present "hot" springs resurges 100 meters away as a stream in a low crawl cave. It has a temperature of about 26 degrees C. The cave was quite large almost all the way to the back, at which point it became a narrow fissure. Its method of formation is apparently quite unique: Hydrogen Sulfide gas given off by the hydrothermal spring combined with the limestone, altering it to gypsum. When the gypsum coating became thick enough, it fell into the stream, dissolved easily and led to enlargement of the passage.

Great Exit Cave, Wyoming September 9 Time Underground: 5 hr.
Party: Tom Miller

The people with whom I had intended to enter the Great Expectations- Great Exit System were unable to show up, so I entered the cave alone at about 10 a.m. I carried with me a French "topofil" mapping system to use in measuring distance on a solo surveying trip.

It took an hour of considerable effort to drag all my mapping paraphernalia upstream in the wet, windy crawl. At the far end, I fired up my carbide, leaving the electric lamp behind for the outward journey. Although I had managed to get the Suuntos through dry, unfortunately the topofil thread was completely soaked through three protective layers, and refused to run off properly. There seemed little purpose in continuing, as it was impossible to dry the device, so except for a short run up-passage I simply turned around and exited in low dudgeon.

Fossil Mountain Ice-Wind Caves, Wyoming Sept. 13 Time Underground 4.5 hr.
Party: Alejandro Villagomez Tom Miller (R)

Using directions provided to us by Rick Riggs of Idaho Falls, we arrived at the Lower Darby Canyon parking area at about 2 p.m. Although in Wyoming, the cave is reached from the Idaho side. It took us until 4 p.m. to pack and hike the 2-3 miles up to the caves. We went first to Wind Cave, a giant cleft perhaps 20 meters high, out of which flows a moderate-sized stream. Inside, we scrambled about 200 m to a small 5 m drop which we rigged to ensure we could complete a through trip from the Ice Cave entrance.

With that task done Alejandro (Alex) and I hiked to the large, but more hidden Ice Cave entrance. It is shown at 9200 feet elevation on the topo map, about 600 feet higher than Wind Cave. This elevation difference provides the chimney effect which creates the strong wind blowing throughout the system, and which gives the lower entrance its name.

We entered the upper cave about 6 p.m. Just inside, the ice began: it coated the walls, ceiling, and floor with large sparkling crystals. We walked on a floor deep in crushed ice; masses of translucent ice, remnants of old floors hung precariously overhead as we passed beneath. This was a fascinating experience for both, but especially for Alex, freshly arrived from Mexico City.

Soon, the floor transformed to a hard, solid surface that suddenly fell over the first pit, a sloping 9 m. Not far beyond was the largest pit. We suddenly

slid out into a large chamber dominated by a huge cold crystal column that sparkled in the warmth of my carbide light. To the left we carefully crept on the ice to rig the rope for the 16 m descent. As this was a through trip, we merely doubled the rope at each pit, and pulled it after us. After sliding down the immense white face of the ice falls, we reached another chamber. From here, a crawl dug open a few years previously by Miles Hecker of Wyoming led in a windy wriggle to the major part of the system. In the breakdown below us we could hear the gurgling of the main stream and in half an hour we reached it.

The hard part was now behind us and it was now simply a matter of following the high wet canyons to the lower exit. There were several more pits of less than 12 meters, and one long deep pool aptly named Crotch Lake. I wore my Gomex suit and stayed completely dry, but poor Alex wore the standard wetsuit and left a string of Spanish oaths and piteous howls behind as he gingerly waded the lake. Surprisingly soon, we reached our rope rigged near the Wind Cave entrance. The rope proved to be merely insurance as the pitch was a relatively straight-forward climb. We exited at 9:30, into a bright moon, and reached camp at midnight.

Craters of the Moon, Idaho Sept. 14 Time Underground: 1 hr.
Party: Tom Miller

I returned Alex to Idaho Falls following the Fossil Mtn. trip, then drove west to Craters of the Moon National Monument by dark. The Monument has a few lava tubes open to, and marked for, the general public. Most of these are very short and of no real interest. With my Coleman lantern in tow, I walked out to one area to visit Surprise, Boy Scout, and Dewdrop Caves, as well as one other. One of the caves had a short section of permanent ice.

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GROTTO MEETING DEC 20 at 8:00