Cascade Caver

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Cascade Caver

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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.

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	Jon McGinnis	(206) 246-7388
Vice Chairman	Emily Ingram	(360) 531-1934
Sec/Treasurer	Marla Pelowski	(253) 835-7404

OTHER POSITIONS

Trip Coordinator	Open Position	
Librarian	Stuart Monsoon	(425) 271-2258
Regional Rep.	Dave Decker	(360) 675-3791
Program Chair	Emily Ingram	(360) 531-1934
Conservation	Hester Mallonee	(253) 838-6464
Safety	Dave McElmurry	(253) 813-8740
Editor	Mark Sherman	(206) 365-5386
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MEETINGS
Regular grotto meetings are held monthly at 7:00 pm on the third Friday of each month at the Shoreline Community Center in the Hamlin room. The Community Center is at 18560 1st Ave NE in Shoreline. Please see the back cover for directions.

UPCOMING EVENTS

March 14	Dynamited Cave – Trout Lake. Call Jon McGinnis for information.
March 18	Grotto Meeting. 7 p.m. Shoreline Community Center
March 19	WVG vertical practice Troutdale, OR
April 2	Jackman Creek Cave cleanup. Contact Hester Mallonee.
April 15	Grotto Meeting. 7 p.m. Shoreline Community Center
April 16	Cascade Cave, Cave Ridge. Contact Hester Mallonee (253) 838-6464.
April 22-23	Succor Creek vertical practice. Contact Gem State Grotto.
May 7	Red Barn vertical practice. Contact Wendell Pound.
May 20	Grotto Meeting. 7 p.m. Shoreline Community Center
May 28-30	Cave Ridge. Contact Aaron Stavens.
August 2006	NSS Convention Bellingham, WA

COVER

This month's cover photo of Nikki McCormack was taken by Michael McCormack. The picture was taken from the entrance of Gypsum Cave near Las Vegas, NV. The cave is well known to all the locals and has been heavily vandalized. It is believed to have been used by pre-historic giant sloths as a den.

Cascade Grotto May Meeting Minutes – January, 2005

By Marla A. Pelowski, Secretary-Treasurer

ATTENDANCE:

Van Bergen, Paul Hill, Emily Ingram, Cameron, Julie & Jon McGinnis, Jon Nestor, Loran Payne, Marla A. Pelowski, Mark Sherman, John Williams, Chris & Mike Wittenbrink.

OLD BUSINESS:

Treasurer's Report: As of December 31, 2004, the Cascade Grotto has $2,085.86 combined in savings, checking, and petty cash.

The pledge made by the Cascade Grotto to The Western Cave Conservancy in the amount of $600.00 for The Campaign to Save Oregon's Marble Mountain Cave expired as of January 1, 2005, without being enforced.

The Cascade Grotto's new notebook computer has arrived. It's a Gateway M320X, Intel Pentium M Processor 710 (1.4 Ghz), 60 GB hard drive, 512 MB RAM, 15" Ultrabright XGA TFT Active Matrix Screen, High Capacity Battery, Microsoft Windows XP Home Edition, 8x Multi-Format DVD Writer, to name a few items it came with. The grotto approved $1,100 for a new computer, which $1,100 was to include a $200.00 anonymous donation and another $200.00 donation from Marla A. Pelowski. The total computer cost before rebate was $1,252.99. After rebate of $200.00, the computer cost $1,052.99. After the $400.00 in donations, the grotto paid net $652.99.

NEW BUSINESS:

The votes are in and new officers as of January 11, 2005, are as follows:
John McGinnis, Chairman
Emily Ingram, Vice-Chairman
Marla A. Pelowski, Secretary-Treasurer
Larry King, Honorary Member

Congratulations to all!! For the record, 15 ballots were returned with the following tally: Chairman: Jon McGinnis-13, Michael McCormack-1; Vice-Chairman: Emily Ingram-8, Mark Sherman-6; Secretary-Treasurer: Marla A. Pelowski-15; Honorary Member: Larry King: Yes-14, No-1.

The Cascade Grotto needs a representative to the NCA. Dave Decker has been suggested that he may have already signed up. Jon McGinnis will check with Dave Decker to confirm.

Let Jon McGinnis know if you are a current committee head or if you would like to be one. The known committees and committee heads are as follows:

Hester Malloneé - Conservation Chair
Web Master - ? - Jon McGinnis, Marla A. Pelowski, and Michael McCormack are Administrators
Trip Coordinator - Needed
Vertical Coordinator - Needed
Program Coordinator – Emily Ingram
Cascade Caver Editor - Mark Sherman

One of Jon McGinnis's missions as Chairman is to fill the calendar with trips. The Cascade Grotto is looking for knowledgeable and experienced trip leaders. If you would like to lead trips, please let Jon McGinnis know. The grotto would then like the experienced trip leaders to take new trip leaders under their wing.

Dave McElmurry is trying to get Cave Rescue classes from Jon Punches in Roseburg this year. Dave is also trying to secure Camp Long as a vertical practice sight, which is owned by the Mountaineers in West Seattle.

It is the Cascade Grotto's turn to host the NCA Regional and we need to decide where and when. Trout Lake and Hells Canyon are in the running. Memorial Day is the traditional date, but the grotto is considering a non-holiday weekend in attempt to bring a different crowd of attendees. It has been noted that holiday weekends are usually reserved for family events (most with non-caving family members). An email requesting opinions from the list serve will be sent.

Michael has donated over $100.00 in software for the new computer. Since the grotto has allowed $1,110.00 for the computer purchase and $1,052.99 was spent, Marla A. Pelowski moves that the remaining $47.01 be paid to Michael McCormack as reimbursement. The move was seconded by many and approved by those in attendance.

PROGRAM:
Paul Hill brought in several cave maps and gave a presentation of longest and deepest caves in the United States. Thanks Paul!

Albright Cave – 9/14/04

By Van Bergen

That's right, the date is 9/14. A Tuesday. That's because Dan Crape happened to be on vacation that week, and his itinerary had him in the vicinity of Albright Cave on a Tuesday. He posted on the group asking if anyone wanted to meet him there. I guess I'm the only one with an excess of unused vacation time. Tuesday? Sure!

I even took off Monday so I could take a scenic drive through the North Cascades. As usual, it was pouring rain all day, so I didn't see any peaks. At least the waterfalls were impressive. The rain let up by nightfall, and I camped on the far side of the pass, not far from Mazama. I met Dan for breakfast in Okanogan on Tuesday morning.

Dan had GPS coordinates for the cave, and even a route. I don't know what a limestone cave is doing in the middle of arid central-north-east Washington, but there it is. We'd heard it was a two-hour hike to the cave. Dan's GPS led us through several intersections and on a winding, dusty dirt road up the mountain. From the parking area to the top of the mountain was about a 15 minute hike, and the cave was right where the GPS said it would be.

The entrance is in a sink at the top of the mountain, and it heads steeply downhill. It's not a long cave, but it's a pretty one. There are some formations and a lot of flowstone, Unfortunately, there's a ridiculous amount of graffiti. The main room is impressively big and tall. It's dry and not cold at all, but large parts of the floor are covered with animal scat. It looks about deer size, maybe elk, certainly bigger than pack-rat size. I don't know whether the animals enter into the cave, or it all washes in from the surface. There's a second crawling entrance, but we didn't feel like crawling in the poop to check it out.

At the end of the big room is a ladder. It's shown on the map in Caves of Washington, so we thought it might be old and rickety. What we found was a relatively new and sturdy ladder. All the better to carry your spray paint cans farther into the cave, I guess. At the bottom of the ladder was a medium-size passage with more flowstone, some beat-up rimstone dams, a couple of high domes, and an even more ridiculous amount of graffiti. Then there's a really tight crawl that soon pinches down to nothing.

Since it was a Tuesday, we didn't expect any company, but a couple of semi-spelunkers showed up. I say semi because although they had no coveralls or helmets, they did have multiple light sources. They weren't graffiti-sprayers, either; they were rock climbers from Omak out for some dark exploration. They even crawled through the poop to the smaller exit. They said they saw a bat there. And they

gave us rudimentary directions to the McLaughlin Canyon crevice caves – not far away, but too far for Dan and I on a Tuesday.

On the way back down the dusty road, we met a local who said the Department of Wildlife was going to close the road. I hope that's not true, because then the hike really would be two hours. Soon Dan was off to the rest of his vacation, and I was off to home. But since I was already so far out there, I decided to see some new sights.

Grand Coulee Dam was a just a big pile of concrete, but the basalt cliffs of the Coulee were really impressive. Great place to rappel, if there were anything to rig to besides piles of basalt chunks. The Dry Falls were a real treat. Not far past them, I came upon Blue Lake, home of the famous rhino cast. Looks like you really do need a boat to reach it. Just a little farther down the road are the Lake Lenore Caves, described by Dave Decker just a couple of issues ago. As Dave said, although they're really only rock shelters, the view from them is worth the short hike. The signs say that Indians used the caves, but I doubt that; the floors are just more piles of sharp basalt chunks. No place to sit.

There's a lot to see out that way, but only one small limestone cave. The graffiti is bad, but there are formations, including a few small live ones with dripping water. It's a long drive but the scenery's pretty. And the McLaughlin Canyon caves are not far away and sound interesting. It's well worth a visit, if you consider the cave as a stop along the way, not as the goal.

Notes on Some New LED Lights

By Scott Linn

Unless you have been living in a cave somewhere, you might not have seen that LED lights have REALLY taken off in the last few years. This is a very good thing for cavers, for a number of reasons:

1) LEDs are very shock resistant
2) LEDs produce a whiter light than incandescent bulbs
3) LEDs can be dimmed, with no decrease in efficiency (usually it increases)
4) LEDs can be run at very low power levels overall

If all you were ever going to do is run an LED light at full power, where the light output is >1 Watt, then it doesn't really gain you anything. The fact that you can dim them is what makes them so versatile and useful. The battery power savings by using only the light you need greatly increases the amount of time you can get out of a set of batteries, which often means you can use a smaller battery such as AA vs. C, or AAA vs. AA, or you can carry fewer spares. This is really important on multi-day caving trips or expedition caving.

One of the newer LED lights which has recently become available is the Princeton Tec EOS. This is a light which continues the trend of using a single high-power LED vs. an array. The LED is a 1.25 Watt Luxeon emitter from Lumileds. The advantage of a single emitter vs. an array of LEDs is that it can be focused. An array gives a very nice area light, but there isn't much "throw" or distance brightness. The EOS changes that.

What further differentiates the EOS is that it has a special optic lens which focuses the LED to a very narrow beam of light. This narrow beam is quite bright: You can still see

it when comparing it to a 10 degree wide 5W beam! What that means is that you get a very small spot which is very bright. Some people will actually like caving with this type of beam, as it is somewhat similar to a highly focused Mag light or similar incandescent light. Some cavers use pretty tight beams in their lights anyway due to the feature of incandescent focusing which creates a "hole" in the middle of the beam pattern. There is actually a little bit of side spill from the light too, so it's not as bad as just a super bright spot.

The EOS also has 3 brightness levels plus an emergency flash mode. I was glad to see they dropped the second flash mode, since that wasn't actually that useful. Power is supplied by 3 AAA batteries, which means that the light is integrated and quite small, but doesn't have a lot of battery power behind it, so it is relatively short-burning at high output.

In order to get an idea of where they set the brightness levels, I opened up the case and removed the batteries. The case is easy to open via a knurled knob on the back. It comes from the factory quite tight, so that you need a screwdriver or something else to put in the slot to loosen the knob. Princeton Tec, however, was quite smart in that they sized one of the plastic headband clips to fit into this slot, so you are never short of a method to open the case even if you slightly over-tightened the knob. Still, I recommend not over-tightening it to avoid problems in the cave.

After removing the batteries, I hooked up a variable power supply, set the voltage to 4.5V, and measured the current at the 3 brightness levels. I also varied the power supply voltage to see how the light responded. Princeton Tec "did the right thing" and incorporated a full step-down power supply in this light, which means it will stay at a constant brightness until the battery voltage drops somewhere below around 3.6-3.8V. That means that that you will get constant light using alkaline batteries until the batteries are around half depleted, at which point the light will start getting dimmer as the battery voltage goes further down.

The 3 brightness levels roughly correspond to 1.25W, 0.36W, and 0.1W. If the light put out a constant brightness for each of those levels over battery life, that would roughly correlate to 3 hours/13 hours/60 hours of light. In reality, those numbers will probably be slightly higher in the higher brightness case, and about the same for the lowest brightness level. Still, that's not too bad for a light running on 3 AAA batteries! Again, you have to evaluate whether the quality of the light (tight beam) is right for you. It isn't for me for a main light, but some people can get by. You could also put a diffuser of some sort on the front to get some spread, which of course would decrease the brightness both from scattering, and from the beam being wider.

The EOS can be had for as little as $27.00 from Amazon.com, with more typical prices in the mid-$30s. In my opinion, this is a very nice little LED light with nice features for a good price.

Another new light along the same lines as the EOS is the Nite-Hawk ECO. Nite-Hawk is a Canadian company which mainly makes bike lights. They were looking for a light which would have great throw for cyclists so they could see down the road/trail at night while traveling at speed. Nite-Hawk ended up developing an optic lens of their own for use with a 1.25W Luxeon emitter. This optic is somewhat larger than the Princeton Tec optic, and has a slight efficiency advantage (a few percent less light loss). By the way, the optics in both of these lights are referred to as TIR or TIROS optics, with TIR meaning "Total Internal Reflection". Basically that means the lens keeps the light inside with little loss before reflecting out the front. Most lenses being designed for use with Luxeon LEDs utilize TIR optics.

Nite-Hawk expanded their bike lights to add headlamps by providing a head strap and a different battery pack. The ECO uses 4 AA batteries on the back of the helmet, similar to other AA caving lights. The case is not waterproof (not a big deal) and somewhat difficult to get in to. The headpiece is waterproof.

The beam is similar to the EOS. I only got to see the beam of an ECO once while on Vancouver Island, but from what I remember they are pretty similar, although I believe the EOS might have slightly more side spill than the ECO. The ECO has two brightness levels: Full (1.25W I assume), and 10% (0.125W). There is no regulation, which probably means they use an internal dropping resistor to limit the current to the LED, which is somewhat wasteful of power. This is quite an oversight in an otherwise very nice light. The basic ECO costs $65 through IMO, which is a bit steep for a 1.25W LED light with no power regulation.

Regarding the beam, here is a snippet from a review in the Anchorage Daily News:

"The beam projects more as a tight spotlight than a broad floodlight, making it better for biking than hiking. At speeds above 6 or 7 mph, you're moving fast enough that you have to look 50 to 100 feet ahead of the bike into the widening part of the beam. When walking, the narrowness of the beam can sometimes be distracting; there simply isn't enough light spillage to illuminate the ground around your feet when you look down."

This correlates with what I thought the beam would be like to cave with, but others might not have such an issue.

Nite-Hawk is also coming out with what they are calling their "Digital ECO" which I think would be of much more interest to cavers, ignoring any beam issues. This light is the same as the ECO but has regulation to keep constant light output over the life of the batteries, plus 6 power settings: 3%, 10%, 25%, 50%, 75%, 100%. These would be very useful for cavers since we encounter many different passage sizes, walls of varying brightness, etc., and gives us many more options to "eke" out battery life. Personally, I prefer a continuous brightness adjust so I can really choose the light level I want for the conditions, however this isn't practical in consumer headlamps.

Another pretty cool feature of the ECO is "Hot Swap". This is where when you are replacing batteries, if you replace them 2 at a time (either the chosen 2, or one of two groups of two I imagine), the light won't go out. This is a pretty useful feature, being able to use the light while changing batteries.

The Digital ECO will be available in the Spring some time, and the official price hasn't been announced yet, but I suspect something over $100 US. Unless they want to cannibalize their normal ECO, then they might bump the price differential up even more. Again, I recommend people either see how the beam looks in the dark before committing to a light with such a tight beam, or look at an EOS and see if that appears okay to them as a main light. The Digital ECO could be a pretty nice caving light for some folks.

www.princetontec.com
www.nite-hawk.com

And, finally, there are currently 3 levels of Luxeon LEDs available: 1.25 Watt, 3 Watt, and 5 Watt. So expect to see some more caving lights based on the 3W in the near future, and possibly the 5W (although heat dissipation is an issue with both the higher output LEDs). While incandescent lights are less efficient than LEDs, their inefficiency results in a split between IR emissions and

heat, whereas the LED simply generates heat. The LED is very sensitive to heat, so it is very important to get any excess heat away from the LED, which is unlike a normal bulb which can get very hot (ever touch a halogen?). This is why we haven't seen any commercial headlamps to date based on the 3W and 5W Luxeons. But now that is changing… Princeton Tec has come out with a 3W light which looks pretty nice (available soon), and Petzl will be coming out with one themselves, although the Petzl rep has stated that the Duo is the only "real" cave light Petzl makes, and you shouldn't rely on the others for normal caving use.

In addition, there are other manufacturers (Cree, Nichia) who are coming out with new high-power LEDs which are more efficient than the current crop of Lumileds Luxeons. And, Lumileds, in order to counter these, has announced more efficient 3W devices in the near future. It's going to be an interesting year for LED cave lights.

Pickings, Ice and Dynamited – Trout Lake August 13-15, 2004

By Van Bergen

At the end of July, Jon McGinnis announced a trip to Dynamited Cave. That sounded great, since I'd only been caving a couple of times all year, and not once in Washington. Garret Coffman also planned to go, but he got sick and couldn't leave until Saturday, if at all. I drove down Friday evening after work, taking the back roads through the forest in the dark, scaring up a couple of elk along the way.

At a big campsite at Peterson Prairie, I found Jon, Julie, and Cameron; Robbie, a school friend of Cameron's; and Wendel Pound and Leigh Anne Hugdahl. I was sleeping in the van, so all I had to do was pull in, pull out my camp chair, and join the campfire circle.

Yeah, it sure felt good to be back at Trout Lake.

We planned to wait until noon Saturday for Garrett to show up before heading for Dynamited, so I followed the McGinnis crew over to Pickings Cave for the morning. I'd never been there and was impressed with the lava decorations – especially the many small lava stalagmites lined up along the sides of some passages. Julie called them the Little People. It's mostly a crawling cave but well worth the effort; there's a lot to see and we didn't see nearly all of it. It's one of the prettiest caves in the area, and even has some secondary mineral formation that looks like calcite. This was Robbie's first cave trip, and he was immediately sucked in.

We stopped back at camp to pick up Wendel and Leigh Anne for a quick trip to Ice Cave. This was Leigh Anne's first cave trip, and she too was immediately sucked in. Garrett never made it, which was too bad. The afternoon trip to Dynamited was for the vertically-inclined, which didn't include Robbie and Leigh Anne. But they'd had so much fun underground in the morning that they wanted to go to Dynamited too. What to do? Jon gave Robbie a quick vertical course and he was ready to go. Leigh Anne decided to walk in as far as the first drop and see what she thought about it.

There were already some cars in the parking area near Dynamited, and several teenagers, including a cheerful girl who insisted on showing us a "new dance" that involved shaking her booty at us. We were rendered speechless (until we were out of earshot, at least).

At the first drop, neither of our "new" cavers were about to stop. We lowered Leigh Anne down; Robbie rappelled himself down, with Jon coaching and me on bottom belay. He pronounced his first descent "so cool!" I forgot to mention that Robbie has cerebral palsy. It's not obvious, he gets around OK, but he gets tired easily and hasn't had too many

experiences like this. We went on down to the Sand Castle Room and checked it out; it's not as impressive as it was the first time I saw it four years ago. Meanwhile, Wendel showed Leigh Anne the free-climb along the wall, and she said she'd be able to handle that, no problem, so she didn't even consider ascending the rope.

By this time, Robbie said he might be getting a little tired, so we decided it was a good idea to head out. Then some Scouts came walking up from the second drop; they were older teens, so I assume they were Eagle Scouts. They had left a rigged static rope at the first drop, along with a piece of dynamic rope tied to a Friend but just lying on the floor.

While Jon and I helped Robbie complete his first ascent (also "so cool!"), more Scouts and then a couple of Scoutmasters arrived. One of the Scoutmasters had a wound behind his ear, just under his helmet rim. He had tried to rappel down the dynamic rope, which had been rigged to the Friend in a crack, when the Friend popped out and he went boom. Now we know Eileen Bergen is not the only person to bounce off her head there, although I don't believe the Scoutmaster bounced as far.

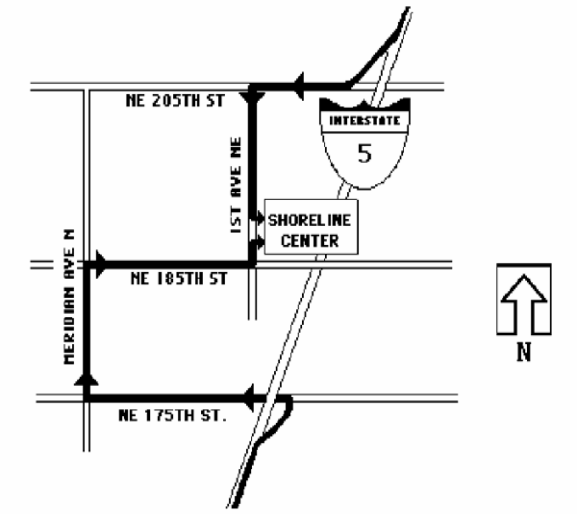
The Scouts and their Masters didn't have any actual ascending gear; they were playing it all by ear. Or by wound behind the ear. Jon offered to belay them all as they free-climbed up the crack, and they quickly accepted. They were all from Yakima and had been visiting the Trout Lake caves for years. They were really interested in learning more, so Jon and Wendel gave out their e-mail addresses and the grotto website URL. They haven't shown up yet; too bad, because we could probably teach them a few things.

The Scout parade was winding down, and it was Leigh Anne's turn to climb. She was most of the way up the crack when she discovered she was too short to make the last move. She was stuck, hanging on by a couple of nubs. Jon grabbed her arm and told her not to worry. A Scoutmaster moved underneath to catch her if she fell (well, at least he was brave….). Wendel climbed up behind her to coach. I backed away and covered my eyes. But with Jon's and Wendel's help, she made it the rest of the way. Not only that, but she still wants to go caving again.

After watching all the drama, it was my turn to be the last guy out, as usual. I got to use my Petzl Pantin for the first time in-cave, and it made that nasty overhung lip a piece of cake. Just stand up on the Pantin, taking the weight off the footloop. Then push off with one hand and move the upper ascender over the lip with the other. Useful little device.

We had planned to do at least the second drop, but with all the new caver ups and downs and the Scouts, we ran out of time. No problem, it was worth a shorter trip to see a couple of friends have a blast the first time underground. Later, Jon said that Robbie talked all the way home about what a great time he had, the best weekend ever, and how he wants to be a caver now. I wonder if he told his parents that Jon put him on rope….

The Cascade Grotto meets at 7:00pm on the third Friday of each month at the Shoreline Community Center. The Community Center is located at 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 bottom of the off ramp. 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. Don't get confused with the Senior Center, which is on the end of the building. Enter the building on the southwest corner and find the Hamlin Room.



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