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Missouri Speleological Survey. President's Message May 2020 by Dan Lamping

So far, the only certainty we've had for the year 2020 is that the caves are still dark and the water is still flowing underground. Beyond that, who knows? Covid-19, Coronavirus, "the rona," whatever you want to call it, has turned things upside down. The effect it has had on us all varies from place to place and person to person. For some it's been devastating, even life ending. For others, it's been an annoyance. For most it's been somewhere in-between and different each day. By the time you're reading this,

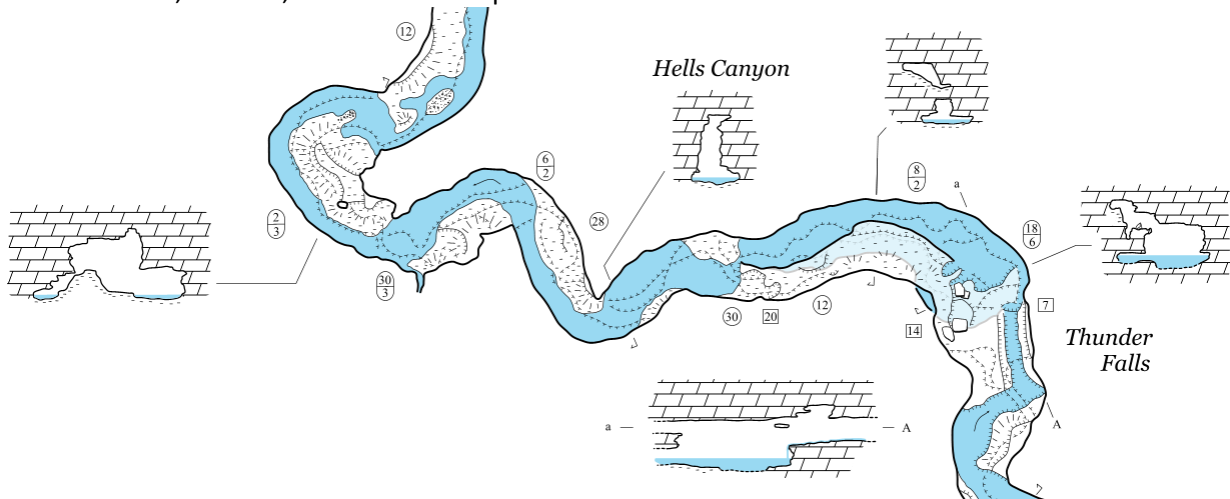
Missouri's stay at home orders will have expired, though similar orders will continue in some counties. So, what does this mean for us as cavers? Well, first our local grotto meetings, if they've been held, have likely been done remotely via digital platforms such as Zoom or Google Meet. The National Speleological Society (NSS) has recommended against physical meetings for the time being and urged its members to stand down from caving for the time being. The Spring 2020 MVOR has been canceled and so has the NSS Convention planned for later this summer. It should also be no surprise that the spring MSS meeting, which was planned to be held at Current River State Park at the end of May is also canceled, along with the MCKC meeting. Hopefully we'll return to some state of normalcy by the end of summer so we can potentially have a fall MSS meeting.

So, what of going caving? There are two concerns as of the present. One, the obvious, is the concern that being in close quarters with others could spread the disease from person to person. Additionally, there is concern that humans carrying Covid-19 could potentially spread it to bats, which are already suffering from WNS. Again, the NSS has asked its members to refrain from caving for a few months. The Missouri Department of Conservation has gone so far as to prohibit any entry into MDC caves for the time being, until there is greater insight on the potential for human to bat spread of Covid-19. This includes preapproved trips on our 2020 MDC permits. If and when MDC access changes I will send a message out to permit holders. We're awaiting word from USFS and NPS regarding access to caves on the Mark Twain National Forest and Ozark National Scenic Riverways for the time being. We know that large, expedition style trips using communal housing aren't likely to happen in the near future, but we're hopeful to be able to plan smaller mapping and monitoring trips to caves which aren't significant bat sites. Additionally, there are the thousands of privately owned caves in the state of Missouri, which depending on the course of outbreak in coming weeks and months, could provide potential options for caving. Unfortunately, uncertainty is the only certainty we face right now, so please, exercise caution, discretion and patience with any attempts at field work or otherwise getting underground.

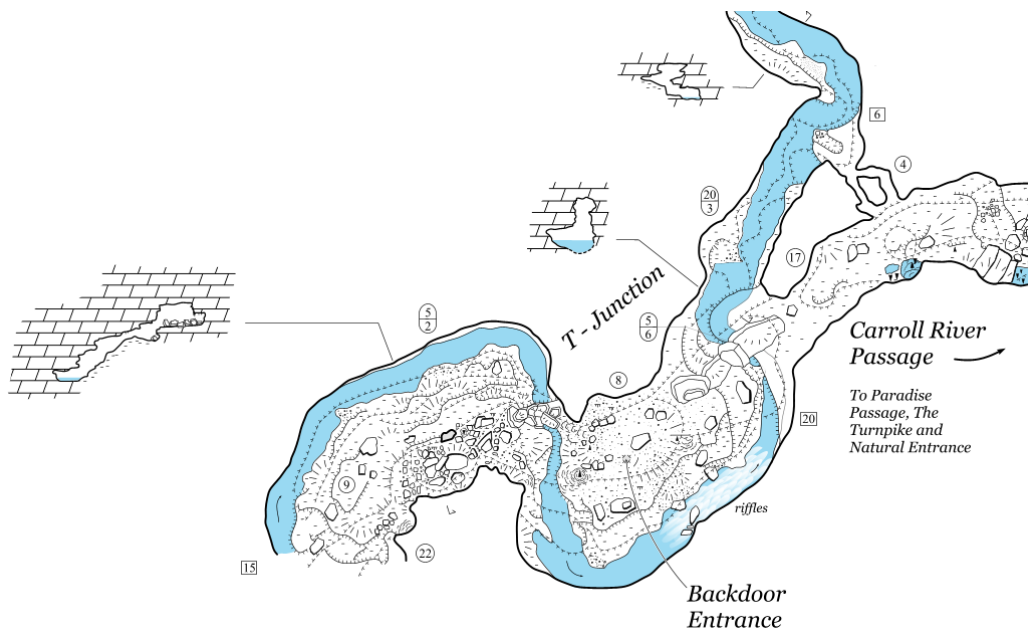
While most of us haven't been underground lately, there has likely been an increase in productivity when it comes to cartography, cave files work, and other cave related ventures which can be done from behind a screen or while social distancing. Personally, I've been able to crank out a couple smaller maps, and as well make some solid progress on larger cave maps I'm working on. Additionally, for the past few weeks, the NSS Survey and Cartography Section (SACS) has held remote sessions over the Zoom platform to teach cavers how to use various GIS programs and other cave related software. Check them out at <https://www.youtube.com/channel/UCUPUulnEw6srhh8TDLzF6jA>, where new updates will be added each week they're held. To participate in them, in real time, join the SACS Facebook Group where links to the Zoom

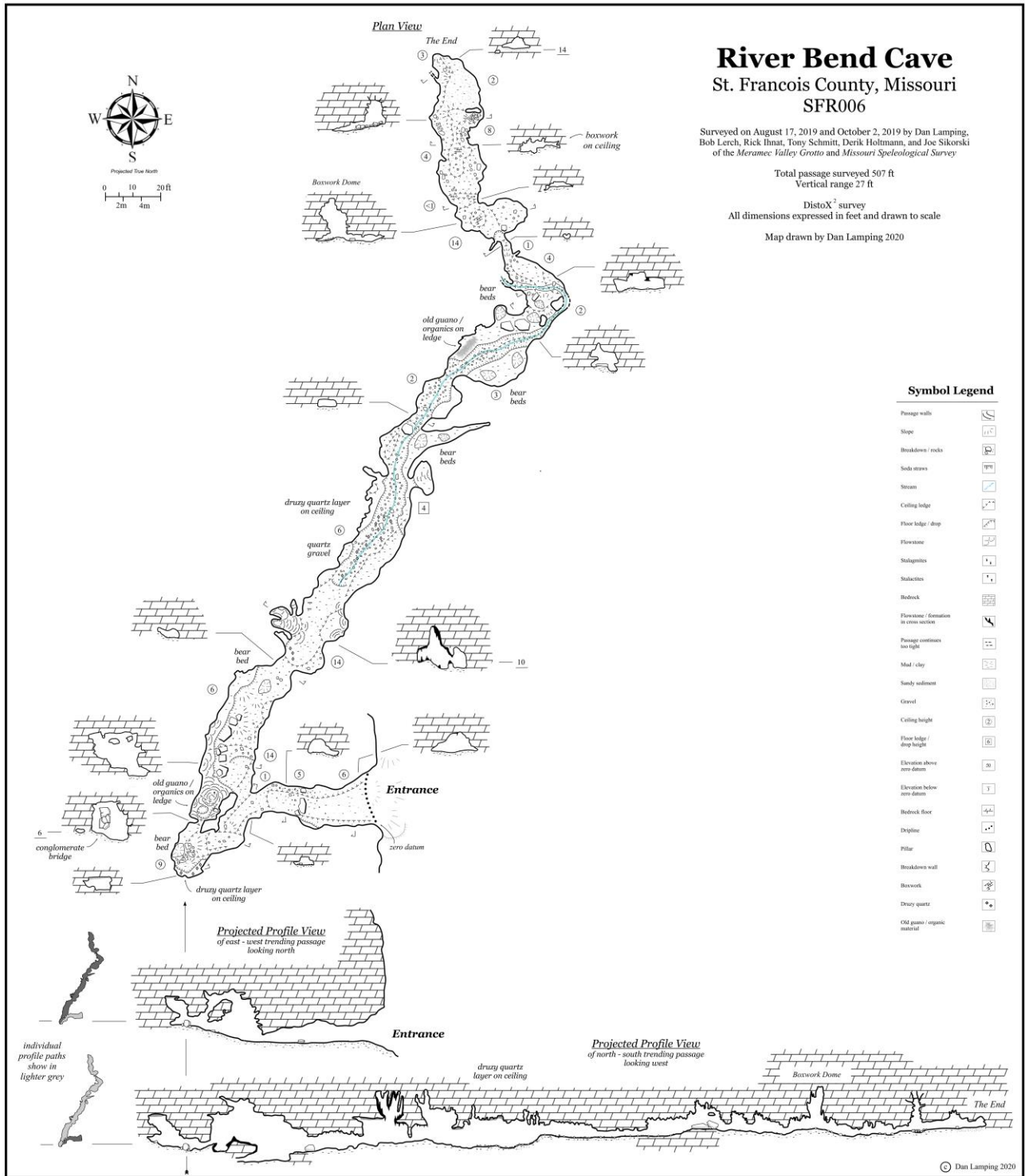
meeting have been posted. Or, email me and I can let you know as they're scheduled. Hopefully they'll continue. Another excellent behind the screen experience is to check out the Introduction to Project Caving video that Derek Bristol created for the NSS. It can be viewed here <https://www.youtube.com/watch?v=3fWEfVwzvXc&t=583s> and no doubt speaks to many of the things so many of us love about caving.

Unfortunately, there is no end in sight. Let us all hope for the best, stay healthy and active, be productive and make it to the end of those crawls when the time is right. I hope to see you all sooner, rather than later. But, for now, here are few maps to take a look at.



A map cut showing Carroll Cave's Thunder Falls (top) and Carroll Cave's T-Junction and the Carroll Cave Conservancy's Backdoor Entrance (below). The discovery of Thunder River, made via the T-Junction is no doubt one of the greatest discoveries in Missouri caving history.





River Bend Cave

St. Francois County, Missouri

SFR006

Surveyed on August 17, 2019 and October 2, 2019 by Dan Lamping, Bob Lerch, Rick Ihnat, Tony Schmitt, Derik Holtmann, and Joe Sikorski of the Meramec Valley Grotto and Missouri Speleological Survey

Total passage surveyed 507 ft

Vertical range 27 ft

DistoX² survey

All dimensions expressed in feet and drawn to scale

Map drawn by Dan Lamping 2020

Symbol Legend

- Passage walls
- Slope
- Breakdown / rock
- Silt matrix
- Stream
- Ceiling ledge
- Floor ledge / drop
- Flowstone
- Stalagmites
- Stalactites
- Bedrock
- Flowstone / formation in cross section
- Passage continues too tight
- Mud / clay
- Sandy sediment
- Gravel
- Ceiling height
- Floor ledge / drop height
- Elevation above zero datum
- Elevation below zero datum
- Bedrock floor
- Dipline
- Pillar
- Breakdown wall
- Bedrock
- Druzy quartz
- Old guano / organic material

River Bend Cave was first described by Lang Brod in the 1960s, though the cave was never mapped. It is located on a private property on the upper Big River in St. Francois County and has some really interesting geologic formations in it.

Identifying Cave Life: Part 6 – Flies

By Mick Sutton

This is part of an occasional series to help those doing cave monitoring, or cavers who are just interested in knowing what they are looking at to be aware of what they can and cannot realistically identify in the field within Missouri caves.

Of all the orders of animals that show up underground, the one you are almost certain to come across in any cave is the Diptera, or true flies. The vast majority of these are not conspicuously cave adapted, though we'll look at a couple of exceptions later. Most flies are not doing anything obvious in the cave, just hanging out and presumably sheltering before going back outside to feed, mate, etc., but they are an important component of the cave's ecosystem nevertheless.

Not surprisingly, flies are most prolific in the entrance and twilight zones, where you will often see dense swarms of fungus gnats or mosquitos dancing around just under a ceiling or a ledge. But which? Superficially the swarms look similar, and fungus gnat swarms are often just assumed to be mosquitos. To be sure, you need to look more closely at one that's settled – a small hand lens and a stealthy approach are useful for this unless you have better visual acuity than I do! Note the much more prominent eyes and the thicker antennae and the shorter proboscis of the mycet compared to the



Left: Culex mosquito, right mycet fungus gnat (photo by Matt Bumgardner).

mosquito. The deeper into the cave, the more likely the swarm is to be of fungus gnats – mosquitos less commonly venture beyond twilight. Family Mycetophilidae (mycets) is as far as you can get with fungus gnats. There are two species that dominate and several more that turn up occasionally but a microscope is needed to distinguish them. For mosquitos, you should be able to distinguish larger *Anopheles* from smaller, mainly *Culex* species. As well as being larger, *Anopheles* also have much longer proboscises.

Incidentally, you don't need to bring out the deet - when sheltering in a cave mosquitos are not in feeding mode. The only time I've been bitten by a mosquito in a cave is when one followed me in from outside. Mosquitos are said to merely represent the mix of whatever species are in the local environment, but I'm not so sure. One species, the small *Culex erraticus* dominates. Only seven species in total have been recorded, and many of those are very sporadic. It would be interesting to sample the local culicid fauna to get a numeric assessment as to whether *C. erraticus* and a few others favor caves more than other species. Although mosquitos are generally pretty drab, an exception that occasionally shows up is *Uranotaenia sappharina*, which has patches of bright fluorescent blue scales on the thorax, visible with a hand lens.



Crane Fly (Tipulidae)

Another group familiar to most and common in near-entrance settings are the crane flies (Tipulidae), aka daddy long-legs. Three species are quite common, others are more sporadic. They vary a good deal in size, but even the smallest species are noticeably larger than mosquitos or fungus gnats.

A lot of cavers are familiar with heleomyzid flies, rather large flies somewhat resembling house flies, which are commonly seen hanging out on cave walls and ceilings, often quite far into the dark zone. There are four species, two larger and two smaller, and

although the larger *Scoliocentra defessa* is by far the most common, distinguishing the members of each pair requires microscope work. These flies contribute to the ecosystem by being a major part of the diet of cave and grotto salamanders.

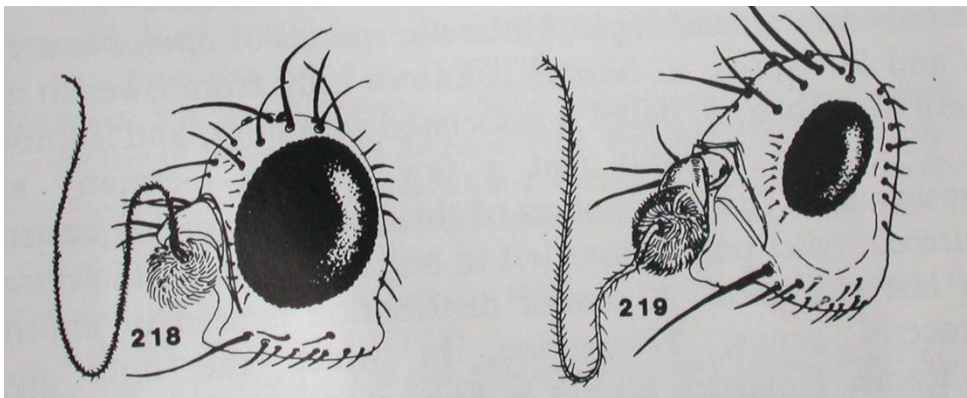


Scoliocentra sp. (Heleomyzidae)

Another much smaller fly, one you can reliably identify in the cave, is the cave dung fly *Spelobia tenebrarum*.

The fly is widely distributed in caves throughout eastern North America. Missouri populations seem to be even smaller than most, around 2-3 mm. Look for this tiny black fly in its preferred milieu – bat guano, raccoon dung, or a juicy fresh corpse. The fly is the first creature to show up at such fresh, high energy food sources. So how do you identify such a tiny creature? Easy, just poke at the fly with a stick or the tip of your finger - if it takes off flying it's NOT *Spelobia*. If all it can muster is a vigorous hop, it's *Spelobia*. Although the fly has perfectly formed wings,

its flight muscles are degenerate and it cannot maintain flight. And although it has functioning eyes, they are a good deal smaller than those of its surface cousins. If you look below the surface of the guano pile you may see the fly's larva, a slender white maggot with a characteristic black head capsule.



Not a pretty face: note the smaller eye of *S. tenebrarum* (right) compared with a Surface relative.

There is some question as to whether the fly is a troglobiont, limited to caves, or a troglophile. The fly has on rare occasions been collected from surface environments, and although generally a dark zone animal, it is not uncommon to find the fly within the entrance zone. This and its wide distribution – unusual for a troglobiont – suggests that the fly is able to disperse overland between underground sites. There are at least two other somewhat cave adapted small flies that are also common on rich food sources, the humpbacked fly *Megaselia*

cavernicolum and a sciarid gnat *Bradysia* sp., but these are harder to distinguish in the cave. Both of them readily take flight.



Webworm - photo by David Ashley

Finally, another one that anyone can identify, although it doesn't look like a fly! The well-known webworm *Macrocera nobilis* is the larva of a mycet fungus gnat, a cousin of the fungus gnat swarms mentioned earlier but a different species. The adult has shown up in cave collections, but only as single individuals, and only rarely. The larva is a distant relative of the famous New Zealand glow-worms, and although bioluminescence is fairly common in larvae of this family, our Missouri example is rather less conspicuous. Looks for it under ledges near

rich food sources where it builds its characteristic horizontal silk track with sticky silk threads hanging down to entrap its food source - small gnats, springtails etc



Pic, 2013 – taken by Rick Hines

REMEMBERING Pic Walenta. “I’d just love to shoot out that light.” Pic said as we sat on my porch in the green glow of the streetlight. She held her hand up and pretended to shoot it. “It would take them forever to replace it, right? Look at the stars, we don’t need that light; this is paradise, baby!”

It was a conversation we had each night that we sat on my porch enjoying a glass of wine. Her laugh, that followed, was contagious. One of the many Pic-isms that I miss dearly. Pic never met a stranger. Even if we had not seen each other for a while, we could pick up the conversation like it was yesterday. We both went through some tough times for a few years, and we were happy that we found organized caving again after a long hiatus. We had met in the caving community a decade ago, and were able to come back into the open arms of our grotto as if we never left. As we looked

at the moon rising over the horizon with the stars dotting the sky, the green pole light obstructing a bit of the view, we both knew we were going to be alright. Life was good, because despite the haze, we could still see the beauty of the world.



Pic, Jack & ? of KCAG after caving trip-summer 2017. Photo by Austen.

After the death of her son, Duffey, Pic grieved deeply. It was a struggle, but she fought her way out of the darkness that grief creates. She knew the best way to overcome great sadness was to find a purpose in life. She doted on her granddaughter, Pean, a little girl who like Pic, was so full of life it was contagious. When Pic returned to the caving world, she wanted to immerse herself into the grotto. She became our President and made a goal to bring life back to KCAG. She would seek out each person, and find a way to give them purpose, just like she had done for herself. She was a true leader in the fact that she knew how to make people feel important, useful, and appreciated.



Pic, Kirsten, Brandon & Nicole after bio-monitoring trip, Kettle Cave, McDonald County.

Pic loved everything outdoors, it was only natural she loved caving. She considered all of us cavers her family. Many times she told me “I don’t know where I would be without my grotto family and my Pean”. She loved us as if indeed we were family. Pic had the ability to form project groups that would have never come together without her. Removing graffiti from a cave in Stone County, pulling trash out of the only known cave in



Pic on stage talking about caver family at the KCAG Summer 2018 fundraiser she organized.

Clay County, organizing a concert/fundraiser for KCAG and helping plan an MVOR for Fall 2020: Pic knew how to get people involved and make sure they had fun. She helped survey caves, build gates, ridge walk, and cook delicious food for all us cavers at camp. She was volunteering as camp chef at Mammoth Cave CRF expeditions, leading restoration efforts on numerous caves in SW Missouri and building relationships between caving organizations and other outdoor organizations. Groups like the Wander Woman, an organization that



Pic & Shawn, best hiking friends

empowers & connects women with outdoor activities.

Pic loved life so much, and Pic was truly loved. We have cried and laughed sharing all of our stories, keeping those Pic-isms fresh in our mind. She took a firearms training class with Wander Woman over the summer and was ready to shoot out that green light. When I sit on my porch at night I can still hear her joking about shooting out that light. I miss her dearly but I realize Pic will never be gone. She left such a mark on each of us, that ordinary things now have that special Pic meaning. Immortality is reached



The rappelling workshop Pic organized with Wander Woman & KCAG, 2019 – photo from Wander Woman

by those that leave a mark on the world that can't be erased. No matter where they are in body, they live on forever in our souls and the relationships that we build. Each of us who knew her, carry Pic in our heart. We will carry her into the future with every cave we visit, each glass of "Caramel Nut" we drink, and every rainstorm that pours on us during cave restoration.

"Is there any more Caramel Nut?" She would ask with a wink of her eye, as we stepped back into my living room-another Pic-ism. It was Salted Caramel Bourbon, homemade by Kirsten, no nut anywhere near the drink, but that was the nickname she had given it and it stuck. We all

had nicknames. Pean, Bean, Honey, Girly, Bunny, and Sweety- just a few of the many names she graced upon us. I don't know how we move on without her spirit of love. I'm sure we can all still hear her laugh as she danced around at MVOR near the fire. She knew how to reach each and every one of us on a personal level. I'm sure for every person she touched there is another "green pole light" story.

Virginia "Pic" Walenta was born in 1956 in Iowa City, IA. She passed away on January 22, 2020 from complications of a sudden cerebral aneurysm while she was on vacation with her caving family in the Dominican Republic. She was preceded in death by her parents, ex-husband Mike Welch, and two sons, Benjamin & Duffey Welch. She is survived by her granddaughter, Olivia Welch and her siblings Patti, Theresa, Robin & Mike. She was the President of the Kansas City Area Grotto and was a driving force in cave restoration, youth caving trips, MVOR Fall 2020, and bringing new organizations to the organized caving world. A celebration of Pic's life, which was postponed due to the pandemic, will be planned at a later date. –Nicole Ridlen



Pic shaking her egg, a musical shaker, at the KCAG concert fundraiser, Summer 2018 – Photo by Rick Hines.

Missouri Speleological Survey Files Report for May, 2020. If you have **new information** on any Missouri caves, my email address is slagrush@gmail.com . We need your help to improve the database and make it more complete. I can and do work with Facebook entries, but for information or photos to be incorporated I need to be “private messaged” with the cave name and county. **The database shows that we have just broken through 7500 caves.** **Kirsten Alvey-Mudd sent:** -7 new cave’s locations, photos, faunal records, directions and brief descriptions in McDonald County: Clemens Crawl, Jones Stanton Spring, Just A Dome, Little Jar and One Pip Wonder Caves. In addition to these caves, they also visited Buzzard Trees, Clemens Bluff Cave (finding/adding a new entrance) and No Lions Caves. About 30 new faunal records were added. -8 new faunal records and over 40 photos for Spargazer Cave in Stone County. -3 more caves in McDonald County: Highway, DOTY and Blunderbuss Caves were bio-inventoried and netted almost 20 faunal records. Entrance photos were also sent and then added to the database and archives. -4 new caves in McDonald County: Bison Corner Tunnel, Hamilton, Disappointing Spring and Digging Chert Caves. Seven new faunal records and entrance photos came with these caves. 2 new caves in Stone County: Waterfield and a New (pending) Cave. Along with these new cave reports, 18 faunal records and entrance photos also came in. -In addition to all the new caves she also reported on Flat Hollow Cave in McDonald and Barrel Spring Cave in Stone County. This last cave only opened up in the past 12 months. Faunals and photos also were sent. **Jon Beard sent:** -9 fauna records from Clayton Cave, one of the flood maze caves of Taney County. -A new map from 2018! Redbud Crawlway Cave (CL=16.3) of Christian County. Somehow this map got lost in the process and was only just entered. **Mark Brooks sent:** -4 photos to document the presence of Grotto Salamanders in Onyx Cave of Howell County. **Matt Bumgardner sent:** -Several photos for the caves that he reported in the last Liaison, these are 3 new caves in Barry County: Tilted Rock, Notonicks and Pancake No.2 Caves. Finding these caves came with an assist from LIDAR imagery. **Treavor Bussard sent:** -18 faunal records for Sequiota and Walk-Way-All-The-Way Caves in one of the Springfield City Parks, an SPG project. “Walkway” only had 2 records. **Martin Carmichael sent:** -5 cave reports for caves in Boone, Camden, Miller and Moniteau Counties, all were entered into the database and the archives. Reports included several good entrance shots for the database too. He followed this up with GPS locations and additional photos for the archives. -An informative cave report on Skaggs Cave in Pulaski County. Also captured 4 fauna records from the report. **Jim Cooley sent:** -A change of ownership notification for a cave in Camden County. -A report on a cave survey trip in Ozark County, 137 ft of survey were captured. -11 faunal records from Spring Creek West Cave in Ozark County. -Two emails related to Roanoke Cave in Jackson County, in one of Kansas City’s parks. The entrance was walled up at one time, but had recently been rediscovered and broken into. **Michael Fuller sent:** -A report on some features in St. Charles County. After a little consultation, these caves are the “somewhat lost” features (poor locations in land grant tracts or truncated sections) known as Jacobs Shelter #1 and #2, last heard from in 1976 when they were surveyed. **Ken Grush sent:** -About 330 transcriptions of the original cave reports for Oregon County from the St. Louis Cave Files; saved now in archives. These have also been transferred over to the database where they can be more easily searched and researched. As I continue to work through the last remaining half dozen counties from the St. Louis cave files, there will be more additions to the archives and database from these historic cave reports. -I’m also continuing the transfer of my “personal” archives of photos, transcriptions of Bretz and MoSpeleo over to the MSS archives. Most of these transcripts have already been included in the database, but not the archives. I have transferred roughly 900 compilations of MoSpeleo articles and/or Bretz. Before transferring, I also converted these 900 PowerPoints into pdf documents for better preservation. There are about 20 more counties to transfer/convert the MoSpeleo/Bretz files. -Currently, there are also 8 file drawers in Winona that came from the Springfield cave files. While I work in Winona on CRF projects, I’m cross-checking the Springfield files against the St. Louis files. With only one drawer checked, I’ve scanned almost 200 pages of original cave reports that weren’t in the St. Louis files from 7 different counties. I’ve only managed to transcribe about 80 of these original reports so far. **Paul Hauck sent:** -A report with locations and photos on 2 known caves (Hoff Cave and Double Barrel Pit) and 4 new leads in Perry County. **Scott House sent:** -Two new maps of Moonshiners Shelter in Douglas County and Three Layer Cave in Shannon County. -Another group of 2 maps from Pinnacle Cave and Pinnacle Shelter in Shannon County. -An update of the Zoo-Heuzel map in Taney County. The 2 caves are not connected, but are seemingly related. Heuzel is very much a single long passage with 2 main branches upstream, Zoo however is a maze passage, lots of short interconnected passage ways in a relatively small plan area. -5 redrawn maps of

Cane Bluff Cave #2 and #3, Cane Bluff Shelter, Little Cane Bluff Tunnel and Midden Cave, all of Taney County. **Dan Lamping sent:** -A lineplot of Tumbling Creek (Ozark Underground Lab, OUL) Cave in Taney County. This is project for cavers all over the state; many hands still make for a good project. -2 monitoring forms exported from the database which were then imported into the “operative” database for Dual Falls and Wet Shelter Caves. -A new map for Spring Forest Cave in Jefferson County. Cave was a new one found through a contact at MoSpeleo.org . -A collection 90 photos and 4 videos from an archaeologically significant cave in south central Missouri. I also got the story to go with it from the MVG Caver. **Joe Light sent:** -15 photos of Cliff Cave in St. Louis County. -An update on the drilling going on in St. Louis to find the old English Cave, which was a well-known and visited cave from the mid-1800s to the early 1900s. Access has been lost for some time now. -Photos of the peccary skull found in Cherokee Cave. Later he sent a collection of 119 different reports on Cherokee Cave, newspaper clippings, some photos and memorabilia from the cave. -Exciting report with photos of the drilling for a lost cave in St. Louis. A link to a St. Louis Construction site that also talked about the discovery of this long lost cave. -2 zip files of all the data that he has collected over the years for Cherokee Cave in St. Louis City. Almost 500 files and 2 gb of data. **Alex Litsch sent:** -Reports on 4 new caves in Jefferson County: Chockstone Cave, Railroad Shelter, Scat Cave and Tube Cave. -A new cave report for Ste. Genevieve County: Stuppy Cave. The lead came from our MSS website with a visitor enquiry. -An entrance photo for Indian Cave in Jefferson County; a cave you can only reach by rope. However, this one came from drone footage, providing a better perspective. **Chad McCain sent:** -Via Scott House a composite map of Berome Moore in Perry County, the state’s second longest cave. **Dennis Novicky sent:** -A location for a new cave in Shannon County, Three Layer Cave. The cave was also surveyed, see House submitted map. -A report of 20 cave salamanders in a new cave from Webster County: Angel Falls Cave. **Nicole Ridlen sent:** -Locations and photos on several caves in McDonald County. Among them are some of the new caves above under Kirsten Alvey-Mudd. Ridlen provided the information to also list Bryozoa Bluff Cave, but Alvey-Mudd had not also had the chance to visit it. **Isaac Smith sent:** -A correction to a faunal record in Fogelbach Cave; a grotto salamander was reported in the database while a search indicated that it should have been a cave salamander. -55 faunal records and 4 use monitoring forms for Bass, OT Spring, 23-Degree and Summit Caves in Crawford County. Monitoring and fauna survey done the Mark Twain for CRF. **Mick Sutton sent:** -55 “new” faunal records. The bulk were historical references taken from biological studies written in journals, but with a handful from joint work with MDC. **Robert Swain sent:** -An Onondaga Cave fauna report that covered the year 2012-2020, which allowed us to capture fauna records for 2017 and 2020. The other years were already captured. -A report on Ennis Cave in Crawford County, that included a new cave in the immediate area, now called Upper Ennis Cave. -A report on the 13 caves of the upper (upstream) Vilander Bluff unit of Onondaga State Park. All caves got improved GPS locations and entrance photos. There are 2 new caves in this section: Dry Cave Annex and Porthole Caves. **Shawn Williams sent:** -Three new cave locations and photos in Ozark County; named after plants near the entrances: Phlox, Columbine and Maidenhair. He also sent a GPS location and photo on a cave already in the database. **Richard Young sent:** -A report on 4 caves and 1 karst feature in Perry County: Grapevine, Little Hotop, Slope and Mystery Pond Drain. He provided some background details on all of them and an update of GPS location. The karst feature may yet prove to be a cave.—Ken Grush

Kansas City Area Grotto (KCAG). Mar. 7th - Kristen Godfrey and Jeff Page led a trip to Skaggs Cave.

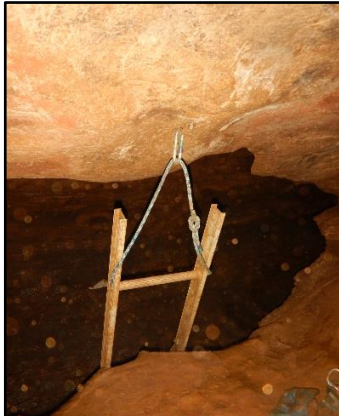
Attendees included Martin Carmichael, Rita Worden and her grandson Bo, and four novice cavers. They entered the cave at 11:20 a.m. and exited at 5:00 p.m. They made it a bit past the Graffiti Room, before turning back.



Jay Kennedy sets a bolt to secure a horizontal ladder over a 20-ft. chasm

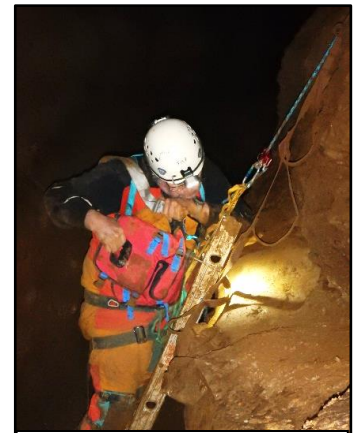
Mar. 8th - Jim Cooley, the newly anointed grotto vice-president, led a trip consisting of Julie Cottrell, Jay and Nick Kennedy, Martin Carmichael (president of Chouteau Grotto), Krista Bartel, Zac & Stephanie Lavicky and their two kids, and Sandra Galloway and her three kids to Cleveland Cave. Objectives for this trip were to secure some ladders in the cave with bolts, to make them safer for novice groups; to develop new guides; and to provide a kid-suitable outing for Chouteau Group. The landowner of this cave requires experienced and vetted caver guides for Scout and other youth group

trips, who are familiar with both the cave and the property, where camping is permitted. The ladders were secured using Jay Kennedy's battery-powered hammer drills, and all other objectives were met. Several of the participants camped at the site. This MCKC-managed, privately owned cave is available by permit on the third weekend of the month, except during months with major firearms hunting seasons. **Mar. 21st** - Bill Gee, our grotto treasurer, Kristen Godfrey, and Marcus Brown continued Gee's survey project at Stark Caverns, a commercial cave near Bagnell Dam. The upheaval over COVID-19 threatened to derail this trip, as did a lack of participation. Gee did not have a full crew until just a few days before it happened. A "stay at home" order for the Kansas City metro area was issued the day after the trip. After checking in with Stark Cave management, they entered the cave at 9:50. The goal for the day was to survey the main trunk of the Grand Canyon area. The whole area is like swiss cheese, with side passages everywhere.



This un ain't goin' nowhere neither, no way

They wound up leaving a good portion of the right wall as "presumed". It will be filled in later as they run survey lines into each side passage. They ended the survey with a shot up the debris slope of a sinkhole. After packing up gear they checked out a couple of the side passages. There is a nice little waterfall in a small hole. Gee climbed down into the hole about six feet. It is just about big enough for one person. The drain is way too small for humans. The side passage it is in has at least two levels, and comes back to the main passage about a third of the way back to the start. There is another side passage taking off at that point. Total surveyed footage was 331.8 feet, some of which was splay shots. They exited the cave at 4:10 p.m. Due to COVID-19 restrictions, they did not share the usual Mexican restaurant dinner in Eldon en route home.



Jay Kennedy drills a hole to set a bolt

In March - Seth Colston, newly promoted to grotto president, led a novice trip to Perkins Cave. Participants included Jesse Kovac and Jen Bell. All of the novices were athletic and enthusiastic, and they went through the entire cave in four hours. Colston also joined CRF on the Buffalo National River on March 7th for cave monitoring. **Stay well!** --Jim Cooley,

Springfield Plateau Grotto (SPG). **Mar. 7th** - Sequiota Cave bio transect survey by Treavor et al. **Mar. 14th** - Treavor Bussard and Jon Beard continued the resurvey of Clayton Cave (Taney Co) as part of Jon's research on the floodwater maze caves of the Cotter Dolomite. More than half of the cave has now been drafted, waiting for both drier weather and the reopening of federal caves for CRF monitoring, mapping and research. Treavor and Jon also noted the fauna seen while in the cave. Although the weather was dry on the hike to the cave, they could hear thunder even hundreds of feet into the cave. Small rivulets of water eventually began flowing down normally dry crawlways forcing the halt to the survey for the day to wait for drier times. The dry creek bed crossed on the way to the cave had become a much wetter creek bed, easily crossed. Jon's 14-inch rubber boots kept his feet dry. **Mar. 15th** -- Treavor Bussard and Brandon Van Dalsem did a Bio-Monitoring Trip to Breakdown and Fitzpatrick Caves (Christian Co) **Mar. 28th** --Brandon Van Dalsem and Nicole Ridlen found a couple new caves while out hiking Big Sugar S.P.--Materials provided by Jonathan Beard, report by Max White.

Chouteau Grotto. **Apr. 20th – 22nd** - Rita Worden and Shawn Williams found four caves while backpacking in the Devil's Backbone Wilderness. Three of the caves are new. One, Freezur Cave, was once surveyed in the 70's. A return trip to survey the new caves is planned sometime in the Fall. – Rita Worden

Middle Mississippi Valley (MMV). **Mar. 29th** - Michele Leicht, Larry Abeln and Jim Sherrell did some ridge walking and entrance locating in the Valles Mines area. The trip had mixed success. No new caves were located but it was evident that there is a requirement to revise many of the old Sat 7 entrance locations of Valles Mines. **Post Fall 2019 MVOR** - The Perry County Tourism Department has adopted a customized version of the Fall 2019 MVOR T-Shirt to help promote Perry County Tourism. They have it in the form of a t-shirt for sale at the Tourism

Office located at 2 W. Ste. Maries Street in Perryville. For questions, contact Trish Erzfeld at (573) 517-2069. Here are the pictures of the MVOR shirt graphic (red) and the revised graphic for Perry County Tourism (white).—Doug Leer



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July 1st - Next MSS Liaison deadline