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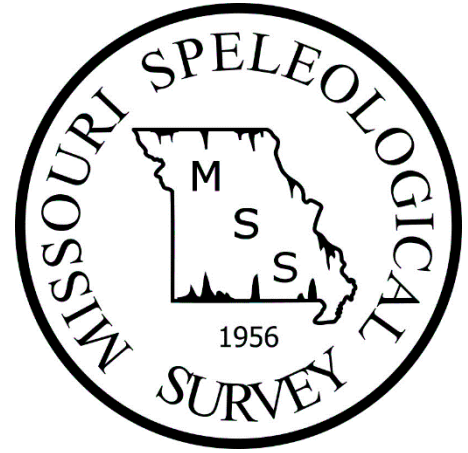
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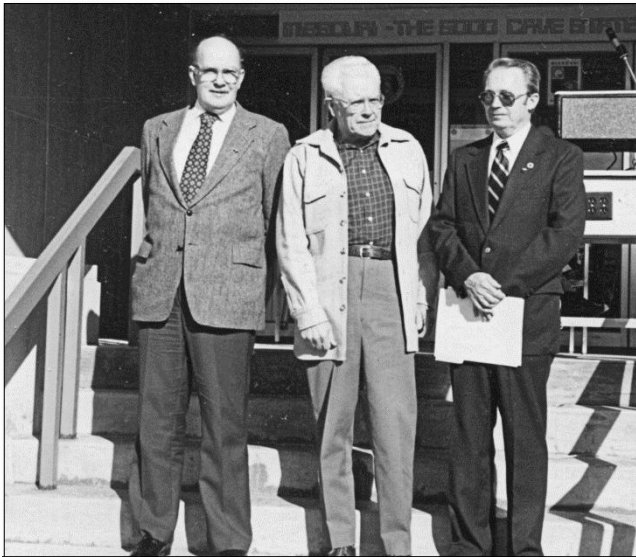
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IN MEMORY OF OZ HAWKSLEY by Dwight Weaver



Frank Dahlgren, Oz Hawksley, Jerry Vineyard

The founders of the Missouri Speleological Survey (MSS) are gone!

First it was Frank Dahlgren of St. Louis, a few years back. On March 31, 2017, Jerry Vineyard passed away. And then on September 6, 2017, we lost Dr. Oscar "Oz" Hawksley. He was 97 years old. The year 2017 has been a tough year for those of us who knew these men, caved with them, camped with them, canoed with them and admired and respected them. More than 60 years have come and gone since they began inspiring and educating young and ambitious nature lovers and Missouri cavers to endeavors of accomplishment.

Oz was born June 30, 1920, in Kingston, New York, to Robert Hawksley and Gertrude Edwards. After serving in World War II he obtained a Ph.D. in ornithology at Cornell University. Oz then taught

biology and zoology at the University of Central Missouri in Warrensburg (formerly known as the Central Missouri State College) from 1948 to 1979. As an enthusiastic outdoorsman he founded the Central Missouri Outing Club in 1950. It was based at the college. He soon discovered that the Ozark hills and hollows were sprinkled with caves, springs and karst. That led him to join the National Speleological Society (NSS #2576), which he followed up by establishing the Western Missouri Grotto (WMO) of the NSS in 1954, one of the first organized caving clubs in Missouri. Because he and quite a few of the Outing Club members were interested in caves, he began taking them on canoeing adventures on the spring-fed streams of the Ozarks such as the Current River and 11-Point River that later became the premier attractions of the Ozark National Scenic Riverways. Oz called these trips "speleo-canoing" because there were caves along these rivers to record, explore, map and write about. Then in 1956 he collaborated with Dahlgren and Vineyard in founding the Missouri Speleological Survey after they had attended the NSS Convention.

I got acquainted with Oz when, right out of high school, I joined the NSS and subsequently WMO in the fall of 1956. Much of the time Oz couldn't seem to separate his students from the cavers not affiliated with the college and his biology classes. His astute criticism could be humbling and there were times during the early days of the MSS when I was the subject of his critical eye. But I respected him and learned from him because I had opportunities to see this educator and family man in ways most cavers did not. In 1957, while in college at Kansas City without a car, I would on some weekends, at his invitation, find a way to get 70 miles eastward to Warrensburg where he lived. There in the "home office" of his modest home set in quiet secluded acreage, Oz

would keep me busy typing up cave reports and doing other duties for the MSS cave files. He would put me up for the night, his wife would cook wonderful meals served with wine, and I got to see the domestic side of this



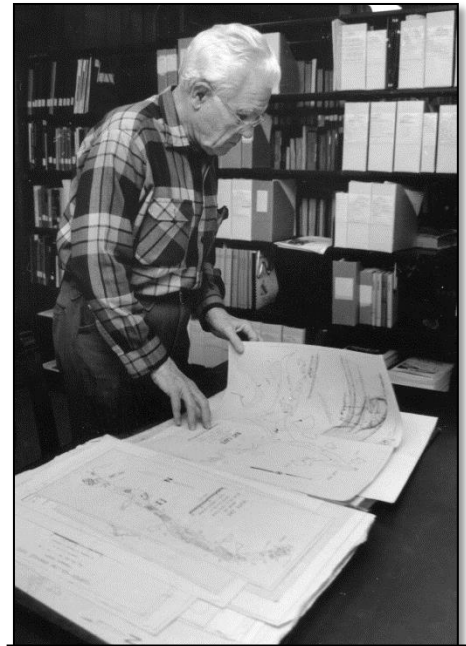
Home of Oz Hawksley

talented and conscientious man. As a college educator he had strong opinions and a willingness to voice them that sometimes led cavers to call him a dictator, but Oz always had their best interests, and the best interests of caves in mind. He was a dedicated spokesperson for Nature Conservancy and any cause that protected caves and the critters that lived in them. He established “bone drawers” at the college and provided paleo-identification for many of the Pleistocene animal bones we found in Missouri caves. That collection is now housed at the Research and Collections Center, Illinois State Museum, Springfield. He got his grad students to take on cave research projects, especially those of a biological nature. He was a

leading proponent for the creation of *The Journal of Missouri Speleology* which the MSS has been publishing for more than 50 years. Oz also established a speleo-library collection at the Central Missouri State University Library at Warrensburg for housing important speleo-literature from all over the world, using issues of *Missouri Speleology* for exchange.



Oz inspired many students to work in environmental sciences. He helped pass the National Wild and Scenic Rivers Act of 1968; in 1965 he authored the river guide *Missouri Ozark Waterways* (in its 17th printing and now called *Paddler's Guide*); he was instrumental in the founding of the American Whitewater



Oz in Speleo-Library

Affiliation in 1954; and the Ozark Wilderness Waterways Club in 1956 (For many years he took off for western states every summer to work as a whitewater river guide); and served for several years on the Warrensburg Parks and Recreation Department Board as well as establishing the Oz and Dorothy Hawksley Turkeyfoot Prairie. He was such an activist for conservation causes and caves I used to wonder how he found time to type endlessly long letters full of wisdom and advice to me and other early cavers who were working to get the MSS well-grounded and on its way to a productive future. Those letters were often four and five pages of single-spaced typing.

Oz was an excellent communicator and organizer and into everything that had to do with wilderness protection, public lands, rivers, caves, springs, karst, wildlife and prairies. Spiritually, he was active in the Unitarian Universalist Fellowship, which stood to reason for he saw the hand of the Creator in all things of nature. In 2011 the Missouri Department of Conservation presented Oz with the Missouri Master Conservationist award, which honors living or deceased conservationists who have made a substantial and lasting contribution to Missouri's fisheries, forestry and wildlife conservation efforts.

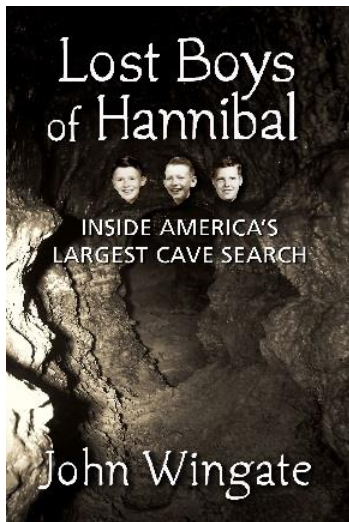
Dr. Oscar “Oz” Hawksley was predeceased by his brother Robert and wives Janet McHugh and Dorothy Dale, and he leaves behind sons John and Derek and several grandchildren. His obit, from which some information for this article was taken, was published in the *Kansas City Star* on Sept. 17, 2017.



By Dan Lamping

Social media and the internet in general have undoubtedly changed the way many of us interact for both the better and the worse. For all of the pitfalls, and there are many, one positive result has been an increase in connectivity between individuals with shared interest, separated by proximity who otherwise may not directly interact. Take for example a barber in Doniphan, MO. I've never been to Doniphan and would otherwise have no knowledge of the town's barber. But a couple of years ago someone I am "friends" with on Facebook, but whom I've never directly met, "introduced" me to this guy via social media due to our mutual interest in the region's karst. Since that time we've come to know one another a bit. He's not a "caver" but he knows caves. He seems to appreciate what organized cavers do but doesn't seem eager to contribute. He is however a very concerned and active environmentalist who's inspired some of my daily habits and who's reinforced my love for the Scenic Rivers of Missouri and my interest in water quality. I appreciate him and have learned from him and yet, I don't know him. This is not anything new. For millennia humans have read the distilled written works of others whom they haven't met, some of which have led to life changing emotional and intellectual growth. Only, it's different with social media. It's in real time, sometimes raw, sometimes candid and sometimes a fable. Recently, the MSS was contacted by a college student at MSU getting a degree in geology who had the location of what he suspected was a cave just outside of the city limits of Doniphan. I confirmed with him that there was no known cave there and suggested he check it out to confirm its presence as he had not yet entered it, waiting for some nod of approval from someone more experienced. To my knowledge there are no organized cavers in Doniphan so I couldn't connect him with a caver. I also very well couldn't just say "go for it." So, I contacted the local barber. A guy who grew up in the area and knows of area caves. A guy who seems to be a good steward of the land and a fine mentor to anyone interested in learning. They were both interested in meeting up. At this point I'm still waiting to hear whether they checked this lead out. I hope they do and I hope their finds are documented with the MSS.

This little anecdote leads me to a new Facebook group called *Missouri's Caves, Mines and Rock Formations*. There are over 7,000 members on this group and only a handful a cavers. While many on the site seem concerned with simply identifying whatever kind of impressive or sentimental stones they've found, there are posts daily on Missouri caves. These are people in the general public, often from rural parts of the state who share a basic interest in the cement which binds us all together, caves. So far, most cavers have been responsible stewards, trying to provide awareness and education as well as an invitation to get involved. Most cavers have thankfully minimized any name calling and appeals to authority, which I greatly appreciate. There's no quicker way to turn people off to organized or even informed caving than lording over them with knowledge and being pedantic. This interest in caves outside of the caving community has no doubt always been the case and many of us started out this way, as curious explorers checking out holes in the ground in the woods out back. But now we can see it and now we can engage with them. It does take a little patience and mindfulness realizing that most people are not aware and involved in all things cave related as we cavers are, so the legends of Jesse James are shared regularly and misinformation can abound, but in general, it's an opportunity more than anything, to have a platform for sharing our mission and goals with an interested and listening body. Therefore, I'll continue to promote the NSS, MSS and organized caving in general and hopefully we'll get a few new cooperators out of it.



New Book *Lost Boys of Hannibal* Details Largest Cave Search in US History for Three Boys in Missouri. In 1967, the largest cave search in US history unfolded in historic Hannibal, Missouri, the boyhood home of author Mark Twain. Three modern day Tom Sawyers, with no caving expertise but an abundance of bravado, made Hannibal ground zero for a terrifying, unfolding calamity that would leave its traumatic mark for half a century. Joel Hoag, thirteen, his brother Billy, eleven, and their friend Craig Dowell, fourteen, vanished after exploring a complex, lattice-like, maze cave system that had been exposed during construction of State Highway 79.

Joel and Billy Hoag were friends of mine growing up in Hannibal. I wrote *Lost Boys of Hannibal* to honor the three boys and the more than two hundred cavers and other personnel who selflessly devoted their time and skills to find the trio, often at great risk to their own lives during the race-against-time search in unstable cave passages.

Maze Caves. It is no coincidence that Missouri is called the Cave State. It has more caves than most other states (7,300 and counting), the vast majority of these discovered since the 1950s. The geology of hilly northeast Missouri is distinctive with a layer of fine-grained Louisiana Lithographic Limestone, up to sixty feet thick in places. Within this massive stratum of limestone are networks of intricate crisscrossed maze cave passages. These were created by the waters of an ancient sea, percolating through cracks in the limestone over a span of millions of years. These maze caves (including Mark Twain Cave and Cameron Cave) exist in an area roughly one mile wide by three miles long, from Bear Creek in the Hannibal city limits southward.

The boys were last seen during the late afternoon of May 10, 1967. First, neighborhood children saw them entering Murphy Cave, near the corner of Birch and Walnut streets, just south of Bear Creek. Murphy Cave had been discovered in the 1870s by workmen digging fire clay for the local brickworks. It wasn't long before children found it, too. In 1873, five youngsters entered the cave and were lost for many hours until retrieved by a band of frantic parent rescuers who crawled through the tight passages with lanterns held ahead of them to light the way. Nearly a century later, yet another incident occurred during the summer of 1961 when Ed and Ron Owen were lost in the Murphy's labyrinth. Miraculously, they found their way out of the complex maze cave several hours later just as their remaining good flashlight lost power. "We were lucky," recalled Ed Owen. "It would be impossible to find your way out of that cave without any light."

Three blocks south of the Murphy Cave complex, State Highway 79 construction activity had recently exposed a large subterranean network of limestone passages that, perhaps, had once connected with Murphy Cave eons ago before the valley formed between them. This construction zone became the second primary search location as cavers explored nearly a mile of tightly packed maze passages beneath the roadbed and extending beneath the Lovers Leap hill, as described in great detail by caver Jerry Vineyard in the book. The boys were last seen on the roadcut slope directly above the construction activity and the exposed cave crevices at 5:15 p.m. on May 10.

The search for the lost boys was a frantic around-the-clock operation involving an estimated 100 cavers from caving clubs (grottos) in the region. Many regional cavers participated in the Hannibal search and the earlier mapping of Murphy Cave: former Deputy State Geologist Jerry Vineyard, Conway Christensen, Dwight Weaver, Stan Sides, Don Nicholson, Gregory 'Tex' Yokum, Langford 'Lang' Brod, Jim Arrigo, Joe Tripodi, Jim Mrozkowski,



Missouri cavers prepare to enter an entrance to a maze cave system exposed during State Hwy. 79 construction in May 1967.-Photo courtesy Hannibal courier-Post.

Bob Cowder, Ann Schallert, Susan DeVier, Brian Borton, Al Viar, Joe Walsh, Jim Rodemaker, Don Myers, Jim Clark, Frank Alexander and many others.

The search operation was led by William Karra who had created the Virginia-based Speleological Society of America (SSA) during the fall of 1966. Karra had gone his own way after the National Speleological Society rejected his particular vision for a cave rescue program as caving grew in popularity during the 1960s.



Anxious onlookers wait outside Murphy's Cave, a major focus during the search for three lost boys. —Photo courtesy Dan Bledsoe.

Here is an excerpt from *Lost Boys of Hannibal* that profiles one of the few women cavers who participated in the search: "Hannibal was now ground zero for the nation's caving community. New cavers were spilling into town daily to help with the search and spell exhausted colleagues. Susan DeVier, twenty-three, arrived Friday evening. She had packed her gear and driven to Hannibal after the school day ended at Columbia's Hickman High School, where she taught psychology. A member of the Chouteau Grotto, DeVier had grown interested in caving during her senior year in high school. *"I joined the grotto out of curiosity and fell in love with caving," she explained. "I loved the social interaction, the people, the camping, being out in nature. And I never minded crawling into tight, muddy spots."* During the ninety-three-mile drive to Hannibal, DeVier and a friend discussed what they'd

gleaned from the news about the cave search. *"We felt that it was probably a case where three rambunctious boys went off and did something dumb and would quickly be found or wander home."*

DeVier already recognized this operation was quite different from other search and rescues. Typically, cavers have a general idea where the missing or trapped persons are located. If they're trapped or injured, rescuers ensure they are kept warm, dry, fed and hydrated until they can be safely extricated by any number of technical means. In Hannibal, cavers didn't really know where to begin. They knew the boys could be anywhere, their conditions unknown.

Once in Hannibal, DeVier quickly stood out among the other cavers, not only because she was one of the few women cavers present, but because standing five foot two and weighing ninety-eight pounds, her petite stature was suddenly a huge asset enabling the search to be extended to many smaller cave passages that the men could not explore. *"When I got on scene, someone looked at me and shouted, 'You! In there,' as he pointed a finger at a small roadbed entrance into the cave system. There was a real sense of urgency."*

Susan came prepared to go to work immediately. She dressed in a one-piece coverall that offered good protection and wouldn't ride up exposing her skin to the damp, chilly cave floor. For footwear, she wore mesh jungle boots that drained well when wet. She dug into the gear bag and hauled out her helmet and attached the carbide lamp. She filled her helmet lamp with calcium carbide and added some water into the small reservoir. Once the acetylene gas, produced by the chemical reaction, was ignited, the lamp began to give off a bright white light to break the consuming darkness below. Susan secured her helmet and crawled down into a narrow roadcut opening, wriggling along with her arms extended ahead of her. *"At one point I was under a street for quite a while, and water from a leaking water line was raining down, soaking me."* It was a tight squeeze in spots, requiring her to exhale deeply to reduce her petite torso's girth by a few millimeters so she could make it through the coffin-snug passage...."



Joel Hoag



Billy Hoag



Craig Dowell

Lost Boys of Hannibal offers a detailed, day-by-day account of the desperate search which spanned many square miles of Marion and Ralls Counties, above and below ground. Also explored are cavers' theories about the fate of the boys in the road construction zone which had been heavily dynamited for many days leaving the cave network below fractured and compromised. Still,

after 50 years, the exact whereabouts of the lost boys remains the ultimate unsolved mystery.--*John Wingate is a Minneapolis-based author of historical nonfiction. He was born in Hannibal and spent his early childhood there, attending elementary school with the two lost Hoag boys.*

Reviews of the book: *"This book was difficult to read, not because it was poorly written, but because it was well written. Mr. Wingate accurately captures not only the facts of the event, but also the emotional climate of Hannibal and of the larger society of the time. He is able to put this incident into its larger historical perspective, without losing sight of the tragedy of three children disappearing without a trace, even in the fifty years that have since past. For those readers who were not personally involved, this book is an excellent piece of Missouri history and a true, unsolved mystery. For those of us who were there, it rekindles memories of an event that impacted and changed our lives forever. I would highly recommend Lost Boys of Hannibal."*--The writer was one of the women cavers who sought the boys.

John, your book far exceeds my best expectations. I think the story couldn't be better told. Yes, your narrative tells the story, and it pulls the reader into the emotions as the events unfold. For me, as Mr. Berra said, "It's Deja Vu, all over again". Yes, this brings back a lot of memories, some of them pleasant, most haunting. Thanks for spelling my name correctly.- Joe Tripodi, Caver, Middle Mississippi Valley Grotto, St. Louis, MO (John says Joe was one of the heroic cavers who spent a month at Hannibal and he's in the book.)

"I just finished reading the book. It is a very detailed account. The entire search...unfolded directly across the street from where I lived. It is an informative and well written book. Even being so close to the situation fifty years ago, I learned so many new facts about the search. I highly recommend it!"--Dan Bledsoe, Long-time major market radio broadcaster, Las Vegas, NV.

Well written and hard to put down. Great that you could put this together. You have the ability to put me into the middle of the story.--Don Berge, Ottertail, Minnesota.

Missouri Speleological Survey Files Report for January 2018. Let me get my apologies out there at the beginning. So many contributions came in over the past months, that I'm sorry that I may have missed a few items in this report. However, I trust with a file in front of me, it goes into the database (MCD, Missouri Cave Database) and/or into the MSS Cave Archives, Map Archives or Newsletter Archives. **Jonathan Beard sent:** 2 maps in Christian County for Big Mouth Shelter and Cedar Head Cave. The Shelter (with a much wider mouth than length) actually has more "total shelter depth" than the Cave; Historical bat records from Pearson Creek Cave in Greene County, spanning the time from late 2011 through spring of 2016. Although many records were previously captured, a few records were added; 2 new maps on Danger Dome Cave and Mirror Cave, both in Christian County; 2 more maps for Guillotine Dome Cave and Cobbs Shelter, more in CHR County; A new map showing both Upper and Lower Stock Tank Caves in relative position, from Christian County. So new, we don't have them in the database yet here are the maps!; An update on Garrison Cave No. 2, with added photos, passage and new footage; A new map of the Big and Little Bear Caves in Ozark County. Either cave is a maze upon itself but a bit of erosion has created a ravine that separates the 2 cave maze complex. A-mazing! **Jim Cooley sent:** Collection of black and white, and color renditions of the final map of Still Cave in Oregon County, along with lots of supporting documentation including: sketches, book notes from the original surveys, XARA cartographic file, Walls file and calculation of the vertical range within the cave. In addition, he provided 2 plates of the map for additional resolution of the cave; Similar collection of documentation for the final map of La Petite Grotte Aux Pierres Plates (The Little Cave with Flat Stones); a name that almost exceeds the 50 ft. of surveyed length of cave. The cave was named in honor of the French Canadian wife of the couple that own the cave and who essentially on the day of survey became a US citizen; Another collection of documentation for the final map of Briar Cave in Oregon County; And yet another collection of documentation for the final map of Moonshine Cave or Wilder Cave. Locals prefer Moonshine. **Paul Hauck sent:** Modified map that includes both Fairhill Farm Cave and Pool of Tears Cave to show both accession numbers, highlighting that the shared sinkhole contains 2 separate caves. **Eric Hertzler sent:** Maps of Rocky Top Pit Cave and Flat Rock Cave, both in Christian County; 7 maps representing 8 different caves in Christian County and one in Greene County: these are Charley Smiths Pit, Fluted Dome Cave, Holt Cave, Little Darling Cave and nearby Darling Natural Bridge, Squatters Cave, and Watusi Cave (even has a picture of one Watusi bull, puts a Longhorn bull to shame), all in Christian County.

Horton Pit Cave (aka Rootbridge Cave) is in Greene County. Hertzler brought the MSS back up to date with these maps from 2010-2012, sorry it took this long; Map of Racetrack Ridge Cave in Taney County. Cave has 2 entrances, one appears to be a bluff entrance and then a sinkhole entrance; 2 new maps on Snug Joint Cave and Stand Alone Dome Cave, both in Christian County; New map on Dew Drop Cave in Christian County, if you don't "dew" the drop you'll miss half the cave. **Scott House sent:** Collection of 10 maps of caves on the MTNF in Barry County: Cobblestrewn Cave, Howling Cave, Left Turn Cave, Littler Cave, Loop Canyon, Slab Spring Cave, Squeeze Cave, Tilting Tree Cave, Textbook Shelter and Wet Foot Cave. Eighteen cave maps have been submitted (including Jonathan Beard, Ben Miller and Dillon Freiburger as cartographers and many others for support) for Barry County in just the past year. CRF is working to fill the data gap between discovery and needed material like these maps, monitoring forms and/or descriptions of caves. To manage the resources, MTNF (and ONSR) requires this data. CRF work trips are being scheduled for December and January, come volunteer at the new MTNF/ONSR facility in Winona, MO (no final word on PMRC); Update on the Jackson Cave map in Howell County; Spreadsheet reflecting multiple years of bat counts in 2 MDC sensitive caves in Washington County. Mick Sutton had entered these into database; Map for a new shelter in Shannon County, Bear Cave Shelter; Map for an estavelle (takes in water at times and other times is a spring) in Shannon County with the ominous name of Dead Man Estavelle, it is 28 ft. below the level of the exterior valley floor and is normally full of water! It has been very dry since the April 2017 floods; Map of Romig Cave, 48 ft. free drop entrance, in Perry County; Report to go along with a new map for the Mountain Maid Canyon Cave, formerly Destination Cave. The Mountain Maid of Roaring River is a charming woman who beguiled the local CCC workers back during that era. Look 'er up! The cave sits near her homestead in Barry County; Map of Great Scott Cave in Washington County, a multi-year (1967-2017), many collaborators map from Mick Sutton. A 2.75-mile-long cave that many have visited now has a map that all should see; Updated map of Three Entrance Cave in Shannon County. **Gary Johnson sent:** Email report regarding activity in Hickory County. They are mapping Vanderman Cave, now third longest in the county at 1150 ft., on an MDC State Forest. Seven faunal records were collected from the report; Preliminary "rough" draft (not for distribution) of Vanderman Cave in Hickory County, representing some of the survey work on properties that were collected over the past year under an MDC permit. A work in progress map was previously submitted early in 2017. **Dan Lamping sent:** XARA software files for the Cave Archives that represent over 70 caves that Dan has worked on or with other MO cartographers including the large mapping project at Carroll Cave; 13 faunal records and monitoring forms for work on the Pioneer Forest (LAD properties) by Mateo Kowal, Alicia Wallace, Mike Bennett and Korey Hart; New map of sensitive MDC cave in Washington County. **Joe Light sent:** Report on a routine trip to Cliff Cave in St. Louis County with some Missouri Master Naturalists. Faunal changes were noted; Scanned copy of the 1953 book by Rowena Powell (of Fairy Cave) on her Adventures Underground in the Caves of Missouri. Thirteen commercial caves are addressed in the 63 pages book. Who knew this book existed? **Alex Litsch sent:** Map of the Valles Mines project. Mapping began from 2 different entrances and now the mapping has all but connected these mapping efforts; Details on a new cave, Flip Flop Cave, on the Current River CA. Spike Crews supplied photos; Map of Christine Cave in Ste. Genevieve, a recent new cave addition to the database; Details (photos, descriptions, entrance dimensions, etc) on four new karst features for Ste. Genevieve, Breakdown Pit, Lost Stream Cave, Mausoleum Pit, and Sandstone Fissure Shelter; Working map of the new deep pit in Ste. Genevieve County, Pentagon Pit with, at least, 5 (penta-) drops inside, 200 ft. below the entrance. **Chad McCain sent:** Details on one more new cave from Ste. Genevieve, Narrows Cave along with an update and additional reports to a previously submitted cave; New topographic overlay (via Scott House) of the Berome Moore Cave on top of the topographic map for the area. The cave map is on the cusp hitting the 22 mile mark, although the survey has surpassed this landmark; 5 reports on activities in Ste. Genevieve County including Jokerst Pit, New Castle Pit, Purgatory (entrance to) Lloyds Cave, Monster Pit and (in a separate filing) Tornado Cave. **Ben Miller sent:** New map with both Big Spring Cave No. 1 and 2 in Shannon County. The 2 cave entrances are just feet away from each other but do not connect along their length staying about 10 ft. away from each other; Map of No Lions Cave in McDonald County. Lucky, there were no mountain lions in the cave as the locals had predicted. **Stan Sides sent:** 9 newspaper clippings from 1994 through 2016, all good information on how the public perceives the caving community. Many address specific caves. **Mick Sutton sent:** 144 new faunal records mostly on Crankshaft Pit in Jefferson County, but also Jerry Long Cave (Ralls Co.) and Great Scott Cave (Washington Co.). He also supplied an updated faunal table which

included recognition of the Grotto Salamander as two different species, most of Missouri will be the Northern Grotto Salamander (*Eurycea nerea*) while Southwest MO has a population of the Western Grotto Salamander (*Eurycea spelaea*); 9 new faunal records on Pine Hollow Cave in Texas County and Hornet Cave in Crawford County; Written report on the biology of Robinson Hollow Cave; Description for Little Pittman Cave in Laclede County; 2 new maps for Wolf Den Cave and Wolf Pen Tunnel, nearby features in Oregon County. The main table in the database has been updated too; New map of Oure Cave in Washington County. **Jeremy Weih sent:** Trip report and 10 faunal records on an MDC cave in Shannon County; As an aside, one grotto asked for a record of geologic occurrence. The Missouri Cave Database, MCD, does have a place to recognize the host formation for a cave. There are some flaws in this query but this should at minimum be relative: Of 2800 filled entries, Gasconade has almost a third with 854 entries, Pierson 359, Eminence 317, Burlington 285, Platin 158. Upon first inquiry, I exported a spreadsheet of geologic formation, but on second thought I simply searched for the different horizons. This response is different from my reply to that grotto. This query will capture multiple entries but won't specify the "dominant" host. Historically, Gasconade has been the dominant host. Obviously, with about 40% reporting of all caves, there are many unreported host formations. Much yet to do! **However**, due to all the work done over the past year, the electronic database is growing quickly. At close of the year, the Missouri Cave Database, MCD, has 2705 monitoring forms (for agency work like DNR, MDC, MTNF, ONSR and others), 5353 map records (not quite the same as caves with maps), 15375 reports, 31137 faunal records. By comparison, in January of 2017, the MCD had 2361 monitoring forms, 5111 maps records, 14078 reports and 26197 faunal records. Thanks and kudos to all of our volunteers and cooperators. What a great year! **And here's one more aside**, Chuck Sutherland is creating cave density maps for each of the states that he can collect data on. Here's a summary of some of the numbers for Missouri: roughly, 7300 MO caves under consideration, Perry (698 caves) and Shannon County (677 caves) are vying for the top seed that Perry has held for many years; and Missouri has 10 other counties that have over 200 caves (4 of these 10 counties are greater than 300 caves individually). By quadrangle, there are 9 quadrangle (topographic) maps that have more than 100 caves on them. Perry County has 2 quads that are exclusively Perry and have over 420 total caves on the 2 quads combined. Shannon Co. has 2 quads with over 260 total caves on the 2 quads. What does that say about cave distribution between our 2 biggest cave count counties? Ste. Genevieve, Barry, Greene and Crawford Counties each have one quad with over 100 caves on them. The ninth quad is a predominantly Shannon County cave quad, but does have 40% Texas County caves on it. **And one last front**, the MSS has historically collected grotto publications and many hardcopies reside in the collection at Rolla. Since about 2011, the MSS has taken on the task of scanning all the old newsletters that it can get. This is a project that is important for collecting the heritage of Missouri caving. A few grottoes have fallen by the wayside since 1956 when the MSS began, but most have remained strong since inception. These publications can be a great resource for collecting information about caves throughout the state. Each grotto often represents a geographic area of interest that puts focus on local caves that other grottos might not take the time to visit. Some of these caves may have very little data on them in our digital archives. How your grotto can help? Send a digital or hardcopy to the MSS of your current publications. As archivist send your digital copy to slagrush@gmail.com. Curious about how complete your grotto's archives are, then have the grotto inquire at same email and I'll forward the grotto (no individual requests please, ask your grotto librarian first) inventory of digital copy. Recently, on this front, Jonathan Beard has taken on another herculean task of updating the digital archives for long lost Heart of the Ozarks (HOG) Grotto, Ozarks Highland Grotto (OHG) and Springfield Plateau Grotto (SPG). More than a dozen electronic copy of HOG's Ozark Caver have been saved; a fairly complete collection. And he is working currently on the OHG's Ozarks Underground which will ultimately be a fairly complete (if not complete) collection when done. **Happy Holidays** and may the New Year bring a bounty of caving and cave reporting/maps.--Ken Grush

Southeast Missouri Grotto (SEMO). Oct. 21st – Mark Brooks, Cody Brooks, Kaitlyn Carr, and Tim Morgan proceed to the end of survey in upper Stream Annex in Berome and obtained 735.2' of survey. **Nov. 11th** – Alex Litsch, Cody Brooks, Chad McCain and Gary Resch began surveying Pentagon Pit in Ste. Genevieve County. During survey another entrance with a 6th pit was found. A 7th pit was found later in the day in an upper level canyon. Survey brought the cave to a depth of 200.5 feet with 7 pits. 92.5' entrance, 52' secondary entrance, 26' pit #2, 25' pit #3, 21' pit #4 and 8' pit #5. An upper level canyon passage was discovered, as well as a side

passage 25' off the floor that can be rappelled into, as well as two bolt climbs at the sump. 639.2' of survey was obtained. **Dec. 9th** – Alex Litsch, Chad McCain and Cody Brooks returned to Pentagon pit and bolted a traverse line 60' above the main canyon floor and began surveying this upper level. Cody then belayed Chad as he conducted a 40' tall bolt climb which unfortunately went to a dead end. While leaving the cave, Chad was climbing and the secondary anchor tree at the lip of the 92' pit failed, sending Chad falling 8 feet back down the pit. No injuries and the rope was climbed and rerigged for the rest of the group to exit. 131' of survey was obtained. **Dec. 9th** – Mark Brooks, Brian Biggs, Doug Kettler, Dane Driskill, Tim Morgan, and Aaron Graham continued survey in Berome Moore Cave in Perry County. Mark took Tim and Aaron went to survey Popcorn Passage while Brian, Doug and Dane went to Breakdown Passage. Popcorn is the same passage located above the Driskill Connection while Breakdown is also, technically a side passage in the Mezzanine. Mark's team was able to squeeze out 346.4' of survey, while Brian's team was able to muster up 47.4 feet. This puts the cave length just over 21 miles by 41 feet. **Dec. 16th** – Jeremy Weih and Alex Litsch conducted a 14.5 hour survey in Fluted Rift in Ste. Genevieve County. Two more pits were surveyed with a sump at the bottom of the 5th, as well as a tributary coming in from the other side of the last pit, which led to a dome with a bolt climb, airflow and a visible passage 40' above. The cave reached a depth of 200.16', which makes two 200' deep caves within a quarter mile of each other. 542.9' of survey was obtained. **Dec. 17th** – Alex Litsch, Michael Bradford, Jeremy Weih and Chad McCain dug open Mausoleum Pit in Ste. Genevieve County. This 20' deep pit led to a small room loaded with bones and bear claw marks. This cave was mapped in conjunction with Tornado Cave, right next door. Tornado cave was basically one single room conglomerate with several shallow domes and old staining from bat colonies. Local graffiti dates back to the 1940's. **Dec. 19th** – Chad McCain and Alex Litsch stripped all hardware out of New Castle Pit, Lloyds Cave/Purgatory Pit and Monster Pit in Ste. Genevieve County. This rigging was removed as the useful safety of the bolts had been reached and no one has visited the pits since survey was conducted. **Other notes** – Alex Litsch has been ridge walking a lot in Ste. Genevieve County this year and has found and turned in a whopping 60 caves in the county in 2017. Great Job Alex!!!—Chad McCain

Roubidoux Grotto (RBX). – RBX continues to work on meetings for learning more about caves, cave biology, and monitoring techniques. Dan Slais spoke at the October meeting about the geology of caves including a summary of counties in Missouri and how many caves the counties have (2007) due primarily to their geology. At the December meeting, Roubidoux Grotto decided to hold meetings at the Pulaski County Visitor Center (January) and the second month meet at a local restaurant. The following month will be back at the Visitors Center. All 6:00 PM meeting locations will be posted on the Roubidoux Grotto website. **Sept. 21st** - Roger Preston and Keenan Dillard picked up trash at Finley Cave. **Sept. 30th** – Keenan Dillard, Samantha Keeton, and Karen Hood checked out Campground Cave. **Oct. 5th** – Laura Huffman, Karen Hood, and Keenan Dillard did entrance monitoring and trash pickup at Roubidoux Cave. **Oct. 17** – Kelsie Johnson & Roger Preston checked Finley Cave for trash and passage-ways for taking groups **Oct. 21** - Roger Preston picked up trash at Finley Cave.--Dan Slais

Lake Ozarks Grotto (LOG). **Dec. 4th** – Gary & Alberta Zumwalt helped Klaus Leidenfrost at Goodwin. We installed a new vinyl outside the cave to help with erosion, securing it with sandbags, cattle panels and rocks. We burned some leaves in the waterfall area and cleared some more brush. **Dec. 10th** – LOG's Christmas party was held at the home of Burke & Christen Easter, with 22 people in attendance. We have no meetings from Jan. to Mar., resuming in April, but cave trips are being planned. **Dec. 16th** - Ken Long, Gary & Alberta Zumwalt helped Klaus at Goodwin. He had equipment come in and take out more dirt in the cave entrance so we had to redo the vinyl we had placed earlier. We checked out the cave to see what had been done. A horseshoe was found in the cave and Gary tied it to the gate. I am convinced that the good luck symbol means we will be in the cave this year. However, someone told us later that the shoe was hung the wrong way and our luck was running out! We also took down the orange fencing along the road and put up a new orange fence. A straw barrier was made on the slope in front of the cave to help stop debris from going into the cave. Winter wheat was spread and more brush was cleared. We invite everyone to help or at least come by and check out Goodwin. It is amazing! Goodwin is owned by the MCKC, an organization that LOG members started.—Alberta Zumwalt

Kansas City Area Grotto (KCAG). **Nov. 3rd** - Ken Grush and Jim Cooley took flora DNA samples in Perkins Cave for a Texas researcher doing DNA work. **Nov. 3rd - 4th**- Landowner Bruce Archambault, Jim Cooley, Ken Grush, Bill Gee, Shawn Williams, Rita Worden, and Dennis Novicky participated in survey at Allie Spring Cave (PUL-317). We extended the cave by over 1000 feet. It now is less than 200 feet short of having two miles of surveyed passage, with many open leads. Next survey effort will be the last weekend of January; contact Jim Cooley at coolstoi@kc.rr.com if interested. **Nov. 23rd-26th**- Jim Cooley and Ken Grush surveyed several caves on private property. **Nov. 28th**- Bill Gee and Laura Anthem Jaynes resumed survey work at Vanderman Cave. Much of their time was spent crawling through water in the C survey passage, whose height of the passage was from one to three feet. So they didn't get to stand up for several hours once they entered this passage. The C survey passage has now merged with the stream passage, so the floor of the passage is typically covered with about six inches of water, although one spot was 18 inches deep. Laura remarked that she was floating away as they surveyed the deep spot. They surveyed in C passage until they were too cold to continue. With numb toes and fingers, they then crawled back to what Bill is calling the Junction Room (the largest area of stand-up dimensions in the cave). Here, they kindly followed project leader and cartographer Gary Johnson's instructions, and did several splay shots. This area has been somewhat problematic on previous surveys. Critters observed included two dark-sided salamanders, two pill bugs, many camel crickets, 20 to 30 amphipods, and one quiescent tri-colored bat (in the Junction Room). They also saw five small mammal bones, each five to six inches long, most likely derived from a raccoon, possum or skunk. The total length of additional survey was 161 feet, bringing the total surveyed length of Vanderman Cave now to 1151 feet. Lastly, they reconnoitered another 100 feet of passage before calling it quits, which will be the end of surveyable passage. Another survey trip will be required. However, the MDC contract with MSS will expire on midnight Dec. 31st, and Bill did not have any available dates between then and the end of the month. So at the time of this writing, we did not know if we'd be able to finish the survey, although we can now confidently say that over 90% of the cave has been surveyed. Vanderman Cave is currently the third longest cave in Hickory County. However, it's closing in on Clymore Cave, which has a total surveyed length of 1,250 feet. **Dec. 12th-16th**-Jim Cooley and Ken Grush supported CRF cave survey and monitoring work on the Mark Twain National Forest, Eleven Point Ranger District.--Jim Cooley

Springfield Plateau Grotto (SPG). **Nov. 1st**—Jon Beard guided a Crowder College class through Crystal Caverns (Barry Co) on an educational field trip. The group saw the features along the old tour path as well as the Aragonite Passage. Seven cave salamanders and a pickerel frog were seen along the way. **Nov. 3rd**—Jon Beard assisted Eric Hertzler in the survey of Sawtooth Dome Cave (Christian Co) as part of CRF projects in Mark Twain National Forest. While Eric sketched, fauna was noted, the cave photographed and written descriptions were made. The cave is named for delicate sawtooth flowstone in one of the cave's 8-foot tall domes. **Nov. 4th**—Dillon Freiburger returned to Downtrend Cave (Christian Co) in Mark Twain National Forest to survey the minimal cave as part of CRF work there. **Nov. 6th**—Cynthia and Clayton Russell hosted Jon and Alicia Beard in a trip to Three Forks Cave (OK), visiting a few thousand feet of this cave currently being resurveyed by Mark Jones et al. Features seen were the Parachute Room, Grand Junction, Little Junction and Gargoyle Room. Cynthia made note of biology seen including Ozark big-eared bats and pipistrelles, Oklahoma and cave salamanders, amphipods, orb weavers, heleomyzid flies and camel crickets. **Nov. 7th**—To round out their two-day visit, Jon and Alicia Beard were guided by Cynthia and Clayton Russell in a trip to Linda Bearpaw Cave (OK) to monitor the biology of the cave. The cave is a summer habitat for large numbers of gray bats. **Nov. 8th, 15th, 22nd, 29th**—Jon Beard continued his photo cataloguing of broken speleothems in Fitzpatrick Cave (Christian Co). Thus far over 1,700 photographs have been taken in this project of 846 broken pieces and hundreds of "stumps" from which the pieces were broken. All of the pieces are now catalogued with a few hundred stumps remaining to be numbered and photographed. **Nov. 9th**—SPG held its annual business meeting in Fantastic Caverns (Greene Co) where 21 members attended plus their guests. The meeting itself was conducted in the Auditorium Room, and afterwards members strolled through the commercial tour section of the cave. Charley Young took photos of the attendees. Much thanks goes to the caverns management for their hospitality. **Nov. 9th- 10th**—Jon Beard led two earth science classes from Monett High School through the Main Room, North Loop, Lower Level Maze Loop, Formation Loop of Breakdown Cave (Christian Co). Some students from each class accepted the Hells Gate challenge and saw the first part of Canopy Avenue. The second class also saw nearby Fitzpatrick Cave. **Nov.**

11th—Faith and Chris Lewis accompanied two friends into the Southeast Passage of Breakdown Cave (Christian Co). All but Chris were able to fit through Hell's Gate and further into Canopy Avenue. At the Register Room, they slithered into the Upper Slimeway, a 308-foot bellycrawl through chunky peanut butter to the Drapery Dome and its five-foot deep Frost Lake. **Nov. 12th**—Max White led a couple of friends through the main room of Breakdown Cave (Christian Co) on a leisurely evening trip. The cave was closed for the season four days later, to allow the bats to hibernate in peace, opening again in April. **Nov. 17th**—Jon Beard was assisted by Eric Hertzler in the survey of Mirror Cave (Christian Co) as part of CRF work in Mark Twain National Forest. The cave was named for the ceiling's mirror image in the narrow, ponded crawlway when it was initially documented many moons ago. However, this day it was dusty dry (and therefore, no mirror image) with the emphasis on dusty. The cave consists of an arrow-straight entrance crawl some 55 feet in length, a 90-degree turn left for a few feet, then a 90-degree turn right at a 5-ft. tall dome for a few more feet before becoming too small. At the first turn is a side passage parallel to the entrance passage that apparently is fed in wet weather from a hillside sink 15 feet directly above it. The map will show the surface sink in profile. Other than hordes of mosquitos, no fauna was seen in the cave. **Nov. 18th**—Dillon Freiburger and Bryant Galloway, Julie Terhune, Kayla Sapkota and Mark Jones completed the survey of Kneebacker Cave (AR). With Dillon and Kayla sketching, the team completed the survey through a series of several ear-dips, bellycrawls and decorated domes up to a sump. This was the first of four consecutive days of CRF mapping and monitoring at the Buffalo National River. **Nov 19th**—Brandon Van Dalsem, Treavor Bussard and Jon Beard surveyed and monitored four small caves as part of CRF projects in Mark Twain National Forest in Christian County. The three took turns sketching and monitoring. Treavor sketched in Devreaux Ridge Cave and Groove Tube Cave, Brandon sketched in Devreaux Cave and Jon sketched in Danger Dome Cave. Also—In another CRF project day in the Buffalo National River in Arkansas, Dillon Freiburger, Christian Hockley, Alexa Smith and Rhett Finley bio-monitored and surveyed Hamster Ball Hole and Needles Eye Pit. The pit, which is more akin to a very large sink, will require another trip to finish the survey. **Nov. 20th**—Jon and Alicia Beard made a cave conservation presentation to scout Troop 48 in Aurora, MO as part of SPG's public outreach program. After the Powerpoint program, they fielded questions from the scouts. Also—Dillon Freiburger, Michael Dudczak and Lizzie Baylor bio-monitored and surveyed Arrington Crawl Cave and Days End/End of Days Cave (AR) as part of CRF projects at the Buffalo National River. **Nov. 21st**—Dillon Freiburger, Mark Jones, Aaron Thompson, Fernando Calderon-Gutierrez, Lizzie Baylor, Christian Hockley, Josh Ring and Brendan Hopper returned to Stockman Cave (AR) to attempt to complete the survey as part of CRF projects at the Buffalo National River. Dillon and Mark each led a survey team in different locations in the cave. It was agreed that one survey trip remains to complete the map. **Nov. 24th**—Jon Beard and Eric Hertzler monitored and mapped three more small caves along a ridge in Mark Twain National Forest in Christian County as part of CRF project work. Eric sketched Stand Alone Dome Cave while Jon recorded biota, then Jon sketched in Guillotine Dome Cave and Cobbs Shelter while Eric counted biota. Cobbs Shelter was the largest of the three caves at just under 50 feet in length. **Nov. 25th**—Cynthia and Clayton Russell bio-monitored Three Forks Cave (OK) and found one Ozark big-eared bat, three pipistrelles and two cave salamanders.--Report by Max White. Material provided by Jonathan B. Beard. **Dec. 1st**—Jon Beard accompanied Eric Hertzler and Austin Deffenbaugh to monitor three caves for the CRF in Mark Twain National Forest. First cave was Blue Hole Spring Cave (Taney Co). Despite the drought, the cave is still nothing more than a divable spring rise pool at least six feet in depth. They finished the day at Dew Drop Pit and nearby Dew Drop Cave, the latter of which Eric and Co. surveyed. Dew Drop Pit is a very narrow 21-foot blind pit with unenterable joints extending north and south. Dew Drop Cave descends gradually its first 26 feet before abruptly dropping 10 feet. Due to a narrow slot in the floor preceding the drop, the drop could not be dropped with rope or cable ladder as the equipment would occupy the narrow slot but the cavers could not. **Dec. 2nd**—While Chris Lewis and Roy Gold were assisting Jon Beard in a survey mop-up trip in Big and Little Bear Caves (Ozark Co), Charley Young guided MSU grad student Sam Miller through the caves to swab the caves for WNS DNA samples. The survey of this cave system is complete and a completed map is forthcoming. Whereas five years ago hundreds of hibernating pips were found, this day only 22 were found. Also noted were more than 20 slimy salamanders including some newly hatched perhaps less than a month ago. **Dec. 4th**—Jon Beard assisted Scott House in the survey of Mountain Maid Canyon Cave (Barry Co) as part of CRF work in Mark Twain National Forest. The roughly 60-foot cave is primarily in the Pierson Limestone, but its lower walls are in the calcareous shale of the Northview Formation

and its uppermost ceilings are in the Reeds Spring Formation. While Scott sketched, Jon recorded biota and cave features. **Dec 6th**—One last mop-up trip was made to Big and Little Bear Caves (Ozark Co) to correct a cross section and to include a sandstone marker bed on several more cross sections. The survey is now complete on a most fascinating maze cave system. **Dec. 8th**—Jon Beard joined Eric Hertzler in another unsuccessful search for the infamous Echo Cave (Christian Co), a small cave on Mark Twain National Forest that was mapped and described by the late Ken Thomson in the early 1970s and has never been found since. After an hour or so of hunting a new possible area, the search was abandoned for the day. The two did survey the lower level of Dew Drop Cave (see Dec. 1st) using a brace and cable ladder to descend 11 feet. The ~50-ft. cave abruptly turns left into a terminal dome. **Dec. 9th**—Faith and Chris Lewis (and friend Jesse) and Jon Beard hosted five members of CAIRN in archeological checking of Pearson Creek Cave (Greene Co) and later Jon and CAIRN Cobbs Shelter (Christian Co) on MTNF. Verifying that no matter how often one searches for trash in a gated cave that in theory has been emptied of all of its trash, several old votive candle tins were found in Pearson Creek Cave. Neither cave apparently has any evidence of prehistoric use by people. **Dec. 15th**—Jon Beard and Eric Hertzler monitored three adjacent small caves in Mark Twain National Forest as part of CRF cave monitoring. Infant Maze, White Worm Spring and Pegleg Cricket caves (Christian Co) were monitored. A small amount of trash was removed from Infant Maze and Pegleg Cricket. Only insects were observed. **Dec. 16th**—Have you ever surveyed all of a 4.7-mile cave only to find there's a hidden passage in the middle of it? In 2016, Megan Gallo and Jon Beard found such a passage in Garrison Cave #2 (Christian Co), so on this day, Max White, Eric Hertzler, Dillon Freiburger, Jake Colvin, Matt Bumgardner and Jon Beard rectified that by adding over 300 feet the mapped length of the cave, bringing the official length to 25,393.5 feet (4.81 miles). **Dec. 19th**—CRF projects at the Buffalo National River in Arkansas (Dec. 19th through the 23rd): Brandon Van Dalsem, Dillon Freiburger, Aaron Thompson and Ethan Brown surveyed Fluted Nuisance Cave, a 35-ft. deep blind pit. After some creative rope work, Brandon was able to reach the bottom of the multi-drop Not A Test Cave and estimated 150 feet of passage. The group also found Paleo View Cave. **Dec. 20th, 26th**—Jon Beard continued the photo cataloguing of broken speleothems in Fitzpatrick Cave (Christian Co), photographing the blunted stalactites in the third area of Paul's Gallery. This far, the broken faces of 604 stalactite "stumps," 20 stalagmite "stumps", 515 stalactite pieces and 313 stalagmite pieces have been photo catalogued involving over 2,000 photographs. Afterwards on the 20th, Jon checked the cave gate and locks at Breakdown Cave to make sure they were secure. Also—Faith and Chris Lewis visited Big and Little Bear Caves, recently surveyed to completion. While in the general area, Chris checked on ownership status of another cave. Also—Brandon Van Dalsem, Aaron Thompson and Dillon Freiburger dropped and monitored Devils Den Pit (CRF in Arkansas). Dillon carried out a variety of trash from the bottom. The group then monitored nearby Mud Cave and Willis Cave. **Dec. 21st**—More CRF work in Arkansas: Dillon Freiburger and fellow CRF cavers Aaron Thompson, Corey Maize, Rhett Finley and Ethan Brown ridgewalked, then monitored Boxley Rat Cave and Smith Creek Cave. Brandon Van Dalsem and Treavor Bussard attempted to make a connection between Mud Cave and Ice Box Cave but were unsuccessful. They also monitored Ice Box Cave and Little Devils Den Pit. **Dec. 22nd**—Jon Beard and Eric Hertzler monitored Merman Spring Cave and Cascade Spring Cave (Christian Co) as part of CRF projects in Mark Twain National Forest. These short caves had little to offer in biology however. While hiking to the latter cave, they monitored and mapped a previously undocumented adjacent cave that they named Cascade Crawl Cave. This being done, they documented and mapped the "Stock Tank Caves" with Jon sketching Lower Stock Tank Cave and Eric sketching Upper Stock Tank Cave. Also—CRF in Arkansas: Dillon Freiburger and Aaron Thompson finished the survey of Needles Eye Pit. Total length was 120 feet with a depth of 45 feet. **Dec. 23rd**—Lastly in Arkansas for the CRF: Dillon Freiburger and Kayla Sapkota collected information on around ten adjacent caves in order to "straighten out" the area. They surveyed three caves including Green Dome Cave which was rediscovered after 25 years. **Dec. 27th-30th**—SPG members Brandon Van Dalsem, Dillon Freiburger, Treavor Bussard and Jon Beard joined other cavers in a four-day survey and monitor trip to Barry County. On day one, while Dillon and Brandon were part of a survey trip to Devils Hole, Jon put on his CRF hat and monitored four small caves in Mark Twain National Forest, surveying three of them (Hidden Dome, Piney and Uphill Crawl). On day two, Treavor and Jon monitored and mapped Quick and Sulfur Caves while Dillon and others monitored and mapped three other caves. On day three, Brandon, Jon and Aaron monitored and mapped Northern Dome Cave and Resolution

Shelter while three others monitored and mapped two caves in the same hollow. On day four, Jon, Aaron and two others monitored Fairy Cave.--Report by Max White, Material provided by Jonathan B. Beard

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Ozark Caving web site– 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

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

Meramec Valley Grotto

Presents

Cave Maps of Missouri, Illinois and Beyond

at

Mehlville Senior High School

3200 Lemay Ferry Blvd., St. Louis, MO 63125

Gym A or Gym B (look for signs at the front door)

February 21, 2018 at 7:00 PM

The February meeting of the Meramec Valley Grotto will be at Mehlville High School.

The program for the evening will be a display of cave maps from Missouri, Illinois and abroad.

The plan is to fill the gym floor up with as many cave maps as we can, including large scale maps of regional caves such as Carroll Cave, Black Fathom River Cave, Berome Moore Cave, Lemp Brewery Caverns and more, including international caves.

This event is open to the public.

ContactUs@mospeleo.org for questions or further details.

Ralphord Cave

also known as Barberford Cave

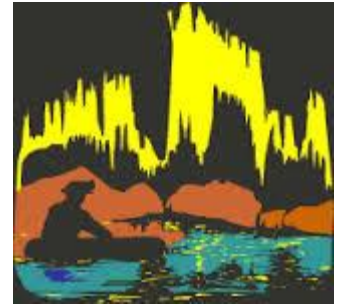


Co-sponsored by Missouri Speleological Survey,
and Cave Research Foundation

Missouri Speleological Survey Winter Board Meeting Agenda

January 20, 2018

Division of Geology and Land Survey Annex Conference Room
111 Fairgrounds Road, Rolla, MO



Morning Session

- Building opens at 8:00 – informal time to socialize, view maps, etc.
- Cave Files Help Desk/Database tutorials, etc.
- Presentations, demonstrations, etc.

Board meeting begins at 1:00 PM

Administrative Business

- Roll call – Officers and Board
- Secretary's Report and approval of last meeting's minutes – Alberta Zumwalt
- Liaison – Gary Zumwalt
- Treasurer's Report – Don Dunham
- *Missouri Speleology* – Don Dunham

Old Business

New Business

MSS Research Council

Projects and Announcements

- Cave files / Database
- Agency Reports
 - *Mark Twain National Forest*
 - *Ozark National Scenic Riverways*
 - *Missouri Department of Conservation*
 - *State Parks*
 - Others
- Affiliate Organizations Project Reports
 - Carroll Cave
 - Berome Moore Cave
 - Others
- Public Outreach
 - Facebook & Website

Next meeting & Adjournment

Winter MSS Meeting 2018

The Winter MSS meeting for 2018 will be on January 20 at the Missouri Geological Survey in Rolla. The doors should be open in the morning with socializing, map displays and perhaps presentations early in the day and the Board meeting happening at 1 PM. If you have any interest in giving a presentation or demonstration, please let me know. The cave files should also be open and no doubt, pleasant personalities will abound. If you're planning to come, encourage a caver or two in your grotto who aren't typically involved to come check out what the MSS is all about, documenting Missouri caves.—Dan Lamping, MSS President

Calendar:

Jan. 20th – MSS meeting, 1 pm, DGLS Annex bldg., 111 Fairgrounds Rd., Rolla, MO. **MCKC meeting – 9 am.**

Jan. 20th – Next scheduled Goodwin work day.

Mar. 1st – Next MSS Liaison deadline.

Silent Auction for Joe Walsh's MSS

T-Shirt

Bidding at the Jan. 20 MSS meeting

To benefit the MSS, MOSPELEO budget

Bring your cash or checkbook

To own your piece of Missouri Speleo History – Lois Walsh

NOTE: The MSS Affiliate fees (\$25.00) are due at the January meeting.