

THE MSS LIAISON

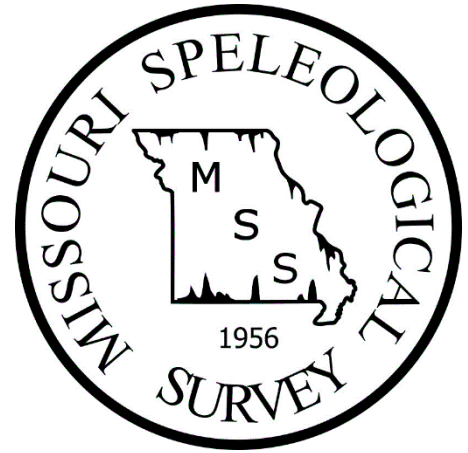
VOLUME 59 NUMBER 5-6

May - June 2019

AFFILIATE ORGANIZATIONS:

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

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Missouri Speleological Survey - President's Message June 2019 by Dan Lamping



The Spring 2019 MSS meeting was held at the Ozark Underground Laboratory, in Taney County, in conjunction with a resurvey effort in Tumbling Creek Cave. Tumbling Creek is a roughly two mile long cave owned by the Tumbling Creek Cave Foundation, a project of Tom Aley, founder of the Ozark Underground Laboratory (OUL). It is a large stream cave with sizeable passage and considerable upper level development. The cave is characterized as being the most biodiverse cave west of the Mississippi River, containing a documented 115 individual species, two of which are endemic only to this site. Most notably the cave is a major Gray Bat site and home to the Tumbling Creek Cave snail, a federally endangered species.

The resurvey was initiated by CRF after Tom Aley inquired about establishing vertical control for the existing map. Since there is no data from which the current map, produced by Don Rimbach, Bob Taylor, and others, was made, a resurvey project was begun in order to bring the survey data into GIS and use in land management above the cave. What better time to start a project like this than at an MSS meeting?

OUL has a bunk house, communal dining cabin and a new bathroom / shower house. Scott House, Ken Grush, Don Dunham, Jon Beard and Tony Schmitt, began survey from the man-made entrance and surveyed up to the stream, which was notably high, on the first day, Friday, May 4. Others arrived that night and the following morning. On Saturday, May 5 we got an early start and were into the cave before 8 AM. Over the night the stream had risen a bit higher, limiting where teams could go. Scott's crew of retirees plus a post-surgery Tony Schmitt,



Scott House sketches as Ken Grush reads data.

picked up where they left off the previous day, mapping in the mainstream, heading upstream. A crew of Mick Sutton, Sue Hagan, Rita Worden and Dillon Freiburger began their survey at the start of the East Passage, near the weir, used to measure stream flow. Their objective was to map up to and into the Hibernation Hall Passage. Meanwhile a crew of Dan Lamping, Jeremy Weih, Brandon VanDalsem, Nicole Ridlen and Kirsten Alvey-Mudd, later joined by Hannah Sanders, began survey at the start of Hibernation Hall passage in the East Passage and surveyed up to just before a large dome room and had to abandon survey due both to the presence of large numbers of bats as well as sketcher fatigue. Each of the teams made use of two sketchers, sharing responsibilities of plan, cross sections and profile. Much of the cave has established tour trails for interpretive groups, etc., which are frequently brought to the cave for educational purposes. This made travel convenient, but off-trail is the ever present Ozark clay, which quickly sticks to any surface, particularly boots, and is easily brought onto the trail, which was discouraged. Interestingly, the East Passage has some beautiful formations, though many of them have been dissolved from uric acid in bat urine.



Jon Beard stands next for a dissolved formation in East Passage

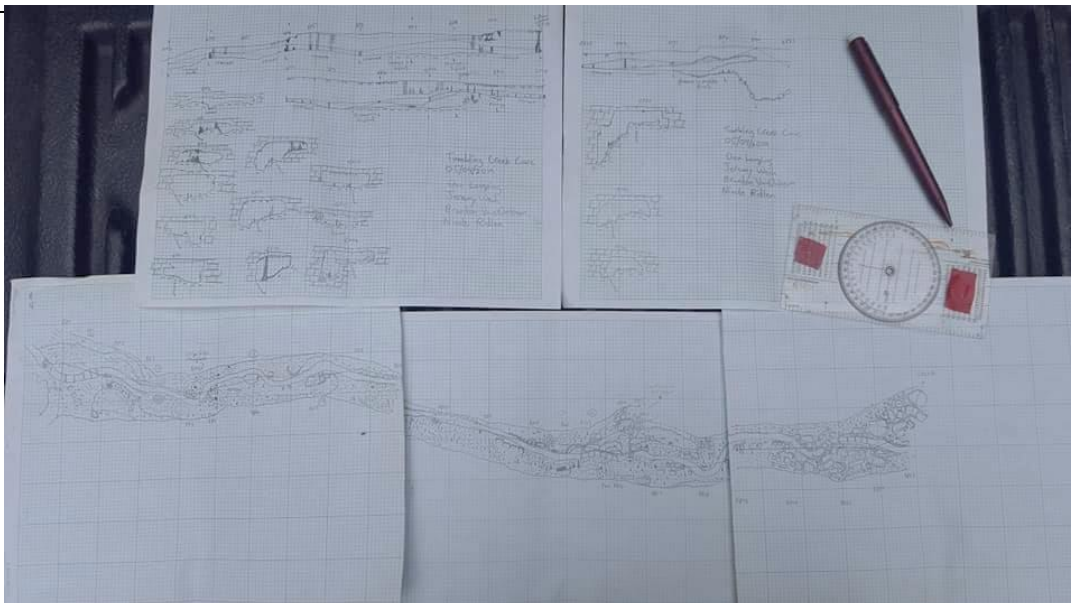
We were out of the cave reasonably early. Ken Grush took on the noble task of entering all of the day's survey data and we had a most excellent group meal, complete with a wild story by Rita Worden of a chance hitchhiking encounter with Elton John in the early 1970s, while she was pregnant, working as a door-to-door soap salesperson. True story. Later, a hike down to the natural entrance allowed for watching the evening bat flight out of the cave in a cool, relaxing setting, where the stream emerges from the cave's mouth, near Big Creek. In total, between the three teams, with one team getting two days of survey in, we mapped 2,261 feet of passage. The great difficulty for this cave survey will be the nearly constant presence of bats as well as the remote location for many of the mappers involved.

The following morning we had the MSS meeting, where Tom Aley welcomed us to the Ozark Underground Laboratory and talked about their efforts there. Additionally, he gave away several copies of journals from the Cave Research Associates, a much appreciated gesture. The meeting was held outside beneath the trees on a beautiful Ozark morning. We knocked the business out in no time and all made our way back home.

The next MSS meeting will be on Sunday, September 15 in Perryville at Berome Moore Cave. Mapping trips into Berome and perhaps a few trips into caves owned by the City of Perryville will occur that Saturday with camping both Friday and Saturday nights.



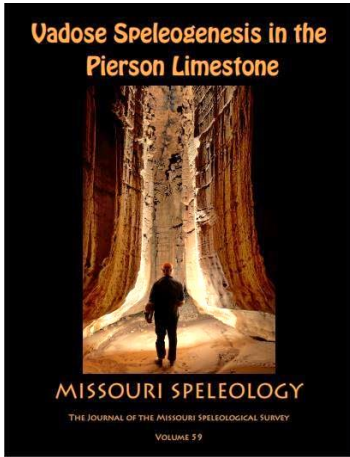
Clockwise: Brandon VanDalsem shoots the DistoX2, Nicole Ridlen holds target on the station, Dan Lamping sketches in the foreground as Jeremy Weih sketches in the background, east Passage field sketches.





MSS News and Outreach

Recently, *Missouri Speleology* editor, Don Dunham, organized a book signing at the Lemp Mansion for Joe Light and his manuscript on Cherokee Cave. While we didn't pack the people in, it was a good time hanging out for the day with Don, the Schmitts and Joe. This issue continues to see on the MSS website.



The latest issue of *Missouri Speleology* is also now available on the MSS website. This is a highly readable explanation of cave development within the Pierson limestone in Southwest Missouri by Jon Beard. The issue contains numerous maps and colored photos to support Jon's explanation.

Missouri Speleological Survey

To locate, record, conserve, and research the caves of the state of Missouri.

Contact us

...if you own a cave and want to report it or see what is known about it.

...to learn more about Missouri caves and caving.

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Missouri Speleological Survey

- The MSS was founded in 1956.
- Missouri has over 7,000 documented caves.
- Over 3,000 caves have been mapped.
- Approximately 100 "new" caves are documented each year.
- Over 70% of the caves in Missouri are on private lands.
- The MSS is a private, volunteer based, non-government organization, which cooperates with private landowners, NGOs, and local, state and federal agencies.

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Cave Mapping in the Ozark National Scenic Riverways

For thousands of years, humans have documented the Earth's landscape. This process is still ongoing in remote places such as caves. The Ozark National Scenic Riverways has over 400 caves within its boundaries. Volunteer cavers with the Cave Research Foundation and Missouri Speleological Survey continue to find and document new caves within the Current River watershed, expanding upon the collective knowledge of the Missouri underground.

Cave maps are essential for resource management and can reveal relationships between the surface and the underground.

A volunteer caver reads a compass through a tight constriction during original exploration in an Ozark cave as a fiberglass survey tape stretches across the cave floor.

A caver climbs into an upper level passage, never before entered, while mapping a remote cave off the Current River.

Cave maps are a starting point for any science or conservation efforts associated with caves. They show where the cave goes and can be used to make new discoveries.

A caver sketches the cave passage in a newly discovered room in order to create a finished map.

(Above right) CRF Ozarks recently put out an interpretive poster on cave mapping in the Ozark National Scenic Riverways. The poster highlights the value of cave maps as ways of documenting karst resources and celebrates the spirit of exploration.

(Above left) The MSS purchased a large quantity of bookmarks a few months ago, for free distribution to help promote awareness of the organization. Ideally, these were intended to give to non-cavers, but they've also been appreciated by cavers alike. We should still have some available at the fall meeting and if it seems they're worth it, we can always order more. – Dan Lamping

Missouri Speleological Survey Files Report for July, 2019. Remember if you have new information on any Missouri caves, my email address is slagrush@gmail.com. We need your help to improve the database and make it more complete. **Kirsten Alvey sent:** -A new location for Freedom Gate Cave in McDonald County. Although long working in this immediate vicinity, this new cave is finally getting recorded. Directions, descriptions, fauna records and photos have all been supplied. Alvey has been working on a project covering several new caves in McDonald County: Cave No More Cave, Waterfall Ledge Cave and Green Briar Ridge Cave that were previously (last Liaison report) reported by Matt Beeson. These new caves provided almost 30 new fauna records. **Bruce Archambault sent:** -Faunal tally sheets for cave trip with his nephews to both Cascade Caverns and Mill Creek Caves in Pulaski County; the nephews, Bruce (13yo) and Chase (11yo) whose curious eyes, undoubtedly did the hard part, spotting the critters. A separate trip report summarized the visit to the 2 caves. **Jon Beard sent:** -A map of the commercial section of Fantastic Caverns in Greene County, 2658 ft were displayed of this long cave system. -Five photos of Sweet Potato Cave in Barry County...always nice to have photos to help document the cave. -Updates to 8 caves in SWMO, along with 70 plus faunal records. **Matt Beeson sent:** -Maps on 3 new caves in McDonald County: Cave No More Cave (CL=79 ft), Waterfall Ledge Shelter Cave (CL=140 ft) and Green Briar Refuge Cave (CL=84). Along with the maps, Beeson updated the Main Table in the database for these caves. -An entrance photo of Blackie Cave in Stone County. -Updates to the main table of the database for Stockton Cave (CL=233) in Barry County, along with faunal records, an entrance photo and the new map. This cave was lost due to a bad location, was found and just didn't look passable, but returned to and entered and surveyed. **Allan Breite sent:** -Several photos from Vance Pit in Jefferson County. **Mark Brooks sent:** -Survey trip reports on Onyx Cave in Howell County and Berome Moore in Perry County. Five fauna records were in the reports. **CAIRN sent:** -3D images of cave signatures in Osage County. Craig Williams, Jessi and Michael Schoenewies took the photographs and processed them into 3D images. The images are much clearer than they appear in cave! Although not all photos were used in creating the 3D images, over 190 "standard" photos were taken and submitted to archives. **Jim Cooley sent:** -Two trip reports, 3 Use Monitoring forms and 16 faunal records for Onyx Mine Cave, My Cave and Onyx Crawl Cave in Camden County. We did not have maps on the last two caves, but Cooley is remapping all three. -Trip report and Use Monitoring form for 3 caves in Shannon County: Cave Spring, Rockhouse Cave and Tube Cave. Use Monitoring provided 2 new GPS locations for 2 of the caves. **Don Dunham sent:** -Dane Driskill's trip report for a visit to Indian Creek Caverns in Perry County. Regrettably, the sculpin issue is still controversial and the owners don't want visitors. **Derek Holtman sent:** -The most recent round of photography on the cleanup at Grandpas Hole in Ste. Genevieve County, some 65 photos. These are added onto the earlier round of about 25 photos. Progress is being made on this latest MCKC managed property; an excellent venture for all involved. **Paul Hauck sent:** -A complete folder of his work on the Ronald Hoff Cave in Perry County. He re-worked the cave map, but also provided surface detail of the larger sinkhole in which the sits on a second map. There are several mini-collapses within the sink. **Scott House sent:** -A new map for a new cave, Herky Shelter in Jefferson County (180 ft wide entrance but only 32 ft behind the dripline). There are lots more shelters like this one in Jefferson County, just need to find and report them. -Maps of Hobo Haven Cave (CL=20) and Aerie Cave (CL=32) in Texas County. The first is new cave for the files while Aerie has been long in the database but finally getting a map and details to flesh out the file on it. -A preliminary map of Sycamore Cave in Shannon County. **Joe Light sent:** -A trip report to Doss Cave in Crawford County, including an entrance photo and 2 faunal records. -Report on the clean-up at Grandpa's Hole in Ste. Genevieve County...a small mountain of tires and other trash, but bats were still using the cave. A great effort of many volunteers for one of the latest MCKC managed properties. -Report on a visit to Blakes Cave (aka Bee Tree Cavern) in St. Louis County, sadly highly vandalized. -Report on a trip to Little Scott Cave in Washington County. The report includes an entrance photo and faunal records. **Alex Litsch sent:** -A map of Tired Bed and Leg-eater Pit in Ste. Genevieve County; turns out that the two pits are connected for a composite length of 703 ft. Both pit entrances are 15 ft drops to access the rest of the cave. -Final map of Hackberry Hole (222 CL; 100+ VD) in Ste. Genevieve County; pit is a multi-drop feature with a 60 ft high dome at its terminus. -A new cave report on Hackberry Hole along with follow-up reporting on three other caves in Ste. Genevieve. (This map submission triggered my memory; sorry for late update on your April submission.) **Mick Sutton sent:** -A new species table, about 40 new faunal records and about as many modifications to existing records. **Jeremy**

Weih sent: -130+ of photos of a survey trip to Hackberry Hole in Ste. Genevieve County; only thin, very thin people may apply!—Ken Grush

NOTE: In the last Liaison, MMV's report was under the heading of MVG – our apologies to Doug Leer and MMV Grotto members.

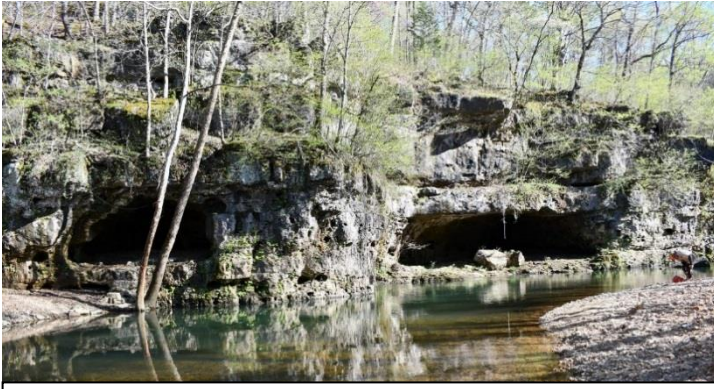
Middle Mississippi Valley (MMV). **Mar. 3rd – 12th** - Don Dunham, Scott House & others visited several caves, along the Ozark Riverways in Shannon County, with the purpose of cave monitoring. In one of the caves, to remain unnamed, more than 30,000 bats were found hibernating. **Mar. 23rd** - Mark Brooks, Brian Biggs, Derik H., Matt O. and Sammy Wenty Surveyed the Walker Section in Berome Moore. A grotto sculpin and a couple of bats were observed during the trip. **Mar. 24th – Apr. 1st** - Don Dunham, Scott House and Mark Brooks did survey work and map creation on a trip to Lava Beds National Monument in northern California. In all, 19 caves were visited. Obsidian flakes were found in one of the caves, which is indicative of human habitation. **Apr. 15th** -- Don Dunham and Ken Grush surveyed Herky Shelter. This is a large shelter cave near I-55. **Apr. 20th** - Brian Biggs, Chad McCain, Darren Sunimands, Jameson Guthries, Chuck Breite, Nathan Storm, Dan Lamping (and kids from all of these guys) participated in a kids trip into Berome Moore Cave. There were 16 people in total and the group did the "four hour loop". this was the second of such "kids trips" in recent times and everyone had fun. **Apr. 30th** - Jim Sherrell, Larry Abeln and Michelle Leicht investigated Tarpleys Mclormes (sp?) in the Valle Mines area. It was reported to have 60 foot deep shafts with 3 levels containing lots of minerals. Mining artifacts from the 1860s were found. Also, a Tommy Stick (a forged candle holder). **May 5th** - Don Dunham and many others participated in a re-survey of Tumbling Creek Cave during the Spring MSS meeting at the Ozark Underground Laboratory in Protem, Missouri. The goal is to create a new map of the cave. **May 18th** - Jim Sherrell, Adam Marty, Jeff Coleman and Eric Sutterlin visited Valle Mines where they explored Rocky Digg and Quarry Caos. There was approximately 800 ft. of passaged explored. **May 20th** - Jeff Coleman and one other person visited Chimney Cave. They stumbled onto this while searching for undiscovered hypogenic caves. **Jun 1st** – Don Dunham, Scott House, Ken Grush, Dan Lamping, Tony Schmitt and Mark Jones worked on mapping Sycamore Cave. It is reported to be a belly crawl that opens up into a very beautiful cave with a large room that, all by itself, took hours to map. **Jun 15th** - Jeff Coleman and Eric Sutterlin plus 2 others visited Valle Mines and explored Rocky Digg where they connected a loop passage. The group also scouted property east of Hwy 67 for additional entrances. None were found. It will be surveyed on the next trip.—Doug Leer

Lake Ozarks Grotto (LOG). **Apr 28th** – Goodwin Sink workday. Participants were: LOG members Ken Long, Gary & Alberta Zumwalt, along with Klaus Leidenfrost, Jean Knoll, and 4 MST students: Elizabeth Sutherland, Samantha Beadle, Andrew Miller and Brannon Schroeder. Gary brought more cedar logs, tin, etc. to construct a small tool shed next to the pavilion, which he worked on most of the day. Ken brought the potty, which was donated by LOG member, Jason Synder. With the help of the four students, it was carried to its location just past the pavilion. Ken anchored it down with rebar and donated the first roll of toilet tissue! Klaus burned a brush pile from an earlier work day and cut a tree that had fallen on the fence. The students made a chat-covered trail all the way to the pavilion and the potty. **May 11th** – Ken Long led a trip into Kiesewetter Cave with LOG member Christopher Dopp, Klaus Leidenfrost, Jean Knoll and 3 Scouts from Versailles: Quinten Ingram, Conner Souders, and Zack Brodersen. He reported an adult vulture was seen in the cave (past the gate), along with an adult and a baby Grotto Salamander, no bats. **Our May program** was a fascinating presentation by Bill Pfantz on Sumerian language and rock art of Missouri. Check out his website: rockartmo.com - Alberta Zumwalt

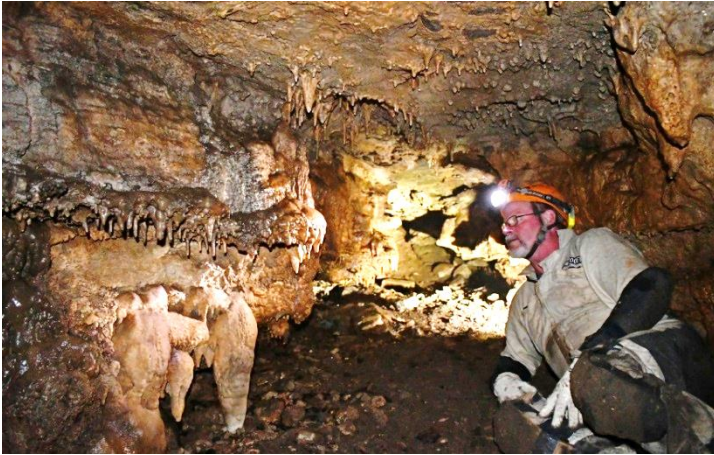
Springfield Plateau Grotto (SPG). **Apr 5th – 7th** - Matt Bumgardner, Treavor Buzzard and Hannah Sanders join other Cavers on the Buffalo River in Arkansas for Survey and Monitoring as part of a joint Project with CRF and the Buffalo National River. **Apr 5th** - Jim Cooley, Dillon Freiburger and Aaron Thompson joined the Corp of Engineers at Beaver Creek Cave and Beaver Creek Cave #2 to see about gating the caves. **Apr 6th**—Charity Hertzler and Jon Beard visited Ritter Springs Park (Greene Co) and hiked to various cave entrances to take pictures and check on signs of visitor traffic. **Apr 6th**-- Brandon Van Dalsem and Nicole Ridlen visited Carlsbad

Caverns. **Apr 8th**—Jon Beard conducted a walk-through of the tour sections of Fantastic Caverns (Greene Co) on his final day of surveying in the cave. The map was completed shortly after. Also--Brandon Van Dalsem and Nicole Ridlen explored Gypsum Sink holes. **Apr 11th** -- Melvin Johnson participated in Nature Awareness Outreach. **Apr 13th** --Matt Beeson, Matt Bumgardner, Dillon Freiburger and Aaron Thompson surveyed three new caves and visited Cave Hollow Cave (McDonald County). **Apr 14th**--Mark Brooks and Sammy Wentz finished survey of historical section of Onyx Cave, leaving only the pristine New Discover Section. Mark sketched to the gate and Sammy sketched the lower Pismo Beach passage For a Total of 329 ft. **Apr. 17th -18th** - Treavor Buzzard took groups from Nixa High School to Breakdown Cave. **Apr 21st**—Alicia and Jon Beard took the tour of Cascade Caverns (TX) as part of their return trip from a week of vacation at South Padre Island. **Apr 26th-28th**—Jon Beard and Dave Ashley attended the celebration of land acquisition at the Ozark Underground Laboratory's Myers property, hosted by Tom and Cathy Aley and the OUL staff. Tours of Tumbling Creek Cave were conducted by Tom, Dave and Nathan Keith (OUL) during Friday and Saturday. Jon stayed another day to conduct restoration in the East Passage of the cave. **Apr 28th** - Brandon Van Dalsem, Nicole Ridlen and Hannah Sanders visited Indian Creek Cave and Powell Cave.--Report by Max White, Materials provided by Jonathan Beard, Brandon Van Dalsem, Dillon Freiburger, Melvin Johnson and Sammy Wentz. **May 3rd – 5th** —Brandon Van Dalsem, Hannah Sanders, Nicole Ridlen, Dillon Freiburger and Jon Beard joined others (Dan Lamping, Scott House, Ken Grush, Don Dunham) in the survey of Tumbling Creek Cave (Taney Co). The crews surveyed from the shaft entrance into the East Passage and Hibernation Hall. On Sunday, Hannah and Jon did some trail maintenance to remove any clay surveyors inadvertently placed on the trail. **May 5th** -- MSS Meeting at Tumbling Creek Cave was attended by SPG members, Tom Aley, Jon Beard, Brandon Van Dalsem, Nicole Ridlen, Bill Hiem, Hannah Sanders, Cheryl Paulson and Max White. **May 9th** —Jon Beard assisted in surveying in Stark Caverns (Miller Co), a show cave in central Missouri. The survey thus far has been along the tour path. Bill Gee of KCAG is directing the project. **May 11th** —Jon Beard, Cheryl Paulson, Max White and guest Dani Majors and Chris Goldsberry joined KCAG cavers and the landowner in continuing graffiti and trash removal in Old Spanish Cave (Stone Co). Although much progress has been made in the two trips thus far, there remains a lot of spray paint on walls. **May 18th** -- Three teams of Cavers from Missouri and Arkansas including Dillon Freiburger and Hannah Sanders continued the survey of Fitton Cave as part of the CRF Project. **May 30th** -- Brandon Van Dalsem and Nicole Ridlen visited Sarcoxie Cave. **May 31st** --Dillon Freiburger and Brandon Van Dalsem joined other CRF caver in Arkansas to continue the survey of Fitton Cave.--Report by Max White, Materials provided by Jonathan Beard, Dillon Freiburger and Brandon Van Dalsem. **Jun 9th**—Due to impassible roads near (under!) Bull Shoals Lake, Dillon Freiburger and Jon Beard couldn't survey Beaver Creek Cave, so they joined three Arkansas cavers in surveying in a privately owned Boone County, Arkansas cave, surveying several hundred feet in two teams. **Jun 11th & 22nd**—Jon Beard removed most of the etched and spray painted graffiti in the main lower level of Fitzpatrick Cave (Christian Co) as part of the ongoing restoration of that gated cave. After five years, all that remains to be restored is the reattachment of several hundred broken speleothems in Paul's Gallery (the upper level). **Jun 13th** --Chuck Bitting, Dillon Freiburger and Aaron Thompson assisted in leading an educational trip for a group of High School Students into Willis Cave and Mud Cave. **Jun 25th**—Jon Beard directed the graffiti removal at Rattlesnake Cave (Christian Co) as part of CRF project work in Mark Twain National Forest. Jon was joined by USFS staff member David Paul and three men from the Youth Conservation Corps (YCC). The trip was coordinated with Nettie Sittingup-Perez of the USFS. --Report by Max White. Materials by Jonathan Beard and Dillon Freiburger.

Kansas City Area Grotto (KCAG). **Apr 20th- 23rd** - Jim Cooley and Ken Grush ridgewalked, did map quality control (QC) work, and surveyed caves on the Golden Hills Trail Rides Ranch in Raymondville, MO. On the 20th, Cooley and Grush were joined by Tyler Skaggs in a search for Lookout Cave, which surely exists, but was not found. Later that day, Cooley and Grush did map QC work on Morgan Caves #2 & #3 (TEX-049 & TEX-048 at 156 feet and 62 feet long, respectively), and then finished up the survey of Potato Cave (TEX-053), which turned out to have 354 feet of passage. On the 21st, Cooley and Grush surveyed the new 27-foot-long Triplet Slot Cave (TEX-212), discovered and reported by Skaggs, and then started the survey of nearby Left Twin Cave (TEX-047), which was completed the next day, yielding 349 feet of passage. On the 22nd, Cooley swam across Big Creek to Right Twin Cave (TEX-213), and determined that there was 100+ feet of significant passage beyond the large,



Left & Right Twin Caves – Golden Hills Ranch



Overlooked Cave – Golden Hills Ranch

Lion Cave (OZK-095), all on Cloud 9 Ranch. The drone was again used to find the distance above drain of Cave Hole Cave (OZK-030), Bear Cave #1 (OZK-088), Bear Cave #2 (OZK-089), Bear Cave #3 (OZK-090), and Bear Cave (OZK-031). Cooley did map QC work in Bear Cave, and later did passage work in Cold Cave (OZK-008). **Apr 27th**- Bill Gee and Cooley sketched the profile of Dani Cave, then Gee visited Frank Cave for the first time. On Sunday, April 28th, Cooley, Gee and Shawn Williams visited Fogey Cave (OZK-012). Cooley worked on cross-sections in the front half of the cave and QC tasks, while Gee and Williams traveled to the last big room in the long, low, predominantly stream-passage cave, to survey some overlooked low passages back there and do QC work. **Apr 29th** - Cooley, Gee and Williams did QC work in Cold Cave, with special attention to the New Discovery section. **May 9th** - Bill Gee led a survey trip to Stark Caverns (MIL-001), a recently reopened commercial cave in Miller County, assisted by Jon Beard, Amelia Niles, and Seth Colston. Gee and Beard sketched, while Niles and Colston did instruments. It was the first survey trip for both Niles and Colston. They surveyed the Queen's Loft, the Bone Passage and the Onyx Circle and cleaned up a bit of data from the previous survey trip on March 30th. There is a small section of tourist trail left to do, after which Gee move on to the wild parts of the cave. The next survey trip to Stark will probably be in mid-July. **May 11th - 12th** - Pic Walenta, Shelly, Baxter and Isla Williams, Dani Majors, and Chris Goldberry joined SPG's Jon Beard, Max White, and Cheryl Paulson, as well as the cave owner, on KCAG's second restoration trip to Old Spanish Cave (STN-002). They successfully removed a



Broken Speleothems – Upper Spring Cave

40+-foot-wide shelter-like entrance, including a (possibly) terminal room that was highly decorated and that may have a pushable, or perhaps diggable, lead. Comfortably surveying this cave will require transiting the creek, which is over six feet deep across the entire entrance, with a dry bag containing complete changes of caving clothes. On the 22nd, Cooley and Grush surveyed 89-foot-long Oneroom Cave (TEX-045); and located, GPSed and surveyed 46-foot-long Overlooked Cave (TEX-156); then located, GPSed, and monitored Scat Cave (TEX-046), until convinced to leave by an upset turkey buzzard (*Cathartes aura*) who was unsuccessful in distracting us from her two eggs, despite herculean efforts. **Apr 24th** - Cooley and Grush met Ron Moon, MTNF Forest Technician from the Potosi Ranger District, and ATVED out to Estes Cave (WSH-035) design a cave gate and assess logistical challenges. The trails and forest roads in that area have been all but destroyed by extensive ATV traffic, so navigating out to the cave was difficult and hazardous. **Apr 26th**- Lee Krout and Jim Cooley used Krout's drone to determine the distance above drain of Ship Rock Shelter (OZK-104), Dani Cave (OZK-048), Frank Cave (OZK-049), Moonshine Cave (OZK-024), and

large amount of graffiti from the first large room. This restoration effort is an ongoing project for KCAG, which looks like it could last a couple of years. Old Spanish, an old show cave closed since the 1970s, located 30 minutes south of Springfield and three miles north of Reeds Spring in the northwest corner of Stone County. It is a relatively dry cave with large rooms and is pretty easy to get around in. We have now opened this project up to youth groups and kids, as the main vulgar graffiti has been removed. If you have interest in organizing a restoration trip with your scout troop, church group, etc. let Walenta know. Primitive camping is permitted on site: No water, electric or toilets. **May 26th - 27th** - Jim Cooley and Julie Cottrell surveyed private caves in northern Shannon County, then on May 28th floated the Current River from Akers to Pulltite in order to monitor Cave Spring Cave, Tube Cave and Rockhouse Cave for CRF. **June 6th - 10th** - Cooley & Cottrell surveyed Onyx Crawl and My Caves on a Missouri Department of Conservation (MDC) conservation area. **Jun 9th** - Cooley met with the landowner's of Flippen Cave (BEN-007) in Benton County, which is about to become a Missouri Cave and Karst Conservancy permit cave with an associated campsite. Cooley also drove the landowners, new residents in the area, all over the back roads in western Benton County, and showed them all the secret swimming holes and boat ramps, but none of the good morel hunting spots. **Jun 19th** - Cooley conducted cave survey training and cartography orientation for Ginny Friedrich, who is new to the grotto and interested in both speleo-cartographic and biological surveys. **Jun 22nd** - Cooley, Cottrell and Friedrich returned to the



The Bobbsey Twins (*cathartes aura*) – Onyx Mine Cave

aforementioned MDC Conservation Area to begin a resurvey of Onyx Mine Cave. We found two juvenile turkey buzzards in the same low nursery area 18 feet from the main entrance where we found two juvenile buzzards last year. These dudes were even MORE pissed off than the other pair. Outside the cave, their mom dive-bombed us several times during our lunch break. No worries -- we weren't eating her poults. (Anyone got a good baby buzzard recipe?) Cottrell and Cooley returned to Onyx Mine Cave and continued the survey on June 29th. The two buzzards were still there, and still intensely unhappy that we were. --Jim Cooley

MSS MINUTES. The Spring 2019 Board meeting of the Missouri Speleological Survey was called to order by President Dan Lamping on May 5th at the Ozark Underground Lab. Pres. Lamping thanked Tom Aley for his hospitality. Tom Aley thanked those that mapped in the cave. He gave some of the history of the Lab. He presented some Cave Research books to: Don Dunham, Dan Lamping, Kirsten Alvey-Mudd, Scott House and Ken Grush (for the cave files). Mick Sutton and Sue Hagan declined because they already had the books.

Introduction of Officers: Dan Lamping, President; Scott House, Vice-President; Don Dunham, Treasurer; Alberta Zumwalt, Secretary. **Roll Call of Directors:** Bill Heim, OHG; Tony Schmitt (proxy for Alex Litsch), MVG; Dan Slais, RBX; Al Quamen, LEG; Ken Grush (proxy for Lorin O'Daniell), PEG; Max White, SPG; Rita Worden, Chouteau; Jeremy Weih (proxy for Jessica Self), MSM; Nicole Ridlen (proxy for Jim Cooley), KCAG; Gary Zumwalt, LOG.

Absent were: CAIRN, SEMO, CCC, MMV, MCKC & Daedalus. **Secretary's report.** Alberta Zumwalt reported that the minutes of the Winter 2019 meeting were distributed after the meeting to the Directors and Officers and were printed in the Jan.-Feb. issue of *MSS Liaison*. The minutes were approved. **MSS Liaison.** Gary Zumwalt reported cash on hand of \$14.02; Check received today from Don Dunham for \$500. Sending out 39 paper copies and the rest as electronic copies, the next deadline is July 1st.

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 – April 30, 2019- ACCOUNTS:** General fund \$10,031.54; Subscriptions *Missouri Speleology* \$5742.27; Research Fund \$9,724.78; Anne Johnson Data Fund \$19,484.73. Affiliation fees \$450.00; Subscriptions *Liaison* \$681.00; Total \$46,114.32. **ASSETS:** Savings bonds \$2,000.00; Interest checking \$8114.32; Certificates of deposit \$36,000.00; Total \$46,114.32. **Missouri Speleology.** Don Dunham reported that Vol. 59 – Vadose Speleogenesis of the Pierson Limestone by Jon Beard is available now. He reported on the book signing at the

Lemp Mansion for the Lemp Brewery Caverns and Cherokee Cave issue. He said the Lemp Mansion bought a small inventory of issues. Don said that the Butler Hollow issue by Scott House will be published before the end of June. Other issues will be North Fork and possible issues by Tom Aley and Kirsten Alvey-Mudd. **Old business** – none. **New Business:** Tony Schmitt asked how many feet were mapped in Tumbling Creek Cave during the MSS weekend. Scott House said 2200 feet of detailed survey. **Cave Files/Database.** Ken Grush said there may be 1,000 new reports since December. There are over 7400 caves, 7600 records that also include leads, mines, etc. Pres. Lamping said that Mick Sutton was going to give a presentation at the NSS Convention on the Filemaker database. **Agency Reports: Mark Twain National Forest** – Mick Sutton said he has been working on Butler Hollow. Scott House said they are behind on bat counts because of government shutdown and flooding. **Ozark National Scenic Riverways** – Scott House said there will be CRF trips from May 28th – June 22nd with trip leaders, Scott, Mark Jones and others. He said Mick Sutton has a bio job to be finished by the end of September, that it took 3 months to get the permit. Scott house said that the cave files in Springfield are not being used and he suggested they be taken to Winona Forest Service facility. No objections. He said they would need some file cabinets. Al Quamen made a motion that they spend whatever funds are necessary for the cave files. Seconded by Rita Worden. Passed. **MDC** – Scott House reported that the entrance to Allen Branch Cave, a 3-mile long cave, is now owned by MDC. **MoDot** – Scott House said they are using data to try to keep highways from going thru caves. He reported that during April, a group of cavers mapped 5 caves, 3 of them were going to be destroyed. Tom Aley said they do two sessions each year, training on cave and karst issues and highway impact with MoDot employees. **Affiliate Organizations Project Reports: Carroll Cave** – Pres. Lamping said that a trip for landowners in the area is planned. **Berome Moore Cave** - July 4th weekend survey trip. **Others** – Tony Schmitt reported on an MCKC cleanup in St. Genevieve Co. next weekend at Grandpa Hole – one of the most trashed caves he has ever seen. Stream team will be involved. They will be primarily doing tire removal with Bridgestone hauling the tires off and recycling them. He said the cavers helping with Stream Team are known as MO Karst & Cleaners Stream Team. Scott House said he is trying to schedule mapping in August at Tumbling Creek Cave. Tom Aley said work should be done at night, because of the bats. Rita Worden announced a re-survey of Devil's Icebox beginning in September. Jeffrey Crews will be in charge of trips. Rita said Roxy and the Devil's Icebox Cave Institute may open for tours in the future. Mick Sutton will do a biology session in August. **Public Outreach:** Pres. Lamping said he continues to put info on Facebook and update the website. He said they now have MSS bookmarks that can be handed out. Don Dunham reported \$1500 - \$2000 in MoSpeleo since putting it up on the website. **Next Meeting:** September 15th, 10 am, Berome Moore in Perryville, MO. Meeting adjourned. – Respectfully submitted by Alberta Zumwalt, Secretary

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Caves of Missouri Discussion Group – <http://groups.yahoo.com/group/cavesofmo>
Petroglyphs, inscriptions, & pictographs: rockartmo.com

CALENDAR:

Sept. 1st – Next MSS Liaison deadline.

Sept. 15th – Fall MSS Meeting, Berome Moore Cave, Perryville, MO. Meeting starts at 10 am. Work trips on the weekend. More information later. MCKC meeting will also be the same day.