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AFFILIATE ORGANIZATIONS:

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In his backyard in "The House of the Future" on Oakland Ave.

Remembering..... Don Nelson Rimbach, from Webster Groves, Missouri, was one of the first cold water spring/cave divers to bring knowledge of karst geology to his observations. He invented several means of silent underwater communication, including one now known as the Rimbach method. He, along with partner Michael Tatalovich, (amongst others) was one of the first people to dive and map Missouri's large spring systems, with an eye to understanding their hydrology and geology, founding Ozark Spring Studies in 1973. His penetrations were limited to the realm of air dives, as mixed gas technology had not been invented at the time. Many of these maps were published in Springs of Missouri, by Vineyard and Feder, 1974. He always considered his maps a tribute to both his lifelong friend Jerry Vineyard, and to Dr. J Harlen Bretz, author of Caves of Missouri, and one of the first trained geologists to visit caves in person before expressing an opinion how they were formed. "I could not care less what people whose opinions I do not respect think of

me." **Don was** born April 11, 1942. For some reason, he never mentioned his birthday without referencing World War II's Death March on Bataan, which was taking place when he came into the world. His first cave was in Blackburn Park in Webster Groves, and he became scuba certified at the local YMCA late in high school. His first encounter with organized caving was meeting Gregory "Tex" Yokum, John Cantwell and MMV members who were mapping in Meramec State Park in the late 1950s. He enlisted in the Navy, hoping for scuba duty, but they made him a welder instead. His ship, the aircraft carrier USS Kearsarge, served with the Pacific fleet, picking up two US Mercury astronauts during Rimbach's time aboard. As the ship neared port to discharge departing sailors, word came of the Gulf of Tonkin incident in 1964; Don, tired of the sea, left the ship just before its first



Don in Roubidoux Spring

voyage into the Vietnam War. **Don took** advantage of his military deployments to visit the caves in the mountains and deserts of Southern California while in training near San Diego, and the lava tubes in Hawaii while recovering from a tendon-severing metal cut to his right hand at a navy hospital in Pearl Harbor. He always said the most nearly religious experience of his life was raising the flag over the USS Arizona Memorial while there. **After his** service, Rimbach attended Southwest Missouri State University, majoring in geology, but did not graduate. He earned room and board one semester of college along with others by mapping Fantastic



Don in Devil's Well

Caverns for the owner. When he came back to St. Louis, Rimbach worked for his father's water and wastewater engineering firm, where he employed his diving and welding skills, and as a self-employed general welding contractor. **Once back** in Missouri, he spent most free weekends either mapping the large springs underwater, or exploring dry caves, in the Current River and Meramec River watersheds, with occasional forays to Carroll Cave and other locations. He was married to Pat Daughtery, in either the spring or summer of 1973 at Round Spring at the same time he was finishing up the mapping of Devils Well. **Mostly field-educated**



Don in Motsinger Pit on one of his cable ladders.

in Missouri and karst geology, he used his knowledge of caves and karst as an activist against the proposed Meramec Dam project. He spent late night 1973 to 1978 delivering over 400 public speeches and debates questioning the Army Corps of Engineers' plans on a karst engineering basis. He worked at Onondaga Cave for two of those years as the cave's geologist, turning Lester Dill's opinion from pro to anti-dam. Rimbach used his geologic knowledge to write a large pamphlet "Meramec--A Dam Site Worse than Teton." He presented arguments which helped delay dam construction, and forced a public vote on the issue. The dam was defeated in a non-binding referendum in 1978, and deauthorized by Ronald Reagan in 1981--one of the few Corps projects to ever be derailed by public

opinion. **Don surveyed**, mapped and took copious biological notes on many dry Missouri caves, but his first love remained the springs. Ill health prevented much active diving after 1986, but he always considered himself primarily "a diver with a caving addiction." He was often consulted on the springs and on landowner relations, especially with government landowners. Don was intermittently a member of the NSS, the Missouri Speleological Survey, and various grottos, but needed no introduction in any gathering of Midwestern cavers. He earned the Lester B. Dill Award from the MVOR Region in 1988. In his later years, Rimbach gated caves, worked against new lead mining in the South Central Ozarks, and encouraged new cavers as well as concocted new projects at the rate of at least one a week. There was never enough time nor money to do everything he wished to. **On the non-caving** side, Rimbach took great pride in being a pheresis donor, because of the accident of having type O- or "universal donor" blood. He was an inveterate chatterbox, (so much so that "Shut up, Don," was a constant phrase of his companions), openly good-hearted to his friends, (he would gladly give his shirt, though you might not want it), and generous with whatever he had, which often was just a coffee can of change, nails, screws, and welding-burnt metal pieces. Other than signing his name, Don hand printed everything: scientific observations, speculations and scripts for video Westerns which involved "Deputy Don" and chastely dressed cowgirls. **Poor health** and occasional seizures plagued him through his fifties, and greatly limited his ability to work at a steady job; it didn't help that, as he often said, "My tummy never graduated from eighth grade." (He invited me to his house once for Rimbach spaghetti, which turned out to be cooked spaghetti with ketchup. I made the spaghetti after that incident.) The cause of the seizures, whether an after-effect of a tick bite which hospitalized him with a high fever in the early 1980s, or uncontrolled diabetes which he "treated" with Pepsi-Cola, was never determined. **In the mid-1990s**, Don took a position as a caretaker for some acreage in Shannon County; he could not physically keep up with the fencing, and other demands around the property. He moved to Houston, Mo., and lived in a tumbledown trailer for a while, still cheerful, and still expecting his luck to turn for the better. **Don suffered** a stroke in March of 2001, and another in August of 2002 which necessitated moving to the Mexico Missouri Veteran's Home. Hampered by lingering stroke disability, he continued to make the best of it, despite being partially immobile and confined indoors. In August of 2003 he was honored at the Meramec Milestones celebration of the 25th anniversary of the defeat of the dam. Don was divorced, and left no children. **Rimbach died** April 6, 2005 apparently of a third stroke. He was 5 days from his 63rd birthday. A memorial and picnic were held Saturday April 23, 2005 at Picnic Shelter #3, (near Camper Spring) in Meramec State Park, Sullivan,



Don sitting by Round Spring

Missouri, on the banks of the Meramec. Approximately 60 people brought memories of Don to share. The memorial featured a cave trip to the last cave Don visited, as well as a hike to the base of the dam that never was.—Jo Schaper (All pictures submitted by Jo)

President's Message. February 2016. If you haven't heard, at the last MSS meeting it was announced that we now have over 7,000 documented caves in Missouri. For the past two decades MSS cooperators have found roughly, on average, 100 new caves per year, with no real signs of slowing down. This figure keeps us second in the nation behind Tennessee which, were they to use the same standards as we use in Missouri, could possibly double their number of caves. There are also states like Kentucky, which no doubt have significant numbers of caves (including many hundreds of miles of mapped cave passage) but which does not have as well-organized cave survey like the MSS and therefore lacks comprehensive, statewide data; though, they're getting there. **Several of us** combed through some of Lang Brod's Missouri cave files, which recently came from Arizona and are currently held in the Master Cave Files at the Missouri Geological Survey in Rolla. This is a treasure trove of scientific and geographic material and a testament to the significant work which dedicated, curious individuals can amass. **The next meeting** of the MSS will be on Sunday, May 22nd at the Powder Mill Research Center in Shannon County, Missouri. There will be a weekend of cave file work and field work, including monitoring and cave survey. Camping is available on site. Please contact me if you have any questions. —Dan Lamping

Update on 7000 Caves. As most of you know we surpassed the 7000 mark of caves documented. Here is a little breakdown on cave numbers and changes during 2015: -There were 170 changes to cave names or numbers. These include new caves, number changes, name changes, and deletions. -The most "active" counties in terms of changes were Barry, Christian, Pulaski, and Howell. Bear in mind this also includes



Scott House & Dan Lamping with MSS 7000th cake – by Jon Beard

deletions. -Thirty records were removed for the following reasons: no location, impossible location/wrong county, and (most popular) duplicate locations (another cave is at that location and they were determined to be the same). Most of this was due to a continuing audit of cave locations throughout the state. -Point locations were derived from Public Land locations. This involved over 2,000 records. - 126 new cave locations were recorded and numbers assigned. **Rounded off**, the largest numbers of caves known per county are: 710 Perry; 670 Shannon; 390 Greene; 360 Pulaski; 320 Stone and Christian. **Two-thirds** of the state's caves are in private ownership. That's 67%. Nineteen percent are on federal lands and only 9% are state-owned.-- Scott House

MSS MINUTES. The Winter 2016 Board meeting of the Missouri Speleological Survey was called to order by President Dan Lamping on January 23rd at the DGLs Annex Bldg. in Rolla, MO. Scott House announced 7000 caves with the blowing of party horns and cake. **Introduction of Officers:** Dan Lamping, President; Scott House, Vice-President; Don Dunham, Treasurer; Alberta Zumwalt, Secretary. **Roll Call of Directors:** Gary Zumwalt, LOG; Jim Sherrell (proxy for Doug Leer), MMV; Ken Grush, KCAG; Craig Williams, CAIRN; Jon Beard, MCKC; Max White, SPG; Bill Heim, OHG; Al Quamen, LEG; Krista Bartel, CCC; Jessica Self, MSM; Chad McCain, SEMO; Tony Schmitt, MVG; Rita Worden, Chouteau; Absent was Lorin O'Daniell, PEG. **Secretary's report.** Alberta Zumwalt reported that the minutes of the Fall meeting were distributed after the meeting to the Directors and Officers and were printed in the September-October issue of *MSS Liaison*. The minutes were approved. **MSS Liaison.** Gary Zumwalt reported sending out 50 paper copies and the rest as electronic *copies* with cash on hand of \$99.33. The next deadline is March 1st. **Treasurer's Report.** Don Dunham had sent out

the report electronically before the meeting and copies were distributed at the meeting. General fund \$5003.15; Membership: (2015) \$2002.00; (2016-2022) \$1078.00. Photo Cave Files \$177.07; Public Relations/ Web site \$71.39; *Missouri Speleology*: Vol. 54 (2014) \$1733.00; Vol. 55 (2015) \$60.00. Back Issues \$1348.76; Research Funds \$12,724.78; Anne Johnson Data Management Fund \$20,085.03. Interest checking \$78.75; Liaison affiliation fees \$375.00; Liaison \$403.00; Total \$45,139.93. Assets: Savings bonds \$2,000.00; Interest checking \$43,139.93; Total \$45,139.93. Income Statement for the year ending December 31st, 2015: Income – Individual Membership Dues \$2,158.00; Interest \$21.46; *Missouri Speleology* \$2,228.72; Organizational affiliation Fees \$325.00; Hats \$726.00; CRF Donation \$100.00; *Liaison* Donation \$5.00; Total \$5,564.18. Expenses – *Missouri Speleology* \$3892.25; *Liaison* \$150.00; Website \$125.64; Hats \$830.00; Anne Johnson Fund \$689.15; Total \$5687.04; Net Loss -\$122.86. **Missouri Speleology.** Don Dunham said that since there were no longer MSS memberships, *Missouri Speleology* would be available by subscription or could be bought when the issues were printed. A subscription would guarantee a copy since the number printed would be influenced by the number of subscriptions. There is no specific times that the issues have to come out. Scott House said issues coming out include: Bat Census in Lower Ozarks area, including Ozark National Scenic Riverways (funds from CRF); Caves along the North Fork River, Howell and Ozark Counties; and Caves of the Butler Hollow Mining District, Barry County. These could all come out this year. **Affiliate Organizations.** Jon Beard reminded everyone that the annual reports are due. **Projects and Announcements.** **Scott House** announced 7000 caves have been documented and more runtimes of the database have been purchased. Ken Grush is doing map records and archiving files. Multiple people can do records – monitoring records and entering reports. 22,000 records have been entered into the faunal records. Ken Grush is recording information from *Liaison* and grotto publications. Funds are given by several agencies, including the Fish & Wildlife, to expand the work. Pres. Lamping and Scott both emphasized that records are needed on private land, especially faunal records. Max White asked about security of the information to tell landowners. Scott said it is in everyone's best interest. The information could be used when Modot plans highways or powerlines are put in. Rita Worden asked if exact locations needed to be used. Scott said exact locations would be necessary for highways but faunal records could be a general area. Rita said that the information could work to protect the landowner in some cases. **MTNF.** Mick Sutton reported mapping 21 caves, biological records almost every trip and gating Radium Cave. **Greensfelder Park.** Tony Schmitt reported bio-inventory and management recommendations for the cave which is mostly vertical, had not been visited in 15 years. He said they also found 2 new caves. **MDC.** Scott House reported that most of the caves had been closed but they are now able to work in many of them. Permits are required from the Conservation area. **State Parks.** Scott House reported that KCAG is working in Lake Ozarks State Park. Rita Worden asked about Devil's Icebox. Scott said Roxie will get a runtime to enter data. **MSM.** Jessica Self reported 2 new caves found. **MMV.** Jim Sherrell said they are working on the Valle Mines project. DNR is filling up some of the shafts. They are working on an agreement with them. **Carroll Cave.** Bob Lerch said he is done. Mapped cave is 21.19 miles with 22-hour round trips. He said one would be hard pressed to squeeze another mile out of the cave. Ken Grush said that Rick Hines had gone to Barnett Hollow, talked to landowners and found at least one new cave. **SEMO.** Chad McCain said he thinks there is another long cave in St. Genevieve County. **Public Outreach.** Pres. Lamping said he has put the first issue of *Missouri Speleology* on the website. A guest at this meeting was Denise Vaughn, a freelance journalist, who is doing an article on the 7000 caves. Pres. Lamping said if he posts something on Facebook that people should "like" it. **Jim Sherrell** asked that MSS co-operators keep their thoughts toward recommending quality privately owned caves to MCKC for purchase or management if a possibility exists. **Pres. Lamping** said thanks to Bob Osburn and Aaron Addison, who had printed all the cave maps at Washington University that were displayed here today. He said that Tony Schmitt will take maps that are not picked up today to display at MVOR. Scott House said he is attending the Missouri Natural Resources Council and will take maps. MDC people will be there. Don Dunham is talking *Missouri Speleology*. **Next meeting.** Sunday, May 22nd, 10 a.m. at the Powder Mill Research Center. Scott House said there will be camping and food available. Alicia Wallace

said the MCKC meeting will be on Saturday night, May 21st at the same location. Meeting adjourned. – Respectfully submitted, Alberta Zumwalt, Secretary.

Middle Mississippi Valley. Dec. – Steve Taylor, Rick Haley and a Washington University PhD Student visited Gooseberry Hole which is near Foglepole Cave (Illinois). This was a survey trip. The pit is 45 feet deep. The trip yielded a total of 285 feet of survey. A cliff top lunch was enjoyed afterward. There was insufficient information on the provided trip notes to determine if the survey is complete. **Late Dec.** - During the winter flood of '15, Rick Haley, Michael Haley and Aaron Addison visited the Ball Mill Resurgence. A video was taken during this time. It was reported that the resurgence was "bank to bank" in its immediate channel outside of the entrance. Though reported during other floods, a resurgence "rooster tail" was not witnessed during this event. Also noted was the flooding of Lithium Spring. The road near there was almost impassable. The town of Lithium later flooded due to Mississippi flooding. **Jan.** - Jim Sherrell, James Sherrell III, Larry Abeln and four others visited 65 foot Tower Pit in one of the St. Louis County Parks. It was a bio-tour trip. The trip was hosted by MVG. **Dec. 19th - Jan. 7th** - Jim Sherrell, James Sherrell III and Larry Abeln went to 13 caves in three weeks in Mexico. Also during this period, they visited Inner Space Caverns in Texas. It was a special "wild" tour. **Feb. 2nd – 5th** - Don and Jan Dunham attended the Missouri Natural Resources Convention. They had an information table set up and represented the MSS. **Feb. 12th** - Dane Driskill, Laura Belarbi, Anette Brostmeyer, Mark Brewer and Caleb Shlanger visited Mystery Cave. It was muddy, cold and highly decorated. A GoPro was used on the trip, though there is no report on the results at this time. This same group (minus Dane and Caleb) also visited Crevice Cave. Also - Doug Leer, Don Dunham, Mike Joiner and Darrol Gasawski went on a winter Current River float from Akers Ferry to Pultite. During the trip, they floated into Cave Spring (Devil's Well connection). There were some first time visitors to the spring, just inside the cave, that were getting ready to go fishing inside of the cave. **Feb. 14th** - Doug Leer, Don Dunham, Mike Joiner and Darrol Gasawski took a harrowing hike down from the top of the hill/bluff to visit the entrance to Courthouse Cave on the Current River, south of Round Spring. The entrance is very difficult to reach from land due to the sheer bluff. But with some effort and partially wet feet, it was reached and entered as far as possible with no lights. The hike back up the hill was a bummer. **Feb. 22nd** - Don Dunham, Jim Sherrell and some others visited Valles Mines. The purpose was to explore mines with the Missouri Department of Conservation to check on bats. This effort was also in coordination with the MSS, CRF, Missouri DNR, and the Federal Mine Reclamation.-Doug Leer

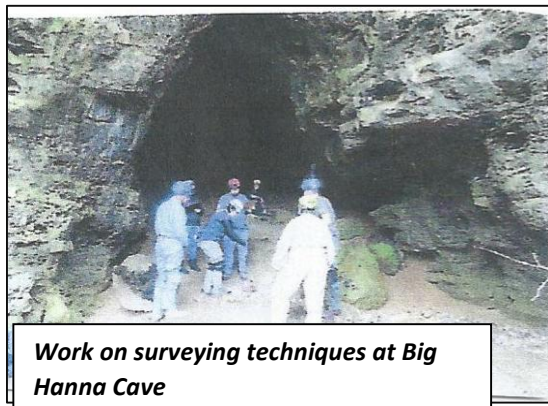
Springfield Plateau Grotto. Jan 1st—Eric Hertzler and Jon Beard ridgewalked in Mark Twain National Forest in Christian County as part of a CRF project and found two undocumented caves. The first, **Snug Joint Cave**, has a passage parallel to the bluff. The joint-determined passage to the left is roughly 8 to 9 inches wide and can be negotiated by relatively thin cavers for about 50 feet. Even when exiting, Jon ripped a large hole in the back of his polypro shirt. The second cave, Stalactite Dome Cave, is entered by way of a low crawl that gets very awkward and narrow before reaching a 10x15x20-foot tall genesic dome that is decorated with many stalactites and wall flowstone. There is a small stream feeding into the room but is too narrow to explore. Also—Max White, Cheryl Paulson, Matt Bumgardner and Bethany Bruman ridgewalked in the Buffalo National River in Arkansas for the CRF, finding 20-foot deep Meh Pit, then later Cheryl found Fluted Falls Cave, at least 60 feet long. High water preventing them from seeing more. **Jan 2nd**—Jon Beard supervised the restoration work by boy scouts in Fitzpatrick Cave (Christian Co). The scouts used plastic brushes, squirt bottles and backpack sprayers to clean muddy handprints from flowstone and stalagmites in the main level of the cave. Also—Matt Bumgardner, Bethany Bruman and Jessie Bridges monitored caves Natural Tunnel, Eden Falls, Dickens, Vulture, Copper Thru, Pendant, Fowler and Rainy at Buffalo National River in Arkansas for the CRF. While they were doing that, Max White and Cheryl Paulson were ridgewalking not far away. **Jan 3rd**—Eric Hertzler and Jon Beard ridgewalked in Mark Twain National Forest in Christian County, finding one undocumented cave they named Walking Fern Cave. The cave consists mostly of wide bellycrawl with one upsloping side passage and a small terminal room with a very twisting ceiling channel for about 100 feet total. **Jan 5th**—Jon Beard met with a group of Missouri Dept. of Conservation folks to assist in the assessment of repairs needed to the gates of Smittle Cave (Wright Co). **Jan 6th**—Jon Beard accompanied Dr. Tom Tomasi, Kirsten and Jim Mudd, Shelly Colatskie to Doghouse Cave (Stone Co) to monitor bats and collect faunal data. **Jan 7th**—

Nathan Keith assisted Dr. David Ashley in searching for the Caney Mountain crayfish in Mud Cave (Ozark Co) in the Caney Mountain Conservation Area. **Jan 8th**—While MSU grad students Olivia Graves and Josh Harmon were conducting salamander research in Dream Cave (Ozark Co), Jon Beard was counting bats along the way, counting 900. Also—Nathan Keith and Dr. Dave Ashley conducted research in Onyx Cave (Ozark Co) on Caney Mountain Conservation Area searching for the Caney Mountain crayfish and also sampling the water for evidence of the crayfish. Also —Eric Hertzler continued ridgewalking in MTNF in Christian County on behalf of the CRF, finding On Point Cave and Pine Holler Cave, two undocumented caves. **Jan 9th**—Jon Beard joined Nathan Keith and Dr. Dave Ashley in checking four small caves in Caney Mountain Conservation Area in Ozark County. While Nathan assisted Dave in crayfish research, Jon counted biota within Tater, Bear Mountain, Caney Creek and Morrison Knob caves. Also—Brandon Van Dalsem checked the entrance passage at Shoal Creek Cave (Newton Co) to see if it was a bit more cooperative than last month when the cave was flooded. This was in preparation of next day's survey trip. **Jan 10th**—Brandon Van Dalsem, Bill Luke and Jon Beard resumed the survey of Shoal Creek Cave (Newton Co), adding roughly 350 of survey to 1,100 feet. The survey is within 200 feet or so of the halfway point. This cave has three personalities—the first one is a very mazy anastomosis mostly crawlway, the second is a long linear crawlway/stoopway and the third consists of domes and high canyons. **Jan 12th**—Jon Beard guided Rhonda Rimer of the Missouri Dept. of Conservation through the first 1,000 feet of H'Doubler Cave (Christian Co)(pronounced "Doh-bler"). While Rhonda took swabs of 20 bats to be tested for WNS fungus, Jon took photos. At least three bats had visible signs of WNS, adding this county to the list of WNS counties in Missouri. One cave salamander, several camel crickets, three little brown bats, three northern bats and 264 pips were seen. **Jan 14th**—Jon Beard assisted MDC staff in repairs of the gates at Smittle Cave (Wright Co). The cave had been damaged by vandals. **Jan 15th**—Eric Hertzler, utilizing a CRF special use permit, mapped Cache Cave and Bliss Spring Cave (Christian) on Busiek Conservation Area. Cache, previously undocumented, was a minimal cave mapped to 21.7 feet (although the distometer measured another 44 feet, but too low to enter) by Beard and Hertzler. After this Eric was assisted by Jon in the mapping of Bliss Spring Cave to 83 feet. There is an impressive stream issuing from the cave, which might be extensive, but breakdown closed off the passage, reducing height to six inches. **Jan 16th**—Brandon Van Dalsem assisted Jon Beard in the completion of the survey of Dripping Cave (Christian Co) as part of CRF projects in Mark Twain National Forest. Total length is 257 feet, basically a bedrock crawlway in a small stream, ending in a 50-foot long, 15-foot wide genetic dome room up to 35 feet tall. After this they joined Eric Hertzler nearby for some ridgewalking, finding two small undocumented caves, Crawl Falls Cave and Shagbark Cave. **Jan 22nd**—Eric Hertzler and Jon Beard searched for cave on privately owned lands in western Christian County, not finding landowners at home, but while on the way back to town, checked an area, GPSing two undocumented caves within sight of the paved road (yes, it is still possible to find caves within sight of a paved road!), naming them Copperhead Cave and Storm Drain Cave. One landowner told of many copperheads found at the first cave, so a landowner filled in the entrance. Later, another landowner opened the entrance back up. The second cave actually acts as a natural storm drain in a ditch by a road. **Jan 24th**—Eric Hertzler was assisted by Jon Beard in the survey of Bear Cave (Christian Co), a privately-owned cave in the Pierson Limestone. The cave begins with an arrow-straight narrow crawlway, parts of it ponded, to a T-junction with another joint-determined passage up to 18 feet high. The cave is about 160 feet in length. Biota noted included pips, one northern bat, camel crickets, larval salamanders, amphipods and flies. **Jan 27th**—Jon Beard conducted the annual January bat count in Pearson Creek Cave (Greene Co). In addition to 18 pips and one big brown, one herald moth was seen as well as many juvenile camel crickets and helemomyzid flies. **Jan 29th**—Eric Hertzler and Jon Beard documented a new cave in Christian County. The cave, formed in the Cotter Dolomite, has an impressive entrance area, but this shrinks down to a bellycrawl in gravel and water soon after. Jon crawled into this at least 100 feet before it became too low. With no echo ahead, it didn't look promising. Cave is about 160 feet in explored length. After this, they talked at length with nearby landowners of Patterson Cave before monitoring the cave. It's about 300 feet in length and has 70 pips, one adult grotto and one larval salamander. **Jan 30th**—Cynthia Spoering, Clayton Russell, Matt Bumgardner, Dan Brandt and Jon Beard conducted the annual winter bat count at the Breakdown/Fitzpatrick Cave System (Christian Co). A combined total of 263 bats were counted in the northern half of the cave system, a new record high count (250 in 2014 was the old record). Of these, two were big browns, the rest were pips. Also 30 pickerel frogs, 1

grotto salamander, five larval salamanders, 1 wood rat, 1 black snake, several herald moths and several camel crickets were noted. **Jan 31st**—Jon Beard joined several volunteers for a work day at Goodwin Sink. The objective was to collect fallen timber and branches from the small streambed that feeds Goodwin Sink to prevent the wood from being carried into the sink and adding debris to the cave dig site after rains. Also there were Gary and Alberta Zumwalt and Ken Long from LOG, Klaus Leidenfrost (project director) from MCKC, Missouri Master Naturalists and scouts. **Feb 1st**—Brandon Van Dalsem, Melvin Johnson and Jon Beard met with Justin Smith of the Springfield Greene County Parks at Ritter Springs Park to discuss bat monitoring of the caves in the park. (Springfield parks contain at least 30 caves.) Brandon and Jon then set out to monitor the six caves of the park, finding lots of biology in some, little in others. All data was entered into the Missouri faunal database. Caves monitored were Ritter Bat Cave, Junction Cave, Blowing Cave, Ritter Spring Cave, Possum Pit Cave and Copperhead Pit Cave. **Feb 5th**—Eric Hertzler was assisted by Jon Beard in the survey of the first third of Milk Cow Cave in Arkansas as part of CRF project work at the Buffalo National River. Photos were taken of the passage and bats. **Feb 6th**—Brandon Van Dalsem, Eric Hertzler and Jon Beard accompanied Kayla Sapkota and friend to monitor a series of caves along a creek in Arkansas. Of course undocumented caves were found along the way. Jon assisted Eric in the mapping of Dripping Root Cave and Pebble Spring Cave, two short caves. Other caves monitored included 29 and a Half Cave, Panther Cave, Indian Rock House, Bullet Cave, Debbie's Delight Cave and Bat Cave and a short, old, abandoned zinc prospecting mine that appears to be based on a pre-existing cave. **Feb 7th**—Brandon Van Dalsem and Eric Hertzler accompanied Jon Beard in the completion of sketchwork in Winding Staircase Cave #1 in Arkansas. While there, Brandon chimneyed up a rock face nearby and found a short cave that was named Winding Staircase Cave # One and a Half. The three surveyed the new cave that will be shown on the overall map of three segments of the cave system. **Feb 8th**—Melvin Johnson and Jon Beard assisted Shelly Colatskie and Lisa Kleinschmidt of the MDC and Springfield parks staff in the first 1,000 feet of Sequiota Cave (Greene Co) to count bats. Shelly and Kisa swabbed a number of the bats to check for WNS. Afterwards, adjacent Walkway-all-the-way Cave was checked for bats. **Feb 9th**—Brandon Van Dalsem, Melvin Johnson and Jon Beard joined Tom Spears, Justin Smith, Deah Sieffert, and Branden Powell of the Springfield parks and Josh Harmon and Olivia Graves of MSU in a bio trip to Giboney Cave (Greene Co). Josh and Olivia collected and measured salamanders for Olivia's study while the others counted bats. After this, SPG and parks staff went to nearby Lost Hill Park to count bats in ten short caves (Cozy, Crevice, Low Arch, Low Arch #2, High Arch, Trace, In & Out, Stalactite, Coffin and Valley caves). Coffin had the most with 22 pips. **Feb 10th**—Jon Beard presented a program on cave mapping for students at Delaware Elementary School in Springfield as part of their learning about mapping. Jon came dressed in caving attire, interactively demonstrated the use of the mapping instruments and showed a number of examples of completed maps. **Feb 12th**—Jon Beard hosted salamander researchers Olivia Graves and Josh Harmon from MSU through the main passage of Dream Cave (Ozark Co), a cave co-managed by SPG and MCKC on behalf of the ORLT. While Olivia and Josh were capturing, measuring and marking grotto salamanders, Jon counted 690 bats, two of which were northrens, the rest were pips. A few dozen of the pips had visible WNS. **Feb 13th**—Matt Bumgardner and Jon Beard hosted a C.A.I.R.N. photographic trip to Lon Odell Memorial Cave (Dade Co), a significant archaeological site gated in 1986, named for a noted Dade County caver of yore. The group photographed and videoed the Ivory Hall section of the 5,000-foot cave as well as some of the cave's biology. Other visitors included Craig Williams, Natalia and Mike Tennant, Mike and Jessi Schoenewies, Alley and Bill Gregory. The cave contains prehistoric human footprints, torch remains and petroglyphs as well as 22 bear denning beds. Most of the cave is "wall papered" in bear claw marks. Next objective on a future trip is to try to operate a drone in passages unexplored that are suspected of having floors covered in human, bear and mountain lion foot/paw prints. **Feb 15th**—Jon Beard was accompanied by Doug Pitt to Ward Branch Cave #2 (Greene Co) for a biological inventory. The 150-foot cave was partially mapped in 1978 and consists of a low wide room, a breakdown crawl and a low stream passage. Not much biota this time, just crickets and stygobitic isopods, raccoon tracks and scat. The cave is close to a proposed road construction project. **Feb 19th**—Brandon Van Dalsem, Matt Bumgardner and Jon Beard were joined by Rhonda Rimer, Cesare Kleeman and Shelly Colatskie in a bio inventory of seldom seen Cliff Notch Cave (Barry Co) on MDC land. The extremely narrow cave has a 40-foot drop about 80 feet into the cave that leads to the remainder of the cave which averages 40 to 50 feet high and about two feet wide. Much of the ceiling consists of one or more thick layers

of chert in the Reeds Spring Formation, then the upper half of the walls in the Pierson Limestone, a thin green layer representing the Northview Formation, then the lower half of the walls in the Compton Limestone. The floor consists mostly of gravel but there is a steep mud slope to some of the floor slumps and drains. **Feb 20th**—Brandon Van Dalsem, Matt Bumgardner and Jon Beard counted critters in Butler Hollow Mine, Butler Hollow Cave and Carter Cave (Barry Co) as part of CRF projects in Mark Twain National Forest. Several hundred pips were counted in total in the caves plus salamanders, crickets, gnats, mosquitoes, spiders. **Feb 21st**—While Matt Bumgardner and Bethany Bruman were assisting Jon Beard in a profile survey in Zoo Cave (Taney Co), Brandon Van Dalsem, Corey McCraney and Dillon Freiburger were conducting a bio inventory in nearby Heuszel Cave, both as part of CRF projects in Mark Twain National Forest. The profile view is important to the overall mapping of the two-cave system, the draft of which is being completed by Scott House. **Feb 25th**—Josh Harmon and Olivia Graves assisted Jon Beard in the annual February bat count in Pearson Creek Cave (Greene Co). They counted 36 bats, the highest total in two years. Also noted was a slimy salamander, six herald moths, camel crickets and mosquitoes. **Feb 26th**—Roy Gold and son Duncan helped Jon Beard in the continuing survey of Big Bear Cave (Ozark Co), a 2,000-foot anastomotic maze cave in the Cotter Dolomite. At the end of the day, there remains 120 feet remaining to be surveyed, accessed only by relatively thin cavers, and the survey of Little Bear Cave, a truncated section of the system. Duncan and Jon counted bats in Little Bear at the end of the day. In the two caves, 271 pips were found in Big Bear, 36 in Little Bear. Both caves are WNS positive. **Feb 28th**—Brandon Van Dalsem did some ridgewalking in the national forest in Barry County, hiked for about 6 1/2 miles in total, started to think he wasn't going to find a cave, but right where he had planned to end the day he thought he saw a dark hole on the other side of the hollow. Ventured over and sure enough he found a 3-ft by 10-ft cave entrance. He named it Destination Cave as it was the only thing he found and it was right at the end of his hike.—Max white

Roubidoux Grotto (RBX). November meeting had discussion of trips and opportunities. Dan Slais, as point of contact to MSS, has received information and monitoring forms to check on caves within the Ozark Quadrangle of Pulaski Co. We are undergoing education trips to develop the skills to handle operations. The December meeting noted membership of 19 members. Several potential trips were discussed including the Outdoor sportsman Show in Saint Robert on Feb. 19th-20th. **Oct. 25th** – Laura Huffman, Karen Hood and Andy



Work on surveying techniques at Big Hanna Cave

Free did some bio-inventory work for MTNF at Peninsula and Angus Caves. They saw some grotto salamanders. **Nov. 1st & 14th** – Ben Perkins, Tucker Palmatier worked on a dive project at Meramac Springs Park Cave. **Nov. 7th** – Ben and Amanda Perkins were in some river bluff caves and did some vertical practice. **Nov. 12th** – Jessica Self went with MSM/MTNF for bio-inventory at Merrell and Wagner Caves. **Late Oct.** – Vic Bentele led a group of kids into York Cave. He has been assisting OCDA with Sherpa duty. **Dec. 5th** – Marc Briner, Dan Slais, Vice and Diana Bentele, Tucker Palmatier, Ben and Amanda Perkins, and Karen Hood went on tour of Finley Cave

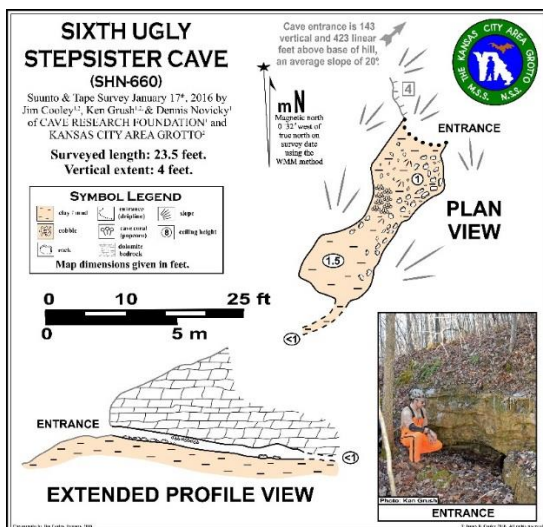
led by Ryan Thompson. Some vandalism pictures were taken of paint inside the cave. **Dec. 12th** – The survey skills workshop was held at Benetel's Hanna Caves. Led by Ben Perkins, the use of surveying equipment was paramount. Members attending included Vic and Diana Bentele, Laura Huffman, Dan Slais, Tucker Palmatier and Karen Hood. There was a cookout at Bentele's house afterward. **Dec. 13th** – Andy Free conducted a gate check at Illinois Caverns. **The Grotto** had one meeting since the new year, the January Meeting was cancelled due to snow. **Feb. 16th**- eight members met and discussed election of officers. Ron Jones, president will be leaving the area in July. Dan Slais is working on permission to monitor caves in the Ozark Springs Quad of Pulaski County for the Cave Research Foundation. Roubidoux Grotto patches are being ordered by Ron Jones. RBX is looking for grants to obtain caving equipment so we can invite more visitors on caving trips. Our Facebook website is monitored continuously by Laura Huffman. Jan/Feb caving was discussed and upcoming

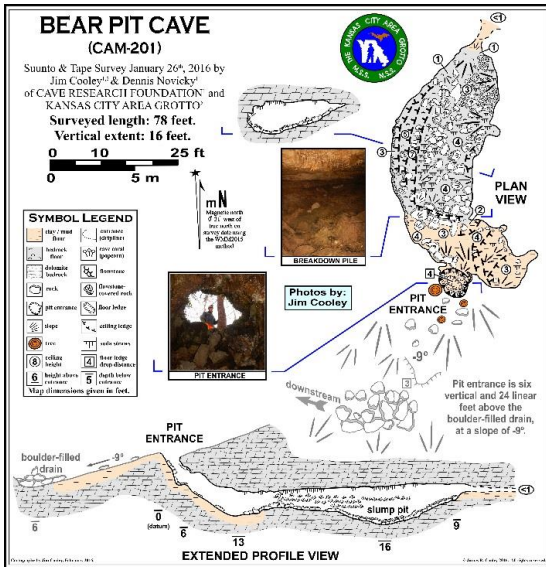
trips (Skaggs Cave – on Mar. 12th). Klaus Leidenfrost, MCKC, presented a talk on Goodwin Sink. **Jan. 9-** Vic and Diana Bentele, and Ben and Amanda Perkins went to Carroll Cave checking on diving possibilities. **Jan. 16** – RBX obtained permission and members Ron Jones, Mark Briner, Karen Hood, and four others checked out the Roubidoux (Pikes Peak) Cave. **Jan 18** – Dan Slais helped with the bat count in Onondaga Cave. **Jan 23** – Karen Hood, Laura Huffman, and Dan Slais attended the MCKC meeting at Rolla. Karen Hood explained problems with the easy access to Roubidoux Cave and the owners concerns. Dan Slais attended the MSS meeting and joined the 7000 caves celebration and attended the biology session afterwards. Karen Hood finished the day ridge walking and noted to the MDC of damage to Ryden Cave gate near Duke, Mo. **Feb. 6** - RBX gained permission and visited Railroad Cave. Members Ron Jones, Laura Huffman and nephew Kyle, Mark Briner and son Kyle, Ryan Thompson, Vic and Diana Bentele, Karen Hood, and Dan Slais attended. **Feb. 14-** Vic and Diana Bentele went in caves Double Dome, Eggshell, Coyote and Coliseum Caves. **Feb 25** – Finley Cave #1 monitoring file (from Dec.5/15) sent to CRF.—Dan Slais

Lake Ozarks Grotto. Morgan Co. project – Cliff Gill visited with the landowner of Comstock Cave and drove the backroads looking for caves, spotting one that is not listed in the files. **Goodwin project: Jan. 31st** – Ken Long, Gary & Alberta Zumwalt participated in a Goodwin work day with others, cleaning up sticks and dead trees from the field across from the sinkhole. Ken and Klaus Leidenfrost did more drilling in the waterfall, while Jon Beard, another worker and the Zumwalts worked to remove debris inside the sink. **Feb. 27th** – Ken Long, Gary & Alberta Zumwalt attended the Goodwin work day, burning brush piles and leaves with others, while several people worked in the cave. There were 20 people. **Feb. 28th** – Ken Long attended the Goodwin work day, burning more brush outside near the cave entrance while others worked in the sump area. Ken started to dig on the bluff side near the entrance and managed to open it up to see several feet back and down into the bluff. There were 8 people. – Alberta Zumwalt

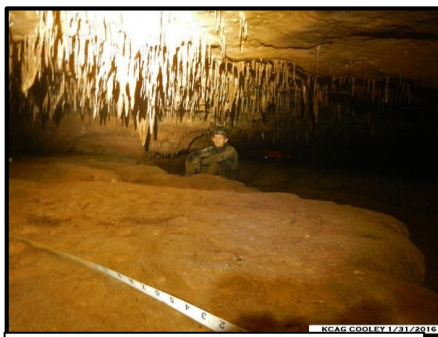
Kansas City Area Grotto: Jan. 12--Jim Cooley and MDC's Shelly Colatskie gave a presentation to the General Services Dept. and the City Planning and Development Dept. of the City of Kansas City, MO, on the mapping of abandoned limestone mines, and the gating of abandoned mines using BCI-standard bat-friendly techniques. As a consequence, the City of Kansas City has requested that Cave Research Foundation prepare mine closure designs for a four-entrance abandoned limestone mine in the center city that is currently being redeveloped under the direction of the City Brownfields Coordinator. **Jan. 14th**—Ken Grush and Richard Young (CRF) monitored 12 caves along 2 sections of bluff adjacent to the Jacks Fork River; in cooperation Cave Research Foundation on the annual Martin Luther King initiative on the Ozark National Scenic Riverways. **Jan 15th--** The brother of an MSS cooperator well known to KCAG, led Jim Cooley to Bear Pit Cave, a small, privately owned cave with a short pit entrance located in central Missouri. **Jan 16-18th**—Jim Cooley led a group Ken Grush, Kyle

Lewis, Dennis Novicky, and Mark Phillips on a private land initiative to map caves in eastern Shannon County. Five Sisters Cave, its Ugly Sixth Step Sister Cave (new), Conduit Cave and Banker Cave were visited. Both Five Sister and Sixth Step Sister were surveyed. Conduit was again examined for a potential survey with Novicky penetrating another body length before being denied further penetration. Banker Cave was visited by Lewis and Phillips. Then Lewis completed a 6-mile round trip hike to the Current River scouting for potential cave leads and enjoying the day. No leads were found but the carcass of an elk was found that had left nearby Peck Ranch. With further investigation, the group found that MDC was well aware of the incident. On the last day, we awoke to a power outage and extreme mid-teen temperatures at the landowner's second home, which encouraged the group to re-evaluate the weather





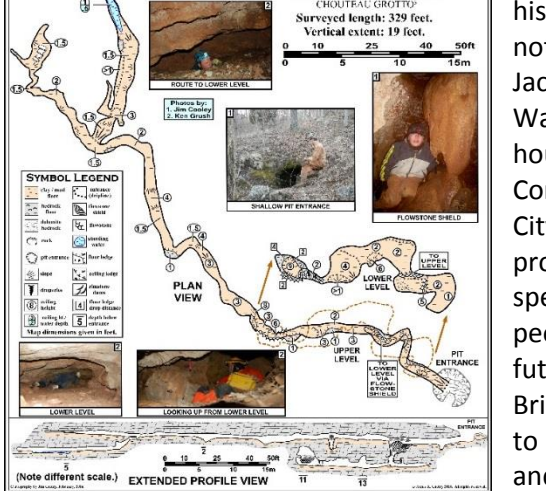
monitored Flippen Cave, 700-foot-long, on private property that was gated by a caver team led by Cooley in Nov. 2011, at the behest of MDC. They also maintained the combination lock. That afternoon, Novicky and Worden returned to Jedlicka-Vollmer Cave to continue the survey there, resulting in the discovery of a new,



Old Toronto Road Spring Cave-Jim Cooley

lower passage that was difficult to reach, and even more difficult to climb out of. Meanwhile, Cooley accompanied MDC bat biologists Shelly Colatskie and Tony Elliott, the MDC Area Manager Paul Johnson, the MDC regional biologist Chris Newbold, and MDC technician Lisa Kleinschmidt, to Moles Cave, on an MDC conservation area closed to the public, to census biology. **Jan. 29th**--Cooley, Novicky and Worden completed the cartographic survey of Walnut Hollow Cave for the U.S. Army Corps of Engineers. This pit cave is located on the Truman Reservoir lands, and yielded 427 feet of survey on four levels, most of it high, tight canyon passages rife with cave coral. Some vertical work was required. **Jan. 30th**--Novicky and Alex Roberts, the new vice-pres. of Chouteau Grotto, finished the survey of Jedlicka-Vollmer Cave, which

came in at 329 feet of mostly very, very brown passage and netted some hilarious video of Roberts trying to climb out of the lower passage: The harder he struggled, the deeper the squished-up pile of mud beneath his feet grew. **Jan. 31st**--Cooley, Novicky, Roberts, and Worden surveyed the first 422 feet of Old Toronto Road



conditions to disperse before road conditions worsened. Icy conditions did materialize and justified the group's decision to abandon further caving. **Jan 22nd**--Dennis Novicky and Mark Jones surveyed 430 feet to connect two separate surveys in Allie Spring Cave. **Jan 26th**-- Cooley returned to the Bear Pit Cave with Dennis Novicky to conduct a cartographic survey, a 77-foot-survey. Cooley then took Novicky to Old Toronto Road Spring Cave for an assessment as to what might be required to start a survey. This cave, newly discovered by KCAG, is located between the upper reaches of Carroll Cave and Toronto Springs. **Jan 27th**--Cooley and Novicky monitored privately owned Toby and Fiery Fork Caves for MDC's for biologic census. They then visited Jedlicka-Vollmer Cave to orient Novicky to the challenges involved in completing a survey of this tight, muddy privately owned cave. **Jan 28th**--Cooley, Novicky and Rita Worden, the new Pres. of Chouteau Grotto,

monitored Flippen Cave, 700-foot-long, on private property that was gated by a caver team led by Cooley in Nov. 2011, at the behest of MDC. They also maintained the combination lock. That afternoon, Novicky and Worden returned to Jedlicka-Vollmer Cave to continue the survey there, resulting in the discovery of a new, lower passage that was difficult to reach, and even more difficult to climb out of. Meanwhile, Cooley accompanied MDC bat biologists Shelly Colatskie and Tony Elliott, the MDC Area Manager Paul Johnson, the MDC regional biologist Chris Newbold, and MDC technician Lisa Kleinschmidt, to Moles Cave, on an MDC conservation area closed to the public, to census biology. **Jan. 29th**--Cooley, Novicky and Worden completed the cartographic survey of Walnut Hollow Cave for the U.S. Army Corps of Engineers. This pit cave is located on the Truman Reservoir lands, and yielded 427 feet of survey on four levels, most of it high, tight canyon passages rife with cave coral. Some vertical work was required. **Jan. 30th**--Novicky and Alex Roberts, the new vice-pres. of Chouteau Grotto, finished the survey of Jedlicka-Vollmer Cave, which

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Spring Cave, a spring cave with 25-foot- to 40-foot-wide passage, which goes and is headed more or less toward Confusion Creek in Carroll Cave, about three-quarters of a mile away. Enroute back to his cabin after midnight, Cooley hit a deer with his van. The van was not seriously damaged; the deer was. **Feb. 9th**--New KCAG president Jack Peters, Secretary Jim Cooley, Treasurer and Quartermaster Pic Walenta, and members DJ Hall and Heidi Fletcher presented a two-hour course on caving entitled "Bound for Underground" to the Community Division of the University of Missouri at Kansas City. This series of PowerPoint presentations was an introduction to project caving, and to the amateur and professional caving and spelean resource management communities in Missouri. Three people attended, who will be joining us on a novice trip in the near future. **Feb 11th**-Dennis Novicky, Rita Worden, Shawn Williams, Jay Bridgewater, Jim Cooley, Lee Krout and his son Jacob were the first to meet in Ozark County for an ongoing KCAG initiative to survey and monitor caves on private property. **Feb 12th**--Novicky, Worden

and Williams headed out for Make Your Mark Cave to finish the survey there. Novicky forced five squeezes, captured some daunting GoPro video, only to find that the cave ended only 23 feet beyond where he had last penetrated, during the last survey trip with Jim Cooley, Ken Grush and Mark Jones on June 16, 2015. Novicky added 112.5 feet of XA survey to the 152 feet already surveyed, for a total of 264.5 feet for Make Your Mark Cave. They also noted fauna for the annual biologic inventory. After finishing the survey, Novicky, Worden and Williams headed to Fogey Cave. Shawn wanted to try to connect the stream survey or the R survey to the big entrance room, as someone had done so in the past, by sticking their hand up into the Mountain Room from below. In the event, they took two new survey shots in that area, did not get into the R survey, and were unable to establish the connection. These two extra shots added 45.5 feet of survey for this cave. They also collected a bio-inventory. Meanwhile, Lee Krout and Jay Bridgewater visited Cloud 9 Bat Cave to do biological census. Krout and Bridgewater then proceeded to Cold Cave, and penetrated as far as they could without getting wet in the stream crawl. The group collected data for the bio-inventory. Jim Cooley met with Frank Shores who conducted the first systematic search of the property and who submitted over 20 reports of caves on this same property over 20 years, between 1980 and 2000. Ideas over publication of the data were discussed. **Feb. 13th**—A wetsuit-clad survey team of Dennis Novicky, Rita Worden, and Shawn Williams formed up to tackle Fogey Cave. They wanted to push the R survey, then start working on the leads in the back. They were unable to connect the R survey with the A survey in the Mountain Room, but they got back past the ear dunk to the Beer Bottle Room, and did collect enough data to complete the survey of Fogey Cave. Much of the numeric data was captured by dictating it to the GoPro camera. Meanwhile, a bio-survey team of Kirsten Alvey-Mudd (MO Bat Census), Cliff Gill and his son Alex, and Brian Sauer (SPG) inventoried Fogey Cave, their first objective. Following completion of Fogey, the bio-survey without benefit of Sauer, continued collecting data by visiting three more caves, Dani, Frank and Moonshine. This trip brings to a close the collection of survey data for over 30 caves on this one property. **Feb 15th**--Jim Cooley joined the MDC Area Manager Paul Johnson and MDC regional biologist Chris Newbold to monitor caves on MDC's Fiery Fork Conservation Area. The caves visited included My Cave, Onyx Crawl Cave, Kings Onyx Cave, two-entrance Onyx Mine Cave, Waterfall Cave, and Buzzard Babies Cave. This last cave was discovered and turned in to the MSS files by KCAG in 2008. **Feb. 21st**—Jack Peters led a group of novice cavers, including the new landowner to Cleveland Cave, an MCKC cave being managed by KCAG.-Ken Grush

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Annual fees (\$25.00) due: Chouteau, MVG, MSM, and PEG. Send check or money order to MSS Treasurer, Don Dunham, 147 Ron De Lee, Arnold, MO 63010.

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

CALENDAR OF EVENTS:

Apr. 9th-10th - MCKC – LAD joint sinkhole project. Volunteers are needed for the Blue Branch Sinkhole cleanup in the Ball Mill Resurgence Natural Area. MCKC has approved the Hoff Underground Nature Preserve (Berome Moore Cave) as the meeting place for this southeast Missouri project. Jim Sherrell says there will be camping and caving at Berome Moore Cave as well. <http://www.mocavesandkarst/meetings-events-news/>

Apr. 10th – Goodwin Sink workday. Contact Klaus Leidenfrost - Email: goodwinmgr@mocavesandkarst.org

Apr. 29th – May 1st – Spring MVOR, featuring Goodwin Sink, hosted by MCKC in Brumley, MO.

May 1st – Goodwin Sink workday. Contact Klaus Leidenfrost - Email: goodwinmgr@mocavesandkarst.org

May 1st – Next Liaison deadline.

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

May 22nd – Spring MSS Meeting, 10 am, Powder Mill Research center, Shannon Co. Activities all weekend.