

New Year's Weekend

in Mammoth Cave

Three days of survey and sparkling apple cider
with the Cave Research Foundation

by Jeff Bartlett

“The whole of the surrounding country appears to be of a cavernous nature; and if the traveler should be so unfortunate as to possess a timid disposition or large development of caution, he might be apprehensive of a sudden disappearance of the stagecoach into the bowels of the earth.” – A Historical and Descriptive Narrative of Kentucky, Dr. W. Stump Forwood, 1870.

Early last Autumn, Bryan Signorelli and Aly Bowen began suggesting that I apply to the Cave Research Foundation, and make plans to come survey with them on one of CRF's work weekends. At first, I was apprehensive – I was too new to caving, I thought, what use would they have for me? – but as I found myself surveying more and more with LRG, and began to work on my own cave maps, it seemed a foregone conclusion that I would attend the New Year's Expedition with Bryan, Aly, and Mandy.

So I sent in my application, and the plans were made. As the date of the trip approached, I looked forward to it more and more. I didn't care about the history of Mammoth, but soon I found myself devouring *The Longest Cave* in a single night.

And here we were, bouncing down the interstate in Aly's Subaru, Eastward through Tennessee and Kentucky, then spilling into the cold night and quietly to our bunks. In the morning, we would be underground. What follows is an account of the 3 days I spent helping CRF map and explore Mammoth Cave.

2007.12.29

My first foray into the world's longest cave would be through the Weller Entrance to Roppel, along with Aly Bowen on a trip led by Ed Klausner. And what an entrance it is, rigged entirely with sturdy ladders, dropping ~116' almost straight down. I simply cannot imagine how much work was involved in its construction.

A few short crawls, a stop at a picturesque waterfall dome with significant flow, and we were on beyond Roppel Junction onto Arlie Way. Sliding down into the lower levels, the rest of the group took a break in a small room while I scouted ahead to look for our objective, the tie-in station from which we would resurvey a portion of cave known as Black Canyon.

Soon I came to a branch leading off from the parent passage, with several inches of water, and followed this for several hundred feet before determining that I'd gone too far.

Surely this was it – the walls were glossy and black for six or eight feet up the walls above the waterline. Just as I began to turn, I saw several blind cave crayfish in a small pool.

Wow! I'd never seen one before. Returning to the fork, I continued down the original passage and eventually came across the station we'd been looking for. I hung an elbow pad on a limestone knob to mark it, and headed back to meet the group.

The survey itself was uneventful and pleasant, untangling the spaghetti of a canyon matched both above and below by separate canyon passages in the same stream cut. Over our 30 foot main passage, a 10 foot canyon cut a line across the network of upper level passage. Beneath, the active stream channel snaked wider and wider, repeatedly intersecting our path.

We completed our objective handily, and after a brief look-see into parts of Arlie Way beyond, headed back up the ladders. Despite my excitement, I was in bed early. I knew there would be more tomorrow.

2007.12.30

The alarm went off at 7:00. I could get used to this routine, made possible by housing five or ten minutes from cave entrances instead of the two or three hours it takes us from central Arkansas. Pancakes were eaten, trips were posted, and I'd be going into Salts Cave with Bryan Signorelli, led by Mick Sutton.

Salts is richly historic, not only in terms of modern caving but archaeologically; humans have explored it for over 3,000 years, and its main passages are black with soot from the cane torches of those prehistoric cavers. Our goal would be to re-sketch walking passage in Lower Salts, up to (and including) the junction with Indian Avenue. This is where Jack Lehrberger and company came roaring in from Colossal Cave on their way out of Salts in 1960, the second of the connections that

would make Flint Ridge the longest cave system in the world at the time, and eventually incorporate it with Mammoth Cave itself.

It's a reasonable hike from Hamilton Valley to Salts, but it wouldn't have been much fun after dark with temperatures below freezing and we took Mick's car. The entrance itself sits at the low point of an enormous crater of a sinkhole, with a waterfall dribbling down the rock face and disappearing into the earth below. Upon arriving, we spent some time clearing the drainage channel that encircles the gate in order to avoid an unwelcome shower, and soon we were loping down the sharp slope and into the blackness beneath.

The main portion of Salts is big. *Really* big, maybe 100 feet wide and 50 feet tall on average. Walking through it, one feels very, very small. Most surfaces, as we found is the case in most of the cave, are dusted with a fine, silty substance. This overwhelming space is heavily scarred: large patches of gypsum peeled off the walls by the ancient natives, soot blackened ceiling and walls from the very same, signatures and dates ranging from 1850 to 1930 scratched and smoked into every surface, the floor of the cave itself crushed and pulverized by thousands of footsteps. The air is incredibly dry in comparison to most caves, and we were wise to pack extra water.

Soon, we detoured downward via Tom Wilson's Accident and into the River Map area, and on into Dismal Valley. What a breathtaking place. On the other side of the canyon, Mick showed us a cedar pole used by the aboriginal miners to reach higher deposits of gypsum. It still leans against the wall they left it on; carbon dating has showed this artifact to be 4,000 years old. Back down below, we reached a Roger Brucker dig, and wormed our way downward into Lower Salts.

The meandering tunnel we were to passage was primarily tall enough to walk through, and quite picturesque. A delicate gypsum crust sheaths the bedrock below in most

places, with gypsum flowers and odd hairlike protrusions peeking out of grottos from time to time. It took extra caution to make sure our impact in this area was minimal. Through one section, all the gypsum was focused on the right wall, with the left wall blank and unadorned; 50 feet further on, these roles had reversed. Later on, an immaculately preserved horn coral, 330 million years past its prime, hung tenuously from a sliver of limestone in the ceiling. Everywhere we looked, there was something to catch the eye.

Even in these lower passages, each step was thick with human history. These prehistoric explorers had found their way into portions of the system that would be lost for thousands of years, not rediscovered until the Flint Ridge cavers pushed this deep underground in the early 1950's. There are spent fragments of cane torches strewn at short intervals, and the stoke marks left on the walls by their bearers. These regions were not mined. Those

who came here were fueled only by the thrill of discovery.

Mick worked on the plan view, Bryan did cross sections and a running profile, I recovered stations and tried to keep everyone in good spirits. After nearly 900 feet of quality sketch work, we reached Indian Avenue Junction and were ready to head back. On a large rock in the junction – the same one later used for the “A” survey whose skeleton we built upon – the following message was scribed in carbide:

JR
OUT OF SALTS CAVE.
-JL. 2-15-53

Dinner was vegetarian chili and cornbread muffins, a huge step up from the fast food we typically settle for in Clinton or Batesville on the way back to Little Rock. One word to the wise, however: those of you consigned to share a room with me may, in the future, wish to



by Bryan Signorelli

discourage the kitchen volunteers from preparing chili. It's a bad scene.

2007.12.31

After waking up and taking advantage of another hearty breakfast, I learned I'd been assigned to a trip with Dan Gregor, Joyce Hoffmaster, and Rick Toomey to the Logsdon River section of Proctor via the Doyel's Valley entrance. As far as I could tell, we'd be climbing a flowstone overhang originally free-climbed by Richard Zopf, a lead which hadn't been pushed because previous teams weren't foolish enough to try and recreate this climb. We would be armed with an aluminum ladder, broken down into 4 foot sections.

The muffled chatter of breakfast was punctuated a bit by Mandy's squeals when the expedition leader Charles Fox revealed that she'd be taking a trip through the Daleo Entrance into Roppel. And, at some point, Dan sidled up to me to ask ominously: "How are your climbing skills?" ...this was going to be an interesting trip.

The Doyel's Valley entrance to Mammoth was originally drilled in 1980, 60 feet straight down into the flat area above a large room on the bank of Logsdon River. The first 4 feet or so is a section of ~36" metal culvert, but the remainder is a ~30" concrete tube, and the rappel down is subsequently a bit disconcerting; you can't see anything but the concrete threatening to bark your knees until you're unceremoniously ejected from the ~7 foot high ceiling. Here we removed our vertical gear and lugged our ladders out into the passage.

Negotiating carefully down an enormous flowstone to the slick mud floor, we came into a large room with a substantial breakdown pile in its center. Here we passed a large blind crawfish on some kind of overland expedition, and attempted to snap a few photos. The trail here was a bit convoluted and difficult to follow. Soon, we found our-

selves in the knobby, rotten chert of the river bed.

Kentucky chert seems to be significantly different than what we call chert in Arkansas, not only in its glossy black color but in its compromised strength. This is not the cover-all-slashing multicolored stuff we know; it strains and buckles under the weight of advancing feet. Any loose bits wash away during the river's flood cycles, leaving a gloomy and alien landscape in their absence.

This is classic Mammoth borehole, ~30 feet wide and ~20feet high as far as the eye can see. Soon, we were at a fork, and the rumble of a waterfall could be heard in the distance.

Station markers had thus far eluded us, and here we laid down our ladder sections to scour the walls for clues as to our location. Rick headed off toward the thundering sound, and my curiosity got the better of me as I followed, staying alert for poker chips and signs of past survey.

The sound grew louder and louder – *surely these falls must be around the next corner*, I thought more than once – until finally we stood on the cusp of the most spectacular waterfall I've yet seen inside a cave. This is Pete's Strange Falls, named for the "P. Strange" signature on a wall nearby. Here, the river completely disappears down a 10 foot x 10 foot hole, rushing angrily over its cherty obstructions and swirling into the drain below.

It isn't a tall waterfall, but the volume of water is breathtaking; I dared not step into the raging water on its upstream side for fear of being swept in. We lingered, then re-focused and decided that we'd clearly come the wrong way. This was not the path to our objective.

We returned to the breakdown pile in the room below the entrance flowstone, skirting the left wall until finding ourselves in another

yawning, black passage. While we were unable to find any stations, a concern since we'd need something to tie into, we recognized our lead immediately from the cross-section in the notes. Here, an umbrella-shaped flowstone structure protrudes ~20 feet from the wall and ~10 feet above the passage floor, above a waist-deep pool. Scrambling up the delicate chert ledges directly across from it, we were able to see our goal carved out of the rock above.

It looked promising, and we wasted no effort in forming a human chain across the shaky traverse in order to pass the ladders across. We were one misstep away from an unpleasant swim, but both cavers and ladders made it across in one piece, and we began to assemble the sections. Our path would go up the naked face of the flowstone outcrop, not the dangerously exposed crack Richard had once climbed.

True to their nature, the chert steps groaned and often cracked beneath us, and more than once we found ourselves grabbing at handholds to avoid the short way down. Luckily, at this point we weren't too high above the water line.

With Rick and I bracing the ladder to prevent any undue pressure at the connection points, Dan carefully picked his way up its 16 foot length and stood atop the flowstone. Here, he rigged a webbing line to hold the ladder in place and a belay line for those who would follow him up, while I set a station in the passage below from which to shoot the entry to our going lead. There were no tie points visible on the way in, and it was going to take some hard work to make sure we didn't slink back to Hamilton Valley with a hanging survey!

We followed, in turn, up the ladder and sloshed into the mouth of our target. This was a nice lead, 6 feet high and 4 feet wide, filled with ankle deep water. However, after a couple hundred feet of survey, the passage's

characteristic changed abruptly into a belly crawl. A *wet* belly crawl. With multiple ear dips. Arkansas cavers aren't shy about grim, wet survey, but this one was going to require a wetsuit crew, something not included in the notes we'd received.

Doubling back and retrieving our ladder pieces, we focused our efforts on finding a tie-in to the trunk survey; a hanging survey is useless, and if Bob Osburn was going to have to send a wetsuit team back to push the virgin ear dip, we were going to make sure they didn't have to waste time hunting for this.

The station directly adjacent to our position was marked as M11 on the original notes, but after nearly 30 minutes of fruitless search we split into two groups and headed in opposite directions to search for nearby stations, armed with the sketches. M10? Nope. M12? Nope. M9? Nope. After over an hour had passed, I heard a triumphant yelp from an invisible point upriver: Joyce and Rick had stumbled across M16. While this wasn't optimal, it would be easy to set some temporary stations and run a survey line back to our starting point.

So we did, and I must say: anytime CRF needs me to read instruments in a 30x20 foot borehole without needing to wait for a sketcher to catch up, I'm their man.

One interesting note about the ascent back up to ground level: the entrance shaft isn't wide enough for a full frog stroke, so one ends up taking awkward baby steps. I wasn't particularly graceful getting off rope at the top (the rig point is centered directly over the shaft), but after watching my fellow cavers follow suit, I didn't feel all that bad.

The running joke about the CRF New Year's "party" is that it's a bunch of tired cavers lounging around staring at each other until the clock strikes midnight in a reasonably appropriate time zone. This is, in fact, accu-

rate. After three days of caving, my knees were more awake than my brain was, and I lasted all the way to 12:02 before I finished off the sparkling apple cider I'd shared with Mandy and made tracks toward the bunk house.

2008.1.1

Tuesday was cold, with bitter winds. It was 2008 now, and the expedition was through. We were heading home.

My lasting impression of CRF will be an overwhelmingly positive one. All were friendly and welcoming, and throw themselves passionately into the project. *A lot* of good work is done. While I knew the caving would be world class, I was pleased to learn that the personnel are as well. I will certainly return.

