

# THE MSS LIAISON

## VOLUME 58 NUMBER 9-10

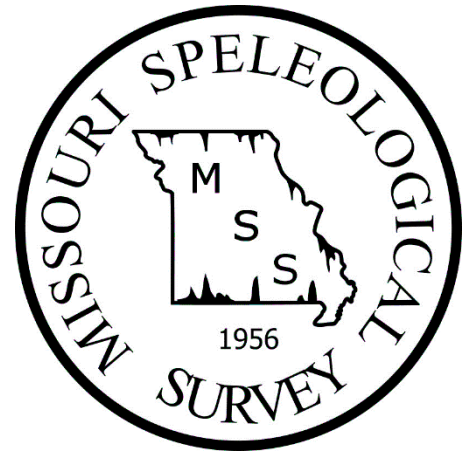
September - October 2018

AFFILIATE ORGANIZATIONS:

CHOUTEAU-KCAG-LEG-LOG-MMV-MSM-MVG-OHG-PEG-RBX-  
SPG-SEMO-MCKC-CCC-CAIRN.

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**Missouri Speleological Survey President's Message October 2018.** Despite the foreboding forecast of biblical rains, the Fall MSS meeting at Current River State Park was a great time. Before the weekend began, we had a long list of objectives and a sizable group of cavers expected to come, as well as ambitious plans for a large map and gear display for the public. Weathermen across the region however, conspired to keep people home with predictions of heavy rain throughout the weekend and flash flood warnings across the state. As the weekend drew nearer, the number of cavers bowing out increased by the day. Nevertheless, while it did rain all day Friday and poured on us during the drive down Friday night, the rest of the weekend was fairly dry and beautiful. The Current didn't rise, so one small group monitored caves via kayak and a much larger group went to Echo Bluff State Park to work on graffiti removal, left over the Camp Zoe events, as well as to perform a bio survey, per request of the park, to see whether the cave closure had any noticeable impact on the presence of cave life. While a crew was visiting Camp Zoe Cave, Sinking Creek did begin to rise from rains further upstream. In the hour it took them to inventory the cave, the stream became turbid and rose a couple vertical feet, making for an entertaining ford back across the stream. Unfortunately, the rising waters cut short plans to survey and monitor a few other small caves upstream of Echo Bluff. Meanwhile, back at Current River State Park, Brenda Goodnight did an outstanding job acting as docent for the public to view cave displays set up in the gym, which included numerous tri-fold boards, courtesy of Kirsten Alvey, of the Missouri Bat Census, along with a few large cave maps and the MSS store. Thank you Brenda. Many thanks also go out to Scott and Patti House along with their friends, the Wessels for all of their work at organizing, cooking and cleaning for the masses. Saturday evening was a good time socializing in the nostalgic setting of the Alton Box Club's former retreat and each meal, provided by CRF, was both delicious and abundant. Fortunately, cavers came together for the weekend and chipped-in money to the tune of a few hundred dollars, which was donated to Current River State Park to help with upkeep of the facility. As usual, the MSS meeting itself was uneventful, but the weekend surrounding it was great. **The next MSS meeting** is scheduled for Saturday, January 26 at 1:00 PM at the Missouri Geological Survey in Rolla. Please contact me if you are interested in or willing to give a presentation that morning, before the meeting.

**Identifying Cave Life: Part 5 – Spiders.** This is another installment in an occasional series to help those doing cave monitoring, or who are just interested in knowing what they are looking at. As always for invertebrates, a small hand lens will assist greatly when you are looking at these critters. **First**, how do you know you are looking at a spider? Seems obvious and usually is, but a lot of people confuse the harvestmen or daddy long-legs (aka opilionids) with spiders. They are easy to tell apart – the harvestmen have one-part body – one rounded or oblong blob with long legs attached. This distinguishes them from spiders, which have a body sharply divided into two parts – a head + thorax (the cephalothorax) and an abdomen. It is also possible to confuse small spiders with mites – again, mites have a one-part body, not obviously divided into head, thorax and abdomen. **The Ozarks** are home to some fully cave adapted spiders, but they are small and hard to see, and you are more likely to encounter the larger, pigmented spiders that like to hang out in the twilight zone. The

commonest of these are the so-called fishing spiders of the genus *Dolomedes*, a large spider that is a familiar sight on the walls and ceilings near the entrance. Two species commonly show up – *D. scriptus* and the somewhat darker *D. tenebrosus*. Distinguishing these two is best left to the specialist. All spiders are carnivores, but fishing spiders are hunters not trappers, and you will never see them on a web.



**Fishing spider *Dolomedes scriptus***



**Wolf spider *Pirata* sp.**

Wolf spiders (usually one of the *Pirata* species) are much less common in caves, but can be easily confused with fishing spiders. They are similar in appearance and also lack webs. The pattern on the abdomen is probably the easiest way to tell them apart for the casual observer - *Dolomedes* have a complex chevron pattern of light and dark

brown, whereas *Pirata* abdomens tend to be rather plain, with at most front to back dark and light striping or rows of light spots.

Another large twilight zone spider, often extending into the dark zone, is the cave orb weaver, *Meta ovalis*. Unlike hunting spiders, these hang out on typical orb webs. The abdomen is strikingly patterned yellowish and black. You will also frequently see silken balls hanging from the walls in the vicinity of the spiders – these are the egg cases. For reasons unknown, but probably related to insect abundance, *Meta* is much more common in caves along the rivers and larger creeks than in upland caves.



***Meta ovalis***



***Meta* with egg case**

Not all spiders are confined to the twilight zone. Deeper into the cave you may well encounter one of the troglophiles. The most common are several species of funnel web spider from the genera *Coras* and *Cicurina*. As the name implies, they occupy funnel shaped webs—silken funnels

often buried in sediment with only the mouth showing. They are frequently found on or in the vicinity of bat guano piles. The commonest and largest species, *Cicurina cavealis* has a characteristic pale tan abdomen.



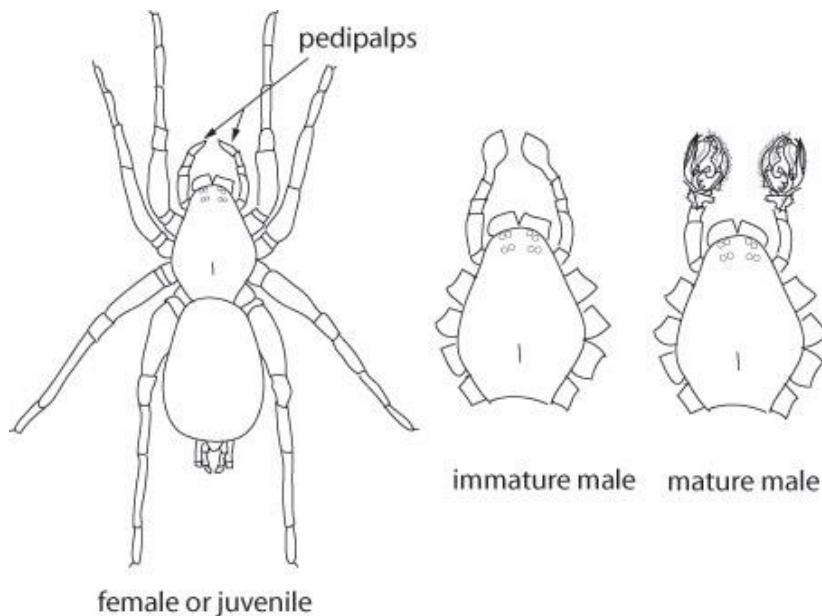
***Cicurina cavealis* funnel web spider**

Another funnel web spider that turns up fairly often is the common household species *Cora medicinalis*. While on the subject of household species, people are often surprised to learn that the brown recluse, *Loxosceles reclusa*, is very rare in Missouri caves, despite its liking for dark, damp cellars. I once dismissed Jon Beard's report of a brown recluse because in all the thousands of records generated by Bill Elliott,

Gene Gardner and myself, there was not one brown recluse – they just didn't inhabit Missouri caves. The very next week I collected one from deep in the dark zone of Sluiceway Cave! Since then, several others have been recorded (and Jon's record is now accepted!)

Then there are the true cave dwellers, the troglobionts, never found outside a cave. Missouri has three species, all of them small, white, eyeless spiders from the family Lynphiidae. They are impossible to distinguish without microscope work. One of these may be unique to Missouri – a species of *Islandiana* (pronounced ICE-landiana from the genus being first described from Iceland). Despite being fairly common and widespread, it has still not been described, and does not have a specific name.

Some fun spider facts: distinguishing male from female is of little importance to the casual observer but is crucial for taxonomic work since in most species, identification is easiest on a mature male. So how do you tell? There are two leg-like structures called pedipalps extending forward from the head. In females and juveniles, the tip of the pedipalp is slender and pointed. As a male matures, the tip gradually expands into a bulb-like structure, then on the final molt to maturity the bulb opens up into a byzantine complicated mess of interlocking parts. This is a secondary sex organ, used to transfer sperm to the female. How is this done? –very carefully!



Female spiders have a well-deserved reputation for cannibalism of their mates, which are often much smaller. If the male isn't careful he will be eaten before performing, and will in any case probably get eaten afterwards. In the case of our fishing spider, the female doesn't even need to bother killing her mate – he just keels over and shrivels up all by himself.

Next time – more eight-legged fun with the spiders' arachnid relatives - pseudoscorpions, harvestmen, mites and ticks.

--Mick Sutton

**Missouri Speleological Survey Files Report for November 2018.** Remember if you have new information on any Missouri caves, my email address is slagrush@gmail.com . We need your help to make the database more complete. **The MSS sent:** -80 new faunal records and 15 use monitoring forms for one day's activity! On 9/8/18 an army of CRF/MSS volunteers descended on Current River (CRSP) and Echo Bluff State Parks as a preamble to the triannual MSS meeting. The army went to 15 caves and monitored all of them collecting faunal records as they went. But wait the army was divided and one division went to Big Rock Bluff Cave and continued a survey of this multi-entrance cave. The army included: Mark Jones, Matt Bumgardner, Dillon Freiburger, Rita Worden, Tony Schmitt, Kirsten Alvey, Jon Beard, Jim Sherrell, Tyler Skaggs, Mick Sutton, Sue Hagan, Jim Sherrell, Lorin O'Daniell and the Dan Lamping family. The second division included Chad McCain, Dennis Novicky, Matt and Kelly Bliss. The elite team fielded the public outreach and cleaned one of the heavily vandalized at Echo Bluff State Park; a job that was only interrupted by the rising waters of the adjacent Sinkin Creek. The creek was rising due to the remnants of Hurricane Gordon passing through the state. About 30 of the faunal records came from Sutton, but these records did include a few that he collected before the MSS weekend. Missouri Bat Census and the MSS had information booths set up in the historic gymnasium at CRSP were adeptly handled by one person, Brenda Novicky. Large map displays were also shown in the gymnasium. To support this large group, Scott House ran logistics while a crack team of Patti House, Chris and Rhonda Wessels ran the kitchen serving breakfast and dinner and offering food during the day as needed. **Jon Beard sent:** -A redrawn map of Ratcliff Cave (CL=313 ft.) in Laclede County. Not to say the old map wasn't nice, but the new map is cleaner,

sharper than the old. Trying to follow the dripline around this cave, I discovered why it is also referred to as Ratcliff (Cave) Sunken Gardens, also check out Beveridge's book, Geologic Wonders and Curiosities of Missouri. - A trip report and Use Monitoring form for Beaver Creek Cave, the site of a recent rescue in Taney County. The cave was evaluated for potential gating. **Matthew Beeson sent:** -An email discussing his search for the Crinoid Pits in Benton County. There is a strange coincidence of 2 pits being in the NW corner of a section, but in 2 adjoining townships and ranges. Now if the area had an overabundance of pits, that is not at all surprising; however there aren't many pits in the immediate area (that we "know" about). Is this just a coincidence or poor locations? Or perhaps there are many more pits in this area than we currently know? Beeson actually reported on his 1994 trip to the pits in the LOG Ozark Speleograph. Anybody been to the Crinoid Pits in Benton County, send me a note, love to clear up this mystery? Beeson is planning more trips to get some clarification for the database. -Monitoring forms and a trip report to Barry County, working under the umbrella of CRF, he visited 5 caves and supplied monitoring forms on each. Each cave got a GPS location which helps verify accurate records are being kept and then a trip report for the day's events. Monitoring forms and trip reports are part of the CRF agreement to provide for feedback on agency work within the state, like the Mark Twain National Forest and the Ozark National Scenic Riverways in MO. For just recently coming back to caving, he already understands and fulfilled these requirements for his day trip. We even got some new photos to add for "cover pictures" of the caves. The caves are Slant Rock Cave, Drop Cave Shelter, Creekside Cave and Waterfall Ledge Cave. We're still trying to straighten out whether Drop Cave is the same as Sinkhole Ridge Spring Cave, but we do believe he found the Spring Cave as the fifth cave he found was a spring. Thirteen faunal records were submitted for this initial trip. -On a return to Barry County, he collected additional survey and faunal data for three of the caves in the same area as above. Shortly thereafter he submitted maps for two of the caves: Sugarcamp Hollow Shelter (surveyed to 25 CL) and Waterfall Ledge Cave (surveyed to 44 CL). Sugarcamp was also monitored as it was not seen on first trip. **Jim Cooley sent:** -4 faunal records and a CRF monitoring use form for his Riverways work in Shannon County. Considering his access and the heat, Cooley decided to swim to the entrance towing his gear on a tether. -Final maps for Ford Cave in Texas County. This is a private landowner initiative with 15 caves or more on the property, but the land went to auction at the end of September and we fear access will cease with new owners. Lots to do before closing! -Final maps for Ride In Cave in Texas County; this was the same owners as Ford Cave but it appears the property now has new landowners, pending closure on the property. The database knows this cave as Buzzard Cave No. 2, but the locals call this cave Ride In, because they do ride their horses right into the entrance of the cave. Cooley not only added a symbol to his "Legend" to identify the area trafficked by horses, he shows a photo with horses in the entrance on the map. -Final map for Piney Creek Blowing Hole (CL=181) in Barry County. Maps included sketch, book, Xara file, B&W and color. **Luke Dodd sent:** - Information initially to confirm locations on 2 caves in Christian and Stone County. He also sent entrance photos. Later he sent more locations and photos on 4 caves in Taney County and 3 from Christian County. Good GPS locations help improve the database, if you get the opportunity collect them in the field then send them to email address at top of this section. Dodd was found through the Missouri Caves, Mines and Rock Formations Facebook page. For all, please private message (PM or Messenger) details on caves and their locations. **Dillon Freiburger sent:** -A GPS location for Pine Run Cave in Stone County. His location pointed out an error in the database where the location was entered incorrectly; a number got entered wrong and the cave actually spotted a kilometer to the south. The old database location was replaced with this GPS which also reflects the description of the cave that it is beside the road. Lots of small tweaks need to be made, send in your reports, your locations and help us improve the database. -A preview of his new map of the 4-cave Wallace System in Barry County; there will Wallace Cave, Wallace Pit (previously submitted) and the 2 new karst features, Wallace Resurgence and Wallace Shelters. Actually, he submitted the main table records for the last 2 features which were new to the database but offered a preliminary view of the system in question. Freiburger has a run-time of the database, a subset database that allows him to see what currently exists in the database and in turn add and improve the handful of counties that he was given. -A trip report, 8 faunal records and monitoring forms for Borderline Cave and Mosquito Squadron Pit in Barry County. Freiburger followed up and submitted a final map of Borderline Cave. **Bill Gee sent:** -A data dump of information from Carroll Cave in Camden County. The collection was 299 files in 19 folders, 8.3 GB, with lots of reports, graphs, photos and videos. It will take a long time to incorporate more of this material into the database, but for now it is also stored in our archives, besides

the CCC's archives. -38 faunal records from a recent Carroll Cave trip. **Derik Holtman sent:** -19 photos focused (yes!) on the fauna of Black Rock Cave, a bio-diverse cave in Ste. Genevieve (see also Litsch). -20 photos of Larkin Ford Cave and 34 photos of Forester Cave, both in Shannon County. Photos were collected on a recent monitoring trip that CRF regularly does. CRF trips often offer a rare opportunity to see caves that are otherwise closed. As part of that CRF agreement, photos should be shared with CRF which Holtman readily does. **Gary Johnson sent:** -A report on Beck and Elkton Caves in Hickory County done back in 2014. Buried within Beck's report was reporting on three other caves in the same area: Bell, Hidden and Little Slot Cave. Lots of good reporting. One of the entrances of Elkton is now for sale. Johnson does an excellent job of describing not just the cave but the area and its geology. We could use more of this kind of reporting. **Mark Jones sent:** -His collection of over 472 photos on 13 caves in Shannon and Carter Counties for work done on the Ozark National Scenic Riverways. Mark also pulls his photos together into a PowerPoint that helps explain what each photo shows. In addition, he had 8 Reports, 28 faunal records and 8 Use Monitoring Forms for the database. **Dan Lamping sent:** -Report, 3 faunal records and a use monitoring form for a trip Bealert Blowing Spring in Shannon County. He also sent a faunal record noting a higher than usual count of Grotto Salamanders in Carroll Cave, Camden County. **Alex Litsch sent:** -A faunal report on Black Rock Cave, a bio-diverse cave in Ste. Genevieve. He also sent 7 photos and a video from the cave (see also Holtman). -A summary of 14 or more faunal records for Crevice Cave in Perry County. Lots of variety of fish, salamanders and invertebrates are found in Crevice. **Joe Light sent:** -Two trip reports for Little Hamilton and Hamilton Spring Cave in Washington County including 7 new faunal records and verification of GPS location. **Randy Long sent:** -An inquiry about a lead in Jefferson County with a "treasure" map for a location on an adjacent landowner's property. His information dating from 1966 led to further investigation and a report from 1989 from Leo Hancock. After contacting the landowner, we concluded there was enough information and actually 2 sketch maps of the feature to consider this a bona fide cave. Regrettably the landowner was not swayed to allow access to his caves. Another location in Perry County was provided but needs field work at this point. **Chad McCain sent:** -New map of Roaring Well (CL=196 ft., CD=30 ft.) in Ste. Genevieve County. Access is through a well casing that appears to have bypassed a nearby collapsed or filled entrance. New Map of Sunburst Shelter (CL=~25 ft.) in Callaway County and Throne Room Shelter (CL=~25 ft.) in Ripley County. Can you say peripatetic!? McCain travels/caves all over the state. - Information on a cave lead in Washington County, more to follow when McCain can verify that it is a cave. - Recent survey notes on Jim Ridge Cave in Howell County. Previously 181 ft. of this cave were submitted with a "drafted" map, but the map stated that the cave continued. This set of survey notes is for an additional 193 of surveyed passage and it still goes. **Ben Miller sent:** -A new map of Corner Crawl Cave (CL=612 ft.; VR=48 ft.) which looks a-maze-ing in plan and vertical views. **Jim Ruedin sent:** -3 Use Monitoring forms, 11 Faunal Records, 3 entrance photos and a trip report for Chicken House, Island and Stairstep Caves in Crawford County. -Trip report, Monitoring, and Fauna Records for Forester and Larkin Ford Cave in Shannon County. **Kayla Sapkota sent:** -3 monitoring forms, 9 fauna records and a trip report for a recent visit to Barry County in SWMO. Photos were also sent to further identify the caves. Her trip report mentions that the 3 caves were also surveyed. Now, I can't wait to see her maps. The caves were Gravelly Tunnel, Gravelly Talus Cave and Scorched Tree Cave. **Tyler Skaggs sent:** -GPS and entrance photos for Blankenship, Seago Springs, Crack and Transom Caves in Texas County. Skaggs lives in Raymondville in the heart of Texas County. Seago and Transom are new caves for the database. **Mick Sutton sent:** -35 new fauna records. Sutton has been digging into various file sources and found a batch of historical data, mostly dated prior to 1984.—Ken Grush

**Chouteau Grotto. Wayfarer Sink Project Kickoff: Oct 20<sup>th</sup>** - 12 members of Chouteau and 3 from Pony Express spent the afternoon working on the clean-out of Wayfarer Sink, a promising pit in a vast sinkhole plain stretching from Cooper County through northern Moniteau County into Boone County and bisected by the Missouri River. Though there are several cave entrances east of the river, such as Devil's Icebox, a significant entrance to the caverns below has never been found this side of the Big Muddy. Perfect weather was appreciated as appliances, recyclables and trash were removed, sorted and loaded into pickups. All the junk is more than 30 years old and only two vehicles are in there, best we can tell, one of which is the sink's namesake. There is a space beneath one of them where smaller debris has settled and sunk into the limestone canyon, a main feature of the view from above, that will surely someday support a protected rope as we

continue to dig and delve our expectations. Late in the afternoon Dave Seidel, Chouteau president, took five newish members up the road a piece to Bruce Cave. Though it's a "thru trip" cave I hear they chose to go back through again! We haven't set a date to return to Wayfarer, but all who participated in the clean-out seemed happy with the work somehow as we returned to Rita Worden's place, where Josh Welch was grilling pork steaks and chicken quarters for the crew at Chouteau's Annual Fall Cookout. Thanks to all who worked so hard! --Rita Worden

**Lake Ozarks Grotto (LOG).** Aug. 18<sup>th</sup> – Ken Long took Jamie Fuliss (OHG) and Byron McDaniel (from the lake area) into Kiesewetter Cave. It was a 3 ½ hour trip. They saw 2 full-grown Grotto Salamanders, a Pickerel Frog, and 4 Pipistrelle Bats. **From Sept. meeting** – Ken Long visited Top of the Rock in Branson where he and Monica rented a golf cart to do a 2 ½ mile paved tour which included going in a cave with the golf cart. Dwight Weaver



brought some historic items on Stark Caverns for the museum that they are working on, some items donated and some on loan. The program was Kerry Rowland's video of Lechuguilla Cave in New Mexico, along with some fascinating cave history. **Sept. 12<sup>th</sup>** – Gary & Alberta Zumwalt helped Klaus Leidenfrost pump Goodwin. Gary mowed the grass and weeded. While Klaus burned some brush. Jean Knohl came to put more paint on the picnic table she donated.

**Sept. 22<sup>nd</sup>** -Gary, with the help of our son and two grandsons, cut cedar poles from trees on our property to use for the pavilion. **Sept. 30<sup>th</sup>** – Gary

& Alberta Zumwalt transported the cedar posts to Goodwin. **From Oct. meeting** – The program was done by Christen Easter who compiled a bat trivia game which had some very interesting facts. **Oct. 21<sup>st</sup>** – Goodwin workday attended by Klaus Leidenfrost, Jean Knoll, Ken Long, Jeff Bowman from Blue Springs (Kansas City area), Ted Windels (Master Naturalist), Maria Thompson with Ollie, Gary & Alberta Zumwalt and 3 Missouri Science & Technology students from Rolla: Elizabeth Sutherland, Ben Asker and Andrew Miller. We built the pavilion, pumped the cave, and cut some brush. Jeff found the largest walking stick (aka devil's darning needle) that I have ever seen! It was a long day but there was a lot of good help. —Alberta Zumwalt



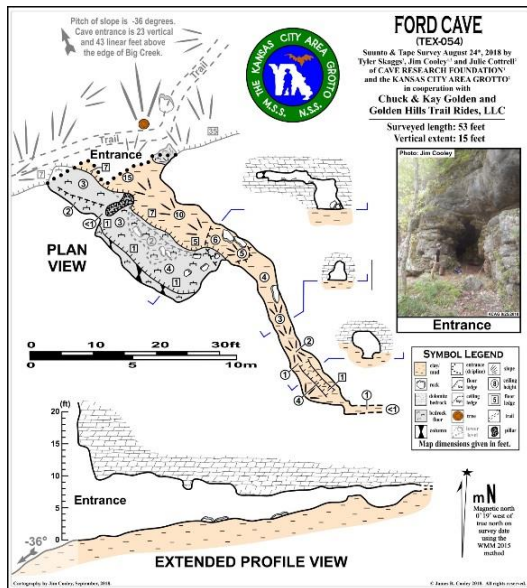
**Meramec Valley Grotto (MVG).** **Sept. 2<sup>nd</sup>** - Chad McCain, Gary Resch, Edmund Tucker, Brian Biggs, and Matt Bliss surveyed 380 feet Rich's Cave in Union County, IL. **Sept. 4<sup>th</sup>** - Derik Holtmann and Alex Litsch surveyed 325 feet in a new Ste. Genevieve Co. cave. Also- Chad McCain, Gary Resch, and Edmund Tucker did a door to door trip in Blackfathom River Cave. **Sept. 8<sup>th</sup>** - Chad McCain, Dennis Novicky, Matt Bliss, and Kelly Bliss surveyed in Big Rock Bluff Cave in Shannon Co., MO. 490 feet of survey was obtained and a 5th entrance was found. Total length is 900 feet and all the entrances require vertical access. Also- Jim Sherrell, Jon Beard, and Alicia Beard cleaned graffiti from a cave at Echo Bluff during the MSS weekend. **Sept. 9<sup>th</sup>** - Use monitoring on ONSR. Visited 10 caves. Typical trash. Tony Schmitt and Kirsten Alvey. **Sept. 15<sup>th</sup>** - CAIRN visited Lon O'Dell Cave to set trails and take photographs. Craig, Jess, Andrué Gasquez, and Jeff Crews. **Sept. 22<sup>nd</sup>** - Alex Litsch organized large survey push at a complex mine system. There was a big turnout of cavers and over 1200 feet of survey was obtained. **Sept. 30<sup>th</sup>** - Alex Litsch and Katelyn Schwoeppe led a group of new MSM cavers into Roubidoux Cave. **Oct. 3<sup>rd</sup> – Oct. 7<sup>th</sup>** - Chad McCain, Chris Doerhoff, Jeremy Weih, Matt Bliss, Gary Resch, and Michael Bradford descended onto the TAG fall cave-in and visited many vertical caves.—Alex Litsch

**Roubidoux Grotto (RBX).** **Oct. 20<sup>th</sup>** - National Speleological Society-Cave Diving Section Midwest hosted a workshop in Saint Robert, Missouri. Roubidoux Grotto hosted a post workshop social outing and cave trip for 20 attendees. Andy Free and Kelsie Johnson led the group of cave divers thru Railroad Cave, answered questions and provided info on safe caving practices. The evening concluded with brews, BBQ and bonfire. The NSS-CDS

group seemed to have a grand time in the cave; a first for many! **Oct. 23<sup>rd</sup>** - Karen Hood, Roubidoux Grotto presented an educational cave safety presentation to the Newburg Children's Museum Afterschool Program children.—Karen Hood

**Middle Mississippi Valley (MMV).** **Aug. 25<sup>th</sup>** - Jeff Fennell, Chuck Bright, Rick and Michael Haley, and others (total of 13) visited Berome Moore and took the Four Hour Loop. The rest of the group consisted of Chuck's colleagues from work. Good group! **Aug. 26<sup>th</sup>** - Brian Biggs participated in a trip into Valle Mines which resulted in the mapping of a door to door connection within the cave. No other details were provided. **Sept. 2<sup>nd</sup>** - Brian Biggs worked on surveying in the upper section of Richers Cave in Illinois. **Sept. 21<sup>st</sup>** - Jim Sherrell visited East Perry County to work on Fall 2019 MVOR planning. This included communication with various land owners regarding cave access during the MVOR. **Sept. 22<sup>nd</sup>** - Bryan Hall, Michelle Leicht and Larry Abeln surveyed in Valle Mines. **Oct. 20<sup>th</sup>** - Larry Abeln checked out a cave lead in Fenton. He reports that it possibly "goes" but will need to speak to the land owner for more details. **Oct. 21<sup>st</sup>** - Dane Driskill checked out a cave lead in Frohna, MO. He went with the land owner to the location and confirmed the cave. A ladder/rope will be needed for further investigation. He will return later in November. It was reported that SEMO Grotto looked at this cave in the 1970s.—Doug Leer

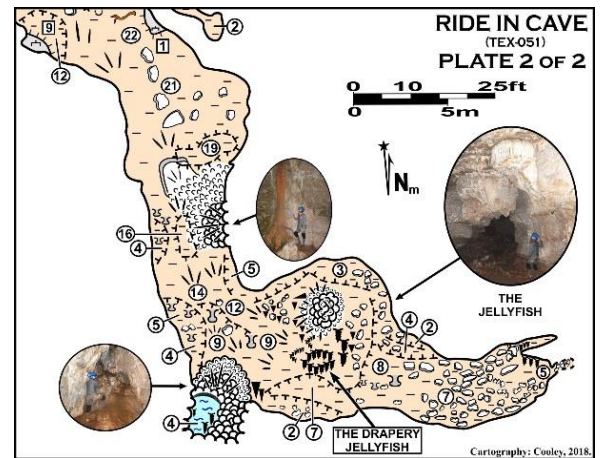
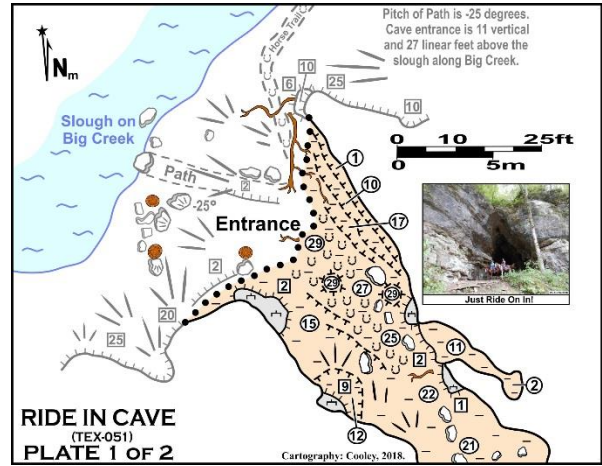
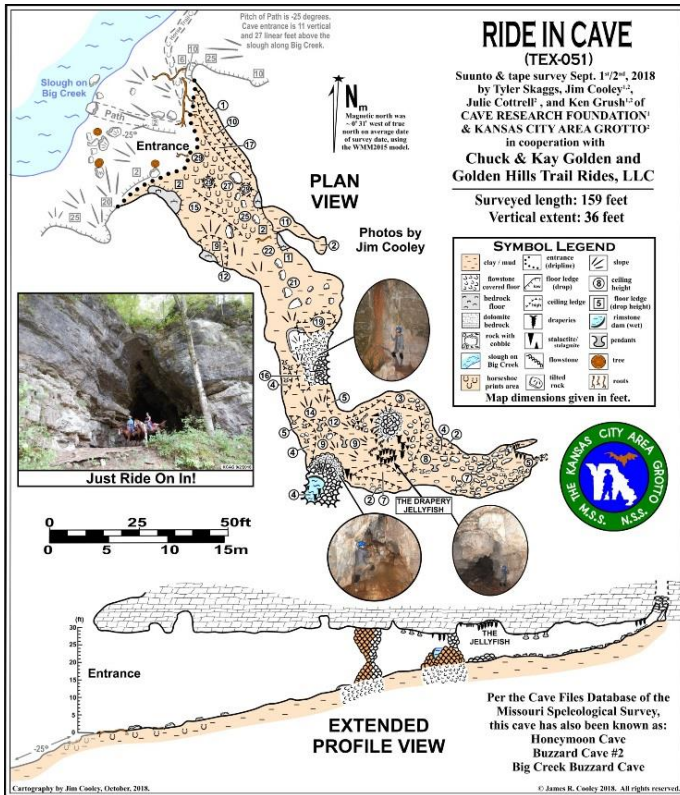
**Kansas City Area Grotto (KCAG).** KCAG has joined forces with Cave Spring Park of Raytown, Missouri on a new project. Given the absence of any kind of real cave at the park, or of any substantial caves in the Kansas City metro area, and given the absence of any youth-engaging outdoor or environmental underground education programs in the area, to fill this gap we are working on a state-of-the-art building which will feature a simulated cave structure of different caving levels, built by a company out of Bulgaria called WALLTOPIA. The project will also include meeting and educational rooms, rappelling, and climbing walls. This facility will be offered to general public, school educational programs, Scouts and youth groups, corporate team building, etc. KCAG's



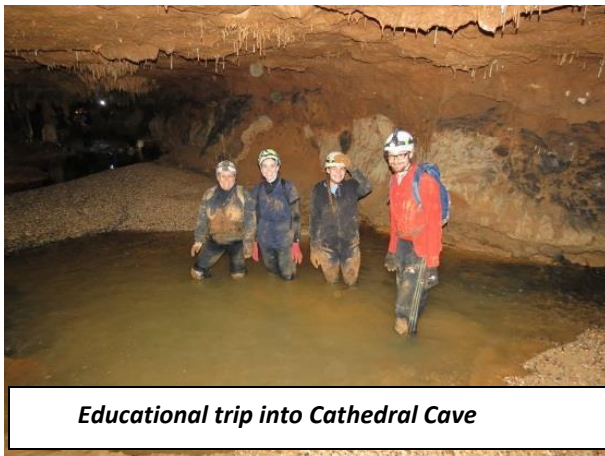
President Pic Walenta, has been asked to join the Cave Spring Park Board of Directors, and will be active in all aspects of the decision making for this project. KCAG's Secretary Laura Jaynes, and members Nicole Rilden and David Foran, will be also active participants representing KCAG. **July 3<sup>rd</sup>** - Jack Peters led a trip including Bill Gee, Jaxson Peters, and Kristen Godfrey into Carroll Cave that was initially planned for educational purposes, but ended up being to download data loggers. Areas visited were Carroll passage and Upstream Thunder River. Originally scheduled for a group of grad students that are studying blind cave fish, about a week before the trip, several of the students had conflicts and they all cancelled. It was a short trip – Bill was the first person to rappel into the cave at about 10:20 a.m., and the team closed and locked the hatch at about 2:20 p.m. Gee tried to download the rain gauge logger before he went into the cave, but it did not behave as it usually does. He assumed it was because the bright sunshine was interfering. After exiting the cave he tried again and

got the same results. It appeared that the logger might have a dead battery. However, later analysis showed that a valid set of data was, in fact, recovered from this data logger. Gee reports that the river level in Carroll was about as low as it ever gets. They saw one cavefish in Thunder River and two in UL2. There were several fresh bat carcasses near the ladder. Gee turned over a few rocks looking for isopods but found only one which was about five millimeters long. They did not see any salamanders nor any live bats, but saw lots of fresh sand, especially in upper Thunder River. Analysis of the data from the data loggers showed a flood event in mid-June that went to about 2.4 feet in Thunder River. The marked trail around the giant formation in Carroll Passage has pretty much disintegrated. It needs to be rebuilt. A number of trail marking reflectors in upper Thunder River were missing. A trip or two should be scheduled to update the trail markers. The Golden Hills Trail Rides surveys are continuing. **Sept. 1<sup>st</sup>** - Jim Cooley, Tyler Skaggs, and Julie Cottrell completed the survey of 53-foot-

long Ford Cave (TEX-054) that Cooley and Skaggs had started on Aug. 26<sup>th</sup>. They also started the survey of 159-foot-long Ride In Cave (TEX-051). **Sept. 2<sup>nd</sup>** - Cooley and Cottrell completed the survey of Ride In Cave, and began



a survey of Bat Cave (TEX-054). **Sept. 3<sup>rd</sup>** - Cooley and Cottrell spent half a day continuing the survey of Bat Cave. Also - Dennis Novicky, Rita Worden and Shawn Williams entered Allie Spring Cave (PUL-317) through the newly discovered second entrance, which bypasses the 847-foot-long hands-and-knees watercrawl, and navigated WAY back to the 60-foot-high Texas Dome. The objective was to find out if there was passage at the top of the dome, and if so, where it went. Novicky had free-climbed half of the ascent previously. Once he had climbed back up to that spot, he found no place that would hold anchors. He decided that ditching the technical gear and doing a very calculated free climb would be best. This plan worked, and he found going passage. Novicky returned about 10 minutes later to tell of a hands-and-knees and belly-crawl that went for at least 150 feet, curved slightly to the left, and had a nice breeze. Before descending, he secured a rope to facilitate future explorations. Total time in cave was eight hours. There are now at least four going leads in Allie Spring with another 200 feet of passage that needs to be



surveyed to connect hanging surveys (i.e., to finish tying the new entrance into the main cave.) **Sept. 15<sup>th</sup>** - Kristen Godfrey, Pic Walenta, Kirsten and Seth Wyatt Colston joined Onondaga State Park's experienced naturalist on a six hour trip, covering 4,400 feet off rarely seen off-trail cave passage, on an educational tour in Cathedral Cave, exiting cave at the gated natural entrance on the Meramec River. This entrance was regated by CRF in March, 2013. Also, Jim Cooley accompanied Missouri Department of Conservation biologist Dave Woods and his three sons to Cobb Cave (CHR-123) in Christian County, where the cave entrance was assessed for a chute gate to protect a gray bat maternity colony. U.S. Fish and Wildlife money may be

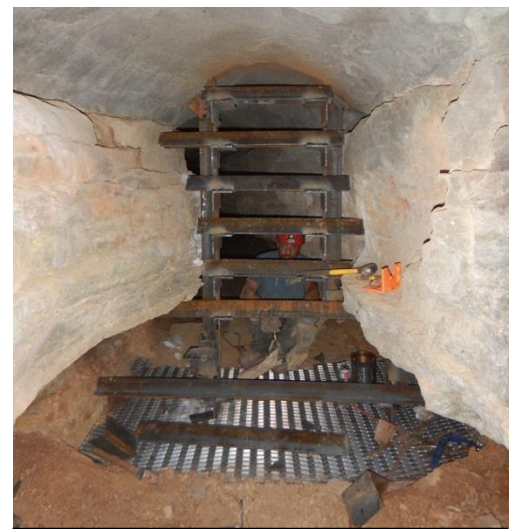


available to build this gate on private lands. **Sept. 16<sup>th</sup>** - Continuing the Golden Hills Trail Rides survey, Jim Cooley was shown Witch Cave (TEX-206), a new cave to the MSS, by Chuck Golden, the landowner. Cooley was able to present Golden with completed maps of Ford and Ride In Caves. Cooley then met up with Kirsten Alvey-Mudd of Missouri Bat Census, Sarah Hooper, a post-doctoral fellow with the Mark Twain National Forest (MTNF), and Tyler Skaggs, to check on and inventory the gray bats in Bat Cave (none found), plus find the Twin Caves #1 & #2, as well as a small, new cave nearby, discovered recently by Skaggs. The day ended with Cooley and Alvey-Mudd starting a cartographic survey of Witch Cave. **Sept. 17<sup>th</sup>** - Cooley and Alvey-Mudd continued surveying in Witch Cave. At noon, Alvey-Mudd left and was replaced by Ken Grush. Cooley and Grush were then joined by horsewoman Susan Wagner, a patron of the Golden Hills Ranch, who showed us the route to Morgan Caves #1, #2, and #3. (A Morgan family lived in Morgan Cave #2 from 1937 to 1942, when they moved to the city to take jobs in war production factories.) We also discovered a new cave, Under the Tree Cave (TEX-207). **Sept. 18<sup>th</sup>** - Cooley and Grush monitored and took notes in Ride In Cave (TEX-052), and then continued surveying, with Susan Wagner, Bat Cave (TEX-053), where we discovered and surveyed an 83-foot-long passage descending through an enormous breakdown collapse that ended up at a waterfall well below the main cave. **Sept. 19<sup>th</sup>** - Cooley and Grush checked out local terrain features Possum Pit, Agee Sinkhole, and Pine Flats Sinkhole, finding one deer but no caves. We were also taken, along with Susan Wagner, on a long UTV ride by Chuck Golden, the landowner, which allowed us to locate and explore One Room Cave (TEX-045) and Bradford Cave Hollow Cave (TEX-157). **Sept. 20<sup>th</sup>** - Cooley and Grush returned to Witch Cave (TEX-206) and finished the survey there. Cooley then proceeded to the MTNF's Winona Ranger Station, and loaded up CRF's gating construction gear. The next day, Cooley took the gear back to Kansas City and stored it in his parent's garage. **Sept. 25<sup>th</sup>** - Cooley took the gating gear back down to Radium Cave in Barry County, where a second mine shaft needed to be closed with a cupola gate. This larger of two shafts had originally been scheduled for closure with the other shaft and the horizontal entrance back in 2015, but it had collapsed and apparently closed, thus obviating the need for an enclosure on this hole. In the interim, it CONTINUED to collapse, opened back up, and so



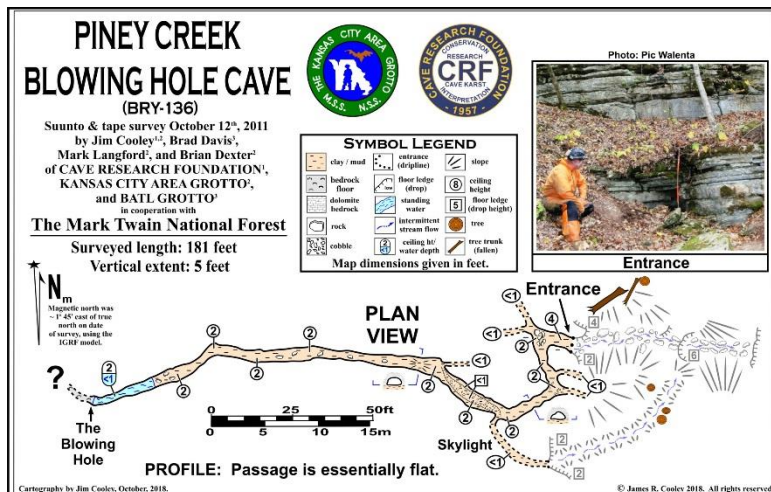
*Most of the Radium Cave Gate Crew*

by spring, 2018, it again required a bat-friendly enclosure for public safety. **Sept. 26<sup>th</sup>** - Cooley worked with several MTNF personnel to deliver steel, set up the work site, and remove downed trees that had fallen into the shaft. **Sept. 27<sup>th</sup>-29<sup>th</sup>** - Cooley and a team consisting of Jay Bridgewater, Joe Williams (MSM) and his girlfriend Margot, Julie Cottrell, Aaron Thompson (BMG, SPG), Art Medley (SPG), Tyler Smith and Adrian Daniels, along with some MTNF personnel, built the cupola gate. The CRF crew camped along Sugar Camp Scenic Drive. Finishing this project early, we decamped and headed over to Bluff Dweller's Cave (MDD-001) on Saturday afternoon, where we were royally received by Ray & Ann Bunch, the owners of this show cave, and Nicole Ridlen (BMG, SPG), who is the manager of this attraction. The accommodations in the Cavern Hotel were rustic and bordered on opulent. A splendid feast was prepared by Cottrell and Margot. Everyone also got a free tour of Bluff Dweller's Cave. **Sept. 30<sup>th</sup> – Oct. 1<sup>st</sup>** - We built a small gate on Flutestone Cave (MDD-028), also on the Bluff Dweller's Cave



*Joe Williams welding on Flutestone Cave Gate.*

property, which had begun to receive significant vandalism. The crew for this gate consisted of Cooley, Cottrell, Bridgewater, Williams, Ridlen, Smith, Daniels, Thompson, Medley, Ray Bunch, and Jon Beard (SPG). Nathan Burton stopped by during the project to see how we built these gates. Burton is the new owner of Old Spanish Cave (STN-002), an old show cave in Stone County that he intends to reopen. He was interested in seeing if we could design a bat-friendly gate to protect a couple of other, smaller pristine caves on his property. **Oct. 2<sup>nd</sup>** - Cooley returned the gating gear to the MTNF Winona Ranger Station After finishing Flutestone. **Oct. 3<sup>rd</sup>** - Cooley proceeded back to the Golden Hills Trail Rides ranch, where he met back up with Ken Grush. **Oct. 4<sup>th</sup>** - Cooley and Grush continued the survey of Bat Cave (TEX-052), which they completed on **Oct. 5<sup>th</sup>**. Also. they started the survey of nearby Potato Cave (TEX-053), which they continued on the 6<sup>th</sup>. **Oct. 7<sup>th</sup>** - Cooley and Grush started the surveys of Morgan Caves #2 (TEX-049) and #3 (TEX-048). **Oct. 8<sup>th</sup>** - We completed the surveys of these two caves, and started the survey of Morgan Cave #1 (TEX-050), while taking time out to give a tour of Bat Cave to one of the patrons of the ranch. **Oct. 9<sup>th</sup>** - Cooley and Grush continued the survey of Morgan Cave #1, but did not complete it. During this stay at the ranch, we were treated to compensatory camping and lodging, and were invited to eat sumptuous breakfasts and suppers, free of charge, at the Golden Hills dining lodge, by our very generous landowners, Chuck and Kay Golden. As our way of saying thanks, we gave a caving presentation the first night after supper. It was so warmly and enthusiastically received that we had to give a presentation after supper EVERY night after that! These presentations, incidentally, resulted in us getting several leads and invitations to visit and map other privately owned caves in Missouri, including a large, well known, and unmapped one in Miller County. **Oct. 14<sup>th</sup>** - DJ Hall led two novice/educational trips for a total of 21 members of the Midwest Hiking and Outdoor Adventure Meet-up Group into Perkins Cave, an MCKC permit cave in Camden County. Hall has also been very active in our youth outreach and Scout mentoring programs. **Oct. 27<sup>th</sup>** - Pic Walenta and Andy Isbell followed up on three cave leads in the Kansas City Metro Area. **Oct. 28<sup>th</sup>** - Jim Cooley and a team of Max White, Charley Young, and Cheryl Paulson (all of SPG) met with the landowner of a southern Missouri cave that was once a well-known show cave. This new owner wishes to reopen this cave as a commercial show cave, and was very enthusiastic in showing us his new treasure. Unfortunately, there has been a lot of graffiti added to the interior by vandals since the cave closed, not all of it of a family-friendly nature. In addition, we visited another obscure cave entrance on a different parcel of property (this landowner



has purchased at least eight caves in southern Missouri), and evaluated this site for a gate. THIS highly decorated cave has yet to be ravaged by vandals, so the landowner is keen to protect its pristine formations and passages, even though it could never be developed as a show cave. Cooley will be designing, and a CRF/KCAG/SPG/MSM/BMG crew will be erecting, a landowner-funded, bat-friendly cave gate at this site in the near future. Then, the only people who will be able to get into this cave in the future will be responsible, respectful members of the organized Missouri caving community. (And

when they get there, they won't be treated to numerous poorly drawn, over-sized penises spray painted on the walls, lots of empty beer cans and bottles – mostly broken – nor a hash of up to three-foot-tall spray-painted names recording the Who's Who of the Missouri Cave Vandal Community.) Cooley also turned in, at long last, the map for Piney Creek Blowing Hole Cave (BRY-136), which was surveyed in 2011.-- Jim Cooley

**Springfield Plateau Grotto (SPG). Aug. 1<sup>st</sup>**—Jon and Alicia took the tour of Lewis and Clark Caverns in the state park of the same name in Montana during the NSS convention. This is a fascinating and well-decorated limestone cave that is almost as vertical as it is horizontal, developed along 40-degree dipping beds near the top of a mountain side. The half hour hike to the entrance afforded a great view of the Jefferson River valley far below. The tour exited the cave by way of a 530-foot artificial tunnel. **Aug. 3<sup>rd</sup>**—On the last day of the NSS

convention, Jon and Alicia Beard hiked to the top of Mount Helena overlooking the city of the same name, an elevation change of about 1,200 feet. Near the top of the mountain there is a short vandalized cave in the limestone. Montana has roughly 400 documented caves. **Aug. 8<sup>th</sup>**—Jon Beard accompanied three Springfield parks staff members in a leisurely informational discussion in the first 800 feet of Giboney Cave (Greene Co) to share the geology and biology of the cave. The information may be useful in educational tours provided by the park staff during the summer months. **Aug. 10<sup>th</sup>**—Brandon Van Dalsem, Dillon Freiburger and Treavor Bussard were parts of survey teams surveying in Fitton Cave (AR) as part of CRF projects at the Buffalo National River. Survey teams mapped in the Lower East area of the cave. **Aug. 13<sup>th</sup>**—Treavor Bussard was assisted by Jon Beard in the survey of 72-foot long Crawlway-all-the-way Cave (Greene Co), one of the small caves in Sequiota Park. While Treavor was sketching, Jon picked up small pieces of trash (beer bottle pieces, cigarette butts, etc.), took a few photos of the cave and counted fauna (5 dark-sided salamanders and about a dozen camel crickets) **Aug. 16<sup>th</sup>**—Using Chris Lewis's Excel chart and photos taken of all break surfaces, Jon Beard visited Fitzpatrick Cave (Christian Co) in its Paul's Gallery section and found matching pieces of stalactites previously catalogued. A future trip is needed to actually rejoin the pieces. Fauna was counted as well (1 cave salamander, 9 pickerel frogs and one bristly cave crayfish plus several camel crickets). **Aug. 25<sup>th</sup>**—Melvin Johnson manned a display at Bennett Spring State Park on bats and caves. This is part of Melvin's and SPG's public outreach program that has educated thousands of people on the importance of these natural resources. **Sept. 1<sup>st</sup>** -- Wayne's Well-- Dillon Freiburger and Aaron Thompson surveyed the pit to a total of 67 feet at the bottom of the pit. They were greeted by a mature timber rattlesnake which made for a nerve racking survey. **Sept. 8<sup>th</sup>**—Jon and Alicia Beard were joined by Tyler Skaggs, Jim Sherrell and Lorin O'Daniell in restoration of Zoe Hole Cave (Shannon Co) in Echo Bluff State Park. Spray paint, etched graffiti and trash were removed from nearly the entire cave. Time was cut short by rising water from recent rainfall. Several others were involved in bio monitoring and cave survey in the county. Also—Chris Lewis discovered recent vandalism to the entrance building of Crystal Caverns (Barry Co), and MCKC-leased cave. The steel door had been breached plus a large hole knocked out of an exterior wall. However, the angle-iron gate immediately inside the structure was still intact. Also--Merit Rock Cave and Conglomerate Cave were monitored by Dillon Freiburger, Mark Jones, Matt Bumgardener and Rita Warden. **Sept. 9<sup>th</sup>**—Jon and Alicia removed etched graffiti in and around the entrances to Big Spring Anastomosis Cave (Carter Co) in the Ozark National Scenic Riverways. **Sept. 15<sup>th</sup>** -- Dillon Freiburger, Kyle Kapella and Corey Maize finished the survey of Dogman Cave on the Buffalo River with over 500 ft. The cave is named after a tale of a man and his dogs living in a large entrance of a cave. **Sept. 19<sup>th</sup>**—Jon Beard accompanied MDC agents Rhonda Rimer and Kevin Hedgpeth in visiting a minimal undocumented cave, which was named Ege Cave. The small cave has a minimal trickle stream flowing through it and with difficulty can be crawled about 20 feet before becoming too tight. It doesn't lack height, roughly 3 to 4 feet, but most of it is so narrow one is forced to bellycrawl against the ceiling. Several salamanders were documented. **Sept. 22<sup>nd</sup>**—Dillon Freiburger was assisted by Aaron Thompson and Corey Maize in the beginning of the survey of Mosquito Squadron Pit Cave (Barry Co) in Mark Twain National Forest. The 48-foot deep pit previously reported was measured by Disto only to a ledge—apparently the narrow pit is much deeper than originally thought. Plans are to return with a longer rope to reach the bottom. A five-footed grotto salamander was found in the cave. They also surveyed Borderline Cave, Barry Co. The cave is a few hundred feet from the Missouri Arkansas border. **Sept. 23<sup>rd</sup>**—Charley and granddaughter Abby Young, Jack Rosenkoetter, Bill Palmer, Jim Huckins, Roy Gold and Jon Beard were joined by Roger Brown in a serious 4-hour photo trip to the upper level (“Dripstone Tour”) of Blanchard Springs Caverns (AR). More than 400 photos were taken altogether. **Sept. 30<sup>th</sup> – Oct. 1<sup>st</sup>** —Nicole Ridlen, Jim Cooley and Jon Beard were among several other volunteers who installed an entrance gate in Flutestone Cave (McDonald Co) to keep vandals out. This privately-owned cave has been vandalized over the years by spray painters and etchers. The cave was added to the Missouri cave files some 50 years ago by the late Jerry Vineyard and mapped more than 40 years ago by the late Bob Taylor. Some preliminary spray paint removal was done after the gate installation was completed. **Oct. 7<sup>th</sup>**—Brandon Van Dalsem and Treavor Bussard monitored a cave or two as part of CRF work in Mark Twain National Forest in Christian County. **Oct. 8<sup>th</sup>**—Jon and Alicia Beard photographed karst features in Ha Ha Tonka State Park (Camden Co) that included the spring, Devils Kitchen and the natural bridge. **Oct. 11<sup>th</sup>**—Ron Martin and Jon Beard presented a program on caves to the Branson Rotary Club. Jon ran the photo presentation and Ron handed out copies of Caring for Your Karst. The program lasted 30 minutes following the

club's business discussion. **Oct. 12<sup>th</sup>**—Paul Wightman, Brandon Van Dalsem, Casey Scarlet, Treavor Bussard, Jon Beard and Dave Ashley assisted Nathan Keith and Shiloh Beeman of the Ozark Underground Laboratory in using cave radios to determine a spot on the surface directly above the center of the Paradise Room in Fantastic Caverns (Greene Co). Brandon, Casey and Treavor carried the transmitter assembly through the 500-foot Paradise Crawl while the others drove to the area in the woods to use two receivers. Nathan and Paul operated the receivers and both found the “epicenter” or “null.” Jon and Dave spray painted spots and Shiloh drove a t-post. **Oct. 13<sup>th</sup>**—Brandon Van Dalsem, Dillon Freiburger and Treavor Bussard participated in CRF monitoring and mapping in the Buffalo National River. **Oct. 15<sup>th</sup>** -- Dillon Freiburger Aaron Thompson and Treavor Buzzard surveyed Cracked Bluff Cave to a length of 160 ft. The cave is a large joint in the bluff that ends in a 30 foot pit. Above the cave is an incredible view of the Buffalo River. **Oct. 20<sup>th</sup>**—Jon Beard presented his program on vadose speleogenesis in the Pierson Limestone for the NSS Cave Diving Section Workshop held in St. Robert, MO. After a BBQ supper courtesy of Roubidoux Grotto and the landowner, the group visited Railroad Cave (Pulaski Co) on a leisurely stroll through the cave. **Oct. 21<sup>st</sup>**—Brandon Van Dalsem, Casey Scarlet, Treavor Bussard and Jon Beard entered Smalley Sinkhole Cave (Greene Co) and crawled 500 feet on chert cobble to spacious White's Room to place the cave radio transmitter while Dave Ashley assisted Nathan Keith of the Ozark Underground Laboratory in using the receiver and mark the null to indicate the epicenter of the room on the surface. Smalley Sinkhole is an upstream segment of the Fantastic Caverns system. Later, Casey, Trevor and Jon crawled the opposite direction from the entrance to Welch's Room about 400 ft. of chert crawlway to repeat the procedure for Nathan on the surface. Many photos were taken in the cave passages including some of the 19 new hatchlings of Bristly Cave Crayfish in a small pool of water. The hatchlings were nearly transparent and one centimeter in length. **Oct. 28<sup>th</sup>**—Treavor Bussard and Jon Beard led a group of MSU biology students through parts of Breakdown Cave and all of adjacent Fitzpatrick Cave (Christian Co) in an informal bio-speleology field trip. Biology was noted. Their absence is deafening—normally over 100 pips are found this time of year in the caves. There were none in Fitzpatrick and only six in Breakdown. Also - Chris Lewis joined by 3 MSU students went to Crystal Cave in Barry County to check on the entrance, which has been breached but the gate inside the cave is still intact. **Oct. 30<sup>th</sup>**—Michael Trussler, Chris Lewis and Treavor Bussard assisted Jon Beard in leading Doug Gouzie's MSU speleology class through the Main Room of Breakdown Cave and the lower levels of Fitzpatrick Cave (Christian Co) in Jon's final guest lecture of this speleology class that Jon has been conducting for more than 30 years. The students were taught about the causes of breakdown and its role in forming large cave rooms, caves as ecosystems and preferential horizons for cave development. Biota were noted in the caves. Materials provided by Jonathan Beard, Dillon Freiburger and Chris Lewis.-- Report by Max White

**MSS MINUTES.** The Fall 2018 Board meeting of the Missouri Speleological Survey was called to order by President Dan Lamping on September 9<sup>th</sup>, at Current River State Park. **Introduction of Officers:** Dan Lamping, President; Scott House, Vice-President; Alberta Zumwalt, Secretary. Absent was Don Dunham, Treasurer. **Roll Call of Directors:** Chad McCain, MCKC; Rita Worden, Chouteau; Doug Leer, MMV; Alex Litsch, MVG; Lorin O'Daniell, PEG; Jessica Self, MSM; Krista Bartel, CCC; Max White, SPG; Gary Zumwalt, LOG; Ken Grush (proxy for Jim Cooley), KCAG; Bill Heim, OHG; Al Quamen, LEG (arrived after the meeting). Absent were: Dan Slais, RBX; Craig Williams, CAIRN; and a rep for SEMO. **Secretary's report.** Alberta Zumwalt reported that the minutes of the Spring 2018 meeting were distributed after the meeting to the Directors and Officers and were printed in the May-June issue of *MSS Liaison*. The minutes were approved. **MSS Liaison.** Gary Zumwalt reported cash on hand of \$211.30; sending out 42 paper copies and the rest as electronic copies with the next deadline is Nov. 1<sup>st</sup>. **Treasurer's Report.** Don Dunham had sent out the report electronically before the meeting and copies were distributed at the meeting. **REPORT OF THE TREASURER – August 31<sup>st</sup>, 2018 - ACCOUNTS:** General fund \$10,011.08; Subscriptions *Missouri Speleology* \$5091.12; Research Fund \$12,724.78; Anne Johnson Data Fund \$19,484.73. Interest checking \$39.52; Affiliation fees \$1400.00; Subscriptions *Liaison* \$661.00; Total \$49,412.23. **ASSETS:** Savings bonds \$2,000.00; Interest checking \$7412.23; Certificates of deposit \$40,000.00; Total \$49,412.23. **Missouri Speleology.** Pres. Lamping reported that the next issue will be History of Cherokee Cave by Joe Light. Scott House added that there are four issues planned on Caves on National Forest land and Barry Co. They also have other material for publication and urged those who wanted something published to submit it. **Old Business:** None. **New Business: Appointment of Treasurer –** Pres. Lamping re-appointed Don

Dunham with the approval of the Board. **Appointments on Research Council** - Pres. Lamping appointed Jeffrey Crews and Doug Gouzie to fill the positions. They join Mick Sutton and Bob Lerch to make up the four members of the Council. **Election of President and Vice President** – Dan Lamping was re-elected as President. Scott House was re-elected as Vice President. **Cave Files.** Ken Grush reported 7700 reports had been submitted. There are 5600 map records – many in Barry Co. He reported 33,000 faunal records. **Mark Twain National Forest** – Scott House said they are in negotiations for work to be done. **Ozark National Scenic Riverways** – Scott House reported that the 5-year permit expires next September so they are negotiating on that, too. **State Parks** – Scott House reported a good turnout at Current River State Park. CRF paid for the food. Donations totaled \$679 which will go to the MSS to send to Current River State Park for upkeep of the Park. Mick Sutton added that focus is on Barry Co., funding will run out in June. Jim Cooley is doing another gate. **Missouri Department of Conservation** – Pres. Lamping reported the current agreement is wildlife collection permits which expire the end of the year so they are working on renewal for next year. There is a limited number of people who can have the permits. **Others** - Scott House said he is working with the City of Perryville and the LAD Foundation for signs to go along a jogging and walking trail near Crevice Cave. Scott also reported that Tom Aley wanted better data on Tumbling Creek Cave (Ozark Underground Lab). Scott said he will be getting together a mass effort to do mapping for the project. Chad McCain reported he and Alex Litsch had surveyed 4.22 miles in Gegg Cave, Ste. Genevieve Co. Jon Beard said he submitted a thesis on “Vadose Speleogenesis in Pierson Limestone Caves.” Pres. Lamping mentioned the cave density map in *Liaison* that was done by Chuck Sutherland. Alex Litsch said they intend to run survey trips in Crevice every month and that it is the longest cave in Missouri. Valle Mines is still going with connections made between two entrances. Rita Worden said she is trying to get her grotto involved in a sinkhole cleanup. **Facebook & Website** – Pres. Lamping encouraged submissions. **Next meeting:** January 26<sup>th</sup>, 1 pm, Rolla with the MCKC meeting the same day. Meeting adjourned. – Respectfully submitted, Alberta Zumwalt

#### **MSS OFFICERS.**

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**SPG** – Max White, 2748 W. Maplewood, Springfield, MO 65807. 417-880-8475 bildmwc@aol.com

**Please note: Address change for Krista Bartel (CCC) and Jessica Self (MSM).**

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

**Historian-** Dwight Weaver – 38 Village Marina Rd., Eldon, MO 65026. 573-365-1171 dwightweaver@charter.net

**Cave Files** - Scott House, 1606 Luce St., Cape Girardeau, MO 63701. 573-651-3782 scott\_house@hotmail.com

**MSS web site** –www.mospeleo.org **Carroll Cave Conservancy website** <http://www.carrollcave.org>

**Ozark Caving web site**– [www.ozarkcaving.com](http://www.ozarkcaving.com) **MCKC website** – <http://www.mocavesandkarst.org>

**Caves of Missouri Discussion Group** – <http://groups.yahoo.com/group/cavesofmo>

**Petroglyphs, inscriptions, & pictographs:** [rockartmo.com](http://rockartmo.com)

**The new MoCaves:** <https://groups.yahoo.com/neo/groups/mocaves/info>

**Please Note: New members on research council are Doug Gouzie and Jeffrey Crews.**

**CALENDAR:**

**December 8<sup>th</sup> – Goodwin workday.** Contact Klaus Leidenfrost ([klaus1@fidnet.com](mailto:klaus1@fidnet.com)) for more information.

**January 1<sup>st</sup>, 2019 – Next MSS Liaison deadline.**

**January 26<sup>th</sup>, 2019 – Winter MSS meeting, 1 pm, DGLS Annex Bldg., 111 Fairgrounds Rd., Rolla, MO.**  
**Presentations before meeting. MCKC meeting will be the same day.**