

# THE NEAR NORMAL NEWS



*THE NEAR NORMAL NEWS* is published by the:

Near Normal Grotto #363,  
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Subscription price is \$10/year or free with the purchase of a grotto membership (also \$10/year). Issues are published in January, March, May, July, September, and November.

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#### ARTICLE SUBMISSION INFO

We accept most cave-related submissions. Equipment reviews, scientific articles, trip reports, announcements, cartoons, artwork, and pictures are all welcome. Most submissions must be received by the last Friday of the month prior to publication. Scientific submissions need extra time for review.

Send submissions, using the guidelines below, to Jeffery Gosnell at [gosnell@greatoakscamp.org](mailto:gosnell@greatoakscamp.org). Submissions on disk may be mailed to 1384 County Road 900N, Lacon, IL 61540.

**Photographic & graphic submissions** should generally be in JPEG format. Query the editor if your submission uses a different program. Photographs should list the cave, general location (ex. Southern Illinois, or Washington Co, IN.), names of any persons included in the photo, and name of the photographer.

**Written submissions** may be sent as an attachment using Microsoft Works®, Microsoft Word®, or plain ASCII (DOS-text), or incorporated directly into an e-mailed text message. If you are uncomfortable with your writing ability, simply put together a basic account of the trip—ignoring spelling, grammar, and punctuation—and request the editor to help draft the finished product.

**Scientific and Technical articles** are expected to be of a high standard, citing evidence of statements and crediting references, where appropriate.

#### The Near Normal Grotto

The Near Normal Grotto meets the second Friday of each month at 7 P.M. in the Community Room of

National City Bank  
202 E. Washington  
Bloomington, IL.

Adverse weather, holidays, and our annual September picnic may affect meeting times.

#### 2004 Executive Committee:

President: Marc Tiritilli

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Vice-President: John Schirle

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Secretary: Troy Simpson

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Treasurer: David Carson

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<http://oldsci.eiu.edu/physics/len/grotto/nng.htm>

The Near Normal Grotto is part of the **National Speleological Society** (NSS). We encourage all persons interested in caving to join the NSS. Membership is \$35/year. Members receive the *NSS News* (monthly) and other caving publications.

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Huntsville, AL 35810-4431  
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**On The Cover:** Soda Straw in Uticah Mine  
Photo by: Dave Carson

# Near Normal Grotto Business

## Minutes from December 2004 Meeting:

Meeting called to order at 7:28pm.

Present: Julie Angel, Brian Braye, Cheryl Braye, Angie Carson, David Carson–Treasurer, Matthew Carson, Justin Carson, Jeffery & Debbie Gosnell & kids, Jim Jacobs, Don Kerouac–Member at Large, Nathan & Angela Marcier, Beth Reinke, Ralph Sawyer, John Schirle–Vice President, Amy Simpson, Troy J. Simpson–Secretary, Marc Tiritilli–President, Tracy Tiritilli.

## REPORTS:

- The November meeting focused on planning the Christmas Party and discussion of two upcoming trips; TAG January 8-9 and Sullivan’s Cave February 19-20.
- There were no expenditure or revenue in November 2004. Current balance is \$294.32.

## OLD BUSINESS

- Planned TAG trip in January 2005. Departure is planned for Friday January 7. Caves to be visited will be announced later.
- 2005 membership dues are due. 2005 dues will remain at \$10.
- Notify the Executive Board of any address changes.

## NEW BUSINESS

- The NNG will still meet at the National City Bank in 2005.
- One of the focuses for 2005 will be to put the word out about the NNG. It was suggested to plan an introduction to caving program as the next program. Jim and Brian suggested it would be best to do it in February due to weather and having a better chance of including students. Troy will coordinate the program.

## TRIP REPORTS

- Brian visited Illinois Caverns. The state has let go the Site Interpreter and other staff will be let go in 2005. The only way to know for sure about visiting hours is getting info from the internet. Brian mentioned he had made it to the “Dragon.”
- John also visited Illinois Caverns with recent visitor Jason K. They explored Rimstone River.
- Troy and Nathan visited Cave River Valley and brought some updated photos of Endless Cave.
- Don Koons reports the last trip to Pautler Cave added 1,200 feet and 30 stations. He did restoration work at Fisher Cave.

- Marc went to Carter Caves S.P. for cave rescue orientation. He had a starring role as an unconscious victim.
- Julie will be conducting graduate work at Carter Caves.

## UPCOMING TRIPS

- Roy Becker will be going to Buckner’s Cave this weekend.
- John and Jeffery are planning a “Last Trip to IC” [*Editor’s note: this trip was cancelled.*]

## ELECTIONS

The 2005 slate of nominations:

President – Marc Tiritilli      Vice President – Ralph Sawyer  
Secretary – Troy J. Simpson      Treasurer – David Carson  
Member- At- Large – Don Kerouac

Jim motioned to close nominations, seconded Jeffery, motion accepted. Jeffery motioned the slate be voted on collectively. Marc and Troy passed out ballots with instructions to vote yea or nay for the slate. A unanimous vote of Yes for the 2005 nominations.

*Secretary’s Note: On behalf of the Executive Board and membership, we would like to thank John Schirle for his outstanding service as Vice-President that past 3 years!!*

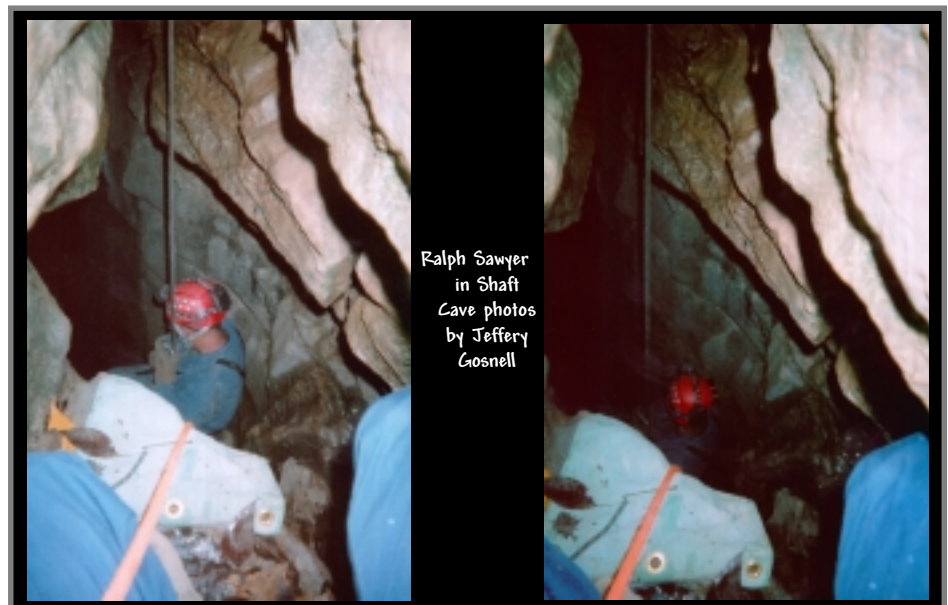
## ANNOUNCEMENTS

- Next NNG meeting will be January 14, 2005
- Troy will be breaking out the archives of Near Normal News of the Past 1991-2004. Bring past grottos activities and stories.

Meeting adjourned at 7:56. Membership enjoyed another year of White Elephant Gift Exchange!!

Respectfully Submitted by:

Troy J. Simpson, Secretary



# VERTICAL CAVER RAMBLINGS OF A TROGLODYTE

by Jeffery Gosnell

## TRIP REPORT ON GREEN EYE PIT I

In November 2003 I wrote in this column, *"I love caves. I hate heights. Since some of the best caves in the world require vertical work, something has to give."* Fear lost the battle on a rainy evening in October 2004 as I began the 95' descent into Green Eye Pit I.

The day started at 6 a.m. with a hard, steady downpour that followed us from Bill Morrow's house in Mohmet, IL to the Star Buck's in Bloomington, IN. At 10:00-our scheduled start at Green Eye-Bill, Ralph Sawyer, and I drank coffee and discussed alternative plans on a cell phone with Marc Tiritilli.

By 11:00 six of us pulled into the parking lot of Buckner's Cave. With Marc was a pair of teenage videographers coming to do a documentary on vertical caving. But instead of setting up camera angles, Rich and Chris stood in a hard rain gearing up for their first trip underground and Buckner's 450' crawlway.

The trip through Buckner's was enjoyable, but brief. Fixed firmly in each mind was the goal of Green Eye, and with fading daylight we stood in a soggy pasture rigging the pit.

Video cameras ran as Ralph and I hung on our tied off racks and QAS to place rope pads under the two lines. More than nine stories below me was the goal I had been working towards for more than a year. The familiar taste of fear stuck in the back of my throat. In ever-darkening twilight, Green Eye Pit had transformed itself into a black, gapping maw, ready to devour any who dared enter. I wondered out loud "I can't believe I'm doing this!" and then remembered the cameras. "Uh, Rich?" I asked, "When you edit this, can you leave that line out?"

Pads secured, Ralph descended. Time slowed, measured solely by the hammering beats of my heart. I was already on the second line. The next ride down was mine. If I wanted to back out, it needed to be now, before I heard the words...

*"Off rope!"* The echoing call reached my ears, and my hand reached for my



QAS. I had trained for this-on the ISU climbing tower, at the grotto picnics, in the oak trees at home. Yes, I was keenly familiar with that bitter taste of fear in my throat--it was there on every "practice" descent--but I also knew the sweet flavor of triumph that awaited me 95' below.

I looked at the camera and spoke nervously, "This is my first vertical descent into a cave." Was that an apology? An explanation for the bumbling effort Rich was about to record? I am still unsure, but my next statement was more assertive. "Rappelling," and I slipped over the ledge.

"Oh, wow!" I had seen pits before, but they were called "domes" from those low vantage points. I had not expected the change in perspective to be so different. With each wall lined by flowstone and draperies, with every ledge arrayed in stalagmites and stalactites, I felt suspended from the ceiling of a grand cathedral, surrounded by the pipes of a massive organ.

The rain that had ended hours ago on the surface still fell in the cave. Long streams of water combined with fluttering fall leaves to fill this surreal world with flashes of silver, yellow, and orange.

Moments passed, and I stood on the cave floor savoring the aroma of success. I love caves. I am scared of heights. Fear had to give.

Bill joined us, followed by Marc and Rich on a tandem rappel that allowed Rich to record the experience, while Marc worked the descent. Chris remained on the surface awaiting our return.

By the time Marc's feet touched the floor I was cold, wet, and ready to ascend. A steady, even pace brought me back to the surface and to the omen of approaching storms. We raced back to

the car in rain and lightning.

Sunday dawned clear, clean, and bright. The dark descent into Green Eye was repeated in the 76' belly of Shaft Cave. But I'll leave the telling of that tale to another.

## THE NOVEMBER ISSUE THAT WASN'T

It was a huge disappointment to not have a November issue to publish. Since then, several grotto members have mentioned trips that they have been on, but have not reported.

The ultimate success of THE NEAR NORMAL NEWS lies not in its editorial staff, but in its submissions. Your fellow cavers want to hear from you. Trip reports, gear reviews, and even your wedding announcements are welcome here. I hope we have a full six issues in 2005!

## THANK YOU, JOHN

After 3 years of service, John Schirle has stepped down as grotto president. I, for one, appreciate his years of service. On the same note, welcome Ralph to the board! And welcome back everyone who served on the previous board. I'm thrilled the phrase "Red Caves, Blue Caves" was not uttered once during the elections.

## WHERE'S THE COLOR?

Assistant Editor, John Schirle has stepped down from his position at Camp One Way, limiting our access to a cheap color printer. My own camp has a color printer in it's Peoria office, and I hope to be back in color by the March issue.



Ralph Sawyer's Mysterious Photo in Shaft Cave (see article on page 5)



# IMAGES BELOW AND FAILED PHOTOGRAPHY

By Ralph Sawyer

Perhaps you've seen the photo, famous by caver standards, of Fantastic Pit in Ellison's Cave, by Jerry W. Brown. Four or five rappellers on the same rope descend the aptly named shaft. The uppermost rappellers, just dark dots, are surrounded by a heavenly glow, a yellow light flares up the rope like carbide flame above the lower rappellers. The photo is featured on the cover of my old *On Rope* catalog, on the cover of ALPINE CAVING TECHNIQUES by Marbach and Tourte, and on the cover of CAVE PASSAGES by Taylor. I'm not sure when I first saw the photo but I remember wondering how more than one person could rappel on the same rope. Eventually I realized they were the same rappeller, firing off a flash unit at intervals. The camera was at the bottom of the pit on a tripod, with the shutter locked open. As I became a more experienced caver, and especially since becoming a novice vertical caver, my determination to make a modest imitation of Brown's masterpiece — in a more modest pit — has grown. And despite the fact that I now own a digital camera, I would prefer to make my version with my beat up old single lens reflex (SLR) camera.

My first attempt at this type of photo was in Buckner's Cave last winter with Bill Morrow and friends. I set the camera on a tripod, focused, set aperture, and locked the shutter open with a cable. My helper moved around the room, firing off a flash at each spot. In between flashes, I placed a shroud over the lens. We worked on several images, changing only the aperture for each shot. It was time consuming to set up and make photos this way. We were already wet when we began setting up and by the time we finished we were both shivering.

I could hardly wait to get the prints back from the camera shop. But Peoria Camera Shop did not bother to print the

photos — they were so underexposed that it would have been pointless. I had used 100 speed film, which is apparently too slow. I reminded myself that Buckner's was practice for my imagined pit shot, but I was still disappointed.

A short time later my in-laws gave me IMAGES BELOW, A MANUAL OF UNDERGROUND AND FLASH PHOTOGRAPHY. I suppose it is out of date by now — it was published just as digital cameras were gaining in popularity — but what a great book it was for me, since much of the book deals with making photos with an SLR on Bulb setting (shutter locked open).

I was anxious to put my new knowledge to work. Preparing for an upcoming vertical trip, I practiced assembling my gear by flashlight on my den floor, calculating correct aperture, clicking the shutter open and closed with the cable release, gently moving the shroud off and on the lens in the dark.

Finally the much-anticipated day arrived. I and fellow Near Normal Grotto members were gathered around the entrance to Shaft Cave in southern Indiana. I conned Bill Morrow and Marc Tiritilli into operating flash units for me. I rappelled first. Once I was off rope I learned my tripod was too short to set low on the floor (I don't remember this being a problem in my den). I had to stack rocks to elevate the camera enough to peer through the viewfinder.



Ralph's Big Room Photo

Then Murphy's Law really kicked in. On Bill's rappel he shouted the flash unit was not working. *You mean you can't get it to work, I thought, because you weren't paying attention when I showed you how to fire it.* Not only that, but he had apparently kicked loose two small rocks on his way down, both of which made a very respectable impact on the pit floor. Luckily I was not in the fall zone. Each time Bill tried to fire the flash, I removed the shroud from the lens for an uncomfortably long time. Bill never got the flash to work. Once he was off rope we discovered I had failed to close the battery cover properly. The two "rocks" that fell were the batteries.

Marc was able to fire the flash as instructed, every twenty feet. I had the camera aimed and focused, with the proper aperture. I moved the shroud off and back on quickly after each flash. Once Marc was down, I unlocked the cable, but I did not hear the click of the closing shutter — it may never have been open.

The one image I have remains a mystery. There are no ghost images or silhouettes in the photo. Because I was afraid of too much flare, I asked Marc to stop flashing thirty feet from the floor, and the lowest part of the image is pretty dark. It would be nice if there were an identifiable caver in the photo.

Is this the shot I took during Bill's no-flash descent? A lot of light at the top of the pit suggests this is daylight only. I had that shroud off of the lens for a long time waiting for Bill to flash and the camera was loaded with very fast 1600 speed film.

In the Big Room of Shaft Cave, I fired off a bunch of shots. Bill reminded me to save a few shots for the ascent out of the pit, but somehow I failed to comprehend what he was saying and I used up all the film.

My conclusion is I am too scatterbrained for this kind of photography. Which makes it even more of a challenge. Which means that when I finally succeed with my pit shot, the photo will be more valuable to me. By that logic I guess I am not ready to give up yet. Anyone here want to do some vertical caving? Can I show you how this flash unit works?

# The Platonic Form of Stalactites

By Mari N. Jensen

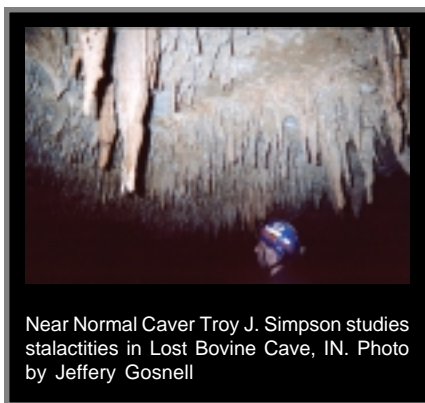
Reprinted with the permission of the University Of Arizona News Service

No matter whether they're big, little, long, short, skinny or fat — classic stalactites have the same singular shape. Almost everyone knows that stalactites, formations that hang from the roof of caves, are generally long, slender and pointy. But the uniqueness of their form had gone unrecognized.

"There's only one shape that all stalactites tend to be. The difference is one of magnification — it's either big or it's small, but it's still the same shape," said researcher Martin Short of the University of Arizona in Tucson. Short and his colleagues have developed a mathematical theory that explains how stalactites get their shape.

"It's an ideal shape in nature and in mathematics that had not been known before," said Raymond Goldstein, a UA physics professor and senior author on the research report. "The Greek philosopher Plato had the concept that there are ideal forms underlying what we see in nature. Although any particular stalactite may have some bumps and ridges that deform it, one might say that within all stalactites is a idealized form trying to get out."

The universality of stalactites had probably been overlooked because the cave formations vary so much in size, said Short, a doctoral candidate in physics at UA. "The result was a surprise," he said. "We had no idea going into this that we'd find this basic shape."



Near Normal Caver Troy J. Simpson studies stalactites in Lost Bovine Cave, IN. Photo by Jeffery Gosnell

Although people have investigated how cave formations grow, few scientists examined why stalactites have their characteristic shape. After someone suggested that the tubules growing in the laboratory resembled some cave formations, Goldstein became intrigued by caves. He and his colleagues took a field trip to the famed Kartchner Caverns State Park in Benson, Ariz. and were floored by the variety of forms, especially the ripples many structures possess. So Goldstein suggested that his student Martin Short investigate the formation of ripples on stalactites. That task turned out to be extremely difficult, Short said. First he had to learn about the underlying dynamics of stalactite growth.

Stalactites grow when water laden with carbon dioxide and calcium carbonate drips from cracks or holes in the cave's ceiling. As a water droplet hangs from the crack, the carbon dioxide escapes, much as a bottle of sparkling water fizzes when opened. As a result, the calcium carbonate comes out of solution and is left behind as a tiny bit of solid calcium carbonate. As each successive drip flows over the minute mineral deposit, the sequence repeats, ultimately forming a stalactite. Because the shape stems from the flow of water over the surface of the growing stalactite, the team turned to the field of fluid dynamics. The researchers developed an equation to describe how a stalactite's shape evolves. "It's a general equation of motion for the growth of stalactites," Goldstein said. "It's a geometric law of motion."

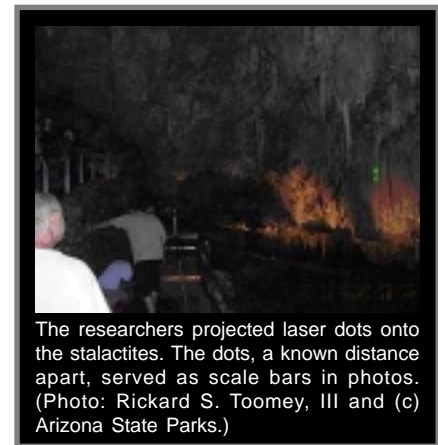
Then the researchers plugged the equation into a computer and asked it to "grow" some shapes. To the team's surprise, no matter what shape was used as a starting point, the computer's formations lengthened and thickened in a universal manner. The results looked strikingly like classic stalactites.

"The computer told us there was something unique to look for, this ideal form,"

Goldstein said. The researchers then solved their equation of motion and obtained a specific mathematical expression that describes the carrot-like shape of stalactites.

The next step was to test their model against the real thing, so the researchers returned to Kartchner Caverns. "We spent four hours in the cave with cameras and strobe lights and laptops. We took dozens of pictures," said Goldstein.

Because cave formations are delicate, the researchers could not stomp around measuring the stalactites by hand. Instead, the scientists used lasers to project a pair of green dots onto the stalactites from afar and then took pictures of the stalactites. The researchers knew how far apart the green dots were, so the dots served as a scale bar for the pictures. Then the researchers could garner the stalactites' dimensions from the pictures.



The researchers projected laser dots onto the stalactites. The dots, a known distance apart, served as scale bars in photos. (Photo: Rickard S. Toomey, III and (c) Arizona State Parks.)

Back in the lab, the researchers analyzed the actual stalactites and compared their shapes to the ideal form predicted by the mathematics. The real and the ideal differed by less than 5 percent.

"We calculated the shape mathematically and said, well, we have to go see if this is right," Goldstein said. "And we did. And it was."

Kartchner's Toomey said, "It's cool because the research contributes to learning new things about this cave that apply as well to other caves throughout the world," adding, "Missions of state parks include preservation, understanding and education. To have Kartchner and other state parks available for these types of studies helps further these missions."

Now, Short and Goldstein say, they finally know enough to figure out what gives stalactites their ripples.





# NEAR NORMAL'S NEWS 'N STUFF

## LOVE & MARRIAGE & CAVING

We Thought You'd Want to Know - We Got Married! On December 16th, 2004, around 12:10pm, we exchanged rings and were officially married by a Unitarian minister in Urbana, Illinois, in the most minimal of ceremonies. We plan to take a little honeymoon trip, perhaps to central Mexico and to celebrate for the rest of our lives. Please, no gifts! Really, we've got way too much stuff. Thanks!



Joann Jacoby & Steve Taylor  
(no name changes, in case you were still wondering)

## LARRY BIRD AND THE HENNEPIN CAVE

Saturday, December 18, Ron Bluemer & I went to Hennepin in Putnam, Co. to lay out the fort site's stockade. Terry Judd is the one working this project for Hennepin. Ron has published 3 books and teaches in Granville and also writes for the News Tribune in La Salle. There are about forty-two of these buildings inside of Fort Hennepin. The outside walls are 467' along the Illinois River front. These walls are like the ones in Starved Rock's fort.

I brought yellow tape to lay over all the walls that made up the stockade's 3' thick, double walls. It took us 4 hours to measure the 37' x 31' outside walls. There is a small cabin inside of this 11' x 12' "L" shaped structure. An indoor stool area was in one corner and a fire place on the south wall. There were three guns inside the cabin with a keg of musket balls and a keg of powder.

In the courtyard and within the main wall is a hole or possible well tunnel that drops down to a cave. This 4' round hole has two inch trees growing down the sides into the cave. The cave runs west 150' to the Illinois River.

*Only* the NNG will be able to go into the cave from the river to tell if the cave is tall enough to walk in, and I *believe* it will be because the cabins in Starved Rock's fort have the same thing coming into two of them. We are waiting for the water to go down some more before the NNG can enter.

The Mayor of Hennepin can by after we had the walls all laid out with tape and said he was really surprised by what has been found.



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