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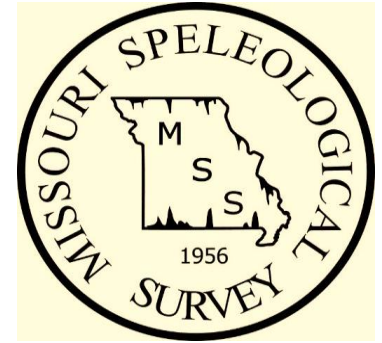
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Missouri Speleological Survey President's Message November 2023

By Dan Lamping

The fall 2023 meeting of the Missouri Speleological Survey was held on Sunday, October 15 at the Lloyd and Ethel Hoff Nature Preserve in Perryville, MO. Alberta Zumwalt gracefully agreed to continue serving as Secretary, which was approved by Board. Though, as Don Dunham later expressed, inevitably, as he and Alberta age, we're going to need some others to take on responsibilities for the MSS. (Note: Alberta, I don't think Don called you old, but he was thinking it.) Don had the latest issue of *Missouri Speleology* available at the meeting, with a paper by Kenny Sherrill on speleothem microfabrics in Ozark caves, a report on Quaternary vertebrate remains from Jacob's Cave in Morgan County, and two reports by Hal Baker providing geologic descriptions of Blue Hole Cave and Twin Cave in Texas County, using photographs, maps and written descriptions. Prints of the latest *Missouri Speleology* issue can be purchased through the MSS website www.mospeleo.org. As always, thank you Alberta and Don for your service to the MSS. People like you are essential to success of an organization like this.

Since last spring we've been working on plans to hold an MSS meeting at Cuivre River State Park to do some field work in the Lincoln County Karst, a region that's been lacking steady attention for some time. Most of the caves are on private property, but Kirsten Alvey Mudd has contacts with many of the landowners. Discussion was had on holding the Spring 2024 MSS meeting in Lincoln County but we're going to postpone again due to scheduling conflicts. Instead, we're tentatively planning to hold the meeting at Paddy Creek Wilderness in Texas County to focus on mapping and inventorying caves on the Mark Twain National Forest. The meeting will likely be held in early April. We're hoping to make arrangements for use of the campground with the Forest Service for the weekend. Paddy Creek is a beautiful chunk of the Ozarks with quite a few caves. Stay tuned for more information, once a date is set.

On Saturday before the meeting, mapping crews worked in different areas in the lower main stream passage of Berome Moore Cave. One team continued mapping in Pink Planarian, having surveyed beyond the previously mapped end, with passage still going. One team moved the main line end of survey down closer to the sump, two teams picked away at the Lower Annex Maze and one team mapped the Lower Stream Annex Crossover. Project manager Chad McCain reports that in total the four teams mapped 2,913 ft of passage with 1,072 ft of new survey added to the total which puts the Moore System at 25.87 miles, ranking it the 25th longest cave in the U.S. Chad



Nathan Curran killing it on the sketch book. ~Photo by Dan Lamping

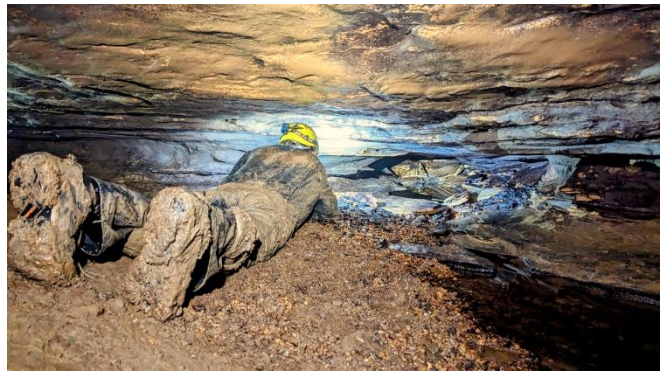
reports having confidence that the Moore Cave System will hit 28 miles, though Mark Brooks, with a little more optimism has surpassing Crevice Cave in his sights.



Lower Stream Annex Crossover. Note the oil on the surface of the pool. ~Photo by Dan Lamping

Interestingly, the survey team I was part of in the Lower Stream Annex Crossover found strange colony-like clusters of a few hundred amoeba like worms rising out of the sediment floor of isolated pools that had a dark oil film floating on the surface. The worms waved back and forth, but retreated into the ground after light was cast down upon them. Reports of finding oil in Stream Annex date back to 1967 by Les Ambuehl in the Missouri Cave Database. At that time Jerry Vineyard implied they could be natural, but made no real claim of the source. Being a karst area beneath a rural, settled landscape, I'd assume the presence of oil was from someone dumping. But finding oil floating on

the surface of the same isolated pools, which are frequently inundated with flood waters over a span of at least 56 years, is noteworthy. Beneath the oil and with the alien worms, the pools had several planarian, mussels, and cave adapted isopods. Upon exit from the cave Mick Sutton had no idea what we had seen, making the observation that much more intriguing. Throughout the survey, I was torn between being grossed out by the oil and the strange worms. Were these some parasitic worm yearning to crawl up my ass? Or, were they some explainable poorly documented behavior, part of a natural phenomenon. Or, both?



Matt O'Neal looks downstream into one of several overflow tubes in Lower Stream Annex Crossover. ~Photo by Dan Lamping



Lower Stream Annex Crossover not too far before connecting with the main Lower Stream Annex passage. ~Photo by Dan Lamping

Mapping the Moore Cave System has been a great project for the Missouri caving scene. Sometime around 2011 when MCKC acquired the property with the help of MMV, Scott House mentioned to me that CRF was going to take on resurveying Berome Moore. I asked him "who?" was going to be doing it and he said "we are." At the time I was doubtful of taking on another large resurvey project being deeply immersed in mapping the far reaches of Carroll Cave's DL7, along with exploring and mapping several Shannon County caves in the Ozark National Scenic Riverways. But I had never even been to Berome before. I had been

to Mystery, but had been given the impression that the caves of Perry County were foul and uninteresting. Regarding whether they are interesting, I was wrong. In 2012, I took my first trip into Berome Moore to begin mapping up into Coon Passage with Tony Schmitt, Jim Sherrell and Bret Meizel. At that time, Berome was reportedly something like 14 miles and we had surpassed it sometime before with the contemporary survey of Carroll Cave. But by that time, we had pushed or were actively pushing the frontier of Carroll, causing us to believe that without a major unexpected breakout, we had far surpassed the point of diminishing returns of survey in Carroll and were long past the point of there being known miles of Carroll left to map. As we were a

few stations into mapping in Coon, back in 2011, we came upon a small, upper-level passage taking off on the right, which we pushed into a bit, and found no end to. Jim mentioned the cave was filled with passages like that, which had never been mapped. This has proven to be true once Chad took over the survey and began systematically mapping the cave, pushing the small, wet and gnarly along the way, including that low passage off Coon.

The resurvey of Berome Moore and the Moore Cave System is a project I've been proud to be a part of, even though it's been bittersweet helping to map it beyond the total surveyed footage in Carroll. But, as a site for having MSS meetings and having a project to get various cavers from around the state involved with project leadership that keeps up with the survey, nurturing interest in the next trip, it's been top notch.

Meanwhile, we keep poking away at Carroll and keep pulling-in more and more of the cavers from the eastern side of state including the Berome cavers.

I hope to see you all at Paddy Creek.

Identifying Cave Life: Part 9 – Mollusks

This is another in an occasional series to help those doing cave monitoring, or who are just interested in knowing who they are looking at underground. This time we look at some of our slimiest subjects, snails and slugs.

Snails and slugs are not taxonomically valid categories – there are snails that are more closely related to some slugs than they are to other snails and vice versa. A slug is basically a snail with the shell reduced and/or internalized or completely absent. There are no fully cave adapted slugs or terrestrial snails in Missouri, but several species habitually hang out in near-entrance situations, usually within twilight. Since slugs in particular require moist environments to compensate for water loss by evaporation and by depositing slime trails, the humid twilight zone environment suits them nicely. Snails require a regular source of Calcium for shell production, and so are most numerous and diverse in limestone areas.

Although lacking an external shell, most slugs have a soft-tissue mantle covering part or all of their back. Like terrestrial snails, they have two pairs or retractable antennae. Most slugs and snails are herbivores, preferring rotted plant material, but there are some carnivorous snails.



Megapallifera ragsdalei

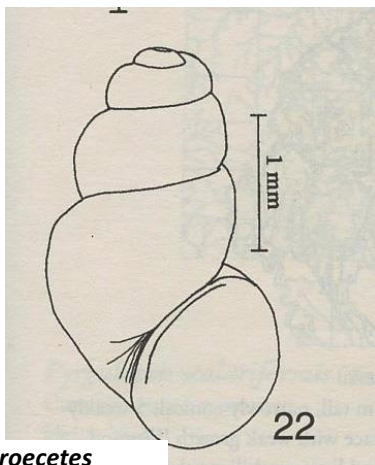
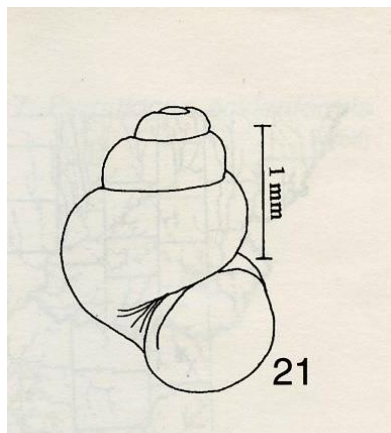


Inflectarius inflectus. Note the two pairs of antennae

The most common slug seen on twilight zone ceilings is the Ozark mantleslug, *Megapallifera ragsdalei*. In mantleslugs, the mantle covers the entire back, and the Ozark mantleslug can be distinguished by a distinctive pattern of angled dark markings along its side on a gray background. The photo shows a relatively small slug, but they can reach an extended length of 7 or 8 cm. You can be reasonably confident of identifying this one by its distinctive pattern – other slugs which occasionally turn up should be recorded as just generic slug.

Identifying terrestrial snails is a more difficult proposition, partly because there's a much larger diversity of species you may encounter. The most common twilight zone species in Missouri is *Inflectarius* (previously *Mesodon*) *inflectus*, a medium sized snail with a flattish shell, up to 3 cm diameter. Unfortunately, technical details of the shell structure are needed to distinguish this species from others similar in appearance, in particular from the look-alike but generally larger *Neohelix* spp.

In the aquatic realm, in contrast, there are a number of cave adapted snails in Missouri. All of these are in the family Hydrobiidae and all are tiny. They inhabit the undersides of rocks in streams ranging from clean,

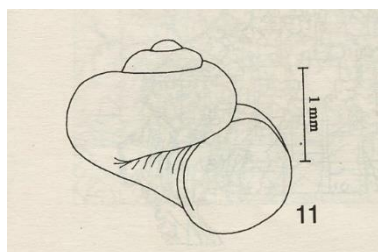


Left: *Fontigens aldrichi*, Right: *F. antroecetes*

nutrient poor Ozark cave streams to the high-nutrient, generally polluted streams of the sinkhole plain caves of eastern and central Missouri.

The commonest of these little snails is the Ozark springsnail, *Fontigens aldrichi*. As the name implies, it's a troglophile, not a full-on stygobiont (aquatic, fully cave dependent), being common in spring branches and cave streams. The snails top out at 2 mm. The shell color is very variable, ranging from pure white to jet black, with many "salt and pepper"

intermediates. Detecting a jet black snail the size of a sand grain on a black chert rock can be tricky – think small! A hand lens is essential for observing these little snails. A close relative is *Fontigens antroecetes*, common in the cave streams of Eastern Missouri. As the illustration shows, antroecetes is about the same size as aldrichi but the shell has a taller spire. All individuals I have seen have been dark colored. Illinois cave biologist Bob Weck has been getting some interesting results from his study of *antroecetes*, in both the cave and the lab.



Amnicola stygia

The sinkhole plain caves are also habitat for another little hydrobiid – *Amnicola stygia*. It is fairly easy to distinguish from *Fontigens antroecetes* (with a hand lens) by its squatter shape. In at least some caves, such as Berome Moore, the two species co-exist, often both inhabiting the same rock. It is a mystery how they partition the resources – two such similar species occupying the same habitat is generally unstable,

with one or the other eventually prevailing. Both snails can be found in astronomical numbers in some locations. One well-known cave hydrobiid is *Antrobia culveri*, the Tumbling Creek cavesnail, known only from that one cave. Tom Aley has worked hard over the years to stabilize a very depleted population by solving water quality issues.



***Physa* sp.**

You may also encounter larger aquatic snails, especially in near entrance areas, where there is a direct connection between cave and surface stream via a spring branch. Whatever snail fauna is present in the watershed may turn up in the near reaches of the cave stream. One larger snail that occurs in deeper cave settings is a species of the genus *Physa* (or *Physella*, depending on which authority you consult). You can readily tell physid snails from others by the shell opening, which is left-handed in contrast to the right-handed shell of the hydrobiids – compare the illustrations.

--Mick Sutton

Illustrations: *Megapallifera* – Sutton; *Fontigens* and *Amnicola* – Ron Oesch, in Missouri Aquatic Snails, Missouri Dept. of Conservation, 1997; *Inflectarius* and *Physa* – public domain from web sites.

Missouri Speleological Survey Files Report for November 1, 2022 - By Ken Grush

If you have **new information** on any Missouri caves, my email address is slak@grush.org. 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.

Karamea Christofferson sent: -New information for Jefferson County: Too Tight Cave is a new cave and 2 Faunal Records for Roadkill Cave. She also sent bio-photos for Roadkill Cave in Jefferson and Bath Tub Cave in Perry Co.; altogether 11 photos sent. **Jim Cooley sent:** -2 new caves, White Niche Shelter in Oregon Co. and Goat Cave from Shannon Co. -Several updates to some recently submitted maps. -10 Use Monitoring forms, 36 Faunal Records for the 10 caves visited in Oregon Co. in September on the MTNF. **Josh Cooper sent:** -Several photos from a recent Streiler City Cave trip, which included 4 Faunal Records. And then was present for the discovery of a cave very near Streiler, a sink developed and led to 100 ft or so of cave passage. -A new cave entry for Perry Co., Bath Tub Cave. **Nathan Curran sent:** -A map of Climbers Crevice (CL=98, VR=51) -Narrative with 2 Faunal Records for St Louis area park. -Map of Hidden Abrasion Pit (CL=132, CD=25) in St. Louis Co.-Map of Nautiloid Pit (CL=25, CD=21) in St. Louis Co. **Bill Gee sent:** -An online Narrative report via the KCAG member site for Stark Caverns, with 6 Faunal Records. **Ken Grush sent:** -4 new LIDAR-based maps for Boehmers Shelter (148 ft dripline, CL=40), Rekate Shelter (183 ft dripline, CL=42), Three Js Shelter (76 ft dripline, CL=22) and Tree Farm Cave (CL=88). Updates also made to the Main Table for these features. -500 scanned documents from Rolla files. I'm working my way through the alphabet, just have a few more C-counties before moving onto the D-counties. Some of these will need transcripts, some will become entrance photos and many will go straight to archives. **Derik Holtmann sent:** -Over 60 photos from the recent Power Mill Creek Cave trip. **Scott House sent:** -A new cave on the MTNF, Taylor Cave in Oregon Co. **Korey Hart sent:** -Via Joe Light, 15 photos from Cliff Cave in St. Louis Co. **JJ Huelsing sent:** -Several photos, GPS and 2 Faunal Records for Oliver Deere Cave in Lincoln Co. -Revised locations, photos and Faunal Records for Buzzard Nest and St. Peter Shelter in Warren Co. He had to cover a lot of territory, both locations were off by more than a quarter of a mile but their maps confirmed the old, PLSS locations were not valid. -7 Faunal Records for Oliver Deere Cave in Lincoln Co. **Dan Lamping sent:** -6 Faunal Records to Berome Moore in Perry Co., and 6 for Cliff Cave in St. Louis Co. **JJ Liebel sent:** -Almost 80 photos/videos of Cliff Cave in St. Louis Co. **Joe Light sent:** -Two reports on Campers Spring and Sheep Caves in Franklin Co. -A faunal record for Cliff Cave in St. Louis Co. -Reports of lights and music being installed in a well-known St Louis Co. Cave! -Report on gate removal from 3PM Pit in St. Louis Co. The gate had already been replaced, but the old had been left inside the cave...until now. Disassembly required! **Tim Schoppenhorst sent:** -Newspapers clippings that document a "historical" photo from the early 1900s at Browns Cave in Douglas Co., all of which supports the social connections of caves in the early years of caving. **Marissa Schorr sent:** -3 Monitoring Forms, 21 Faunal Records, and 11 photos from the cave cluster of Coon #1, Coon #2 and Kaintuck School Cave in Phelps Co. **Isaac Smith sent:** -37 Faunal Records for 2 features: Salamander Cave in Shannon Co. and Blackjack Crack in Iron Co. **Mick Sutton sent:** -New map for McCormick Cave (1520=CL, 45=VR) in Phelps Co. **Richard Young sent:** -Several photos for a lost cave in Perry Co.: Crosstown Pit. Just can't remember how to get there! He followed up with several descriptive Narrative that have been added for this cave. Several other entrance photos were provided for other Perry Co. Caves, along with brief descriptions for some of these. -Several more entrance photos: first group of 3 photos included Hankins, Rock and Mud Caves in Gasconade Co. Second group included 3 more from Gasconade, Cave Hill, Mud and Bear Caves, along with Daisy Cave from Cape Girardeau and Lost Cave from Perry Co. Third group included Schultz Hill and Lane Caves in Cape Girardeau; Kohms in Ste. Genevieve and Winschel Cave in Perry. The fourth were Doc White Spring, Mertz Resurgence, Meisner Resurgence and Thunder Hole Resurgence Caves. -An assessment and 6 photos of Angle Cave in Perry Co.-A detailed report with 4 photos of entrance and interior of Besier Cave from a 1996 cave trip.

Chouteau Grotto. Sept. 2nd - Rita Worden, Bob Lerch, Kohl Mitchell, Jack Rufener, Daisy Dabbs, Caleb Mundwiller, Joseph Garten and Justin Owens (DICI) started the resurvey of the R&B passage in Devil's Icebox Cave in Rock Bridge Memorial State Park. On this trip, they discovered a rainbow sheen on water beyond The

Bypass. **Sept. 16th** - Tiffany Stoots went on the P3 trip in Devil's Icebox with other members of DICI. This is the fall invertebrate census and Tiffany was the 'scribe', a very busy job. **Sept. 23rd** - Jack Rufener helped with the ongoing survey efforts in Devil's Icebox by associates of the MSS. Rita Worden was unable to enter but showed up to help with preparations. On this trip, Jack collected water samples from the contaminated areas found on Sept. 2nd. **Oct. 7th** - Martin Carmichael led a Devil's Icebox trip with Jack Rufener, Amy Fawks, Emma Buckingham and Sean Douglas. **Oct. 14th** - Kohl Mitchell and Jack Rufener contributed 232 ft. of survey in the Lower Annex Maze of Berome Moore Cave as part of Mark Brooks' team. **Oct. 28th** - Martin Carmichael, Daisy Dabbs, and Jarrett Whistance assisted Bill Gee on his annual bat census in Carroll Cave. --Rita Worden

Springfield Plateau Grotto (SPG). **Sept.**-- Jon Beard spent 19 days in Fantastic Caverns conducting restoration. Sarah Peterson assisted on the 18th and 22nd, Loren Kuntz and her father Pete helped on the 26th and Heather Pyle helped on the 29th. **Sept. 12th** -- Dr. Doug Gouzie and 13 Missouri State Speleology students went to Old Spanish Cave (Stone Co.). Nathan Burton led the trip; Sarah Peterson assisted. **Sept. 19th** --Dr. Doug Gouzie and 13 Missouri State Speleology students went to Talking Rocks Caverns (Stone Co.). Bruce Herschend led the trip; Casey Scarlet assisted. **Oct. 3rd**--Alicia and Jon Beard photographed Carlsbad Caverns in New Mexico. **Oct.**--Jon Beard spent 16 days in Fantastic Caverns conducting restoration. Sarah Peterson helped on the 13th and Candace Kovacs helped on the 18th. Current grand total stands at 910 speleothems restored. --Report by Max White. Content provided by Jon Beard and Dr. Doug Gouzie

Kansas City Area Grotto (KCAG). **Aug. 28th:** Jim Cooley met with an investigator from the Missouri State Highway Patrol (MSHP), who is reopening a "cold" missing person case, a possibly drug-involved 47-year-old female spelunker who went missing on Mother's Day, 2020. Foul play is suspected. Jim had previously led a group of amateur cavers in the summer of 2020 to search several privately owned caves in Benton Co., MO. The MSHP has now requested he throw the net wider in a search for human remains. **Sept. 9th:** Jim and Julie Cooley, Max White, and Kurt and Cameron Skeeters searched Drenon Cave (BEN-005) on behalf of MSHP, looking for the remains of a missing spelunker. **Sept 18th-23rd:** Jim and Julie Cooley led a cave survey and ridge walking trip that included, for different periods of time, Bill Gee, Dustin Schmidt, Tristin Whetstine and Peter Schnegelberger, on behalf of several private landowners in Shannon Co. Progress was made on a number of projects, including an interior pit requiring SRT techniques. The high point of the trip was when Tristin used his special super heterodyne rock-climbing shoes and some amazing technical skill to scale what looked to the uninitiated like a sheer cliff, near the top of which he discovered the cave long rumored to be "hidden in the clouds." He did, however, find it necessary to rappel back down. **Sept 23rd:** Bill Gee led a six-hour trip to Roubidoux Cave that included Alex Stump, Dave & BJ Seidel, Martin Carmichael, and Joseph Garten. One of Bill's intrusion detectors had been installed in the cave over a year ago and had not been serviced since. The batteries are good for only 6 or maybe 7 months, so they were certainly dead. The previous cave manager had resigned and the current (temporary) cave manager has not been able to arrange a trip to service the intrusion detector, so it seemed a good opportunity for Bill to take care of several tasks in one trip. Plus, he had never been to Roubidoux Cave. There were four project goals for the trip: First was to service the intrusion detector, which needed new software in addition to battery and memory card replacement, so the decision was made to simply replace the whole thing. The original will go back in place on the next service trip. Secondly, Alex Stump knew of some trash in the back part of the cave near the Roubidoux Room that needed to be picked up. Lastly, Bill had two other cave electronics projects to test in a cave. One was an air quality monitor, the other a bat detector. Martin Carmichael brought a tall ladder which was used to search for the intrusion detector. It took 30 minutes to locate it. It was on a shelf high above the floor. The shelf hangs out into the passage; the ladder was absolutely needed to reach it. The bat detector easily picked up the few ambient bats, of whom Bill made a few 5-second recordings. The air quality monitor did not require any work. It recorded temperature, relative humidity, barometric pressure and CO₂ concentrations every minute. CO₂ started at 988 ppm, then decreased to about 700 ppm while the party was further in the cave. When they returned, the CO₂ level quickly rose to about 1000 ppm. The relative humidity was 100% for the entire period and the temperature was 12.6 Celsius (54.7 Fahrenheit). After a physically challenging trip including the Meatgrinder, the Phreatic

Junction, the Corridor C crawl, the Slot Room, and the Roubidoux Room, part of Roubidoux Avenue was scoured for trash. About 20 pounds of trash (half of a 30-gallon trash bag) was removed from the cave. There is a photo of what was removed on Google Photos, URL is: <https://photos.app.goo.gl/rYwq6NQG2Cf1hr7w7>. The cave will require a LOT of conservation and restoration. Several items were noted: There are still a lot of carbide dumps that need to be cleaned up, and some broken glass, especially in the entrance room. The entrance room shows evidence of many bonfires. The existing map is not adequate. It has very little detail in most of the passages, and there are passages and rooms that are not on it. The entire cave needs to be remapped. There is a lot of graffiti all over the cave, worse once you get past the first tight crawl. All of it needs to be removed. It's a good thing this cave is now managed by a conservancy – it has plenty of



Woodrat smorgasbord from White's Creek Shelter

opportunities to conserve and restore! **Sept 26th-30th**: Jim and Julie Cooley and Peter Schnegelberger monitored and surveyed caves for CRF on the Irish Wilderness. We put in at Whitten Access and floated down to White's Creek Float Camp, where we pitched camp for five days and four nights, enjoying fabulous weather under a full moon. We completed the surveys of Scree Slope, White and Niche Caves, and continued the survey of Amphitheatre Cave. We completed a survey of the newly reported White-Niche Shelter, and monitored Porifera, Creekbed, and Coffin Caves. We monitored White's Creek Shelter, where we discovered someone had been building fires and camping. They had hauled in a large foam sleeping pad to the site for that purpose. Woodrats made hash out of it. We packed up and floated out that nasty mess along with other garbage, and destroyed the fire ring under the drip line. We serviced (oiled) the

lock on the White's Creek Cave gate, in the process discovering that the gate has yet again been breached. The damage had been cleverly concealed to make the gate's locking mechanism look and act like it was still intact.



Our tricky contortionist with (Peter said) HUGE ambitions

It wasn't. In camp, Peter introduced Julie to a venomous reptile, of a different species than the one Julie almost sat on during our *last* trip to the Irish Wilderness. Since it was found lying in wait just outside Peter's tent, obviously intending (Peter swore) to make a meal of him, we named him Donald Trump, based not only on the size of his ambition, but also because his other name is Mr. Contort Trix. After all that adventure and more (think "Snow White and the Seven Armadillos"), we reluctantly broke camp and floated out to the Riverton access under bright, sunny skies, having the river entirely to ourselves. **Oct 21st-24th**: Jim Cooley led a survey training and cave survey trip that included Mike Kovacs, Sarah Peterson and Nick Dwyer, on behalf of several private landowners in Shannon Co. One day was spent escorting a landowner through several of their caves. **Oct 28th**: Bill Gee led a team consisting of

Martin Carmichael, Mike & Candace Kovacs, Sarah Peterson, Daisy Dabbs, and Jarrett Whistance to the Mountain Room in Carroll Cave for his annual biological census trip, entering the shaft at 9:10 a.m. On arrival at the bottom of the shaft, Bill set out an air quality monitor, a device he built around an Arduino microcontroller. It measures temperature, relative humidity, barometric pressure, carbon dioxide and volatile organic compound content once per minute. The numbers are saved to a memory card. Unfortunately, the memory card file system got scrambled, probably because the battery ran low. There was no usable data from the air quality monitor. They left the ladder at about 10:00, heading for the Mountain Room. This year, there was more guano than usual on the guano gauges that get regular use, and more bats were seen than in past years. But they saw no clusters of bats. Everything was lone individuals. On the way back from the Mountain Room, they picked up the Anabat Roost Logger for return to Vona Kuczynska of U.S. Fish and Wildlife Service,

which had been on loan to us for three or four years. Everyone was out of the cave by 5:45 p.m. A much more thorough report is on the Carroll Cave website with detailed critter counts. **Oct 29th**: Bill Gee led a team consisting of Mike & Candace Kovacs, Jack Rufener, and cave owner Amy Hargroves into Stark Caverns to get some better photography of an overlook just off the west end of the Onyx Circle, check out some tight leads and blowing air at the far end of the Rugged Canyon, and to run an endoscope camera into a very tight hole at the Half-Way Room to see if it was worth trying to dig it out a bit. They accomplished all three goals, and will be doing a dig in the Half-Way Room in the future. The trip took about five hours. -- Jim Cooley

Meramec Valley Grotto (MVG). On Going: Nathan Curran and Bobby Swain have been leading the surveys of several new pits in St. Louis Co., the most extensive leading into 500ft of highly decorated horizontal passage. Basketball-size chunks of calcite were also found in one cave. **Sept. 10:** Kyle Mann led a clean-up trip



Group after Richard's Cave Pull Down Trip-TAG

to Camper Spring Cave to remove some graffiti. **Sept. 14-17:** Many MVG members attended MVOR and visited several caves over the weekend. **Oct. 4-8:** MVG, SEMO, and MSM members went caving together in TAG and attended the TAG Fall Cave-in. Caves visited were Cagles Chasm, Fern Cave (Surprise Pit), Wolf Cove Cave, Waterfall Cave, Sinking Cove, Flowingstone Pit, and Richard's Cave. MVG member Chad McCain suffered a copperhead bite to the chin while at the bottom of Cagles Chasm. Fortunately, it was a dry bite and he was able to stay and enjoy the next several days of TAG caving. **Oct. 13-15:** MVG members and many other cavers from around the state gathered at MCKC's Berome Moore Cave Preserve for the MSS/MCKC Meeting weekend. Many surveyed deep in the Moore Cave System on the 14th while others assisted the MCKC in planting 156 trees at their Pot of Gold Cave Preserve nearby. 2,913 feet of survey was done. Cave length stands at 25.87 miles. **Oct. 17-19:** Dan Lamping led MVG members and others in a survey of a large Shannon County Cave. More new footage was added and an area dubbed "Death Jenga" was discovered. **Oct. 18:** Alex Litsch, Kyle Mann, Derik Holtmann, Bryn Downes-Ward (Chouteau), Shelby Proctor (SEMO), Liz Sutherland (MSM), Garrett Bell (MSM), and



Group ready to hike to Fern Cave - Tag

Melissa Meyer surveyed in Valles Mines. After 12 hours they got 1,000 feet of survey and broke 4 miles of total survey for the system. **Oct 29:** Dan Lamping, Joe Light, Kyle Mann, and other MVG members did a bio trip into Cliff Cave. It was Joe's 50th trip into the cave. Dan was rocking a ceiling burner



Valles Mine Group

carbide light. There was cake afterwards.

Nov. 5th: Chad McCain took Isaac Smith, Shelby Proctor (SEMO), and Logan Dowd (SEMO) to finish surveying a bluff cave with 5 entrances in ONSR. They also surveyed an adjacent cave. —Alex Litsch



Group photo in Moore Cave System

MSS MINUTES. The Fall 2023 Board meeting of the Missouri Speleological Survey was called to order by President Dan Lamping on October 15th at the Lloyd & Ethel Hoff's Underground Nature Preserve, Perryville, MO. **Introduction of Officers:** Dan Lamping, President; Don Dunham, Treasurer; Alberta Zumwalt, Secretary. Krista Bartel, Vice-President, was absent. **Roll Call of Directors:** Al Quamen, LEG; Dave Hoffman (proxy for Emily Reimer), MSM; Max White, SPG; Michael Bradford (proxy for Tony Schmitt), MCKC; Allan Breite, Stygian; Alex Litsch, MVG; Kohl Mittchell (proxy for Rita Worden), Chouteau; Ken Grush (proxy for Jim Cooley), KCAG; Gary Resch, SEMO; Don Dunham (proxy for Doug Leer), MMV; and Gary Zumwalt, LOG. Absent were: CAIRN; Daedalus, OHG and PEG. **Secretary's report.** The minutes were distributed to the officers and directors after the meeting and printed in the March-April *MSS Liaison*. Minutes approved. **MSS Liaison.** Gary Zumwalt reported cash on hand of \$82.46; Sending out 28 paper copies and the rest as electronic copies, the next deadline is November 1st. **Treasurer's Report.** Don Dunham reported: September 30th, 2023 – ACCOUNTS: General fund \$9,935.68; Subscriptions/Donations *Missouri Speleology* \$4428.55; Research Fund \$15,579.18; Anne Johnson Data Fund \$15,724.77; Affiliation Fees \$250.00; Subscriptions *Liaison* \$60.00; Total \$45,978.18. ASSETS: Interest Checking \$9,978.18; Certificates of Deposit \$36,000; Total \$45,978.18. Don reported the most expense was the printing of the last volume of MOSpeleo, about \$800. Other expenses were small amounts. **Missouri Speleology.** Don Dunham recommended subscribing to five volumes at a time for \$50.00. He said some volumes will cost more than that. So, the cost is higher on the website, like the Aley volume which cost \$13 to print. An upcoming volume will be Island Branch Natural Area, probably out before Christmas. Pres. Lamping added that the content for MOSpeleo is broad – can be like Joe Light's historical papers. Cherokee and Cliff Caves have been best sellers. **Old Business:** none. **New Business:** Appointment of MSS Secretary. Pres. Lamping re-appointed Alberta Zumwalt as Secretary, with approval by the Board. **Cave Files/Database:** Ken Grush reported 7750 caves with 4500 mapped, leaving 3250 unmapped. The database 44,500 faunal records (one cave, one day, all observers, one species), and 27,400 reports (details of the caves, not necessarily a detailed report) and 4200 Use Monitoring reports (generally used for agency work, but the easiest and most useful report that can be submitted for any cave trip). Cave maps received so far this year are 103, most done by Scott House (26), Matt Beeson (19), Kohl Mittchell, Jim Cooley and Ken Grush, contributing 90% of the maps this year. There have also been huge contributions for two longer systems, Carroll Cave and Valles Mines. New caves – 87 so far this year, mostly by Kirsten Alvey with about 40 caves (8 with Mark Jones), Richard Orr (12 – mainly along the riverways) and JJ Huesling (with Dawn Martin) north of the Missouri River with 10. There is a backlog of about 290 leads, many of which simply need a survey to confirm. Many (75) are in Mark Twain and can be visited if done in conjunction with CRF and are surveyed. (CRF requires caves that are turned are also mapped). Twenty caves are in just 2 square miles in Texas County. Al Quamen said waiting until a cave is mapped could be ten years. Ken said he would like to have entrance photos and GPS readings because some caves get turned in with only quarter sections, no names, nothing else. Discussion. Ken did say that nothing is deleted and they are still in the database. He said Scott House has a list for CRF work and has to deal with the agencies involved. Ken said better documentation is needed, citing 788 features in Perry Co., and 790 features in Shannon Co. **Agency reports. Mark Twain National Forest:** Mick Sutton reported monitoring and biological surveys are ongoing. **Ozark National Scenic Riverways:** Pres. Lamping said work is continuing. **Missouri Department of Conservation:** Pres. Lamping said there are permits to go into caves on an approved list, working with a bat biologist that changes at times. **State Parks:** Pres. Lamping reported a recent work trip to Devil's Icebox, project led by Spike (Jeffrey Crews). **Others:** MVG had a cleanup in Meramec Caverns. Ken Grush reported he was to do entrance photos of caves at Mastodon Park but when he got there, he was told that he couldn't do it and there were "private property" signs on part some of the park property. **Affiliate Organizations Project Reports. MCKC.** On Saturday, surveying was done in Berome and planting 156 trees (12-13 species on an approved list) at the Pot of Gold property. **Carroll Cave** – Pres. Lamping reported a survey trip last January. There will probably be another this January. KCAG is putting up the pavilion. **Others:** Alex Lisch reported a restoration project on Pleasant Valley Cave, Jefferson County. Pres. Lamping expressed thanks to Alex, Tony Schmitt and MCKC for taking the project on. **Public Outreach.** Pres. Lamping puts things on Facebook, like MOSpeleo information. He also updates the website, with Joe Light doing the tech work. Pres. Lamping said he does get emails regularly, as a result of the website. **Next meeting.** Pres. Lamping said the

tentative plan to meet at Cuivre River State Park, Lincoln County, in March (to be set up by Kirsten Alvey) will not work for March, since there would be no water there. So, that will be postponed to a different time. Alternative plan, for the Spring meeting, is to try to meet at the Geological Survey in Rolla on a Sunday, if it is available. Paddy Creek area (Forest Service) campsites would be available. Meeting could be scheduled in early April or May. Dave Hoffman suggested meeting on the University campus if the Geological building was not available. The Piney River Brewing Company was also suggested. Pres. Lamping said a date would be announced later. Meeting adjourned. —respectfully submitted, Alberta Zumwalt, Secretary.

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Cave Files Committee: Scott House (Chairman), Ken Grush, Mick Sutton, Dan Lamping, and Jeffrey (Spike) Crews.
NEXT LIAISON DEADLINE: JANUARY 5TH, 2024.