

The

The Kansas City Area Grotto

GUANO

Volume 17

Issue 11-12

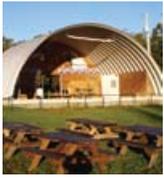
December 2003

Reports from the
Fall 2003 MVOR

including Great Spirit Cave,
Berry Cave, and Campground Cave,
plus the MVOR Geology Trip

and more

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Trip reports tentatively scheduled for future issues of *The Guano*

Caves of Madison County Wildlife Management Area in Arkansas ... Copperhead Cave, Skull Pit, and Indian Creek at Buffalo National River ... Skaggs Cave and Cave Lodge Cave ... Paddy Creek Natural Arch and Slabtown Natural Arch ... Miller Cave and Stone Mill Spring at Fort Leonard Wood ... Look for these trip reports and more in future issues of *The Month's Guano* ... And if you've been caving, please share your experiences by submitting a trip report.



A long-tailed salamander in Copperhead Cave (photo by Mike McKinney).

Events

February 14-15, 2004

Cave Research Foundation — Mammoth Cave President's Day expedition. For more information, contact Scott House at scott_house@semo.net.

March 6-7, 2004

Cave Research Foundation — Fitton trip (tentative). For more information, contact Scott House at scott_house@semo.net.

March 10, 2004

KCAG Social meeting — 7:00pm - 9:00pm at Waldo Pizza at 74th and Wornall Rd.

April 14, 2004

KCAG business meeting — 7:00pm in the Magg Conference Center at the corner of Volker and Cherry (on the UMKC campus).

May 12, 2004

KCAG Social meeting — 7:00pm - 9:00pm at Waldo Pizza at 74th and Wornall Rd.

May 20-23, 2004

SERA 2004, hosted by the Appalachian Grotto at Camp Davy Crockett in St. Clair, Tennessee. For more information, see the Appalachian Grotto's website at www.caves.org/grotto/appalachian/.

May 28-31, 2004

33rd Annual Speleofest 2004 at Camp Carlson in Fort Knox-Meade County, Kentucky. Tent camping, showers, picnic area, playground, and 25 acre lake. RV sites are available. For more information, contact Larry Martin at caverlarry@hotmail.com or Shelly Wolf at cavewolf@hotmail.com or visit the Louisville Grotto's website at www.caves.org/grotto/louisvillegrotto/.

The Guano

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Submit articles via e-mail to the editor:

guano-editor@kc.rr.com. Preferred file format for trip report attachments: Microsoft Word. Multiple photos are typically required for each trip report.

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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.

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 President

In the final Guano issue of 2003, I take my leave as President of KCAG. I was honored to serve in this office and look back on a year of increased activity and accomplishment, of which I can claim little credit. We took a memorable trip to the Guads, saw our newsletter turn into a quality magazine and our website gain in usefulness and appearance. In addition, we organized a better approach to helping scouts.

Many Ozarks caving groups are looking inward these days, assessing their relevance and effectiveness and redefining their missions. This is a necessary process as one generation of cavers makes room for another. The challenges of cave conservation in the 21st century are daunting, as more challenges involve what happens on the surface rather than underground. During my time spent at the National Cave and Karst

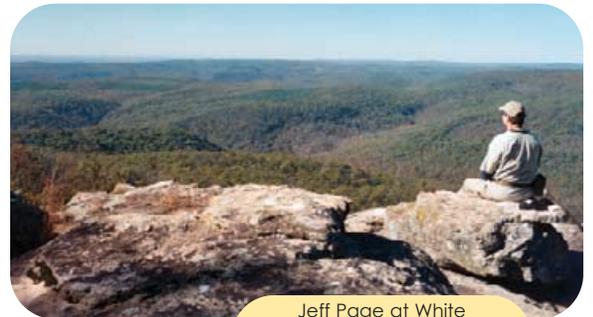
Management Symposium in October, I became convinced that educating the general public on karst issues may be the most important thing we can do.

Ours being a city grotto located far from caves brings some challenges of its own. Planning a trip, communicating with the group, and traveling require more time and effort than most grottos have to endure. Relying more on information technology will help us get the job done. The main challenge we face is making our contributions to cave conservation while not taking ourselves so seriously that we forget to have fun. I'm confident we'll find that balance.

Cave softly and safely,

Jeff Page

2003 KCAG President



Jeff Page at White Rock Mountain in Arkansas (photo by Gary Johnson).

Cover photo

This cave is officially known as Unnamed Cave #7, but it is also known as Redman's Cave and Clifty Hollow Cave. The cave contains a single room, a dome that is about 20 feet high and 20 feet in diameter. Photo by Conor Watkins.

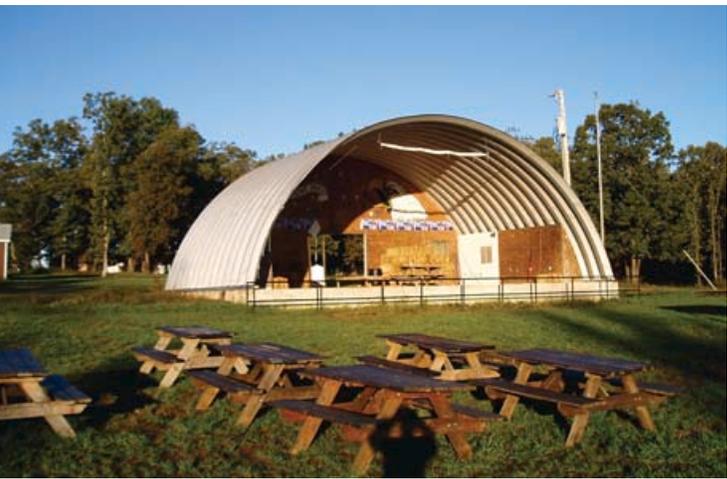


Reports from the Fall 2003

MVOR

report by Gary Johnson and Bill Gee

photos by Conor Watkins, John Prigmore, and Bill Gee



The Fall 2003 MVOR was hosted by the MSM Spelunkers Club, and it took place near Waynesville on the grounds of the Pulaski County Shrine Club. The Shriners property offered plenty of land with many trees, and it included nice shower facilities. (And it wasn't nearly so claustrophobic as the Spring 2003 MVOR at Cat Rock Resort near Lake of the Ozarks.) A large band shell headed the central field. No one was allowed to set up camp on the central field, but there were plenty of camping areas nonetheless. This same site has hosted events for well over 1,000 people.

Bill Gee was the first one there from KCAG and he chose a spot away from the main camping area. It was a nice secluded area on the outskirts with some trees to shield us from the noise. This MVOR didn't have a designated quiet area, so noise was definitely a potential problem.

Several people from Kansas City showed up, including

Top to bottom: Everyone needed to check in at the MVOR registration booth (photo by Conor Watkins). The central field on the Shriners' property featured a stage (photo by Conor Watkins). Vendor row offered MVOR participants a variety of goods (photo by John Prigmore). Meals were served from this building at the MVOR (photo by John Prigmore). KCAG members set up camp at this out-of-the-way location (photo by John Prigmore).



Bill Gee, Bryon and Michelle Carmoney, John Prigmore, Jeff Page, Rick Hines, Randy Bruegger, Peddie Heinz, Marianne Krist, and Gary Johnson.

This area of the state is riddled with caves, and many of these caves are substantial, so this promised to be one of the better MVOR caving opportunities. The biggest caving event of the weekend was a work trip to Great Spirit Cave, led by Bill Elliott of the Missouri Department of Conservation. Other caving opportunities included Berry Cave, Sandy Dome Cave, Roubidoux Cave, Campground Cave, Merrill Cave, and several others. In addition, Conor Watkins, a graduate student at Rolla, led a geology trip.

A row of vendors offered caving gear and other goods. A speleobox attracted many cavers who wanted to test their skills at crawling and squeezing. As speleoboxes go, it was a relatively easy one, with only one really tight squeeze.

One of the MVOR highlights came on Saturday evening when a dive club showed video footage of their extensive underwater excursions into Roubidoux Spring, where they've surveyed several thousand feet of passages.

The major events included most of the MVOR standards – a banquet, a bonfire, a hot tub, and a band cranking out cover versions of '70s and '80s tunes. Although the main purpose is to have a meeting of the MVOR cavers, that seems to be the least-attended event. Most people go to party, meet old friends, party, get in some caving, party, eat, party, drink, party ... You get the idea. It's actually rather tame compared to events like the Sturgis motorcycle rally, but don't get to thinking it's a church camp either.

The MSM Spelunkers did a good job setting up this event and arranging the caving opportunities. Andy Free, Matt Goska, Jeff Crews, Kenny Sherrill, and all the others of the MSM Spelunkers Club deserve a round of thanks.

On the following pages, you'll find a selection of reports from trips offered at the Fall 2003 MVOR



Top left: A display of maps showed the caves available for trips on Saturday (photo by Conor Watkins). **Top:** The cave tent attracted activity on Saturday morning (photo by Conor Watkins). **Middle:** Many cavers tested their skills in this speleobox (photo by John Prigmore). **Bottom:** The traditional MVOR bonfire attracted everyone's attention on Saturday evening (photo by Bill Gee).



Above: This large formation, named The Chief, dominates the Cathedral Room in Great Spirit Cave (photo by Bill Gee). **Below:** Bill Elliott (center), standing in front of the cave's huge gate, led the day's activities at Great Spirit Cave (photo by Bill Gee.)



Fall 2003 MVOR

GREAT SPIRIT CAVE

trip report and photos by Bill Gee

One of the trips offered at the Fall MVOR was Great Spirit Cave. This cave is owned by the Missouri Department of Conservation and is managed as habitat for endangered Indiana and Grey bats. It is only open twice a year to employees of MDC.

Bill Elliott let a trip to Great Spirit cave to do some restoration work and conduct a biological inventory. The trip was limited to 30 people. A total of 27 went on the trip.

We left the MVOR site about 8:45am and arrived at the cave less than 10 minutes later. After gearing up, Elliott gave a brief talk about the cave and its history.

MDC does bat counts every other year. They usually count the bats by measuring the piles of guano. In the maternity colony, they do some very quick counts and then leave. The data over the years shows that the population of bats has fluctuated but is trending downward.

We all walked down the hill to the cave, opened the gate, and went in. The first task was to replace the signs just inside the gate, warning people to stay out. The old signs were somewhat confusing. As it turns out, the new signs did not fit the mounting posts. We eventually decided to leave the old signs up and screw the new signs in place over them.

The entrance to Great Spirit is one of the largest I have ever seen. About 100 feet wide and 30 to 40 feet high, the entrance passage stretches hundreds of feet back into the hill with no reduction in size. The whole of MVOR could have been held in the entrance of this cave!

The remains of the wooden tourist trail lie against the right wall as you face into the cave. Our trail went along the left wall, up a pile of breakdown, and into the Cathedral Room. This room is dominated by large piles of guano and a single large column formation called The Chief.

We spent 30 minutes or so documenting the current

state of The Chief including some drip pools around its base. We cleaned up a few small spots that contained glass and wire from the old electric tourist lights.

The tourist trail continues another 50 feet then makes a sharp switchback. 200 feet beyond the switchback we came to a pair of wooden stairs that went down then up a small break in the trail. For 30 or 40 feet before the break, there were many other scraps of wood. A few people climbed down the stairs, but it was too rotten to be safe so the rest of us climbed down the rock wall next to it.

The scraps of wood along the trail were examined for critters. If any were found, the scrap was moved to a place out of site of the trail. Most of the wood had long since been denuded of any nutrients. Those pieces were stacked for later transport out of the cave.

The stairs were so rotten they could be torn apart by hand. One group stayed behind to do that while another group went on. This part of the trail runs in a side passage near the top of the entrance room. Every hundred feet or so the passage has an overlook out into the entrance room. We found no more scraps of wood, so we went back.

After passing the group taking apart the stairs, we went on down the right-hand passage toward the bat graveyard room. We took the wrong route and wound up crawling up a tight crevice on the side of a pile of breakdown. There were several rooms along the way filled with graffiti. We dropped two buckets of cleaning supplies for use on the return trip.

The bat graveyard is several hundred feet past the graffiti rooms. As the name implies, there are many bat carcasses in the bat graveyard. At least one was no more than a few weeks old and still had a distinct odor to it. Bill Elliott and his assistants collected several skulls from the carcasses for later identification. The rest of us had little to do, so we had lunch and took a nap. There was at least one

bat flying around in there.

Back to the graffiti room, we all got out spray bottles of clear water and nylon brushes and applied a little elbow grease. Bill Elliott systematically went around the room taking digital photographs of every piece of graffiti. We came behind him spraying and scrubbing. Most of the graffiti was made with soot from carbide lamps and came off very easily with just water. Some graffiti, including arrows on the ceiling, were done with spray paint. We got a

couple of the arrows off with wire brushes. One arrow had to stay because no one was tall enough to reach it.

We used a cordless drill with a fiberglass grinding wheel to take off some painted graffiti along one wall. The grinding wheel was fairly soft, so it did not do much damage to the limestone. We drained two batteries to finish the job. When we were done, you could not see any traces of the graffiti. The rock looked just like all the rock around it. Only a layer of dust on the floor gave away the location.

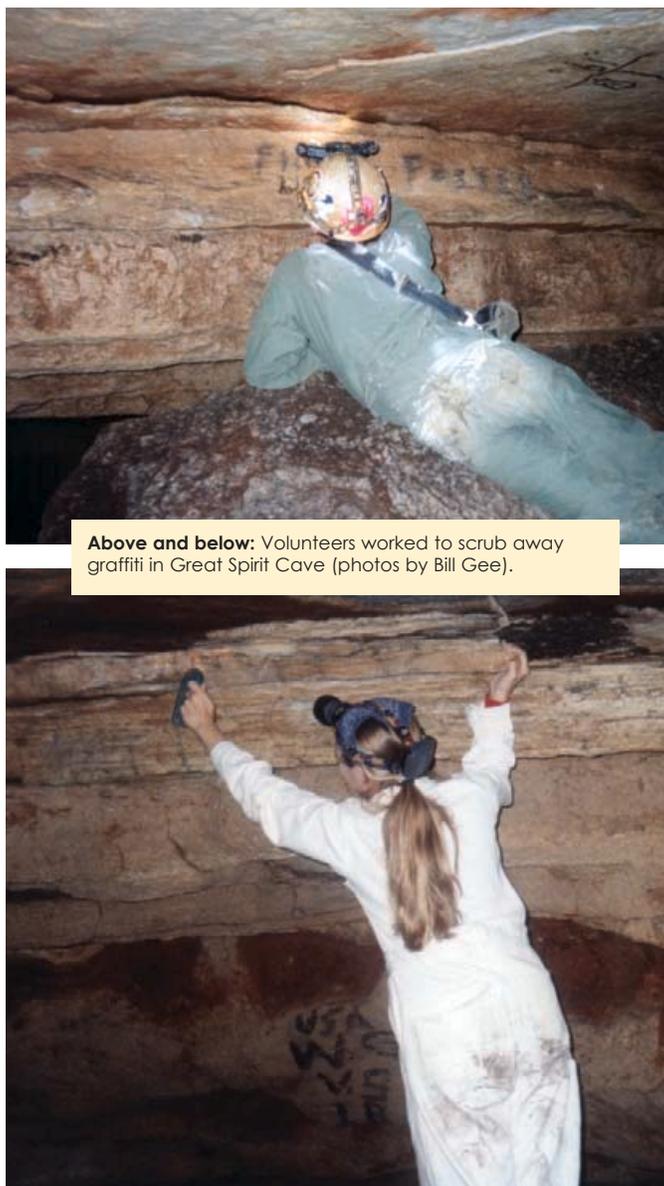
We were out of water, so we could not work on the second graffiti room. We were also running out of time. While we were working on the graffiti, the other group came by on their way to the bat graveyard. Everyone got a chance to go back to see it.

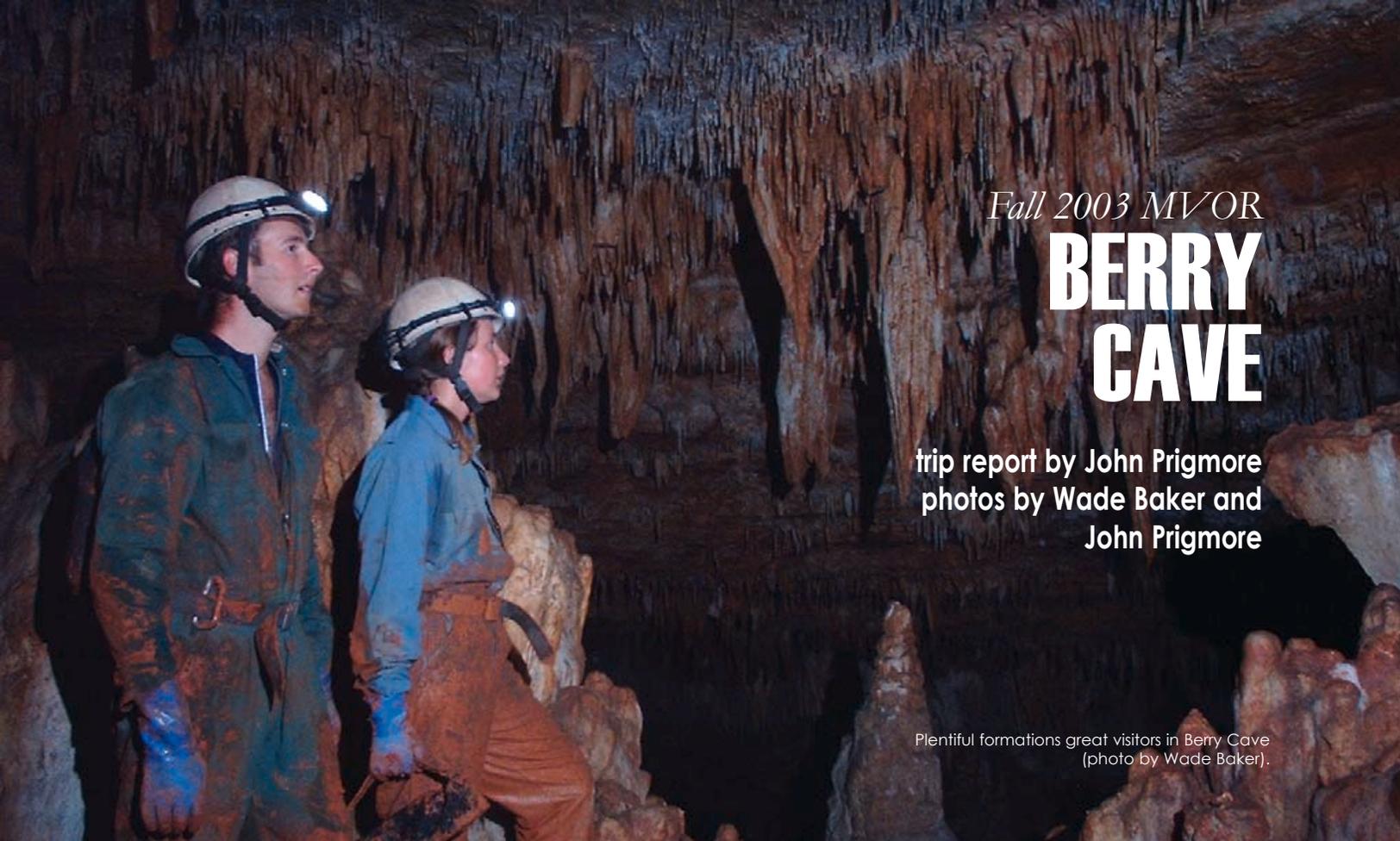
Our group left and went back to where the stairs had been. Most of the rotten wood had been hauled out. We made several trips hauling the remaining wood to the entrance. That old wood was

the dirtiest part of the cave!

Once everyone exited the cave, we started loading the wood onto an alligator brought in by another MDC employee. It took four trips to get all the old wood up the hill. We just piled it off to one side in the woods. When it has dried out, they will scatter it to finish rotting.

Trip completed and everyone back at MVOR site by about 4:00pm. ●





Fall 2003 MVOR

BERRY CAVE

trip report by John Prigmore
photos by Wade Baker and
John Prigmore

Plentiful formations great visitors in Berry Cave
(photo by Wade Baker).

Berry Cave was my first wild cave experience. My limited knowledge of the different types of formations found in caves made it hard for me to describe what I observed, but I can write about and describe my feelings as I explored this cave.

A local caver with the MSM Spelunkers, named “Spike” (aka Jeff Crews), led the trip to Berry cave, which was located only a couple of miles from the MVOR campground. As the black asphalt gave way to a dirt road, the caravan of vehicles pulled off to the side of the road. “We’re here,” said Spike as he exited his car. The group then climbed out of their vehicles and started putting on their caving gear. After we got ready, Spike led us through a farmer’s yard and pasture. The cave entrance was approximately a half mile from the road. We crossed the dry stream bed of Roubidoux Creek and then climbed a steep hill. By the time we all reached the top, we were ready to take a breather.

After awhile, we pulled up our kneepads and turned on our headlamps as we descended one by one into a crack in the ground. We climbed down a few yards, going over old tree logs that had fallen into the cave, and quickly became adjusted to the darkness. After we clawed through the entrance, the cave opened up with a ceiling height of ten feet and a width of twenty feet across. Soon, the group started to spread out as the younger cavers went on ahead. We took short breaks as some of the photographers

dragged out their camera equipment from their muddy cave packs to take a few shots.

The first formations we came across were the Leaning Towers. These were two large formations that appeared to have broken from the floor of the cave and were leaning to one side.

There was a lot of mud and steep mounds to climb over and around. At one point, one of the cavers got stuck up-to-her knees in mud and had to have someone pull her out. That’s when some of the members decided that we had ventured far enough into the cave. About that time someone found another way around that was not so muddy.

At this point, we were in the Sandstone Mountain Chamber. This chamber was formed after some of the sandstone ceiling caved in, creating a large sandstone dome in the ceiling. There were a couple of side passages, but we stayed in the main portion of the cave for most of the trip.

Bats hung from the ceiling. A couple of times, the ceiling was low enough to view some of the bats up close. We saw two different species of bats in the cave - the Gray and the Little Brown Bat. There were approximately ten to fifteen bats in all, roosted singly throughout the cave.

The last major formation we saw was the Signature Rock formation. It was a large flowstone approximately 5 feet across. We stopped here for our last break and took some last photos.

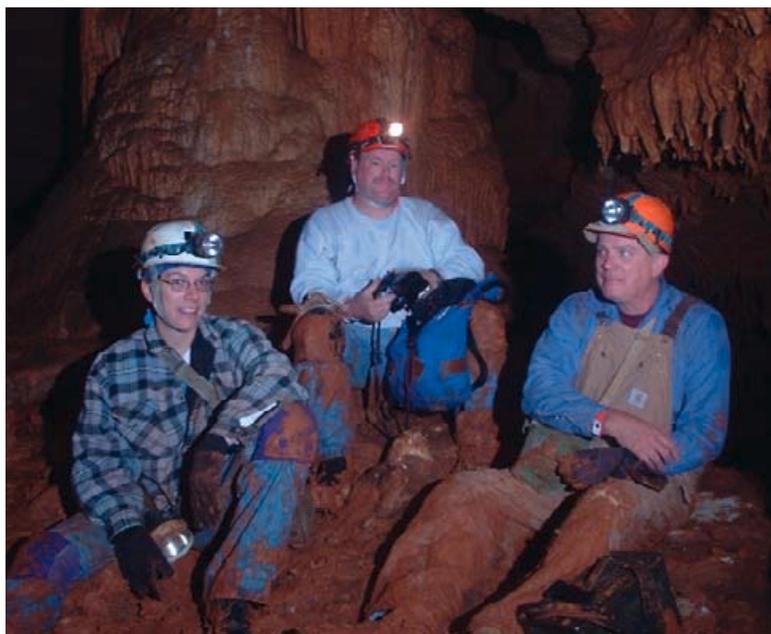
The total length of the cave was approximately 1000

feet, but we only ventured in about 700 feet. At that point, some of us had enough caving and wanted to return to the surface. Some of the other cavers stayed behind to explore more of the back of the cave.

I think the return trip was harder than climbing in because there were fewer of us to shine light on the route out of the cave. We saw other cavers arriving as we were leaving. I was tired, so it felt good to climb out of the cave. We were only in the cave for approximately two hours, but what a “great day it was!” I thought to myself. ●

Thanks go to Wade Baker of Boston Mountain Grotto for allowing us to publish his photos.

Below: The entrance of Berry Cave isn't exactly large (photo by John Prigmore).
Bottom: John Prigmore (center) takes a rest with two other cavers in Berry Cave (photo by Wade Baker).



Brian Dexter stands at the entrance of Campground Cave (photo by Gary Johnson).

Fall 2003 MVOR CAMPGROUND CAVE

trip report by Gary Johnson, photos by
Gary Johnson and Conor Watkins

After spending Saturday above ground on the MVOR geology trip, I was ready to do some caving on Sunday. During the geology trip I was in several caves (or natural tunnels, depending on how you draw the distinction), but I'd yet to do any real caving on this weekend. On Sunday morning, though, there were no planned guided tours. Everything was self-guided. So I opted for a short trip to Campground Cave. I was anxious to get back on the road back to Kansas City to see the Chiefs football game, so a short trip was all I had time for. So I got together with a small group and we headed for Campground Cave.

On the way we stopped at Roubidoux Spring. I suppose I caught the spring at a bad time because the local rowdies had likely been a bit more disrespectful than normal – a metal trash can was floating in the water and a pick axe sat in the middle of the rise pool, its handle sticking a few inches out of the water. Assorted additional trash littered the rise pool. We looked for the rise pool's feeder conduit, but we couldn't see it. It apparently isn't very large, and from the best I could tell it must be located underneath a small ledge. The entrance probably isn't more than a couple feet high. On Saturday night, a dive group had shown a video of their efforts in Roubidoux Spring. They have surveyed over 2,000 feet of passageway. But on this day, the spring certainly didn't look very prom-



Left: Roubidoux Spring rises at the base of bluff marked with caves (photo by Conor Watkins). **Below:** Roubidoux Cave, several miles north of Roubidoux Spring, has a huge entrance that was frequently used as a dance hall in the early 20th century (photo by Gary Johnson).

mostly about 6 to 15 feet across, with occasional ledges that were filled with formations. Some of the ledges extended back for 40 or 50 feet, but with less than a foot of headroom, they didn't look very promising for exploration. These areas weren't depicted on the map that I was carrying. The map didn't seem to show any passage that was less than a foot high. Eventually we were crawling through water and over muddy banks. A stream moved sluggishly through the cave. None of the crawls lasted very long. About two-thirds of the way to the back of the cave, the passage became nearly choked off by a large cascade of flowstone. It spilled into the passage from the left and nearly joined the flowstone on the right wall. At this point, the cave showed much less evidence of human impact. As we proceeded, we found an impressive section of helectites and several nice white formations.

I was fully expecting with the cave's proximity to civilization that all formations would have been removed. But once you reach 1,000 feet into the cave, the cave contains a surprising amount of decorations. The final 50 feet of the cave becomes a tight crawl. In fact, when we reached that point, we decided we didn't really want to see the end of the passage all that bad anyway. I attempted a squeeze to the left, but my helmet wouldn't fit through the passage. I was afraid I'd get wedged in the passage as I pushed forward, so I retreated and looked at the map again. The passage I was attempting to squeeze through wasn't even on the map. A right side passage was shown with dotted lines. Brian Dexter tried this passage. I could hear him splashing through water, but he soon gave up and retreated. A low crawl in the middle was apparently the way to go. You'd have to slide down a small bank and then twist to the left. But I didn't feel strongly enough about seeing the final room to continue forward.

Later, I learned that Marianne Krist made this final crawl to the end of the cave on Saturday, and she confirmed that there is a nice little room back there with a 15-foot-high formation. I guess I stopped just a few feet short.

We retreated from Campground Cave and shed our muddy clothes. Clean cotton clothes sure feel great. As we started the drive back to Kansas City, Brian showed me the entrance to Roubidoux Cave. I grabbed my camera and took a few pictures. During the previous evening, Brian had tried to talk me into going caving at Roubidoux, but with passages such as the "colon crawls" labeled on the cave map, I didn't find the cave very enticing, although it has a considerable amount of passage. So I just took some pictures in the entrance area and then hit the road for home. ●

ising. The rise basin is near circular and only three or four feet deep. It's no more than 50 feet across. A road passes on the bluff side, and a retaining wall keeps the pool free of gravel and rubble. The spring is located in a city park. The spring branch flows to the west where it joins Roubidoux Creek.

We then headed for Campground Cave, which is located surprisingly close to Waynesville. I'm not sure where the city limits are drawn, but the cave is possibly located inside the city limits. The road near the cave is fairly well-traveled. We saw a car every two or three minutes. And the path leading to the cave is directly across from a house. The path is no longer than 50 yards. The cave is clearly visible from the road, particularly during leaf-off.

On this Sunday, we were the only ones in the cave. Marianne Krist visited the cave on Saturday, however, and she said there were several people exploring the vicinity of the cave entrance (apparently locals). As you might expect, the cave shows strong signs of visitation. You'll find hundreds of soda straw stubs. For the first several hundred feet of passage, nearly all the soda straws have been broken and removed. However, the further back in the cave that you go, the more intact formations you'll find. The route isn't a cake walk. It requires some crawling through water. I probably succeeded in getting about 100 yards into the cave before I got my feet wet. Afterwards, though, we were largely walking through water. The passage wasn't huge,



Fall 2003 MVOR

GEOLOGY TRIP

trip report by Gary Johnson
photos by Conor Watkins and
Gary Johnson

Clifty Creek Natural Arch towers above its visitors
(photo by Gary Johnson)

When I travel to someplace I haven't visited before, I need to get my bearings. The MVOR geology trips serve this purpose well. However, at the Fall 2003 MVOR I was torn: should I take a rare opportunity to see Great Spirit Cave (for William Elliott was leading a work day at Great Spirit) or should I take the geology trip? A tough choice. But my need to understand the locale won out, so I signed up for the geology trip.

The trip was led by Conor Watkins, a graduate student in geological engineering at the University of Missouri at Rolla. Conor had been active in the MOCAVES discussion group, where he'd pointed readers toward several articles that he had written on geology-related topics. I'd read several of his articles and was envisioning someone closer to my own age (i.e., 40 something). So it was a bit of a surprise to see the baby-faced Conor at the trip tent. He was a good 20 years younger than I expected. But regardless of age, Conor knew his stuff. And the geology trip was a good showcase for his knowledge of the local sites of geologic interest.

Geology Trip Stop #1

Clifty Creek Natural Arch • Clifty Hollow Cave • Clifty Creek bluffs • Portuguese Point

First stop on the trip: Clifty Creek Natural Arch. Here was the real reason I chose the geology trip. Long ago, I'd seen pictures of the arch and had wanted to visit it. Clifty Creek Natural Arch is one of the most picturesque arches in the state. Getting to Clifty Creek isn't necessarily easy, though. It is located well north of Waynesville, in the next county. It took over 30 minutes of driving to reach the trailhead, which is several miles east of Dixon on County Road W. The trailhead isn't obvious. Two or three short, wide posts on the north side of the road are the only clues. From here, an unmaintained trail heads down a steep hill into Clifty Creek Hollow. (Beware of the loose rock on this trail. It'd be easy for someone to slip and tumble down the hill.) The trail isn't particularly long. Once you reach the bottom of the hill, you're only about 100 yards upstream from your destination.

Clifty Creek Natural Arch appears on your left as you walk down the hollow along an intermittently wet stream bed. The arch is in a relatively thin ridge (30 to 50 feet wide) that has been eroded through at its base by an intermittent stream. The inner dimension of the arch is about 20 feet high and 60 feet wide. Some arches are delicate thin wisps of rock miraculously



Above: Boiling Spring rises in the Gasconade River, near the east river bank. This photo, taken from the west side of the river, is a composite of photos taken by Gary Johnson and Conor Watkins. **Left:** A view through Clifty Creek Natural Arch (photo by Conor Watkins)



modest bluffs 30 feet high rise vertically above the creek and extend several hundred yards upstream, toward Clifty Creek Natural Arch.

Back in our cars, we began the trip to our next destination. On the way, we made one short stop, Portuguese Point, which is a rock promontory that juts out to the west and provides a great vantage point for looking out over the Gasconade River. In this case, that meant parking at the Point Steakhouse, several miles south of Dixon, and walking to the edge of the bluff beside the restaurant. According to Conor, the area was named for the Portuguese farmers who raised cattle and sheep in the valley below.

Geology Trip Stop #2

Boiling Spring

Boiling Spring is one of the largest springs in the state, rated at 42 million gallons per day, which ranks it 9th in the Ozarks. However, according to Conor, recent research by Jim Kaufmann indicates the true rate of flow may be over 80 million gallons per day. Because the spring rises in the Gasconade River, it's hard to get a good viewing perspective from land. We approached it from the west, at a commercial campground on private property. We paid a small day use fee (\$1 each) and drove to the river access point. From here, Conor pointed out Boiling Spring across the river. At least 200 feet away, it was difficult to see the bubbling water that marked the rise of the spring. I trained my binoculars across the river and could see spring water bubbling through the Gasconade, rising two or three inches above the surrounding water. High bluffs rise behind the spring on the east side of the river, making access to the spring somewhat difficult from the east. Onyx Mountain Caverns is located not far away beyond the bluffs. Another geology trip destination, Slaughter Sink, is within one mile at this point, as the crow flies to the east. By auto, the route is over 20 miles. I don't necessarily recommend viewing Boiling Spring from the west side of the Gasconade. You don't really see much. To properly see the spring, you'd need to be in a canoe. According to Jerry Vineyard in *Springs of Missouri*, dye tracing indicates a connection between Slaughter Sink and the water that rises at Boiling Spring.

still standing. Clifty Creek Natural Arch is over 60 feet thick. It's a huge, almost intimidating mass of limestone that dwarfs everyone who stands at its base. Many arches are located next to bluffs, leaving little real estate between these arches and the nearby bluffs. However, Clifty Creek Natural Arch is relatively unique in being isolated from bluffs. This is one of the most impressive natural arches that I've ever seen.

While we were in the vicinity, Conor led us to two lesser sites: first, a small cave (officially known as "Unnamed Cave #7" but unofficially known by two local names, Clifty Hollow Cave and Red Man's Cave. According to Conor, the cave received the latter name when an Indian lived in the cave in the early 1900s. It's an interesting little cave. A couple of rock pillars hold up the bluff overhead. A somewhat precarious situation, for the pillars are made of brittle limestone that is fracturing and deteriorating. The pillars form two short tunnels at the mouth of the cave. The cave itself is basically one room, a nice 20 foot high dome. Remnants of cave popcorn and a few broken formations can be found on a ledge on the right. On the left ledge, we found an old bed frame and a plastic bucket, so in the not-so-distant past, someone apparently lived in the cave.

After we returned to our vehicles, Conor led us to one last stop before we left the Clifty Hollow area: we drove down County Road W to the east, where it crossed Clifty Creek. At this point,



Geology Trip Stop #3

Shanghai Spring • polished pebbles

On the way to the next major stop, Devil's Elbow, we drove by Shanghai Spring. No stopping. We just slowed down and peered through our car windows. The spring is located on private property, and the property is clearly posted. The spring rises in what is essentially the front yard of a house. The rise pool is somewhat small, no more than 20 feet across and 30 feet long and at least 20 feet deep. According to Springs of Missouri, the spring is connected to a cave in the bluff to the north. The cave contains 100 feet of passageway, which typically requires wading through water two to three feet deep. The cave passage ends at a deep rise pool. I didn't see the cave

entrance during our drive by. The spring looked especially pretty on this day, with indirect light from a bright sky illuminating the bluish rise pool.

We stopped briefly not far away from Shanghai Spring at a site where Conor pointed out polished pebbles only a few feet from the road. He conjectured the pebbles were created when they were at the mouth of a spring and the spring water kept pebbles boiling, thus becoming polished in the process. Now, there is no

indication of a spring. There is no cave. No cavity. The pebbles are simply located on a dirt bank beside a road.



Geology Trip Stop #4

Route 66 • Devil's Elbow • Devil's Elbow bridge

Sections of old Route 66 wind around Interstate 44. On the way to Devil's Elbow, Conor showed us one of the surviving sections of Route 66 roadway. This section is now known as County Road Z. A fairly nondescript name for such an historic route. The edges of the highway are marked by a raised lip, which was originally meant to help keep drivers from drifting off the road. But the raised lip tended to cause accidents instead of reducing them, so the practice was dropped. A deep road cut – called Hooker Cut – was one of the deepest cuts in the country when this stretch of Route 66 was built in 1944.

Devil's Elbow is a tiny community nestled beside the Big Piney River. You'll find a few scattered houses, a real estate office, and a



Top: These towering bluffs line the east side of the Big Piney River at Devil's Elbow (photo by Gary Johnson). **Above:** Shanghai Spring rises on private property, at the edge of a gravel road (photo by Conor Watkins). **Below:** Historic Route 66 curves through Devil's Elbow (photo by Conor Watkins). **Left:** These polished pebbles may have been created by ancient spring action (photo by Conor Watkins).

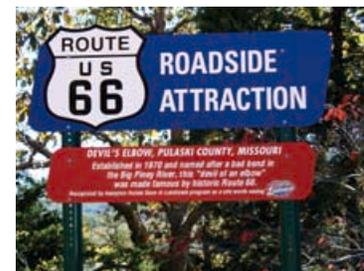
general store. The latter is located in an historic building, but we were running way behind schedule when we reached Devil's Elbow and the general store had closed. It's only open until 1pm on Saturday.

Big Piney River is typically floatable all year long because it carries a large volume of spring water. At Devil's Elbow, the river goes around a sharp bend. Back in the days when railroad ties were floated down the Big Piney, bound together in rafts of 100 yards or longer, the bend gave rafters problems. So the name Devil's Elbow described their reaction to this difficult to navigate section of river.

An original Route 66 bridge crosses the Big Piney at Devil's Elbow.

Unfortunately, the bridge is slowly deteriorating and badly in need of repairs, as Conor pointed out while taking us on a tour of the bridge's underside. He pointed out rusted beams and crumbling infrastructure.

You'll find no public access points to the Big Piney at Devil's Elbow, but Conor had arranged for us to get a closer look at the river by entering from private property just east of the bridge. This allowed us a great viewpoint as we walked down to the edge of the river. On





Above: Conor Watkins takes in the view from the top of the bluffs at Devil's Elbow. This photo is a composite of photos taken by Gary Johnson and Conor Watkins. **Left:** This bridge, badly in need of repairs, was built for Route 66. It crosses the Big Piney at Devil's Elbow (photo by Conor Watkins)



path to the edge of the weathered limestone bluff. The view was incredible, with the Big Piney far below. We could look out over the entire Devil's Elbow area for several miles to the west.

Geology Trip Stop #5

Conical Sink • Slaughter Sink

If you follow the signs to Ozark Mountain Caverns (a commercial cave only a mile or two north of I-44 and located between Rolla and Waynesville), you'll pass between Conical Sink and Slaughter Sink. Be on the lookout for the place where the road widens and a right-side shoulder allows room for three or four automobiles to park. On the left-side, a barbed wire fence encroaches to the edge of the road, and just beyond the fence ... the land drops almost straight down. This is Conical Sink. Illegal dumping mars this sink, but it's still quite impressive. It's about 80 feet deep. The more impressive sink is to the right side of the road. Slaughter Sink is one of the largest sinks in the state. Conor led the way onto a rock promontory that stuck out into the sink. From this vantage point, the sink was impressive indeed. Bluffs lined the sides of the sink, with 50 foot vertical drops being common. The sink was several hundred feet across. We followed a trail on the left that led to a cavity in the promontory, a natural tunnel that pierced to the east side of the promontory. We slipped through the tunnel and down to the bottom of the sink. *Geologic Wonders and Curiosities of Missouri* says the sink is

the far side of the Big Piney, bluffs rise vertically for well over 100 feet, possibly as high as 200 feet in places. I could see a white building at the top of the bluff, set back maybe 200 feet. I assumed it was the home of a wealthy landowner. But soon, we jumped back in our cars and Conor led us to the top of the bluff, where we discovered the building was an apartment complex. Surely, these apartment dwellers must have one of the best views in the state. We parked near the apartments and Conor led us through the trees, down a steep

Right top: When this stretch of Route 66 was constructed, Hooker Cut was blasted through limestone rock (photo by Conor Watkins). **Right middle:** Slaughter Sink is one of the largest sinkholes in the state (photo by Conor Watkins). **Bottom:** The north entrance of Kaintuck Natural Tunnel (photo by Conor Watkins)



175 feet deep. After heavy rains, a lake several feet deep sometimes forms in the sink. The lake slowly drains away. We followed an old eroded road back out of the sink.

At this point, there were several more stops on the geology trip schedule, but we were way behind time. Everyone had called it a day except for Conor and me. And now Conor was ready to head home. So I continued on one last stop on my own, using as a guide Conor's notes on the geology trip in the MVOR guidebook.

Geology Trip Stop #6

Mill Creek • Kaintuck Hollow • Kaintuck Natural Tunnel

My wristwatch now read 3:30pm, so I was running short on time. The thick trees and the low angle of the sun now made for relatively low light levels, so my camera had trouble adjusting for proper exposures. But there were several places I wanted to visit in the Mill Creek/Kaintuck Hollow area. First, on my list was Kaintuck Natural Tunnel. Conor would have surely come in handy. I wasn't sure where the trailhead was at. I even missed the turn for the recreation area. I figured it out soon enough, but at this point, with the sun nearing the horizon, every wasted minute hurt.

Mill Creek Recreation Area is located in Mark Twain National Forest, a few miles south of the town of Newburg (which is a speed trap, consider yourself warned!). Many people come here to fish Mill Creek. Others come to hunt. I didn't encounter anyone hiking, but I encountered several fishermen and several hunters. County Road 7750 passes through the recreation area. It skirts a day-use picnic area and a parking lot for Cave Trail. An artesian well continuously runs from a spigot near the Cave Trail trailhead.

To get to the Kaintuck Hollow hiking trails, you must drive across Mill Creek and follow the road as it bends to the south. Be patient and stick with the road. Eventually, you'll find a sign for the natural tunnel (although I was just about ready to give up, thinking I'd missed the trailhead). The trailhead has room for three or four cars. I parked and started walking to the west, praying I was headed in the right direction. There wasn't much time for errors. Nonetheless, I wasted several minutes by making a premature turn to the right. There are many spur trails in this area so it can get confusing. Finally I decided to get back on the main trail and continue west, and when I did the main trail curved to the right on its own and led to the natural tunnel. I walked past at least two fire rings. The area appears to be heavily used for camping, most likely by scout groups.

From the natural tunnel's south entrance, it doesn't look like a tunnel. It looks like a cave. I pulled on my headlamp and stepped forward into the darkness and found the tunnel zigzags, first to the left and then back hard to the right. This arrangement prevents light from slipping all the way through. The passage is fairly large, a 10 foot ceiling, with the width varying between 20 and 40 feet. The tunnel is about 175 feet long and cuts through a small ridge. You can continue hiking Kaintuck Hollow trails after you hike through the tunnel. Trails head west from here, leading to Yelton Spring and Wilkins Spring. The later spring is located in a pond that is stocked with trout. I didn't have time to hike to the springs.

My next order of business was Cave Trail (although this trail was not part of Conor's itinerary), so I backtracked to the picnic area and parked at the trailhead. The trail heads up a hill at a fairly steep angle, but the climb doesn't last for too long before it levels out and follows a ridge and winds past pine trees. Eventually the trail descends and leads past Mill Creek Cave. I stepped a few feet inside the cave, far enough that I could see the cave maps are right – the wide passage gets muddy. I retreated, confident I'd found Mill Creek Cave, and then headed back to my car. That was all I had time for and I headed back to the MVOR grounds.

Wrap-Up

This was a good geology trip. The pace was somewhat slow and that meant we failed to reach three of the scheduled stops. I'll have to return to Mill Creek and Kaintuck and spend more time hiking the various trails. In addition, I didn't spend any time at the Vichy Road Filled Sink or Lane Spring and Blossom Rock, but I guess this gives me something to do in the future when I return to this area. Thank you for leading the trip, Conor, and thank you for allowing us to publish your photos. ●



A trip to

Devil's Icebox Dripstone Cascade

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

In September 2003, I decided it was time to return to Devil's Icebox and take another state park sponsored wild cave trip. I had first visited Devil's Icebox in October 2002, when I took a standard trip to Chocolate-Vanilla (an impressive flowstone display with numerous small rimstone dams beneath it). I was ready to move up to a more strenuous trip, so I signed on for a level C trip to Dripstone Cascade and told Sam Clippinger I was planning to take this trip. He then also signed up.

We arrived at the state park about 40 minutes early, so we decided to take a look at Rock Bridge Natural Tunnel and check out the cave passage on the right side. I'd peeked in the left side passage during a previous trip and found it just a muddy slope that soon pinched off. The right side passage was a little bit different. It leads up and branches to the right for several feet. A tiny, well-travelled crawlway seemed to continue, but I had no interest in pushing further.

We also checked out the sink hole that leads to Devil's Icebox. I knew there would be little time to actually look around in the sink hole once the wild cave tour started. So we looked at the passage that continues downstream. We followed the passage around a corner and about 100 feet further before standing water stopped us. The passage seemed to reach a sump not far afterwards. (Reportedly, divers have continued in this passage and discovered some nice sized rooms.)

After checking out these passages, we headed for the Rock Bridge Memorial State Park main office to meet our tour guides and the rest of the caving group. We found Kathy Christensen would be our head guide and Darla White of KCAG would serve as Kathy's backup. They were both quite knowledgeable about the cave and had no doubt been in Devil's Icebox many times. They gave us a quick overview of the trip and where we'd be headed.

Kathy and Darla pointed out Dripstone Cascade's location on a large map. It was up the left fork, which branched from

Left: The Dripstone Cascade formation can be found near the end of the left fork. The formation is about 15 feet high. It is one of the few examples of white flowstone in the left fork (photo by Gary Johnson)

the main passage not far from the Chocolate-Vanilla formation. Everyone on this trip had been on a Chocolate-Vanilla trip previously. Now, we would be going two or three thousand feet further into the cave than any of us (except the guides) had been before. The route looked somewhat intimidating, with several low, tight watercrawls. The map of the left fork had three 1's on it (indicating the ceiling height in feet), but Kathy said there were alternative routes around the watercrawls, and we'd be using these alternative passages.

Of course, the toughest part of a Devil's Icebox wild cave tour is simply carrying the damn canoes from the parking lot up to the sinkhole. The sturdy plastic canoes used for wild cave tours are quite heavy. The guides used light canoes, knowing they would take care of them. But because they couldn't trust the wild cave tour participants to treat the canoes carefully, the participants got stuck with super heavy, thick plastic canoes that each weighed about the same as a baby whale. Sam offered to carry the canoe up to the cave, so I'd be carrying it back down, an arrangement that was fine with me. I'd prefer to save my energy for the cave instead of expending so much of it just getting the canoe into the entrance. But Sam thought he'd better lug the canoe while he had the energy to do it. In retrospect, this arrangement worked out well for both of us because while the cave beat me up pretty good, I still had plenty of energy after exiting the cave, whereas the cave took its toll on Sam and I doubt that he could've carried the canoe back down the hill).

The trip went without incident all the way back to the left fork. Everyone did a decent job managing their canoes as they paddled through the half mile of watery passage and dragged /carried their canoes over the three portages. No one had any troubles negotiating the low ceiling section where you have to lay down flat in your canoe.

Once you can finally abandon your canoe, the cave is all large walking passage back to the left fork, with ceiling heights of 10 to 30 feet and a passage width of 50 to 100 feet. This is big passage with a stream running through it, so the going is somewhat muddy. But it's all very easy.

There isn't nearly as much passage up the left fork as up the right fork. But the left fork passage is fairly strenuous. It requires lots of hands and knees crawling and even a little belly crawling. Immediately once entering the left fork, the ceiling height drops to only two to three feet. You slosh through knee deep water, but you can stay dry by moving sideways down the passage with your hands on the bank.

From here, the passageway (which was considerably smaller than Devil's Icebox's main passage, at only 6 to 12 feet wide) alternated between walking height (rarely more than 10 feet high) and wide stream meanders that required crawling. In all cases, where a watercrawl seemed imminent, Kathy and Darla



Right: This soda-straw-stalactite-stalagmite combination can be found only a few feet away from the Dripstone Cascade. For scale, the ceiling is about nine feet high in this room (photo by Gary Johnson)

led us to alternative shortcut routes that cut across the meanders. These routes weren't necessarily easy, though. They involved squeezing through narrow holes and down steep banks. For the most part, the alternative routes were sort of slippery, which actually made the squeezing and bellycrawling a little easier. Instead of expending lots of energy squirming over dirt and rubble, you simply slid forward on a thin coating of mud and clay. Not everyone in the group could negotiate the narrow squeezes. One member, who was a little thicker in the mid section than the rest of us, had trouble getting through the squeezes and instead opted to slosh through the wide, wet meanders. So the meanders definitely are do-able, but be prepared to get soaked

The Dripstone Cascade is a fairly impressive formation. As its name indicates it is a wall of flowstone, about 15 feet high altogether and about two feet wide, sort of like a frozen waterfall. Much of this flowstone is white. The Dripstone Cascade was our turnaround point. It can be found in a room with a nice stalactite/stalagmite combination and some nice draperies. There isn't much more cave up the left fork beyond the Dripstone Cascade. We had our lunch here and then began the return trip.

I thought I'd been drinking plenty of water, and I ate a good-sized lunch, but on the return trip, I started to suffer from cramps in my legs, most likely the effects of dehydration. But the cramps weren't too bad and they typically went away after a few swigs of Gatorade. I was anxious to get back to the main passage, however, where I could walk instead of crawl, and once we reached the main passage, I was fine. The leg cramps didn't reappear.

Sam, however, was ready to get the hell out of Dodge; and we had at least one other trip member who was suffering leg cramps, so Kathy and Darla didn't waste time getting us back to the canoes and out of the cave. I carried the canoe up out of the sinkhole and back down to the parking lot – and it was murder. I was cursing most of the way, although I eased up when we encountered bystanders/hikers and even stopped for a few minutes to answer their questions. People tend to have lots of questions when you crawl out of a wet hole, covered in mud, with a canoe on your shoulders. Go figure.

This was a tough trip. We were in the cave for about seven hours, and much of that time was spent crawling and squeezing through narrow passages. On the following day, I was plenty sore and it took a couple days for the muscles to recuperate. If you've been in Devil's Icebox once and you're ready to move up to a more strenuous trip, you should give the Dripstone Cascade trip a try. ●



Top: From an October 2001 trip to Devil's Icebox, Christie Burcham and Jeff Page float beneath the low ceiling in the entrance passage (photo by Bill Gee). **Middle:** Also from the October 2001 trip, Bryon Carmony and other cavers return with their canoes to the trailhead parking at Devil's Icebox (photo by Bill Gee). **Bottom:** Believe it or not, these cavers began their day with different color caving suits, but after several hours in Devil's Icebox muck, they emerged as the same dull brown. This photo was taken after the September 2003 trip to Devil's Icebox. That's co-leader Darla White on the right (photo by Gary Johnson).