The Kansas City Area Grotto

The Guano

Volume 20
Issue 2
August 2006

Off-Trail in Bridal Cave

plus
Blanchard Springs Caverns,
Eleven Point River,
Courtois Creek,
Little Scott Cave,
Spring 2006 MVOR, and
MSS 50th Anniversary

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Cover photo

Eric Hertzler floating across Spirit Lake. The lake is 120 feet long, has a maximum width of 45 feet and an average depth of 12 feet. Eric floated in the 60° water for 20 minutes as Rick Hines took photos, leaving Eric a bit chilled. Photo by Rick Hines.

Events

August 29 or 30
CRF cave mapping school in Perry County with SEMO members. Contact Scott House.

September 13
KCAG monthly meeting — 7:00 p.m. at the Magg Conference Center on the UMKC campus, at the corner of Volker and Cherry.

September 16-17
MSS Meeting in Rolla — Survey trips, cave gate work, restoration, photography, and biological survey will all be available in Onyx Cave and other Forest Service caves. Campsite: Onyx Cave. A porta-potti will be on site and Saturday evening food will be a cookout over fire featuring hot dogs provided by CRF.

September 23-24
Meramec Valley Grotto work trip on Pioneer Forest land, Shannon County. Contact Tom Panian.

September 29-October 1
Fall 2006 MVOR — Hosted by MSM Spelunkers at the Shriner's Club campground near Buckhorn, Missouri, just south of Hwy. 44 and southwest of Waynesville.

October 6-8
CRF Board and Annual Meeting at Lava Beds NM in far Northern California. Cave and geology/sightseeing trips in association with the meeting.

October 10
KCAG monthly meeting — 7:00 p.m. at the Magg Conference Center on the UMKC campus, at the corner of Volker and Cherry.

October 28th
CRF work trip — Ozark Riverways trip. Contact Scott House.

November 12
KCAG monthly meeting — 7:00 p.m. at the Magg Conference Center on the UMKC campus, at the corner of Volker and Cherry.

The Guano

August 2006, Vol. 20, Issue 2

The Guano is published on an irregular schedule as dictated by the trip reports submitted to the editor.

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The Kansas City Area Grotto is affiliated with the National Speleological Society and the Missouri Speleological Survey. In addition, KCAG is a founding member of the Missouri Caves & Karst Conservancy.

Meetings are held monthly. Check www.kcgrotto.org to determine the dates.

Annual Dues: $15 for full members (three caving trips with KCAG, nomination, and vote of membership required.)

NCRC Callout number – Emergency use only: Central Region (502) 564-7815. This number may be used for cave rescue emergencies in the states of Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Ohio, and Wisconsin.

A Message *From the* Editor

This issue of *The Guano* features some of the best photos that we've had the privilege of publishing. Both Rick Hines and Richard Cindric have done some remarkable work, using remote flash units to illuminate large underground voids, and sharing some genuinely remarkable visions.

Most of us are familiar with Rick's excellent work in Carroll Cave (a large selection of his photos was featured in an August 2005 feature article in *NSS News*), and earlier this year we published several stunning photos taken by Rick in Ennis Cave. In this issue, he turns his lens on the off-trail areas of Bridal Cave. A trip organized by Eric Hertzler pushed beyond a sump and into an area rarely visited. Rick recorded the sights with a superb set of photos.

Display photos were badly faded at The Blanchard Springs Caverns visitor center (photo by Ben Boling).

Also gracing this issue is a marvelous selection of photos by Richard Cindric and Ben Boling. Arguably the most beautiful cave in all of the Ozarks, Blanchard Springs Caverns features huge rooms and truly incredible displays of flowstone. During a previous trip to the visitor center, Richard noticed the horribly faded photos that hung on the walls. He knew he could correct this problem if the National Forest Service could be convinced that a photo trip was appropriate. They accepted his offer. The results, as you'll see in the accompanying photo spread, are remarkable. The next time you're at Blanchard Springs, check out the new photos in the visitor center. Richard graciously donated the poster-size photos in the name of KCAG. Thank you, Richard.

It was a tough call deciding which photo to use for the cover of this issue. There were many candidates. I originally considered placing the Bridal Cave and Blanchard Springs photos in separate issues so that both would become cover articles. But I got lazy and just put together one issue. Sorry about that. Both photo trips deserved their own covers.

Best,

Gary Johnson

Guano editor

Bridal Cave

Beyond Spirit Lake

trip report by Eric Hertzler
photos by Rick Hines

Above: Eric Hertzler floating across Spirit Lake in Bridal Cave (photo by Rick Hines).

As I pulled the camera from my cave pack, I realized that both the camera and film were as soggy as I was. The camera was ruined and our plans to photograph this obscure area in Bridal Cave were dashed. It was at this moment that a future trip beyond Spirit Lake became a reality. Diving the sump only moments ago had been a frightening experience: I was not willing to make it a habit. Returning to this area would require a better camera, a good Pelican case, and a lower water level so that free diving the sump could be avoided.

That was three years ago. At that time I knew little about the characteristics of the underground lakes in Bridal Cave (or of their detailed relationship with the Lake of the Ozarks) and seasonal rainfall. For the last three years, I have monitored the lake levels inside Bridal Cave and the Lake of the Ozarks, which is located just outside of the cave. At any given time, I can measure the first lake in the cave. Mystery Lake can be seen from the tourist trail, and its water level indicates the level at the sump, which is located in the cave's second lake, Spirit Lake.

The water level of Lake of the Ozarks is generally lower in the winter months, and its fluctuations generally reflect how the water level fluctuates in Bridal Cave. How long the Lake of the Ozarks remains at these low winter levels depends both on power needs and rain/snowfall. Would the lake levels ever drop low enough to allow entry into the rear portion of Bridal Cave without having to dive a sump? According to Gary Zumwalt of Lake Ozarks Grotto (LOG), it had in 1981 when he discovered this portion of the cave. Was this a common occurrence? Further investigation revealed that 1981 was the year that Truman Dam was completed. The Osage River, which is a main water source for the Lake of the Ozarks, was largely pirated to fill Truman Reservoir. This dropped the Lake of the Ozarks to a record low that year, allowing Gary and others to swim through the sump area.

Two winters had passed since my first trip beyond the sump. The lake levels had been nowhere close to as low as they were on my 2003 trip. My hopes that the sump may open from time to time were filled with doubt. I was growing impatient, and some of my nightmare memories of the sump had waned.

In December of 2005 the Lake of the Ozarks level was low, and as a result, the lake levels within Bridal Cave had dropped within range of another trip beyond Spirit Lake. I expected both the Lake of the Ozarks and the underground lakes in Bridal to drop even lower in the next month or two. It was time to think about who I would invite on the trip.

Steve Potter (PEG) is one of my favorite cavers. He has a great attitude, and I always end up having an excellent time when caving with him. Jonathan

Above: Jonathan Beard emerging from the sump at Bridal Cave (photo by Rick Hines).

Beard (OHG) is no stranger to watery cave conditions. He had told me stories of a near-sumped Garrison Cave #2 entrance trip. He had mapped "Nasal Navigation" in Spring Cave (KS). Jon had also dove a few sumps, one being about 20 feet long. I also asked Jeremy Bounds (OHG) to go along. Jeremy is a strong caver who expressed interest in Bridal Cave at the 2003 Spring MVOR. Jeremy is also a R.N., and it was comforting knowing that he may be of assistance if there was an emergency. Rick Hines (KCAG) showed interest in going. Rick is an excellent cave photographer. His Carroll Cave photos had graced both the front and back covers of the August 2005 issue of *NSS News*.

Rick was willing to bring along his 8 megapixel camera, along with 8 infrared triggered flash units. He agreed to take all the photos on the trip, with the rest of us assisting in carrying his flash units. This would be the sole purpose of our trip beyond Spirit Lake.

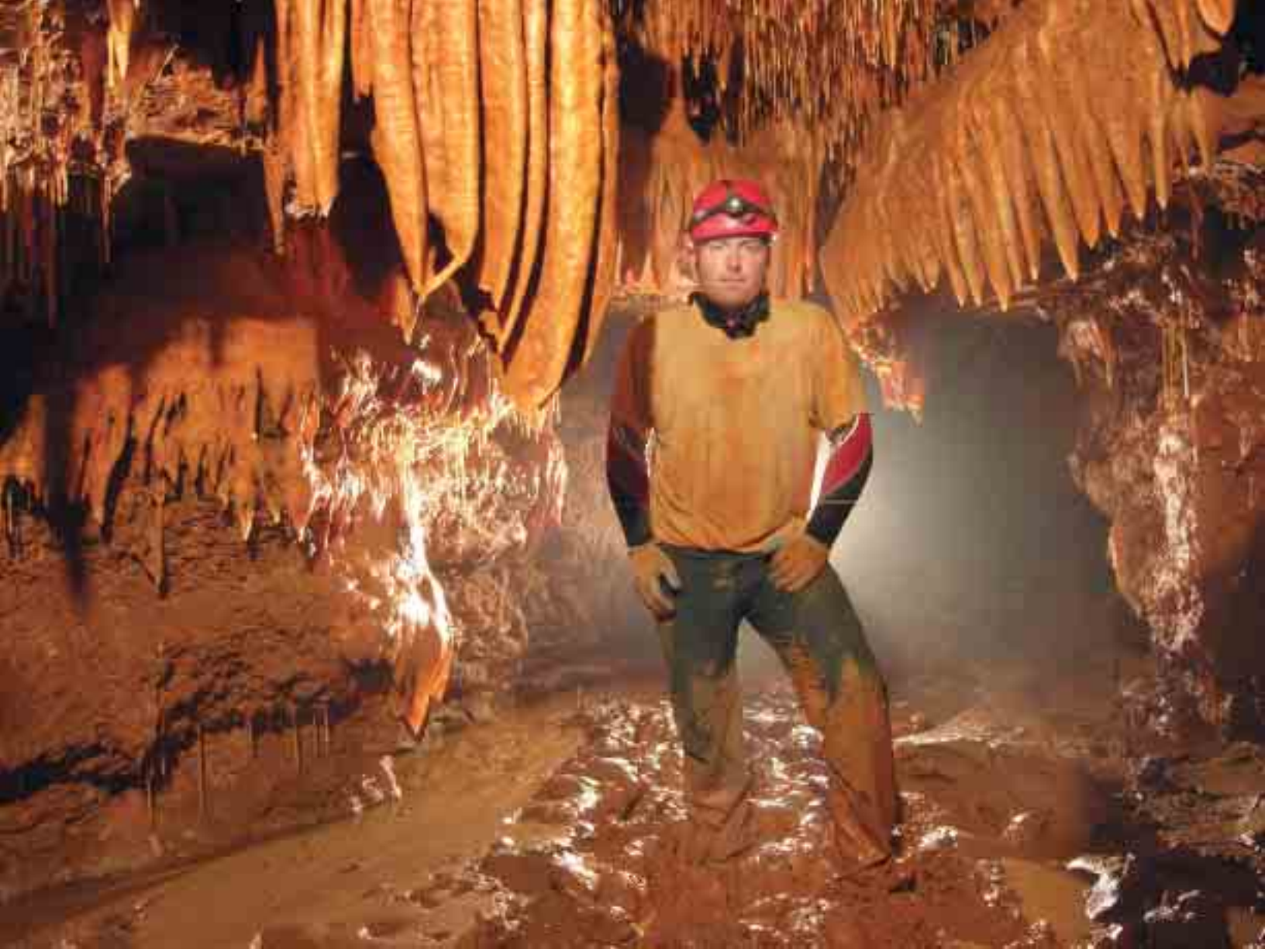
On February 4th 2006, five of us, including Charity Gramm (OHG) and Christen Stewart (LOG), met at the Bridal Cave gift shop. Charity and Christen planned to take photos on and off the tourist trail. They would also act as our contact with the outside world, should something go wrong.

After greeting one another, we headed down to a lower building located next to the cave entrance. Here we assembled all our gear and suited up for the trip. We all had wetsuits on (at various stages) when the final tour group of the day came marching out of the cave. They peered in through the window at us with looks of mystery and disregard.

Soon we were all suited up. We entered the cave and walked to the end of the tourist trail, to a small observation deck above Mystery Lake. We would use an extension ladder that was already in the cave to reach the surface of the lake 25 feet below us. From the ladder, we would cross Mystery Lake in an inflatable raft. On the other side, a knotted rope hung from the right wall. The first person across the lake would climb the rope (about 12 feet) and then secure a cable ladder from above for everyone else to ascend. I volunteered for this task, and was soon on the other side of the lake. I anchored the cable ladder to a large rock projection and assisted the others in hauling up gear.

At this point we all stood on "Paradise Island," which is basically a large mass of clay, bedrock, and calcite that separates Mystery Lake from Spirit Lake. Paradise Island offers incredible views of both Mystery and Spirit Lake, from high ledges 30 feet above the lake surfaces. In the middle of Paradise Island is a slump pit, known as "The Screw Tube." This small hole would give us the closest access to the surface of Spirit Lake. Another cable ladder was anchored here and threaded down through the Screw Tube to help us negotiate a four-foot ledge that gives way to the water's surface.

Rick and the others prepared to take photos of Spirit Lake while I gathered a flash unit in a dry bag. I climbed down the cable ladder through the Screw Tube and slowly lowered myself into the 60-degree waters of Spirit Lake. The lake measures 120ft. long, has a maximum width of 45ft. and an average depth of 12ft. I swam toward the middle of the lake, using a float tube that Steve had brought. From back at Paradise Island, Rick guided me to the best spot for photos, and everyone else spread out on the upper rim of the lake with flash units. Rick took several photos, and after about



Above: Eric Hertzler beyond the sump, near the end of the passage in Bridal Cave (photo by Rick Hines).

20 minutes, he was finished. I had become chilly during this time. I remembered that towards the sump, there were some underwater ledges I could stand on and get my upper body out of the water. While everyone else assisted Rick with a few more photos, I swam ahead. Near the back of Spirit Lake, the passage narrows and bends to the left. While swimming around the corner, I splashed past a cluster of partially submerged stalagmites and columns. The passage closed down further and tuned back to the right. Soon I reached the underwater ledges and took a breather. Passage dimensions here are 10 to 12 ft. wide, with 4 ft. of air above 8 to 9 ft. of water. The ceiling and walls are decorated with a variety of formations.

While straddling the ledges to stay out of the deeper water, I looked at the sump while shivering from being in the cold water. I could see stalagmites on the floor of the sump, indicating that before the Lake of the Ozarks was built, this area of the cave was in fact dry. I could clearly see the roof of the sump about 1 foot under the water. Several stalactites hung down under water. These would force us to swim down another foot or so to clear them.

Butterflies began to fill my stomach as I thought about the reality of going through the watery passage. It had been almost exactly 3 years since I had been here. I could not remember if the dive was a straight shot through, or if we had to angle off to one side or the other. Coming face to face with the sump again was uncomforting.

My legs began to cramp from the cold water, and I had to keep shifting my weight around to relieve the cramping. My shifting slowly started to cloud the water around the sump. I could hear the distant splashes and whoops of the others in the main part of the lake. They soon would be here also, and one of us would have to dive through quickly to avoid clouding the sump.

The others finally arrived, and all 5 of us crowded into the sump area. Rick had borrowed a high powered dive light to use at the sump. I asked to use it, volunteering to go first. I would swim through, while taking one end of a 20 foot rope that would be tied off on either end of the sump, providing a guide through the sump even if it became too murky to see.

My heart was racing. I took a couple deep breaths of air, ducked under, and

gave a hard kick forward. Suddenly my helmet crashed into a wall. I swam backwards as fast as I could and came back up gasping for air. I became a little unnerved. I had brought goggles, but chose not to use them on the first attempt because they were fogged up. Steve suggested that I spit into the lenses to defog them. Ducking back underwater, I was able to see the murky ceiling of the sump. I kicked forward until I could see air on the other side, where I then surfaced. Again I came up gasping because of the cold water. I let the others know I had made it by shouting through a small crack above the sump.

I asked the others to tie their packs on the rope; I would pull the packs through. The rope was long enough that the packs could be tied off in the middle. I could pull them through and the others could still have enough rope to pull it back through to their side. There was a long silence after I asked to send the packs. Jon then said, "We don't have the other end of the rope." Apparently the other end of the rope had accidentally been dropped and was now somewhere under the murky water. I was asked if I was willing to swim the rope back through. I replied "no" because going through once was scary enough!

Rick said that he was willing to come through. Rick took some deep breaths, dove underwater, and soon popped up on my side of the sump. He quickly grabbed the rope and went back through! Now we had the rope secured on both ends.

Jeremy and Steve swam through next. Even with the high-powered dive light, I did not see either of them until they surfaced only inches from me. Only Jon and Rick remained on the other side. They tied the packs on the rope and I attempted to pull them through. I tried as hard as I could but could not pull them through. The packs were so buoyant that they stuck to the ceiling of the sump. Rick then said he would swim the packs through one at a time! I mentioned that I did not like this idea and that we could just tie the packs on one at a time and pull them through. Rick insisted that diving the sump did not bother him and that he was coming through. Rick then made 6 dives through the sump bringing 3 packs (containing 5 flash units) and a cave pack. Rick then swam back through for his camera and case. Jon swam through, followed by Rick making yet another dive, this time with his Pelican case. We decided to leave the float tubes, life jackets, 3 flash units, and a few cave packs floating on the other side.

Now we all stood wet and shivering on the other side of the sump. This room is called "The Crystal Room." The room is circular in shape and roughly fifteen feet in diameter. The small pool where we had

Top: Bacon and soda straws in Bridal Cave (photo by Rick Hines). **Above left:** Helectites in Bridal Cave (photo by Rick Hines).

surfaced from the sump floors the room. Ceiling heights above the pool are 8 feet. It was apparent by looking at the resolutioned formations on the walls and parts of the ceiling that this room, at times, almost completely sumps.

At the far end of the Crystal Room, the cave continues as a rimstone-floored passage. Within a few feet, another small room with almost the same dimensions as the Crystal Room is encountered. For a moment it appears that this is the end of the cave. However, closer examination of the rear wall reveals a small opening 13 inches square between the formations.

I squeezed through the opening. It quickly gives way to a small flowstone area that slopes off into 8 or 9 feet of crystal clear water. The flowstone that I was perched on was only large enough for two people. I asked if Rick could go through next so that he could get a few photos of this tranquil cave scene. Rick came through, and I held flash units as he snapped his camera.

From here we would have to return to the uninviting water and swim further into the cave. Steve jumped in first, followed by Jeremy, Rick, me, and Jon last. The flooded passageway was 12 feet wide, 10 to 12 feet tall, and the water averaged 6 feet deep.

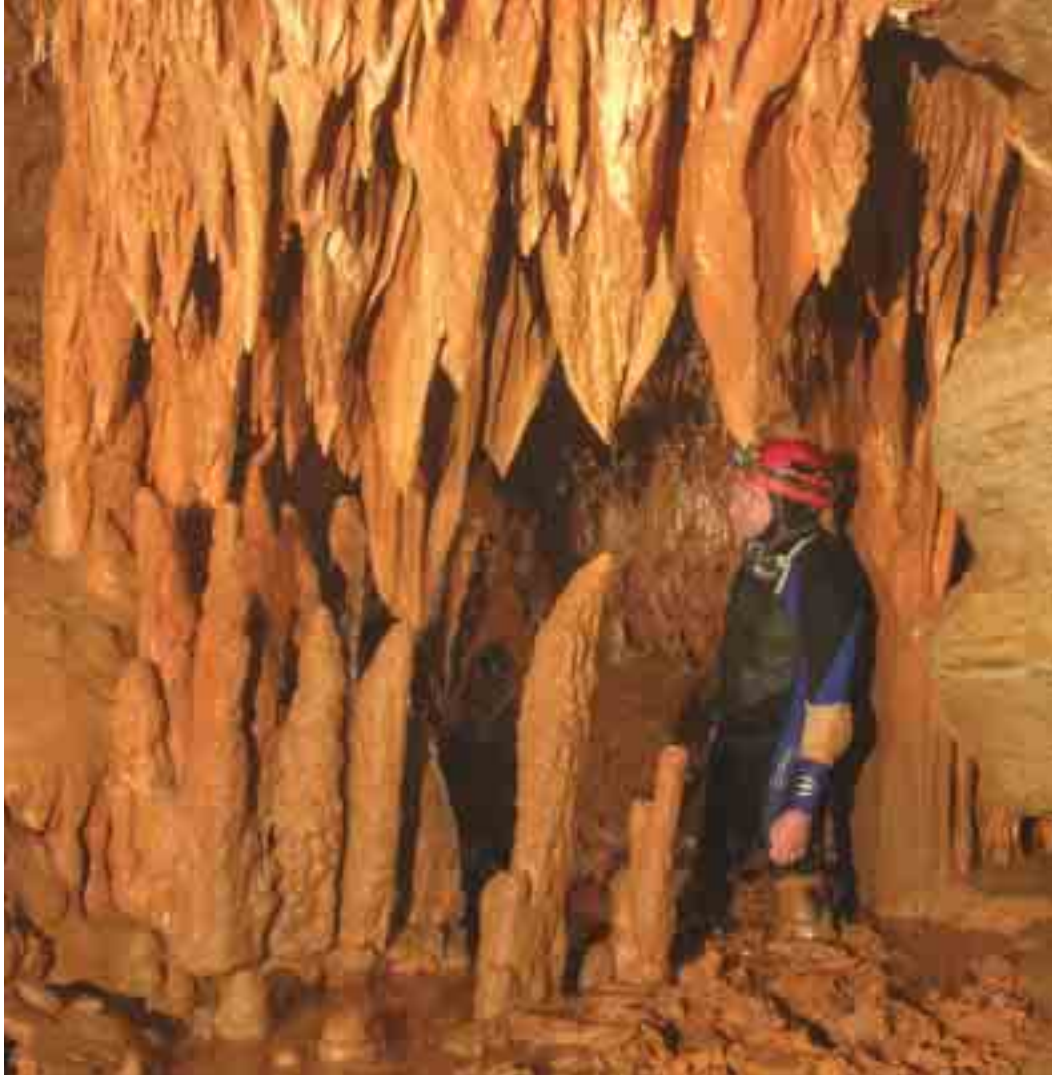
Within 50 feet of leaving our flowstone perch, a large canopy of smooth flowstone and clay spanned the passageway in front of us. The top of it came within inches of the ceiling, and beneath it was a small hole 2 feet wide and only 15 inches above the water surface. We continued through the hole and swam under the large canopy, which was roughly 30 feet long. I turned around to see the other side. It was also decorated with impressive flowstone, stalagmites, and other formations.

Here the passage widened to 25 feet and the ceiling rose to 15 feet above the water surface. Swimming along the left wall allowed us to touch the bottom, which was slick clay. Within another 100 feet, we reached the end of the water passage and were met by a clay bank.

The clay bank signaled the end of our swimming and the beginning of a 300-foot stretch of walking passage. This section of cave averaged 12 feet wide and 10 feet tall. The floor was sloppy, boot sucking mud that was knee deep in spots. The walls were made of smooth dolomite. Formations were found only in small clusters every so often. The smooth bedrock walls, sporadic formation clusters, imbedded chert fragments, and stream gravel makes this part of the cave unique from any other section of Bridal. It also appears that this area of the cave has a very shallow overburden, due to four Eastern Pipistrelle bats that we found here and tightly packed stream gravel imbedded in the clay banks along the passage walls. This is the only place stream gravel is found in Bridal Cave. A deep surface valley found above the cave's terminal point may at one time have penetrated the rear portion of the cave.

Within the last 50 feet of passage, we stopped at a large cluster of stalagmites, stalactites, and columns. Even though these formations were stained a mud color, they would be a highlight in any other wild cave. Bridal had kept true to its claim throughout our trip as one of America's most beautiful caves. Rick took some photos here, and then we moved forward to finally see the back wall of the cave. Here, a flowstone cascade makes up the floor, while the ceiling is decorated with soda straws, stalactites, and curious helectites. We had all made it to the end of Bridal Cave, joining a small list of others who had been lucky enough to be here. We each had our photo taken at the far reach of the cave, and then started our journey back towards the sump.

We slogged back through the knee deep mud and onto the water's edge. We all took to the water and swam back under the large canopy, climbed back up the flowstone, and squirmed back through the formation squeeze. Five soggy cavers huddled in the Crystal Room once again. Everyone started to ready



Above: Jonathan Beard beyond the sump and near the end of the passage in Bridal Cave (photo by Rick Hines).

themselves for the inevitable. While everyone was gearing up, Rick decided to take some photos of some of the interesting helictites that adorned the ceiling. After 10 minutes or so, he put up the camera for the last time. Now, we were once again face to face with the sump.

The water had settled a little. I could just make out the roof of the sump beneath the water's surface. I would again dive first. I positioned myself in front of the sump, put on my goggles, and took several deep breaths. I quickly ducked underwater and was able to get a good look at the underwater passage ahead of me. The ceiling was mostly smooth, the floor was silt with intermittent small stalagmites, and the passage was 4 to 5 feet wide. I swam forward, dove another foot or so to avoid smashing into the submerged stalactites, and then quickly swam to the surface. I shouted to the others, letting them know I had made it.

Steve came through next while the water was still somewhat clear. He was relieved to be on the other side of the sump, and so was I. Once again I held the dive light under the water, and Jeremy came through next. He surfaced inches from me. Again, I did not even see him coming. The water was now very murky.

Rick again insisted on swimming the packs through one at a time. He swam through and then proceeded to make 4 more trips, bringing us a cave pack and 5 flash units. He then went back to retrieve his Pelican case, which was still on the other side. He called out that he was coming through again. Steve and I listened as he went under. Suddenly there was a low thud, then another, and then silence. Ten seconds had passed, and I shouted, "Did he come back up over there?" I received no response, and suddenly I feared the worst. Then, came the welcome sound of Rick surfacing on the other side. Jon asked, "Is everything all right?" Between coughing up water, Rick responded, "No!" Rick then went on to explain that he was okay, but his camera and case were still somewhere under the water, stuck on the ceiling. While bringing the camera case through, he ran into a wall and was confused as to where he was. His only option was to follow the wall until he found air above him.

Above: Eric Hertzler in a passage beyond the sump in Bridal Cave (photo by Rick Hines).

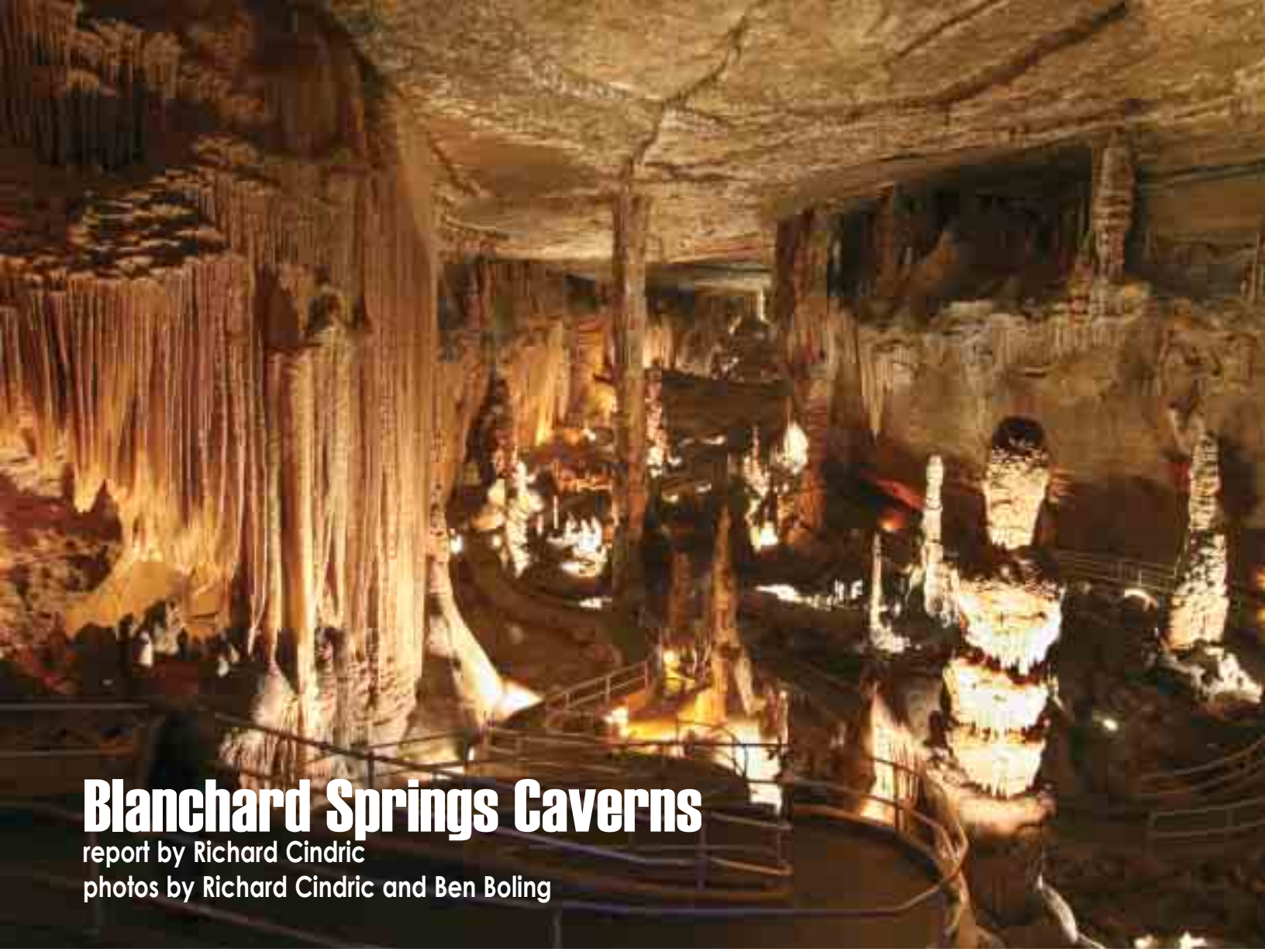
Soon Rick found his camera case on his end of the sump. He announced that he was going to swim through. This time, after only a couple of seconds, Rick popped up on our side of the sump. This was his 14th time swimming through the sump on our trip! Jon was the last one left on the other side. I offered to pull him through with the rope, and Jon accepted. After a few tugs, I saw Jon's red helmet come poking out from under the flowstone ledge. He surfaced, and a big sigh of relief was had by all of us. We had all made it, and thanks to Rick we had lots of photos to boot!

We all started our swim back across Spirit Lake, and soon we could see the tourist trail lights glancing off the ceiling of this great room. Wow, what an incredible view from down here on the lake surface.

Back on Paradise Island, we climbed the Screw Tube and de-rigged the cable ladder. Then we climbed down the second cable ladder to the surface of Mystery Lake. I — being the last person across — de-rigged this ladder, climbed down the knotted rope into the inflatable raft, and paddled back across Mystery Lake.

After we climbed the extension ladder, we were at last all safely standing on the Bridal Cave tourist trail. We picked up all of our gear and headed towards the cave entrance. We were now among a list of less than 20 people to ever walk/swim from the front of Bridal Cave to the back. The feeling was incredible. The trip had been a test for all of us, both mentally and physically. I personally felt a togetherness with the others in the group. What we had done, and where we had been, further bonded the friendship I had with each of my fellow cavers.

I thank Rick, Jon, Steve, and Jeremy for accepting my invitation and making this trip a great success. I also thank Charity and Christen for waiting for us at the tourist trail. It was nice to know that someone was there just in case. Thank you, David Thompson and John Dalton of Bridal Cave, for allowing us to take this trip. I would personally like to thank Rick Hines for his bravery in diving the sump 14 times and bringing all the photo gear. Rick also unselfishly risked ruining all of his camera equipment in the very wet conditions of Bridal Cave. Thank you, Rick!



Blanchard Springs Caverns

report by Richard Cindric
photos by Richard Cindric and Ben Boling

It was a year ago that I was in the Blanchard Springs Visitor Center for the umpteenth time, and I finally noticed the photographs on the wall. It's not like me to notice things: 90% of my thoughts are about food, sex, and my bowels. But this time I did notice two large photos so deteriorated with age that they could barely be recognized as photos.

"Richard," I said to myself, "maybe you should offer to take some replacement photos and have them printed and donated to the Forest Service." With only 10% of my brain power available to formulate these thoughts and decide on a course of action, it took awhile for anything to happen. I sent an e-mail message to the Forest Service, and Antonella (Tony) Guinn answered, "Yes."

Fast forward several months to March 18, 2006. Tony, Phillip Dobbins (who also works at Blanchard), Ben Boling, Jerry Cindric, Gay Garrett, Richard Keith and I enter the cave after the last tour is gone. It's about 5pm. Ben and I are taking photos while everyone else is working flash bulbs and electronic flashes. Tony is the occasional model. In 2½ hours, we each take about 60 photos. Then we're done.

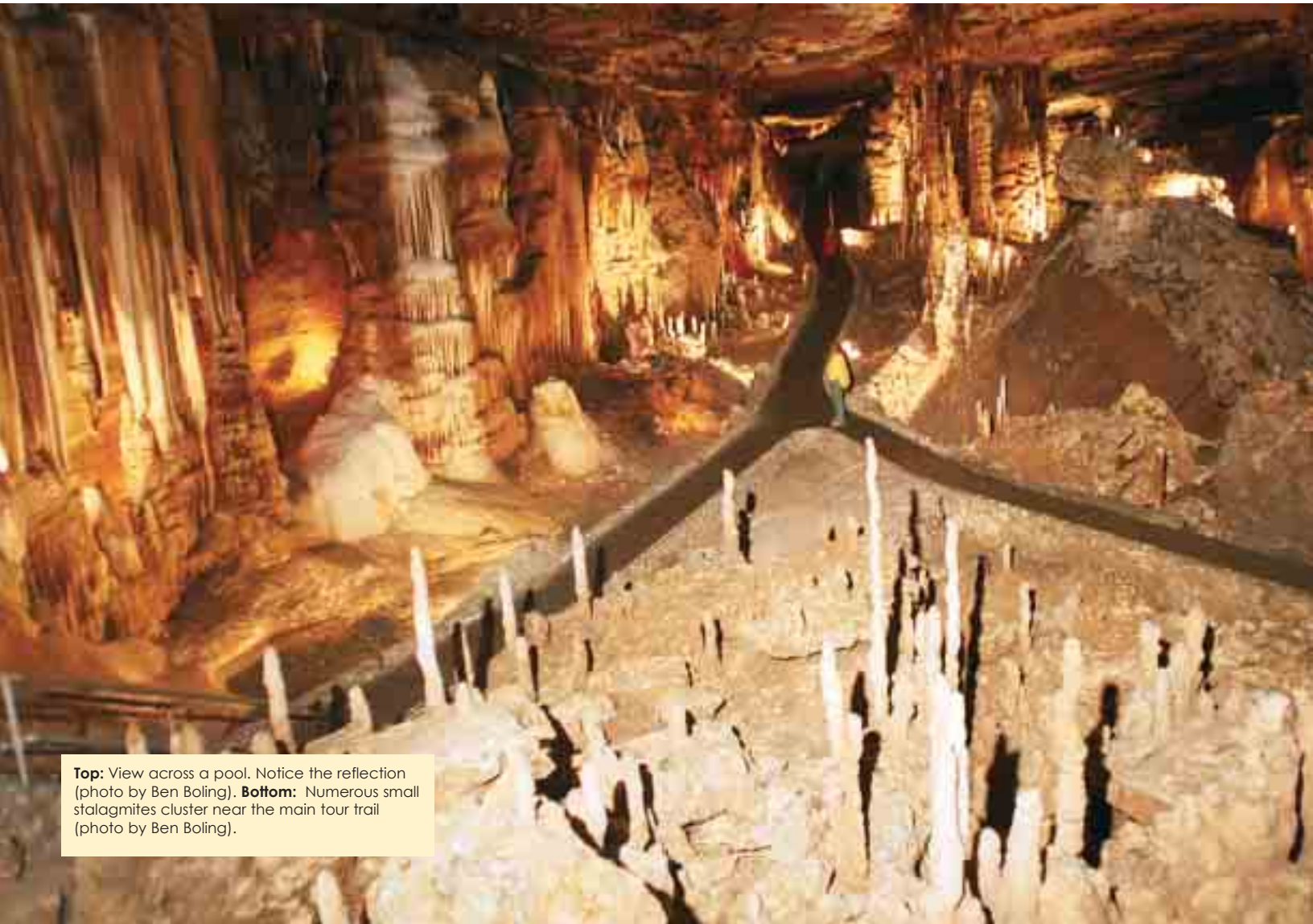
It was a different experience for me. I've taken boat loads of cave photos but never in a commercial cave with lights on, and seldom in very large rooms with very large formations. In general, I was unhappy with my photos: I can't explain why I didn't have better results. The ratio of stinkers to keepers was greater than I expected.

The electronic flashes were really useless for a couple of reasons: The distances in the rooms were too great and the color didn't match the installed lighting. Flash bulbs were a great way to go and we used a lot of them.

After we got home, Ben gave me a CD of his photos, and I used Adobe Photoshop to massage his photos and my own. I sent a CD of all the photos — raw and processed — to Tony and she picked out the two she wanted for 39" square prints. The desired result was that we'd have a couple of new photos for the Visitor Center, and we definitely accomplished that.

For those of you who are so unfortunate as to not have been to Blanchard Springs Caverns, it's located in north-central Arkansas near the town of Mountain View. It's the only commercial cave managed by the Forest Service. All other federally operated commercial caves are managed by the Park Service. Blanchard is in Stone County which is famous to all Ozark cavers because of wild caves such as Ennis, Alexander, Janus, etc. Blanchard is a long and fantastically decorated cave with large passages — a perfect combination. The Dripstone Trail tour is open year round but the Discovery Trail tour is only open during the summer due to endangered bats. The Blanchard campground is nearly as perfect as the cave; beautiful Sylamore Creek runs through it, spacious campsites, lots of shade, and hot showers.

Above: The tourist trail winds through this immense room in Blanchard Springs Caverns is over 1,000 feet long (photo by Richard Cindric). **Next page, top:** A massive display of flowstone dwarfs Tony Guinn (photo by Richard Cindric). **Next page, bottom:** The formations are huge in Blanchard Springs Caverns (photo by Richard Cindric).



Top: View across a pool. Notice the reflection (photo by Ben Boling). **Bottom:** Numerous small stalagmites cluster near the main tour trail (photo by Ben Boling).

Top: Soda straws and columns (photo by Richard Cindric). **Bottom:** Flowstone and small formations (photo by Ben Boling).

Clockwise from top left: A shallow pool in Blanchard Springs Caverns; spring branch; Sylamore Creek; foliage; and a group photo (l to r): Richard Keith, Tony Guinn, Richard Cindric, Gay Garrett, Jerry Cindric, Phil Dobbins, and Ben Boling (photos by Richard Cindric, except group photo, by Ben Boling).

Clockwise from top left: Blanchard Spring; close-up of bluffs at the day-use area; bluffs with shelter cave; foliage; Mirror Lake; and spring branch (photos by Richard Cindric, except Mirror Lake, by Ben Boling).

Floating the

Eleven Point River

trip report by Brian Payne
photos by Conor Watkins

So I must confess, having spent more time on the water than crawling around in caves (I'm doing all I can to make up for lost time!), I looked forward with amusement to how my subterranean friends would fare on this June 2006 trip. Our six-man canoe armada was made up of Gary Johnson of KCAG, Wade Baker from Arkansas, Steve Potter of PEG, and Rolla recruits Conor Watkins, Ben Johnson, and Brian Payne. As it turned out, the only getting wet occurred during some wet cave crawls and when we washed off traces of poison ivy from our clothes. No tipped canoes this time.

Credit must be given to the mastermind of the operation, Gary, for gathering the preliminary intelligence for our trip. Through Mick Sutton, who's been doing contract work for the National Forest Service, Gary gathered several leads along the Eleven Point River. In addition, there were plenty of previously discovered caves scattered along the route to investigate.

The Eleven Point is hands-down one of the most pristine of Missouri's riverways, and it's swift at 4 to 5 mph. On Friday morning as we loaded up the canoes. After finishing arrangements with the canoe outfitter to ensure we had a means off the river, we were on our way.

We spent most of Friday in the vicinity of Little Hurricane Creek, a tributary of the Eleven Point. We couldn't have asked for better weather, and it stayed with us for the whole trip. We had about four leads to

Top: The old mill wheel at Turner's Mill (photo by Conor Watkins) **Bottom:** Turner's Mill Spring issues from a small cleft at the base of a bluff (photo by Conor Watkins). **Next Page, left column:** Formations in White's Creek Cave (photos by Conor Watkins). **Next Page, right column:** Boze Mill Spring rise pool; spring branch; dam, sluice, and old turbine; (photos by Conor Watkins).

pursue, but the first thing we found was poison ivy … and lots of it! I'm not sure I've seen such lush, healthy looking ivy. I'd swear the stuff was cultivated the way it coated the forest floor. We came to where our first lead should have been located and didn't see a thing. To improve our odds, we spread out with half of us going one direction and the rest the other.

Wade and Steve bagged our one and only find of the trip, but all of us were nonetheless excited when we heard Steve announce it over the FRS radios. After working to dig out the entrance, Wade and Steve finally were able to push a tight crawl for about 60 feet. We continued throughout the late morning and afternoon to pursue the other leads. We found plenty of limestone, pitted and carved with the tell-tale signs of what we hoped would lead to caves, but no luck.

Fortunately there were a couple of known caves in the area to take in as well. Prickerbrush Cave was aptly named, and we spent some time fending off the spiny plants before locating the cave in a bluff. It proved to be a small, short cave, but rewarding nonetheless after having spent the good part of a day hunting down leads. The caves only got more spectacular from there.

The last cave for the day was Beaver Spring Cave. The 10 foot by 30 foot entrance was welcoming after the day's smaller caves. The cave contained around 300' of passage and contained plenty of soda straws and a nice flowstone formation. Next, we paddled on to our campsite, stopping to visit Turner Mill Spring along the way.

Saturday began with Bliss Spring Cave. With less than 100 feet of passage, it was short, but it was a fun wade through knee-high water. Next was Sand Cave, filled with a sand bar you'd have expected to see at the beach, not underground. The main attraction, however, was White's Creek Cave. Its location is no secret as it shows up on topo maps, and a well-traveled trail leads right to it. The entrance could've fit a set of double doors, but not much else. I was shocked by the massive chamber inside the unspectacular entrance. The best way I could think to describe it was to take one of the massive halls in Kansas City's Union Station … and put it under ground. The cave was well traveled, but its sheer size made the graffiti and abuse small by comparison. The scale of everything was so different than all the other caves of that weekend. One thick formation started at ground level and towered several feet above our heads. Our passage further back was barred by a rope and sign forbidding access and put there to protect the bats that roost in the back of the cave.

The last cave of the trip was my personal favorite. Both its name, River Level Cave, and its soggy entrance were unassuming. In fact, it was the tight wet crawl over jagged rocks that'd kept it so pristine. After a long crawl, you suddenly pop up into a room some 20' high, with arms of flowstone that wrap around you. I was amazed at how much water was trickling down into this cave, which explained the abundance of formations. As you continue back into the cave, you're enveloped on both sides by flowing curtains of formations. The stream flowed steadily, shin high, and dropped over a two-foot waterfall, which you had to ascend to continue back. Wade found a blind crawfish in the pool at the top of the waterfall. Farther back there were more formations and countless soda straws. From there, the map showed it continuing in a low wet crawl, so we turned around and continued to Boze Mill, where we camped beside the spring branch.

Sunday we spent canoeing to our take-out point some 10 miles farther down the river. Near the end, we explored an area called the Narrows. Three big springs here pump out over 100 million gallons a day. Afterwards, we paddled the final mile to the take-out point and waited for the outfitter to arrive. On the ride back to our vehicles, the outfitter filled us in on all sorts of local history, but most interesting was what pertained to caves. Beaver Spring Cave, for example, went by another name amongst the locals, Broadfoot Cave. It even turns out that this outfitter had long been searching for a lost cave of his own.

Needless to say, we probably came back with more leads than when we began, but then it wouldn't be caving if that weren't the case. All too soon, we were all headed our separate directions home. Thanks to all those who participated and made it happen!

Top: Blue Spring as viewed from The Narrows (photo by Conor Watkins). **Bottom:** Mill race at Morgan Spring (photo by Conor Watkins).

Floating Courtois Creek

and a Trip to Little Scott Cave

trip report by Gary Johnson
photos by Bernhard Arnold, Jeff Page, and Conor Watkins

This April 2006 trip originated through my desire to see Green Cave in Meramec State Park. It reportedly has one of the largest cave entrances in the state and about a half mile of passage. However, when it came time to talk to outfitters about canoes, I learned the outfitter in the park wasn't set to start business until the week after our trip was scheduled to take place. So I scrambled for another stretch of river. It came down to the Vilander Bluff area or the Courtois (pronounced code-away or coort-away by locals), and eventually I settled on the latter. I even tried to get us a permit for one of the most interesting caves in the area, Jagged Canyon Cave, but be warned you have to make your permit request at least a month in advance. Also permits are automatically cancelled if there is any rain 72 hours in advance of the permit date, which would've included our trip. So even if we had secured a permit it would've been rendered void. In any case, there is a lot to do on the Courtois and it certainly kept us busy all day Saturday.

The itinerary for this trip included putting in at Butts Slab on the Courtois and floating the seven miles to where the Courtois meets the Huzzah, floating the Huzzah to the Meramec, and floating the Meramec for two to three miles to our campground. During the float we would stop at several caves. Bear Cave and Sewer Cave would be the two caving highlights of the trip. We would also check out some small bluff caves and look for another couple caves at the Narrows, which is named for a narrow ridge that separates the Courtois and the Huzzah.

Above: The float team at the put-in point on the Courtois Creek (l to r): Jamie Bernard, Sam Clippinger, Gary Johnson, Kydell Chauza, Bryan Gross, Wesley Gross, Jeff Page, Sheryl Nettleton, Conor Watkins, Diana Dexter, and Brian Dexter (photo by Conor Watkins).

We were dealing with Ozark Outdoors, which is located directly across the river from Onondaga State Park. Their campground is huge, over a mile long from one end to the other. During the summer, I'm sure it's an absolute madhouse. Conor Watkins, who would be joining us on this trip, said he'd dealt with Ozark Outdoors before and his experience wasn't exactly good. He also told me about wall-to-wall canoes on the Meramec during the summer and people with huge jam boxes cranking out 100 decibels. But I figured this trip would be early enough in the spring that the huge numbers of floaters would stay away. In addition, the weather turned a little cool right before the trip date. Ultimately, during our float, we saw few people. Near the primitive campground in Huzzah Conservation Area, we ran into several people walking the trails (some stumbling with alcoholic drinks in their hands). But otherwise the river was ours and ours alone. Just as I like it.

The outfitter put us in near Butts Slab at an outfitter's campground. They had apparently worked out an arrangement in which they traded access to their take-in and take-out points, which were on private property. It was a relatively uneventful first couple miles, but one of the downsides of floating this early is the number of snags. No one had yet been down the creek with a chainsaw to remove the numerous downed trees. That meant there were sections of the river in which we were zigzagging our way downstream, around a snag on the left, another 100 feet and a snag on the right, another 50 feet and a snag on the left, another 100 feet and a tree all the way across the creek. That was how it was in the Narrows section, where the creek averages only about 20 feet across.

Somehow, I don't know the details but Jeff Page and his girlfriend, Sheryl Nettleton, ended up swamping their boat. This took place where the creek is flowing through private property, so we couldn't linger here for them to dry. I directed us to the edge of Huzzah Conservation Area, at which point we jumped out of our canoes. Sam Clippinger had brought along several scouting friends on the trip, who quickly had a fire going on a sand bar. Jeff and Sheryl hung up their clothes to dry and changed into what spares they brought along. After they were reasonably warm and comfortable, we set float again.

We wasted way too much time looking for Fault Cave. It appears on USGS topo maps. We looked all over the bluff where the cave was supposed to be located and found absolutely nothing, except for a small cave at river level. The area looked very promising for caves, with highly pockmarked bluffs teasing us to continue searching. Ultimately we probably wasted an hour. A few weeks later I talked to Steve Potter of PEG, and he said he had searched for Fault Cave on at least two occasions and had found nothing. So I suspect it's misplaced on topo maps. The rock layer is supposed to be tilted about 20 degrees at the entrance. We didn't see this layer on the south bank, where the cave is supposed to be located, although this layer is quite obvious on the north bank. Opposite the tilted layer, the south bank is worn away. There is no bluff. But the cave is supposed to be about 30 feet up the bluff. Hmm ….

Anyway, not much further downstream, the Ozark Trail drops down to the creek and follows alongside a bluff on the north side of the creek, passing several small caves along the way. We tied up our canoes and got out to investigate. We were initially lured by a cave clearly visible about 30 feet up the bluff. Hmm … the same height as Fault Cave. Could the cave symbol have been misplaced on the wrong side of the river? We checked out the cave, which is mostly hands and knees crawling passage. Largely dry. No, it was nothing like the

map of Fault Cave and the rock layer wasn't tilted at the entrance. I have no idea what the name of this cave might be, but it was about 150 feet long. The passage curved to the left and then ended in a flowstone choke that included several nice but small rimstone dams.

The bluffs near this cave were very interesting. One alcove was a dead ringer for an old dome that had collapsed. The bluff walls were marked by vertical channels and striations like you get in domes. Now, it served as a wet weather waterfall. Conor crawled up to check it out and said it just kept going as a series of cascades. Alongside the creek, several members of our party checked out the next small bluff cave. It required climbing seven feet into the cave's mouth. The cave was similar to the first one and about the same length. As we floated past the remainder of this bluff, we saw at least three more caves.

Bear Cave and Sewer Cave are located in a bend of the river. They're easily accessible and receive a fair amount of visitors in the summer. Bear Cave has a nice-sized entrance at the base of a bluff. It's about 15 feet wide and 10 feet high. The passage curls to upper clay banks that contain numerous depressions, said to be bear beds (although they also looked a lot like the holes left by pot hunters). This cave is largely dry. It contains a few modest decorations and at least one fair-sized room, about 20 feet across. But most of the cave consists of a small passage that alternates between walking height and crawling height. After about 700 feet, the passage eventually peters out.

A short distance downstream on the same bluff as Bear Cave is the inconspicuous entrance of Sewer Cave. The entrance is very similar to a street-level sewer entrance. It's only about a foot high and slants down at a steep angle. I was the first to slide in. The entrance was floored with leaves that hadn't been disturbed for quite a while, so we were likely the first cavers to enter Sewer Cave in several weeks, maybe months. Also, I'd heard about how messy and muddy it can be in Sewer Cave, but I found crystal-clear pools awaiting. The rest of the party will have to trust me on this because I'm afraid I stirred up the silt. Everyone else found muddy pools. We sloshed our way through the main passage to where you can finally crawl onto dry land. This happens about 200 feet into the cave, at which point you encounter a surprisingly large room, with about a 50 foot high ceiling. Flowstone pours down the far wall in one of the prettiest displays that I've seen. On top of this flowstone, a nice-sized column reaches another 20 feet up to the ceiling. This is a very impressive area. The cave weaves its way for a few more feet, for a total of about 400 feet of passage altogether.

Not far downstream is another cave, Bat Cave, but it is gated and access is not allowed. Several other potential caves dotted the bluff, but by this time the group was running out of steam. It seemed best to make a sprint for the campground, so we made no stops from here to the take-out point. By the time the Courtois has reached Bear Cave and Sewer Cave, it is wide enough and deep enough that snags aren't much of a problem anymore, and after it meets the Huzzah, the resulting river is about 60-100 feet across. It slips underneath a bridge at Scotia (stay far right if you want to avoid dragging your canoe). Not long afterwards, the Huzzah joins the Meramec. The float took a lot longer than I expected, most likely because the water wasn't moving very fast, but eventually we reached our take-out point on the Ozark Outdoors grounds.

On Sunday, we headed for Little Scott Cave. It's located a good 30-minute drive to the east from our campground. I figured out which backroads to take (it's a little tricky) and led the way. This was my second trip to Little Scott. It's a very interesting cave. The entrance is a vertical slot near the uppermost reaches of a hollow. The slot is on the west side of the hollow. It drops about six feet to a slope that continues down into a room with a ceiling height of only about four feet. I hadn't yet visited the passage that heads to the north from here, so we took

Top: Floating the Courtois Creek (photo by Bernnhard Arnold). **Right:** Portage time (photo by Conor Watkins).

Left: At the entrance of Little Scott Cave (photo by Jeff Page). **Lower left:** Jeff Page standing above the entrance gate (photo by Bernhard Arnold). **Lower right:** Jeff and Sheryl in Little Scott Cave (photo by Bernhard Arnold).

off in that direction. This is a highly decorated passage. As a matter of fact, if you want to continue, you soon have to be willing to walk on flowstone ledges. I peeked through the formations, saw the conditions didn't let up, and decided I didn't have any justification to be contributing to the mud buildup on the flowstone. So we turned around. This short passage is very pretty.

Little Scott is somewhat unusual because its stream doesn't flow toward the entrance. The stream flows away from the entrance, toward the cave's farthest extremes, at which point the stream passage eventually becomes too small to follow any further. From a recreational point of view, Little Scott is fascinating because there are several levels that circle and intersect. A very cool side passage on the right is easy to neglect because you have to climb up to find it, but searching is worthwhile because the passage leads to a gravel slope with a small hanging pool. Tucked to the right, up a little free climb is a passage that leads to a 25 foot high dome.

Trails in Little Scott frequently lead up onto high clay banks that suddenly just … end and leave you either retracing your steps or carefully slipping down on ledges and footholds. Occasionally the various levels come together in modest chasms. We somehow found a highway to the back of the cave and were soon standing in the Tilted Room, at which point there is only about 200 feet of main passage left. We checked out an upper side passage and then followed the main passage. As the stream entered, I soon found I was looking down into a pool occupied by at least a dozen salamander larvae. I decided it wasn't worthwhile to risk disturbing the larvae, so we turned around and headed for the cave's major side passage, which is where the cave continues for roughly another 1,000 feet.

We searched for several minutes for the side passage, instead finding several dead ends. Finally I found it. This passage is sort of deceptive because it looks like it enters a nasty water-crawl, but when you get into the crawl, you find the passage bends left and quickly you're back out of the water. You only have your chest in the water for about four feet. Then the passage quickly increases in size until you're working again, and the cave stays like that to the very end, with a ceiling height frequently greater than 20 feet. The passage isn't wide, no more than 10 to 15 feet in most places. I'd heard the passage was highly decorated, so my expectations were running high. I was somewhat disappointed. There were a few decorations but they weren't different than what you'd already seen in the cave's main passage. The passage is floored with sticky clay. It was so messy that we considered turning back to avoid messing up the passage any further with our footsteps. In the cave's terminal room, the seven-foot high ceiling is marked by mud splatters, quite probably the result of well-meaning cavers pulling their feet out of the muck and bringing a resulting glob of clay/mud arcing toward the ceiling. (Or maybe there is an old tradition of throwing muck at the ceiling of this room. It's sort of strange.)

On the way back out of Little Scott, Conor saw an area of passage, right before we again reached the short crawl, that grabbed his interest. Several small beige-colored fragments poked up from the clay bank. He conjectured the fragments might be bones. So we marked the area and the next day informed Jim Kaufmann of the Missouri Department of Conservation about the find. I suspect the fragments were formations, maybe splash cups, that had been covered by clay and were now being re-exposed. But I could be wrong. So Kaufmann said he would check it out. I've yet to hear about his findings.

Overall, the Courtois trip was one of my lesser outings. There were probably too many people for the trip to run smoothly. We had twelve people altogether on Saturday (and eight for Little Scott on Sunday). I found it was hard to remain in control of that many people on a float as we frequently wasted valuable time just getting everyone back together again. A few weeks later, I led a trip on the Eleven Point in which six people seemed like the perfect number: I could remain in control and keep us focused on our target destinations. But on the Courtois trip, the larger number led to a cumbersome float, at least under my leadership. Live and learn.

A Report from

Spring 2006 MVOR

trip report by Gary Johnson
photos by Bill Gee and Gary Johnson

Just a few quick notes. The Spring 2006 MVOR was hosted by the Meramec Valley Grotto and held at Camp Zoe, which is located just a couple miles north of Round Spring, not far from the Current River, on Sinking Creek. Thanks to the influence of MVOR co-chairman Tom Panian, it was a back-to-basics event. Tom wanted to get away from the "bigger, better, flashier" approach of many recent MVORs by scaling back the bonfire, fireworks, music, cave trips, etc. The resulting MVOR was definitely more simple than past efforts, but it was still worthwhile. For dedicated cavers who wanted to see one of the state's premier caves, a work trip to Cookstove Cave was available. For budding cave surveyors, an opportunity to complete a survey and get their names on a map was provided. For those people wanting to visit a selection of the area's amazing springs, Jo Schaper lead a trip. For those people simply wanting to stick around camp and check out the retailers, a modest selection of retailers set up their wares.

Camp Zoe is fairly large. It has several camping areas, some nestled down close to Sinking Creek on gravel bars. Others located up high on grassy slopes. It frequently handles groups several times the size of this MVOR for festival weekends. So there was plenty of room for everyone. Even the evening entertainment on Saturday night followed the back-to-basics approach, with an old-fashioned bluegrass band providing the evening's entertainment.

Not many people from KCAG showed up at Camp Zoe. Just Bill Gee, Jeff Page, and me (with Jay Kennedy also from the KC area joining the fun). Bill wanted electricity for his camper and I wanted to stay away from campers, so I headed elsewhere and ended up about as faraway as you could get. Jeff got there late at night and ended up way on the hill. Jay ended up somewhere different altogether. So needless to say, there was no KCAG area.

On Saturday morning, Bill, Jeff, and Jay decided to join the survey workshop. They had fun surveying nearby Camp Zoe. Meanwhile I needed to do some research, so I talked to Tom Panian about following his group to Cookstove. From there, I looked for an old cemetery, which is still maintained and sits close to Blair's Creek. I'd heard that cave formations serve as tombstones. And not far into the cemetery, I did indeed find a small stalactite (maybe a foot long) serving as a grave marker. A flat rock sat on the stalactite's broken point.

Blair's Creek is a very interesting area. Many families used to live along the creek, mostly subsistence farmers in the first half of the 1900s before they were bought out by mining operations. I also found the old spring house at Stroup Spring.

The Current River area is fascinating. I'm always glad when an MVOR gives me an excuse to visit this part of Missouri.

Clockwise from top right: Vendor row; more vendor row; Steve Potter and Kathleen Holeman of PEG; Camp Zoe Cave; Stroup Spring house; cave formations as grave markers at Blair's Creek Cemetary; and Jeff Page surveying in Camp Zoe Cave (photos by Bill Gee, except cemetary and springhouse by Gary Johnson).

MSS 50th Anniversary

at Meramec State Park

report by Gary Johnson
photos by Bill Gee, Jeff Page, and Ben Johnson

In June 2006, MSS members got together at Meramec State Park to celebrate the organization's 50th year of existence. Back in 1955, famous Missouri cavers such as Oz Hawksley and Jerry Vineyard decided to join forces in a statewide organization committed to surveying Missouri's caves. Now, over 50 years later, the total count of caves in the state has pushed over 6,000.

The celebration weekend proved to be a great opportunity for meeting many of the major cavers in the state's history, with Hawksley, Vineyard, Dwight Weaver, Scott House, Leonard Butts, Joe Walsh, David Hoffman, and many others making the trek to the state park. I was especially excited because I had never met many of these people before, although I'd communicated with most of them by e-mail. Hawksley in particular had provided a great deal of information about Carroll Cave when I was working on the *NSS News* article in 2005. So it was great to be able to actually shake his hand and speak to him in person.

The weekend's main event was a banquet in which Hawksley, Vineyard, and Weaver provided much of the entertainment by sharing their stories about caving, with several stories featuring Carroll Cave and Devil's Icebox. A mischievous Vineyard may have received the evening's biggest laughs as he told elaborate stories that typically centered on Oz Hawksley losing his cool.

Kirsten Alvey did an outstanding job of planning the weekend's activities. In addition, she arranged for the park's permit caves to be available. So we grabbed slots on trips to several caves, including Mushroom Cave, Hamilton Cave, and Bear Cave. The rest of this article consists of notes about the caves that we visited.

Mushroom Cave

Mushroom Cave is one of the most famous caves in Meramec State Park. It has been known since the early 1800s. For most of its history, it was known as Garrett Cave, after an early landowner. However, mushroom farming efforts in the 1920s proved to be modestly successful for a handful of years, so eventually the cave's name was changed. Starting in the late '20s and lasting for only about five years, Lester B. Dill operated Mushroom as a commercial cave, during a period when he also led trips to Fisher Cave.

We met in the parking lot of the park's visitor center and signed the permit. Our trip included six people from Kansas City, as well as two other people, whose names I didn't recognize. One was a woman named Mo, who was relatively new to caving. The

Above: MSS presidents, past and present (l to r, standing): Leonard Butts, Oz Hawksley, Dwight Weaver, Scott House, David Hoffman, and Matt Forir; (l to r, front) Elaine Hackerman and Jerry Vineyard (photo by Bill Gee). **Left:** The Meramec River near the campground (photo by Bill Gee).

Clockwise from top left: At the entrance of Mushroom Cave; a Western slimy salamander; an old drill hole in the ceiling of Mushroom Cave; Entrance #1 resembles the entrance of a root cellar; a cave salamander (photos by Jeff page, except upper left, by Bill Gee).

other was a woman named Elaine, white-haired, distinguished, who said she'd been caving in Missouri since the '60s. She said she'd even visited Mushroom Cave once before, about 40 years ago, but she said she didn't remember much about that trip.

I grabbed the key for the cave's gate and got the group headed toward the cave. (I'm sort of obsessive about being in charge on caving trips.)

We entered the cave through Entrance No. 2, which is the largest of the cave's three entrances. One of the park's most popular hiking trails leads past this entrance. This entrance is gated. It sits alongside a north-facing bluff in a heavily wooded area. The entrance is about five feet high and 20 feet wide. Almost immediately inside the cave, we started seeing salamanders. First cave salamanders and dark-sided salamanders. And later we saw several dozen slimy salamanders. I'm not sure why salamanders take such a hankering to Mushroom Cave, but this is evidently a popular spot for the little amphibians. I've never seen so many before. There were times I was literally warning my fellow cavers, "careful, salamander," everytime I moved my feet for six or seven consecutive steps.

The cave's main passage is very large. It varies between 30 and 70 feet wide, with a ceiling from 10 to 20 feet high. Near where the passage from Entrance No. 2 joins the main passage, large columns and stalagmites fill much of the passage. The cave has been very highly visited for over a century and a half, with virtually every square inch of floor space bearing the sign of having been trampled under foot. Undoubtedly, many smaller formations have long since been broken and/or removed from the cave. However, there are so many large formations remaining that the cave is still quite impressive.

Two parallel furrows weave past the large formations and head deeper into the cave. This is the road used by the mushroom farming operations of the 1920s.

Top row: Flowstone in Mushroom Cave; helectites; and a column in Mushroom Cave.
Above: Pool table sized slabs of formations in Mushroom Cave (photos by Jeff Page, except upper left, by Bill Gee).

Carts (probably horse drawn) were used to move the mushrooms back to the entrance. After the first 300 feet of passage, the large formations disappear entirely. At this point, the cave's floor becomes wide and flat. I suspect the mushroom farming operations used this part of the cave, although I didn't see any conclusive signs.

We noticed the large entrance of a side passage on the right. This passage leads to Entrance No. 3. We made note of the side passage and headed deeper down the main passage. As light slanted up the passage, from the headlamps behind me, the relief in the floor was accentuated. I could make out faint rows of parallel mounds, most likely evidence of the old mushroom farming operations. We continued down the main passage, passing by a wall of stone that went all the way across the passage and separated the final 200 feet of passage (for what purpose?). The passage became progressively smaller and then ended in a flowstone choke.

Returning back down the main passage, this time we took the side passage. I was expecting Mushroom Cave to be a simple dry cave, but the side passage would prove me wrong. I didn't know the caving skills of the two additions to our caving party, Mo and Elaine, so I made sure they were up for some crawling. That's what the cave map showed awaited us — about 150 feet that varied from two to four-feet high. Both Mo and Elaine said they were ready for the crawling.

The passage starts out narrow with a high ceiling, but soon the ceiling descends until you're crawling through pools of water. The mud here is slippery, although it's not very deep. It was a relatively easy little crawl, but much messier than I had expected. We were all pretty well slimed. The passage led to a small sinkhole entrance where rebar has been anchored in concrete (like the bars of a jail cell window) to prevent unauthorized access.

We retraced our steps back toward Entrance No. 2. Bill Gee stayed near the large formations in the main passage to take photos, with Jay Kennedy assisting him. The rest of us continued down the left passage toward Entrance No. 1. This section of passage is much smaller than the main passage, but it's highly decorated, including some pure white formations that have somehow avoided getting splattered with mud from careless cavers. We saw occasional grayish-white cave pearls (misshapen in angular globs). This is a marvelous stretch of passage, very beautiful in spite of the many years of abuse. For about 150 feet it turns into a rather nasty stretch of clay/mud that sucks at your boots and makes walking sort of tricky.

Right before arriving at Entrance No. 1, we encountered one of the cave's most fascinating features: several pool-table sized chunks of ceiling that had split away, most likely due to heavy masses of stalactites. These stalactites now served as legs, holding up the chunks of ceiling at table height. The layer of ceiling broke in a clean plain, so the result is a fairly level area that resembles table tops. You walk around the tables, sort of like at a large banquet. Here, though, we found the main attendees seemed to be Western slimy salamanders. I

Left: Entrance of Hamilton Cave (photo by Bill Gee). **Lower right:** Unusual formations above a hanging pool at Hamilton Cave (photo by Bill Gee).

counted at least a dozen, but there were undoubtedly many more.

I tried the key and it opened the lock on Entrance No. 1. Here, we found stone walls were constructed many years ago, leading up from the cave. Entrance No. 1 sort of resembles a long entrance to a root cellar. We stepped out of the cave into daylight and looked around for a few minutes, immediately becoming aware of a park road only about 100 feet away as a car roared past. The trail that led to the cave was evidently buried somewhere in the trees below us, but I didn't feel like bushwhacking to find it. We also needed to hunt down Bill and Jay, so we returned to the cave and retraced our steps to Entrance No. 2. There we found Bill and Jay wrapping up their photo session.

Back at the visitor center, we took advantage of the park rangers' offer of a hose to clean off our cave suits and gear. Everyone was caked with mud and clay so the hose came in mighty handy.

Mo and Elaine did well in the cave. I can only hope I'm in as good shape as Elaine when I reach her age. Later that evening, at the banquet, I found out a little bit more about Elaine: she was an MSS president in the '60s! Vineyard and Weaver told stories of being a little intimidated by her authoritative manner. So at the banquet, I sheepishly apologized to Elaine for not recognizing her name. She had very graciously tolerated my ignorance.

Hamilton Cave

Second on our Saturday caving itinerary, Hamilton Cave waited for us a 10-minute drive away. We had lunch while huddling in the shade near the park's visitor center. At this time, John Cantwell dropped by and we talked to him for several minutes. John did a considerable amount of caving in this area back in the '50s and '60s. As with Oz Hawksley, I leaned heavily on information from John while researching the *NSS News* article about Carroll Cave. So it was great to see him again.

A little later, Kirsten showed up with the permit, we signed our names, I grabbed the key, and we headed for our destination. We didn't exactly drive directly to the cave. The first turn zoomed past before I realized it and could signal Bill Gee, who was driving.

We eventually got turned around and on the right road. Meanwhile, my compass was spinning in circles. Maybe there is a significant amount of iron in the hills north of Hamilton Hollow. Maybe it was just something about Bill's truck. Whatever the case, it was sort of weird. We parked at Old Hamilton Ironworks, which has recently received some attention from the Missouri Department of Conservation: the signs and trails have been redone so the area is once again easily accessible. Last time I was here, a couple years ago, you had to bushwhack to find the signs and the old remnants of the ironworks operations.

I was looking forward to visiting Hamilton Cave because on my previous visit (a scout trip) we had only ventured

Top left: Earl Hancock (yellow shirt, lower rightl opens the gate at Bear Cave while the caving team waits (photo by Ben Johnson). **Top right:** Brian Payne (right) starts the cave radio (photo by Bill Gee). **Above left:** Everyone got slimed in Bear Cave mud (photo by Ben Johnson). **Top left:** The cave radio (photo by Bill Gee).

about 1,500 feet into the cave. I knew the cave was about a mile long. So I wanted to return, go through the crawl, and get into the back passage.

We hit the trail to the cave, and after a minor detour, in which I missed the turn off that leads to the cave's entrance, we got back on the right path. The entrance of Hamilton Cave is one of the prettier entrances around. It's surrounded by lush vegetation. The entrance is about 30 feet high and 50 feet wide. A huge gate sets back in the entrance about 80 feet. This is a tough gate to open, and I struggled with the lock for several minutes. Locking the gate after we were inside was particularly tricky — until we figured out that the lock wouldn't latch unless the key was inserted.

The first 2,000 feet of Hamilton is all huge passage. We checked out the area on the left that was once used by little brown bats, but we saw no signs that bats had used the area recently. The first side passage on the right is the most impressive area of the cave. The walls are coated with flowstone. Beds of cave pearls are clustered on the right wall. A huge flowstone formation hangs above the passage, choking off what may have once been an upper level passage. At the end of the side passage, we found a double set of hanging lakes. The larger, lower lake has large lily pad formations, sort of like the famous ones in Onondaga Cave. Last time I visited Hamilton Cave, the lake with the lily pads was bone dry. But on this trip, after torrential rains hit the area earlier in the week, the lake held water. The water didn't cover the lily pads (which are about a foot and half wide and sit about three feet above the bottom of the pool), but the lily pads were very impressive nonetheless. The second hanging lake, perched to the right, above the lily pads pool, was cloudy and not nearly as pretty as I remembered it. Last

time I was here, the lake was a deep blue. Now it was a murky brown with some hints of blue. (Maybe the condition was caused by morning visitors?) Below the hanging lakes, in a crawl area, we found several nice rimstone dams that were holding water. This is a very beautiful side passage.

We headed back to the main passage and headed deeper into the cave. The main passage soon becomes a seemingly endless series of rimstone dams that reach all the way across the passage. We sloshed up the passage through ankle deep water, trying to avoid stepping on the rimstone dams. The rest of the floor is largely composed of chert rubble, so walking in Hamilton cave is very easy. You don't have to deal with much silt or clay. It's all very easy going — that is until the ceiling starts to descend.

At first the ceiling is 30 feet high. But as you move deeper into the cave, the ceiling gradually drops lower and lower. At first, the passage is so large that a large clay bank on the right was reportedly used as a dance hall many years ago by locals trying to avoid the stifling summer heat. But after about 2,000 feet, the ceiling has dropped to the point where you have to stoop walk. And then crab walk. And then crawl on hands and knees. And then belly crawl. The crawling goes on for about 300 feet, with no apparent signs of letting up.

Bill Gee was in the lead at this point and he was ready to continue. But we'd already hit the turnaround time that I set when we entered the cave. I was concerned about getting the key back to the office before it closed. In addition, I wanted to leave us plenty of time to get cleaned up for the evening's banquet after we got back to camp. (I also wanted to catch Mick Sutton's presentation that evening because I'd communicated with him by e-mail about the Eleven Point River and wanted to introduce myself.) So we had plenty of reasons to make the turnaround. Plus the crawl started to take its toll on our stamina, so

even though I was convinced we had almost reached the point where the crawl entered a dome, and soon after the passage would open up to walking height, we stopped and then headed out.

Bear Cave *report by Brian Payne*

Perhaps one of the most talked about caves of the Missouri Speleological Society's 50th Anniversary was Bear Cave. My own involvement with the cave began by reading "wetsuit required" next to its name on the list of permit caves that could be visited. I knew I had to check it out. Well, I was not alone. The ten open spots on the permit were quickly filled.

It wasn't until I began talking to fellow cavers that I began to gain an appreciation for this cave. Only being open a few weeks out of the years, this was really a momentous occasion. I also learned that wetsuits were needed for crossing a large underground lake. In addition, because access to the cave was so hard to get, the convention was the perfect time for Earl Hancock to recruit volunteers to help in a project. He wanted to use a cave radio to verify the cave's true orientation.

It had been suspected that iron in some of the local sinkholes was throwing off surveys, among them Bear Cave. If a radio transmitter could be carried into the cave, and its location pinpointed with a receiver on the surface, the current surveys could be corrected for any deviation caused by metal deposits. The plan was to carry a power source and radio transmitter into the cave, set it up as quickly as possible, leave it running for at least an hour while exploring the cave, and finally return and pack it out.

The sheer size of Bear Cave was its most stunning characteristic. There were some formations, but mud and massive caverns were much more prevalent. The main room was over 100 feet wide in sections, up to 30 feet tall, and nearly a 1000 feet long — and filled with boot-sucking mud. Due to recent heavy rains, crossing the lake was not to be allowed. It proved to not really be an issue anyways, as half the group didn't make it that far back, and the other group turned back after reaching the lake. The late start on Sunday had limited the amount of time people could spend before needing to go home.

The cave radio project proved successful and will help out greatly. It's even hoped that after the cave's orientation is corrected it might line up more favorable with Fisher cave and make it more likely that there might be an undiscovered passage between Fisher and Bear Cave.

Lone Hill Onyx Cave

We had originally been scheduled to visit Bear Cave on Sunday morning, but the caving schedule had apparently become somewhat mixed up, putting well over a dozen people milling around the visitor center parking lot, expecting to go into Bear Cave. So to make a long story short, I ended up stepping aside. And Jeff Page was busy in the visitor center while the permit was getting filled with names and signatures, so he was out also. He talked Brian Dexter to join us and formed an impromptu trip to Lone Hill Onyx Cave.

This is what you might call a sacrifice cave. It is one of the few wild caves that state park officials will tell people about who ask at the visitor center. A well-maintained trail in Meramec Conservation Area leads directly to the cave's entrance. We took the long way to the entrance (not by design), walking past several lookouts near the Meramec River before the trail finally turned and headed back in a loop toward the cave entrance, which we could've reached easily earlier if we had only gone right instead of left. But it was a nice little hike and soon enough we were inside the cave.

The entrance is mostly walking passage, with a little bit of hands-and-knees crawling required. The entrance passage isn't huge, maybe 10 feet wide and 6-8 feet high. A little stream slowly gurgles out of the passage. The last time I was here I encountered a good number of salamanders in the entrance passage, but this time I saw very few in comparison. I saw three cave salamanders and a slimy salamander. And deeper in the cave we encountered two grotto salamanders. I suspect all the weekend activity had sent the salamanders scurrying for their hideouts.

Despite the frequent visitation, Lone Hill Onyx is still an interesting cave. Areas of profuse soda straws have long since been devastated, with only short stubs now remaining, and even more so than Mushroom Cave, the cave floor is a mass of footprints from the entrance to the cave's farthest reaches. However, the cave has a nice collection of novice-level passages that present some minor navigation problems. For example, we entered the cave without a map — one of the very few times you'll find me without a map — and somehow we got stuck in a large right-hand side passage, thinking we were headed for the large room at the back of the cave. It was a nice passage with huge displays of flowstone. But we were going around in circles.

I had remembered looking at the cave map only a week before and knew the passage we were in was nowhere near the size of the terminal room. I dropped to my knee and holding my compass in one hand drew a map on the floor of what I remembered of the map. Nope, this can't be the end of the cave. We're in the right-hand side passage. So I yelled for Jeff to start looking for another passage. We retraced our steps and soon found a large passage still awaiting us.

We made the turn and after ducking under a low hanging mass of rock soon found ourselves walking through a very large, dry passage. Eventually, we were looking at a hill made of breakdown, and at the apex of the breakdown, we saw a large column. We scrambled up the breakdown to the base of the column. This is the largest formation in the cave, about 30 feet high and beside the column a dome-like structure carved higher into the ceiling.

With hopes of finding additional passage up above, cavers carried ladders into the cave several decades ago and inspected the dome, only to find no additional passage. The side of the column has deteriorated somewhat, most likely from the force of water falling down the dome during heavy rain. This is a very nice-sized room, about 100 feet wide.

We took a break here, ate a snack, and then began the trip back out of the cave.

Overall, this was a great weekend. Thanks go to Jeff Page for working with Kirsten to get us campsites, banquet reservations, and slots on the cave trips. For anyone who didn't take this opportunity to venture to Meramec State Park and meet some of the key cavers in the state's history, you missed a genuinely rare opportunity.