

BIRMINGHAM GROTTO

NEWSLETTER

January 2012



VOLUME 42

NUMBER 1

BGN Calendar

JAN 17	SERA planning meeting 7pm, above Matthew's Bar & Grill at 2209 1st Avenue N. (aka The Fanaei Building).
JAN 31	Grotto Fun Money Maker event at the Birmingham Ballet (proceeds go into an account for grotto fun events). See David McRae if interested. There may be one more in 2012; details as they are made known.
FEB 14	Grotto Meeting 7pm, meeting space above Matthew's Bar & Grill at 2209 1st Avenue N. (aka The Fanaei Building).
FEB 17 FEB 19	Paint Rock Retreat at 2012 SERA site. Site info and pictures available at www.prvlodge.com .
FEB 21	SERA planning meeting 7pm, above Matthew's Bar & Grill at 2209 1st Avenue N. (aka The Fanaei Building).
MAR 13	Grotto Meeting 7pm, meeting space above Matthew's Bar & Grill at 2209 1st Avenue N. (aka The Fanaei Building).

The Grotto Calendar is being continually updated and is available online at www.bhamgrotto.org. Check it out!

It's Ours! William Shrewsbury

The new headquarters is ours! We are looking forward to having the room to accomplish great things. Over the last year many members dedicated uncountable hours to achieve this. First, our Board took the bold step to move forward with a vision for expansion. OVP Luckins and S-T Young then negotiated a deal with the Shriners that resulted in a win-win for both organizations. Once the contract was signed and a financial institution selected from several offers, the piles of paperwork began. The National Speleological Foundation has provided immeasurable guidance to the Society. I tip my helmet to both NSS and Foundation member Bert Ashbrook and NSS legal counselors Joel Stevenson and Jay Clark for helping us maneuver through the complex legal documents involved. The Foundation has always been there for us, and we are very proud of our association with them. On December 15th we started signing as the clock struck 12. An hour later, the keys were in our hands. Headquarters Commission Chairman Dave Haun arrived on site that morning with tape measure in hand and started sorting through plans. The Shriners are as proud of their history as we are - they retained everything, including the original blueprints and colored pencil drawings. Dave has spent days measuring and meeting with potential contractors for various phases of our renovations as we tailor the facility to our specific vision. Fundraising Chairman Bill Putnam has been working on several programs so that every member can be part of this exciting step. Look for a new form to appear on the NSS website on January 1st. You'll be amazed at how little it takes to do great things. As President of the Society, I thank you for the opportunity to be at the helm during this historic time. I'll do my best to ensure our Society's goals are achieved as we move forward. The lamp is lit and new passages lay before us!

Disclaimer

Caving trips posted are led by volunteers. No grotto committee reviews any trip leaders' qualifications. New cavers should inquire about the nature of the trip and the experience of the leader in advance. Those participating in the trips should be aware of their limits. On vertical trips all participants are expected to supply their own gear and be knowledgeable about rigging and safe practices.

The *Birmingham Grotto Newsletter* is published twelve times a year by the Birmingham Grotto, Inc. of the National Speleological Society, Inc. Other NSS Internal Organizations may reprint material provided credit is given to this publication and the author.

Annual dues are \$15.00 per individual and \$20.00 per family which is payable on October 1st. Dues are prorated for anyone joining during the year. The subscription rate is \$15.00 per year. The Birmingham Grotto will exchange publications with other NSS Grottos. Exchange newsletters should be sent to:

Birmingham Grotto
PO Box 59607
Birmingham, AL 35259

Articles, Trip Reports, Graphics, Poetry, and any other speleo-related material should be sent to the Editor via email at the address noted below. Naturally, the Editor will accept typed text in practically any form; however, electronic submission reduces the risk of typographical errors. Submissions via e-mail should be directed to: editor@bhamgrotto.org. The deadline for publication is the 25th of the month; however, the Newsletter is limited to 12 pages and often fills up quickly.



On the cover...
Christmas Tree formation
inside Tumbling Rock.
(Jeff Harrod)

Birmingham Grotto Newsletter

SERA Planning Report Edna Caudle

Birmingham Grotto Officers
President: Jeff Harrod, NSS 37101 webmaster@bhamgrotto.org
Vice-President: Alan Cook
Secretary: The Howells NSS 13926/18128 vdshowell@yahoo.com (205)591-5127
Treasurer: Dale Douglas, NSS 60404 dale.douglas@kellogg.com (205) 356-4019

SERA co-chairmen - Scott Fee & Dave McRae

Treasurer - Dale Douglas

Total pre-registration as of Dec 31 - \$996.00

Guidebook Chair - Dave Howell

Members - Donna Cobb & Jeff Harrod

Security - Fenn Spencer - confirmed 9 volunteers for security, 4 women rotated shifts @ gate check in , 5 men for grounds security.

Pre-Registration - Edna Caudle

Pre-Registered as of Dec 31 - 18 adults, 1 youth, 1 child. 7 t-shirts ordered. 11 banquets bought.

On-site Registration - Magz Sims - volunteers will be needed at SERA

T-shirt - Chris "Howdy" Davis

Porta Potty Procurement - David Caudle - vendor contacted & porta-potties ordered.

Entertainment - Dave McRae

Band - Pine Hill Haints confirmed - other activities being worked on

Banquet - Allen Bullen

Vendor Chair - Amy Strickland

Letters sent to all vendors from last year's SERA. NSS Bookstore has registered.

Vendor Electricity - Ryan Strickland with help from Spencer Rendall and Gary Barnes.

Munchie Stand - Fenn Spencer & Larry Money

Larry reports that two restaurants have been contacted.

Decon Station -SKTF will run this.

Next meeting will be at 7:00 p.m. on Tuesday, January 17th at 2209 1st Av. N.

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Rock-Eating Bacteria Found In Cave Reprinted with Permission

CORVALLIS, Ore. - A team of scientists from Oregon has collected microbes from ice within a lava tube in the Cascade Mountains and found that they thrive in cold, Mars-like conditions.

The microbes tolerate temperatures near freezing and low levels of oxygen, and they can grow in the absence of organic food. Under these conditions their metabolism is driven by the oxidation of iron from olivine, a common volcanic mineral found in the rocks of the lava tube. These factors make the microbes capable of living in the subsurface of Mars and other planetary bodies, the scientists say.

The findings, supported by a grant from the National Aeronautics and Space Administration (NASA), are detailed in the journal *Astrobiology*.

"This microbe is from one of the most common genera of bacteria on Earth," said Amy Smith, a doctoral student at Oregon State University and one of the authors of the study. "You can find its cousins in caves, on your skin, at the bottom of the ocean and just about anywhere. What is different, in this case, is its unique qualities that allow it to grow in Mars-like conditions."

In a laboratory setting at room temperature and with normal oxygen levels, the scientists demonstrated that the microbes can consume organic material (sugar). But when the researchers removed the organic material, reduced the temperature to near-freezing, and lowered the oxygen levels, the microbes began to use the iron within olivine - a common silicate material found in volcanic rocks on Earth and on Mars - as its energy source.

"This reaction involving a common mineral from volcanic rocks just hasn't been documented before," said Martin Fisk, a professor in OSU's College of Earth, Ocean, and Atmospheric Sciences and an author on the study. "In volcanic rocks directly exposed to air and at warmer temperatures, the oxygen in the atmosphere oxidizes the iron before the microbes can use it. But in the lava tube, where the bacteria are covered in ice and thus sheltered from the atmosphere, they out-compete the oxygen for the iron.

"By mimicking those conditions, we got the microbes to repeat that behavior in the laboratory," Fisk added.

The microbes were collected from a lava tube near Newberry Crater in Oregon's Cascades Mountains, at an elevation of about 5,000 feet. They were within the ice

on rocks some 100 feet inside the lava tube, in a low-oxygen, near-freezing environment. Scientists, including Fisk, have said that the subsurface of Mars could have similar conditions and harbor bacteria.

In fact, Fisk has examined a meteorite originating from Mars that contained tracks - which could indicate consumption by microbes - though no living material was discovered. Similar tracks were found on the rocks from the Newberry Crater lava tube, he said.

"Conditions in the lava tube are not as harsh as on Mars," Fisk said. "On Mars, temperatures rarely get to the freezing point, oxygen levels are lower and at the surface, liquid water is not present. But water is hypothesized to be present in the warmer subsurface of Mars. Although this study does not exactly duplicate what you would find on Mars, it does show that bacteria can live in similar conditions.

"We know from direct examination, as well as satellite imagery, that olivine is in Martian rocks," Fisk added. "And now we know that olivine can sustain microbial life."

The idea for exploring the lava tube came from Radu Popa, an assistant professor at Portland State University and lead author on the paper. Popa used to explore caves in his native Romania and was familiar with the environmental conditions. Because lava tubes are a sheltered environment and exist on both Earth and Mars, Popa proposed the idea of studying microbes from them to see if life may exist - or could have existed - on the Red Planet.

"When temperatures and atmospheric pressure on Mars are higher, as they have been in the past, ecosystems based on this type of bacteria could flourish," Popa said. "The fingerprints left by such bacteria on mineral surfaces can be used by scientists as tools to analyze whether life ever existed on Mars."

Original publication: <http://oregonstate.edu/ua/ncs/archives/2011/dec/scientists-find-microbes-lava-tube-living-conditions-those-mars>



Cave Rescues In The News

A 19-YEAR-OLD construction worker was rescued after he fell into a 100-foot-deep underground cave in Barangay Nug-as, Alcoy, Cebu last Friday.

Marvin Sera suffered a fracture in his left shoulder and wounds in the different parts of his body, said PO1 Marivel Pardo in a phone interview.

The teenager was confined at the Vicente Sotto Memorial Medical Center (VSMMC) in Cebu City.

Sera and his friend Victor Sibay, 29, had gone to a disco in the barangay last Thursday night. The barangay was celebrating its fiesta, Pardo said.

At 1 a.m. Friday, Sera boarded Sibay's motorcycle. They were about to go home.

While traveling, about six masked men blocked their way in Sitio Bulalacao. Sibay gripped the brakes, while Sera ran and disappeared in the darkness.

Sibay told the police he was punched by one of the men that caused his right eye to bruise.

Afterwards, the culprits fled and Sibay headed home. He did not look for Sera.

At 10:30 a.m., Nug-as Barangay Councilor Timoteo Amaca reported to the police station Sera's disappearance.

Pardo said Insp. Reyco Romaguera, the town's police chief, formed a search and rescue team. When they arrived in Bulalacao, they tapped residents Domingo Milan and Jerry Iñigo to guide them in finding Sera.

When they reached the mouth of the cave, Milan and Iñigo went down using a rope. After Milan turned his flashlight on, he saw Sera, who was crouching.

The rescue team let the rope hang loose from a tree trunk, which was put across the mouth of the cave, so that Sera would not hit the cave's wall when the rescue team started pulling the rope.

Milan and Iñigo placed Sera inside a sack and they tied a portion of the rope around it. Pardo said after Sera was pulled out from the cave, he was still conscious. But he couldn't speak.

Published in the Sun.Star Cebu newspaper on December 18, 2011.

Three rescue teams spent much of Christmas Day underground helping a caver who was injured by a falling rock.

The Cave Rescue Organisation was alerted about 5.40pm yesterday, Sunday, when the 39-year-old man suffered a serious leg injury in the Ease Gill system, on the western fringe of the Yorkshire Dales.

The caver was hit by the falling boulder in Molluscan Hall and members of the Clapham-based rescue team called in help from the Upper Wharfedale Fell Rescue Association and Kendal Mountain Rescue Team.

Rescuers gave the man pain relief and splinted his leg before bringing him to the surface via County Pot, 10 hours after he went underground.

Members of the Kendal team stretchered the man, described as a 6ft-tall, heavy casualty, across wet and boggy ground to an ambulance waiting at Bull Pot Farm.

The injured caver was then taken to hospital and rescuers were back home around midnight. The rescue was the CRO's 82nd of the year.

<http://www.grough.co.uk/magazine/2011/12/26/three-teams-rescue-injured-christmas-day-caver>

Birmingham Grotto Meeting Minutes
December 13, 2011

The meeting was called to order at 7:03 pm by President David McRae.

The following visitors were recognized: Ryan Taylor

Election of Grotto officers for the December 2011 - December 2012 term was conducted. The following officers were elected:

- President - Jeff Harrod
- Vice-President - Alan Cook
- Secretary - the Howells (2 for the price of 1!)
- Treasurer - Dale Douglas

Applause to outgoing President Dave McRae for his excellent service to the Grotto the last 2 years!

The minutes of the November 8 meeting were accepted as written in the December Newsletter.

Treasurer Dale Douglas reported the following activities on the Grotto account since the last meeting:

Opening Balance:	\$4,062.94
Expenses:	
Printing & postage	\$ 40.71
Website	\$ 60.00
PO Box Renewal	\$ 110.00
Catering Fundraiser Labor - Lucas Butts	\$ 30.00
Total Expenses	\$ 240.71
Income:	
Dues	\$ 351.00
Getaway Auction Payments	\$ 49.75
2012 SERA Pre-Registration	\$ 158.00
Catering Fundraiser	\$1,050.00
Total Income	\$1,609.00
Ending Balance	\$5,431.23

The unpaid balance from last February's auction is \$141.75.

Announcements:

- All 2011 Getaway auction debts must be paid by the 2012 auction, or the debtors' bids cannot be accepted.
- Dave & Sam McRae will host a New Years Eve party at their place in Blount County, with a bonfire at Alan Cook's property nearby.
- There will be another catering fundraiser Tuesday, January 31, Dave McRae in charge.
- The next SERA planning meeting will be Tuesday, January 17 at Matthew's.
- A cleanup of debris from the April 27 tornados will be held at Fox Mountain (an SCCi property) Saturday, December 17 starting at 9:00 am EST.

Old Business:

- Grotto Conservation Chair: Valerie Howell noted

that, with the recent departure of Deirdra Hahn for better opportunities in Knoxville, the Grotto is without a Conservation Chairperson. After some discussion, Dave McRae volunteered and was appointed to this position.

- 2012 Getaway: As tornado damage to Guntersville State Park is still not fully repaired and will not be by mid-February, it was voted that the 2012 Getaway will be held at the Paint Rock Valley Lodge & Resort (to be the venue for the 2012 SERA Cave Carnival) in Estill Fork, Alabama the weekend of February 17-19. The cabins will not be un-winterized, but (some) rooms are available in the lodge, and the owner will allow camping in the game room and other "open floor" areas of the lodge. Kegs not a problem.

- Grotto meeting location: Dave McRae announced that 2 "new" rooms at M Lounge (i.e. rooms we haven't used before) are available for Grotto meeting. These rooms, which are on the upper floor on 1st Avenue North, should provide a more smoke- and noise-free venue for our meeting(s).

New Business:

- Daniel Wood announced that the Pine Hill Haints have agreed to play at the 2012 SERA Cave Carnival.
- The December Grotto trip will be announced later on the Grotto E-groups, but may go to the Christmas Tree in Tumbling Rock, reportedly decorated for the season.

Trip Reports:

- Jonathan Hobbs reported on a trip to Pettijohn's, which found the waterfall at chest-deep level.
- Dave Howell reported on a lead check on Keel Mountain; alas, the leads turned out to be only impressive karst features, not qualifiable for the ACS.
- Howdy (aka Chris Davis) and Damon Moats reported on their attainment of certification level 1 at the recent SPRAT* workshop. (* = Society of Professional Rope Access Technicians, not "SPLAT" as originally stated.)
- Alan Cook reported on the Moses Tomb campout.
- Daniel Wood reported on trips to Kenamer Cave, Brown Pill Pit, and Kenna Pit with his brother James.
- Chris Garrison reported on a trip to Neversink.
- Dave McRae reported on a recent report of an enterable hole on top of the mountain on the Adcock property - the fabled upper entrance to Blowing Salt peter?
- Bruce White reported on a trip to Iron Hoop, with certain exit difficulties. Bruce reported the road down the cove to be in better condition than his driveway. (He neglected to mention he drives a halftrack.)

David Caudle presented a slide show of the best entries to the NSS Photo Salon.

Respectfully submitted,
the Howells, Secretaries

World's Oldest Bedding Discovered in Cave From LiveScience.com - Dec 8, 2011

The oldest known bedding - sleeping mats made of mosquito-repellant evergreens that are about 77,000 years old - has been discovered in a South African cave.

This use of medicinal plants, along with other artifacts at the cave, helps reveal how creative these early peoples were, researchers said.

An international team of archaeologists discovered the stack of ancient beds at Sibudu, a cave in a sandstone cliff in South Africa. They consist of compacted stems and leaves of sedges, rushes and grasses stacked in at least 15 layers within a chunk of sediment 10 feet (3 meters) thick.

"The inhabitants would have collected the sedges and rushes from along the uThongathi River, located directly below the site, and laid the plants on the floor of the shelter," said researcher Lyn Wadley, an archaeologist at the University of the Witwatersrand in Johannesburg, South Africa.

The oldest mats the scientists discovered are approximately 50,000 years older than other known examples of plant bedding. All told, these layers reveal mat-making over a period of about 40,000 years.

"The preservation of material at Sibudu is really exceptional," said researcher Christopher Miller, a geoarchaeologist at the University of Tübingen in Germany. [See Photos of the Ancient Beds]

Many of the plant remains are species of *Cryptocarya*, evergreen plants that are used extensively in traditional medicines. The beds appeared to be mostly composed of river wild-quince (*Cryptocarya woodii*), whose crushed leaves emit insect-repelling scents.

"The selection of these leaves for the construction of bedding suggests that the early inhabitants of Sibudu had an intimate knowledge of the plants surrounding the shelter, and were aware of their medicinal uses," Wadley said. "Herbal medicines would have provided advantages for human health, and the use of insect-repelling plants adds a new dimension to our understanding of behavior 77,000 years ago."

Microscopic analysis of the bedding suggested the inhabitants repeatedly refurbished the mats. Starting about 73,000 years ago, the site's inhabitants apparently also burned the bedding regularly, "possibly as a way to remove pests," Miller said. "This would have prepared the site for future occupation and represents a novel use of fire for the maintenance of an occupation site."

These mats were used for more than just slumber. "The bedding was not just used for sleeping, but would have provided a comfortable surface for living and working," Wadley said.

Beginning about 58,000 years ago, the layers of bedding at the site became more densely packed, and the number of hearths and ash dumps rose dramatically as well. The archaeologists believe this is evidence of a growing population, perhaps corresponding with other population changes within Africa at the time. By approximately 50,000 years ago, modern humans began expanding out of Africa, eventually replacing now-extinct forms of humans in Eurasia, including the Neanderthals.

The age of the oldest mats are roughly contemporaneous with other South African evidence of modern human behavior, such as the use of perforated shell beads, sharpened bone points likely used for hunting, bow and arrow technology, the use of snares and traps and the production of glue for attaching handles onto stone tools.

"These discoveries show the creativity and diversity of behavior that these early humans practiced," Miller told LiveScience.

Wadley, Miller and their colleagues detailed their findings in the Dec. 9 issue of the journal *Science*.

News & Notes

Dave Howell

*** Happy New Year, and welcome to 2012! The new year promises to bring several important events: the GUNTERSVILLE GETAWAY, which will be held this year at the Paint Rock Valley Lodge & Resort in Estill Fork, due to as yet unrepaired tornado damage to G'ville State Park, the customary venue for this event; the SERA SUMMER CAVE CARNIVAL, hosted this year by us, also at Paint Rock Valley Lodge; and of course the end of the world predicted by the Mayan calendar on December 21. (Gosh, didn't we just have the Apocalypse last May, then again last October? Seems like just yesterday the world was ending.) We have a lot to look forward to!

*** The December meeting, as usual, featured Grotto elections. Our officers for 2012 are as follows:

President - JEFF HARROD
Vice-President - ALAN COOK
Secretary - the HOWELLS
Treasurer - DALE DOUGLAS

Congratulations to you all on your seizure of power - ahem, I mean ascent to office, and a big Grotto *thank you!* to the outgoing officers for a job well done. Say, any of you outgoing officers interested in running for US Congress? You'd do a better job than our present one!

*** Word reached me a few days after Christmas that one of our former Grotto presidents is ill and in the hospital. The Grotto extends wishes for a speedy recovery to STEVE SPENCER; we hope you're back on your feet before these words see print, Steve. It's just no fun

at all being hospitalized during the holidays. After all, you don't want to miss raising ten kinds of hell New Year's Eve - right?

*** Ink is forever. When it's in the printed form, it has a remarkable tendency to survive bookburnings, censorship, and other forms of suppression. When it's in your skin, it's there for the duration. Check out TONY TOMASELLO's new ink, a full back piece, his first tattoo and wicked as hell! Congratulations, Tony, on your cool new tat, you're now a walking *objet d'art*.

*** In the spirit of the season, Valerie and I heard from a couple of different old-time Grotto members. CYNTHIA VANN and CHUCK PEASE are still actively retired in Sedona, Arizona, and sent a picture of themselves at Dunn's River Falls at Ocho Rios, Jamaica, one of their 2011 travel destinations. (Life is hard!) LARRY MULLINS and KITTY WOOLDRIDGE also enjoyed some travel adventures last year, to Nazareth, Kentucky for Kitty's 50th high school class reunion, and again for a reunion of her noviate class; to Half Moon Cay and Key West, which they describe as "a wild and crazy place during Fantasy Fest." And TOM and VIVIAN LAMB are enjoying the extravaganza of residential architecture on the banks of the Etowah they bought in Dahlenega, Georgia, and are preparing to retire from teaching. Always nice to hear from old friends. Maybe some of them might even make it to SERA this May.

*** Our colleague DON HARTER, formerly of our Grotto, now in Nashville, forwarded an interesting item via Grotto egroups. It seems that one Richard Thornton, architect and city planner, has written an article contending that terraces and other manmade features on the side of Brasstown Bald, the highest point in Georgia, are in fact remnants of an 1,100 year old village developed by the Maya. The article goes into quite a bit of detail about this theory, far too much to recount here; if you want further details, click the link that Don provides. As you might guess, the idea of ancient Maya in north Georgia generated quite a fuss in the southeastern archaeological community, everything from calling the theory a hoax, writing it off as sheer lunacy, or simply dismissing it out of hand. I am not ready to say the Maya were definitely in Georgia, but I do think the reaction says something about the mindset of academia.

*** We lost an old-time Grotto member last month. Some current Grotto members may not remember BILL SILER, but he was an enthusiastic and active vertical caver in the 1980s and 90s. Even back then, he was one of our older members; when he retired from his job, still an active caver, the Grotto presented him with a retirement gift of a cane fitted with a carbide lamp. He died shortly before Christmas at age 91, of complications from recent surgery. Bill is fondly remembered by all who knew him and caved with him.

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P.O. Box 59607
Birmingham, AL 35259

Forwarding & Address Correction Requested