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REMEMBERING ROBERT "BOB" TAYLOR.

Robert Louis Taylor passed away in June, 2012, ending a caving "career" lasting nearly 50 years in which he visited thousands of caves, mapping, photographing and describing many of them in the Midwest, primarily his home state of Missouri.

Bob was born in 1944 in California, but in just a few months his family would move to Springfield, Missouri, which he would call home nearly all of the rest of his life. Graduating from Hillcrest High School in 1962, he began his college years at what is now Missouri State University. It is here that he met cavers in the start of Heart of the Ozarks Grotto (HOG), a student organization. He would

assist Don Rimbach in cave surveys a few years into his matriculation, and in doing so would turn Bob's attention to sketching maps. In 1968 he met Ken Thomson who had begun his teaching career at the university and sponsorship for the student grotto. Bob and Ken partnered in dozens of cave surveys with Bob (mostly) and Ken sketching and Ken doing much of the map drafting in Bob's early years of mapping. Bob's most productive year, in terms of quantity of maps, was 1973 when 30 were completed.

In 1975, Bob became the founding president of Ozark Highlands Grotto (OHG) but would leave a year later for Western Kentucky University to pursue his Master's Degree in philosophy. There, he became the founding president of Green River Grotto. In 1979 he would return to Springfield to serve again as OHG's president.

In the 1970s Bob was joined by Mike Warshauer in mapping several caves including some in Arkansas. His most legendary map in Arkansas was over 3.5 miles of Ennis Cave. In Missouri Bob would map Cookstove Cave and Jam Up Cave in the Ozark National Scenic Riverways as well as Crystal Cave of Greene County (with Ken Thomson) and Wilson Cave of Lawrence County.

In 1980 he continued to map many caves. Some of the more significant of Bob's surveys of this decade included Smalley Sinkhole Cave of Greene County, Breakdown Cave of Christian County and Lon Odell Memorial Cave of Dade County.

In the early 1990s, an old friend Roy Gold moved back to Missouri to retire. Immediately Roy was a new (renewed) addition to Bob's small army of survey helpers that often included Jon Beard, Jack

Rosenkoetter and Charity Gramm. Bob began several large survey projects in the 1990s including remapping Ash Grove Cave, Giboney Cave, Hall Branch Cave of Greene County and Lowell Cave of Wright County.

He began other major cave surveys in the 2000s that included Steins Creek Cave of Wright County.

In 2006, Bob was one of the founders of Springfield Plateau Grotto and he served as its first MSS Director after SPG became an affiliate of the MSS. He would produce nearly 40 completed cave maps prior to leaving us.

And Bob was more than just a cave surveyor. His 50-year mass of cave photographs from 1962 to 2011 are both great to observe but a valuable archival resource. For example, his photos taken in 4,000-foot Keeslar Cave in Greene County decades ago may be the only ones taken of 10-foot white columns in an almost inaccessible main passage due to a 90-foot long extremely tight bellycrawl).

Bob's use of wit and humor in his cave trip articles were a favorite to read for many years. He was modest, self-effacing but always found humor in every bad turn. He referenced Inspector Clouseau on one cave trip when a tail-wagging dog bit him in his hand when Bob attempted to pet it. (Clouseau: "Does your dog bite?" Desk clerk: "No." [dog bites] Clouseau: "I thought you said your dog does not bite!" Desk clerk: "That is not my dog.") Puns effused from his writings. He was hilarious at times. His puns were a dense fog that accompanied Bob wherever he went. The more nauseated friends were from hearing his puns, the more Bob was pleased. It was perhaps the only part of Bob that was unkind, bordering on the sadistic.

Bob was more than a caver. He was a husband, a father, a friend and a teacher. He taught others how to map and photograph, and today there are many cave maps produced from some of his former apprentices.

Many of Bob's unfinished surveys are being completed posthumously by those who loved his company and deem his projects important. His legacies are his maps, his photos, his reports, his puns and his friendships, all of which are worth remembering. —Jon Beard

Note: This is the first in what will hopefully be a semi-regular series of hints on how to identify Missouri cave life, and how much can and cannot be determined by the caver without a strong background in biology.

Identifying Salamanders

There are five or six species of salamander which somewhat regularly show up in Missouri Caves together with several others occasionally encountered. The adults are relatively easy to identify, as long as you know what to look for. Probably the commonest point of confusion is between the similar-looking cave and long-tailed/dark sided salamanders, respectively *Eurycea lucifuga* and *E. longicauda*. The two have similar ranges of coloration, and despite the name *longicauda*'s tail is not noticeable longer than *lucifuga*'s, but look more closely at the tails – the cave salamander on the left has distinctly rounded dark spots, spaced rather widely. The tail of the



long-tailed salamander (on the right) is a lot more variable, but never has distinct, widely spaced spots. The example shown here is the type subspecies, *E. longicauda longicauda*; through most of their Missouri range

though you will see the dark-sided subspecies *E. longicauda melanopleura*, where the spots and splotches down the side and on the tail tend to merge into a dark smear, making it easier to distinguish from a cave salamander. Both cave and long-tailed salamanders typically have an orange background color but *longicauda* tends to be darker and often has a greenish tinge.

Most cavers have little problem recognizing the grotto salamander, *E. spelaea* – nothing else has a pale color (usually) with no pattern of dark spots, and in the case of adults, eyes with a skin covering. What may be a little confusing though is that many individuals, especially larvae, have more of a grayish color, which can be quite dark and those usually have somewhat faint *pale* spots in parallel rows down the back and tail. Three other species commonly show up in near-surface situations. The slimy salamander, *Plethodon albagula*, is easily recognized, with its dark gray or black background color with many small white spots. Look out also for slimy salamander egg masses – unlike the vast majority of salamanders which lay eggs in water, the slimy lays eggs in a secluded spot on dry land and guards them until they hatch.

The Ozark zig-zag salamander and the southern red-backed salamander are very similar in appearance – both have dark sides, limbs and head with a brick red stripe down the center of the back and the tail. Fortunately the species have ranges that overlap only slightly – the zig-zag is found only in the southwest of the state, the red-back throughout most of the Ozarks.



southern red-backed salamander: photo: Mark Jones



slimy salamander: photo: Max White

What about salamander larvae? These can range from tiny white tadpole-like creatures with inconspicuous legs – recent hatchlings – up to a grotto salamander close to transforming to an adult, which is actually larger than the adult it will become. The larger grotto salamander larvae are the only ones that can be reliably identified in the field, but for everything else you are generally safe calling them *Eurycea* species. It is useful to distinguish adult from larval grotto salamanders. If the creature is on dry land, it's a no-brainer – it's an adult. If it's in water though, you need to look more closely. The best field marks are the shape of the head and the presence or absence of gills. Look for the red gills immediately behind the head of the larva (these may be hard



grotto salamander larva: photo Bill Elliott



grotto salamander adult

to see). The larva also has an abrupt narrowing behind the head, giving the head a boxy shape, compared with the adult where the head tapers gradually into the body.

And the best hint of all? If you really want to improve your salamander identification skills, get yourself a copy of *Reptiles and Amphibians of Missouri* by Tom Johnson, an excellent guide published by the Missouri Department of Conservation and available for a bargain \$18.

Next time: identifying the mole salamanders and frogs. --Mick Sutton

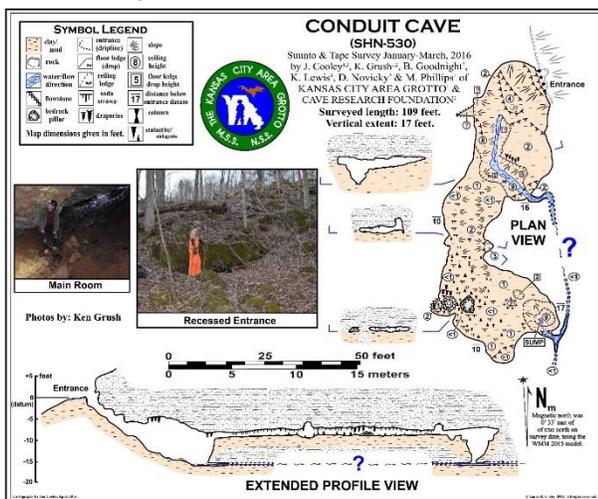
Missouri Speleological Survey. Files Report for January – April 2016. Great piles of new information are streaming in, challenging the capacity of the data keepers to keep up. It is (as Spike says) like trying to drink from a firehose. But keep it coming! **Here are** some of the contributions and, as always, these are the ones that have been processed so something probably got missed in the confusion. **Kirsten Alvey** sent: New cave location for Marion County, this one being in, more-or-less, downtown Hannibal. **Jon Beard** sent: Map of Miners Cave, Christian County; An inspiring account of the Conquest of Lowell Cave; A nice map of Dripping Cave, Christian County, on Mark Twain NF land; Over 300 faunal records from SW MO, the results of years of careful record-keeping plus new records from recent monitoring; Over 100 modified records, mostly from Christian County; Map of Island Cave in Greene County; Another 500 faunal records, gleaned from his old records and trip reports in grotto newsletters; Map of Baker Cave, Christian County. **Michael Bradford** sent: Very nice map of Sunset Cave, Pulaski County, a cave on a stretch of the Gasconade that, amazingly, few people have looked at; Information on cave leads in St. Louis County; **Josh Brewer** sent: Maps of Davis Cave #2 and Davis Cave #3 on Mark Twain NF land in Pulaski County; Map of Lower Hooten Cave on MTNF in Pulaski County; **Shelly Colatskie** of MDC sent: Photographs, location improvement and other information on a cave in Warren County; Correction to bio record for a cave in Stone County; Numerous other small contributions to cave life and cave owner information; **Jim Cooley** sent: Maps of Boat Shelter Cave, Double Opening Cave, Submarine Beaver Cave, and Mosquito Cave all from Lake of the Ozarks State Park in Miller and Camden Counties. Map of Jedlick-Vollmer Cave in Camden County; Landowner info for a Camden county cave; Map of Coakley Spring Cave, Camden County, Lake Ozarks State Park; Five new cave locations from Camden County and one new location from Shannon County; 50-some new faunal records and a pile of use monitoring records; A nice update on work at Lake of the Ozarks SP. **Spike Crews** sent: Four new caves and some corrections from MTNF land in Pulaski County; Confirmation of location and photograph of Fairview Cave on MTNF land in Pulaski County; 27 faunal records and 8 monitoring records, results of MSM work on MTNF caves in Pulaski County; **Tony Elliott** of MDC sent: Information on a couple of biologically important caves in Franklin County. **Susan Farrington** of MDC sent: Revised locations from MDC caves in Shannon County. **Roy Gold** sent: photo of Bob Taylor in Lowell Cave, Wright County. **Brenda Goodnight** sent: Two monitoring reports and several faunal records **Ken Grush** sent: Updated map records and map archives set; 21 faunal records from old reports; Over 400 new related reports; New record set for Vernon County, incorporating caves that had appeared in Missouri Speleology but never been assigned numbers; Revised files for Moniteau, Morgan, Marion, Newton, and Monroe counties; 58 new faunal records gleaned from the files; 296 related reports, also gleaned from the files. **Josh Hafner** sent: Photographs from a large cave in Ste. Genevieve. **James Halpern** of the USFS sent: Information on a cave archaeology site on the MTNF. **Eric Hertzler** sent: Map of Redford Cave, Christian County; Map of Bliss Spring Cave, Christian County; Map of Dewitt Pit, Christian County; Map of Case De Loco Shelter Cave in Camden County. **Derik Holtmann** sent: Great photos of a variety of caves on Pioneer Forest and MDC land. **Patti House** added: a bunch of new faunal records from Ozark Riverways, gleaned from the files. **Scott House** added: Maps of Bench Cave and Buttram Hollow Spring Cave from Taney County, MTNF; Reports and faunal records and other stuff in some quantity. **Mark Jones** sent: A bunch of faunal and monitoring records from Ozark Riverways and Mark Twain National Forest. **Dan Lamping** sent: Draft of Plundered Canyon Cave on LAD/Pioneer land in Shannon County; Correction on a cave location on Pioneer lands elsewhere in

Shannon County; Faunal records from Green Cave and Hamilton Spring Cave, Meramec SP; New report on Banker Hollow Cave on MDC land in Shannon County; New related record for a Warren County cave; New related record and report for a cave in the Ozark Riverways; Faunal and monitoring records for MVG/CRF trips to two MDC caves in Shannon County; Faunal and monitoring records for trips to several Ozark Riverways caves; A new cave from Jefferson County, courtesy of archaeologist Mike Fuller; Cultural information from Fuller on a cave in Phelps County; A correction for faunal records from Texas County; An overlay of SH Cave in Shannon County; Map of Flowstone Pit Cave in St. Louis County; A new cave report for Ste. Genevieve County from Derrick Weisbrod. **Joe Light** sent: Information on more lost caves from St. Louis, courtesy of the voluminous files of Lang Brod. **Alex Litsch** sent: Map of Creek side Cave on MTNF land in Pulaski County. Cave mapped by several new members of MSM; Map of Dusty Ledge Cave, also on MTNF Pulaski County, surveyed by MSM. **Chad McCain** sent in: Report on a new cave in Perry County; Report and photo for a new cave on MTNF land in Ripley County; Map of Bates Cave in Jefferson County, surveyed by Chad and Shelly Colatskie; FileMaker reports on three new caves in Ste. Genevieve County; An improved location and photographs for a cave in Pettis County; Updated map on a large cave in Ste. Genevieve County. **Ben Miller** sent: Map of Shoulder Walk Cave in McDonald County; Records of new caves from Barry County; New and revised records of caves from McDonald County; Maps of Cotter Column Cave and Border Dome Cave on MTNF land in Barry County; Maps of Creekbluff Cave and Buzzard Trees Cave, McDonald County; Maps of Manning Cave and Highway Cave in McDonald County. **Jim Ruedin** sent: Faunal counts from five caves in Shannon County. **Rhonda Rimer** of MDC sent: Reports and faunal counts for two caves in Christian County; Faunal counts and report for two caves in Greene and McDonald County; Faunal counts from a cave in Stone County; Information on two caves in Boone County; Information on caves in Christian, Dade, and Ozark Counties; Report on a cave in Barry County. **Kayla Sapkota** sent: Faunal records from several caves, all from a trip to Taney County on MTNF land. **Tony Schmitt** sent: Photos, use monitoring and faunal counts from an Ozark Riverways cave; Locations for several new caves in Shannon County. **Dan Slais** sent: Monitoring and faunal reports from a Pulaski County cave. **Mick Sutton** sent: Clarification on faunal records; 122 faunal records, mostly gleaned from old Missouri Speleology issues; A whole new species table showing 1151 different species; Monitoring reports from MTNF caves; Sixty-some new faunal records from various MTNF trips. **Edmund Tucker** sent: Several GPS locations for new cave leads in Perry County. **Craig Williams** sent: Cultural reports on a couple of Barry County caves on Mark Twain NF land. **Shawn Williams** sent: Reports on McCubbin Spring Cave in Ozark National Scenic Riverways, Shannon County. **Richard Young** submitted: Cultural reports on a number of small caves on the upper Jacks Fork River in the Ozark Riverways; Cultural reports on several more caves in an MDC natural area in Shannon County; Cultural reports for a number of caves in the Cassville and Ava Districts of Mark Twain NF. **So far** this calendar year we have added forty new caves to the files and "lost" two because they were duplicates of something else.--Scott House, Missouri Cave Database, 1606 Luce St., Cape Girardeau MO 63701 573-651-3782 scott_house@hotmail.com

Missouri School of Mines. (MSM) Over Christmas break 2000' of survey was done in St Gen. **Jan. 1st** - Mammoth trip: Conundrum Canyon - virgin passage survey by Craig Buschkoetter, Michael Bradford; North Crouchway - Alex Litsch with others surveyed virgin passage in Roppel; Currens - Alex Litsch, Michael Bradford assisted in re-survey on two separate trips. **Jan. 16th** - Blowing Hole Cave survey. Nine bats were found where no bats had been documented before, including a big brown bat. An armadillo walked in during the survey! - Creek Side Column Cave (New Cave!) -Creek Side Cave (New Cave!)-> Garrett Wood, Alex Litsch, Andy Free, Allie Free. Also: New cave in Pulaski County explored on local landowners property. Two little browns and 5 pips were found. - Jessica Tygett. **Jan. 17th** - Alex Litsch sketched his first map at Osage Underpass in Osage County. **Jan. 24th** -MSS Meeting in Rolla had cake to celebrate 7000 officially documented caves! Mick Sutton led a biology trip for the MSS meeting and Hanley Cave and Western Turkey Cave in Phelps County - Noah Beck, Anna Meyer, Jessica Self, Nathan Durfee, Rabia Khan, and Lucas Harper. **Jan. 30th** - Creekside, Rat Den,

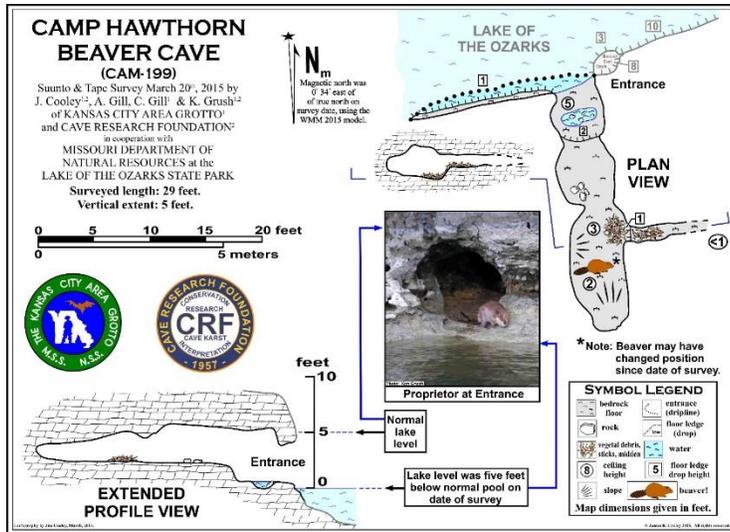
and Dusty Ledge Caves surveyed in Pulaski County. Caves were completely mapped and monitored. Jeremy Weih did his first sketch for a cave map. - Jeremy Weih, Alex Litsch, Nathan Durfee, Rabia Khan. **Jan. 31st** - A second vertical workshop was done for members of MSM at Gourd Creek Cave. Eight new members were trained. Garrett Wood, Micca Nevins, Alex Litsch, Nathan Durfee, Rabia Khan, Jackson Eberle, Lucas Harper, Amanda McDuffee, Lia Vanzant. Three ropes were in use. Trash was cleaned out of the cave. 125+ Tri-colors and 5 Big Browns Counted. **Feb. 6th** --Easter Cave-Noah Beck, Anna Meyer, Lance Parish, Lukus Shoffner, Jessica Self, Owyn Self, Charles Barker, Jackson Eberle. Also -Ste. Genevieve collaborative cave survey trip with SEMO, MVG, MSM, and MSS. **Feb. 10th** - Spike gave a class on Cave Formations after the regular grotto meeting. Feb. 14th -Cave hunt for Hide Hollow Cave in Phelps County. It was located. - Jessica Self, Lukus Shoffner, Joey Castrilla, Rebecca Shaffer, David Doell, Dalton Adamson. **Feb. 20th** -Creek Bend Cave and Rat Den Cave. Rabia sketched for the first time - Rabia Khan, Brendin Wright, Luke, Dalton Adamson, and Lucas Harper; another new cave found. **Feb. 28th** - Hide Hollow was partially mapped. Ten Larval salamanders and a Herald moth were documented. Jessica Self sketched for the first time. -Jessica Self, Lukus Shoffner, Sarah Klaas, Amanda Swain, Bobby Swain. **Mar. 12th-13th** -Spike, Lucas Harper, and Jessica Self helped with a bio inventory in Onondaga Cave State Park; A Skaggs Cave trip was also done this weekend. **Apr. 2nd** -McDonald County caving/camping trip for restorations and survey - Noah, Anna, Garrett, Amanda, Jeremy, Alex. **Apr. 9th-10th** - Lucas and Alex took the speleobox to BatFest at Onondaga Cave State Park and had lots of interest in the box and club. Rollins #2 Cave's SOB passage was pushed to its end, bigger passage was found. Some LIDAR work was done in a nearby cave. **Apr. 23rd – 24th** -Tony Schmitt took a group into Crankshaft Pit for vertical practice. Missouri S&T held an Earth Day for the community of Rolla. MSM Spelunkers brought out the speleobox and information about karst to share with the local school children. The speleobox was a hit, naturally. **Apr. 29th – 30th** -Alex Litch, Jessica Self, Jackson Eberle, Andy Free and Benn Sullins attended MVOR in Brumley, MO. **At the end** of the semester, our members are still very active. The speleobox has had a makeover with some new boards and a fresh set of paint. Also this semester, three bat boxes were installed in Phelps County for future research. Last, but certainly not least, MSM has announced that we will be hosting the Spring 2016 MVOR!!- Jessica Tygett

Kansas City Area Grotto, (KCAAG). Two February trips were not previously mentioned. **February 13th:** Bill Gee led a reconnaissance trip in Carroll Cave with members of OCDA. They evaluated the trail to the Lake Room for a possible dive trip. The lake was scanned with hand-held sonar units looking for the location of the drain. Two potential drains were found. Maximum depth recorded was 43 feet. **March 2nd:** Dennis Novicky and Brenda Goodnight surveyed 109-foot-long, privately



owned Conduit Cave. Jim Cooley did the cartography and drew up the map. **March 4th:** Cooley continued to participate in a cooperative project with MDC to monitor mines for bats in Kansas City with a visit to Rocky Hollow Park Quarry in Clay County. Bats with visible fungus were found. **March 12th:** A return survey trip to Allie Springs was cancelled when the cave sumped to the ceiling in the 847-foot-long entrance watercrawl ceiling. However, Novicky visited the cave several times, learning the hydrology of the system and how it responds to rainfall. The results were very interesting. In very little time, with very little rain, the cave sumps to the ceiling and stays unenterable for at least three days. Plan accordingly! **March 14th-19th:** Cooley led a group consisting of Robin Bobo, Alex Gill, Cliff Gill, Ken Grush, Jim Harmon, Novicky and Rita Worden (Chouteau) on a CRF-sponsored survey trip of the caves of Lake of the Ozark State Park (LOSP). Cooley and Gill provided boats to get around

the lake. Four new caves were investigated and surveyed: Whitebeard Shelter, Grassy Ledge Cave, Shelter Bluff Shelter, and Shelter Bluff Cave. The last three required rope and SRT techniques to enter. In addition,



the KCAG-Chouteau team mapped known caves: Buzzard Slot, Coakley Spring, Goose Tunnel, Grand Glaize Shelter, and Two Buzzard Tunnel, as well as completing the survey of the last 230 feet of 897-foot-long Pin Oak Cave. No one is likely to ever again see the end of the muddy soup in Pin Oak Cave, which taped out to twice the original estimated length of the cave. Neotenic Neoprene-clad Novicky went where no man will willingly go again – including Novicky! One high lead was removed from the objectives list, when Novicky and Gee concluded that Goose Aerie in Buzzard Bluff fell short on cave length. In addition, the group

managed to do some “off-the-park” projects, such as: measuring the Ha Ha Tonka State Park’s River Cave for a new gate. The old gate was destroyed by the July, 2015 flood event and removed by Park personnel; completing two separate survey trips in the newly discovered Old Toronto Road Spring Cave, bringing the total to 998 feet of all hands-and-knees (or lower) muddy crawl; and lining up a couple of privately owned caves for the Spring MVOR, namely Little Mouth Cave, which was monitored, and Wounded Knee Cave. **March 24th:** The CRF bat assessment initiative with MDC to monitor Kansas City’s mines continued by monitoring the flooded Bannister and Holmes Mine in Jackson County. Canoes were required. Cooley arranged and led the trip with Rick Hines doing photography, and Jerry Cindric, Jaclyn Dalbey, and Jay Bridgewater providing support. The new landowner was taken through the cave. Only three bats were seen. **March 26th:** Gary Johnson, Krista Bartel and Gee continued the survey in Clymore Cave in Hickory County. The cave is now over 1,300 feet long,



George Bilbrey welds up repairs on vandalized cave gate 14 feet below the surface at Lost Man Cave on the ONSR, Carter County.

which is the second longest cave in the county. Small people willing to ooze through tight spots could add another 100 feet, maybe more, to the survey. We exited the cave when we were surprisingly evicted by resident warm blooded mammals! **April 3rd:** Cooley, Goodnight and Novicky started the survey of Archie Jones Cave, netting 209.4 feet of survey. **April 4th:** Cooley, Goodnight and Novicky were joined by Cliff Gill for the survey of the two last confirmed survey objectives at Lake of the Ozarks State Park: Tree Root Cave and Camp Rising Sun Cave. The second objective required survey stations to be set and shots taken in the first 100 feet of passage while swimming. **April 5th:** Cooley, Gill, Goodnight and Novicky then returned to Archie Jones Cave to survey another 119.2 feet. **April 19th:** Cooley and George Bilbrey repaired the breached gate on Lost Man Cave on the Ozark National Scenic Riverways, with the help of park personnel. **April 20th:** In a strange coincidence that reminded Cooley of his lavishly misspent youth, Cooley and Bilbrey found themselves surveying High Cave on the Jacks Fork River, on the Ozark National Scenic Riverways. The survey was conducted in the rain, which made getting up and down the very steep chute to the entrance very challenging. The next day,

Cooley did the cartography and drew up the map. **April 22nd:** Cooley checked gates and performed lock maintenance on cave gates at Wallace Cave, Devils Well, Polygonal Pit, Welch Spring Cave, Medlock Cave, and

Round Spring Caverns. These caves are all located on the northern end of the ONSR. **April 24th:** Cooley visited Sugar Silver Cave in Barry County on the Mark Twain National Forest (MTNF), a mined cave, that MTNF plans to gate in 2017. **April 25th:** Cooley met with Jess Register, Forest Technician, and Nettie Sitting Up Perez, Ava/Cassville/Willow Springs District biologist, to assess Carter Cave and Butler Hollow Mine for gating in June. Cooley then took Register and Sitting Up Perez to Sugar Silver Cave, which they had never visited before. **April 28th:** After Cooley contacted private landowners and obtained permission for these caves to be visited during the Spring MVOR, held in Brumley, and after preparing guides, directions and liability waivers, Jim Cooley and Brenda Goodnight flagged trails and/or entrances on Little Mouth Cave, Wounded Knee Cave, Perkins Cave and Joe Cave. **April 29th:** Cooley, Goodnight, and Jan & Justin Morton performed survey QC on cave maps Cooley had drawn up of these Lake of the Ozarks State Park Caves: Fort Cave, Camp Hawthorn Cave, and Sinuous Sinus Cave. **April 30th:** Cooley, Jackson Eberle (MSM) Goodnight, Novicky, and Worden continued the survey at Archie Jones Cave, netting another 90 feet of interior and 60 feet of exterior survey. **May 1st:** Cooley removed the flagging tape from the trails to and the entrances of Wounded Knee Cave, Perkins Cave, and Joe Cave, and changed the combinations on the locks at Perkins Cave. The Mortons were dispatched to remove the flagging tape on Little Mouth Cave.—Ken Grush

Carroll Cave Conservancy. (CCC) Jan. 9th – Annual Data logger servicing trip – Convention Hall. Bill Gee (project leader), Ben Perkins, Amanda Perkins, Vic Bentele, Diana Bentele. Entry – 10:05am; Exit – 3:55pm. Secondary goal to introduce several members of OCDA (Ozark Cave Dive Alliance) to the cave with an eye toward doing a reconnoiter trip to the Lake Room. I downloaded the two data loggers at the ladder. The level of Thunder River was about 6-8 inches above nominal. We went down Carroll Passage to the data logger in Carroll River. There were many deposits of fresh sand in boot prints and other depressions, some of them 4-5 feet above the stream level. At the data logger, one of the upper guy wires was no longer attached to the stilling well. The other two were loose. Apparently the recent flood had caused one of the guy wires to come unwrapped. After downloading the logger, the guy wires were retied. A visit to Thunder Falls, back to entrance ladder for lunch, then to UL2 and downloaded the data logger, completing the main trip objective. **Feb. 13th** – Reconnoiter trail to Lake Room for possible dive, Downstream Thunder. Bill Gee (project leader), Ben Perkins, Laura Battle, David Moore, Bob Koch, Nathan Taylor, Tucker Palmatier, Dirk Bennet. Entry – 7:30am; Exit – 7:40pm. In 20at, Ben Perkins of the OCDA asked about the possibility of doing a dive trip in the Lake room of Carroll Cave. Ben and other OCDA members did a couple of practice trips in Oct. 2015 and Jan. 2016. This trip was intended to reconnoiter the trail from the ladder entrance to the Lake Room, to find out what sort of logistics would be required to move people and gear. We also did some basic survey of the bottom of the Lake Room to see if there was any obvious drain conduit. We had a third goal of replacing the rescue cache at Jerry's Cairn with something that is truly watertight and tied down. A few hundred feet downstream from Black Rock Riffles we found several lengths of iron pipe strapped together with 3 green 6-gallon water jugs attached, obviously to act as floats. The entire contraption was about half-buried in the mud. We hauled it out of the main stream, took photos and left it there. At Jerry's Cairn, we tied up the rescue cache using orange para cord. Then on to Horseshoe Falls and on to the last part of the trip from DL7 to the Lake Room. Divers used hand-held sonar units to check water depth. Deepest – 45 feet. Several ledges about 10-15 feet below the surface looked like they might hide a drain. Ben reported good visibility to about 10-15 feet, milky beyond that. He reported mud pockets 2-3 feet below the surface of the lake, indicating that the lake goes down below where we found it. Bill did a basic sketch of the room with markings for depth as the divers called them out. Nathan handled lights, Bob did video, Tucker had a GoPro on his helmet. David and Laura found a blue dry bag in the lake, half full of water, with a sleeping bag, some food, titanium sterno stove and various other camping gear. Leaving the Lake Room, we stopped at Black Rock Riffles and found nothing on the biology tiles. Saw no isopods, salamanders or bats but saw 20 cave fish. Tucker's video shows one cave fish in the Lake room about 3 inches long. Any dive trip to the Lake Room would be very challenging for

logistics. There are no good camp spots, getting gear and people through the spanky banks and mud would be difficult. Thunder River between Thunder Falls and Horseshoe Falls can be floated, except for a few hundred feet where it goes under a breakdown pile. From there, the river does not form a continuous trail. Gear would have to be carried for about half of the distance. Multiple trips would be required to stage gear, both to set up the dive and to bring everything out afterwards. Scheduling people and gear would be very complex. There is no obvious drain in the lake. There is a natural bridge on the far left side of the lake which has water flowing under it. Ben looked at the pool beyond the bridge and thinks there is a drain in it. **Feb. 6th** – Upstream Thunder restoration. Jack Peters (trip leader), DJ Hall, Heidi Fletcher, Madison Fletcher, Cliff Gill (sub for Mark Fletcher). Entry – 10:30; Exit – 4:00. Visited Upstream Thunder instead of downstream due to a participant not having warm enough clothing for downstream. (Updated the permit prior to going in). Cleaned up some tracks in the Upper Thunder areas.- Krista Bartel

Lake Ozarks Grotto. (LOG) Morgan Co. project. Cliff Gill found a couple of small new caves which could be surveyed. **Goodwin – Apr. 3rd** – Gary & Alberta Zumwalt helped Klaus Leidenfrost pump the sediment trap in front of the cave entrance to prepare for the upcoming workday. **Apr. 10th** – Ken Long reported 31 people, mostly soldiers, dug in the sump and water started coming in. **Apr. 29th** – The Zumwalts helped Klaus pump Goodwin in preparation for the MVOR work trips. **Apr. 30th** – Gary & Klaus pumped the sinkhole and Alberta took pictures. Klaus and Jon Beard worked with Bill Kacerovskis, David Lilly and another person on the cave dig. Gary rescued a box turtle (which Jon said was a female) in the sinkhole close to the cave entrance and carried it out of the sink. A black snake was curled up on top by the picnic area and we left it right there! **MVOR** – Attended by LOG members, Dwight & Rosie Weaver, Ken Long, Kerry & Kira Rowland, Linda Marg, Gary & Alberta Zumwalt. Special thanks to Kerry Rowland, for initiating a motion to donate \$1000 to the MCKC for Goodwin. – Alberta Zumwalt

Springfield Plateau Grotto. (SPG) Mar. 2nd, 3rd—Brandon Van Dalsem continued to ridgewalk in Mark Twain National Forest in southern Barry County, finding as many as ten possible undocumented caves. **Mar. 4th**—Eric Hertzler was assisted by Jon Beard in the survey of Racetrack Ridge Cave (Taney Co), a cave Eric found some years ago. It has two small entrances and about 70 feet of passage. Although plenty of evidence was there to suggest raccoons (small tunnels under the wall and scattered leaf and twig detritus), they only found crickets, mosquitoes and two slimy salamanders. The cave is developed in the Cotter Dolomite. **Mar. 5th**—As CRF cooperators in Mark Twain National Forest in Barry County, Ben Miller and Mark Jones were mapping caves while Scott House, Don Dunham and Richard Young were monitoring three others, Jon Beard accompanied Mick Sutton and Sue Hagan in monitoring Onyx, Goins, Goins Home, Sweet Potato, Four Step Flowstone and Tiny Tube caves. Altogether more than 15 caves were monitored for bats and other biota on a gorgeous spring-like weekend. **Mar. 6th**—Mick Sutton and Jon Beard monitored Rattlesnake Cave (Christian Co) in Mark Twain National Forest on their way back to their homes. They proceeded about 200 feet into the cave, finding 64 pips and 3 big brown bats, larval salamanders and insects. **Mar. 8th**—Jon Beard was asked to check out Island Cave (Greene Co) on a property recently purchased by the landowner. Accompanied by the owner's son, Jon checked for biota, photographed the cave, then surveyed the cave to 23 feet. This is a newer map showing a profile and more detail than the original 1974 map. **Mar. 11th**—Jon Beard accompanied Olivia Graves and Josh Harmon of Missouri State U in their continuing salamander research in Dream Cave (Ozark Co). An example of the devastation of WNS: In March 2015, there were over 1,250 bats (normal winter population). This year, 175 bats, about 20% of which had visible WNS. That's only 14% of the norm. **Mar. 13th**—SPG conducted its annual bio transect and resource assessment of Sequiota Cave (Greene Co). Participating were SPG members Andrew Westmaas, Brandon Van Dalsem, Cynthia Spoering, Clayton Russell, Kate Moran, Bobbilynne Koepke, Melvin Johnson, Eric and Charity Hertzler, Paul Folbre, Luke Buzzard, Treavor Bussard and Jon Beard. Also along with MSU students Olivia Graves and Josh Harmon and a caver

friend, Sheryl Galvin. While Melvin manned a display booth and talked caves with park visitors outside, and Bobbilynne tested both cave streams (temp, pH, dissolved oxygen, etc.), the others split into two teams to conduct the bio transect of the North and East Passages, both containing perennial streams. Afterwards, everyone got good and wet outside cleaning the mud off of the boats used to traverse the first 1,000 feet of cave. Lots of wet muddy fun! **Mar. 16th**—Brandon Van Dalsem and Jon Beard completed the survey of Big Bear Cave (Ozark Co), then hiked to the other side of the hollow to begin the survey of Little Bear Cave (both caves to appear on the same map). While Jon sketched, Brandon took photos. One darksided and one slimy salamander were noted as well as 41 bats in Big Bear. **Mar. 18th**—While Roy Gold and Jon Beard were narrating a cave slide show for the general public at the Springfield Conservation Nature Center, Melvin Johnson had set up a display table with pamphlets and brochures. The program last about an hour and was part of SPG's public outreach education program. **Mar. 19th**—Paul Folbre and Jon Beard explored a Greene County cave with new landowners. The cave is developed in the Burlington Limestone and contains about 600 feet of cave passage with some speleothems and lots of mud and breakdown. Also —Luke Buzzard took a visiting friend through Fitzpatrick Cave (Christian Co), a 637-foot cave managed by SPG. **Mar. 20th**—Jon Beard guided MSU students Miles Pearson and Lexi Amos through Fitzpatrick Cave (Christian Co) to enable Miles to obtain an air sample for radon testing as part of his Master's Degree studies. As Fitzpatrick is a dry cave occasionally back-flooded from the James River, low levels are expected? While there, Jon checked bats, finding 26 healthy-looking pips. **Mar. 22nd**—Jon Beard guided an Evangel University class through Fitzpatrick Cave (Christian Co) as part of SPG's public outreach education program. This is the fifth successive year for Professor Donovan Nelson's class. **Mar. 23rd**—Jon Beard counted the bats in Pearson Creek Cave (Greene Co). 39 bats were found altogether, including two with apparent WNS. **Mar 24th**—Brandon Van Dalsem and Corey McCraney assisted Jon Beard in the resumption of the survey of Carrico Cave (Dade County), one of the county's longest caves. They completed the northeast section of the cave and mapped roughly the first third of the northwest side passage complex. One bristly cave crayfish was seen. A few pipistrelle bats were checked for WNS, finding two with fungal hyphae. **Mar. 25th**—Melvin Johnson conducted a cave presentation for elementary students at McGregor School in Springfield as part of SPG's public outreach education program. **Mar. 26th**—Brandon Van Dalsem, Matt Bumgardner, Bethany Bruman and Jon Beard were joined by Mick and Sue Hagan and Dillon Freiburger in a CRF project day in Piney Creek Wilderness in Barry County. Jon and Bethany successfully hunted for White Oak Onyx Cave to survey a profile section through the cave while Dillon accompanied Mick in a bio survey of Moonshine Hole Cave while Brandon and Matt verified some cave leads Brandon had found earlier in the month. **Mar. 29th**—Ron Martin assisted Jon Beard in the survey of 70-foot Baker Cave (Christian Co). The cave is all crawlway, first part on bedrock, second part on chert cobble before it gets too small. A cave salamander, camel cricket and an earthworm were seen. The cave has a small perennial stream that issues from a bedding plane near the entrance but is not visible the rest of the cave. **Mar. 29th -30th** -Melvin Johnson presented a program on caves to elementary students at Bisset School in Springfield. **Mar. 31st**—Jon Beard guided two classes of Nixa High School geology students, one at a time, through the Main Room, North Loop, Formation Loop and Handshake Hall of Breakdown Cave (Christian Co) as part of SPG public outreach education program. While doing so, Jon counted pips, salamanders and cave spiders along the way. This is the ninth consecutive year Nixa High School geology students have been taken on field trips through this cave (four classes in two days each). Also—Melvin Johnson and Jon Beard manned displays and answered questions on caves, karst and snakes for Boy Scouts and Venturers at the Springfield Nature Center along with the Missouri Dept. of Conservation.--Report by Max White. Material provided by Jonathan B. Beard, Luke Buzzard, Melvin Johnson, and Brandon Van Dalsem. **Apr. 1st**—Jon Beard guided two classes of Nixa High School geology students, one at a time, through the Main Room, North Loop, Formation Loop and Handshake Hall of Breakdown Cave (Christian Co) as part of SPG public outreach education program. A total of 56 students (two classes a day March 31 and April 1) participated. **Apr. 2nd**—Brandon Van Dalsem, Matt Bumgardner and Jon Beard joined Kirsten Mudd and MSM cavers in the survey of Sears Cave (Newton

Co). The cave has a spring entrance and a slump entrance on the hillside. Two teams mapped the upper dry section and lower watercrawl section. After this, Kirsten showed the crews a bluff containing three short caves that could be mapped later. After supper, Brandon and Jon checked Henson Cave (McDonald Co) for restoration needs (much!) and the MSM cavers collected bags of beer cans from the cave. **Apr. 3rd**—Brandon Van Dalsem, Matt Bumgardner and Jon Beard, Kirsten Mudd and the MSM cavers visited some caves near Noel in McDonald County. Sealed Cave was checked out before the group divided into two teams to map a nearby cave. Alex’s team mapped the interior while Jon’s team mapped from the entrance to a sink a few hundred feet away. After this, Polar Bear Cave was visited to check on bats and other biota. **Apr. 4th**—After Eric and Charity Hertzler checked the entrance to Coen Pit Cave (Greene Co) the previous day, Charity returned with Brandon Van Dalsem and Jon Beard along with staff of the Watershed Committee of the Ozarks. Jon rigged the pit, Brandon then free-climbed down the 20-foot pit and explored the cave, taking measurements and photos. Jon then descended the pit and drew a rough sketch of the cave, also taking photos. The cave is about 60 feet in length, has some biota and modest flowstone. **Apr. 7th**—Andrew Westmaas, Treavor Bussard and Jon Beard accompanied Josh Harmon and Olivia Graves in a salamander research trip to Dream Cave (Ozark Co). The group simultaneously searched for salamanders and bats. Only 15 bats were found while more than four dozen salamanders were counted (adults measured). This is testimony of what can happen to a bat population over 1,200 in a cave gated since 2001 in just one year due to WNS. **Apr. 9th**—Dillon Freiburger, Matt Bumgardner and Bethany Bruman ridgewalked in Barry County in Mark Twain National Forest in search of undocumented caves, finding Solitary Shelter, a wide shelter 30 feet in length. Meanwhile, Brandon Van Dalsem was assisted by Jon Beard in Piney Creek Wilderness a few miles away with his first full shot at survey sketching an entire cave (Roundabout Skylight Cave). After that, Brandon assisted Jon in the survey of nearby Stone Barrier Cave, a 70-foot bellycrawl on cobble. These efforts are part of CRF projects. **Apr. 12th**—Today marked the 10th anniversary of the founding meeting of Springfield Plateau Grotto. **Apr. 16th-24th**—While on a nine-day float trip from Steel Creek to Buffalo City in Arkansas, a distance of about 123 miles, Eric Hertzler and Jon Beard GPSed and monitored several caves (most were minimal in length) on behalf of the CRF’s projects along the Buffalo National River. One cave had at least 15 species of critters. **Apr. 27th**—Jon Beard resumed restoration in Pearson Creek Cave (Greene Co). Stubborn spray paint graffiti was the focus on this visit—large red “Fade to Black” is indeed fading fast. Biota noted included 20 pips, one slimy salamander and 11 spelobia flies. **Apr. 29th**—Roy Gold and Jon Beard manned a cave and cave critter booth at the annual Junior Ranger Day event at Alley Spring hosted by the National Park Service for area elementary school students. Jon dressed in typical caving gear, Roy demonstrated the lighting of a carbide lamp with a “POP!” and they had porcelain plastic real-looking grotto salamander, bristly cave crayfish, Ozark cavefish and a pipistrelle bat. Each participant received a copy of Caring for Your Karst. Also —Bill Heim led a trip to Skaggs Cave (Pulaski Co) as part of the MCKC-hosted MVOR. **Apr. 30th**—Jon Beard helped with a cleanout dig at Goodwin Pit Cave (Laclede Co), directed by Klaus Leidenfrost of the MCKC. Others from other grottos helped including David Lilly and Alberta and Gary Zumwalt (and others). Also —Brandon Van Dalsem participated in a photo trip to Perkins Cave (Camden County) as part of the MVOR. Also - Dillon Freiburger, Cheryl Paulson and Max White, ridgewalked at the Buffalo River and located one undocumented cave. --Report by Max White, Materials provided by Jonathan B. Beard, Matt Bumgardner, Brandon Van Dalsem, Bill Heim and Max White

Roubidoux Grotto (RBX) At monthly meetings, RBX has found space in Cloud Storage for cave photos, getting cave loaner equipment for visitors on caving trips, and developed and obtained Roubidoux Grotto patches. We are working on helping with Newburg Children’s Museum with the idea of a Cave Room. Some members have talked with owner’s relatives about concern for Meunch Cave in Phelps County. With 22 members, RBX is continuing one recreational cave trip per month. **Feb. 27th** - Vic and Diane Bentele helped at the cleanup at Goodwin Sink. **Mar. 5th** - Vic and Diana Bentele, Ryan Thompson and Dan Slais worked on monitoring Ozark Springs Caves by visiting with an owner whose property held 7 caves. Working the hillside,

they found 10 caves and will need another trip to coordinate and complete the matching of caves with GPS data. Also— Andy Free assisted on a project with Chad McCain in St. Genevieve Co. **Mar. 12th** - RBX went to Skaggs Cave members included Karen Hood, Vic and Diane Bentele, Marc Briner, Liz Monson, Ben and Amanda Perkins, Ryan Thompson, and Ron Jones. Also- Tucker Palmatier went to Sinks Cave near Mt. Vernon Ky. **Apr. 9th** – Dan Slais helped at the Batfest and annual opening of Onondaga Cave for visitors. **Apr. 10th** – Ron Jones went on an Ozark Spring Quad tour. **Apr. 17th** – Tucker Palmatier was diving with a crew at Cannonball Cave at Lake Wappapello. Also- Andy Free was examining some 15 caves as he floated the Big Piney River. **Apr. 23rd** - RBX trip to Rollins #2 was attended by Ron Jones, Marc Briner, Tucker Palmatier, and Karen Hood.—Dan Slais

MSS OFFICERS.

President – Dan Lamping, 4946, St. Louis, MO 63123 314-775-8584 daniellamping@att.net

Vice-President – Scott House, 1606 Luce St., Cape Girardeau, MO 63701 573-651-3782
scott_house@hotmail.com

Treasurer - Don Dunham, 147 Ron de Lee, Arnold, MO 63010. 402-203-3191 don_g_dunham@yahoo.com

Secretary - Alberta Zumwalt, 1681 State Route D, Lohman, MO 65053. 573-782-3560 Gzumw@aol.com

MSS DIRECTORS.

CAIRN – Craig Williams, 5454 Mardel, St. Louis, MO 63109. 314-695-1012 cwilliams@cairstl.org

Chouteau – Rita Worden, P.O. Box 204, Jamestown, MO 65046. 573-673-3388 wordenr12323@yahoo.com

CCC – Krista Bartel, 625 Armour Blvd 3E, Kansas City, MO 64109. 816-812-5206. Kbartel1088@gmail.com

KCAG – Ken Grush, 32 Circle View Dr., Fenton, MO 63026. 636-600-0369 slagrush@gmail.com

LOG – Gary Zumwalt, 1681 State Route D, Lohman, MO 65053. 573-782-3560 Gzumw@aol.com

LEG – Al Quamen, P.O. Box 292, Carbondale, IL 62903. 618-549-2550 carbide@globaleyes.net

MCKC – Jon Beard, 923 E. Guinevere Ct., Springfield, MO 65807-3720. 417-887-7231 Mokanman@att.net

MMV – Doug Leer, 730 Lakeshore Meadow Dr., Wildwood, MO 63038. 636-207-8468 dogleer@gmail.com

MSM – Jessica Tygett, 10104 Trail of Tears, Devils Elbow, MO 65457 573-587-2794 Gneiss.self@yahoo.com

MVG – Tony Schmitt, 1227 Perdiz Ln., Fenton, MO 63026. 314-482-0516 Tonymarn2601@yahool.com

OHG – Bill Heim, 2025 W. FR 178, Springfield, MO 65810. 417-889-0640(H), build_it1@juno.com

PEG – Lorin O’Daniell, 4515 Faraon-Apt. F, St. Joseph, MO 64506. 816-646-3240 lodaniell@yahoo.com

SEMO – Chad McCain, 6676 Ike Dr., Barnhart, MO 63012. 573-513-5785 chads93GT@hotmail.com

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

ADDRESSES.

Affiliate Organizations – Jon Beard 923 E. Guinevere Ct., Springfield, MO 65807-3720. 417-887-7231 Mokanman@att.net

Missouri Speleology Circulation Manager- Bill Pfantz – Wmpfantz@aol.com

MSS Liaison editor - Gary Zumwalt 1681 State Route D, Lohman, MO 65053. 573-782-3560 Gzumw@aol.com

MSS store - Don Dunham, 147 Ron de Lee, Arnold, MO 63010. 402-203-3191 don_g_dunham@yahoo.com

Research committee - Jerry Vineyard 1113 N. 19th Ave., Barrington Springs, Ozark, MO 65721. 417-582-0063 JelenVnyrd@aol.com Other members – Oz Hawksley, Dwight Weaver, and David Ashley.

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

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

MSS web site –www.mospeleo.org

Ozark Caving web site– www.ozarkcaving.com

Carroll Cave Conservancy website <http://www.carrollcave.org>

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>

CALENDAR:

May 21st – MCKC meeting, 7 pm, Powder Mill Research Center, Shannon Co.

May 22nd – Spring MSS meeting, 10 am, Powder Mill Research Center. Activities all weekend.

Annual fees (\$25.00) due: Chouteau, MVG, MSM and PEG. If you have still not paid - Send check or money order to MSS Treasurer, Don Dunham, 147 Ron de Lee, Arnold, MO 63010.

Annual Reports due: CAIRN, CCC, MMV,MSM, MVG, PEG, SEMO. Send reports to Jon Beard, 923 E. Guinevere Ct., Springfield, MO 65807. 417-887-7231 Mokaanman@att.net

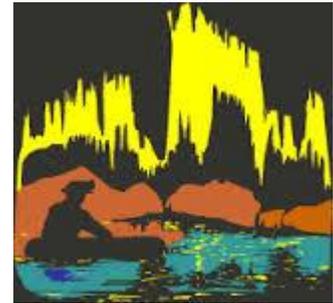
Missouri Speleological Survey

Spring Board Meeting Agenda

*Powder Mill Research Center at Owls Bend
Ozark National Scenic Riverways
Shannon County, Missouri*

May 22nd, 2016

Start time 10:00 AM



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* – *Missouri Speleology* Editorial Board
 - Subscriptions
- Affiliate Organizations – Jon Beard

Old Business

New Business

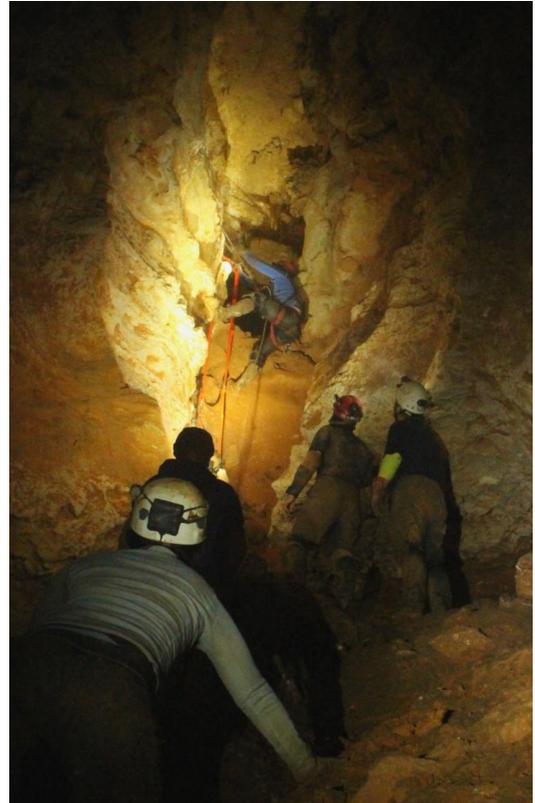
Projects and Announcements

- 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
 - Others
- Public Outreach
 - Facebook & Website

Next meeting & Adjournment

MSS Liaison
President's Message
May 2016
by Dan Lamping

Our Spring meeting is on the approach. This year it will be at the Powder Mill Research Center at Owl's Bend in the Ozark National Scenic Riverways on Sunday, May 22, 2016. There will be cave trips including survey, monitoring and bio inventory on both Friday and Saturday before the meeting. Camping will be available at Powder Mill. Bring your canoes and deconned cave gear.



Picture Captions:

(Left) A group of MSS cavers planning the day's survey objective at Gegg Cave in Ste. Genevieve County.

(Right) Mike Tennant climbs a high lead in a remote Shannon County Cave, accessing a significant continuation of virgin passage.

FIRST CLASS

MSS Liaison
Gary Zumwalt
1681 State Route D
Lohman, MO 65053