

# THE MSS LIAISON

## VOLUME 61 NUMBER 11-12

November - December 2021

### AFFILIATE ORGANIZATIONS:

CAIRN – CCC – CHOUTEAU – DAEDALUS – KCAG – LEG – LOG –

MCKC – MMV – MSM – MVG – OHG – PEG – RBX – SEMO – SPG - Stygian

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### Missouri Speleological Survey - President's Message January 2022 by Dan Lamping

Happy New Year, Missouri cavers. As 2022 unfurls, we can look forward to an MSS Meeting and public outreach event in Perryville the weekend of March 4-6. While details are still in the works, the plan is to have camping available at Berome Moore Cave for the weekend.

There are hotels and various VRBO / Airbnb options available as well. The meeting and public event will be held in the conference center at the Catalyst Center at 508 N. Main St. in Perryville. On Saturday, there will be trips planned to do cave work in and around the City of Perryville. There may be the same for that Friday. On Saturday evening, we're hoping to do a public showing of the movie *Karst in Perry County* at the Perry Park Center. This movie was produced in 2020 by Denise Henderson Vaughn, Somewhereinthewoods Productions, and the Ozarks Resource Center and showcases work the city has done as well as work cavers have done protecting the karst beneath Perryville. For those who've not yet seen it, you can watch the movie online at [ladfoundation.org/perry-county-karst/](http://ladfoundation.org/perry-county-karst/). At present the MSS Board meeting will be Sunday morning at 10:30 AM, following the MCKC meeting at the Catalyst Center, with a public outreach event in the afternoon. The public event will likely include several agencies as well as caver exhibits on cave gear, cave survey, bats, amongst others. Once details get a bit closer to being finalized, we'll send them out. Expect that some of this may change as the date gets closer, so look for the most recent communications. This whole weekend will be a good opportunity to do some caving, connect with active cavers and project caving, and to help support an ongoing project to document and help protect the caves and karst of Perry County. The City of Perryville has really shown that they have an interest in protecting their karst. The Missouri caving community should certainly give as much support as we can. As details come out, please share them with your grottos and encourage cavers to participate. Look for updates on the MSS website, [www.mospeleo.org](http://www.mospeleo.org) as well as an update through Alberta's *Liaison* email list and via the Mocaves email group.

Recently I finalized our 2021 report to the Missouri Department of Conservation, which is part our obligation for receiving permits to do cave work on MDC lands. In total we produced: Thirty four trip reports; Fourteen new caves, owned or managed by MDC; Twenty-four new maps, including some lidar scans of previously mapped caves; Two hundred and nineteen faunal records. This is amongst the wide range of data that Missouri cavers produced on federal and private lands across the state. The Missouri caving community has much to be proud of. As always we rely on the contributions of cavers in order to compile this collective understanding of Missouri caves and karst. Even if you're not actively leading projects or producing data, as we enter the new year, challenge yourself to get involved and help support an on-going project. Even leading beginner trips for your local grotto helps to keep the flow of new cavers who are willing to support the goals of the MSS, alive and strong.

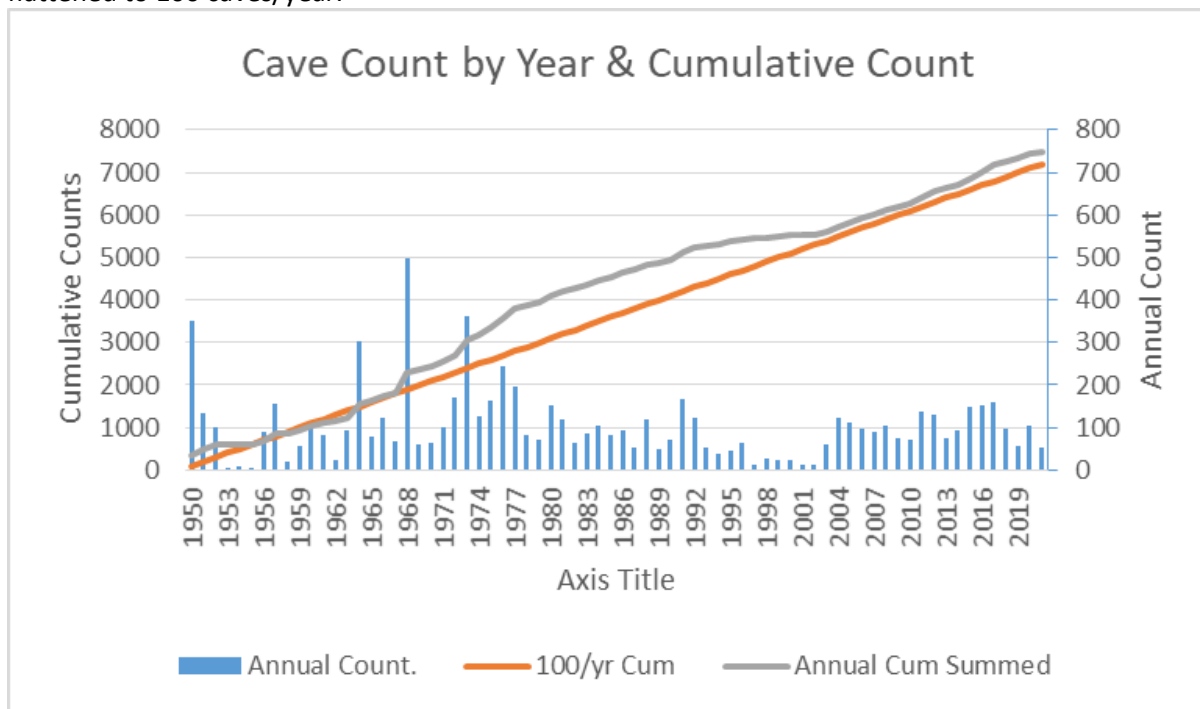
So as we enter 2022, let's be reminded of the purpose of the MSS.

### ARTICLE III: PURPOSES OF MSS

This organization is organized and will be operated exclusively for educational and scientific purposes within the meaning of Section 501-C (3) of the United States Internal Revenue Code of 1954 (or corresponding revisions or any future United States Internal Revenue Law).

- A. To locate, record, conserve, and research the caves, of the state of Missouri
- B. To provide a permanent, non-profit non-sectarian, cooperative organization for the pursuit of speleology.
- C. To disseminate knowledge of caves of Missouri through publications, conducting public forums, lectures and other similar programs.
- D. To establish and nurture a professional atmosphere among Missouri's speleologists.
- E. To cooperate with all individuals and organizations consistent with the forgoing purpose.

**Missouri Speleological Survey Files Report for January 1, 2022 - By Ken Grush.** First, I wanted to address a project I had over the past year to assign a “first reporter” and first “year” to each record in our database. The database has a spot for this information, but it was not well-documented for all the caves that occurred before that first digital database (early 1990s). This project would provide some “historical” context to each entry in the database. Furthermore, the MSS has often reported that “we” received about 100 new cave entries every year. This process should support-document that statement and it succeeded, roughly. Here’s the chart, but first let me explain. There is a red line showing just exactly what a 100 caves per year looks like as it builds the cumulative 7500 Caves that we report today. The gray wavy line represents the actual data cumulative; we essentially mirrored that “100” trend and built a little cushion, before 2004 or so, then flattened to 100 caves/year.



We actually have a few more than 7500 caves today but we lacked a first reporter and initial year for about 4750 caves in the database. At the end of 2020, we had 9500 total blanks between the two entries (reporter and year). Today we have about 1750 blanks; primarily hard to know who first reported (on 1650 caves) while the year can be estimated by presuming it was found before the catalog in which it appears. An initial peak in 1950 represents a cumulative of reporting from 1805 (our first records) to the first catalog in 1952. There are additional peaks in this chart for subsequent catalogs in 1957, 1960, 1964, 1968, 1973, 1976, 1980, 1984, 1988, 1991 and 1995; the “cataloged” cave count was diluted by the documented reports that were submitted in a year between catalogs. In other words, the catalogs document the caves that weren’t otherwise reported or documented by a first reporter. Many times, the only “first” documentation was a mention in a cave catalog. Initially, there was roughly an average of 4 years between catalogs. After 1980, there were almost annual catalogs, but I did not feel the need to report exact year of each catalog for the first mention when so many weren’t documented by an accompanying report. Always something more to do!

And for the “look-back” over the past year: At close of the 2021 year, the Missouri Cave Database, MCD, had 3735 monitoring forms (5.8% increase over 2020 forms), 6071 map records (2% incr.), 23924 reports (4.6% incr.), and 39702 faunal records (5.3% incr.). By comparison with same time last year, the database had 3529 monitoring forms, 5955 map records, 22880 reports, 37682 faunal records. A 2-5% growth rate during another COVID year seems quite good. However, this is down across the board compared to the 2020-Covid-year. The cave count is still over 7500 and is approaching 7600, but the “cushion” on changes isn’t thick enough to report that next centennial (and we are less than 100/year additions for this year!). (To be consistent, this text above is “almost” verbatim last year’s reporting with only the numbers and percentages changing.) Kudos to all of the cooperators working within the state.

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.

**Kirsten Alvey-Mudd sent:** -16 photos including entrance photos for 6 caves in Shannon Co. while monitoring caves with CRF. **Jon Beard sent:** -His last update to the Shoal Creek Cave (CL=3682 ft) map in Newton Co. -A map of Clayton Cave (CL=1186 ft) in Taney Co. A-mazing map! This is indeed a maze cave and will be included in an upcoming MoSpeleo issue on “flood maze” systems. **Susan Bloom sent:** -Four newspaper transcripts dating from 1899 to 1931 for Carrico Cave in Dade Co. Apparently, the cave was quite the “cool” social spot during those years. Ms. Bloom traces her lineage back to Vincent Carrico (1819-1875) and some of the early founders of Dade Co. **Seth Colston sent:** -A composite map of Geronimo Spring Cave’s sketches so far. He also sent a report and Faunal Records for the latest survey trip. **Spike Crews sent:** -A new cave location for Oregon Co., named after the coon dog rescued from same: Monkey Cave. **Shelly Colatskie sent:** -7 Faunal Records for Rockwoods (aka Bathtub) Cave in St. Louis Co. **Jim Cooley sent:** -6 faunal records for cave adapted cavefish and crayfish in Missouri. **Josh Cooper sent:** -7 Faunal Records for the Moore Complex in Perry Co. **Dillon Freiburger sent:** -2 photos of Steve Cave in Boone Co.; one of these made the “cover” photo for the database. **Bill Gee sent:** -The latest edition of the Stark Caverns map (in progress) in Miller Co. **Ken Grush sent:** -8 new maps for St. Clair Co. and 15 Use Monitoring for caves in Henry Co. This SURVEY effort is work done in conjunction with CRF, MDC and USACE and links to Grush’s work in 1977 as reported in Missouri Speleology (MoSpeleo) v49. **Derik Holtman sent:** -Almost 50 photos of a recent survey trip to the Ozark Underground Lab in Tumbling Creek Cave. **Scott House sent:** -Updates to the database. At least 1 new cave location, 184 faunal records, 42 cave monitoring forms and 23 Mark Jones’ reports. These additions were a CRF team effort, while working from the joint facility in Winona, with assists primarily from Mark Jones and Kirsten Alvey-Mudd. At least 18 caves had additional changes to the Main Table of the database. Several locations improved with GPS locations. The joint “residence” facilitates/allows CRF cave work to be done on MTNF and ONSR properties. - Four new maps of Flip Flop Cave (CL=25), Horse Hollow (CL=96, resurvey), Little Shawnee-Peep Hole Caves (CL=16; CL=35 composite) and Lower Thrasher Ford Cave (CL=49). All are in Shannon Co. -Information on Mosby Cave in Clay Co. including maps and newspaper clipping. **Gary Johnson sent:** -Updated reports on 3 caves in Hickory Co., including one new cave, Mule Shoe Forked Cave. All three were surveyed on this trip. **Ed Klausner sent:** -Maps of Stallcup Cave (CL=2226 ft) in Texas Co. and Willow Branch (CL=1081 ft) in Howell Co. **Dan Lamping sent:** -An updated map of Tumbling Creek Cave (CL=10354 ft) in Taney Co. He included all the supporting information to create the map, a GB of data and over 200 files. **Joe Light sent:** -Documents for the location of a cave turned into a brewery under St. Louis City’s busy streets. GPS and photos of the manholes were submitted. -A text document of a conversation discussing the location of another cave under a “city” park in St. Louis Co., which remains unentered. -2 historical newspaper clippings for Scott and Jasper Co. We can tie one of these to two known caves. Dwight Weaver actually reported on this known cave, but now it is further documented with the original newspaper clipping....from 1903! -2 photos for Spyder Pit Cave in St. Louis Co.; one of these made the “cover” photo for the database. -A 1902 newspaper clipping on Snell Hollow Cave, this is a lost feature that Chad McCain spend quite a bit of time trying to find...to no avail. There are several of these articles that described Horace Kephart’s trips to the cave. -2 newspaper clippings from the early 1900s, one for Onondaga Cave in Crawford and a “treasure” cave in Stone Co. **Jon Lillestolen sent:**

-Via Messenger, a link to the new national depth record of 472 ft for a spring, here, at Roaring River Spring in Barry Co. and as reported by the Barry County Advertiser. Missouri now has the deepest record for the nation for a natural spring. Accordingly, some interesting fauna is coming back from as deep as 450 ft. **Alex Litsch sent:** - Reports with photos, GPS location, directions, descriptions, sketch map and Faunal Records of Dream, Lost, Short and Pyramid Caves in Ozark Co. -Map of Kohms-Kuehn Cave in Ste. Genevieve; Litsch incorporated some of the old map to but his version included a new lower level and the connection to Kuehn Cave. -A map of Moore Pit (SL=125 ft, CD=87 ft) in Ste. Genevieve Co. **Chad McCain sent:** -2 reports on Missouri's longest caves; top two being Berome Moore and Crevice Cave, both in Perry Co. Moore with 24.4 miles is second only to Crevice at 31 miles. -2 map documents for Berome Moore: a composite map displaying the route of a common cave trip through the cave and then an atlas of 12 plates that cover the same route. **Ben Miller sent:** -One new cave locations for Reeds Spring Rift and 2 nearby leads, all in Barry Co. -4 final map sheets for the new Doghouse Cave map (CL=3889 ft, VR=78 ft) in Stone Co. -4 new caves including Devils Den Dudhole, Devils Den Dos Hole and Oswalt Bluff Caves in Stone Co. and Eabrywestn Cave which fell so close to the "east Barry and west Stone County lines" that they created the name suited for the location. **Rhonda Rimer sent:** -Via Scott House, a Faunal Record and site assessment for gating a cave in Greene Co. **Craig Williams sent:** -Via Scott House, a cultural assessment for a cave in Greene Co. Several pictures were included. **Shawn Williams sent:** -Photos and 3 reports for Crooked Branch, Rhyolite and Prairie Hollow Cave. One in Ozark Co., 2 in Shannon Co. and 2 in Rhyolite! What igneous rock? **Shannon Zaloz sent:** -Preliminary copy of the next Chouteau Foresight. There were many (ten or more) cave trips that were previously captured but this issue also included 15 new Faunal Records and 5 new reports.

**Love Hurts.** To get here, you have to first twist yourself into an uncomfortable contortionist move at an obscure entrance, which is little more than a crack in the rock at the back of an overhanging shelter hiding on a shadowed hillside above the Meramec River. No normal person would ever consider entering it. After crouching down, sideways and diagonal, you commit and begin slithering on your back for a few body lengths with face up against the damp, earthy stone ceiling and jagged, walnut sized rocks rolling beneath you, poking into your back.

The passage then opens up a bit, still only a couple feet tall, and the floor goes from a knobby cobble to a slick, hard packed clay with a trickling stream and short sections of clear pools pulsating with small stream dwelling invertebrates, called amphipods.

From here one has to travel around 2000 ft, mostly hands and knees crawling in the stream and slithering over mud bank meanders on occasion, dragging a cave pack tethered to one's belt, wearing wet muddy clothing which seems to double one's body weight. The water is cold. There are a few places where you can stand and walk for a short bit before being pushed back down into the muddy, tiresome grind. But there are

also a few places where you're lying on your stomach or planking beneath the low ceiling using the end of your toes and whatever upper body movements you can gain to pull yourself across the rocky stream floor.

It's here, near where this photo was taken, at the end of the long entrance crawl that we began mapping upstream for the day, pushing into the unknown. Behind us, a tall canyon passage meanders into a beautifully decorated upper level with high ceilings, big rooms and stunning formations which few have ever seen. It's a geologic story millions of years in the making. But that's not where we were going today. Wearing thick neoprene wetsuits that we pulled behind us in our packs, and forced ourselves into while standing on uneven muddy floor, we pushed ahead in the uninviting stream struggling to keep the expensive laser survey tools from



**Tony Schmitt gazes upstream. Photo by Dan Lamping**

getting slimed and fighting to get a decent, usable sketch to chart our explorations and in order for the map to grow. It's a passage that was missed in the initial exploration and was passed up by many on their way to the upper level, during years of mapping. Last year it was found on accident. We're here to find where it goes.

Progressively the passage gets lower, wetter and tougher to move through. The body is tired and the anxiety can be bit elevated. There's grunting and joking around. The only comfort is knowing you're suffering this misery with kindred souls who are also the right kind of wrong, and the hope that at any point the ceiling will open up into a large chamber which no human has ever seen.

The potential is there. But there's also the fear that the passage is going to continue in an endless slog and an end not ever to be found. The scary part is knowing that means you'll have to come back. No one will force you, but yourself, just to see where it goes. Just to confirm there's not great discovery on the far side of that last wet squeeze. And all for a few hundred feet of grim survey along with the hope that it breaks open.

Once the cold and tired set in, we turned around, facing the long crawl out, knowing we'll have to come back after the body and spirit heals. It's a long trip heading out.

Exiting in the cold of night adds to the miserable charm. Stripping the wet, muddy layers off the body in the freezing night air and rushing to the fire once dressed in warm, dry clothes lets you know you're alive and causes you to question why the hell you keep returning for more. Yet here we are, twenty years later, with reason to return. It still goes. Love hurts. —Dan Lamping

**Chouteau Grotto: Oct. 16<sup>th</sup>** - At Chouteau's annual cookout, many of us spent the Saturday working to remove trash from Wayfarer Sink in Moniteau County. Two pickup loads were removed along with much recyclable metal. The car still awaits removal at the top of the sink. **Nov. 12<sup>th</sup>** - Rita Worden and Shawn Williams (MVG) accompanied Mick Sutton into the Maidenhair entrance of Crooked Branch Cave to obtain specimens of a cave fish and a cave crayfish and were successful on both counts. **Dec. 26<sup>th</sup>** - Chouteau members Briony Downes-Ward, John Roth, Rita Worden and Shannon Zalos returned to Wayfarer Sink to pick up more trash...what fun! John set up a rigging system to secure workers in the sink and Rita prepared the car for removal at a later date. The rusted truck in the bottom was hoisted out with a pulley system. Well, at least the cab and the hood were... --Rita Worden



**Moore Cave System - 2021 Survey Report – By Chad McCain.** In 2021, 36 surveyors helped add 2.55 miles of survey to the cave with 1.34 miles of new survey and discoveries, as well as 1.21 miles of resurvey of old data. While I have never really tracked the ratio of resurvey to new survey, this may be the first year that new survey was over 50% over the total survey obtained throughout the year. Of these 36 surveyors, 9 were new to the project. Highlights of the year including digging open a new side passage in the Formation called Wrecking Ball that is a nasty and full contact passage that is still going after 2 surveys. Waterfall Passage was found not to end where the old map started, but 1,571' past this point to the choke noted on the map. This choke was dug through and an additional 926' of survey was obtained past the old choke for a total of 2497.2' of survey added to the cave where the old map "ended." Waterfall Passage is currently at 3832.8' long with 1 good lead left that needs to be dug that has most of the water coming in. Another passage was started at the end of the old map and approximately 1000 feet was surveyed up Left of the Lie, the left fork of Formation that starts at the end of the "old map." This lead is still going. Most of the historic Tom Moore section of the cave has now been resurveyed. The end of survey downstream now lies where the Annex water input comes in, which is approximately 20-25 minutes walking from the sump. July 17<sup>th</sup> saw 30 cavers surveying 4607.4' in one long day with teams strung out all over the system.

13462.7 of survey in 2021 – 2.55 miles; 1.34 miles of new survey in 2021 and 1.21 miles of resurvey.

### Surveyor Contribution Totals – 2021

Isaac Smith 4210.2; Mark Brooks 4048.5; Brian Biggs 3247.4; Chad McCain 2662.7; Krista Bartel 2326.5; Aaron McClean – 1859.6; Jeff Fennell 1816.1; Derik Holtman 1765.4; Tyler Rider 1685; Cody Brooks 1135.1; Dan Lamping 1065.2; Mollie Ratliff 1023.1; Michael Haley 936; **Ben Damgaard** 936; Rick Haley 936; Joe Sikorski 936; **Nathan Thombaben** 893.8; Shawn Williams 893.8; Rita Worden 893.8; Julie Springman 782; Rick Ihnat 759.9; **David Golubock** 759.9; **Logan King** 731.4; Don Dunham 708.7; Mike Young 686.1; Scott House 629.6; Richard Young 629.6; **Jessie Bridges** 422.6; **Brent Wilkins** 361.5; Michael Bradford 361.5; **Jessica Walden** 312.3; Alex Litsch 265.5; Kyle Mann 249.4; **Katie Short** 249.4; Mick Sutton 79.1; **Andrew Porter** 79.1.  
**Bold = new surveyor**

**Kansas City Area Grotto (KCAG). Oct. 30<sup>th</sup>**- Bill Gee led his annual bat census trip into Carroll Cave trip. Participating this year were Kristen Vogel, Matthew Hernandez, John Roth and Martin Carmichael. The round-trip to the Mountain Room, returning via the turnpike, took 11 hours. About 300 live gray bats in two clusters were counted. Guano gauges were measured and cleaned. A lot of sculpins, salamanders and isopods were also inventoried. **Nov. 1<sup>st</sup> – 5<sup>th</sup>** - Jim Cooley and Julie Cottrell attended the National Cave and Karst Management Symposium in San Marcos, Texas, representing the Missouri Caves and Karst Conservancy (MCKC). One of the fastest developing areas in the country, the cave-rich karst along the San Antonio-Austin corridor suffers from severe environmental impacts due to excessive populations of bipedal hominids and their filthy machines. Cooley and Cottrell gleaned a wealth of information and insight about cave conservancy operations to bring back to the MCKC, and were fed extremely well for their efforts. **Nov. 6<sup>th</sup>** - Kristen Vogel, KCAG's Novice and Special Events Trip Coordinator, led a KCAG novice trip to Perkins Cave, included several first-time cavers and new Grotto members. Several members of Midwest Wilderness Adventures Meet Up group, led by Crystal Carney, also attended the Perkins trip. Despite recent rain, the entrance crawl was almost completely dry. The group split in two near the back of the cave, where a few people wanted to go all the way to the end. The entire group emerged after five hours underground. **Nov. 20<sup>th</sup>** - Bill Gee led yet another seven-hour Stark Caverns survey trip. The team included Seth Colston, Hou Zhong, Mike & Candace Kovacs, Kohl Mitchell and Shannon Zaloz. As they did not have a third book person, Mike, Candace and Hou spent the day doing photography. The photographers were dropped at Onyx Circle, and Bill pointed out a passage that leads to the crevice and a tight crawl. Another branch of that passage goes around in a loop and comes to a window high in the side. They took off, while the rest of the group went to the Overlook. The water level was as low as Bill had ever seen it, so it was an ideal day to survey in the stream passage. Leaving a tarp and clean shoes just off the trail, Seth and Kohl went down to the stream passage while Shannon and Bill went back to the Flat Room. There was one last very tight channel around the east side of the Flat Room that Bill wanted to run a line through. Shannon and Bill took 20 minutes for a "Survey 101" class. Shannon learned how to use the DistoX and how a survey is conducted. With that, the two survey teams tackled some very tight, difficult passage. While in the stream channel, Shannon, who is a veterinary student, found several piles of small bones, probably mice or voles. After that, Bill caught back up with the photographers, and gave a Cave Survey 101 class for Mike and Candace on the paved trail at the Wishing Well. Seth and Kohl's team managed to get



*Candace Kovacs in the 150 ft. long Entrance Crawl – Geronimo Sprinas Cave.*

about 150 feet of survey in 17 stations. It was tight going, with several shots under five feet. Hou went down to the stream level and was able to go quite a way upstream, but did not reach the end. The stream level continues. After exiting the cave, Bill drove to Mule Shoe Conservation Area to camp while the rest of the group went into Eldon to have dinner at Si Señor Mexican Restaurant. The photography results were a mixed bag. None of the GoPro video turned out to be useful. It was poorly lit, plus much of it was taken with helmet-mounted cameras that was too shaky to see what was going on. There was also quite a bit of footage where the camera had a big glop of mud over

the lens. On the other hand, Hou's still photos came out very nice. He took several photos of the formations at the bottom of the slot, and more in the upper level behind the Onyx Circle. **Nov. 21<sup>st</sup>** -Seth Colston led a



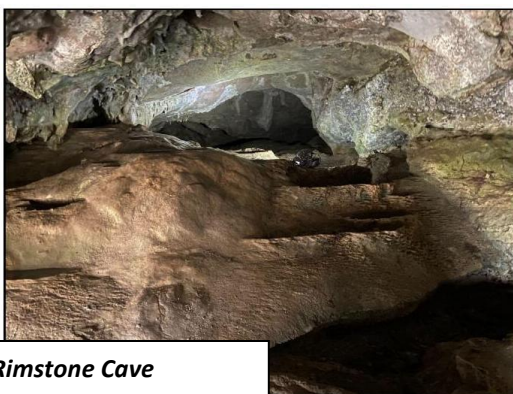
**Seth Colston Surveying in Geronimo Springs Cave.**

trip consisting of Bill Gee, Kohl Mitchell, and Candace and Mike Kovacs to Geronimo Springs Cave in Macks Creek, Missouri. Two teams of surveyors continued surveying the main passage of the cave, and created a few more stations in the second room. One team worked along the same path all day, starting at station A24 and ending at A32. In this area you start seeing some secondary cave formations. After finishing the second room, they did some scooping to see what else they were up against. A side passage ends up wrapping around to the waterfall in the second room, decorated with flowstone, drapery, and helictites. They also found some box work formations. Everything was sketched all the way around to the

waterfall. There is still additional passage back into A25 that needs to be surveyed, which goes into a room with a sinkhole. The cave had a lot of biota, duly inventoried. **Nov. 24<sup>th</sup>** -Gary Johnson, KCAG's Hickory County project leader, and KCAG president Seth Colston visited Missouri Department of Conservation's Mule Shoe Conservation Area in Hickory Co., under the auspices of a Cave Research Foundation permit. They surveyed three previously discovered caves and investigated three new cavities in a second study area. None of these three cavities qualified as caves. Gary is drawing up maps of Mule Shoe Spring Cave (HKY-061, 22 feet), Mule Shoe Rimstone Cave (HKY-062, 49 feet), and Mule Shoe Forked Cave (HKY-063, 27 feet). This makes five new caves discovered and surveyed at Mule Shoe Conservation Area in 2020 & 2021, the longest being Mule Shoe



**HKY-062: Mule Shoe Rimstone Cave**



Cave, HKY-059, at 69.5 feet in length. Access to some of these caves requires vertical techniques. **Dec. 4<sup>th</sup>** - Kristen Vogel visited Crystal Caverns in Barry Co. along with cave manager Ben Reuter and Boy Scout troop 323 out of Lee's

Summit, MO. The cave was mostly walking passage, which the parents appreciated. **Dec. 18<sup>th</sup>** - Kristen Vogel led another KCAG novice trip to Cleveland Cave, including several first-time cavers, new Grotto members, and members of Midwest Wilderness Adventures. One caver wanted to experiment with four-minute exposure photography and got some really cool pictures. The group was broken into two, so that one group went in the morning and one went in the afternoon. Each group spent about three hours in the cave. This trip was originally going to include camping, but when the forecast overnight temperature dropped first into the 20s and then into the teens, the number of campers dwindled to just three. **Dec. 25<sup>th</sup>** - Kristin Vogel teamed KCAG up with Crystal Carney's Midwest Wilderness Adventures Meetup Group to ridgewalk about 225 acres in Camdenton, property that bordered on the Lake of the Ozarks. Participants included Jim Cooley, Julie Cottrell, Martin Davy and several others. Six hours of ridgewalking by six intrepid explorers turned up nothing longer than several intriguing ten-foot-long dirt-fill-terminated cavelets. After returning to landowner Margo Kirk's house, everyone enjoyed a large and sumptuous Christmas dinner, with ham, turkey, smoked duck, and all the trimmings. **Dec. 28<sup>th</sup>** - Rick Hines and Jim Cooley drove from Kansas City to Montreal, MO to consummate the purchase for the Carroll Cave Conservancy (CCC) of the graveled trail (access road) up the hill from Mill Creek

Road to the six acres CCC owns around the silo. "The silo," an artificial entrance to Carroll Cave, is a 120-ft.-deep, three-ft.-in-diameter shaft blasted out by the conservancy on leased ground in 2002. In 2019, Rick Hines was finally able to acquire this property for the CCC through a purchase/donation arrangement. This new purchase involved one acre of land, in a 30-foot-wide strip. We met with the landowners, Rusty and JoAnne Clark, talked for a spell about longhorn cattle (they sell grass-fed longhorn beef), got the papers signed, got them notarized at the bank, took Rusty and JoAnne to lunch, and got the deeds recorded at the Camden County Courthouse. Agreements signed included a grazing lease on 4.5 acres of existing CCC property, and the donation of the cave rights under all of the landowners' land to the CCC. In addition, we discussed with the landowners the cattle fence they are having built to enclose a 1.5-acre plot at the silo, and paid them for CCC's half of the cost. The nearly \$4,000 for these transactions was very generously donated by CCC member #1: Rick Hines. The most interesting and exciting feature of this junket for your reporter was that we took Rick's all-electric Model 3 Tesla, which required a visit to two Tesla supercharging stations along the way. (Tesla supercharging stations provide 60-amp current at 440 volts. (*Shocking!*) We left Kansas City with 273 miles of range on the battery meter. The first supercharging station was in Nevada, MO. By the time we arrived at the second supercharging station at the end of the day, in the HyVee parking lot in Osage Beach, we had 11 miles of range left in the battery from our charge in Nevada. Fortunately, the battery meter seemed to be accurate. Happy New Year to all! --Jim Cooley

**Stygian Grotto.** Grotto meetings are being held for the Winter months at the St Charles County Library, Spencer Road Branch on the first Wednesday of the month at 7pm. **Nov. 13<sup>th</sup>** - Grotto members JJ Huelsing, Allan Breite, Rich Orr, Kevin Berdak, Jason Cole and Dawn Martin assisted Professor Bob Weck of Southwestern Illinois College with a cave snail survey in Stemler Cave, St Clair Co., IL. Bob is also associated with KCI, The ISS and the Clifftop Foundation. The group enjoyed learning the difference between the endangered Fontigens Antroecetes cave snails and the more prevalent Pysella species present. A return trip has been discussed for 2022. **Nov. 20<sup>th</sup>** - JJ Huelsing assisted Ralph Sawyer and other volunteers for the Karst Conservancy of Illinois with its annual property and Honeysuckle management at Pautler Cave in Waterloo IL. **Nov. 21<sup>st</sup>** - JJ Huelsing, having earned his sweat equity ticket with KCI on Saturday, got a hands-on introduction to Pautler Cave from the inside. This was a trip he won't soon forget. **Dec. 11<sup>th</sup>** - Grotto members Rich Orr, JJ Huelsing, Dawn Martin and Jason Cole joined MDC Naturalist Shelly Colatskie for a trip into Bath Tub Cave along with other members of the public as part of the MDC Outdoor Events Program. The group assisted Shelly with a faunal survey as this cave has been closed and not entered for a long time. A good bat presence was noted and reported by Shelly. **Dec. 12<sup>th</sup>** - JJ Huelsing and Dawn Martin continued the field survey in Cuivre River State Park. Unfortunately, 2 new sinkholes were identified that are filled with trash from past use of the area. --Allan Breite

**Springfield Plateau Grotto (SPG).** **Nov. 2<sup>nd</sup>** —Jon Beard was accompanied by Chris Lewis, Dr. Doug Gouzie and Dr. Toby Dogwiler in guiding Gouzie's speleology class through the Main Room of Breakdown Cave and the lower level of nearby Fitzpatrick Cave (Christian Co) in the 34<sup>th</sup> annual field trip to these caves for the MSU class GLG350. **Nov. 6<sup>th</sup>**—Chase Cunningham from Kansas City assisted Jon Beard in the resumption of the resurvey of Clayton Cave (Taney Co) in CRF project work in Mark Twain National Forest. Jon is remapping the cave to show additional detail to help illustrate his paper on maze caves in the Jeff City/Cotter Formation of southwest Missouri. Perhaps one more survey trip will complete the survey. **Nov. 13<sup>th</sup>**—A trip to Old Spanish Cave (Stone Co) for new members and some restoration was attended by Trenton Wells, Liz Wells, Kristen Vogel, Sarah Peterson, Alex McKinley, Sean Fay, Chase Cunningham, Nathan Burton, Matt Bumgardner, and Jon Beard. Nathan and Kristen guided most of the group through much of the cave while finding a few pieces of glass and other trash, and later everyone removed some of the remaining spray paint graffiti in the cave. **Nov. 18<sup>th</sup>**— A panel consisting of Doug Gouzie, Toby Dogwiler, Jon Beard and Dave Ashley answered questions about Missouri caves in a Deep Dark Secrets of The Cave State webinar viewed by a few hundred registrants. **Dec. 4<sup>th</sup>**—Jon Beard was assisted by Chris Lewis in the next-to-last survey trip to Clayton Cave (Taney Co) on Mark Twain National Forest as part of a CRF project to remap the cave. About 155 feet was mapped of the very



mazy cave. Chris took several photos of the cave's passageways. **Dec. 10<sup>th</sup>**—This time, Jon was assisted by Chris and also Sarah Peterson, this time to complete the in-cave survey of Clayton Cave. Approximately 132 feet were added, bringing the total length of the "spaghetti" cave to 1,186 feet. Chris and Jon took additional photos, noted fauna and Jon removed four old white spraypainted arrows. Hopefully none of this graffiti remains. **Dec. 10<sup>th</sup> - 12<sup>th</sup>**—Treavor Bussard and Brandon Van Dalsem walked, climbed and crawled through sections of Cumberland Caverns in Tennessee, mapping a small section that had eluded previous surveys. **Dec. 24<sup>th</sup>**—Alicia and Jon Beard surveyed above-ground surfaces above and adjacent to Clayton Cave (Taney Co) to complete the mapping of the cave. The surface surveys show the thickness of the overburden over the cave's profile view as well as shows the proximity of the cave to the low escarpment immediately outside. **Dec. 20<sup>th</sup>** - --- Matt Bumgardener and Bethany Bruman visited Makauwahi Cave, Kauai Island, Hawaii. The cave is the largest limestone cave found in Hawaii. The cave is reached through a sink hole and has been described as maybe the richest fossil site in the Hawaiian Islands. Materials provided by Jonathan Beard and Matt Bumgardener. --Report by Max White

**Lake Ozarks Grotto (LOG).** At our November meeting, all officers were re-elected. Ken Long, Chairman; Christen Easter, Vice-Ch.; Alberta Zumwalt, Sec.-Treas.; Gary Zumwalt, MSS Rep. We added a new position – Chaz Jesiolowski as Program Chairman. Beginning in April, our meetings will start at 6 pm at Stark Caverns, Eldon, MO. **Dec. 5<sup>th</sup>** – Grotto Xmas party at the home of Burke & Christen Easter. One of our long time LOG members, Buzz Caldwell, alerted us to an interesting situation involving a cave in the Mongollon Rim, Arizona. In the early 1920's, Art Combe, while teaching horticulture to Navajo Indian students, decided to explore the sandstone cave. On a natural rock ledge, covered with guano and sand, he found a small bottle, a woven basket made of yucca strips with a cork dipped in pine pitch. Inside were 200 or more watermelon seeds. He planted the seeds. The melons were round, tapering at the end into a crookneck. The seeds were thought to be 800-2000 years old of Anasazi origin. One can now obtain seeds from Baker Creek Heirloom seeds. Buzz grew this last year and has given us some seeds to plant. It is definitely an interesting story.....-Alberta Zumwalt

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**Research Committee** -Dr. Robert Lerch, Dr. Michael Sutton, Dr. Doug Gouzie and Jeffrey Crews.

**Cave Files Committee:** Scott House (Chairman), Ken Grush, Mick Sutton, Dan Lamping, and Jeffrey (Spike) Crews.

**Calendar:**

**February 20<sup>th</sup> – Early deadline for the next MSS Liaison**

**March 5<sup>th</sup> – 6<sup>th</sup> – MSS weekend in Perry Co.** MSS meeting on Sunday at 10:30 am. The MCKC meeting will be held before the MSS meeting.

**March 30<sup>th</sup> – April 10<sup>th</sup> – Toby Cave gating project.** Contact Jim Cooley.

**NOTE: MSS Affiliate Organization fees are due.** Check or money order for \$25.00 should be sent to the MSS Treasurer, Don Dunham, 6104 Valley Creek Ct., Imperial, MO 63052. Those already paid are: MCKC, MVG, MSM, LOG, Roubidoux (owes \$10).

