

CHOUTEAU GROTT
FORESIGHT:
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Introduction: What is this document?

Each time the grotto organizes an outing or event, a trip report is written by one of the attendees. This written record includes information about location(s) visited, members attended, activities undertaken, and any other pertinent information. Information from biodiversity surveys, cave mapping, and cave monitoring can also be maintained in these reports. Reports can be referenced in the future as to how caves, biodiversity, and landscapes change over time. Every quarter, all the trip records are compiled into one document, the Foresight, and published for grotto members to view.

As some of the information included in trip reports includes full names, cave maps, and exact cave locations, previous editions of Foresight are not shared with the general public. To request access, please contact the current Chouteau President, whose contact information can be found on the grotto website, <http://chouteaugrotto.org/>.

There are 22 Trip Reports in this Foresight. There are two versions of this document, one with full trip report photos and one with minimal photos, for printing purposes. You are viewing the version with full trip report photos.

The 2022 Officer Team included:

- President: Martin Carmichael
- Vice President: Dr. John
- Secretary: BJ Seidel
- Treasurer: Kevin Feltz
- MSS Director: Rita Worden
- Quartermaster: Rita Worden
- Foresight Editors: Shannon Zaloz and Kohl Mitchell

We had a firm date to return to Devil's Backbone Wilderness; due to hunting activity and Mick Sutton's schedule, it had to be November 12. Mick had obtained a permit to collect tissue samples from the undetermined crayfish as well as the cave fish, if we find it. This would be his third attempt to see the fish Shawn Williams and I had photographed in Crooked Branch cave in 2020.

Shawn and I had stayed at the Winona facility to do some cave monitoring near Two Rivers and Mick had arrived the evening of the 11th, so next morning the three of us were able to get an early start for the hour's drive, and an hour's hike, to the cave entrance. We came in from the upper trail-head so we had a clear path to follow almost all the way, eliminating any off course steps or checking of devices. At the cave we rearranged gear and once ready we made our way efficiently through the now familiar Maidenhair entrance all the way back to the slot canyon that drops to the stream level. I was leading and Shawn last so we could help Mick with his equipment. As I began to lower myself, reaching down with my right foot, the thick ledge I had my right arm on broke clean off, a shocking surprise as the limestone there was more than 2 inches thick...word. So we carried on, down the waterfall, arriving quietly at the rise pool where we immediately spied a fish.

Mick pulled out his tiny, battered net and made a valiant attempt to coerce this "blind" thing to allow itself to be caught. I couldn't decide if the net was grossly inadequate or the fish was enormously aware, but it was very obvious that we were getting disappointed here. The fish just literally seemed to slide away, its movement imperceptible, like the aurora in real time, or a cloud; suddenly it was in deep water, out of our reach.

We gave up, thinking to try later, and turned our attention to the big cave crayfish right there, "watching" us. This invertebrate was no match for Dr Sutton, who soon had him in hand. And it turned out to be a male, the first we've found among the many blind crayfish in this cave. Mick made his usual measurements, notes, and photos, then quickly plucked a leg off and dropped it in a specimen bottle. I said, "whoa, I thought...", but he assured me it would grow back. Oh...yeah. But, while we were giving this creature the experience of a lifetime, Shawn had found another fish!

A little ways downstream (further into cave) Shawn had one cornered, sort of. We joined him with the net and Mick made an attempt without success. Shawn had him in sight again, silt moving in, and called for the net. It was a real rodeo but he finally came up with the prize! Mick got busy collecting data and asked me to help clip a piece of its tail. The fish was pretty feisty so we got seriously ready; Mick would secure the fish, I was to hold the tail by tweezers and snip w/ the tiny sterile scissors, and Shawn would hold the specimen vial and take photos. Everyone performed as expected, especially the fish! AND he got away...but there, on the tip of the scissors, was our tissue; a little ¼ inch sliver of tail fin! What luck! What a day!...and then Shawn and I left Mick to his work and followed the stream into the wall.

We'd had it in mind to brave the tight wet space for some time, but it always looked daunting with the water rushing in and low airspace visible ahead. But it's been dry and today the water was very low, so it looked easy. Just a few inches or so of water under a ceiling of about 12 inches. The floor is tumbled chert over eroded, blackened "gnarlies" that grab at clothing, and hang from the ceiling too, inconveniently. We pushed about 90ft back there and it still goes, but we'd found what we were looking for: surveyable passage going who knows where?...

We found Mick in his element and with the prized specimens secured, made our way out to daylight, out of the wilderness, and out to supper with local cavers Dennis and Brenda, who toasted our long-sought success!

Carroll Cave

- Trip date: 2022-01-15
- Project manager: Kristen Vogel
- Trip purpose: Photography
- Areas of Cave visited: Carroll Passage, Turnpike
- Trip participants: Kristen Vogel – Leader. Kathy Christensen, Chase Cunningham, Joseph Garten, John Nigro, Dr. John, Rita Worden, Shannon Zaloz
- Entry Time: 10:30am, Exit Time: 5:30pm

Trip report by Kristen Godfrey:

Two people braved the cold weather and camped at the silo Friday night. Four of us stayed at an Airbnb Friday night and arrived at the silo at 8:40am. Two others drove to the silo on Saturday morning. One of those was late due to getting lost, so he was not in the picture taken at the silo. That picture only has seven people in it, when we actually had eight.



Group photo before the trip started. Left to right – Joseph Garten, Rita Worden, Kathy Christensen, John Nigro, Dr. John, Kristen Godfrey, Shannon Zaloz. Photo by Kristen Godfrey.

We started down that shaft shortly before 10:00am, with the last caver getting in at 10:30. We quickly set off down Carroll passage. This was the first time in Carroll for 2 people, and the first time past the data logger for several, and I was not sure how long it would take to get to the lunch room.

Despite heavy rainfall the night before, the water level in both Carroll and Thunder River looked normal. I pointed out the data logger when we passed it. We went through the water barrier without incident. We were careful to be quiet and look for bats when we passed the guano piles. No bats were seen at the guano piles.

We arrived at the lunch room at 11:40 and took a break there before heading into the turnpike. I saw something in the stream coming out of the turnpike that appeared to be 2 mesh bags with charcoal inside tied to a rock. We figured it was someone's experiment so we left it alone. At first, I thought it was trash, but it looked like it was tied to the rock and set there on purpose.

One bat was seen in flight shortly after we entered the turnpike. We enjoyed our leisurely stroll through the turnpike. When we got to the far end of it, several people went down the ladder to check out Carroll passage below. We stopped to take a group picture on the way out, and arrived back at the lunch room at 2:00pm.

We headed out, stopping at Thunder Falls to take some pictures, swim, and wash off. The last person was out of the cave at 5:30pm, and we were all headed to dinner by 6:00.



Snake skeleton in Carroll Passage near the ladder to the Turnpike. Photo by Joseph Garten.



John Nigro coming up the ladder into the Turnpike. Photo by Kristen Godfrey.



Towards the end of the trip. Everyone was very muddy. Left to right: Joseph Garten, Katy Christensen, Dr. John, Kristen Godfrey, Chase Cunningham, John Nigro, Shannon Zaloz, Rita Worden. Photo by Kristen Godfrey.

Railroad Cave

- Railroad Cave Trip
Saturday Jan 22, 2022
- Participants: Erich Petzall, Kohl Mitchell, Martin Carmichael, Emma Buckingham, Dr. John, Shannon Zaloz
- Objectives: Meet new landowner, survey, bat census
- Time in: 09:45 out: 13:45
- Bio survey: 11 Tricolor bats, 16 Big Brown bats, 25 Pickerel frogs, 50 salamanders, 2 cave crickets, numerous isopods
- Trip Report Written By Dr. John, with contribution from Shannon Zaloz

Image: Martin Carmichael with the large column to his left and the salamander pool behind him.



We met at the DAV thrift store off Hwy 17. James Corsentino was sick and couldn't make it. The new landowner Erich drove up in his side-by-side and we chatted in the parking lot. Turns out the real estate agent had only once casually mentioned a cave opening on the property. Erich has already done considerable exploring in his cave, and was hopeful to see more.

Erich had opened to gate, allowing us to drive down the hill to his cabin, where we met his beautiful young family. After Shannon's struggling with the orange Taj Mahal changing tent, we drove up the gravel access to the north entrance.

Once inside, we finished changing and began a long conversation about the history of the cave, as Erich has been researching its history, including J Harlen Bretz's description. We discussed the filming, bat population, geology, and the need for remapping to include new sections. We discussed a remapping project which would include James Corsentino, a longtime Pulaski County resident who has a particular interest in Railroad cave.



Kohl wasted no time in heading to the unmapped “drain”, where he deftly passed a narrow crevice with cave ninja moves, disappearing around a bend I could not follow. Shannon and Erich pursued Kohl.

Image: For reference to how tight the passage behind The Drain is, this photo shows Kohl’s foot as he climbs over the rock arch just before The Land of The Soda Straws.

Shannon’s Perspective:

Kohl and I (Shannon) visited The Drain in 2021 and found considerable passage beyond it, but turned around when we reached a water crawl and did not have the appropriate gear to pass through it. This time, we came prepared for the cold. There are three rooms past The Drain (see description on 2021 Trip Report from Railroad Cave). Past these rooms, the cave walls grow closer and closer together until you reach a final squeeze.

Here, there is a knee-high drop that

had a trickle of water running off of it last year. This year, the water level was lower, which worked in our favor later on. At this point, you have to lie flat on your back and scoot over the edge of the drop-off. You then stand/climb up the walls to launch yourself over a rock arch that is most inconveniently placed. Once past this arch, you enter a room big enough to stand in, but be careful! You have now entered The Land of The Soda Straws and standing fully erect puts your head dangerously close to the straws. This is the most highly decorated area of The Drain. The passage makes a “Y”, with the soda straws going to the right side of the Y. The soda straws eventually peter out, moving towards the left wall and eventually disappearing. This route has some crawling and climbing over rocks. There are several holes going to a lower level that the water flows through. One of these holes was big enough for Kohl and myself to crawl into, one at a time. It opened up just enough for us to turn around in about 4 feet into the crawl. About 3 feet farther and the loose gravel and sand bottom curved up to be about 5 inches from the ceiling. By shining my light past this point, it looked like it did open up further down the passage, but accessing that area would require digging out the constriction, which is not ideal to do. Today, the water was pretty low with almost no flow, forming puddles in some spots. Our backs stayed dry through this area. Back into the right-sided passage of the aforementioned Y, the cave continues on for a little ways before choking out in a dirt and mud embankment. To the right of

this is a small route that looks like water has flown down in the past. It was dry at the time.

Image: Shannon and Kohl after crawling down the Rimstone area.



The left side of the “Y” is much less pleasant. There are few soda straws along this route and lots of crawling through mud. Last year, we stopped when we ran into a crawl space that had muddy water in it. Today, the water was much lower and clear. We were primarily crawling on our knees, with the end being a belly crawl. The floor was a mixture of mud and rock, with a central channel of water running through it. The water would occasionally cut underneath some rocks, but would return to the passage shortly. There were 2 groups of Pickerel frogs, 5 frogs per group. Some ways down (distance was hard to gauge down here due to the amount of crawling we did) we encountered a room that we turned around in last year. We were primarily crawling on our knees, with the end being a belly crawl. The floor was a mixture of mud and rock, with a central channel of water running through it. Last year, there was a bat (gray/silver in color, no confirmed species ID) in this room. There were no bats here this year. This was the last place we could sit up on our knees. After this, it was a long belly crawl through the mud and water (thankfully much lower this year). The water eventually sumps and turns to the left through an un-passable route, perhaps back towards the main cave. We crawled a short ways past this and the cave turned to the left, narrowing down to a point that even Kohl and I could not fit through. The ceilings were low, but the walls were wide enough apart that we were able to turn around and head back, disappointed that we had finally found the end to The Drain. I did get some GoPro footage of the passage beyond The Drain, but it’s so shaky that the viewer feels like they’re riding in the passenger seat of their fun aunt’s car as they zoom down the crooked Ozark roads with a stomach full of gas station chili cheese fries.

Dr. John’s Perspective:

Meanwhile, Martin and John stuck with Emma, as this was her first cave trip. We strolled to the big meander on the left (east side) to explore the labyrinthine multilevel canyon. Erich joined us quickly, having had the good sense to quit following Shannon and Kohl. We poked in lots of leads, and Emma’s claustrophobia eased.

Image: One of the juvenile salamanders in the salamander pool by the large column in Railroad Cave.

Once we came out, the whole group went on to the big formation area and got pictures. Climbing up past the salamander pool, we photographed a new generation of young, called a “congress” or a “herd” which were white and less than 1cm long. Erich had not been down the pit, so we all did the tour to the bottom and saw the eroded haystack formation. Back at the top, we continued on to the rimstone lead, then ultimately to the big columns of the North entrance. By this time the outside temp was near 40F, but we still had entrance ice

stalagmites. Martin convinced Kohl and Shannon to go down the Rimstone lead, which they pressed for about 90 feet before turning around. Most of the crawl was 7-8-ish inches high. Martin had a good laugh at the expletives they were muttering as they crawled along.

Image: Emma by the large column in Railroad Cave.

Another neat “treasure” in this

cave is a partial skeleton located about 1/4th of the way past the entrance. Not all of the bones are left, but there is a skull and a few long bones. There is a black outline in the ground showing where the animal lied when it died. It gives a pretty good idea of the shape of it; we think it may have been a raccoon. There were also several raccoon tracks scattered through the main passage of the cave.

The trip back was much faster and we exited before 2pm. We enjoyed conversation with Erich and his family, and then went to Waynesville for burgers and beer at Hoppers Pub. Kayla joined us at Piney River Tap Room after her Carroll Cave trip. We stopped by Roubidoux Spring which





had very low water levels. On the way back on hwy 17, we stopped to scramble up to the entrance to Roubidoux Cave (aka Pike's Peak or Indian cave), recently acquired by MCKC. The gated parking area is much improved with more gravel.

Image: Partial skeleton and body outline in Railroad Cave.

Ridgewalking in the Wilds of Rocheport

- Date: 1/31/2022
- Location: Land north of Lewis and Clark Cave
- Goals: Ridgewalking, exploration. Find an easier connection to Lewis and Clark.
- Participants: Kohl Mitchell, Bryn Downes-Ward, Shannon Zaloz, Dr. John
- Time In: 10:30 AM
- Time Out: 6:00 PM
- Bio Count: 3 Tricolor bats, 1 fat racoon, numerous worms and various insects.
- Signs of Recent Vandalism: None
- Report Written By: Shannon Zaloz

The last time we entered Lewis and Clark Cave, Shannon Zaloz and Dr. John reported significant cave passage past the area of restricted airspace. The goal of this trip was to look for a second cave entrance that connected with this area to avoid the soul shriveling,



hypothermia-inducing, 2-hour crawl through water. Kohl Mitchell, Shannon Zaloz, and Bryn Downes-Ward carpoled to a private residence north of Lewis and Clark Cave. Dr. John had contacted these landowners, as well as others, to get permission to look in the sinkholes on the properties.

Shannon, Kohl, and Bryn had a quick chat with the landowner, Sherri, who was very kind and friendly. For the next 2 hours we combed through the sinkholes on her property. We found several with 3-inch diameter drain holes, a few with warm or cold air around or coming from the ground, but none that a human could pass through. We did find one dirt shelter underneath a large tree's roots, but no big cave entrances. Dr. John joined us a little after 12:30 and added to the search. We stopped around 3:00 PM for a quick lunch, then continued on.

Dr. John has been in contact with other cavers who have records of a few caves in the area. We found one of these caves, Possum Pit, as the sun was beginning to go down. The cave entrance was not in the location that was provided to us, but is behind one of Sherri's neighbors' homes. The entrance is at the bottom of a sinkhole and had several sticks on it, making it a little harder to spot. The entrance initially goes down at a southwestern angle into an easily climbable chimney. It then

levels out into a horizontal area with a large opening above a 25-foot deep pit. A rope is very helpful to climb in and out of this pit. On the upper level, there is a small deviation in the wall that goes towards the northeast. On the southeastern side of the room, there is a ledge that we used to begin our climb down into the cave. Bryn was the wisest of the bunch and elected to not climb

down the pit. John led the way down and coached Kohl and Shannon down, as they were less confident in their climbing skills. The area below has a rock bottom and several bones, including the pelvis and partial



skull of a deer. There was a small side passage with rock arches going towards the east.

On the south side of the floor was a small hole going down. Kohl and Shannon (myself) were small enough to slip through this hole, making note of the several bones we found along the way. We followed a downwards incline that curved towards the left, went under a rock arch, and found a slightly larger space where we could stand on our knees. To the center-right continued on to a larger room where one could *almost* stand up. There was organic debris on the walls and ceiling. In the ceiling of this room was another hole that led to additional passage. Kohl was the first one to poke his head through this hole and he did a quick turn around when he saw a fat, live raccoon on the other side of the hole. He popped back down into the room and we had a quick conversation on what to do next. I peeked through the hole, could not see the raccoon, and assumed that it had been scared to deeper parts of the cave. I climbed up through to the next room and thankfully saw nothing but the raccoon's tracks.

The next room was large enough to stand in. At this point, the clay/mud in the cave started to get deeper and stickier. There was a lower route on the left that we assumed the raccoon had gone down and a hole $\frac{3}{4}$ of the way up the wall a few feet to the right of this hole. I attempted to climb through this hole first, but the mud was too slippery to get through it. Cleats

would be required here, or someone with longer legs than mine who could push against the opposite wall. I was able to get most of my chest through the hole and saw that it went into a dome, with an 8-ish foot drop below and a high ceiling above. One bat was visible on the opposite wall. The area below appeared to connect with the route to my left. We went through this and found the bottom of the dome (approximately 30 feet high), which had a generous layer of mud on it. John could see our lights from the main entrance through the roof of the dome. A small stream crossed the floor, dove underneath, and headed back towards the entrance. There were 3 tricolor bats on various levels of the dome. There was a rock arch, with water passage underneath it, that led on. This area was tight enough that only one person would fit at a time. Kohl went first and found another rock arch about 6 feet in.

We could still hear John in the main cave, singing caving songs. He politely requested that we turn around at this point because it was starting to get dark. Kohl got out his phone so we could record video of the cave we had seen so far and we made our way back, considerably more muddy than when we had entered the cave. The only tracks we saw on our way out of this part of the cave were animal tracks, but there are previous reports that match what we saw. There was a generous amount of animal scat in the cave. We all climbed safely out of the cave, but were sad to leave the warmth; there were still patches of snow on the ground. We bundled up our gear and hiked back to Sherri's house to report what we had found. We enjoyed a quick chat with her and her four dogs. Sherry said that we were welcome to return to explore more, but only on Sundays.

Image 1: In the bottom of Possum Pit, with the camera pointed at the passage headed east.

Image 2: Shannon and John looking down from the top of the pit in Possum Pit Cave.

Crossword

R O U B I D O U X P D M E X I A J O N C R G D A Z
 K D Q N F S J A D A U O S C W T D A N E O U A I V
 S L E K I P N R U T M O O M I V U Z V J C A O R N
 T Q L E B A R Z E O D R S V H H A I H A K N R S V
 I X U O Z R R L C A O H U L Q Z R A E X A O L P G
 P O V E R N O D S U P C T B L R R F R L R T I A V
 M R O P E H D T E H C N Q H E A P V D E C A A C H
 U M S W K Z R J O H Z U H D G M F T P H H X R E L
 S M S N A A E T Z H T L N T U I R R G N I P M A C
 S N I V W T O Q N J H U W S I I L L E W H Z N S B
 O S F S S G E R Q Y H C O J C Q Z H H D U A A R G
 P X B R R C W R E T M B O O D L E P S D N L J T D
 T E J A Q E Y V B G B I L N O D F E O A A U T W R
 N Y P A F Y R W B A G O I V G V T O U M L A H Y E
 X H H N M U L O C Z R O B C Y R Y G A U D F H T E
 Y F O T S Q R Q X U F R L E L X E N A I U X V R B
 L A B Y R I N T H I N E I A Y A D S B L F N Q S S
 G N I K L A W E G D I R M E T E Y R S Y K V R C L
 R R C A R R O L L R I V E R R A C R A W L E V L H
 E O H G B C K V A W F S J K Y C D K B C G N V E T
 D F B W P B P S A A O E G M U U Y F E R C I U A K
 L Y T Q A E E G V R B N C N C N S A U U I O H T H
 G N W T P I O L X N X W H W T H A B V Z L Z O S V
 A Y S D Z E T I M G A L A T S E N O B F L A U N Q
 V K A A L R S E K S K D Z W D J Y K O U J T K M B

PHOTOGRAPHY
 CAMPING
 DATA LOGGER
 LUNCH ROOM
 THUNDER RIVER
 CARROLL RIVER
 WATER BARRIER
 GUANO
 BATS
 TURNPIKE
 THUNDER FALLS
 RAILROAD
 SURVEY
 CRAWL

SODA STRAWS
 COLUMN
 FLASHLIGHT
 MUD
 SUMP
 LABYRINTHINE
 CONGRESS
 HERD
 SALAMANDER
 STALAGMITE
 ICE
 BEER
 SQUEEZE
 ROCK ARCH

RIDGEWALKING
 THE DRAIN
 POSSUM PIT
 SINKHOLE
 ROPE
 CLAY
 CLEATS
 TRICOLOR
 BONES
 BURGERS
 ROUBIDOUX
 RACCOON
 AIRSPACE

Vertical Practice in Capen Park

Jan 31 st 2022 was unusually warm (55F), so Kohl Mitchell (22) NSS#71471 and Dr. John (53) NSS#37877 went to the practice bluff at Capen Park in Columbia, MO to do some vertical and fine tune Kohl's frog system.

The cliff is used frequently by rock climbers, and allows several areas from 50 to 90 ft pitch. The two chose an area with good free hang and rigged two parallel ropes 4 ft apart, padded, and with redirects to keep the ropes close together. Both cavers are right-handed. Kohl was on the left, and John on the right, so he could watch Kohl's rope grip while on rappel.

Kohl's new components included a presewn cow's tail tether clipped to an upper handled ascender with a carabiner, and a second presewn foot loop extending down to his feet, also clipped to the handled ascender at the carabiner. Kohl's seat harness was a climber style with a single sewn attachment point integrated with the waistband, poking up. A stubai 90-degree twist carabiner around the waistband of his harness allowed a lower attachment point for his Croll S to rest against his chest, with an upper webbing harness holding the top of the Croll.

After rappelling with both figure 8 and 6 bar rappel rack, Kohl expressed a preference for the rack. No surprise. They completed the ascent and rappel a few times. When not in use, Kohl stowed his upper handled ascender on a carabiner from a gear loop on the left side of his harness.

The next planned maneuver was a changeover from climb to rappel, so Kohl started ascent on the left rope while John held the tail to assist start. Kohl got up about 20ft and stopped, and John ascended on the right rope up to his level. Kohl stood in his foot sling to unweight his chest Croll, and removed his Croll from the rope. As Kohl then gradually relaxed his leg, he transferred his weight to the cows tail connecting the upper handled ascender to his harness. Comfortable, Kohl reached for his rack to place it on the rope. At this point, John on the right rope could not see Kohl's left side.

"POP!" went the left gear loop. DOWN went Kohl. "YIKES!" went John.

Kohl experienced uncontrolled descent for 15ft, grasping the rope with his hands as he went, bumping off the curved rock face and coming to rest 5 ft below. He immediately reported he was unhurt, but did suffer rope burn on fingers. Instead of clipping his new cows tail tether to his harness attachment point, Kohl had left it on the gear loop, and John had failed to see this prior to beginning the last ascent. After a complete gear check, both cavers used their frogs to ascend back up the cliff and derig.

Discussion: If one chooses frog, a caving harness with a low D screw link gives the longest (most efficient) step. With the Croll directly in the middle of the D ring, attach the upper ascender tether to a locking biner off to the left. Leave it. Attach the rappel biner on the far right.

SELF RESCUE IN CRYSTAL CAVE, MAMMOTH CAVE NATIONAL PARK, KENTUCKY

Feb 19 to Feb 20, 2022

Our survey team of four met back up with the other team at the prearranged time, compared notes, shared expectations for future efforts, and spent a short time preparing to exit the cave. There were some free climbs and canyoning along the way and all of us were tired after nearly 10 hours of caving and survey work. Though eager to get out to my supper I was extra careful, knowing this is when accidents can happen. And then it happened.

I stepped down onto a nice 1ft wide ledge with an exposure that dropped down about 8ft below. Continuing forward I had a strong hold with my right hand, my left hand on the opposite wall, and as I went to step up with my left foot my right foot slipped entirely off the ledge, dropping all my weight onto the right handhold, I shouted "NO", lost the hold and fell backward head first into the room below, landing on my back and shoulder. I lay a moment assessing where it hurt and when I found I could sit up, noticed that my right arm wasn't moving, just laying there hanging along my side, aching. Soon Tom Brucker, the leader of this trip, was at my side and began assessing the whole situation. It was 8:20pm.

Between the two of us we eventually determined that my arm was dislocated but not fractured. When it was clear that the injury was significant he began organizing gear and assigning roles for the rescue plan. After collecting any gear, food, warm clothing and water we might need, he decided to send out Mike R, who'd been my survey team leader and knows the cave and whom Tom deemed capable of returning. He took most of the tired cavers with him as well as a note detailing what had happened, what the plan was and what Mike R needed to bring back with him. That left Mike C to help Tom with the logistics of movement, and Shawn, my friend, who served as 'Mr Calm' and my heat source. I would be able to walk so my pack was emptied and used to secure my arm to my side where it wanted to be, mostly hanging. I swallowed an extremely expired Percocet from my own first-aid kit and 400mg of ibuprofen from someone else's. The first time I stood up I was too shaky, but I think we got underway about 9:20pm. Of course the first thing I had to do was climb back up out of this gravely room.

Fortunately, there is little moisture in this cave so one-handed climbs are do-able. I knew there were bigger climbs ahead and couldn't imagine how I was going to do with one hand what was hard for me to do with two. I rested at the top of each climb or other difficult obstacle, and while I rested against a warm Shawn, Tom and Mike C would look ahead and get the next challenge figured out. Sometimes it was a climb that needed a mechanical assist or another good foothold, sometimes it was a canyon that needed loose rocks removed. There were a few huge, inconveniently perched stones shoved into the canyon's depths, with apologies.

I did not feel confident stemming the canyons with one hand and resorted to the "butt on one side, feet opposite" method. With no help from my right arm I was pretty terrified of any exposure, so when the canyon was wide or looked sketchy to me, Tom or Mike would mirror my

technique from opposite me and stay close in case I slipped. It was easier to do this sideways butt slide on the left wall(exiting) so I could use my good arm, but that was not always possible. On the right wall I could lift my butt yet not be able to slide to the right and that's when Tom would sit on my right and pull my hips sideways each time I lifted. Sometimes I just crawled along the edge if it was wide enough. When it was, I had to crawl on my left elbow, pushing with my feet and resting my right arm atop my hip. I couldn't do hands-and-knees as then gravity would swing my right arm forward...very painful. Needless to say, the canyons and climbs were very slow going. I remember hearing it took us over four hours to go about 350ft, but I'm guessing that may not include the vertical feet of the climbs, and a lot of time was necessarily spent preparing for the next obstacle.

A "fresh" team showed up with Mike R just about 5 hours after he had left. Most of these replacements had already caved all day on trips of their own...ouch. Then Mike R took Mike C and sleepy Shawn out, leaving Tom at my request, the poor man, and plenty of others to help. I had some hot cocoa, took a leak, and warmed up under a space blanket with someone. I know Kirsten was there with the cocoa but I really can't remember all the names. I was very much 'with it', but as in childbirth, couldn't be bothered with conversation. I found Kirsten annoying but said nothing, of course. We still had far to go.

We continued to progress and another group showed up bringing a flight nurse, of all things, and taking out some people and unneeded gear. I was really fatigued and compliant, but when CCRN Sarah, who did not know me, came at me in an authoritative manner about what she was going to do and the drugs she had ready to give me, I rallied to object. And when another person chimed in with 'the national park is in charge and you really don't have a lot of choice', I let them know who I was and that I knew for a fact that I had all the choice I needed and could refuse if I wanted to. I mean, I've taken such a stance with patients myself so I understood where she was coming from, but I also knew the decisions were mine. Sarah professionally adjusted her approach and we proceeded with mutual respect, it seemed. I put off the fentanyl she offered and agreed to whatever dose of ibuprofen and/or acetaminophen she thought appropriate. After 600mg and 1gm, respectively, the arm was properly splinted and swathed in its "position of comfort", which helped loads.

We carried on with my laborious trek and were soon clear of any dreaded exposures. At some point Bill Koerschner was there, showing me how to negotiate the cave and the tight crawl "with one arm tied behind yer back". A big confidence booster. (Bill mostly lost the use of his right arm in a caving accident years ago) I was glad to have his guidance as well as the attitude adjustment, giving me hope and gratitude. And I found that with my right arm properly swathed I could now creep along on my knees, which was still slow with just one arm. The long crawlway went faster though, maybe because I'm from Missouri, but the pain was increasing a lot and my right hand felt like a balloon.

When we reached the walking passage Sara gave me 12.5mcg IM of fentanyl. I met her dad there, director of emergency management and former truck medic, like me. His presence

was very reassuring, and he's the one who actually gave me the shot in the arm, though it didn't help much. We exited to a chilly but sunny Sunday morning at about 0930am and made the short climb up the mossy stone steps of this former show cave first developed by Floyd Collins. (Yeah, at some point Tom said that if I die in here they'll put my body on the spot where Floyd had lain; I was agreeable to that plan and had laughed.) There was an ambulance waiting, a park ranger and some other people.

I was helped to shed my coveralls and wool top so they wouldn't get cut at the hospital, and my cleats too of course. I kept my 'farmer Jane' wetsuit on for warmth as I was sure I wouldn't be warm enough. The ambulance ride was very bumpy and I'm sure a car would've been less painful, but I wanted drugs. The medic started an IV and gave me all the pain meds she could, but it helped little. I guess I maxed out on that because the hospital gave me none. Note to self: leave some room for pain meds at the hospital because the x-ray procedure was THE most painful part of all. Finally got a warm blanket after that though. Later, for the reduction, they gave me a pain med, Ativan, and an anti-emetic. The reduction didn't hurt as I watched the doctor just pull my arm straight out to the side, raising and lowering like a slo-mo handshake til it popped in. Then I slept 3 hours, Shawn came to get me, and well, "that's all she wrote".

Stark Caverns Survey Trip

- Date: 2/26/2022
- Location: Stark Caverns
- Goals: Survey trip, train cavers how to sketch.
- Participants: Bill Gee, Seth Colston, Becky, Kohl Mitchell, Dr. John, Shannon Zaloz, and two other cavers from KCAG.
- Time In: 9:40 AM
- Time Out: 5:00 PM
- Bio Count: Various insects. 1 dead frog, 1 dead spider. 1 Pickerel frog, 9 salamander larvae.
- Signs of Recent Vandalism: None
- Report Written By: Shannon Zaloz

Image: Bill Gee and his handy sketchbook. Photo by Dr. John.



Three members of Chouteau Grotto met 5 members of Kansas City Area Grotto on 2/26/2022 to help Bill Gee with his ongoing project of surveying Stark Caverns. We also had the goal of practicing more sketching so that we can gain skills for surveying caves in our local area. Stark Caverns has a nice, clean visitors center that everyone congregated in to sign waivers before entering the cave. Bill gave a quick tour of the public part of the cave before we gathered at the Wishing Well to make a plan for the day. There were 8 people on the trip, two of which were skilled sketchers. There were 3 people interested in learning how to sketch. The simplest way to divide ended up being to split into our respective grottos, with Bill leading the members from Chouteau Grotto and Seth leading the members from Kansas City Area Grotto. We would go as a single group to the last survey station placed down the Rugged Canyon by Shannon, Kohl, and Seth in November. From there, the plan was to split up into our two groups. Seth's team would begin surveying at this station (R20) while Bill's team would press deeper into the cave and would begin surveying backwards to meet Seth's team somewhere in the middle.

Bill led the way to the area where we would split up; he sure can move quickly through a tight cave! After leaving Seth's team at their station, we continued until we reached a room (Clay Flow Room in the 1960 map) with a few formations on the floor. Here, we started placing survey

stations, with a quick break for lunch. John had brought his own survey book, as well as extra supplies, so there could be three people sketching at a time. We would place stations, then stopped to practice our sketching. It was slow going and Seth's team placed several more stations than we did (12 versus 7). After the two groups joined back up, Seth and Bill compared sketches. In the area where we had joined, there was a lead to a lower passage. We abandoned our survey tools and bags for a quick scoop into the cave beyond before heading out. After approximately 300 feet of crawling, climbing, and slithering, we stopped at a water crawl through stream passage. Along the way we also saw an old carbide dump and an old turtle shell. Just prior to the water crawl was a "Lake Room" where the water had made a shallow pool. John saw 1 Pickerel frog here; Kohl and Shannon found 2 salamander larvae in the pool. Most of the group turned around at the water crawl, but Kohl, Shannon, and Seth pushed through it. They came to an area where the water forked; there were 2 salamander larvae here. Going to the right, there was an approximately 20 foot high (highest place we had been in for a while) canyon extending up into the ceiling. The water crawl beyond had stagnant water that held another 5 salamanders. Shannon started to go down this water crawl, but stopped out of concern for the salamanders. The trio turned around at this point to join the others, who were headed out of the cave. We all headed out of the cave, making decent time, but going slower than we did on our way in. A tour in the main passage got to see 8 mud monsters as we reluctantly left the warmth of the cave for the outside world.

Total foodage surveyed was 175.7 feet, with Bill's team recording 89.4 feet and Seth's team recording 86.3 feet.

2/27/22 Geronimo Trip Report

Seth Colston

Kohl Mitchell

Scott Wenzel

Start Time: 9:30am

Exit Time: 1:30pm

Fauna: ~10 Pickerel Frogs, 1 Tri-Colored Bat

Scott and Seth arrived at the Husong's house around 9am. Kohl was already there. Though, we saw a bucket with a piece of paper attached that had the name "SETH" on it. So, we had to stop and investigate. Bill Gee left a letter and disto in the bucket. Bill had to bail because his heater broke down in the middle of the night. A good call, because caving when already chilled is a bad idea.

Seth talked to Angela and informed her on the progress so far. Kohl, Scott and Seth entered the cave at 9:30am. They made it to A32 and started surveying from there. Kohl did lead and Seth sketched. We completed the A survey which is the main passage which ended in a couple of rooms that look to be connected to sink holes. Most of the formations are in this part of the cave. They are old formations that are not living.

After lunch, Seth continued sketching the A survey. Kohl and Scott went down a side passage off of A32 and got a good 150feet of data (it keeps going!!) which will need to be sketched at a later date. About an hour after lunch most of us were getting worn out. All three were surveying rugged passages at Stark Caverns the day before. Therefore, we started heading out at about 1pm. We all were on our way home around 2pm.

Elbow Cave Workday

- Date: 2/27/2022
- Location: Elbow Cave
- Goals: Clear debris around cave entrance, reinforce fence with additional t-posts.
- Participants: Martin Carmichael, Angie, Caleb Mundweiler, Shannon Zaloz.
- Time In: 9:00 AM
- Time Out: 11:00 AM
- Signs of Recent Vandalism: None
- Report Written By: Shannon Zaloz

Members of Chouteau Grotto met on 2/27/2022 for a workday at Elbow Cave. This cave receives a lot of runoff debris from the surrounding sinkhole that piles up against the cave gate. Last year we placed a fence around the cave to try to reduce the amount of debris that is washed into the entrance. The debris pushed against the fence, bending the metal. Our goal today was to remove the new debris and to reinforce the fence with additional t-posts. Martin brought several tools and a wheelbarrow to carry everything in. It is a 15 minute walk from the parking area to the cave. Upon arrival, Martin used his chainsaw to cut the larger logs. We then used pitchforks and shovels to move the debris into the wheelbarrow. The last time we brought the wheelbarrow to this cave, we made 17 trips to dump it. This time, we only made 7. Once the debris was cleared, we made some adjustments to the fence before attempting to add additional t-posts. We were able to place one t-post, but the area that needed the posts the most was over a streambed, which meant it was full of rocks. The ground was still slightly frozen and we did not have the tools to put a post in the streambed, so we decided to return another day with the necessary supplies. We



made the short walk back to our vehicles before walking to another cave in the area. We did not enter either cave, but just viewed the entrances. We left around noon.

Image: After photo of the entrance to Elbow Cave. Photo by Shannon Zaloz.

Barton Creek Cave

Date: February 21, 2022

Cave: Barton Creek Cave, Belize

Participants: “Mag” Matlock, Alice Ericksen, and Oscar (our guide) (an officially recognized guide is required to enter any cave in Belize).

Report: Barton Creek is one of several larger caves in the area south of Beumopan (the capital). The largest is known as ATM, the initials of its longer Mayan name. I did not attempt that cve sa it required being in the stream (wading, swimming) for a considerable distance at the entrance. Barton Creek Cave also has a stream entrance but is accessible by canoe for the first 500 to 1000 meters. The stream is blocked by large breakdown blocks that would require a more fully-equipped group to get past. The cave seems to be joint controlled for the length of the stream passage with extensive decorations with speleotherms hanging down from the 10 meter ceiling. Many of them were over the stream requiring careful maneuvering of the canoe to get around. Reminded me of Devil’s Icebox. We saw a few bats roosting and flying around but couldn’t get close enough to make an identification. Because of the climate they don’t have to hibernate.



Trip Report written by Mag Matlock.



Spring 2022 MSS/MCKC Meeting

March 4/6, 2022

Six Chouteau members (Martin Carmichael, Rita Worden, Dr. John, Shannon Zaloz, Kohl Mitchell, and Bryn Downes-Ward) traveled to Perryville to attend the spring 2022 Missouri Speleological Survey and Missouri Caves and Karst Conservancy meetings and associated cave trips. Rita, Martin and Kohl arrived Friday afternoon, while Shannon, John and Bryn arrived Saturday morning.

On Saturday morning, approximately fifty cavers met at the Catalyst Center in Perryville and divided into teams to tackle several different projects around the city of Perryville. Shannon and Bryn participated in an advanced biological survey in North Street Cave, John and Kohl were members of survey trips to Streiler City and Tom Moore caves, respectively, and Martin participated in a biological survey trip to Crevice Cave. Rita, still recovering from her injury, did not partake in any caving on Saturday. Associated trip reports can be found below.

After the caving on Saturday, Shannon returned home, but the other Chouteau cavers stayed in Perryville. Some cavers returned to the Catalyst Center to watch a documentary, while others headed directly for refreshments at Jackson Street BrewCo. Afterwards, the group returned to the Berome Moore campsite for more socializing and imbibing. That night, all Chouteau members except Martin slept at Berome Moore. The next morning, they attended the MSS and MCKC board meetings at the Catalyst Center before returning home.

Written by Kohl Mitchell.

MSS Trip Reports:

There are 4 trip reports from the MSS meeting from North Street Cave, Crevice Cave, Tom Moore Cave, and Streiler City Cave. The reports are below:

North Street Cave

- Date: 3/4//2022
- Location: North Street Cave
- Goals: Biodiversity Survey.
- Participants: Shannon Zaloz, Bryn Downes-Ward, Mick Sutton.
- Time In: Approximately 10:30 AM
- Time Out: 2:40 PM
- Bio Count: 3 long tailed salamanders, 35 cave salamanders, numerous beetles, flatworms, isopods, amphipods, snails, millipedes, and earthworms. 4 camel crickets, a few spiders and 2 springtails.
- Signs of Recent Vandalism: None, but there was a large amount of trash that has been washed into the cave.
- Report Written By: Shannon Zaloz

The MSS meeting was over the weekend of March 5-6th. 5 members of Chouteau Grotto attended. I arrived shortly after 8AM and got to meet several people whose names I have heard over the years, but have never met in person. Kenneth Grush showed us the Missouri Cave Database and pointed out certain pieces of information that he needs the most for the database, including cave GPS locations, entrance photos, directions to the cave, and cave descriptions. I'll try to be sure to record more of this information during our future trips (I'm not off to a great start, as I forgot to get an entrance photo and GPS location for the North Street Cave).

Several cavers showed up on Saturday for the cave trips. There was quite a crowd that had to be organized, but Scott House did a good job of it. I originally wanted to go on a survey trip, but Scott asked if I would be okay going on a biodiversity survey trip instead. Being an aspiring veterinarian with an interest in animals, this was no problem. Bryn and I were assigned to the "Advanced" Biodiversity Survey Trip into North Street Cave with Mick Sutton; "Advanced" because the entrance is rather snug and only small cavers can fit. The cave entrance is off of Rock Street in the yard a white house. There is a small hole in the ground that is easily overlooked, save for the yellow cage over the top. The entrance is quite close to the road; we parked on the street next to it. Shortly after we arrived two SEMO Grotto members showed up with traffic cones to place around the vehicle and cave entrance. The entrance to the cave starts out as a circular concrete drain with a pipe from underneath the nearby street draining into it. The concrete ends over a thin canyon with slick walls that you shimmy down to drop into a small room. Mick rigged a handline at the upper end of the rock to help us down.

The entrance drops into a small room just big enough for the three of us to crouch in. From this room there are 2 obvious routes to take and a third less obvious way to go. The two main passages have water in the bottom and go a short distance before choking out with formations and rock. A hole in the ceiling of the room drops you into a lower passage where the main stream is. We found that it was easiest to go feet first through this hole, which was a bit awkward given that it was at the top of the wall. You drop into a 7" high tunnel with passage going to your left and right. The stream flows towards the northeast.

Once in this passage, we paused to assess the fauna living in the creek. We found numerous isopods and amphipods here and collected samples for later identification. We moved upstream first, taking advantage of the clearer water. The creek bottom was full of loose stones, but as we moved southwest, the floor changed to a smooth bedrock. We found several amphipods, isopods, snails, salamanders, millipedes, a spider, flatworms, and a beetle before turning around. Going northeast, we found more salamanders, millipedes, beetles, earthworms, springtails, snails, rove beetles, and the everpresent flatworms, isopods, and amphipods.

We stopped when the water level began to creep up, as Mick knew the cave ends in a restricted airspace watercrawl. The air in the northeastern passage smelled strongly of sulfur. There were no bats in this cave. We did see a few bones, but they were too big to be from a bat. There was a large amount of trash in this cave. Broken glass, an old Nokia cell phone, pottery, plastic, a bullet, a banana split flavored yogurt, and much, much more. I was surprised by the number of salamanders we found, given the amount of trash in this cave. A cleanup-effort is much needed, but would be complicated by the size of the entrance. Getting trashbags full of broken glass out of the entrance we came through would be impossible without the bags being half empty. The majority of the time spent in the cave was spent crawling and there were a few tighter areas to squeeze through, which would also make a trash removal trip challenging. We passed underneath a second southwestern entrance that might be easier to push trash out of, but it is still a small entrance.

Trip Report #2

North Street Cave PRY588

March 5, 2022

Mick Sutton, Shannon Zaloz, Bryn Downes-ward

Agency: City of Perryville

Project supported: Perryville survey and inventory

Trip objectives: Biological survey

Time in: 10:00 am; Time out: 2:30 pm.

We first went to check the entrance, which was reputed to be tight, and concluded that it would filter out Sue, so we substituted a skinny crew of me (the fattest) plus two. The cave had no existing biological records so we were starting from scratch. I rigged the entrance chimney with a handline, which was a help on the exit. The stream at the bottom of the entrance drop was somewhat sparsely populated but the main stream had a healthy population of the usual Perry Co. suspects - a very high density of hydrobiid snails, lots of amphipods, presumably *Crangonyx forbesi* (although *Gammarus* has also shown up in these settings), lots of stygobitic flatworms, a scattering of *Caecidotea brevicauda* isopods and a few *Batrachus* phreatobitic amphipods. Apart from a high load of macro trash, the stream bed seemed pretty clean and consisted mostly of gravel/ cobble riffles alternating with stretches of bedrock.

We first checked upstream so as not to be working against our own sediment cloud, and conducted a timed count of stream fauna. We checked almost as far as the upstream limit and up the side passage to the secondary entrance. The most notable feature of the secondary entrance inlet was the large number of cave salamanders, especially congregating around the twilight zone of the entrance culvert.

Downstream was initially very similar, with the stream makeup indicating a pretty healthy ecosystem. As we progressed beyond the long hands and knees crawl and the crouchway and back to a lower ceiling, the stream bed became more loaded with fine sediment, leaving less suitable habitat, and we started to detect a distinct sulfurous odor, quite possibly from the sediment we were stirring up. What's more, on patches of bedrock substrate there were dense populations of epigean flatworms (either *Phagocata* or *Dugesia*) replacing the stygobites from further upstream. Water quality therefore seems notably worse in the downstream reaches. Since the input water seems in pretty good shape, I suspect that the fine sediments are binding to and trapping pollutants. We turned around at the point where getting seriously wet would be required – we weren't using wet-suits and in any case were content to head back to the realm of better air quality.

Terrestrial wildlife was also pretty typical for Perry Co. The high density of cave salamanders we'd seen in the secondary entrance passage was matched by large numbers downstream, with a total for the cave of 38. We also saw at least three small long-tailed salamanders. Carabid beetles were numerous - most of these were probably the common troglophile *Platynus tenuicollis*, and small aleocharine rove beetles were prolific on finely shredded flood debris. Millipedes were also common - some were the invasive *Oxidus gracilis*, but also many juveniles of what is probably the troglophile *Austrotyla specus*. Other terrestrial invertebrates included a few small camel crickets, springtails, a fair number of small spiders, none of which were the common *Meta ovalis*, and numerous earthworms in the downstream sediment banks and flood debris piles.

Back at the entrance climb, Shannon insisted on checking out the downstream continuation of the entrance stream through 100 ft. or so of somewhat contorted going to where continuing would be grim at best. The stream no doubt forms the first of the downstream infeeders to the main stream. This passage is not on the 1984 Yocum map.

A more detailed biological assessment will await analysis of collected specimens. There were plenty of indications of the cave flooding to the ceiling, and a trip there should not be attempted in threatening weather.

Thanks are owed to the able assistance and enthusiasm of this crew.

Trip Report Number 3

North Street Cave PRY588 Biological Survey

3/5/2022. Mick Sutton, Shannon Zaloz, Bryn Downes-Ward

The majority of the cave was examined, from the Rock Street entrance to the upstream entrance and downstream as far as the start of the low airspace section.

In the upper reaches, the small cave stream and its infeeders from the two entrance passages has a typical gravel/ sand/ rock low-gradient pool and riffle makeup, with some patches of exposed bedrock. The faunal assemblage is fairly typical for a Perry County stream cave, dominated numerically by tiny hydrobiid snails, a combination of *Fontigens* prob. *antroecetes* and *Amnicola stygia*. More conspicuous stream denizens are a troglomorphic amphipod, troglomorphic *Caecidotea brevicauda* isopods, and large numbers of stygobitic flatworms, presumably *Sphalloplana evaginata*. Specimens of the amphipod were *Gammarus troglophilus* rather than the more common *Crangonyx forbesi*, but the latter may also be present, since the species cannot be distinguished by casual observation. There were also low numbers of a larger aquatic snail – a small species of *Physella* - and of the phreatobitic amphipod *Batrachurus brachycaudus*.

Downstream, the nature of the stream gradually changes, with sections running on bedrock, segueing into a substrate of deep mud, unsuitable habitat for most of the upstream fauna. There was also a slight but definite sewage odor, which was not present upstream. While the *Sphalloplana* flatworms were absent, the bedrock sections had high densities of a small, black epigeal flatworm (*Phagocata* or *Girardia* sp.). Hence, the downstream reaches appear to suffer from poorer water quality than upstream. Speculatively, the fine clay sediment perhaps tends to retain nutrient overload and other pollutants that have washed out of the upstream section. As is common throughout Perry County caves, there were fairly large quantities of plastic and other trash distributed along the stream courses.

Amphibious life was well represented by large numbers of cave salamanders, with a total of 40 counted, with major concentrations around the secondary entrance and on the stream banks downstream. There were also several long-tailed salamanders. Terrestrial invertebrate life was

also rich and diverse, especially among fine flood debris on the stream banks. Fauna included the common troglomorphic ground beetle *Platynus tenuicollis*, large numbers of a small aleocharine rove beetle (*Atheta* or *Aleochara* sp.), large numbers of the troglomorphic millipede *Austrotyla specus* and of the invasive hot-house millipede *Oxidus gracilis*, several different springtails, including *Tomocerus* sp., small earthworms, and numerous small spiders occupying webs on the ceiling and walls. Most of the latter were juvenile spiderlings, the one spider sampled was a small male wolf spider (Lycosidae), a molt short of maturity and hence not identifiable to genus. Camel crickets were sparse, with only four recorded, three of them near the main entrance.

Mammalian life was indicated only by occasional raccoon prints and various limb bones and bone fragments, including a set of deer antlers. No bats were seen.

Crevice Cave

At the Spring 2022 MSS meeting in Perryville MO, five of us (Kirsten Alvey, Paul Hauck, Richard Young, Michael Walker and myself). We performed a bio count along our route. Paul first went caving in Crevice over 50 years ago, frankly I find that amazing.

We entered the cave via a horizontal gate in a field; Michael and Paul noted there was visible change below the gate - mud, clay and rocks had washed away.

It's a fairly dry cave and thus warm once you get to the climbs and squeezes. It's a very decorated cave; the parts we were in were fairly tall (30'-50') but not all that wide. The sides are coated with flowstone and draperies. I've never seen another cave with so many formations. Small waterfalls adorn the creek bed. It's also full of life, phoebe's nests, slugs, millipedes, salamanders, frogs and crickets were some of the wildlife we found.

- Martin Carmichael

-



Photo by Kirsten Alvey (Martin Carmichael)



Photo by Kirsten Alvey (Martin Carmichael)



Photo by Kirsten Alvey (Martin Carmichael and Richard Young at the gate).

Tom Moore Cave

- Date: 3/4/2022
- Location: Tom Moore Cave (Moore Cave System)
- Goals: Survey
- Participants: Krista Bartel, Shawn Williams, Kohl Mitchell, Nathan Burton
- Time In: Approximately 10:00 AM
- Time Out: Approximately 3:30-4:00 PM
- Bio Count: Approximately 50 salamander larvae, isopods & amphipods
- Signs of Recent Vandalism: None, but there was a moderate amount of trash that has been washed into the cave.
- Report Written By: Kohl Mitchell

The four cavers, along with the members of another survey group, entered the cave at about 10:00 AM and made their way through several hundred feet of well-decorated passage to the main stream passage, where they continued left at a T-junction towards their survey area. The objective of this trip was to connect two sections of previous survey. The goal was to connect station T91 to station K14; these two stations were separated by about 300 feet of trunk passage. The passage in question had been surveyed before, but needed to be redone. A secondary objective, if time allowed, was to begin surveying at the T-junction back towards the other survey crew, which was also re-surveying in the entrance passage.

The group passed K14 and continued deeper into the cave until they found T91, at which point they began their work. Krista took the role of sketcher, Shawn was lead, and Kohl and Nathan alternated between instruments and observing Krista's sketching progress. This was Nathan's first survey trip, and he was curious about the entire surveying process, while Kohl was learning how to sketch.

Due to the tall, wide passage, long shots were able to be taken, and four shots were all that was needed to connect the two previous surveys. The left side of the passage (from the perspective of going further into the cave) was a complex network of breakdown and side meanders, and this was mostly left for another time - two leads in need of further exploration were noted. Both were crawlways - one wide and low, another tight and wet. On the right side of the cave, a side passage that meanders away from the trunk and joins back in after approximately 100 feet was surveyed. This passage required hands-and-knees as well as belly crawling. Another side lead extended off the right side of this passage. Due to its small size (about 3'x1'), Kohl was sent to investigate. It extended about ten feet before making a 90 degree turn and transitioning into a water crawl. None of the group were prepared for full immersion, so this passage was also left for another time.

After connecting the two surveys, the group was feeling cold, tired, and hungry, and elected to return to the surface rather than work on the secondary goal. The group made their way back towards the cave entrance, meeting up with the other survey crew along the way (who were also in the process of wrapping up), and returned to Perryville. Approximately 350 feet of survey was done, with the ~100 feet of side passage being new survey and the remainder being resurvey.

Streiler City Cave

MSS meeting weekend March 5, 2022

For the MSS weekend meeting, over 50 cavers signed up for survey practice 9 am Saturday morning, divided into about 10 small groups destined for spot projects in local caves. I was added to Dan Lamping's group headed to the end of Streiler Cave.

This 3000ft cave is under the city of Perryville, and swallows runoff from several acres of land, has gated entrances, and an old map. The basic structure lies in Joachim Dolomite, consisting of phreatic passages which experienced uplift, then showing secondary vadose changes. Because of storm water runoff into the cave, it can fill to the ceiling, with characteristic mud and debris deposition on walls. Here's the "Miscellaneous Publication Number 44" by the legendary James Vandike:

<https://share.mo.gov/nr/mgs/MGSDData/Miscellaneous%20Publications/Movement%20of%20Shallow%20Groundwater%20in%20the%20Perryville%20Karst%20Area,%20Southeastern%20Missouri/MP-044.pdf>

We entered around 11am, immediately traversing to the back of the cave, on top of a high mud bank. We turned around and started surveying out, using a disto-x. Dan and I both sketched, and compared notes later. His horizontal artwork was definitely better, but he kept my vertical profile sketch to add to his notes. As we eventually progressed to the tie-in station, we could hear a waterfall above us, somewhere above an undercut ledge, supposedly virgin passage. (i.e. Great Lies of Caving #6)

With some human-stacking, I was able to ascend the ledge, then reconfigured my pack straps as a handline so we could all to climb up. We found the waterfall, good borehole, and a long stream crawl. After scooping a few hundred feet our resolve shrank like the crawl did, and we routed.

Exiting the cave mid-afternoon, we rendezvoused in the parking lot and planned for dinner.

Hominy Creek Cave

- Date: 3/13/2022
- Location: Hominy Creek Cave
- Goals: Survey trip, train cavers how to sketch.
- Participants: Kohl Mitchell, Shannon Zaloz, Krista Bartel, Jeff Fennell
- Time In: 11:50 AM
- Time Out: 6:20 PM
- Bio Count:
 - o 2 aquatic snails and 1 terrestrial snail.
 - o 1 terrestrial isopod
 - o Numerous aquatic isopods
 - o Numerous amphipods
 - o 4 monorail worms
 - o 1 brown beetle
 - o 3 salamander larvae
 - o Several flies, gnats, and mosquitos.
 - o 1 dark sided salamander.
 - o 7 live Pickerel frogs, at least 5 dead frogs.
 - o 2 spiders (*Maybe* orb weaver spiders)
 - 2 spider egg sacs
 - o 5 Herald moths.
 - o 1 dead white millipede.
 - o 6 Camel crickets.
 - o 14 Tricolored bats.
 - o 1 Eastern Phoebe nest.
 - o 1 dead turtle.
 - o 1 cluster of mud dauber nests.
 - o 1 terrestrial snail.
- Signs of Recent Vandalism: None
- Report Written By: Shannon Zaloz



Image: Krista and Kohl at the cave entrance during sunset.

Kohl Mitchell and Shannon Zaloz (myself) met Krista Bartel and Jeff for a day of survey training. Kohl and I have been pursuing opportunities to gain experience with survey and sketching. The four of us had a brief chat about

calibrating distos and looked over some of Krista's books and maps before heading to the cave, which was a 20 minute walk from where we parked.

Once at the entrance we discussed team roles; Jeff on point, Kohl sketching, myself recording data and drawing cross-sections, and Krista on foresights and troubleshooting Kohl and I. We continued this way for 15 stations, at which point Kohl and I traded roles.

The entrance to the cave sits in the bluffs overlooking a creek. There is a second collapsed entrance just downhill of the primary entrance we used. The cave stream flows out of the second entrance. There is some breakdown at the dripline of this cave. There was a dead turtle at the entrance of the cave that had been moved since the last time Krista had visited. There was 1 Eastern Phoebe nest on the left side of the cave entrance. There were several mosquitos, flies, and gnats in the cave and we saw 1 roly polly. Krista told us that this cave was known to be home to 3,500 bats before White Nose Syndrome hit. The last biocount in this cave showed 7 tricolor bats. Today, we found 14 tricolor bats just past the Twilight Zone. There were several bones in this cave that looked bat sized. We also found what I think was a mouse mandible and some rib bones that were too big to be from either a bat or mouse. Perhaps a rat?

There is a lot of crawling and some climbing over/under rock arches in this cave. We spent the vast majority of our time on our hands and knees, rather than standing. Towards the end of our surveyed area, we reached a room with a guano pile where we could stand up; this was one of the few opportunities we had to stand. There were no bats in this room. There were scratches on the walls and ceiling with dates and initials. There were a few other places in the cave where visitors had left marks on the walls, which included:

- 1984, AAI, ELSIES, Lloyds
- 1/8/207 LLE, ES, EIE, OC, DTR
- 12/3/90 with numerous illegible letters.

A stream flowed through the length of the cave where we were. Most of the time, we were able to keep pretty dry, with the occasional wet foot or kneepad. The cave stream has a low flow rate at the front of the cave, but picks up as you move back into the cave. The deepest area of water that we encountered was around 1 foot deep. Krista did tell us that some areas in the back of the cave require you to get your chest wet as you crawl, but we didn't get that far. There were numerous isopods and amphipods in the stream. We saw 1 salamander larvae in the stream and two larvae in a pool. We found two aquatic snails that looked like the bladder snails that can be found in aquariums. We encountered 7 live Pickerel frogs. There were 2 frogs towards the entrance of the cave that had been torn into two pieces. A little farther back was another dead frog. Near the room with the guano pile was a massacre scene; at least 8 frog legs and several other body parts, along with some "juicy" feces. There were at least 5 frogs in various stages of disembowelment in the cave. Something has been hunting the frogs in the cave and leaving some of its prey uneaten.

We left the cave around 6:20 PM as Kohl and I had long drives to make that night. Total distance surveyed was 449.7 feet. We had a blast and would love to repeat this experience. Now to just figure out Walls...

Carroll Cave Trip Report 19 March 2022

Participants:

- Bill Gee
- Seth Colston
- Martin Carmichael
- Kohl Mitchell
- Shannon Zaloz
- Emma Buckingham

Trip Report written by Bill Gee.



The goal of this trip was to relocate the bat roost detector from the Mountain Room to the Lunch Room guano piles. We also planned to replace the batteries and the memory card in the roost logger, and to upgrade its firmware. The final goal was to collect three of the stream level data loggers so they can be sent in for battery replacement.

I drove to the site Friday afternoon, arriving about 4:30pm. I had some sprinkles of rain when leaving Kansas City, but none after passing Warsaw. The ground at the silo was a bit wet. There had obviously been some rain recently. The frog pond was at normal level. The spring peepers were in full song. I opened the cave and hung the rope. The lights in the silo were on when I arrived, and also the rope light in the shaft.

Overnight it rained for several hours. It did not rain hard, but it was constant. My estimate is about 3/4 of an inch came down. Saturday morning the ground was fairly soggy.

In the morning Martin was the first to arrive at about 8:00am. He let me know that Shannon would be participating after all. She had been in and out due to both a fever and the possibility of a different caving trip. Several other people had signed up but had to drop out for various reasons. At one time there were ten people on the roster.

Everyone else arrived by 9:00am. We all geared up and were in the cave at 10:15am. I placed the cave light detector under a rock near the ladder, then we all left for the trip to the Mountain Room.

In order to upgrade firmware on the bat roost detector, we carried a laptop computer in a Pelican case as far as the Lunch Room. That task got passed around so everyone had a turn. We arrived at the Lunch room at 11:30. The waterfall in the Lunch Room was



flowing, though not very hard. We dropped off the laptop and proceeded through the Turnpike.

We came out of the Turnpike shortly after 12:00pm. It was lunchtime. We all had lunch. The remainder of the trip to the Mountain Room took a bit less than half an hour. It is fairly easy caving in that section of Carroll Passage. We arrived at the Mountain Room about 1:00pm.

Our tasks here were fairly simple. We packed up the bat roost detector

and the PVC pipe mounting platform. I carried the bat roost detector in my pack, and Martin carried the disassembled mount platform.

We got back to the Turnpike ladder about 2:00pm. Emma's light was just about out of batteries, so we paused to change them. It turns out that we did not have a tool to open the battery pack on her Apex light. Shannon pulled a spare light from her pack for Emma to use.

The return trip through the Turnpike seemed even muddier and more tiring than when we first came through. Shannon's loaner light turned out to be rather dim. That was fine for the confined space in the Turnpike, but needed to be handled when we got out.



We arrived at the Lunch Room about 2:30pm. Martin and I set about taking care of the batteries, memory card and firmware update on the bat roost detector while Shannon and Emma did another light switch. The batteries and memory card were quickly swapped and verified to be working. The firmware update was a complete fail because I did not have the right kind of USB cable. The detector requires a right-angle USB mini-B, and I brought only a right-angle USB micro-B. We hauled a heavy and clumsy Pelican case all that way for nothing.

Continuing on, we arrived back at the ladder at 4:10pm. Seth, Shannon, Emma and Kohl went over to Thunder Falls. Martin and I went on to the ladder. Martin geared up and climbed out while I collected the two stream level data loggers. A few minutes later the others joined us.

Seth climbed up first while I checked gear for Kohl, Shannon and Emma. The four of us climbed as a group. Seth was at the top to help everyone get out of the shaft safely. We were all out of the cave by 5:00pm.

It was a nice sunny day with a bit of a breeze blowing. Hou Zhong was there after having led a novice trip at nearby Perkins Cave. After changing, packing and talking for a while, most of the group went into Camdenton for Mexican dinner.

There were several salamanders on guano piles 11 and 12. Seth took a few photos of them. We also saw a few sculpins in Carroll River and some frogs at the Mountain Room. As we started to climb out, I noticed a larval salamander in the pool at the base of the ladder. We saw plenty of bat carcasses, most of which were fairly old. We saw no live bats.



Midco
CTR008

3/20/22
9:30am

Shannon
Zaloz, Kohl
Mitchell,
Keith
Thompson,
Shawn
Williams,
Kirsten

Image:
Alvey-Mudd,
Shannon
Zaloz, Kohl
Mitchell,
Shawn
Williams
(front), Keith Thompson (back), Landowner.



Midco Cave has a history of Salem Cave Crayfish, Southern Cavefish (*Typhlichthys subterraneus*) and Grotto salamanders. Water is present at shin to knee deep from the entrance on. We came prepared with wetsuits. Evidence of very efficient beavers were present outside on the downed trees and in the cave with beaver huned dam and debris piles, tracks and scat. We carefully made our way through the cave waters doing our best to keep the silt to a minimum. Although several smaller

Image: Gray bats above a pool of water in the back of the cave.





Above Image: A cluster of gray bats.

Below Image: Interestingly shaped rock near a pocket in the ceiling explored by Kohl Mitchel.

measure it (if possible) on our next trip when we return with fins and snorkels for better counting without disturbing any silt present. Three of the cavefish were found in the low air space passage and room behind and to the left the spring pool. These are the ones that were photographed and a small video taken. All of which are not fabulous quality, but sufficient for identification as a troglolytic cavefish. I have assigned identification off of the known species record as being seen and photographed on other visits.

Shawn indicated that this side passage had not been present

species of fish were seen in the cave stream throughout, the 4 Southern Cavefish we counted were in the deep back spring rise pool. There was one nearest the center of the pool in the same location as the clustering gray bats. I waded carefully and quietly into the waters to photograph the bat clusters for counting. The water became extremely deep quickly. I was able to find a few formation ledges to get me close enough for the photos I took. There was a point in the center where the bottom could not be touched at all and I was going swimming to reach the next set of ledges. So water is well over 5 ft deep beyond that it's unknown. We will attempt to





or visited 10 years ago on his previous visit. We pushed beyond this passage which is a 15 ft room with clay fill on the left half with approximately 3 ft of airspace and a clay bank which slopes underwater with no known bottom for the far right hand side and clear blue pool where the cavefish were seen.

Image: Cavers illuminate passage ahead.

Another small passage approximately 12 in high by 15 in wide was beyond this room and when pushed only popped into a 4 ft by 6 ft room with about 3 ft of airspace and no additional passage.

While exiting back out of the cave a ceiling pocket was seen above one of the 8-ft clay banks. Shawn Williams assisted Kohl Mitchell in entering a small upper chamber room not noted on the map. The room contained several nice flowstone, drapery and soda straw combinations, a small pool of cave pearls and skeletal and carcass remains of seven dead bats along with raccoon scat.



Clay bank passage along northern side of cave also had 3 old but modern era bear beds. (Not large enough for short-faced bear, see photo documentation).

We did not see any grotto salamanders, although numerous cave and a dark sided salamander were seen. We also did not see any crayfish either troglolytic or terrestrial. Discussions with the landowner revealed that crayfish from previous trips had been bait lured and trapped in order to count them. They were not prevalent in visible areas.

The cave is buried deep within private property, not visible from the road or any appreciable trail. In order to access, one must pass through two different fields and past another family members house. I feel quite certain it receives minimal if any human disturbance. No graffiti or vandalism of any kind were seen.

Included in the photo package for this cave are three photographs (see images of cavefish and crawdad on this page) taken by an unknown researcher on a previous trip to the cave and given to the landowner. He provided us with both digital and print copies for the database.



Biology:

- 2 tricolor bats
- 7 Phoebe's nest
- 17 water striders
- 13 Pickerel frogs
- 8 cave salamander
- 1 Dark sides salamander
- 87 Gray bats
- 43 salamander larvae
- 4 Southern Cavefish (Typhlichthys subterraneus)
- 26 other small surface fish
- Numerous minnows
- cave crickets
- fungus gnats
- Beaver tracks & den
- 3 old modern era bear beds
- raccoon tracks and scat
- Woodrat midden and scat
- Beaver dam, scat and tracks

Notes for return surveys: mask and snorkel for back pool, underwater camera, bait trap for crayfish. Bring Michael Sutton.

New Cave: Fish & Bev Bulldoze Cave

Shannon Zaloz and Kohl Mitchell, current exploration and documentation

1985-6 Mark Brooks & Beverly (Graves) Bonney, initial discovery & dig

Along the old and abandoned Main Road into the former town of Midco is an east facing cave measuring 49ft x 12ft at the dripline.

A 15 inch x 2ft entry slit is in the upper left hand (south) corner of the clay-filled cave entrance.

3ft high x 15ft wide passage with numerous columns, flowstone and soda straws. A tight crawl between two columns leads to a small passage approximately 25 feet long and slowly pinching down to 3-5 inches where a dig was begun 40 years ago (1985-6) by Mark Brooks and Beverly (Graves) Bonney . Numerous digging tools are still present at the site from the dig. The cave name is what the landowner calls it in honor of their efforts.

The cave is still blowing lots of air.

Shannon's Perspective: The entrance to this cave is at the top of a steep earthen embankment. At the top of the soil is a small gap of varying size beneath the rock ceiling of the cave. The largest gap was 15 inches x 2 feet at the left side of the entrance. Just past the entrance the cave opens up to a wide but short room. The ceiling height was on average 3 feet high. The periphery of the room had several columns, stalactites, and stalagmites. There was scat scattered around the entire cave. The left side of the cave has numerous columns and formations that act as a divider to a second room. To access the second room, you squeeze between two columns, or there are several paths through the formations that you can crawl through to access the second room. There is space to stand mostly erect on the left side of the second room. There was a small tunnel dug out of the floor on the center/left side of the back wall in the second room where the previous dig site was that rapidly progressed to a crawlspace. There was a ~3 inch rock ledge at the bottom of this crawlspace, approximately 6 feet in. This ledge was a barrier to accessing the crawlspace beyond, as it got quite tight. There was a 4x4 foot domed room down the crawlspace. The crawl continued on another approximately 15 feet, narrowing down to 3 inches in diameter. There was strong airflow through the hole.

Biology:

- 1 cave salamander (Eurycea lucifuga)
- Woodrat scat and midden
- Raccoon scat and tracks
- Armadillidae
- Mosquitoes
- Cave crickets



*Top Image: Kohl Mitchell disappearing between the formations of Fish and Bev Cave.
Bottom Image: Some of the old tools left behind in Fish and Bev Cave.*

After completing monitoring at nearby Midco Cave and documenting new to the database cave Fish and Bev Bulldoze Cave on the same property, we had a lovely lunch at Jolly Cone and Van Buren before setting out to locate three additional caves on the MTNF nearby.

Following the written directions sent we ended up on the wrong County Road. Pike Creek Road is incorrect and is not the Forest Road listed. However, our adventure down Pike Creek Road led to us seeing an opening above a spring which we have documented as a potential lead for a new cave.

After a little more consultation of the map and directions, and chatting with a farmer on Pike Creek Road, we did find the correct Forest Road and make our way to the caves following the rest of the written directions quite accurately.

4:00 PM.

Monitoring team: Shannon Zaloz, Kohl Mitchell, Keith Thompson, Shawn Williams, Kirsten Alvey-Mudd began looking for 3 caves in this area.

Buzzard CTR053

This cave is the lowest to the creek level and closest to the power line cut through of the three caves close to each other in the same Hillside. The cave entrance is 2.5 ft by 2.5 ft approximately and the cave itself is about 20 ft long.

Biology:

- 1 tricolor bat
- Fungus gnats
- Mosquitoes
- Woodrat midden



3 small shiny pieces of litter likely drug in by the woodrat in the cave.

Image: Kohl Mitchell stands by the entrance to Buzzard Cave.

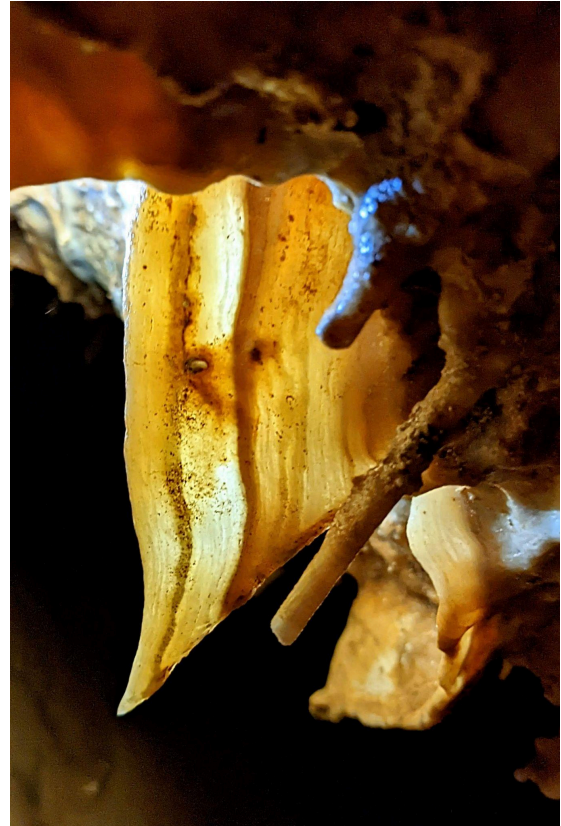
CTR054

Lower Camp Yarn

This is the second or middle cave in a row of three consecutive caves in three separate levels of rock outcrop sitting above the creek and to the north of the power line cut through just south of the Forest Road.

This hidden sink cave sits in a rock outcrop base in the second level of outcroppings. Entrance is 5ft x 1.7ft and is not visible from below and barely visible from above. You almost have to stand on top of it to see it. There are large blocks of breakdown approximately the size of hay bales in front of it.

After sliding in the entrance one is in a walking passage which eventually becomes crawling then belly crawling. Floors are clayfield and walls are heavily decorated with a spring trickling stream which meanders back and forth in a snake-like pattern throughout the cave. It's littered with a variety of sizes of rimstone dams, several of which have beautiful little waterfalls inside of them. Quite a few of the formations are translucent with bacon visible. The first formation in the entry room was running steadily with water today as well. We explored approximately 350 ft of passage before the cave dropped down to a constant belly crawl in water.



No signs of any modern human disturbance was seen. There are several names signed in various locations in the cave. The newest of which we could find was from 1978. No trash was present.

Image: Western Slimy Salamander.

Biology:

- 29 cave salamander
- 6 larvae salamander
- 2 Western slimy salamander
- 9 pickerel frogs
- 2 Caecidotea
- 1 lirceus
- Cat tracks in mud banks (photo documented)
- Raccoon scat and tracks

- Woodrat scat and midden
- Cave crickets
- Mosquitoes
- Fungus gnats
- 2 Cat beds
- 1 old modern era bear bed
- 3 meta ovalis spiders

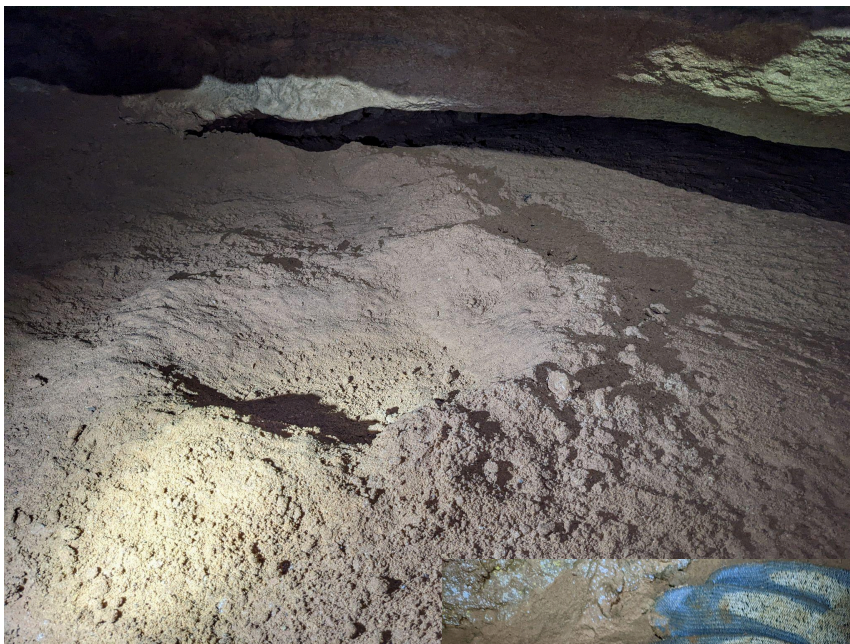


Image: Bobcat tracks and one of the two cat beds.





*Top Image:
Shannon and
Kohl illuminate
some of the
many rimstone
dams in this
cave.*



*Bottom Image:
Shannon kneels
by the cave
entrance.*

Camp Yarn CTR003

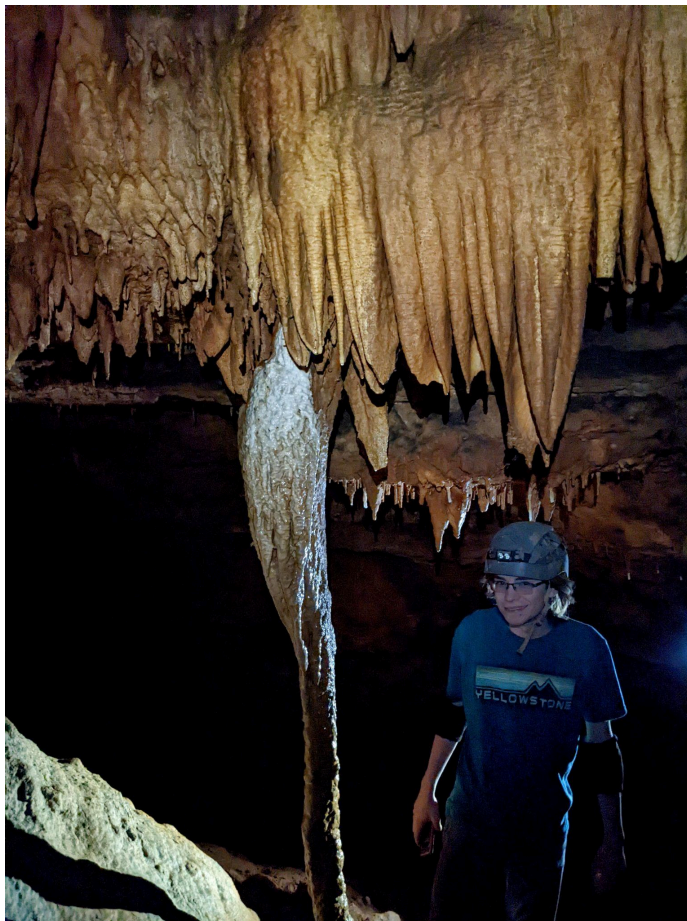
6pm.

This is the third cave in a row of three consecutive caves in three separate levels of rock outcrop sitting above the creek and to the north of the power line cut through just south of the Forest Road.

This hidden sink cave sits in a rock outcrop base in the fourth level of outcroppings just above the last rock on the third level of outcroppings.

Cave Entrance is nearly identical to Lower Camp Yarn and is not visible from below and barely visible from above. You almost have to stand on top of it to see it.

Image: Kohl Mitchell by one of the columns in this cave.



Sliding in the entrance one can stand up quite quickly in the first set of rooms. The majority of the passage for the first 350 ft of the cave is all walking or crouching with a random crawl over or through formation to return to walking or crouching passage again. It contains a large number of rimstone dams and pools, some of which are extensively deep and highly decorated with draperies, flowstone, and soda straws as their centerpiece.

After climbing through a series of draperies, passage drops down to primarily hands and knee crawl and begins to look as though it peters out through the main. If one looks to the right or south off the main passage there is just enough room to crawl between two columns and crawl just a short bit before returning to crouching and standing position in more passageway heavily decorated with flowstones, draperies, and columns. This passageway continues for approximately 150 ft before one is on top of a 20+ ft mud ledge requiring a hand line for descent and ascent. You can see massive up and down mud floor passage with 10+ft ceilings ahead for easily another 75ft.

Due to time constraints of two members of our party needing to leave and head home, we ended our monitoring here. We look forward to returning in the future and eventually pushing this cave to its end.

Image: Sean Williams admires the formations and rimstone pools.

No modern signs of human disturbance were present. Although there is a well-worn path over several formations, there was no spray paint or modern signatures found. No trash was



present.

Biology:

- 2 Tricolor bats
- 2 fishing spiders
- 4 western slimy salamander
- 1 cave salamander
- Caecidotea
- Cave crickets
- Fungus gnats
- Woodrat scat and midden
- Raccoon scat and tracks

Image: A sky cave salamander peeks out of a hole in the cave wall.



Image: The tantalizing view we turned around at. There is still quite a bit of cave left to be seen.