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INTERCOM

Volume 48, Issue 5

September – October 2012

Iowa Grotto

P.O. Box 228

Iowa City, IA 52244

Grotto Website: www.caves.org/grotto/iowa

Coldwater Cave Project website:

<http://www.caves.org/project/coldwater>

Membership Dues: due January 1, \$15.00 per year, includes INTERCOM and Hotline subscriptions. INTERCOM subscriptions only are \$13.00 per year. The Iowa Grotto reserves the right to decline membership during or after a probationary period.

Due Dates: for submission of material for publication in the INTERCOM is Dec. 1st. Send material for publication, e-mail, disk or hard copy to:

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Coordinate photographs for publication in the INTERCOM with Scott Dankof, the INTERCOM editor.

Cave Rescue: Contact the Kentucky Disaster and Emergency Services Central Dispatch at 502-564-7815 for cave emergencies only in the NCRC Central Region of Iowa, Illinois, Indiana, Michigan, Minnesota, Missouri, Ohio, and Wisconsin.

Iowa Grotto Meetings: are the fourth Wednesday of each month, third Wednesday in December at 7:30 p.m. in Room 125 or thereabouts of Trowbridge Hall on the campus of the University of Iowa, Iowa City, Iowa.

Cover Photo: Indiana bats in Unknown Cave. Photo by Ed Klausner.



National Speleological Society

P. O. Box 228

Iowa City, Iowa 52244

Chairman - - - - - Mike Lace
Vice Chairman - - - - - Ed Klausner
Secretary - - - - - Teresa Kurtz
Treasurer - - - - - John Donahue

Volume 48

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C A L E N D A R

January Grotto meeting – Jan. 23rd, room 125, Trowbridge Hall. Presentation: Caving in Aruba and Bonaire.
February Grotto meeting – Feb. 27th, room 125, Trowbridge Hall. (program – Caves and Karst of Aruba and Bonaire)
March Iowa Grotto Meeting – Mar. 27th
April Grotto Meeting – April 24th
Iowa Grotto Summer Picnic (1st weekend in August) – Aug. 3rd (location to be announced)

Iowa Grotto
Regular Meeting
September 26, 2012

The regular meeting of the Iowa Grotto was called to order by Mike Lace, President, at 7:45pm with five members and three guests present. Prior to the meeting, Lace gave a presentation of his recent trip to Puerto Rico. Minutes of the August regular meeting were not available. Treasurers Report: Petty Cash--\$135; Cold Water Fund--\$75.85; General Fund--\$4394.72.

TRIP REPORTS: Patrick: Gave a report on a trip to Coldwater Cave with Mark Jones. Also he talked about Vertical Training with John and Teresa, Brandi and Jared, Nick and (new wife), and Jasen Rogers. Training was done by Doug Schmuecker with Mark Jones as his most trusting assistant. John Donahue: Gave a report on a surveying trip to Mystery Cave with Teresa Kurtz and Jeff Brandon. Mike Lace: Gave a report on a surveying trip to Puerto Rico with John Lovaas and locals, where they surveyed 16 caves. He was also in Haiti with Dan Nolfi where they surveyed an additional 20 caves.

FUTURE TRIPS: Ongoing survey trips to Mystery Cave, contact Warren Netherton. Other trips include Coldwater Cave, the small Iowa cave projects, and Kemling Cave. Contact the Iowa Grotto for more information.

OLD BUSINESS: No old business was discussed.

NEW BUSINESS: No new business was discussed.

ANNOUNCEMENTS: The November Grotto meeting is scheduled for November 28. Meeting adjourned at 8:15pm. Submitted by John Donahue, Treasurer

Iowa Grotto
Regular Meeting
October 24, 2012

The regular meeting of the Iowa Grotto was called to order by Mike Lace, President, at 7:45pm with 16 members present. Prior to the meet-

ing, Lace gave a presentation caving in Haiti.

Minutes of the August and September regular meetings were presented.

TRIP REPORTS: Liz reported on 2012 OTR (Old Timers Cavers Reunion) activities. Ed Klausner reported on two trips to Mammoth Cave (New Discovery area) and an expedition to Talus Cave (Maine).

FUTURE TRIPS: Ongoing survey trips to Mystery Cave. Contact Warren Netherton.

Bat surveys will begin in December with potential dates being the first weekend of every month following. Notices will be sent via the Iowa Grotto list serve. Contact Joe Dixon to report on bat sitings throughout the winter months and for more information on participating in the surveys.

Goliath Cave: Survey scheduled for December.

Kemling Cave: November trip planned.

Willard Cave (Delaware County): Vertical; contact Doug Schmuecker.

Coldwater Cave: Third week in November and December.

Fitton Cave (Arkansas): Contact Ed Klausner (CRF trip)

OTR: August 2013, Shippensburg, PA

OLD BUSINESS: None

NEW BUSINESS: 2013 officer nominations opened. Nomination presented and accepted to retain current slate of officers: Mike Lace (President), Ed Klausner (Vice-President), John Donahue (Treasurer), and Teresa Kurtz (Secretary).

ANNOUNCEMENTS: The next Grotto meeting will be held on November 28. No Grotto meeting is scheduled for December.

Meeting adjourned at 8:20pm. Following the meeting Alex shared a slide show on caving in the Ukraine.

Submitted by Teresa Kurtz, Secretary

Please welcome our newest Grotto member: Randal Reinertson from Waterloo

Old Timers Reunion

Brad Smith and Liz Robinson and about 1500 people
Dailey, WV over Labor Day Weekend

We got our new truck shortly before we left for OTR. For those of you who are aware of the atmospheric unpleasantness that took place at Convention in Lewisburg, we were one of the groups that lost our vehicle. After much searching and a lot of help from Consumer Reports we picked up our new vehicle about a week before we left. We did not have time to order a topper for the new vehicle. After a certain amount of gnashing of teeth we were able to put the topper from our 1994 vehicle on the new one, At least it provided protection from weather and theft.

We started out on Thursday the 23rd and drove to Batesville, Indiana, where we spent the night. After picking up a few items at Jungle Jim's Market near Cincinnati in Fairfield, OH we drove on to Washington, PA for our annual visit to the Pennsylvania Trolley Museum. We also planned to go to Pittsburgh and show our friend Steve Gaines the Inclines and the little industrial museum at Station Square.

We got to camp and set up our campsite. I worked on the dam and stacking firewood while Brad and Steve set up the cool pool. Steve has never gotten down here and had a chance to enjoy some of the local things. We took him to Green Bank on Tuesday. He found it a lot more interesting than he anticipated. The visitor center has been upgraded since we were there last with interactive museum exhibits, and posters depicting student projects from grade school to post graduate. It was too late to buy Cass tickets when we arrived there, so the next day we arrived and got tickets to Bald Knob. There were several other people from OTR on that same trip. (It seems like there are a lot of us who are both cavers and rail fans as witness by past conventions as well.) We also learned a big les-

son, make sure that you have plenty of gas in the vehicle in these small towns. We were able to get gas in Green Bank, fortunately at a lower price than we had been seeing around Elkins.

I worked registration for several hours, but this time I was able to get away for the opening memorial service to those who are no longer with us. I missed it last year. Registration was much more efficient this year. Those of us who were pre-registered were able to pick up our pre-registration packets with no delays. Those registering online had fewer delays but most were due to the printers. TRA replaced the old obsolete computers which was a big help. This year registration was down about maybe 20 or 25 people after having gone up last year. The Closed Cave List was late in arriving much to the consternation of attendees. The Membership chair took applications from guests for membership after the Doodah Parade and these who paid for and received TRA membership this year get a coupon for a \$10 discount on registration for next year. Not a bad deal. We were processing coupons given away last year. We also encourage children to get their own membership as junior members. Once they turn 18, instead of being guests they can be easily convert to adult regular members.

During the first couple of days the weather was good. Then we got some gentle rains and finally some hard rains. There was a thunderstorm going on when the fun run was scheduled to begin. Fortunately the campground was not turned into a total mud puddle. It made for some inconveniences, We had to take both of our tents down to B&C to get some repairs done from Convention, but we had to wait to get the sleeping tent rain fly sewn when it was dry.

Brad and Steve participated in the obstacle course and won first and second senior men respectively. They got some Caverbucks to spend on Vendors Row which Brad used to get a couple of Frequent Freezer cards (any

surprise there?) We ran into Maria Perez, now on the faculty of WVU, who had been active in the Iowa Grotto, where she earned her PhD (Brad attended the defense of her dissertation while I was having a dental crown made at the College of Dentistry this past fall) She was an OTR Virgin this year and was filling out her Virgin book. These books were instituted last year to give people a taste of what is available at OTR and to meet TRA and OTR staff. There is one for underage and one for adults.

The OTR theme was Renaissance Festival, so Brad and I had our costumes that we had worn at past festivals at the Amana Colonies in Iowa. At any rate it was fun. We also were awake (we always do the Midnight to early morning shift at the sauna duty) to see the entire Doodah Parade. with all of its silliness.

We stayed and helped with the take-down on Monday and packed up and left Tuesday. Our GPS took us through some interesting small towns and back roads on our way back. It's an America most people do not see when the stick to main traveled roads, interstates and airplanes. It was well worth seeing and in its own way very beautiful. We stayed over in Cincinnati and got a few more things to take home from Jungle Jims. Normally we got up to Syracuse and Watertown before heading home, but we decided that we needed to save my leave from work.

Elevation Uncertainty

By Ed Klausner

I've been working on an elevation problem in Mammoth Cave with Rick Olson (Ecologist, Division of Science and Resource Management, Mammoth Cave National Park.) From our survey data, the sump at the River Acheron Branch of River Styx is below the level of the Green River, which can't be. In thinking of the problem, what exactly does the elevation measurement mean? In simple terms, it's the height

above mean sea level. So what exactly is mean sea level? It turns out that that is not so simple.

Mean sea level can be determined at a specific location or locations using a gauge and measuring the level over long periods of time. The British have used several over time. For example, at Newlyn (Cornwall) measured between 1915 and 1921. Of course, different countries often use different locations for different time periods, often incorporating measurements for multiple locations around their country. A datum is a set of values that describes a geodetic system. Just as there are hundreds of datums used around the world for locating positions on the surface of the earth (NAD 27, NAD83, etc.) there are also hundreds of vertical datums used as well. In the US, we used the National Geodetic Vertical Datum of 1929, which was based on 21 US gauges and 5 Canadian gauges. The North American Vertical Datum of 1988 superseded the 1929 datum, but many agencies still use the 1929 datum.

Once a datum is adopted, it must be realized by doing a leveling survey and putting in markers (bench marks) labeling the elevation. There are a number of problems with this. First is that errors are made in the leveling survey. The further from the origin of the leveling survey, the greater the error is likely to be. The second problem is global warming resulting in the rise of the mean sea level. A third is that mean sea level varies globally by plus or minus 2 meters. An additional problem is that mean sea level is affected by such factors as sea water density due to temperature, amount of water on land-masses, plate divergence/convergence and the rise or fall of the earth's plates.

The problem can be eliminated by creating a datum for the map itself. One point is selected, usually the entrance, and this is labeled "0 Datum". All elevations in the cave map are relative to this point, so you may see a profile view with a scale going from 0 to some negative number

giving a graphic view of the elevations in the cave. This datum is only relevant to this specific cave. You may also see cross sections with the relative elevation given in feet or meters.

This doesn't solve the problem of the sump level in River Acheron Branch of River Styx. Our interest is relative; the relative elevation of the sump to the level of the Green River or to the rest of the survey net of the cave.

One common survey error is a reversed instrument shot that is either the first shot of the day or a tie shot to existing survey. If a survey station is found, it often happens that the shot is taken from the tie shot to the new survey but recorded as the opposite. If reversing the instrument reading closes the loop and the sketch shows that the readings were reversed, it's a pretty good guess that a mistake was made in recording the readings. Of course, just because the math works out better doesn't mean that it shouldn't be confirmed in the cave. We are still working on the problem.

A good introduction to this, map projections and datums, is a book by Jonathan Iliffe and Roger Lott: Datums and Map Projections for Remote Sensing, GIS and Surveying 2nd Edition.