

Minutes of the Kansas City Area Grotto
July 2020 Business Meeting
Held Tuesday, July 21st, 2020 – 6:30 to 8:30 P.M.
Meeting Held Remotely on Zoom

The meeting was called to order by president Seth Colston. The following members and guests were present: Jen Bell, Seth Colston, Jim Cooley, Jen Cornelison, Julie Cottrell, David Foran, Jeffrey Fouquet, Ginny Friedrich, Bill Gee, Kristen Godfrey, Kay Hines, Laura Hines, Rick Hines, Laura Jaynes, “Jodi”, Jay Kennedy, Nick Kennedy, Shannon Robinson, Craig Williams

CAIRN Presentation

This evening’s presentation was a talk on cave archaeology by Craig Williams. In 2008, Craig founded the non-profit Cave Archaeology Investigation and Research Network (CAIRN) to identify and document archaeological sites inside caves. CAIRN is affiliated with the Cave Research Foundation (CRF), National Speleological Society, and Missouri Speleological Survey, along with various local grottos. CAIRN provides services for various organizations, including the US Forest Service, the National Park Service, the CRF, Missouri State Parks, the Missouri Department of Conservation, and private landowners.

Craig’s presentation began with an introduction to archaeology, which he defined as the study of human activity through the recovery and analysis of material culture. Contrary to popular belief, archaeology is not centered on bones: Instead, it focuses on cultural artifacts such as tools, glass bottles, and pottery.

In the context of caves, archaeologists investigate not only individual artifacts like those described above, but archaeological features as well. These features include footprints, torch remains, wall art, fire rings, and other artifacts that cannot be removed from a cave.

Shrines are another archaeological item of interest that can be found within caves, but it is often difficult to distinguish a purposeful shrine from a random collection of objects, as a shrine can consist of as little as a pile of rocks or a group of artifacts. One shrine that Craig investigated consisted of arrows stuck into a large speleothem that had been placed upright on the ground. Another shrine that Craig studied was harder to distinguish: It consisted of a collection of artifacts pressed into the cracks between breakdown. The objects that he found in this shrine included a prehistoric sandal, grass, a basket, and four to five wood-and-sinew arrows. Craig cautioned that any caver who thinks they may have found an archaeological shrine should leave it untouched and not attempt to move any of the associated artifacts.

Missouri has four archaeological time periods: the Paleoindian period, the Archaic period, the Woodland period, and the Mississippian period. Most cave artifacts found in Missouri are from the early to middle Archaic period through the late Woodland period, or from around 5,000 to 900 years before the present. Often, though, caves can contain objects from different eras, such as one cave that Craig investigated that contained both prehistoric artifacts and detritus from an aborted 1950s guano-mining attempt.

Cave archaeology is a time-consuming process that requires meticulous attention to detail. Before archaeologists can begin studying a site, they must first be able to physically access the cave. Craig has studied caves that merely require walking into an obvious entrance, but he has also climbed a ladder to the bottom of a deep well, crawled into caves, and flown as far away as Hawaii or Italy to access field research sites. Some specialists go as far as to use SCUBA to access artifacts found in underwater caves.

The field work itself traditionally begins with a pedestrian survey, in which archaeologists conduct a detailed walk-through of the site, mark any visible artifacts using pin flags, and note any archaeological

features. This survey can be very time-intensive, requiring hours for even a mid-sized entrance room. As artifacts are found, archaeologists note their locations, draw the locations into the cave map, and photograph the items. Any pits dug by looters are similarly noted and documented.

Technology is increasingly used to solve the problems and limitations found in cave archaeology. For instance, many artifacts preserved in caves are fragile and may deteriorate if removed, so 3D scanning is increasingly used within the caves to document these artifacts; a 3D scan can even be used later to 3D-print a reproduction of the artifact for further study. Three-dimensional scanning is also used to document impressions, such as toe marks and footprints, that are found within the surfaces of the cave itself. But three-dimensional scanning is not the only technological innovation used in cave archaeology: chemical analysis is used to investigate petroglyphs, which may contain traces of paint, as well as torch marks and other rock art.

The world's cultural resources are being lost at an even faster rate than natural resources, and once cultural resources are lost, they are gone forever. White-nose syndrome has only accelerated the looting process, as caves that are visited less often are more vulnerable. Cavers might note signs of looting in the form of "looter piles": piles of discarded items, such as pottery shards, left behind as more valuable items are removed. If a looter is spotted in action, do not confront the looter directly, as looters often carry firearms. Instead, take a physical description of the perpetrators, leave the immediate area, and report the incident.

For any questions, or to report any suspected looting or any items of archaeological interest found within a cave, contact Craig Williams via email or via CAIRN's website (<http://www.cairnstl.org/contact-us/>).

Officer Reports:

President: Seth Colston had no specific president's business to report.

Treasurer: Bill Gee reported that there was no significant bank activity in June.

July 2020 meeting - Treasurer's report

June beginning balance = \$2716.37 (Commerce Bank)

Deposit = \$0.00

Checks = \$0.00

Debit card = \$0.00

Bank fee = \$5.00

End balance = \$2711.37

Activity:

Income: \$0.00

Expenses: \$0.00

Bank fee = \$5.00

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June beginning balance = \$427.16 (Paypal)

End balance = \$427.16

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June beginning balance = \$67.00 (petty cash)

End balance = \$67.00

Vice President: Jim Cooley reported that all is well underground. No other updates.

Secretary: The May meeting minutes were accepted. No other updates.

Quartermaster: The digital quartermaster's list should be available within the next month. Contact Seth Colston or Bill Gee to borrow gear.

Fundraising: No updates. Contact Seth Colston (swcy92@gmail.com) or Bill Gee (bgee@campercaver.net) for more information.

Presentations: A fair number of people have postponed presentations until they can be held in person, so KCAG is in need of presenters for future meetings. Please contact Seth Colston at swcy92@gmail.com if you are interested in giving a meeting presentation or have a topic idea.

Carroll Cave Conservancy: The annual CCC meeting occurred on Saturday, July 25 at 10:00 AM via Zoom. New officers were elected (as all ran unopposed), and KCAG swept the ticket: The new president is Jeff Page, vice-president is Jay Kennedy, secretary is Bill Gee, and treasurer is Kristen Godfrey. The entry gate relocation, which should improve safety, will likely be accomplished in the near future.

Maps of Carroll Cave have been provided to the board by the survey committee, and Rick is working to assemble these maps into a single database. He would appreciate help from anyone with experience in GIS. In addition, Bill's recent trip reports are now available on the CCC website. The data logger trip showed that there have been no major floods recently, with a maximum water height of only 3.5 feet at the ladder.

Missouri Speleological Survey (MSS) and Missouri Caves and Karst Conservancy (MCKC): Jim Cooley, the MSS director representing KCAG, reported that the fall MSS meeting has been cancelled due to COVID-19 concerns. The spring meeting may be held in-person next year, and the Vice President may step down, leaving an opening for a new VP. This meeting will be associated with the spring MCKC meeting and may or may not be accessible via Zoom. There will be caving available after the meeting. Contact Cooley at coolstoi@kc.rr.com for more information on either of these organizations.

NSS update: The NSS virtual convention occurred between July 27th and July 31st.

MVOR: The KCAG and MoBat will no longer be holding an MVOR in fall 2020, and the KCAG currently plans to reschedule to fall 2021 or 2022. These tentative plans will be impacted by several factors, including the state of COVID in 2021 and whether there are already outside bids for the 2021 MVORs. Additionally, it is unclear whether MoBat will be involved in hosting this MVOR. Seth will have more information on this topic within the next few months.

Novice and Scout Trips: Kristen Godfrey, KCAG's newly nominated Novice Trip Coordinator, led a novice trip to Perkins several weeks ago. She and the novices socially distanced and wore masks to

mitigate any risk. Kristen had a few additional novice trips planned for this summer, but she has placed these trips on hold again.

Kristen provided several suggestions to improve the organization of KCAG's novice trips. First, she suggested that if, in the future, KCAG aims to schedule one novice trip per month, additional trip leaders will need to be recruited. Additionally, Kristen has previously led a pre-trip training session to better prepare novice cavers, and she believes that it may be recommended to require a similar session, either in-person or virtual, for all future novice trips.

Hickory County: No updates.

Cloud 9 Ranch: No updates.

Stark Caverns Survey Project: The most recent trip occurred in early June, with Bill Gee, Seth Colston, and Kristen Godfrey participating. Bill completed some resketching, while Seth and Kristen sketched side passages off of the Grand Canyon room. Bill reported that he had been considering a trip in early August but has postponed this trip to September or later this fall. There is a fair amount of the cave, potentially up to 4,000 feet, still left to survey.

Old Spanish Cave Restoration Project: Max White has talked with Nathan, the landowner, and has concluded that while last summer weekly tours were hosted, there has been no activity in Old Spanish this summer due to the coronavirus. Seth aims to coordinate a trip in the future to continue the restoration.

Cave Spring Park Association: No updates.

Devil's Icebox: A meeting occurred in late July, in which Elbow Cave was visited. Trips to Devil's Icebox are currently still planned for September, as this is the only month that the cave can be entered due to its status as a gray bat maternity colony and an Indiana bat hibernaculum.

White Nose Syndrome: See <https://caves.org/WNS/> for the most current map of the spread of WNS.

MeetUp: Contact Seth Colston (swcy92@gmail.com) or DJ Hall (rangerdjhall@gmail.com) to add trips to the MeetUp schedule.

New Membership Nominations: None.

Trip Reports and Other News:

Several months ago, Jim Cooley suggested building a hidden device to detect light in sensitive caves, such as those on government land, mostly to quantitatively assess unauthorized intrusion to determine if they really need to be gated. Bill Gee has now built several devices based on the Arduino Light Detector. These instruments, which cost \$30 each to construct, can be placed in an old mayo or peanut butter jar and left for months inside a cave, where they will record a time stamp when light (i.e., from a headlamp) is detected. Seth and Bill reported that they intended shortly to place one device inside a cave to test the detector's efficacy. So far, the instrument's sensitivity appears to be fairly high, but the battery life has room for improvement.

Seth and Jim went ridge walking in search of a reported cave. They found the cave, but it contained gray bats, so they will return in the future when the bats are gone to survey the cave and place one of Bill's Arduino devices.

Jim Cooley, Julie Cottrell, Seth Colston, Bill Gee, and Max White went on trips to Toby and Moles Caves with several US Fish and Wildlife Service employees, as well as a professor from St. Mary's College, to

test an audio device that measures how many bats enter and exit a cave per day. The initial trips were successful, and researchers will return soon for a final check.

Bill Gee led two trips to Carroll Cave: the data logger trip, which successfully retrieved the data, and a trip to the Round Room with Seth Colston, Kristen Godfrey and Jim Cooley. The Round Room trip inventoried the rescue cache and replaced some defective items. Bill reported that the gravel road was overgrown with grass but is much more passable than it was the previous winter.

Jim Cooley was asked to look for a missing person on behalf of a local Sheriff's Department. Jim put together a team on short notice consisting of Bill Gee, Seth Colston, Krista Bartel, and Max White (SPG); this team visited multiple caves, many of which Cooley had ongoing surveys in, including one cave that was previously partially mapped but that has several hundred feet that still need to be surveyed. No body was found, but a number of survey opportunities were identified, most of which require small cavers.

Jim Cooley and Seth Colston performed a map QC check for Flippen Cave, which KCAG gated in 2010.

Seth Colston, Bill Gee, and Jim Cooley visited a large private ranch in Shannon County to search for a missing sinkhole cave. They did not find the cave that they were looking for, but they did find a 130-foot water cave, which was named Just Go with the Flow Cave and which Bill and Seth surveyed, and a smaller cave, which they named Buddha's Shrine Cave. Bill and Seth also surveyed an additional 50+ feet of tight passage in Cave Spring Cave. Bill and Seth rappelled into a lower passage and reported that there is a fair percentage of this cave left to survey, all of it a wet stream passage. The owner of the ranch that contains these caves also owns some additional land, which Seth and Jim ridge walked without finding any new caves.

New Business: Kristen Godfrey volunteered to fill the position of the Novice Trip Coordinator, who is responsible for organizing and promoting novice trips and maintaining the grotto's helmets. This had been an official KCAG role in the past but has not been filled in recent years. Rick Hines nominated Kristen, Laura Jaynes seconded, and the motion was passed. Congratulations, Kristen.

Seth informed the National Grey Bat Recovery Coordinator about the bat census trip to Carroll Cave, and she reported that she has access to \$400 sonic detectors that provide bat counts. These instruments are checked every six months, and the Fish and Wildlife Service might be persuaded to purchase two and loan them to the CCC for one year.

Unfinished Business: Seth Colston confirmed that there was no unfinished business. The meeting adjourned, and the members returned to their own lives and, potentially, their own pizza and beer, until such time as the pizza can be shared by grotto members in person.

Upcoming Trips and Events

COVID-19 update: Some restrictions have been lifted. Restrictions or not, please make your own decision regarding your own health. The caves are not going anywhere.

August 29th - September 5th - 19th International Symposium on Vulcanospeleology

Catania, on the island of Sicily Italy

<http://www.19isvetna.com/>

If interested contact David Foran, caver_skier@hotmail.com

October 24 - Carroll Cave annual bat census trip.

All day at Carroll Cave. This is a difficult and strenuous trip. Wetsuit required! Contact Bill Gee bgee@campercaver.net for more information.

October 16-20 - Devil's Backbone Wilderness (DBW) backpacking, camping and survey. Contact Shawn Williams for more information. sosifr@yahoo.com, 314-583-7039. DBW is in Ozark County, Missouri. The plan calls for surveying five caves.