

CASCADE Caver

Published by the Cascade Grotto of the NSS

September 2010, Volume 49, No. 4





Cascade Caver

Cascade Grotto of the National Speleological Society

Volume 49, Issue Number 2

Copyright 2010 by the Cascade Grotto, All rights reserved

August 2010

The *Cascade Caver* is published periodically throughout the year by the Cascade Grotto, a local chapter of the National Speleological Society. Any material in this newsletter that is not copyrighted by an individual or another group may be copied or reprinted by internal organizations of the National Speleological Society provided that credit is given to the author and to the *Cascade Caver* and that a copy of the newsletter containing the material is sent to the Editor. Other organizations must contact the Editor.

Opinions expressed in the *Cascade Caver* are not necessarily those of the Cascade Grotto, the editors, or the NSS. Unsigned articles may be attributed to one of the editors. Great pains is taken to assure proper attribution of copyright and to use works in the public domain when the copyright is not clear in the case of illustrations. If you feel that this publication has infringed upon your copyright, please let the editor know immediately.

All material to be published, subscription requests, renewals, address changes, and exchange publications should be sent to the Grotto address.

GROTTO MEMBERSHIP:

Membership in the Cascade Grotto is \$15.00 per year. Subscription to the *Cascade Caver* is free to regular members. Membership for each additional family member is \$2.00 per year. Subscription to the *Cascade Caver* is \$15.00 per year. Subscription via email is \$11.00 per year. Members can save \$4.00 per year by subscribing to the e-mail version of the caver

GROTTO ADDRESS:

Cascade Grotto
P.O. Box 66623
Seattle, WA 98166.
This post office box should be used for both the grotto and for the *Cascade Caver*.

GROTTO OFFICERS:

Chairman Jake Earl (206) 715-5315
Email: Chair@cascadegrotto.org
Vice Chairman Robert Mitchell (360) 802-5131
Email: Vicechair@cascadegrotto.org
Sec/Treasurer Erika O'Connor (360) 224-4438
Email: Secretarytreasurer@cascadegrotto.org

OTHER POSITIONS:

Trip Coordinator Open Position
Librarian Michael McCormack (425) 941-4619
Regional Rep. Kari Doller (253) 797-1606
Program Chair Robert Mitchell
Conservation Hester Mallonée (253) 838-6464
Safety Dave McElmurry (253) 951-1995
Editor Edd Keudell (208) 610-0065
Email: mapperhd@msn.com

Inside this issue:

<u>Articles/Items</u>	<u>Page</u>
Cave Ridge – July 19 & 20, 2009 Tom Evans	3
Finding the Big Crater Caves Edd Keudell	5
Map of Big Crater Caves Edd Keudell	6
Map of Half-Baked Moon Cave Edd Keudell	7
Trip Reports from January to March 2010 Jake Earl / Edd Keudell	8
Map of Elderberry Cave Edd Keudell	12
Map of Ramsey Cave Edd Keudell	14
Trip to Little Brush Creek Cave Jake Earl	16
Lewis & Clark Caverns, 09/19/09 Tom Evans	18
September 2010 Meeting Minutes	20

COVER PHOTO:

Robert Mitchell, Cascade Grotto Vice-Chairman, proficiently demonstrates his vertical expertise at the 2010 University of Scouting caving display, demonstration, and vertical practice session. Photo by Ron Zuber.

Cave Ridge

July 19 & 20, 2008

By Thomas Evans

Cave Ridge is addictive, enticing, alluring, and impossible to get out of your mind. July 19th and 20th, 2008 saw a trip up Cave Ridge for the purposes of getting projects done that had been plaguing a number of us for some time.

Those in attendance included Kari Dollar, Aaron Stavens, Dave McElmury, Danny Miller, and me. As usual the hike up Cave Ridge was painful, but well worth it due to the incredible views and clear skies. I found myself quite exhausted after the slog up the hill, but more than ready to tackle the laundry list of projects we wished to accomplish.

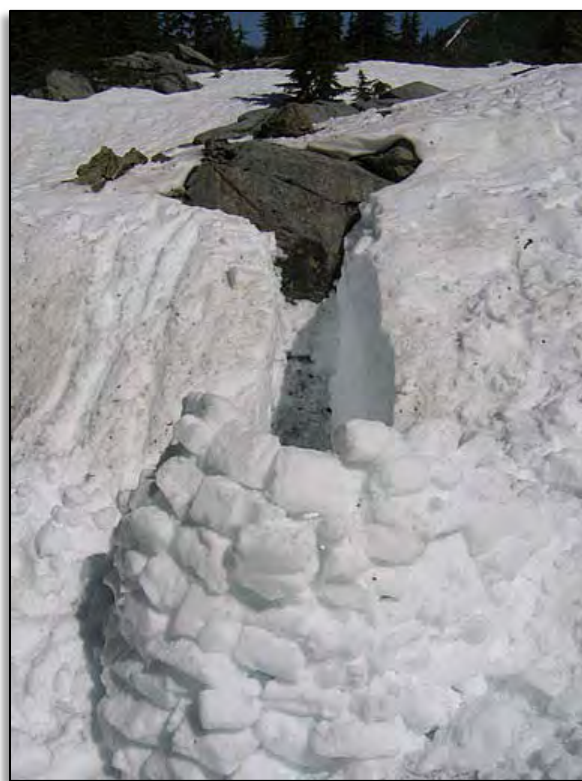


Dave McElmury excavates an impressive snow staircase to X-rated Cave. Photo by Tom Evans

First it should be mentioned that caving is a group sport. On Cave Ridge in particular this must be remembered since you must have a number of people up there in order to get anything done. As such it is useful to plan trips where each person in the

group meets one of their goals, or at least works toward meeting a goal. This trip was just such a trip.

Dave and I are interested in opening up X-rated Cave, a delightfully small cave entrance near Danger Cave that is in need of some entrance "improvement". It is impossible to bash a larger hole in the rock while it is coved in fifteen feet of snow, so Dave's first priority was digging out the cave entrance, which is what he set his mind to do rapidly.



A different view of the snow pile resulting from the excavation. Photo by Tom Evans.

A few hours later, and a huge ice pit later the cave entrance was opened. The entrance was not nearly large enough to do any work in, particularly with the confines of the snow trench around it so this cave was abandoned for this trip in favor of working on projects elsewhere on the ridge. The hope was that later trips would be able to work in X-rated after it had fully melted out. Dave's excavation should have made it melt out much earlier. Aaron is obsessive. I've heard him speak of this one little hole on Cave Ridge for two years. This trip was to determine if his obsession was a viable lead or a pipe dream.

En masse we headed over to Aaron's little hole in the ground which turned out to be substantial in size.

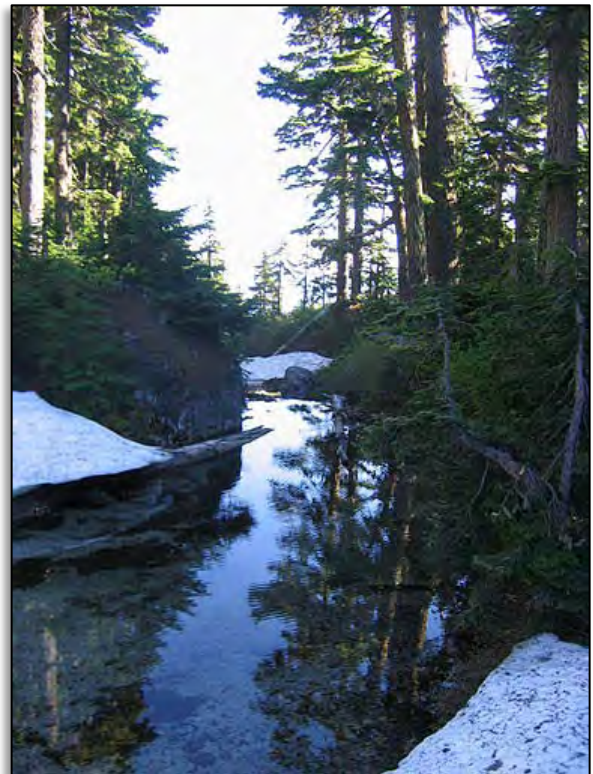
True to his description there was a large rock blocking the hole that had to be removed before further exploration could occur. With the aid of some of the tools I hiked up the ridge the previous year, and some rope in the cache we were able to open up the area around the rock a bit. We wrapped it with webbing, connected it to the rope and pulled. The rock came out of the hole surprisingly easily. What was left was a body sized hole with debris in the bottom with a tantalizing lead in the back. In true caver form, we started digging. There are few people more persistent than Dave when it comes to digging open a cave. If ever I get caught underground in a collapse get him to dig me out. As a group we all took turns wedging ourselves in the hole, digging, prying rocks up, and generally making the hole larger.

There were a few interesting moments rigging pry bar haul systems to remove some very large rocks out of the hole, as well as rigging a quick way to get dirt out of the hole by using a bag as a sediment bucket. Over the course of an afternoon the small hole became quite a spacious enclosure, one that was entertaining to lie in.



The waterfall as it pours off of Cave Ridge. Photo by Tom Evans.

At the end of the day the hole was still filled with debris, but a tantalizing lead with a little air blowing through it was left. It will wait till another trip to the ridge to find out where it goes. After a full day of digging we all retired to our customary camping site on the top of the ridge. I slept well that evening knowing that we had worked toward our combined goals and had fun at the same time. The next day we packed up and headed down the ridge since we were all tired. We had spent a bit of time the previous day and that morning looking at the ridge around Aaron's lead to see what the local layout was. It is certainly an intriguing area that is geologically similar to other areas with caves on the ridge. After running around there I determined to pick up the geological literature about the area in the hopes that I could discover a bit more about how the area was formed. At the parking lot we separated and drove home tired, but knowing we had accomplished much over the weekend.



The pond located just before the waterfall. Photo by Tom Evans.

As always we had fun, spent time (partially) underground and in a beautiful place. For all those who have not been up to Cave Ridge, you should go to drink in its splendors. Safe caving everyone!

Finding the Big Crater Caves

October 2005

By Edd Keudell

These caves were the last thing we thought we'd find when we started on our hike that day. The purpose of the trip was to locate a small cave I had found about 10 years before while on a hike to the Big Crater with my sister and brother-in-law. We had found the cave while hiking back to the car after enjoying a nice lunch in the small meadow at the bottom of the crater. The cave was approximately, 75 feet on total length with the entrance being at the junction of them. It was a crawl way to a small room (with a solitary bat) one way and the other led down slope to a doable squeeze that dropped quickly. It is quite possible based on the position on the slope it could have opened up in height. The goal on that day in October of 2005 was to find it again and see what the lead did.

Normally it would be Garry, Blair, and I caving and surveying together, mostly surveying, but this time Garry was on a family trip to South Korea and Blair and I wanted to go caving. We were in between projects and didn't want to start another until Garry got back from his trip. We decided to go look for the small cave, just for the heck of it, to get outside and wander around on the lava bed.

We drove up near Goose Lake and wandered around the area where I thought the cave might have been for quite awhile, but were unable to locate it. We did find a breached dike where the lava had built up and then broke through to flow down towards Goose Lake, but nothing cave-like. We decided to hike north in that direction and then swing around back towards the west and eventually to where we parked. Along our trek we encountered a few areas that exhibited surface tube formation, but almost completely collapsed. It was about half way back to our parking spot when we came out of some brush and a dense

stand of trees that we saw the hole in the hillside. The entrance had formed at the end of a lava ridge on a steep slope and not from a sink hole as commonly seen.

We entered the cave finding it was standing height and it continued in the upslope and down slope directions. The down slope direction was crawling to hand and knees for about 30 feet, but the up slope passage was walking height. Fortunately, we had brought survey gear just on the unthinkable chance we stumbled on something (who would have thought). We went upslope and found the passage looped around, was mostly walking and some stooping, and a couple of hundred feet total length.

After exiting the cave we looked around the hillside and found a couple of large sinkholes nearby. One was rather large and had a few passages leading off of it. This cave turned out to be the more interesting as it was almost entirely walking and had braided passages, yielding many hundreds of feet. After completing the survey we decided to come back on a later weekend when Garry was back and survey as well as place brass inventory caps on the entrances.

Two weeks later we finished surveying the third cave which yielded a few hundred feet as well. While on our hike out the caves we came across another small cave of approximately 60 feet naming it Half-Baked Moon Cave. This area needs further examination as there is potential for more caves. What made these caves so interesting was they formed in a lava flow with a higher viscosity and steeper slope. We noticed the same when we had surveyed Downdraft (aka Datus Perry's Cave), Backdraft, Draftdodger, and the Spillover Caves also related to the Big Lava Bed. Is the viscosity of a flow consistent? Does the level vary in layers or in patches laterally? Was there more than one eruption and flow from the crater?

Big Crater Caves

aka The Dog Caves

Skamania County, Washington

A Suunto Compass/Climo and Disto A5 survey

Survey Dates: 10/08/2005 & 10/22/2005

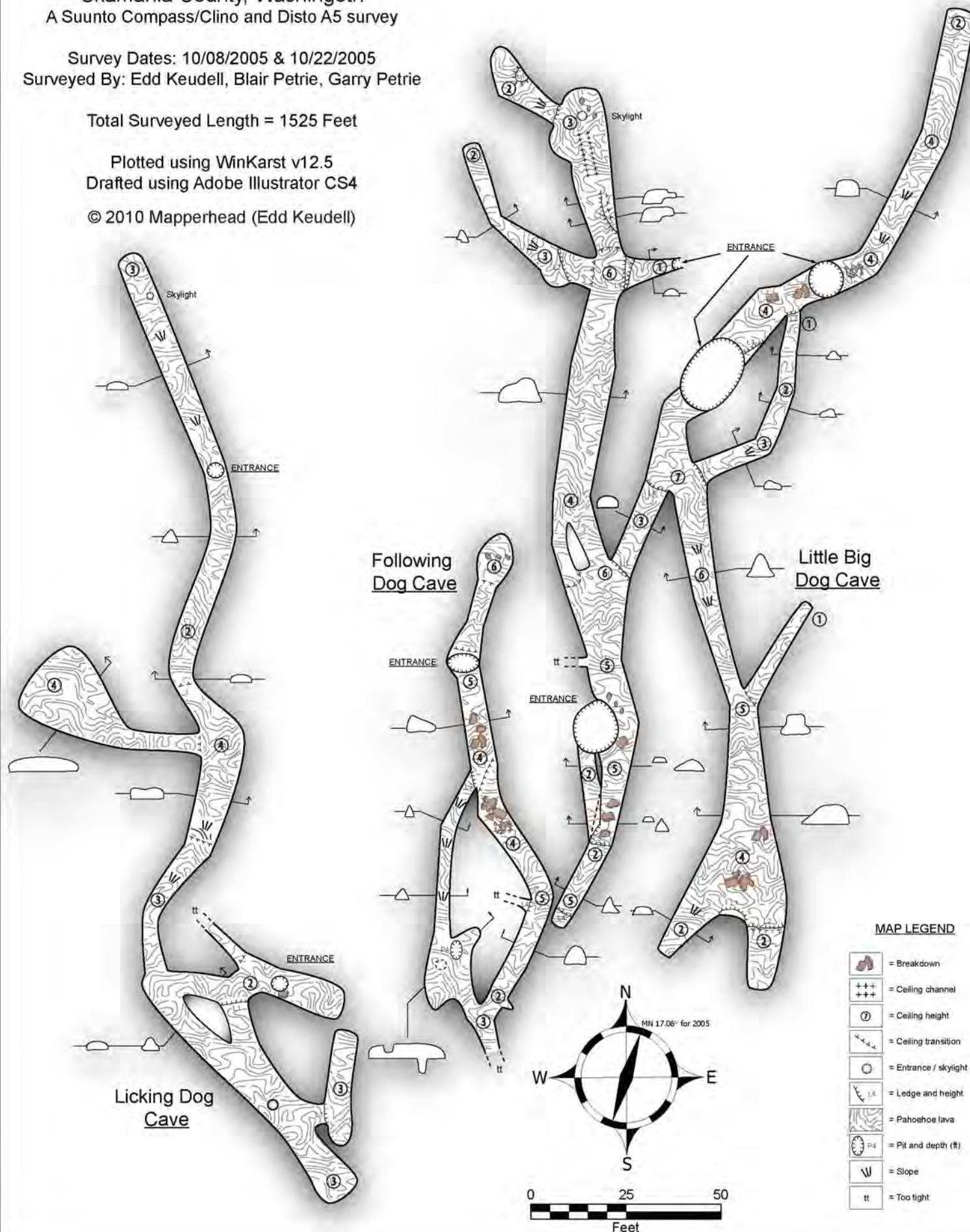
Surveyed By: Edd Keudell, Blair Petrie, Garry Petrie

Total Surveyed Length = 1525 Feet











Plotted using WinKarst v12.5

Drafted using Adobe Illustrator CS4

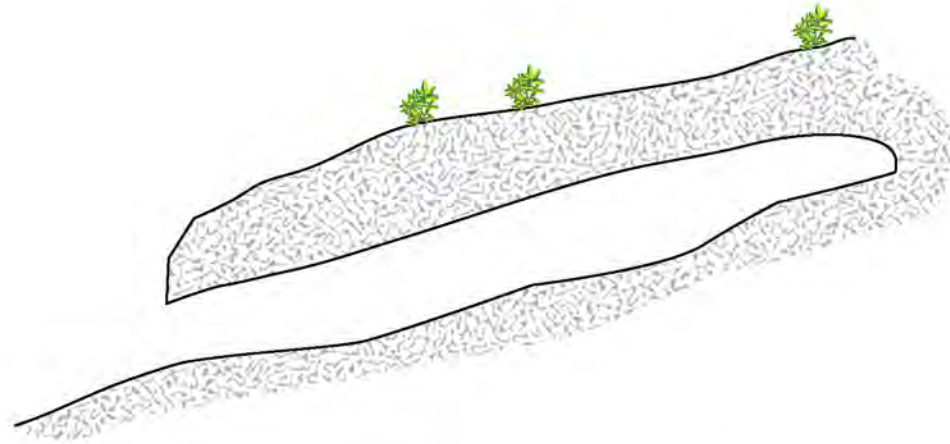
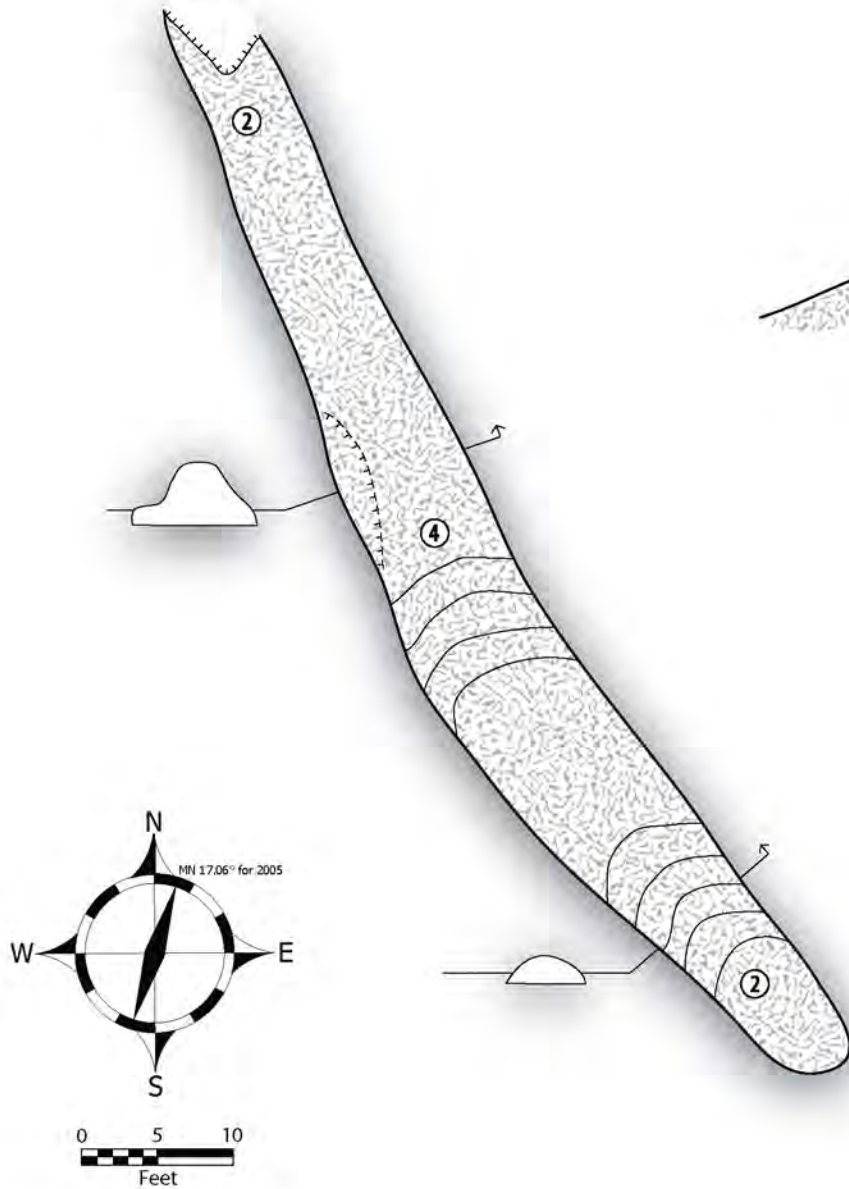
© 2010 Mapperhead (Edd Keudell)



MAP LEGEND

	= Breakdown
	= Ceiling channel
	= Ceiling height
	= Ceiling transition
	= Entrance / skylight
	= Ledge and height
	= Pahoehoe lava
	= Pit and depth (P)
	= Slope
	= Too tight

ENTRANCE



Half-Baked Moon Cave

Skamania County, Washington
A Suunto Compass/Climo and Disto A5 survey





Surveyed: 10/22/2005
Surveyed By: Edd Keudell, Blair Petrie, Garry Petrie

Total Surveyed Length = 84 Feet

Plotted using WinKarst v12.5
Drafted using Adobe Illustrator CS4

© 2010 Mapperhead (Edd Keudell)

MAP LEGEND

-  = Ceiling height
-  = Ceiling transition
-  = Floor contour
-  = Lava

Warm winter allows for plenty of caving

January to March 2010

By Jake Earl and Edd Keudell

I had recently moved to the Seattle area after living in Sandpoint, Idaho for the past two years and Ron Zuber had introduced me to Jake a someone who was anxious to do some caving. Having lived in Portland for the past couple of decades I was used to caving almost year 'round and living in north Idaho had cramped that style to three, maybe four months, during the short summer cycle. The weekend following the January meeting Jake and I and some occasional others started on a caving spree that lasted until the late season snow fall in late March. The following is brief accounts from Jake on that spree.

San Juan Islands trip January 23rd, 2010

Our trip started off with about an hour long ferry ride to San Juan Island. We arrived early morning and headed onto the island and in search of Haffner's Quarry Cave. After some bushwhacking and looking around we spotted the cave and started our survey (My first time ever doing a survey of a cave, and with a DistoX). The cave is somewhat unusual, being in a chunk of limestone that is by itself. It is about 25 to 30 feet in diameter, and maybe 20 feet tall. It appears the cave was carved out by the sub-water table; rising and falling.

After surveying the cave we headed off to English Camp Cave, which is located inside the English Camp Park. I had been there about 2 years ago and found the cave, so having the coordinates for the cave we walked right to it. We did a quick survey of the cave, since it has already been documented and with a map in Caves of Washington. After surveying and doing some ridge-walking in the area of the cave we headed off to Roadside Cave, which I have also been to 2 years ago. We parked and walked to 8 – September 2010, 49-3

the entrance; which is literally on the side of the road. I looked in and surprise.....it was full of WATER!!



*Looking out the entrance of Haffner Quarry Cave.
Photo by Jake Earl.*

Maybe later in the summer it will be accessible. We drove back to Friday Harbor and got a bite to eat. I was hoping the brewery was going to be open to get some of their tasty beer, but they were closed down for remodeling. We ate at a restaurant and got a burger and beer. We headed back home and already planning our next trips for the year!



The entrance to Roadside Cave. Photo by Jake Earl.

Concrete Trip to 3 Mile and Jackman Creek Cave

Since Edd hadn't seen any of the caves in the Concrete area, I decided to show him 3 Mile Creek cave, and Jackman Creek Cave. We headed up to 3 Mile and did a quick survey, looked at the sink above the cave, which is filled in with dirt, and logging slash.



The entrance to Jackman Cave. Photo by Jake Earl.

We headed over to Jackman Creek Cave, and crawled in. As usual we surveyed the cave on our way. The cave was wet in places, but not to much dripping water. We also chimneyed up the dome, and looked to see if it goes. It appears it gets too tight. We finished the survey and headed down to Birdsvie Brewery which has very good BEER, by the way! And burgers, too!

Trip to Elderberry and Jensen Cave, February 2010

We headed up to concrete and up the road to our parking spot and off to look for Jensen and Elderberry. We searched and searched for Jensen, but no luck today. Tired and sick of walking through old slash left from the logging, we heading into the woods to look for Elderberry. On our way into the woods we found some very neat solution karst features in the woods, but no caves. We proceeded down towards Elderberry and got to the entrance. We got suited up and headed in to start surveying the cave. We surveyed the cave, and pushed some

tight crawlways but ended in dirt fill, or got to tight and pinched out. The main part of the cave was pretty dry. There were some remains from a porcupine in the upper part of the cave. We exited and walked back down to the truck, looking for any karst features or caves as we headed back to the truck. We decided to fill our growlers and get a bite to eat at the brewery.

Trip to Ramses Cave and Jensen February 20, 2010

As usually we headed out early to the concrete area in search of Jensen Cave again, with a little more



The entrance to Jensen's Cave. Photo by Jake Earl.

help from some other cavers. After bushwhacking for awhile we were getting into the area of where the cave is supposed to be. At this point we were in a newly established second growth, with quite a bit of slash left behind. After searching, Edd yelled, "Here it is!" Jensen is in a sink hole about 15 feet deep, and maybe 15 feet across. At the bottom is a low stooping entrance, sloping downward, and soon

you are confronted with a tight "S" shaped squeeze to get back into the back room of the cave. "See map in Caves of Washington."

After looking at Jensen Cave, and eating some lunch, we headed back to the road and over to Ramsey Cave. Our goal was to re-map the cave, since when it was originally mapped the cave was just recently opened and there was very much sediment in the cave. After it had been opened on its own, some logging had been done recently in the area. With the following rains of the fall and winter to come, it washed in dirt and rock, filling up most of the back of the cave.

We entered the cave, and mapped as we crawled through the cave. As we got to the back of the cave there is a stream that enters the cave, and the last room had about 7 or 8 feet deep water in it. We decided to come back on a later trip to survey the rest of the cave. Since the original map shows some confusion, as there isn't any high/tall rooms in the cave except for the sand room. See the attached map for comparison to the original map done in the 70's, to the map done recently. All in all this was a good trip, and we got the majority of the cave mapped, and also found Jensen Cave.

Trip to Ramsey Cave February 28, 2010

We headed up early to the usually parking spot, and headed up to Ramsey Cave to finish the survey into the water room, and the last 10 to 15 feet of crawling stream passage at the very end. We crawled down to the end of the cave and I crawled backwards onto a small marble bridge (which was very slippery with mud), and then up the last bit of the cave which was a stream passage. Yelling the survey noted back to Edd as I finished the survey for the cave. After finishing the survey we headed out and walked up the road farther looking for any new caves that may have opened up, or any neat features.

After looking around we decided to call it a day and headed back to the truck. We stopped at the
10 – September 2010, 49-3

brewery to fill the growlers and back home.

Trip to Neelie Creek Cave and Blood Cave March 5, 2010

Edd and I headed up to the Denny Creek parking area and headed up onto the back side of Denny Mt in search of Neelie Creek Cave, and Blood Cave.

On our way up we found the quarry, and resurgence which is noted in Limestone Resources of Western Washington (LrOwW). We had some vague directions to Neelie and Blood Cave, but with some persistence we scoured the hillside where we were told the cave should be. After feverishly climbing up and down the steep hillside we found Neelie! Tired, we ate some food and got ready to explore the cave. After lunch I decided to dig some snow out from a spot farther up from Neelie that kind of looked like a cave entrance. After removing enough snow i looking in and sure enough it was Blood Cave! We did a quick survey, and documented the cave. Blood cave is a short 20 foot cave or so, that sloped steeply and ends in a small dome. You can just barely stand up in the dome, but the walls are completely covered with allophane! Which is a very neat formation that only a few caves are known to have.

We went down to Neelie and squeezed through the tight "S" shaped entrance and into a small dome room, with enough space to stand up. We then proceeded under and into another dome, with a tight squeeze at the base. Imagine the walls on your back, and front pressed against you and sliding down and into another dome. From here you are in a small room that Maybe 3 people could be in, and in the back is another small round shaped hole you squeeze down and on to the top of the first 24 foot drop. While crawling through the last squeeze there were a bunch of harvestmen spiders in a beard! Kind of weird... and they smell funny.

We didn't have a rope on the trip for the drop as the trip was more of a recon to find Neelie Creek Cave, and to come back on a later date to finish the

survey and explore the rest of the cave.

On our way down Edd spotted a cave opening, I started to get excited since Donlon's Cave hasn't been relocated and I was starting to believe this was it! We did a quick survey and documented the cave. Later on after exchanging some emails with Danny, we came to conclusion and some notes from an old map that is was one of the mines dug up there by Donlon's (I believe it was Donlon's). Well the search is still on for Donlon's, and hopefully it will turn up!



*An old mine entrance mistaken for Donlon's Cave.
Photo by Jake Earl.*

Quick Trip to Neelie Creek Cave on (Not sure of the date)

On a Friday in the afternoon, Edd and myself headed up to the Denny Creek trailhead and hiked up to Neelie, hoping to get the survey done! We suited up and crawled into the cave. We rigged the rope and descended down the 24 foot drop. At the bottom is a bunch of breakdown, and 2 domes

which are side by side, and on the other side of the room is a steeply sloping passage with talus on the floor. At the bottom is a dome, and a karst window which leads down farther to the noise fault.

We crawled back up the passage and looked around some more, and decided to head out since it was getting pretty late. We crawled out of the cave, hardly knowing that was the entrance we just crawled out of. It was dark out and we had a fun decline down the steep hillside. We got back to the truck and headed home. And as usual planning our next cave adventure!



*The entrance to Blood Cave after being dug open. Photo
by Jake Earl.*

As Jake exclaimed on our way down the hillside back to where we had parked, "I've been caving more in the last three months than I've been in the last three years!"

Elderberry Cave

Skagit County, Washington

A DistoX A3 Survey

January 26, 2010

Surveyed by:

Jake Earl & Edd Keudell

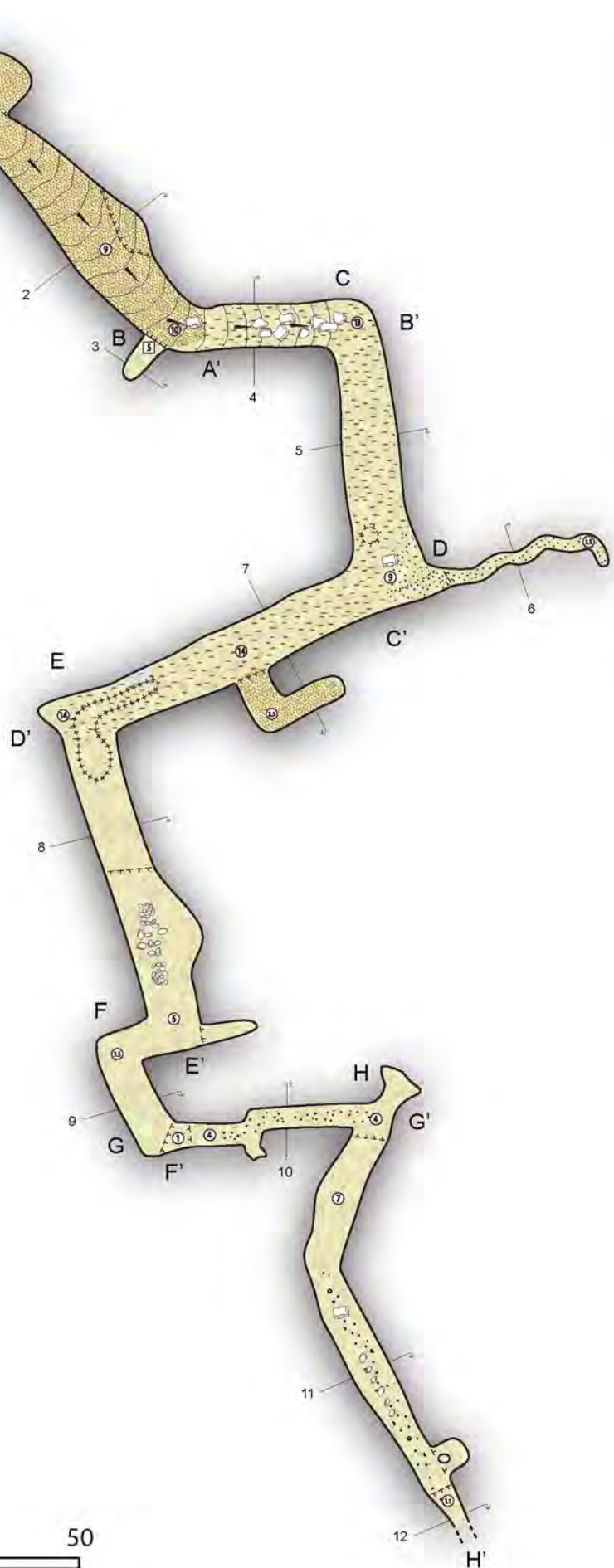
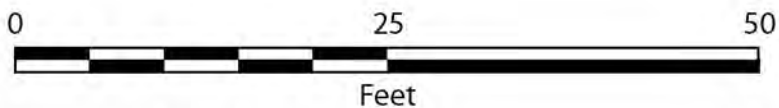
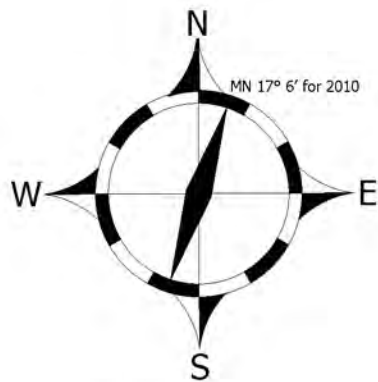
Plotted in Winkarst v12.5

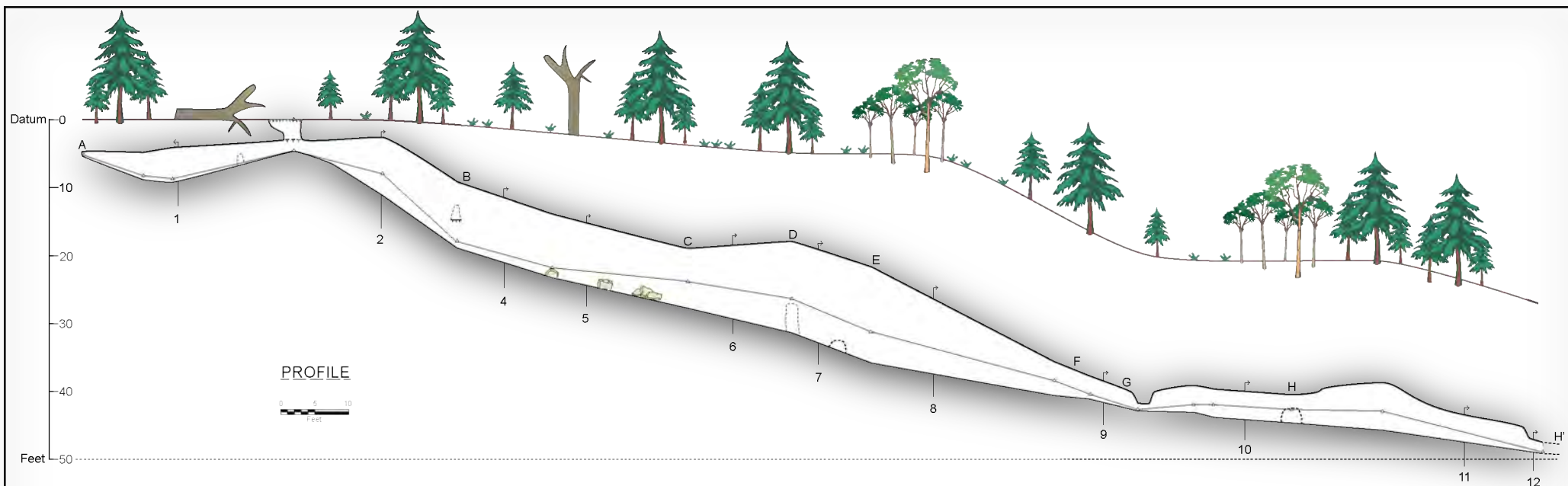
Drafted in Adobe Illustrator CS4

© 2010 Mapperhead

Map Legend

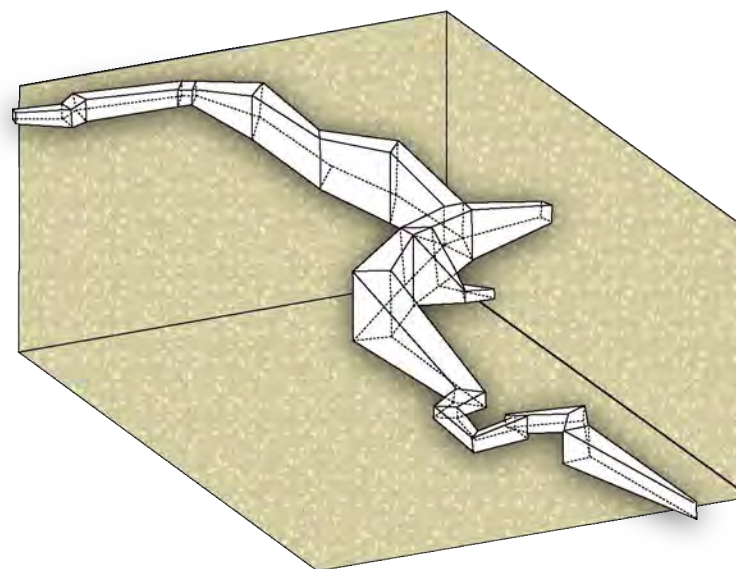
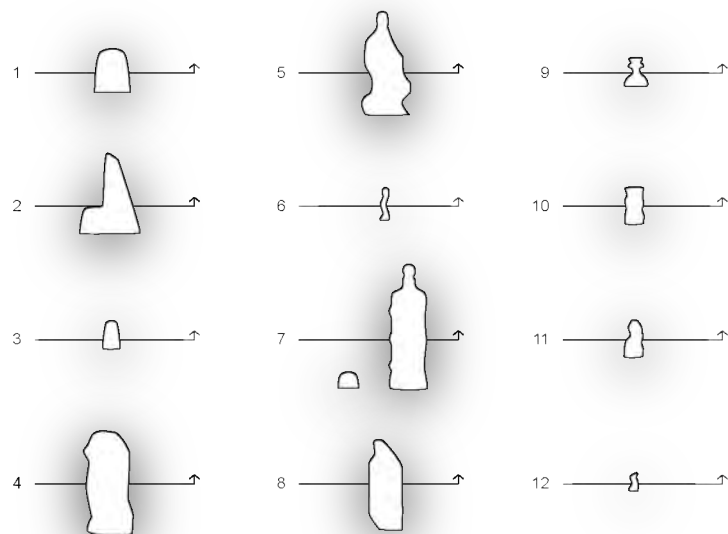
	= Breakdown - large		= Dirt/Sand
	= Breakdown - small		= Dome
	= Ceiling channel		= Ledge height
	= Ceiling height		= Ledge/pit
	= Ceiling transition		= Limestone
	= Cobbles		= Mud
	= Cross section		= Profile section
			= Slope





Elderberry Cave
 Skagit County, Washington
 Vertical profile, cross sections, and 3D projection

Cross Sections



Ramsey Cave




Skagit County, Washington
A DistoX A3 Survey

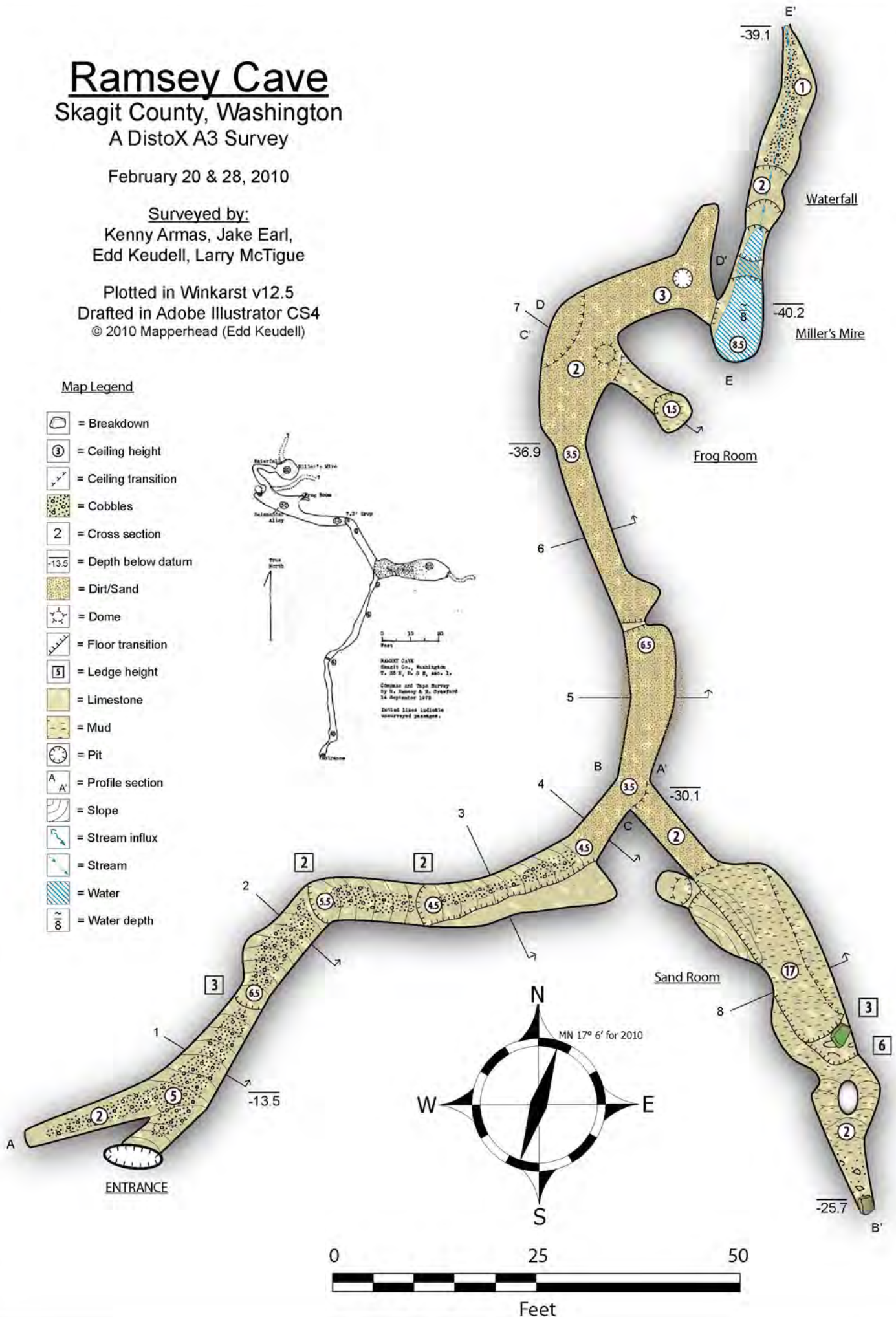
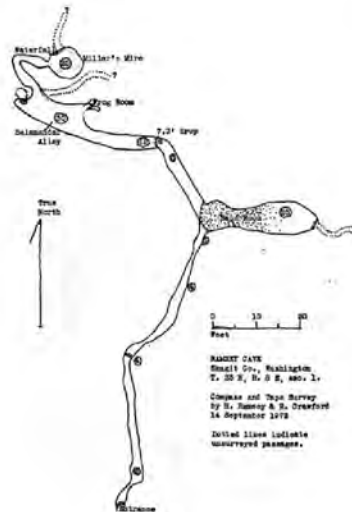
February 20 & 28, 2010

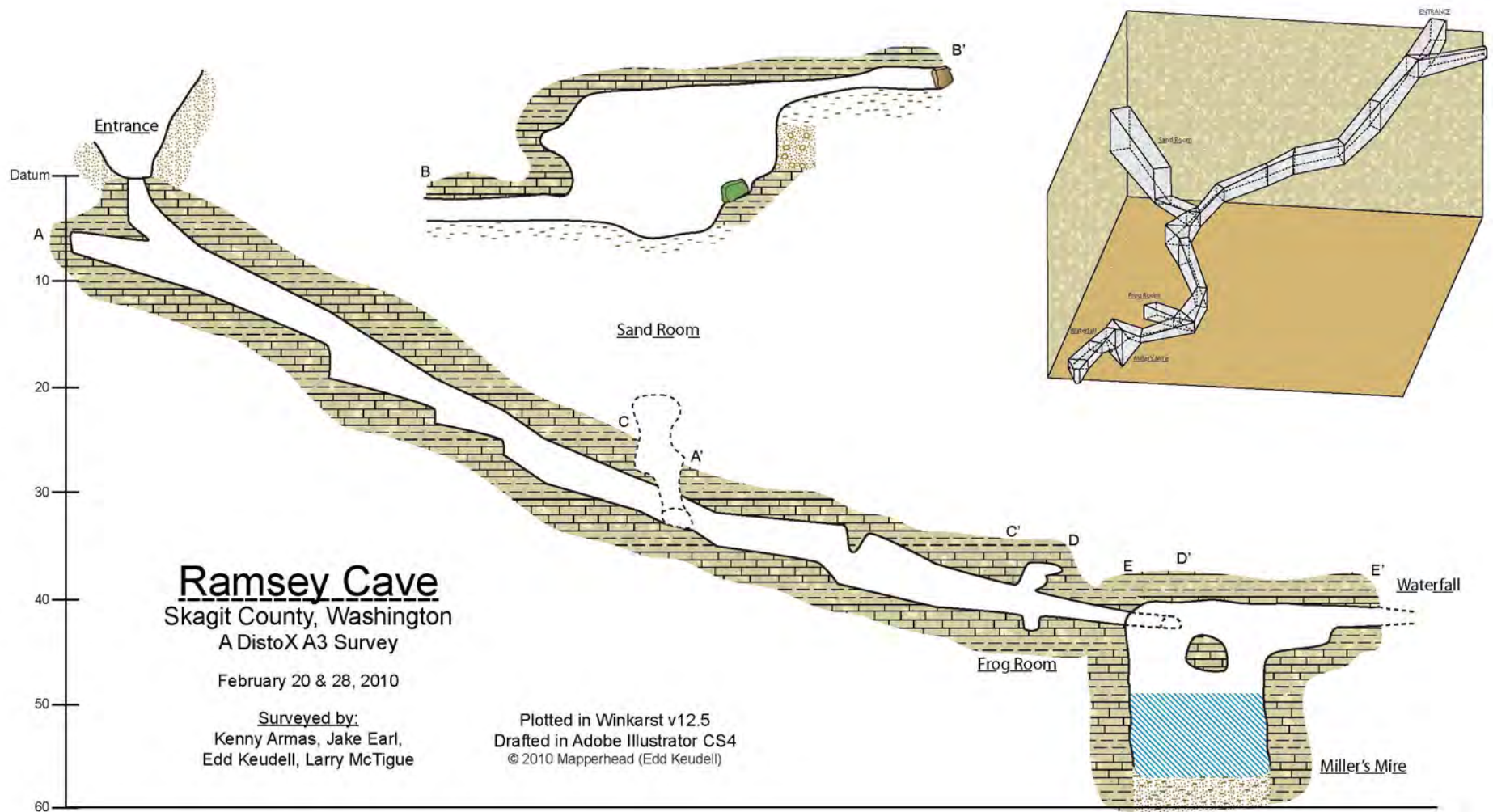
Surveyed by:
Kenny Armas, Jake Earl,
Edd Keudell, Larry McTigue

Plotted in Winkarst v12.5
Drafted in Adobe Illustrator CS4
© 2010 Mapperhead (Edd Keudell)

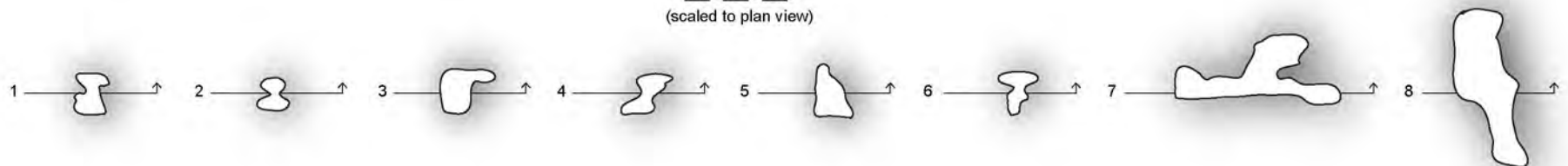
Map Legend

-  = Breakdown
-  = Ceiling height
-  = Ceiling transition
-  = Cobbles
-  = Cross section
-  = Depth below datum
-  = Dirt/Sand
-  = Dome
-  = Floor transition
-  = Ledge height
-  = Limestone
-  = Mud
-  = Pit
-  = Profile section
-  = Slope
-  = Stream influx
-  = Stream
-  = Water
-  = Water depth





Cross Sections
 (scaled to plan view)



Trip to Little Brush Creek Cave 9/13/10 with Al Hinman

By Jacob Earl

Our trip started out by meeting at 9:00am in Manila, a small town in Utah just across the state line of Wyoming. We headed south towards the cave, on highway 44, then onto 191. After a short distance we pulled off onto a dirt road and before I knew it we were at the little parking area to get suited up for the cave. We scraped together all the gear we needed, suited up and headed down into the entrance.



Standing at the entrance to Little Brush Creek Cave. Photo by Jake Earl.

The entrance of the cave is quite big, and actually really cool. As we started into the cave we were confronted with a lot of debris; logs, chain link fence; and garbage, all from the result of seasonal flooding the cave takes each year from snowmelt. But that soon was all negotiated within the first 200 to 300 feet of cave passage; well we still encountered some other logs that made it deeper inside the cave. The majority of the cave has a lot of crawling passages, and a few areas of walking passage. One of my favorites was a walking passage with a series of pools of water. It was a series of step downs with pools of water as you winded through the passageway. The walls were all clean as if the water had just been drained out of the cave, and the color of the limestone went from a gray, to an almost orange hue.



In the walking passageway with the pools of water, I painted this picture in with my LED flashlight. Alan in the background, check out those sweet caving boots. They can be purchased at any Nike store! Photo by Jake Earl.

After crawling some more through winding passages and up and down we entered another short section of walking passage, again were scattered pools of clear and pristine water. Shortly after this it was back to crawling, and before I knew it the passageway looked as if it dropped into a room, and indeed it did. Climbing down about a 5 foot drop we were in the "H Room". This was a nice room, with ceiling height around 20 feet, and quite a big room to look around in. There were all sorts of spots water runs into this room. We took some pictures and took a rest before heading down another passageway. Shortly back to crawling we crawled for a while through winding passages and past a few junctions. We kept going on what seemed to be the more main passageway, and soon crawled into a room with a ceiling height of which seemed like 60 feet or so. The walls were all covered with mud and the floor was slippery. Unlike the other part of the cave we had crawled through this wasn't as clean. This room ended and we back tracked to one of the junctions and chose one and crawled down it. It began to get quite tight, so I kept on crawling and Alan waited for me. It kept on going and going, and soon it started to get to tight, so I crawled back and we checked out another crawlway. This passage was a bit more spacious, but still low ceiling; we were crawling for some ways and Alan said "I'm Tired", and I crawled around the corner and there was a truck tire stuck in the passageway. We decided to turn back and start heading out.

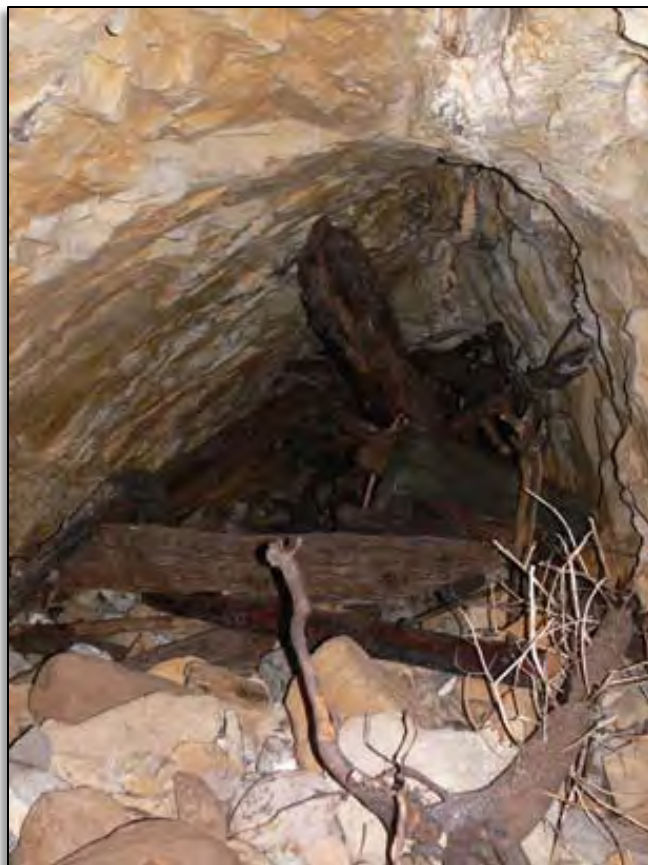


Alan at the truck tire. "Too tired". Photo by Jake Earl.

We crawled out of the cave and got a few pictures of the walking passage with the pools of water. This is one of my favorite spots in the cave since, in the state of Washington, are there many if any caves with this classic type of caving. I enjoyed this cave very much, and would love to go back to see more of the cave since there is more than 5 miles of mapped passageway.



On the way out, just climbing up from one of the deeper pools on the cave, about 3.5 feet deep at the deepest spot. Photo by Jake Earl.



The log jam just inside the entrance of the cave. It was a good obstacle to crawl over to get into the cave. Photo by Jake Earl.

If you are ever in the area i would recommend going to Little Brush Creek Cave. it is a very fun, and athletic cave with lots of crawling. The limestone has many colors and the texture is just classic. Especially since the cave gets flooded every year who knows what crawlway it may wash open and reveal a new part of the cave never before seen.

Lewis & Clark Caverns, 9/19/09

By Tom Evans

Lewis and Clark Caverns is a show cave owned and operated as a state park in Montana. While driving along I-90 in south western Montana it is frequent to see signs pointing out one of the many routes to this small, yet delightful, tourist trap.

The cave is developed in the Madison Limestone at the apex of a tectonic fold which fractured the rock, increasing the pore space for water movement, thus speeding cave formation. This interesting and compelling geologic story was the object of our geo-adventure this Saturday.

Every year oil company representatives make the rounds of earth science departments to attempt to recruit the top talent from each school. As part of these recruiting trips often field trips are offered to students to both teach them about geology and observe how they behave and learn in the field. This tourist cave trip was offered as a field excursion by the ConocoPhillips recruiter, since he attended Montana State University (MSU) for his masters and worked on the genesis of Lewis and Clark Caverns. Like most field trips offered by oil companies, students from a number of schools were in attendance. About half of our sixteen person group was from MSU, including myself, and the other students were from Montana Tech, and the University of Montana.

We met at Headwaters State Park, which is the headwaters of the Missouri River, and introduced ourselves. Nicely we did not have to wake up early to get there since we met at 10 am, however, many of the other students had long drives and were less than awake when they got there. The group was mixed, with structural geologists, sedimentary geologists, and the odd petrologist; I was there just to go caving.

The day started with a brief look at the packages of rock in the area, their structural modifications (folds, faults, etc), then we headed west to view the rocks that had been deposited above the rocks in the Gallatin Valley. These field trip stops are along a highway, so they were a bit nerve racking since I was appointed the 'safety officer' since I had been on the

trip last year. Sigh... I just had to watch the semi trucks wiz by. These stops were followed by a few interesting outcrop visits in a fault bounded valley where recent and fossil sediment was deposited, ranging in age from billions of years old to the younger few million year old sediments. Even though I had attended the same trip last year, I found this portion of the trip to be delightful.

We ate lunch at Lewis and Clark Caverns campground, then headed up the hill to get underground. Since our guide has worked at the caverns for decades they allow him to run his own tours of the caverns for students. So we waited for one of the tour groups to get far enough ahead of us, then we started our own tour. Like most show caves, the path is paved, well lit, and generally easy to navigate. The only exception is a short section best navigated by sliding on ones posterior; clearly my most favorite part of the tour. As usual we took our time, discussing cave formation processes, "nerding" out at the rocks and geology, and generally being a herd of geologists. The cave is beautiful, so the time passed quickly.

After reaching the exit we all walked to the parking lot and said our farewells and parted ways except for myself, my friend and fellow geo-nerd Cathy Lash, and our host. We had arranged to take a second trip into the cave to photograph some of the crystal growths off trail and attempt to photograph some of the big formations in the larger rooms. Now this part of the trip was fun. We breezed through the boring portions of the cave and went straight for one of the big rooms where Cathy and I played flash monkeys for a couple of hours.

We climbed all over that room, over the largest of formations, and generally played acrobat trying to get the flashes in the right locations. We then moved to the largest room and spent quite a deal of time photographing the largest formations in the cave. It also took hours, but it was worth every second of it, just to get off trail and see what it really looks like up close. At the end we were taken to the most decorated portion of the cave, far off trail, for a private tour.

The tourist route is largely degraded, but off the trail, and over a few passages, the crystal growths are amazing! It should be noted that Cathy was a cave newbie on this trip and had asked for the opportunity

to get off trail. Once again, I spoiled a newbie. She is now completely hooked! When we finally exited the cave and made our way home, she was still excited, albeit quite tired, for the next opportunity to go caving. With any luck I will be able to find another good cave to take her to in the relatively near future, just to solidly convert her to the dark side. Until then I will have to content myself with looking forward to going to Bighorn and Horsethief Caves.



*Crystals near the Snow Room in Lewis & Clark caverns.
Photo by Nick Worden.*



Ribbons near The Wall, beyond The Wind Tunnel in Lewis & Clark Caverns. Photo by Nick Worden.

Cascade Grotto Minutes
September 17, 2010
By Marla A. Pelowski

Note, due to the White Nose Syndrome presentation, very little business was conducted because of time constraints

Attendance: Chris Anderson (Washington Department of Wildlife), Jim Harp, Lane Holdcroft, Edd Keudell, Paul Lundgren, Hester Mallonee, Michael McCormack, Nikki McCormack, Albert Meerscheidt, Robert Mitchell, Glennis Monson, Stuart Monson, Erika O'Connor, Marla Pelowski, Steve Sprague, Aaron Stavens, Jerry Thompson, Ron Zuber; Guests: John Basset (Bats NW), Michelle ? (Bats NW); Deidre Erickson, Barbara ?, Pat Ormsbee (R-6 Bat Specialist, Willamette National Forest), Jesse Plumage (Forest Biologist, Mt. Baker/Snoqualmie National Forest)

Treasurer's Report:

N/A

Old Business:

N/A

New Business:

Tom Evans paid \$25 for the permit for the Twin Falls Highline/Rappelling event and would like reimbursement by the grotto. Moved by Aaron Stavens. Seconded by (sorry, didn't write it down). Approved, no dissent.

Jerry Thompson moved that we bring ideas to the next meeting regarding how to implement education of the public and other cavers regarding white nose syndrome. Seconded by Ron Zuber. Approved, no dissent.

Upcoming Cave Trips:

10/1/10-10/2/10 Come to Dynamited Cave to finish the cave conservation trip and remove the bags of debris which were hauled up from the blind pit but still remain in the cave. Contact Hester Mallonee.

Program:

Pat Ormsbee (R-6 Bat Specialist, Willamette National Forest) flew up to give our grotto a presentation on White Nose Syndrome and discuss possible upcoming policy regarding caving on United States Forest Service (USFS) land. October 1, 2010, mandatory decontamination will begin for USFS land in Washington and Oregon. Cave closure has not yet been decided. Jesse Plumage (Forest Biologist, Mt. Baker/Snoqualmie National Forest) and Chris Anderson (Washington Department of Wildlife) also attended to offer information and answers to questions.

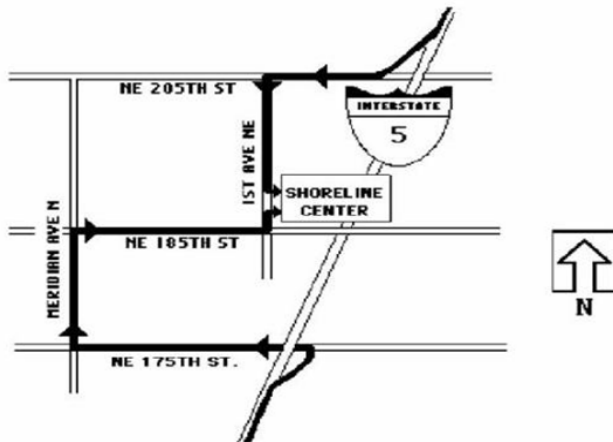
MEETINGS:

Regular grotto meetings are held monthly at 7:00 pm on the third Friday at the Shoreline Community Center, Hamlin room. 18560 1st Ave NE in Shoreline.

To get to the Community Center from Seattle:

Take Exit 176 on Interstate 5 (175th St. N) and turn left at the light. At the next traffic light (Meridian Ave. N) turn right. Turn right at 185th St. N (the next light). Turn left on 1st NE, which again is the next light.

The Community Center is on the right. Enter the building on the southwest corner and find the Hamlin Room.



Cascade Caver
P.O. Box 66623
Seattle, WA 98166