

# The Tech Troglodyte

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Fall 1994

# THE TECH TROGLODYTE

A JOURNAL OF THE VIRGINIA TECH GROTTO OF THE  
NATIONAL SPELEOLOGICAL SOCIETY



Fall Semester 1994

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## Editors Plea

by Eileen & Laine (who else?)

Welcome to another exciting Trog. Thanks to all those who submitted stuff to fatten it up and provide some education and/or amusement.

Hey, folks, don't be shy about submitting articles to the Trog. You don't need to be a trainee to turn in a trip report, and if you have some opinions (and we're sure you do!) on some good caver techniques, let everyone know. Who knows, someone may bind it useful.

We were a bit low on trainees this semester, hence only a few trip reports. What this cave club (and newsletter) needs is some fresh meat. Maybe we can make this new semester an exciting one.

If you have any pictures, ideas, articles, or whatever for the Trog, you know who to contact!



## **On Camera, Underground**

by Carl Bern

As a person I am always attempting to experience and try new things (what about the rest of us dogs? --Eds). This is why I decided to join the Smokehole trip going out on October 21. Not only would this be my first time in Smokehole, but the purpose of the trip was to attempt to videotape underground. Prior to this my main connection to underground filming had been through the Disney Channel.

It was sometime in the afternoon when we finally assembled the entire group, complete with videotaping equipment, at the Bat Ranch. The group consisted of Mike Newsome, Big John Fulmer, Ray Sira, Eric Owen, Greg Frohn, and myself. The equipment consisted of Mike's camera complete with a water-proof bag that can be filmed through, two high powered electric lights belonging to Ray, and a large, foam-lined plastic case for carrying the camera when we were not filming. The lights would be the greatest limitation on the amount of filming we could do. Their batteries would run out after roughly twenty minutes, long before the camera batteries would die.

We donned our cave clothes and were dropping into Smokehole not too long after. We made our way to the place where you meet the stream for the first time and decided to begin videotaping there. Mike stood with the camera at the bottom of the slope that drops into the stream and the two high powered lights were held by people positioned on either side of the slope. Mike then filmed myself and Greg making our way down the slope. We then set up a number of other shots as we moved slowly upstream. Each time we tried something different, changing the lighting, the adjustments on the camera, the angle of the shot, etc. Finally, we packed up the camera with the hopes of filming more when we got to the Big Room.

The only problem was that we could not find the Big Room. We scrambled around the large breakdown pile and surrounding passages for about an hour pondering aloud such subjects as how to get sex, drugs, and rock 'n roll into a caving movie. During this time we sent Mike, as the only person wearing a wetsuit, into a partially submerged passage in a section of the cave below the breakdown pile. After the trip we found out that this was the passage to the Big Room, but when Mike has not found the way after about five minutes we headed back up to search the breakdown pile for another twenty minutes. After deciding that the cave gods did not want the Big Room to be filmed on this particular day we chose to do the next best thing: film the water exit.

After making our way to the start of the water exit we got out the camera and lights one more time. Mike held the camera while Greg and Ray held the lights and we all waded into the water. As usual the water was cold enough to take your breath away. Then, as the floor sloped away beneath my feet I realized that this was the first time I had ever been swimming underground. It's really nice to watch your cave pack bobbing next to your head as you move downstream with the current. If I had still had any feeling in my body at the time I probably would have floated there awhile and enjoyed it longer. As it was I kept moving. I guess we were lucky that the water was low on this particular day because no one had to duck under water to make it through

the sump. From what I have heard that is the leap of faith one makes when leaving Smokehole through the water exit. Soon we could smell the overpowering odor of vegetation that marks the end of every summer cave trip (especially those summer trips that occur in October --Eds). Before my feet had even ceased to be numb we were back at the Bat Ranch critiquing the video we had made.

For anyone else trying to film underground here are some of the things we learned from this experience.

- When in a cave your camera will be subject to damage from dust, water, mud, bumps, and falls; think well on the precautions you must take to prevent such damage.
- Keep battery life in mind. The high-powered lights needed for filming underground can drain batteries fast.
- Unless you have a tremendous amount of light, your subjects are going to need their own personal light sources. The solution for preventing light trails on the film would probably be to have the subjects use a directional electric light (such as a Petzel Zoom) that can be angled downward, away from the camera.
- When filming with the camera inside a waterproof filming bag, autofocus is your enemy. As soon as some dirt or water gets on the outside of this additional lens the camera will automatically focus on that instead of your subject.
- We seemed to have our best results with close-up shots; these also require less lighting.
- A camera-mounted light would be an idea worth trying. We did not try it on this trip, but it seems (in theory) that it would eliminate a lot of the excess shadows that result from light hitting the subject at an angle to the camera's viewpoint.

## 1/06/95 Convention Planning Meeting

by Carol Tiderman

At this meeting several significant commitments were made by VPI. We will be camping at the South Athletic Field, using all of the Donaldson Brown, Auditorium in Squires, and Burrus. Shower Access will be the visiting team locker room in the gym (men), the visiting team locker room in the coliseum (women), lockers in the War Memorial Gym, and in the dorm we are assigned. We have the Duck Pond area for the Howdy Party with a rain substitute area at the Stadium. The gymnastics room in the War Memorial Gym will be available for Vertical Contest. The Wesley Center can be used for session. We have authorization to place professional look directional signs on campus. This, in addition to several other promising locations, have put us in a good posture.

The current cast of characters for convention are:

Co-chair	Jim Washington	VPI
Co-chair	Carol Tiderman	Baltimore
Treasurer	Bob Hoke	DC
Registration	Beth Webb	DC
Campground	Dave Colatosti	VPI
Sessions	Chuck Hoffman	Baltimore
Sessions	Gene Reynolds	Baltimore
Program	Bill Karpowicz	
Guidebook	Carol Zokaites	VPI
Daily Rag	Norma Peacock	MIG
Howdy Party	Judy & JC Fisher	Tristate
Banquet	Bill Bussey	
Geo Field Trip	Karen & Earnest Kastnings	New River
Geo Field Trip	Will Orndorf	VPI
Pre/Post Trips	Walt Pirie	VPI
Cave Trips	VACANT	
Speleolympics	Mike Newsome	VPI
Communications	Dave Shantz	VPI
Consignment Sales	VACANT	
Vendor Sales	Ted Kaye	RASS
Security	Ed Fortney	VPI
Rescue	VPI	
First Aid	Bob Barlow	
Child Care	Kathy Emory	(search committee)
Symbolic Devices	Trey Murphy	RASS
Souveniers	Carol Tiderman	Baltimore
Local Attractions	Sandy Knapp	VPI

As you can see, we have a wide variety of functions, some of which are still in need of leadership. If you see something you might like to help with, please feel free to get in touch with the folks listed above (list of phone numbers available from Eileen O'Malley).

## Caving Etiquette, or "Pardon me, may I use your teeth as a foothold?"

by Mrs. Cartwright (A.I.'s mom)

While trying to relax at home, I've had many occasions to overhear you cavers grumble and argue with each other. Oh, such language you use! Really, you need to learn how to get along with one another. While underground it's absolutely essential to keep the lines of communication open (and I need a decent night's sleep!). In order to foster smooth relations, I've put together a few rules of etiquette which I think may be helpful.

1. If you are hungry or need a rest, the proper thing to say is, "Could we please stop a moment so I can catch my breath?" Please do not resort to having your last word be, "Aaaaaaahhhhhhhhhh . . ." because your limbs gave out over a straddle pit. This tends to put a damper on the enjoyment of the other cavers on the trip.
2. If a fellow caver uses the proper phrase in tip number one, the appropriate response is, "Sure. Can you make it to the room just around this bend? It's a nice place to stop." An unacceptable reply: "Sure. I know a great place to stop.. We just have to climb this breakdown, cross a stream passage, chimney ten feet up the wall, ease over a ledge, and crawl a few yards."
3. Knocking rocks onto a caver's head is generally frowned upon. However, we all know there are times when one is left with no good alternatives. In this case, be sure to use the appropriate call, "ROCK!", if not before the impact, then at least some time before the victim loses consciousness.
4. If you must kick someone in the face, please do so with the utmost care. It is always polite to thank him/her afterwards, as in, "Thanks very much; pushing off your teeth gave me just the extra boost I needed."
5. The human body does, occasionally, need to expel excess gas. There are times when this is acceptable. Leading another through a tight crawl is *not* one of those times.
6. Be sure to carry your own gear while caving. If you have another person haul your supplies, the temptation for them to "accidentally" hand you a bottle of cave water to drink may be too great. Most cavers have enough evil on their souls; it is not for you to add more.
7. If you plan to stumble over a ledge and mortally wound yourself, do so in a way that makes for easy body removal. Falling in a hard to reach place is rather rude, as it takes much longer for the other members to get to a beer.

Please keep these pointers in mind while you are underground with friends. Perhaps they will remain that way. Happy caving!

## A Trip Report (original, no?)

by Steve LePera

Well, it was early in the morning, cold, dark, and I was too tired to move. I was sure happy that it was the weekend so I could get up 2 hours earlier than usual and go spend 12 hours in an icy wet and slimy hole in the ground.

Containing my excitement, I calculated the absolute minimum amount of time it would require to carry the gear from my closet out to my car. I knew that, since I hadn't touched anything since the last trip, it would all be stuck efficiently together. No chance of leaving any important stuff behind (Caving tip #1).

I watched the clock tick another minute closer to 8 am. In two more minutes I would have to get up.

In reality, you should have your license suspended if you operate your motor vehicle too early in the morning. If the government really had our well being in mind that would be the case. Amazingly I left my bed and appeared in the back seat of Lawrence Britt's truck with my gear. I think I may have even spoken before Lawrence, Steve Wells, and I arrived at Murder Hole.

Don't you hate it when you are ready to get underground and someone is piddling around trying to get their act together? I do. That's why I always pack my stuff at the cave. It gives me a good chance to go over my equipment and be sure everything is ready to go, and you never need to wait on the other cavers (Tip #2, valid only when not caving with me).

Murder Hole is very nice. I don't think I thought that the first time I went there, but it is true. You are usually greeted by the rotting corpse of some dead critter at the bottom of the drop. They inevitably drag their mangled bodies in front of the small entrance slot before cashing it in. If you are lucky you can see the maggots crawling around inside them as you pass by into the cave.

If you like to straddle spread eagle over deep pits, this is the cave for you. The nice thing about all these pits are their similarity to TV violence. After following Steve Wells for a little while, you become desensitized and they just don't seem that bad anymore.

On this particular trip, our goal was to survey a 90 ft pit just past Double Wells and finish surveying the man-eating, ascender cam-tooth-polishing area called 7 Second pit. I suspect this name originated when someone tossed a loose rock (read: previous handhold) down the drop and never heard it hit the bottom. "Wow, what a deep pit," they must have exclaimed. Of course, there is no 800 ft pit in Murder Hole, or anywhere else in this area either. What really happened was that the mud at the bottom reached up and silently swallowed the rock. Seven seconds, really, is the time it takes to free your foot from the mud there after you've been standing in one place too long.

On our way back to 7 Second, we passed several noteworthy places. We passed the Elevator, where on my very first survey trip into the cave I lost my carbide lamp down the drop and into a stream. The base, of course, was destroyed. Fortunately Lawrence had his trusty backup lamp in his pack...

We passed near Atlantis. I have been to Atlantis. It really is the most beautiful piece of this cave I've seen so far. Everyone should check it out. A must see.

We crossed the Butt Ledge. The first few times I crossed the butt ledge, I crawled. The great thing about this is how your gear hangs out over the drop and

kind of pulls you slowly down the sloping shelf behind it. Very safe. I recently got double dog dared into doing the butt ledge (who would have thought, who could have imagined) on my butt. There are doubters among you, but listen to me: You are all silly people to crawl across the butt ledge. Butting the butt ledge is so much easier than crawling I will never crawl across again (Tip #3, valid if you promise not to fall off the ledge while following my advice).

We went past Double Wells. I've heard Leroy throwing rocks in from an adjacent pit but never dropped down there myself. Hopefully I'll get the chance (on rope of course) sometime soon.

We reached the 90 ft pit. All the rocks in this area were sharpened hundreds of years ago by Native American cavers for use as arrowheads, so lots of padding was required. We dropped in, padding all the way down, and swamped through 50 ft of passage at the bottom to a sump at the end. We killed an hour swimming around there and trying to connect over the sump through channels in the ceiling. Lawrence made a pretty impressive climb up one of the walls by cutting footholds out of the mud. I followed him and destroyed the footholds. Neither of us could fit through either of the two leads so we gave up. Both looking like the Swamp Thing, we returned to the pit and got ready to climb. I don't want to talk about the knife-like lips the rope was riding on as we climbed out.

There are at least two great things about surveying with Lawrence. One is the camp stove, and the other is...oh I won't spoil it yet. The camp stove heats up your Spaghetti-O's and warms your fingers. Despite being slimed, after eating our warm meal we agreed to go on to 7 Second.

We twisted and turned our way towards 7 Second. For the sake of brevity I'm leaving out the part about all the "ceiling leads" we stepped over on the previous trip. We'll get them sooner or later....

.7 Second has at least two obvious holes to drop into. We had surveyed the left drop previously, so when we arrived Steve rigged the rope and lowered it down the other side. Bob will be pleased to hear that we used a different rig point than on the first trip. Statistically, though, since neither one followed us down the pit, they both were equally nice.

From a surveying point of view, the right side was much nicer than the left. After some early confusion about where the points from the previous trip were located, we managed to get a long plumb down to where I'd rappelled, about 15 ft or so from the bottom. We wanted to verify that the sumps at the bottom of the left side of 7 Second, where we'd been on the last trip, connected to the sumps I was standing above.

Steve and Lawrence dropped down, and then tossed me off the side of the ledge we were on to find out what was what. I found cave art I'd left on the floor from the previous trip, confirming the connection (a standard NSS approved survey technique). I crawled through a hole and checked to be sure the sump was closed. I was so hoping it would be open so I could swim some more, but it wasn't.

Since no part of my body had less than an eighth inch of greased mud coating it, climbing out of the crack was a real blast. My knots, usually a rad-hip super-cool neon green, were mud. They really didn't even feel like nylon anymore. Something more like a cross between jello and refried beans. The beauty of knots, though, is that no matter how uncomfortable they may feel, they don't slip. My mechanical ascender, which prior to this trip had teeth on it, was not particularly impressive in its

performance.

Nevertheless, as you must know since I've written this, I made it up the rope and out of 7 Second. Another efficient 40 ft/hour survey trip completed, we headed back towards the entrance. We felt pretty proud since we had actually finished the part of the cave we came to work on. A rare event.

At the entrance we found a torrential rainstorm. Well, maybe it wasn't that bad, but once I was on rope, my lamp went dead, the rain seemed to double in intensity, and to make things even less convenient I couldn't see anything because my glasses were quickly coated with mud splashing down from my arms and ascender. I knew I had nearly reached the top when I crashed my head into the lip. "I must be at the top," were my cheerful words. Ask anyone. The only good thing I can say about that climb was that the hood in my suit worked Wunderfully.

Naturally, the rain subsided once we were all out of the pit. We didn't care because we knew the other great thing about caving with Lawrence was waiting for us in his truck.

The post-survey beverage is the best beverage you will ever drink. And sitting there in the light drizzle getting changed, I felt great. I felt great because Murder Hole really is a great cave.

Murder Hole wants me, so I'm going back. Want to come along? :)

## Quotable Quotes

PK to JY: "I'm in this up to my receding hairline."

SK: "This just hasn't been my year."

LB to EOM: "One woman's festive balls are another woman's lollipops."

PK: "Some of my best trips haven't been actual trips . . ."

DS: ". . . they were bonding experiences with caving gear in the back."

DC to EF: "Aliens want corrective lenses."

LB to JK: "I'm tired, are you?"

JK to LB: "Not really, I've gotten more sleep in the last eight years."

PS to KD: "Don't hate me because I'm beautiful; hate me because *I'm* in the bathroom."

ME to JS: "He's a pedophile."

JS to ME: "They just had sex, right?"

CJ to SW: "Boy, you're really making it smoke."

SW to CJ: "That's because your equipment's so hot."

DM to DS: "We figured we'd start [having kids] within the first year. I didn't know it would happen within the first five minutes!"



## COMMERCIAL CAVING IN EUROPE

by Jackie Hoell

Bob and I had the opportunity to visit Europe through a Study Abroad program the Department of Management at VA Tech offered, during May & June of 1994. I prepared for the trip by reading several travel books for each city/country we were to visit. Naturally, I would search the index of each travel book for possible commercial caves to visit. In addition, I was able to download quite a bit of information about commercial caves in the various countries from America On-Line (Check in the travel section). I was quite surprised at how many opportunities we would have.

I must admit the research I did ahead of time paid off. Knowing the opening and closing times and general locations (or actual directions) enabled us to plan cave trips that fit into our busy study abroad schedule. I also wrote to the NSS members listed in the membership directory living in the European cities we visited. What a tremendous help they were (details to follow).

Our trip started in Amsterdam. Being a low lying country with land reclaimed from the sea, I initially didn't check for caves to visit in the Netherlands. Fortunately, the book I purchased had information about caves in the city of Maastricht in the southeast corner of the Netherlands. The day our study abroad group was to travel from Amsterdam to Frankfurt, Germany, we used our Eurail pass to take an out-of-the-way side trip to Maastricht. We knew we could get directions and tickets at Maastricht's Visitors and Convention Bureau. We had 2 choices. A boat trip down the river Meuse to visit the Zonneberg System or taking the local bus to the Northern Gallery System. Our schedule dictated that we visit the Northern Gallery System only.

The city bus dropped us off at the base of Mount St. Peter. A steep hike up to the check-in trailer took 15 minutes. Our tour guide led us down the path to the cave entrance carrying one 4 D cell flashlight and 2 Coleman lanterns. This was the tour's only light sources. Our guide carried the flashlight to point things out with and 1 of the lanterns. She asked a gentleman to carry the other lantern and bring up the rear. Being a good caver I did carry my own 3 sources of light into the cave, my mini-mag flashlight, flash on my camera, and a pack of matches I had just picked up. The following geological and historical descriptions of the cave are from the Maastricht Visitor Bureau's brochure on the cave.

"Mount St. Peter is formed out of a marl table-land by erosion of the valleys of the rivers Meuse and Jeker. This table-land was formed 80 million years ago during the Cretaceous Era, by the accumulation of the remains of shellfish. Marl, a kind of sandstone, was found to be particularly suitable for building houses and has been cut into blocks for a very long time. Most of the caves 20,000 passages have been enlarged by the removal of the blocks of Marl. At various places all kinds of fossils are to be found in the walls and ceilings; shells, sea hedgehogs, sharks' teeth and pieces of petrified reptile bones. In 1770 the head of a reptile was found called the Mosasaurus, purported to be 20 meters long. A giant turtle fossil was also found.

In the military history of Maastricht, Mount St. Peter and its caves have been of great importance. Subterranean fights between the French and the Dutch took place in 1794. During the second World War the galleries were prepared for sheltering people in case of air-raids including ovens, a well and a hospital. Many of the Dutch museum pieces were stored here during the war."

The cave had very few formations due to the excavation of the sandstone blocks. The limestone underneath the sandstone layer had also been mined. The cave was filled with charcoal paintings and sculptures that provided a unique underground experience. The cave had an average temperature of 10° C and only goes to a depth of 35 meters. The tour took about one hour and was given in English and Dutch. I forgot to write down the cost of the tour but I am sure it was less than \$10. We definitely want to return and visit the larger system, Zonneberg, but we will need at least 5 hours because of the boat trip required to get to the entrance.

Our schedule while in Frankfurt allowed very little free time. Alas, no cave trips. Taking an overnight train, we arrived next in Budapest. We had written NSS member Dr. Kosa with the dates of our visit to Budapest. Dr. Kosa wrote back with his phone number and said to call him when we got in and that he would make arrangements to take us caving. When I called Dr. Kosa, he said that he had arranged his schedule so that he could take us caving on Friday and would pick us up in his Russian-made car.

There are 3 commercial caves within the city limits of Budapest. Dr. Kosa first took us to Cave of Pal-Volgy. The advantage of going with Dr. Kosa is that we did not have to pay to see the cave, since Dr. Kosa knew the owners and was allowed to lead us on our own private tour. In fact, we were let into the cave ahead of a group of school children, while cries of "American Cavers" filled the air (In Hungarian, of course!) Again referring to literature from the cave:

"The cave was discovered in 1904 in a former quarry. It was opened to visitors in 1919 and electric lighting was installed in 1927. The cave was thoroughly mapped in the 1980's and comes to 6.5 kilometers, third longest among caves in Hungary. The tour covers 500 meters of the cave which includes steps and ladders through narrow and high passages characteristic of thermal caves. The tour takes you to a depth of 30 meters. The passages are decorated by dissolutions, spherical cavities, spherical niches, and dripstone formations."

We had great fun with Dr. Kosa in the cave, including trying to locate the light switches that turn on the next section of lights. The lights are on a timer and we would occasionally get caught in the dark when we had been talking about an unusual formation. Dr. Kosa is a geologist and has worked in some interesting places like Russia, Libya, Iraq, Cuba, and Colombia. Needless to say, we didn't ask too many details about his work.

The Cave of Pal-volgy has an entrance most cavers dream of. A concession stand sits on one side of the entrance selling tickets, postcards, posters, books.... On the other side of the entrance is a bar. Dr. Kosa bought us each a half-liter bottle of beer (about 30 cents a piece) to enjoy while we "rested up" for our next trip. You know you are in good caver company when you can go caving for 45 minutes, come out and drink inexpensive beer, all before 10am. You should realize that Hungarians (and most Europeans) consider beer a food group. My kind of country!

Since Hungary has no drinking and driving laws, Dr. Kosa drove us 2-3 kilometers around the ridge to the Cave of Szemlo-Hegy. Again we got a free individual guided tour of the cave. The Hungarian literature does a far better job of describing this cave than I could.

"Experts qualify Cave of Szemlo-Hegy as one of the most beautiful examples of thermal-water caves. Its high and narrow passages are richly covered by botryoidal "popcorns" which were created by the thermal-waters. Although discovered in 1930, it has only recently (1986) become a commercial cave. The total length of the cave is 2 kilometers. Unfortunately the tour covers only a small but beautifully decorated section which can be seen in 30-40 minutes."

The Cave of Szemlo-Hegy has several professional displays in their entrance foyer which describe the geology, hydrology, and biology of the cave and other caves in Hungary, maps of several caves, and descriptions of why caves need to be environmentally protected. The gift shop here is much larger and I was able to obtain several books and posters.

Dr. Kosa showed us an unusual caver attraction that lay above the entrance to Cave of Szemlo-Hegy, the Hungarian Caver Cemetery. It is a memorial to those who have died while caving. Each deceased caver is represented by a piece of limestone inscribed with their name, date of birth and date of death. Dr. Kosa told us several stories about how these deaths occurred. After listening, I came to the conclusion that there are



The illustrious traveler and  
her companions enjoy a beer  
outside the entrance of  
Pal-völgy. Rough, huh?

"stupid caver tricks" happening all around the world. The entrance to the cemetery is marked by a small wooden bell tower.

We did not get to visit Castle Cave of Buda which lies in the heart of the Castle district (a major tourist area). Instead, we spent what time we had left talking with Dr. Kosa about caving in Hungary and about Hungarian life and times.

Our study abroad trip next provided us with short stays in Vienna and Graz, Austria. Although I had information about several commercial caves near Vienna and Graz, we had no time to visit them. We had a longer stay in Maribor, Slovenia formerly part of Yugoslavia.

Here is where reading tour books really paid off. There is limited tour book information on Slovenia but I was able to find an old Yugoslavian tour book. The 1960-era glossy pictures describing Postojnska Jama made it a cave trip we had to make. To get to the cave Bob and I took a 4 hour train ride (one way), getting off at a train station smaller than Petticoat Junction's station. Fortunately there was a tourist office inside the train station that provided us with a map of the town and how to get to the cave. An easy walk down through town and to the cave took 30 minutes.

The tour book states a 10,000 people visit the cave each day during prime tourist season (May-September). We were skeptical at first but became believers after walking through the gauntlet of gift shops and gift kiosks to get to the entrance. Since we were visiting right before prime season, the cave only offered trips every hour. We requested an English speaking tour and was told the Noon trip would be in English. We also overheard the ticket taker tell others that it would be in Italian, French, and German. Hmm....

At the entrance, there was a concession stand that rented hooded coats for a \$1.00. Wisely I rented one. The doors opened at noon and we were funneled to a train. Actually, it was more like a roller coaster, given the size of the car and gauge of the track. The tour starts with a 10 minute train ride going about 30 kilometers per hour. Each train holds 120 visitors and was first used in 1872.

A little bit of information about the cave: the cave system lies in the Pivka River Basin on a plateau 300-600 meters above the river in the Alpine-Dinaric Mountains. The Postojna cave system is over 23 kilometers long and consists of several caves. These include Postojna, Pivka, Tartarus, Lekinka, Otok, Magdalena, and Black Cave. Pivka and Black Caves are also commercialized. Unfortunately we didn't have time to visit them. Postojna Cave contained evidence that prehistoric man used the cave. The first documentable evidence of visitation into the cave comes from a signature on wall of the Gallery of Old Signatures, dated 1213. The cave was seriously commercialized in 1818.

The train ride takes you through several highly decorated rooms and stops at The Great Mountain. Here it becomes evident why the ticket takers said the tour would be English, Italian, French, German,.... At various locations up the path of the Great Mountain were lighted signs for various languages (9 total). Our "English" tour consisted of 5 people. One British woman brought 2 Russian friends who spoke English (the tour is not offered in Russian) and the 2 of us. The 1.5 km walking tour starts by winding up and around the Great Mountain. From there you make your way to the Nice Gallery and Russian Gallery. Both are immense rooms filled from floor to ceiling with a variety of speleothems. The passages between the galleries are also highly decorated. It is difficult to explain how beautiful this cave is. "Pretties" for as far as the eye can see. Just when you think you have seen the most stunning set of formations around the next corner were more (5 rolls of 36 exposures more!). Besides the wonderful formations, the cave is home to the Proteus Anguinus. The salamander is kept in a large holding tank for the visitors to ooh and ahh over. Also, its likeness is sold on t-shirts, pot holders, novelties, and is even carved into the concrete pillars of the shops and buildings.

The hour and a half tour ends in the Concert Hall which is 40 meters high and can hold 10,000 visitors in chairs. The train ride out takes you through a room where the Germans in World War II had a fuel dump. The dump was blown up by saboteurs leaving the room black but otherwise unscathed. You exit the cave along side the huge river, complete with dam, that runs 18.5 meters below the tourist trail.

If you are ever within a day's train ride of Postojna Cave you need to find a way there. You can get there from Trieste, Italy, rather easily. Words cannot express the grandeur this cave possesses. We are definitely going back and plan to stay either in the 1000 bed hotel next to the cave entrance or in the campground. Please note: Outside the cave there are numerous signs indicating that you cannot take pictures inside the cave. But I did take 5 rolls of film with no problems or hassles. The reason for the no photo signs is because the tour will not wait for you. To move the volume of people they have visiting the cave through the cave, the tour guides move at a steady pace. There is no time to set up a tripod shot. When we visit again we hope to make arrangements for a "photo" trip.

Our next caving opportunity would come while we were in Prague. I had written NSS member Dr. Pavel Bosak ahead of time. Dr. Bosak indicated that about 40 km outside of Prague there was a commercial cave that he recommended visiting. I was to call when I arrived in Prague for further information. Unfortunately, I was unable to meet up with Dr. Bosak and did not get to go caving. I did notice that the American Express office on St. Wenceslas Square in Prague offered an all-day trip to the cave Dr. Bosak recommended. The American Express tour also included visits to several castles. Maybe next time...

From Prague, the study abroad group went to Munich. The group did a day trip to Neuschwanstein Castle. Mad Ludwig's castle includes its own "grotto". King Ludwig had a room built that simulated a cave with stalactites and stalagmites. As with all of the rooms in the castle there was a secret passage entrance in the Grotto Room. It took some looking but we found it. Photographs of any of the rooms in Neuschwanstein were forbidden. We had been assured that the gift shop had pictures and slides. The gift shop had 100's of pictures and slides, but none of the Grotto Room. Phooey! Next time I think I will risk a picture or two.

Bob and I took a 6 day layover in Paris while the rest of the study abroad group flew home from Munich. Yes, we even visited caves and pseudo-caves while in Paris. The caves we visited were all manmade caves at Euro Disney. The most impressive was the Dragon's Lair under Cinderella's Castle. We also visited Keehaul Cave, Pirates of the Caribbean Cave, and Big Thunder Mountain Cave.

A little more realistic, but not truly cave trips, were visits to the Crypt at Notre Dame and the Sewer Museum. The Crypt at Notre Dame was discovered recently when a new subway station was being excavated. Pre-Roman ruins were found. A self guided tour of the ruins is a nice way to get out the Parisian heat and get underground. Our most unique underground visit of the entire trip was to the Sewer Museum. An absolute must if you ever visit Paris. Seriously! The self guided walking tour has displays in English of the history, geography, science, and technology of the Paris sewer system. The English translations were the best we had seen in any museum. I enjoyed looking at the 2 dozen carbide lamps displayed. A caver could really feel at home in a Paris sewer...

We were surprised at how easy it was to go commercial caving while on our trip. The research we did and the letters we wrote really paid off. It will be at least 2 years before we can travel overseas again, but I am already making plans to go caving when we do.



Charcoal  
drawing  
in the  
Northern  
Gallery  
System,  
Maastricht



Memorial for  
unfortunate  
cavers in  
Hungary

## *Grotto Grapevine*

by A.I. Cartwright

So here we are, at the beginning of another semester. Time to start up, buckle down, and gossip! Let's start from the beginning.

Let's see, who's new in the club this year? Will and Zenah Orndorf introduced T.J., their new little girl. Ed and Linda Devine now have Jeremy, and Brian and Kathi Emery added Ed to their collection. Matt Seigler and Erica Freiberger have recently announced their engagement; perhaps they'll be adding to the trainee population?! Two others that have decided to tie the knot: Gary Moss and Barbara Bradshaw (and she did the asking).

Now let's see who's old in the club. Walt Pirie springs to mind, celebrating his birthday in late December. Craig Ferguson was feeling blue when he realized that just a week before, he had turned half of Walt's age. He immediately quit smoking and started eating broccoli. Carol Zokaites will soon hit a milestone year, but got rid of the excess baggage of a gallstone.

Speaking of injuries, Jen Savage discovered that Dominos Pizza is bad for your health when she wound up in the hospital with an ulcer. Sandy Knapp proved her psychic abilities when she exited from a car that was soon to burn down -- unfortunately, the car was still moving at 70 mph at the time of her departure (there ought to be a rule against her using modes of transportation that go above 5 mph).

VPI found a new club tarp at OTR this year. It seems the newly opened West Virginia Brewing Company set up shop, offering \$5 mugs and unlimited refills all weekend. If you didn't see your friends at their campsite, you knew where to find them . . . . It was a first for many -- actually taking beer *home* from OTR.

Mark Eisenbees wanted to be mentioned in the Grapevine.

The Halloween party brought out its usual crowd of partiers: Lt. Worf, King and Mrs. Tut, Minnie Mouse, and the occasional bum off the street (sorry, the Devil with the Blue Dress was unable to attend).

Paul Kirchman has recently been running around with an art student. Until he brought her to the New Years Party, everyone had assumed he'd gotten another date from the Acme Inflatable Doll Company.

Ed and Lynn Richardson hosted the aforementioned New Years Party again. The folks gathered there finished off 3 kegs of beer with only a minimal number of keg/automobile collisions. Afternoon entertainment consisted of watching men push large vans through the mud in attempts to get them unstuck.

Physical Therapy has taken on a new twist; Jerry Redder has been taking semi-monthly caving trips to test his post-surgery back. A young female on the trips refers to them as "The Old Man Trips", as the first one was peppered with conversations about prostates and, "Well, my chiropractor suggests . . ."

Rumors abound that the Elvis Grotto is involved in some big secret project. When questioned, a representative of the group said, "We're not talking about anything." Hmm . . .

But enough gossip for now. I'm sure many of you have better things to do with your time. If not, you'd better go find something.

Don't forget about Banquet!



## **Bob's Article**

by Bob Cosby

Well, the semester has come and gone again a little too quickly. Despite the lack of lots of new trainees and old members doing things other than caving, the semester has turned out pretty well. Meetings have been starting reasonably on time all semester. Cave trips have not been as plentiful as I like to see. Hopefully we will be getting a few new members from our trainee crop this year. There are not a whole lot of them, but those few that are around will make good cavers.

Congrats to our one new member this semester, Carl Bern (#350). Hopefully there will be a few more people getting their memberships so we can have officers next year.

Training people on vertical work has been difficult as always this semester without the bridge. There never seems to be enough time to get two people out to the quarry to play on rope. All three times that I made it out to the quarry there were never more than four people out there. If anybody has any ideas where we can practice vertical work in town, please let me know.

The club gear is worse for wear as always; we need to fix a few lamps up if anyone has time to play with them.

Convention is coming up this summer and is keeping everybody busy doing various tasks. There are still lots of things that need to be done if anybody has any extra time.

On to better things, though. Thanks to Spotty Dog for taking care of Halloween; it was a great party (yep, you know what's coming --Eds) as always. Much thanks to Hoss for taking on Banquet. It will be a great banquet this year even if it is dry with the post-banquet party at the Bat Ranch. Dave C., you did a great job pulling off the Practice Rescue; thanks to Alison Williams for being the patient. The road out by the Bat Ranch looked clean for awhile; thanks Steve. I am sure Amy will do just as good a job with it next year.

## Practice Rescue from a Slightly Different Perspective

by Alison Williams

Who knows what made me do it that Friday night at the meeting, but I had to ask the question of who was going to be the victim (patient, sorry) for practice rescue. I know, I know, I did volunteer so I really shouldn't whine; I just thought it would be interesting to see practice rescue from a different perspective. I was getting a little apprehensive as it got closer to rescue time on Saturday morning and wondering if I would regret volunteering the night before. Amazingly enough, it was actually a very good experience and my fears definitely lessened as the rescue proceeded.

As Capt. Ed, Leroy, and I went through Tawney's to get to the salt-petre room, I noticed things in that cave that I had never really seen before. Every little obstacle made me wonder how the rescuers were going to maneuver the stokes and just how uncomfortable and/or anxious I would be while they were trying to get me around the obstacle. But after getting to the accident spot, we had plenty of time to lounge around for a while and discuss our most frightening caving accidents and near misses.

Anyway, after all the rescuers (cavers, friends, whatever...) got there, they did an excellent job of tying me in the stokes from what I could tell. I definitely didn't think that I was going to fall out. It was a different feeling only being able to see the cave ceiling and bright lights that kept shining in my face. Not to mention that the rescue goggles refracted the light of the lamps into a zillion different colors, which I am sure would have been even neater with a little chemical enhancement. The ride in the stokes was very smooth, which says a lot about the people who were carrying it. I could imagine how uncomfortable a ride in the stokes would be with an injury or with people who weren't very careful.

There were only a couple of places where I held my breath, but I know it was a lot more uncomfortable for other people to get me up through those tight spots (thanks to everyone who donated their bodies :)). My biggest fear was when I was eating food that people were feeding me and wondering what would happen if I choked (those little drink boxes definitely squirt when you squeeze them). In general, practice rescue was great and except for the webbing constantly landing on my face, I have no complaints. I know that in future years I will definitely be more considerate and gentle with the stokes since I understand what it's like to ride in one. And, if I ever get injured in a cave I will know what to do.....Walk or crawl out by myself.

**SHOE** BY JEFF MACNELLY





Photos by Joey Fagan





## The Endangered Indiana Bat (*Myotis sodalis*) Part I - The Problem

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The Indiana Bat (*Myotis sodalis*) is found throughout the northeastern and central United States. However, its population has shown an alarming decrease since population surveys were first made in the 1960s. This species of bat was among the first mammals to be recognized as endangered on the first Federal Endangered Species List of 1967 (U.S. Fish and Wildlife, 1976, 1983, 1988). Since then, action has been taken to save this species from extinction, sometimes successfully and sometimes not.

We should be reminded of what happened when we ignored the plight of an endangered species in the past. In the 1800s, the Passenger Pigeon was very abundant in the United States and it seemed unimaginable that we humans could significantly affect that abundance (especially considering the limited population of humans in the U.S. at that time). In 1815, a flight of about a billion Passenger Pigeons took three full days to fly across a region of Kentucky. People shot them right and left and continued to destroy their habitat, such that by 1900, they were rarely seen. By 1914, they were totally extinct (AAAS, 1972).

It is said that the Passenger Pigeon became extinct partly due to its low birthrate. An adult female produced two young per year. Most bats, including the Indiana Bat, have only one young per year. Danger of extinction? You bet!

In the following article, I will try to summarize the life-style of the Indiana Bat (*Myotis sodalis*) and where it stands in respect to becoming "history."

### ORDER, SUBORDER, GENUS, AND SPECIES:

Bats fall under the mammalian order of Chiroptera (meaning "hand wing"). They are the only truly flying mammals. Others, like the flying squirrel, simply glide. There are about 900 living species of Chiroptera in the world which accounts for almost a quarter of all mammals on Earth (Fenton, 1992)(Tuttle, 1988).

This order is subdivided into two suborders: Megachiroptera (large ones) and Microchiroptera (small ones). Bats found in the United States are Microchiroptera.

The Indiana Bat falls under the genus *Myotis* meaning "mouse-eared" because of its appearance. There are almost 100 species within this genus.

Bats are warm-blooded mammals and therefore northern bats must either migrate to warmer climates or hibernate in winter. The Indiana Bat hibernates. Bats are one of few mammals that "truly hibernate". Body temperatures fall to a few tenths of a degree above the surroundings. A few bats can withstand freezing, but the Indiana Bat can't. They must hibernate at a few degrees above freezing. Bears, squirrels, and such don't actually hibernate. They just sleep for long times while maintaining their body temperatures at near normal.

Finally, the Indiana Bat is classified under the species *Myotis sodalis*, or "mouse-eared social bat." The term "social", no doubt, stems from their habit of hibernating in huge clusters, making them extremely vulnerable to attack and extinction.

Many *Myotis* bats look alike. The Little Brown Bat (*Myotis lucifugus*) is the most common here in the mid-west. It is easily mistaken for the Indiana Bat (*Myotis sodalis*), but has entirely different roosting habits. The Little Brown Bat likes to roost in buildings near water. As we shall see, the Indiana Bat doesn't live in houses. If you have bats in your attic (or belfry), they aren't Indiana Bats (Garner and Gardner, 1992),

## PHYSICAL CHARACTERISTICS:

Typical adult Indiana Bats average about as follows (Fenton, 1992)(Hall, 1960)(x13):

Weight: 6.5 grams (males) & 7.2 grams (females)

Forearm Length: 35 to 41 mm.

Head & Body Length: 41 to 49 mm.

Wingspan: 220 to 320 mm. (note, the huge wing surface area to body size means that they readily exchange heat with the surroundings and quickly heat up or cool down to surrounding temperatures)

Lifespan: up to 20 years or more

Body Temperature: 35C (95F) when active; 4 to 8C (39 to 46F) when hibernating [can hibernate up to 10C (50F)].

Heartbeat: about 400 beats per minute (active); 25 beats per minute (hibernating)

Food Supply: eat insects (a colony of 500 can consume about 250,000 mosquitoes per hour when feeding (dusk to dawn).

Mating: Mating occurs in the late fall, but sperm remains dormant within the female until she ovulates in the spring. Mating is not by mutual consent, but rather is physically forced upon the female by the male (Fenton, 1992)(Hall, 1960). Last fall, Don Coons and I witnessed a mating and Don called it "date rape." The male holds the female with his teeth and wings while she tries to escape. Upon insertion, she finally settles down and submits to the act which takes from 5 to 20 minutes.

## WINTER HABITAT:

In late fall, Indiana Bats cluster (or "swarm") around hibernacula caves and mines (never buildings) to fly in and out and feed voraciously on insects in preparation for their hibernation. Mating often takes place at this time. To survive the winter months (often 6 months) they must gain about 25% of their body weight in fat reserves (a 7 gram bat must gain weight to 8.8 grams). For some unexplained reason, some Indiana Bats, both male and female, do not gain the needed body fat to hibernate and have been found to remain active late into the winter. Many dead bats are found on the floor of the hibernating mines or caves and are thought to be those that did not gain necessary fat reserves to last out the long winter with no food (often up to six months) (Fenton, 1992)(Richter et al., 1993)(Tuttle, 1991).

A few Indiana Bats have settled down to a hibernal life for the winter as early as September, but most wait until October and November. During hibernation, body temperature falls to a few tenths of a degree of the surface rock on which they hang. The temperature must be very low so that their metabolic rates are slowed enough to last through the winter. Temperatures of 4 to 8C (39 to 46F) are ideal, but they can withstand temperatures up to 10C(50F). Humidity must be high to replenish water lost in respiration (usually 75% relative humidity or higher). They do awaken periodically (every few weeks) to drink water (often condensed on their fur), urinate, groom, and sometimes move to better temperature zones in the cave or mine. They do not eat or defecate during hibernation and therefore there is never a guano pile in the hibernaculum of an Indiana Bat (Barclay, 1983)(Hall, 1960).

Suitable hibernacula are infrequently found, since the temperature must be below the usual cave or mine temperature which remain at the mean annual temperature of the region. In the U.S., mean annual temperatures range from 12 to 20C (54 to 69F). In the Midwest, caves and mines average 13C (56F) year round, which is too warm for hibernation. Only caves and mines which cool off more than that in winter are suitable ("cold traps"). Hibernacula must have a way for cold winter air to flow in from outdoors, displacing ambient air during the winter. Most such mines and caves have multilevel entrances so that warmer air can exit an upper level while cold air enters a lower one (chimney effect) (Barclay, 1983)(Belwood and Waugh, 1991).

Most Indiana Bat hibernacula are in Kentucky, Indiana, and Missouri. Two have been located and studied here in Illinois. The Blackball Mine (abandoned) in north-central Illinois is along side the Illinois river and Cave Springs Cave in southeastern Illinois is near the Ohio River. Recently, a third hibernaculum at Fogelpole Cave has been discovered in Monroe County, Illinois near the Mississippi River (Garner and Gardner, 1992).

The major Indiana Bat hibernacula in the entire United States (or world for that matter) are located in only seven caves or mines in the Midwest which contain 85% of the total population. Two of these contain almost 50% (Richter et al., 1993). Hibernating colonies have been reported with up to 100,000 individuals (discussed later). No wonder that the Indiana Bat is endangered since it clusters in so few locations and in very dense clusters of thousands, closely packed at about 300 individuals per square foot.

#### SUMMER HABITAT:

Female Indiana Bats begin leaving their winter hibernacula in March and early April to migrate to their summer maternal roosts. They then ovulate and become pregnant with the sperm stored in their bodies throughout the winter. Males are in less of a rush to return to an active life and may stay dormant until May or some into early June (Walley, 1970).

Female Indiana Bats fly to their maternal colony roosts under the loose bark of dead trees alongside waterways at which they will start feeding to replenish the weight and energy lost throughout the long winter. A typical female Indiana Bat enters hibernation weighing 8.8 grams and awakens weighing 7.2 grams. The summer roosts are often a considerable distance from the hibernacula (100 miles and more). The long flights, which usually follow waterways such as the Mississippi, Ohio, Illinois Rivers, etc., must be very straining on a bat in this famished condition and many fatalities probably result. Summer roosts are less well known than are the hibernacula, but most are known to exist in the regions of dense woods near major or minor waterways (usually within one to three kilometers range from the roost). Flood plain regions seem to be a favorite location (although an increasingly scarce one). Here food is abundant and roosts can be found in dead trees shielded by the canopy from direct sunlight. Temperatures of 25 to 35C (77 to 95F) are preferred. If it gets much hotter, the bat may overheat and die. The adult female bats remain in their roosts from dawn to dusk (more than 15 hours) and emerge at night to feed. Maternal colonies are generally smaller than hibernating colonies and consist of 50 to 100 adults. Many summer roosts are in Indiana, Kentucky, Missouri, Ohio, and Michigan. Some have been reported in Illinois. Suitable forested areas next to waterways is the key factor (Clark et al., 1987)(Garner and Gardner, 1992)(Kurta, Kath, et al., 1993)(Kurta, King, et al., 1993)(Walley, 1970).

The summer roosts of the male and juvenile Indiana Bats are less well known. Some have been found to move to different areas of the same mine or cave in which they hibernated. These roosts are evidently different since the floor will now be covered with guano since they now travel outdoors to feed and therefore defecate. Recall that the hibernacula of the Indiana Bats do not have guano piles. Males are likewise starved when they emerge from



dormancy. Typically a male hibernates weighing 8.0 grams and awakens weighing just 6.3 grams (very hungry indeed - bye bye mosquito).

#### MATERNITY:

Birth of a single pup per adult female occurs in June and early July. The pups are born as big babies when compared to their small mothers. They often weigh 25% to 35% of their mother's weight at birth. The pups nurse on the milk of their own mother for the first three weeks. By sight, smell, and maybe sound, the mother bat can identify her own pup among a hundred other hungry babies. The babies mature quickly and by week-three start eating insects bought to them along with the mother's milk. By week-four they can fly and start on a life of their own (Fenton, 1992).

#### ENDANGERED SPECIES:

Some horror stories and some hopeful ones tell the story of an endangered animal that is in its eleventh hour. It may survive. If so, we must change our own ways of destruction into ways of help. First, I will tell some of the tragedies, natural and man-made that put this once abundant species on the Federal Endangered Species List. After that, I will describe some good moves already underway and some still needed.

#### HORROR STORIES:

Let's start in Virginia in 1968 (Tuttle, 1991). A bunch of cavers routinely visited a cave that was a hibernaculum for about 100,000 Indiana Bats. When told about it, Merlin Tuttle (now head of Bat Conservation International, BCI) wanted to see it during the next winter and was shown the cave in 1969. Only 1,200 Indiana Bats remained. Where were the other bats? Gone elsewhere, run off by constant disturbance by cavers? Tuttle thinks not. A single disturbance from the sleep of hibernation means that the bat must raise its body temperature from slightly above freezing to active body temperature of 35C (95F) at a cost of 10 to 30 days reserve of body fat. Tuttle thinks that the disturbances cost the bats their lives (100,000 destroyed in one winter by well meaning cavers)! The Indiana Bat is now seldom seen at all in the eastern United States. Remember the Passenger Pigeon!

You can read Merlin Tuttle's excellent account of this occurrence and others in "How North American's Bats Survive the Winter" in Bats, Vol. 9, No.3. Fall 1991. Bats is the quarterly magazine of Bat Conservation International (BCI) (Tuttle, 1991). Basic membership is \$25 per year (seniors/students \$20). The address is Bat Conservation International, P.O. Box 162603, Austin, TX 78716. I have no affiliation with BCI, except for being a member for a number of years and the firm conviction that BCI is doing excellent and necessary work to educate people and to save the bats of the world. End of commercial.

In 1993, Andreas Richter, et. al. wrote about the danger to bats of modified cave entrances. This article in Conservation Biology (Richter et al., 1993) contains more horror stories. In the 1960s the world wide population of Indiana Bats (wholly in the United States) was estimated to be more than 640,000 (probably a million or more). In 1981, it was 550,000 and in 1991 352,000. That is a loss of about 65% in 30 years and accelerating.

In Dome (Coach) Cave, Edmunson County, KY a hibernaculum contained 100,000 Indiana Bats in the 1960s. In 1975, a heavy steel gate was installed on the main entrance to "protect the cave." Bats could still enter and leave through smaller holes. The population of Indiana Bats almost instantly dropped to 4,500 and continued to drop to only 50 in 1991. Why? They could still enter and leave. The reason was that the gate had altered the temperature in the hibernaculum from the desirable 4 to 6C (39 to 43F) to an unacceptable 10.5 to 11.4C (51 to 53F). The Indiana Bat has a lifelong attachment to the same hibernaculum and probably just came back and died. Good intentions - bad results. The gate has since been modified to allow temperatures to return to normal, but the bats have never come back.

Wyandotte Cave, Crawford County, IN is a complex cave having over 10 km of mapped passage. Still only 0.5 km served as usable hibernacula (all near the entrance). In the 1950s, 15,000 Indiana Bats wintered here before a stone wall was installed at the entrance. Again temperatures in the cave rose and the bat population declined to 1,460 by 1974. In 1977, the stone wall was removed, but the bat population has, at best, remained constant.

Missouri's third largest hibernaculum, Pilot Knob Mine (an abandoned iron mine), collapsed by natural causes. In 1960, the Indiana Bat counted at 71,800 and in 1980 33,000. The largest known hibernaculum in Missouri is a mine which is in imminent danger of subsidence threatening the largest population in the state (U.S. Fish and Wildlife, 1983).

In Kentucky (as of the 1983 Fish and Wildlife report) (U.S. Fish and Wildlife, 1983), the state has the greatest decline of population of Indiana Bats since the 1960s (75%) due to poorly designed cave gates which effect the microclimate of the cave. This 1983 report says that Kentucky is doing the least to levitate the problems. I expect to be submitting a second part to this article soon in which I will report on recent work being undertaken in Kentucky and other states to help alleviate some of the problems.

In Illinois, most land has been "civilized" and converted to towns, industrial complexes, agricultural land, and mining. Of the original coverage of forested areas (38%), little still remains (12%) and most of that consists of replanted, secondary forest (Garner and Gardner, 1992). Streams and rivers have been channelized to eliminate the flood plains (remember the floods of the summer, 1993 that taught us that the rivers can overcome our meager human barriers?). The flood plains are gone (except for such exceptional flooding). Where will the female Indiana Bats have their summer material colonies? Not many places.

Nationally we continue to deforest, build roads and towns, strip mine, and destroy the habitat of all animals (except the human ones). We pollute with all kinds of toxins such as insect and plant killing pesticides and herbicides (which endanger other animals and ourselves, as well). Mother Earth has been an adaptable habitat for life, but can it take all this indefinitely? Probably not!

#### HOPE:

In 1972, a joint symposium sponsored by the American Association for the Advancement of Science (AAAS), the National Speleological Society (NSS), and the American Society of Zoologists (ASZ) held a symposium entitled "Symposium on Cave Bats: Their Ecology, Physiology, Behavior, and Future Survival" (see NSS Bulletin 34, April 1972) (AAAS, 1972). The call-to-arms had been made to save the bats. Much work was and still is ahead to understand the problem and to cure it.

Specifically to the survival of the endangered Indiana Bat are federally sponsored plans by the U.S. Fish and Wildlife Service entitled "Recovery Plan for the Indiana Bat" dated 1976 (U.S. Fish and Wildlife, 1976) and revised in 1983 (U.S. Fish and Wildlife, 1983). Again, action is underway, but its success depends upon all of us (especially on us cavers).

Missouri is doing more to preserve bat populations than elsewhere. Hopefully the natural disasters that have occurred recently there and are expected in the near future may be offset by alternative plans (U.S. Fish and Wildlife, 1983). In Indiana, the population of Indiana Bats seems to be holding its own (U.S. Fish and Wildlife, 1983).

In Illinois, the Illinois Department of Conservation, with which my grotto (Near Normal Grotto, Bloomington-Normal, IL) and I am collaborating and assisting, has actively taken to heart the survival of the endangered Indiana Bat. Happily, we can report that population counts within hibernacula in north-central Illinois which had dropped to a third between 1956 and 1960 (350 to 120) have now climbed back up to 655 in 1993. While Illinois is not the principal state for the Indiana Bat, we seem to be doing something right. Mainly correctly protecting our hibernacula from intrusion during winter.

In Kentucky constructive work is going on by protecting previously unprotected hibernacula with bat-friendly gates and replacing bad-unfriendly ones on many caves, including Dome (Coach) Cave which lost its once huge population of 100,000 Indiana Bats to poor management. As of 1993 only 27 remained. Whether they bats will return to an again friendly environment is yet to be seen.

In "Part II - State-by-State Trends" of this article [not yet available, but will be in the next Trog if there's interest --Eds], I will discuss this and other current developments, some good and some not so good, and put together the information concerning populations of the Indiana Bat.

Nationally, even the military is taking heed of the plight of the bats and is converting abandoned ammunition bunkers into useful bat habitat. These bunkers are "war hardened structures" and much more stable than the collapsing mines.

On a world-wide scale, thanks largely to BCI, bats are now viewed by many as friends and not "demons of the dark." Unfortunately, to many people, the old superstitions persist. Recently, bats have been slaughtered in Arizona by ignorant hunters firing into a maternal colony of "hateful vermin". In Mexico ranchers randomly destroying any bat confusing it for a vampire bat that feeds on the blood of their cattle. The slaughter continues everywhere. Even if we love bats (and cavers usually claim to), we can injure them out of carelessness and ignorance. Bats need friends and in fact bats are our friends.

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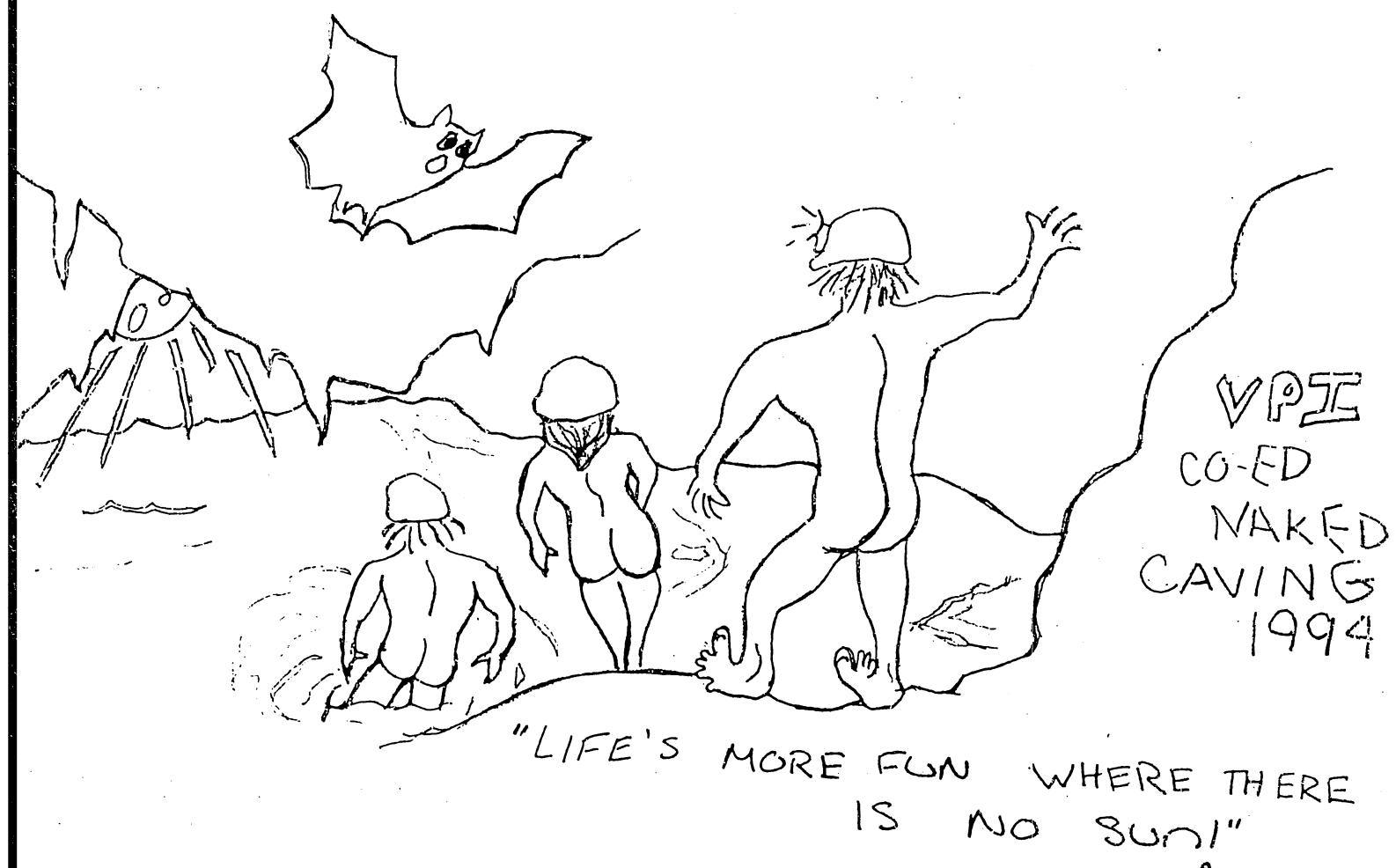
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## **From the Signout:**

VPI Cave Club logged 2260 caver-hours from 4/28/94 to 12694 with an average of 4.9 hours per trip.

6/5 Newberries	S. Vermeulen, R. Sira, D. Warren	"One car crash, a couple hundred feet surveyed, a #@?!**!!#@! wet squeeze, and the scars to prove it!!"
6/19 Pighole	S. Vermeulen, S. Knapp, P. Ballister, E. Fortney	"Our lips are sealed."
6/24 Links	K. Reynolds, S.D. Rapier	"Kirsten becomes an almost official member of the coed naked hot tub shooting club."
7/16 Stay High	S.Wells, M. Wells, J. Geiger, D. Warren, A. Hale	"Who says you can't party at Jim's till 3:00am and still cave in the morning?"
8/27 New River	J. Redder, A. Hendrick, D. Shantz, E. O'Malley	"Two old men and two young ladies."
9/10 Catawba Murder Hole	S. Vermeulen, S. Wells, C. Carson, R. Sira, Ilia Alexandrov, Vladimir Kisseljor	"Russians are <u>lots</u> of fun to play with."
10/22 Clover Hollow	D. Colatosti, S. Wells, A. Williams, S. Diaz, R. Sira, S. Rapier	"Oompa loompa -- if you want to know -- ask."
11/26 Warm River	D. Colatosti, P. Kitchin, A. Fust, Dave Warren	"We came, we saw, we scratched the hell out of ourselves, but we had fun!"

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P.O. Box 558  
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SARAH JUDEKE