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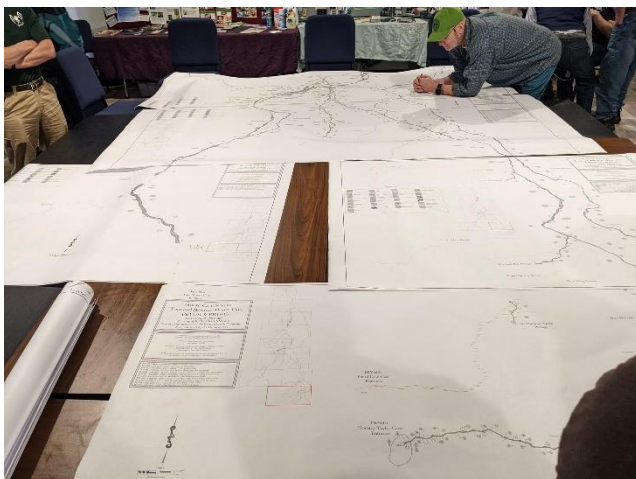
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Missouri Speleological Survey - President's Message - May 2022 by Dan Lamping

Missouri cavers recently descended upon the City of Perryville in Southeast Missouri for a weekend of cave survey, cave clean up, bio-inventory, meetings and public outreach. The Missouri Cave Database shows 37 records for caves or cave entrances owned by Perryville. Four of the state's five longest caves are found in Perry County, with two of them bordering the City of Perryville. The event, called the Perry County Underground was largely organized by Scott House and was put on by Cave Research Foundation, Missouri Speleological Survey, Missouri Caves and Karst Conservancy along with Missouri Department of Conservation, U.S. Fish & Wildlife Service, Missouri Geological Survey, SEMO Grotto, Missouri Bat Census, and L-A-D Foundation. The event operated out of the Catalyst Center in front of the American Tractor Museum near town square in Perryville and was a good test run for hosting the 2022 CRF Annual Meeting at the same location.



Left- Rick Haley examines a section of the Moore Cave System map. Right - Cavers, Perryville residents and agency personnel during the public outreach event. Photos by Kirsten Alvey-Mudd

Cavers met at Catalyst Center in the morning on Saturday, March 5th and broke into multiple crews. Four survey teams went into Streiler City Cave to begin remapping this large cave which runs beneath a residential area in Perryville. 3,051 feet were mapped in Streiler City Cave with several leads continuing on while U.S. Fish and Wildlife searched the cave for the Grotto sculpin, a cave adapted fish found only in a handful of caves in Perry County. Two survey teams went into the Moore Cave System via the Tom Moore entrance just outside of the city and a bio inventory crew went into nearby Crevice Cave, the state's longest cave found just east of

Perryville. Another crew worked on trash removal in caves beneath the city along with a few more crews doing various field work. All together we had 52 cavers in the field.

That evening, there were two public showings of the video *Perry County Karst* created by Denise Vaughn. The video teaches about the karst of Perry County and showcases efforts made by the City of Perryville to improve upon their karst groundwater quality and the efforts of cavers to document the caves. The video can be watched at <https://vimeo.com/45158472>. The next day, on Sunday morning, both the Missouri Caves and Karst Conservancy and Missouri Speleological Survey held their meetings followed by a public open house with large format cave maps displayed and exhibits set up. People were in and out all day long including landowners and cave owners, all who seemed to have a genuine interest in the region's caves. It was one of the best public outreach events I've seen cavers put on. Aside from the caving and good company the highlight of the weekend was watching young Perry County kids tracing their fingers across the Moore Cave system map as they vicariously explored the cave. Hopefully one day they'll also be exploring the caves of Perry County.

During the MSS meeting several cooperators of the MSS were recognized for their distinguished contributions. Bob Lerch and Ben Miller were both awarded the J Harlen Bretz Award, Krista Bartel, Kirsten Alvey-Mudd, Derik Holtmann and Mark Brooks were given Brod Certificates of Recognition and Denise Vaughn and Neal Humke were given Tex Yokum Certificates of Appreciation. It is cavers and cooperators like these people, who give so much to organized caving in Missouri, which makes what we have going on here, so special. Many thanks to Scott House, Krista Bartel, Kirsten Alvey-Mudd and everyone else who worked to bring the weekend together.



Plans are underway for the next MSS meeting to be held in early October at Rockbridge State Park, in Boone County, home of a Missouri classic, Devils Icebox Cave. For a few years now, Spike Crews has been leading survey efforts in Devils Icebox. Devils Icebox has over 6.6 miles of mapped passage. It is a biologically significant cave with a large stream that requires using boats for entry. Spike's efforts have involved tying-in hanging survey to the original survey along with surveying any unmapped leads and adding the passage onto the existing map created by George and Ruth Deike in 1960, as an alternative to a complete resurvey. In support of Spike's project, Rita Worden has arranged for us to be able to camp at, and hold a meeting at Rockbridge State Park. Weather permitting, we're planning to run mapping trips into Devils Icebox on Saturday, October 1, 2022 with the meeting to be held on Sunday, October 2. If rain interferes, we have back up options to do some monitoring and mapping work in Three Creeks Conservation Area. More information will be coming out in coming months.

Missouri Speleological Survey Files Report for May 1, 2022 - By Ken Grush. If you have **new information** on any Missouri caves, my email address is slagrush@gmail.com. We need your help to improve the database and make it more complete. I can and do work with Facebook entries, but for information or photos to be incorporated I need to be "private messaged" with the cave name and county. First off, need to report that the MSS Meeting in Perryville on the first weekend in March was a huge success. Fifty cavers hit the field collecting Faunal Records and cave surveys. Streiler City Cave had several survey teams tackle this cave; an accurate survey plot may be able to tie into some of the "stand pipes" that the city has installed for overflow rainfall and to help better understand the underground drainage of Perryville. Mick Sutton led a team into

North Street Cave which has never been biologically described; capturing Faunal Records. Remember the health of the underground drainage systems tells us something about the health of the local drinking water. The archives received a huge contribution from Alex Litsch with his survey files, almost 50 cave-specific folders were sent representing 7700 files (including his state-wide map collection), almost 300 sub-folders and 16.7 GB of data. If you want to get involved in caving come to the “field meetings” of the MSS, there will be “service” trips to gain information about the caves of the state, to see cave survey work in action and learn how we survey/map caves. This is also a way to get to know the active cavers in the state and perhaps get in on their trips. See additional details below from individual contributors.

Kirsten Alvey-Mudd sent: -5 new caves in Lincoln Co. and one in Montgomery Co. She included descriptions, locations, 10 Faunal Records and 40 or more photos. And, a lead turned out to be a new multi-entrance cave for Montgomery Co. -Via Mark Jones, 400 photos of their CRF work together on the Riverways (ONSR). -Via Facebook with Messenger confirmations, Faunal Records for 2 caves in Lincoln Co.: Dwyer and Lowenhopt Caves. Previously she added additional records for the Lost Cave and Mayes Cave Systems in Lincoln Co. In 2022, Kirsten added 70 records for Lincoln Co. -On MSS weekend in Perryville, her Monitoring form and Faunal Record list of 19 different critters in Crevice Cave, a “city-owned” access for the state’s longest cave. -At least 16 cave reports at Cloud 9 Ranch in Ozark Co.: included were over 100 photos and 80 Faunal Records. She included 4 new caves in the county: Bryant’s Bend, Sunset Slit, Arrowhead and Tyson’s Narrows Caves. -Separately, 17 Faunal Records for Russell and Bryant’s Bend Lookout Caves in Ozark Co., along with 15 photos of Russell Cave. Previously she shared Bryant’s Bend photos. -Another volley of 9 caves at Cloud 9 Ranch, including 93 photos and 50 Faunal Records. Tysons Narrows, Sunset Slit and Arrowhead Caves were included -Report, 65 photos and 16 Faunal Records for Midco Cave in Carter Co. -New cave report with 6 Faunal Records for Fish and Bev Cave in Carter Co. **Jon Beard sent:** -77 changes to the Main Table of the database. Changes included addition of small-file-size photos, entrance dimensions, descriptions, geology, etc. Included with these changes were 3 new caves: Iverson Cave in Barry Co., Wild Acres Cave in Dallas Co., and Little Sink Cave in Stone Co. Separately, he also sent 50 Faunal Records from the past 3 years. -6 Faunal Records for Clayton Cave in Taney Co. -A new map of the Rockspan Complex in Greene Co. The landowners requested a change in name for the former Natural Bridge (The Rockspan, now) Complex. Map was dated 2021. -A full size photo of Iverson Cave entrance, one of the new Barry Co. caves. -8 “Cover” photos of cave entrances for the database, all in Barry Co...well, also in our database now. **Allan Breite sent:** -Report on Fern Cave in Lincoln Co. including GPS, entrance photo and several Faunal Records. **Mark Brooks sent:** -A survey report and notes on Onyx Cave in Howell Co. Cave is “right at a mile of cave now. -5 historic photos of the first trip into Streiler City Cave, vintage 1983-1985. -8 photos, Narrative of survey trip and 3 Faunal Records for Berome Moore Cave in Perry Co. **Shelly Colatskie sent:** -Her 20 Faunal Records from the MSS weekend for Tom Moore Cave. **Seth Colston sent:** -A survey Narrative report with 2 Faunal Records for Geronimo Cave in Camden Co. He also sent a composite of the sketches that have been surveyed so far. **Jim Cooley sent:** -A report on a break-in at a recently gated cave in Christian Co. **Josh Cooper sent:** -His monitoring form from the MSS weekend with 5 Faunal Records for Bailey Sawmill Cave. **Spike Crews sent:** -An entrance photo and GPS location for a new cave lead called Pigeon Fork Cave in Ripley Co. -A snapshot of an 1873 “Geological Map of Lincoln County” which displays the Sandy Creek Natural Tunnel. We have over 500 caves with reports that pre-date Bretz. Only 83 caves have reports that predate 1/1/1900. **Bill Gee sent:** -An update on the remap of Stark Caverns (CL=3411 ft) of Miller Co. -Two trip reports for Carroll Cave in Camden Co. with 6 Faunal Records. **Ken Grush sent:** -200 photos and GPS locations of some 25 entrances in Marion Co. -On the MSS weekend, about a dozen photos that were in the archive but weren’t captured as “cover” photos in the database. One field trip included entrance photos and GPS locations for North Street Cave which Mick Sutton had led a Faunal Assessment team to on this weekend. Additional GPS locations which were not updated in the database were harvested from the Narratives that were submitted in 2015, my first trip to Perryville to help support the making of the video that was presented at the MSS Meeting. -New data on 4 caves in Jefferson Co.: Trash Sink (GPS, photos), Pevely Dairy Spring Cave (GPS, photos), former lead Baumgartner Pit (now cave, GPS, photos) and Crescent Shelter (GPS, photos and new map with 66 ft dripline and 47 ft depth behind it). -New map of Bear Bed Cave (CL-288 ft), Perry Co. (see Resch below). -72 scans from Jerry Vineyard 1955-1956 Field

Notebook. Vineyard reported on over 100 caves in this (approx.) 12-month span. Many of these were represented in the database, but about 30 or more were significantly different to add to the database. **Eric Hertzler sent:** -3 new caves: descriptions, photos and location for Ursus, Flat Slab Shelter and Creep Block Caves in Christian Co. -A map of Robert L Taylor Memorial Cave (CL=1147 ft) in Christian Co. -Corrections for 2 caves in Douglas Co.: Coon and Old Still Cave. He provided new GPS, entrance dimensions and entrance photos; all good information for caves that otherwise haven't been reported on for decades! **Derik Holtmann sent:** -58 photos that he captured while surveying in Streiler City Cave during the MSS weekend in Perryville. **Mark Jones sent:** -A 1000 photos that he collected since the start of the year. Turns out that about 400 were from Alvey-Mudd when the 2 of them were working CRF project on the Riverways (ONSR). **Dan Lamping sent:** -The "cherished" field note book of Jerry Vineyard; the book is believed to precede or at his start of his work at "Missouri Geological Survey". At this point, it isn't completely clear how many caves are included, but there are detailed notes on directions, owners, descriptions. He set the groundwork for the key information items that are useful to report even today, probably 6-7 decades before today. Remember Vineyard was a founding member of the MSS, he has left a strong legacy for any caver to follow in his footsteps, big ones for sure! -2 trip reports for survey in Berome Moore and Streiler City Caves. Streiler Cave was a major push to resurvey during the MSS Meeting weekend in Perryville. -A map of Russell Cave (CL=928 ft; VR=15 ft) in Ozark Co. **Bob Lerch sent:** -Sent via Dan Lamping, a new length for Carroll Cave in Camden Co.: 20.74 mi (109,528.5 ft). Carroll is third in length behind Crevice and Berome Moore Caves. **Joe Light sent:** -4 old 1868-1903-1950 reports on 8 different caves across the state, including Rice, Tavern and Hildebrand Caves and several caves now in Meramec State Park. -Reports, 10 photos and GPS locations for Scotia and Misery Caverns in Crawford Co. -Report and 10 photos of Fault Cave in Crawford Co. As above, Light went to find Fault Cave but instead found Misery Caverns. He went back to correct the situation by finding the correct location of Fault. All 3 caves have now been updated with current GPS and entrance photos. Further, the new location (bad marked topographic location), confirmed with the old map, also confirms that a former cave was a duplicate or synonym for Fault Cave. So, we lost a cave, but that's an improvement over a duplication. -13 photos in a single pdf document of Cliff Cave in St. Louis Co. He also sent a trip report with 9 Faunal Records. **Alex Litsch sent:** -Almost 60 photos from a trip to 2 pit caves and a third cave on the ONSR. -On the MSS weekend, his survey collection of 300 folders and 7700 (includes the state's 6000-file map collection from the CDs that DNR sold at one time) files for his 44 caves, mostly in Ste. Genevieve Co., but also 6 other counties across the state. Also, a detailed report of his survey trip into Streiler Cave over the weekend. Among the files, a copy of Keyhole Cave was new (and added) to the database. -GPS locations for both Keyhole and Cave Hollow Spring Cave in Shannon Co. Entrance photo for both caves were also included. **Chad McCain sent:** -A survey report for Crevice Cave in Perry Co. Cave is longest in Missouri, now at 31.1 miles surveyed...lots more to survey. He also sent survey notes for this trip. -Survey notes from a trip to Tom Moore Cave in Berome Moore Cave in Perry Co. -10 documents for 3 survey books in Crevice Cave in Perry Co. -2 reports for new caves in Perry Co.: Southeast Rim Cave and Annex and Brown Cave. He also surveyed Brown Cave in the same immediate area. Ten Faunal Records were included. **Kohl Mitchell (Chouteau) sent:** -GPS and photos on a new cave lead in Ralls Co. He also found an Environmental Statement (not labeled EIS) from the USACE on Mark Twain Reservoir also in Ralls Co. that mentioned several caves in the county. -A lead near one of the "older" Ralls Co. caves. No luck was had with the old cave, it probably went under the waters of Mark Twain Reservoir. -Latest copy of the Chouteau Foresight with a survey trip to Possum Pit in Boone Co., including several Faunal Records. **Gary Resch sent:** -Survey and sketch on new Bear Bed Cave (CL=288) in Perry Co. (see Young below and Grush above). **Rhonda Rimer sent:** -Ten Faunal Records for Mary Lawson Cave; 9 Faunal Records for Bumgardner Cave and 10 Faunal Records for Slaven Cave. All three caves are in Laclede Co. Also 2 new cave locations that need survey. **Jim Ruedin sent:** -Photos and reports on 2 caves in Shannon Co. **Tony Schmitt sent:** -A report on a recent visit to monitor Bat Cave in Shannon Co. -From the MSS Meeting in Perryville, his survey Narrative from Streiler City Cave. -3 photos of the gate at Pleasant Valley Cave in Jefferson Co. and a report about the gate and previous closure (concrete plug). **Marissa Schorr sent:** -Trip Report (also used for Narrative in MCD), Use Monitoring form and 16 Faunal Records for Apple Dumpling Cave in Phelps Co. -Trip Reports, Use Monitoring, 8 photos and 16 Faunal Records for Confluence Camp and Skunk Rapture Caves in Texas Co. **Mick Sutton sent:**

-10 biological summaries for caves in the MTNF. He also included 40 Faunal Records, half were historical records from last century and half were Sutton records from 2020 to current. -Sent 58 Faunal Records, many historical but also new detail on North Street Cave in Perry Co. which also received an updated summary of the "faunal habitat" as a result of the MSS weekend trip. **Denise Vaughn sent:** -On the MSS Weekend, her video that was presented at the MSS meeting...a fantastic presentation on Karst within the City and the partnership between cavers, city and the citizens of Perryville. Remember good drinking water is healthy for all us, the cave and cave critters. -A new cave report for Moody Cave in Howell Co., the latest new cave reporting in the state. She had lots of information to populate the record for this cave: GPS, entrance dimensions, photos, directions, description, estimated length, entrance photo...great reporting, well from a "news" reporter! **Craig Williams sent:** -Use Monitoring, 4 Faunal Records, Cultural Assessment and photolog of Hanley Cave in Phelps Co. **Richard Young sent:** -3 cave reports for 2 new caves, Bear Bed and Collapse Caves, and Hudson Cave (1979 vintage), all in Perry Co. Two of three were evident on LIDAR. If you are not aware, the bulk of the known caves in Perry Co. (historically, the most of any county in the state), probably 90% of Perry's Cave lays between Interstate-55 and the Mississippi River. These however are west of the interstate. -Nine new locations, two appear to be connected, one appears to resurrect a lost cave and the other 6 locations appears to new caves. In addition to the locations, Young sent Directions, Brief Description, Entrance Photos and a handful of Faunal Records. -Location, photo and brief description on Hog Hole in Perry Co. **Shannon Zaloz sent:** -Detailed set of Directions and Brief Description for Hominy Creek Cave in Polk Co.

Springfield Plateau Grotto (SPG). Chris Lewis led a group of MSU students through Ash Grove Cave, Dade Co. The Recreation Center at MSU had added caving as an activity for students. **Mar. 6**—Jon Beard



Ash Grove Cave – MSU group led by Chris Lewis

accompanied Eric Hertzler in checking some possible cave leads in northwest Douglas Co. They explored the first 420 feet of Coon Cave, but decided to leave the bellycrawl in water to those more willing. Biology was recorded, a few photos taken. **Mar. 13**--Trenton Wells, Elizabeth Yannielli and Dirk Arnold visited Fitzpatrick Cave and Breakdown Cave, Christian Co. **Apr. 9**-- Trenton Wells, Dirk Arnold and a MSU Research Group and their Professor visited Fitzpatrick Cave and Breakdown Cave, Christian Co. The students studied Salamanders while their professor was doing research on Pseudoscorpions. **Apr. 16**—Max White, Roman Thomas, Cheryl Paulson, Dillon Freiburger, Nathan Burton and Jon Beard traveled to Barry Co. where Max, Roman, Dillon and Nathan checked out Iverson Cave, a previously

undocumented cave. The cave was mired in fill material from a previous landowner's attempt to fill the entrance. Thus, only 30 feet of cave was accessible. After this, the six drove to Ash Cave where the group checked out the first 300 feet of the cave, noting the presence of pigeons and lots of spray paint graffiti. **Apr. 19**—Jon and Alicia Beard were treated to a guided tour of Talking Rocks Cavern. Stone Co., where Jon photographed a couple of cupola features in the cave's ceiling, may be the result of upwelling hypogenic water in the formative processes that created the cave.—Max White

Meramec Valley Grotto (MVG). **April 16th:** MVG hosted a vertical workshop at a member's home. Several new folks were trained on basic SRT. **April 9th:** MVG members visited Illinois to check out a handful of sinkhole leads. Several small caves were found and some were mapped. **April 6th:** MVG members were called out to an Illinois property to investigate a large sinkhole pit that had opened up in someone's front yard. The pit was about 50 feet deep and 20 feet in diameter at the top. Crawling size cave passage was found at the

bottom, but the instability of the fresh collapse makes it far too risky to explore at this time. **April 3rd:** MVG members assisted SEMO Grotto in a Perryville Cave cleanup. **March 26th:** MVG and SEMO Members led by Chad McCain surveyed in Crevice Cave via the Historic entrance. **March 5th:** MVG and several other grottos descended upon Perryville for a weekend of project caving, caving organization meetings, and public outreach.—Alex Litsch

Lake Ozarks Grotto (LOG). Apr. 10th – Goodwin work trip. Ken Long joined Klaus Leidenfrost and Jean Knoll with the plan to finish putting up some tin sheets on the new pavilion that was built last fall. It was too



New pavilion with sides and roof extension

muddy to do any work in the cave so we were the work crew. After unloading the trucks, we went up the road to the neighbor's house. He had a stack of tin sheets that he gave to us to use for our projects. We loaded up 14 sheets on Klaus's truck and headed back to the sink. After unloading the truck, Klaus and I started putting up tin sheets on the new pavilion. Jean was working on the area cleaning up sticks and burning them on a fire she had started. We put up 3 sheets on each side of the new pavilion and then 3 sheets on the roof. We will eventually close in the front with a door and lock for storage. On the existing pavilion we built a few years ago, we had one side that had a tarp to cover it. We took the tarp off and put up tin on that side also. This

will help protect everyone if the weather gets bad and allow everything in the pavilion to stay dry.--Submitted by Ken Long

Chouteau Grotto. April 24th - Shannon Zalos, Kohl Mitchell, Briony Downes-Ward, John Roth, Victor Munsen, John Drenon, and Rita Worden completed the survey of Possum Pit in Boone County. A muddy triple-dome tube requiring rope in a pristine forest of massive sinkholes. -Rita Worden

Stygian. March 12th - JJ Huelsing and Allan Breite continued field survey in a St Louis County Park for 2 lost cave entrances. The entrances remain elusive but several sinks were located and are heavily soil-filled and obstructed making confirmation uncertain. They will require further research and investigation to make any confirmations. **March 16th** - Phillip Newell, Sally Kula and Allan Breite continued field survey of a St Louis County Park for 2 lost cave entrances. Grotto Meeting held at St Charles County Library - Spencer Road Branch. **March 19th** - JJ Huelsing, Allan Breite & Dawn Martin continued karst field survey for Cuivre River State Park to relocate geological features and collect details and descriptions. Information previously compiled by Bruce Schutte and maintained by the parks service is being updated. **March 26th** - Community outreach follow up with 2 local landowners regarding several Lincoln Co. caves on private lands that had not been visited in many years. Access discussions are still ongoing. Additional field survey of the Big Sugar Creek Valley in Cuivre River State Park by JJ Huelsing, Allan Breite and Rich Orr. Relocated what appears to be an old homestead with debris filled sinkholes and pond. Dept. of Natural Resources and Park Service representatives are currently determining whether the site is of historical significance and whether a site clean-up will be warranted and granted. **April 3rd** - JJ Huelsing and Dawn Martin continued karst field survey in an additional area in Cuivre River State Park. Several new sinks were located. **April 4th-5th** - Rich Orr assisted members of the MDC, USF&W, CRF, KCAG & MOBat Census in the cave gate construction for Toby Cave. Rich Orr and Gene Gardner originally found the cave in 1978 while working for the MDC. The cave is a significant Gray Bat sanctuary. **April 5th** - Jason Cole reported a new sinkhole that opened up in St Peters, MO. A business is located on top of it and the area has been fenced off for safety since it appears to have undermined part of the building structure. Grotto Meeting held at St Charles County Library - Spencer Road Branch. **April 12th** - Rich Orr located and reported a new cave in Franklin Co. to the MSS caves files. **April 14th** - JJ Hulesing met with DNR Archaeologist

Rachel Campbell to further discuss recent homestead location and site designation. A plan for clean-up will be determined based on the designation. **April 16th** - JJ Huelsing & Dawn Martin located several previously unknown karst features in Cuivre River State Park. Several sinks and 2 new springs were recorded. **April 24th** - Allan Breite made a follow up check on the cave gate for Green Arrow Cave in Lincoln Co. Gate and entrance has not been disturbed since last inspection. Vandals have done significant damage and the NSS reward is available based on the terms of the reward posted on their FB site Cave Vandalism Deterrence. **April 30th** - JJ Huelsing and Dawn Martin located a possible new cave lead in Cuivre River State Park while continuing the karst field survey of the park.—Allan Breite.

Kansas City Area Grotto (KCAG). Feb 20th – Nathan Taylor and his son, Sam, led a grotto novice trip to Cleveland Cave, a privately owned MCKC permit cave in St. Clair Co. The group included Candace, Mike and Adele Kovacs; Dustin and Malcolm Schmidt; John Fletcher, and Kayleigh Schneider. The crew spent about two hours in the cave, pushing to the explored limits, where they found and continued to remove broken glass left



Trusses for the CCC Shelter House & Rick Hines with that Gleam in his Eye

from decades of vandalism. Taylor also trained and vetted trip leaders to add to the stable of “approved guides” for leading trips into Cleveland.

Feb 22nd – Rick Hines and Jim & Julie Cooley delivered the trusses that will hold up the roof of the planned shelter house to the Carroll Cave silo campground, inventoried our stash of used 2x6s, and, using Rick’s surveying transit, staked out a tentative 20x24 site for the concrete pad for the pavilion. On further reflection, we decided this location needed to be changed to facilitate running

power to the shelter house, and to leave a driving corridor that will allow vehicles to be used to hoist packs up out of the shaft. **Feb.**

24 – Bill Gee accompanied Jordan Meyer (MDC), Kyle Jansky (MDC) and Vona Kuczynska (USFWS) to Coffin Cave in Laclede Co., to provide SRT support for a hibernaculum survey of this vertical cave. The trip was complicated by snowy, icy roads, but fortunately everyone had 4WD vehicles. Leaving Meyer on the surface with an FRS radio for surface watch, Gee accompanied Kuczynska and Jansky into the cave, where they found several hundred thousand hibernating bats (!). The drop was about 30 feet on a very steep slope (70 to 80 degrees), then about 50 feet to the top of a debris pile, with the actual floor of the cave being another 30 vertical feet down the debris pile. **Feb. 26:** Bill Gee led another survey trip including Becky Nelson, Scott Wenzel and Seth Colston (KCAG), Kohl Mitchell (Chouteau), John Roth (Chouteau), Shannon Zaloz (Chouteau), and Laurel Dunn (PEG) to Stark Caverns. They went into the cave about 9:30 a.m. Since four of the crew had never been in the cave, they did a quick walk-around of the tourist trail, then split into two teams. One team was Seth, Laurel, Scott and Becky; the other was Bill, John, Shannon and Kohl. They worked their way out the Rugged Canyon passage to station R20, the end of the previous survey. Seth's team started there. Bill's team went on to the end of the upper-level passage, then started a survey working backwards. The teams connected up their surveys at about 2:30 p.m., not enough time to really get started on more survey. Bill had dropped into a hole during a break and found walking passage beyond. Everyone dropped into that hole and scooped another 300 feet or so of cave, ending in a fairly miserable but mostly dry belly crawl, where Seth, Shannon and Kohl pushed yet another hundred feet or so. This is not virgin cave, as there is an obvious elephant trail through it. They then turned around and worked their way out of the cave. It was tough going! The cave is tight, convoluted and jagged. Everyone was out at 4:15 p.m. Rugged Canyon is really two and sometimes three passages stacked on top of each other. The lowest level is a belly crawl in the stream and the middle is mostly impassable due to tight constrictions. The upper level is very challenging due to constrictions. The end of their survey is now at the end of the old 1960 map in a room marked as "Clay Flow". Eventually they will need to run a line through as much of the stream level as can be accessed. **Feb. 27:** Seth Colston led a survey trip to Geronimo Spring Cave including Scott Wenzel and Kohl Mitchell (Chouteau).

Seth talked to the landowner and reviewed progress so far. The team then entered the cave and started surveying from A32, completing the A survey (the main passage.) It ended in a couple of rooms that look to be



Seth Colston sketches in Slough Bottom Hollow Cave (the whole cave looks like that!)

connected to sink holes. Most of the formations are in this part of the cave, formations which are not currently active. After lunch, Seth continued sketching the A survey. Kohl and Scott went down a side passage off A32 and got a good 150 more feet of line plot data (and it keeps going!!). This passage will need to be sketched at a later date. **Mar. 14:** Jay and Nick Kennedy rode down to the Carroll Cave silo with Rick Hines, the CCC shelter house construction lead, to re-stake the location for the Pic Walenta Memorial Shelter House. The previously selected site would have interfered with hauling packs from the shaft with a pulley system and a vehicle, plus it probably wasn't level enough. The new location is just south of the fire ring and

much closer to the power pole, between the fire ring and the sky crapper. After trying several possibilities using a transit, they selected the best location and staked out the location for the eight posts that will support the roof. The 24 X 20-foot area was angled relative to north to provide the flattest area to build on. The cedar trees planted last year by Rita Worden will someday provide a nice windbreak. They then met with the contractor who will grade the spot and haul in and spread river gravel for a base for the concrete pad. As soon as the post holes are drilled, Rick will let him know and he will get started. Rita Worden arrived shortly after Rick's team did, to work on the trees she put out last year, locating several more of the oak trees previously planted. She flagged them and placed tiles on the ground to help locate them. The newly installed fence will protect them from the longhorns. **Mar 19:** Bill Gee led a trip consisting of Seth Colston, Martin Carmichael, Kohl Mitchell, Shannon Zaloz and Emma Buckingham to the Mountain Room to relocate the bat roost detector back to the Lunch Room guano piles. They had also planned to do a firmware update, but were thwarted when they discovered they had the wrong cables. They did upload the data and get the detector relocated. **Mar 19:** Hou Zhong led seven novices on an Introduction to Caving novice trip to Perkins Cave.



Joe Williams in front of nearly completed Toby Cave fly-over gate

Mar. 19: After spending a couple of days getting steel, cutting gases and portable toilets to Toby Cave (CAM-034) in anticipation of the gate building project to start April 1st, Jim & Julie Cooley spent a few hours on a resurvey of the cave. We shot azimuths all the way to the back (597 feet) and started on a side passage. **Mar 20:** Bill Gee led a second trip into Carroll Cave consisting of Seth Colston, Kristen Vogel, Hou Zhong and John Roth, the purpose of which was to familiarize newer cavers with Carroll so they could function as competent trip leaders. This trip was to familiarize the younger folk with UL1, UL2, and the 3M passage, which includes Convention Hall and the

Conference Room. **Mar 20:** Jim & Julie Cooley continued the resurvey of Toby Cave, sketching the first part of the cave (four stations) where the gate will be built. **Mar 27:** Jim Cooley and Seth Colston finished the survey of Slough Bottom Hollow Cave (OZK-028), retrieved one of Bill Gee's intrusion detectors that had been left in the cave since March 19th, 2021, and put a new and improved intrusion detector in its place. One intrusion was detected on April 21st, 2021 at 7:59 p.m. The batteries, however, were well and truly dead, so we do not yet have a way to know for how long they lasted. That'll come in the next revision. **Mar. 29:** Jim Cooley and Seth Colston retrieved a large trailer of CRF gating gear from the gear depot in Winona, and delivered it to Toby Cave. They worked on site set-up for the gating project on this day and on **Mar. 31**, having had to sit out Wednesday due to torrential rain. From **Apr. 1-5**, Jim Cooley led a CRF gating team that built a fly-over gate at Toby Cave to protect a Priority 1 gray bat maternity colony. This gate was funded by USFWS & MDC. Thermal Infra-Red (TIR) imaging by MDC has verified that up to 115,000 bats use the cave some years as a maternity roost. Joe Williams, Tyler Fisher and Cliff Gill served as welders, and Jeff Fouquet (a Kansas Master Naturalist) and Jeff Bowman as oxy-acetylene steel cutters. They were supported by an incredibly hard-working team including cavers Julie Cooley, Seth Colston, Kirsten Alvey-Mudd, Bill Gee, Nathan Taylor, Joe Wynne, Dustin Schmidt, Matthew Hernandez, Tierney Bowman, Kristen Vogel, George Bilbrey, Richard Orr, and Don Toole, plus Missouri master naturalists Arienne Barnes, Damon Kempker and Jarrett Whistance, with support from landowners Dan and Mark Mauss. Agency personnel supporting the effort included MDC employees Kristin Goodrich, Tracey Prenger, Tayler MacDonald, and Dilan Simmons, and USFWS employees Byron Mitchell, Vona Kuczynska, and Gabriella Wolf-Hernandez. From **Apr. 6-8**, Jim & Julie Cooley tore down the site and returned gating gear to the CRF Winona depot. **Apr. 10:** Bill Gee led a brief trip into Carroll Cave to reinstall data loggers. Participants included Mike, Candace, & Adele Kovacs, and Rita Worden. They reinstalled three stream flow data loggers in the cave, which had recently been returned from the service center with fresh batteries. **Apr. 16:** Seth Colston led a novice trip to Perkins Cave.--Jim Cooley

Daedalus Grotto. **April 9th** - Krista Bartel, Stephen Bishop (a Long-time Kentucky caver and friend of Krista's) and myself (Jeff Fennell) surveyed in Tom Moore cave in Perryville, MO. We surveyed a little over 400 ft, tying in two hanging surveys. During our trip, we observed two Grotto Sculpin, about 20 Amphipods, thousands of Isopods and one Tri-colored Bat.--Jeff Fennell

MSS MINUTES. The Spring 2022 Board meeting of the Missouri Speleological Survey was called to order by President Dan Lamping on March 6th, at the Catalyst Center in Perryville, MO. **Officers Present:** Dan Lamping, President; Krista Bartel, Vice-President; Don Dunham, Treasurer; Absent was Alberta Zumwalt, Secretary. **Directors Present:** Michael Schoenweiss (proxy for Craig Williams), CAIRN; Rita Worden, Chouteau; Jeff Fennell, Daedalus; Jim Cooley, KCAG; Al Quamen, LEG; Alex Litsch, MVG; Doug Leer, MMV; Alicia Wallace, MCKC; Jessica Shoffner, MSM; Lorin O'Daniell, PEG; Max White, SPG; Gary Resch, SEMO, was seated during meeting. Absent were: CCC, LOG, OHG, RBX, Stygian. **Secretary's report.** The minutes of the Fall 2021 meeting were emailed to the officers and directors, and printed in the Sept-Oct *MSS Liaison*. Approved as sent. **MSS Liaison.** Krista Bartel (proxy for Gary Zumwalt) reported cash on hand of \$19.55; Sending out 32 paper copies and the rest as electronic copies, the next deadline is May 1st. **Treasurer's Report.** Don Dunham reported: REPORT OF THE TREASURER – December 31, 2021 – ACCOUNTS: General fund \$10013.84; Subscriptions/Donations *Missouri Speleology* \$7373.12; Research Fund \$9284.78; Anne Johnson Data Fund \$17914.77; Affiliation Fees \$1442; Subscriptions *Liaison* \$281; Total \$46309.51. ASSETS: Savings Bonds \$2000; Interest Checking \$8309.51; Certificates of Deposit \$36000; Total \$46309.51. Income Statement for the year ending December 31, 2021: Missouri Speleology Subscription \$690; Missouri Speleology Sales \$5197.11; Organizational Affiliation Fees \$565; Liaison Subscriptions \$120; Total Income \$6571.11. Expenses Missouri Speleology \$4945.85; Liaison \$300; Anne Johnson Fund \$240; Bank fees \$120 that's going to come down to \$60 this year; General Fund \$149.64; Total \$5755.49. Net Gain \$816.62. **Missouri Speleology.** Don Dunham reports he is currently finishing editing a manuscript by Tom Aley, a collection of memories of a hydrogeologist, to be published within a month. Issue coming up written up by Bob Thompson of Ohio, working beside Gordon Smith, to gather a collection of old postcards and photos of Missouri show caves, many that are no longer show caves. Scott

House has 2 or 3 issues in the works. Great sales have been received on the web store. Thanks to Dan and Joe Light for putting together the website as the store has really taken off. We are always looking for content. This publication is high quality and focused on caves enough that several of the authors of issues have specifically chosen us to publish with over other outlets (such as Tom Aley and Bob Thompson). This is a feather in our cap.

OLD BUSINESS. None. **NEW BUSINESS.** Awards presented by Dan Lamping. MSS has 3 different awards to be given out. One is the Tex Yokum Certificate of Appreciation, purpose is expressing other than cavers that have shown support of the goals and objectives of the MSS. Recipients today: Denise Henderson Vahn, LAD worker as a journalist, she tells the story of Missouri karst in an exceptional way to inform those that are not into caves. Thanks for being a great voice for caves and karst in Missouri. Neil Humpkey of the LAD foundation, largest private landowner in the state, owns most caves in the state as a private landowner. MVG has performed a lot of work in Blair Creek, Big Creek and Pioneer Forest. Neil is Very accommodating and encouraging of our work. Neil is getting hooked and might become a caver. Shared information has really helped the organization know more about caves, mapping, bio, gating. MSS also has the Lane Brod Certificate of Recognition, provide a means of recognizing and encouraging cavers to contribute to the study of speleology and goals of the MSS in the state of Missouri. A couple that could not make it today. Mark Jones, does a lot of work with the CRF, in the National Scenic Riverways in particular. Mark does exceptional job of writing reports, doesn't live in MO but one wouldn't know that with the amount of data that comes in from him. Greatly appreciated. Matt Beeson, taken on leadership roles in large survey project with MSS/ CRF Mary Lawson and Ozark Caverns. WE need these leaders to not only coordinate events like a few that we have offered, even yesterday, but to spend the time at the computer afterwards to input the data. Greatly appreciated. Derrick Holtman, exceptional job of bringing Missouri underground to life through photography. Derrick is always around for survey as well and lugs a heavy camera to make us look great. Krista Bartel, Vice President of the MSS, but beyond that a long time Missouri caver that has been reliable showing up for survey trips, working with a wide range of different grottos, and groups within the state. Anything we need done, she is eager to help out. Kirsten Alvey-Mudd, a go-getter to say the least, probably creates a full-time job for Ken Grush with all the data she submits to help one of the most important thing the MSS does, the repository for the work that cavers do. Kirsten gets a lot done and invites a lot of people to be involved, giving opportunities to them to help collect data preserved and available for generations to come. *Dave Hoffman mentions that both were MMV members from late 50s, until passed away or moved out of state, proficient mappers, good at artistic drawing and proficient writers. Tex Yokum caved a lot in the 70's and 80's in Perry County, and with the long history of contribution to the area, led to the work we are able to do in Perryville.* The last recipient of the Lang Brod today is Mark Brooks, who did in fact cave with Tex as a young man in Perryville and Perry County, continued caving a lot in Mammoth, and recently came back to join Missouri organized caving brought heat and momentum and encouragement to those that need to keep moving. Last award J Harlan Bretz award to those who have made outstanding contributions in the field of speleology in state of Missouri. Given to Ben Miller and Bob Lurch. Both have done a considerable amount of caving together over the years, including taking leadership roles in the remapping of Carroll Cave. Contributions also to the Roaring River Dye Tracing project. Ben Miller has turned in 245 caves within the state and was the principal cartographer in 292 caves and assisted in more than 53 additional maps. *(An error in the actual meeting led to a report far lower than the accurate number, apologies to all)*

Cave files committee report. Ken Grush, Read detailed report in the most recent *MSS Liaison*. 8,000 accession numbers, multi entrances and leads do ding this number. 7,606 caves right now. 40,000 faunal records, 3,800 monitoring forms, 24,000 reports scanned, good resource to be used. 6,000 map records, about 4,300 mapped caves (duplication of maps) we need to catch up, but over half of our caves mapped. Appreciate all the submissions. Jerry Vineyard's daughter donated personal cave log from before the MSS, dates from back to 1954, Ken is willing to scan in such documents. How to navigate through the landowner/organization/research/people requests for data is an important job of the cave file committee to get them the info they need without getting bogged down by delineating out what can and cannot be handed out for each request. It is good that we can provide this support to projects that can benefit the community, but hard as a small volunteer organization.

Agency Reports- due to multiple reports elsewhere, most know what is going on. It has been a trying winter for bat census, as odds/ends years brand new bat people on hold

due to covid, now suddenly having to do all the reports. **Affiliate Organizations Project Reports-** Have an agreement with MODOT with a cave in Hannibal, that once was surveyed, only Lang Brod's notes survived the old survey. With this new agreement, a new entrance has been stabilized that allows access to complete a map. We are working on it, but may be about half done. Cave is similar to Cameron/Mark Twain with safety issues also, but also understanding the sensitivity of the location, know there are people working on it and actively working on it with cultural inventories and photo inventories. Future management will be Modot due to safety concerns. Crevice - recent trip into Echo Pit helped bring total length to 31.11 miles, with a 65ft tall lead in crevice that will be a bolt climb, but there is more cave! 24.5 miles in Berome. **Next Meeting-** Two meetings minimum per year required, suggestions to next meetings/venue include: National CRF board members meeting first weekend in November in catalyst center in Perryville, MO Geological Survey in Rolla, good to maintain sense of connectivity given that is where state cave files are located. Camp potentially at Dave Hoffman's property. Piggyback in September on MCKC meeting. No preference currently, please respond to future emails about preferences, dates, and further suggestions. Scott: Doesn't have to be all or nothing, could be Current River State Park, a work weekend is an option too. Could be a summer trip with monitoring, not all organized meetings have to be the board meeting. **Thanks** to Scott House for organizing this and having the public outreach aspect of working with the city, and providing all cave opportunities under parts of the Perryville city property. With 52 cavers going underground yesterday, and spread throughout the city, we made ourselves known! Big success, city is very happy. Meeting Adjourned. -Respectfully Submitted, Krista Bartel, Vice-President, Proxy for Alberta Zumwalt.

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

Cave Files Committee: Scott House (Chairman), Ken Grush, Mick Sutton, Dan Lamping, and Jeffrey (Spike) Crews.

NOTE: MSS Affiliate Organization fees were due in January. Check or money order for \$25.00 should be sent to the MSS Treasurer, Don Dunham, 6104 Valley Creek Ct., Imperial, MO 63052. **Not paid are: CCC, Daedalus, MMV, OHG, Roubidoux (owes \$10), Stygian.** Failure to pay the Affiliate fee will affect your status on the Board. Please send money to Don ASAP.

Calendar:

July 1st – Next Liaison deadline.

October 2nd – Fall 2022 MSS Meeting, Rockbridge State Park & Devils Icebox