

The Southeastern Caver

Volume 26 February 2021



Heart of Gould Cave

The Southeastern Caver is the official newsletter of the Southeastern Region Association (SERA) of the National Speleological Society and is published once a year for distribution to SERA member grottoes and the NSS archives. Statements and opinions expressed herein do not necessarily reflect the policies or beliefs of SERA or the National Speleological Society. Reprinting of articles is allowed if proper credit is given to the author and/or photographers represented in this publication. Send correspondence and exchanges to: The Southeastern Caver, c/o Don Hunter, address given below.

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Chair: Jon Zetterberg
Vice-Chair: Zeke McKee
Secretary/Treasurer: Alan Hatcher

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Cover: Jim Fox in the formation dome in Hog Heaven, Heart of Gould Cave. Photo by Chris Higgins.

Back Cover: Kelli Lewis, GD301, Tennessee. Photo by Chuck Sutherland.

A Few Words From The Editor:

As I put this issue of the Southeastern Caver together, the caving community, like the rest of the world, is having to adjust and adapt to how we do business/carry on our lives due to the impacts of the worldwide COVID-19 pandemic. The Upper Cumberland Grotto somehow managed to pull off hosting Spelopocalypse, the 69th Annual Summer Cave Carnival, at Camp Tubb, Rock Island, Tennessee. A good time was had by the 80 or so registered attendees. Currently, it appears that the 2021 Winter Business Meeting will most likely be a physical meeting with an option for virtual attendance. Hosting and location for the 2021 Summer Cave Carnival are still up in the air and will hopefully be resolved during the upcoming Winter Business Meeting.

I would like to think that, as vaccines are distributed and administered, we can, with appropriate discretion, soon resume life with some semblance of normalcy, visiting with family again, scheduling caving trips and enjoying gathering for those most important post-caving trip dinners at our favorite Mexican restaurant! Hang in there!

Don Hunter

2021 SERA Summer Cave Carnival

At the time of publication of this issue of the Southeastern Caver, final decisions had not been made regarding the host grotto or location of the 2021 SERA Summer Cave Carnival. The indecision is a result of the COVID-19 pandemic and the uncertainty regarding when conditions might change, allowing a grotto to host a physical event.

2021 Treasurers Report

(Covering January 1, 2020 to December 31, 2020)

BEGINNING BALANCE \$719.22

(Balance brought forward from December 31, 2019)

INCOME (\$158.00)

Nashville Grotto Avis Award Fund \$100.00
Rebate from Alexis Harris Award Not Given \$50.00
Patch Sales \$8.00

EXPENSES (\$509.76)

Check # 581 : Michael's for Award Frames \$19.76
Check # 582 : 2020 SERA Cash Awards \$300.00
Check # 583 : 2020 Donation to SCCi \$120.00
Check #584 : Madison Tropy Shop for Engravings \$70.00

ENDING BALANCE \$367.46

2020 SERA WINTER BUSINESS MEETING

MEETING NOTES, SUMMARY, TO-DO LIST

(A digital recording of the meeting (partial) is available in the SERA Archives. The minutes presented here are edited/reformatted for publication in this issue. The official version will be posted at the SERA website.)

The 2020 SERA Winter Business Meeting was hosted, on February 22, 2020, by the Dogwood City Grotto in the Community Room at the Bank of LaFayette, LaFayette, Georgia

1030hrs SERA Chair Bill DeVan opens meeting.
Vice Chair Jon Zetterberg present and host for DCG
Secretary/Treasurer John Hoffelt present
SKTF Chair Maureen Handler present

Jon Zetterberg welcomes on behalf of Dogwood City Grotto.

Salon Introductions:

- Fine Art Salon, Don Hunter – 20 photo submittals; one art; New (2020) and back issues of the Southeastern Caver are available; 2020 issue is in memorial of Lee White. Judges for salon: Kim Fedrick, Nancy Aulenbach, Scout Aulenbach.
- Map Salon, Brent Aulenbach – 26th Annual Map Salon, 4 submittals. Judges for salon: Brent Aulenbach, Kyle Lassiter, and Chuck Sutherland.

Executive Reports:

- Chairman, Bill DeVan – chair and help organize the WBM

- Vice Chairman, Jon Zetterberg – assisting with the WBM
- Secretary/Treasurer, John Hoffelt – Treasury for 2019 started with \$807.97 added \$617.50 income and \$706.25 expenses for end balance of \$719.22
- No new or dropped Grottos. Showed SERA archives and talked about Secretary responsibilities.
- SKTF, Maureen Handler – Brought WNS Decon to Cave Carnival and TAG Fall Cave-In; need new chairman.

SERA Activities:

- 2019 Cave Carnival – Mark Ostrander reported attendance was 350; profit ~\$500. Hosted by Huntsville Grotto.
- 2020 Cave Carnival – Chuck Sutherland reported that the carnival will be held at Camp Tubb, Rock Island, Tennessee, May 15-17, 2020. Hosted by Upper Cumberland Grotto.
- 2021 Cave Carnival – Michael Gilbert reported that the carnival does not have a location or date, yet. Hosted by Central Alabama Grotto.
- 2021 Winter Business Meeting – Bill DeVan reported that East Tennessee Grotto would host the meeting but no date or location, yet.
- 2022 Winter Business Meeting – John Hoffelt reported that there was no response from invites to Flint River through Gadsden Grottos; verbal invite to Georgia Speleological Survey, to follow-up with written (email) invite. GSS will get back with their decision.

Old Business:

- 2019 WBM Notes – John Hoffelt read the minutes from the 2019 WBM; no changes where noted.
- SERA Web Development – Jay Manneschmidt reported that the website is now up to date, but that it requires more work than anticipated. The website has a new address: <https://sera.caves.org> The old address will automatically redirect to the

new site. (Report provided after lunch in New Business timeslot.)

- 2019 NSS Convention – Maureen Handler reported that the Convention was an awesome success, with a profit of \$45K. No major problems, just small hiccups. Chuck Sutherland reported that the after-impact in Cookeville is very positive.

New Business Identification:

- Bill Stringfellow announced that the SCCi has an option to buy Cyclops Cave in Virginia. SCCi will need the money on-hand by the end of April for the option.
- Bill also requested agenda items for the Congress of Grottos to consider at the 2020 NSS Convention.
- Jon Zetterberg recognizes Eric Crisp on his 50th birthday.
- Julie Ann Ramsey and Kim Fedrick announced a multi-agency clean-up of an illegal dump in Savage Cove. The clean-up will occur March 6 through 8, 2020. Agencies involved include the cavers, TDEC, and Grundy County. Informational flyer provided.
- John Hoffelt requested a volunteer to serve as the southeast representative to the NSS Conservation Division.
- Also, John Hoffelt identified that the SERA treasury could provide \$120 as donation, as directed by the membership.

1215hrs Break for Lunch

1400hrs Meeting Reconvenes

- Maureen Handler advertises NSS Headquarters work weekends and provides update on progress.
- Jeff Patton advertises Cave and Karst Resources Symposium hosted by TDEC and TTU Water Center at TTU on February 29, 2020. Information flyer provided.

Roll Call and IO Reports:

13 IOs present (see Sign-In Sheet in Archives)

- DCG emphasizes the need for all IOs to officially adopt the NSS Harassment Policy.
- New Business Resolution; No New Business;
- J. Mannes Schmidt provides website update. (see under Old Business, herein)

SERA Awards:

- Francis McKinney Award – awarded to Nathaniel Mann; Judges: Alan Hatcher, Kyle Lassiter, Chuck Sutherland
- Richard Schreiber Award – awarded to Lee White (posthumously); Judges: Gerald Moni, Jeff Patton, Marion Smith
- Alexis Harris Conservation Award – No Nominees
- Larry S. Adams Landowner Appreciation Award – awarded to Jeff Haston; Judges: Michael Gilbert, Alan Hatcher, Warren Wyatt
- Avis Moni Hospitality Award – awarded to Kim Fedrick; Judges: Jenny Crisp, Zeke McKee, Natalie Pheasant
- Meritorious Service: Maureen Handler and NSS Convention Staff and Volunteers (nominated by Bill DeVan, SERA Chair, second unanimous from the Floor) for outstanding service during the 2019 NSS Convention.
- Meritorious Service: John Hoffelt (nominated by J. Patton, Upper Cumberland Grotto; second by D. Cousineau, Pigeon Mountain Grotto) for service as SERA Secretary/Treasurer.

Election:

Vice Chairman: Zeke McKee

Sec/Treas: Alan Hatcher

Donation:

\$120 donated to SCCi general fund to be used as necessary. (motion by A. Hatcher, Nashville Grotto; second by C. Sutherland, Upper Cumberland Grotto)

1515hrs Chair Bill DeVan closes meeting and award committees meet

1730hrs Banquet Meet and Greet

1900hrs Awards Presentation by Bill DeVan, Don Hunter, Brent Aulenbach (results found elsewhere in this newsletter)

1930hrs Banquet speaker: Kyle Lassiter: Resurvey of Gourdneck Cave.

2020 SERA Map Salon Winners

Submitted by Brent Aulenbach

The 26th annual SERA Map Salon was held at the SERA Winter Business Meeting on Saturday, February 22nd, 2020. The meeting was hosted by the Dogwood Grotto at the Bank of LaFayette Community Center, LaFayette, Georgia.

The goals of the map salon are to encourage and improve the mapping of caves in the SERA region by:

- (1) providing a venue for cartographers to display their maps,
- (2) give cartographers an opportunity to view other cartographers maps and techniques,
- (3) provide helpful critique, and
- (4) provide an incentive through healthy competition.

There were four maps entered for competition by three cartographers. All the maps were from caves in Tennessee. Maps were judged in a single "all caves" category. All maps were of high quality and three maps received awards:

A merit award went to Jon Zetterberg for Van Dykes Cave, Grundy Co., TN.

(A merit award indicates that the map achieved a high level of proficiency while not receiving another award.)

Second Place went to Warren Wyatt for Spade Hole, Putnam Co., TN.

Best of Show went to Zeke McKee for Chism Chasm, White Co., TN.

In addition to these maps, Warren Wyatt entered Beaty-Pickett Cave, Putnam Co., TN and Bill DeVan displayed a thick binder of draft pages of Zarathustra Cave, TN for show.

Thanks to all the cartographers for their excellent maps! And thanks to the judges: Brent Aulenbach, Kyle Lassiter, and Chuck Sutherland.

Looking forward to seeing many more great maps next year! Get mapping & drafting!

2020 SERA Fine Arts Salon Winners

Submitted by Don Hunter

Twenty photos by nine different photographers and one piece of art were submitted for judging. A big thanks to the judges, Nancy Aulenbach, Scout Aulenbach and Kim Fedrick

Photo Salon Results, by category:

Color, People:

1st Place: Ashley Atkin Irons, "If the helmit fits, you fit!"

2nd Place: Warren Wyatt, "Lunch Box Cave"

3rd Place: Warren Wyatt, "Crabtree Cave"

3rd Place: Jason Lovvorn, "Kid Kavers"

Honorable Mention: Alan Hatcher, "Muddy Hell"

Color, Macro/Closeup:

1st Place: Warren Wyatt, "Helictite"

2nd Place: Taylor Lynn, "Sallie"

Color, Artistic:

1st Place: Chuck Sutherland, "Mega-Junction, Blue Spring Cave"

2nd Place: Warren Wyatt, "Little Hell Hole"

3rd Place: Chuck Sutherland, "Mt. Stromboli, Gourdneck Cave"

Honorable Mention: Alan Hatcher, "Catacombs"

Color, Entrances/Exterior Scenes:

1st Place: Kelli Lewis, "Jay Creek Spring Cave"

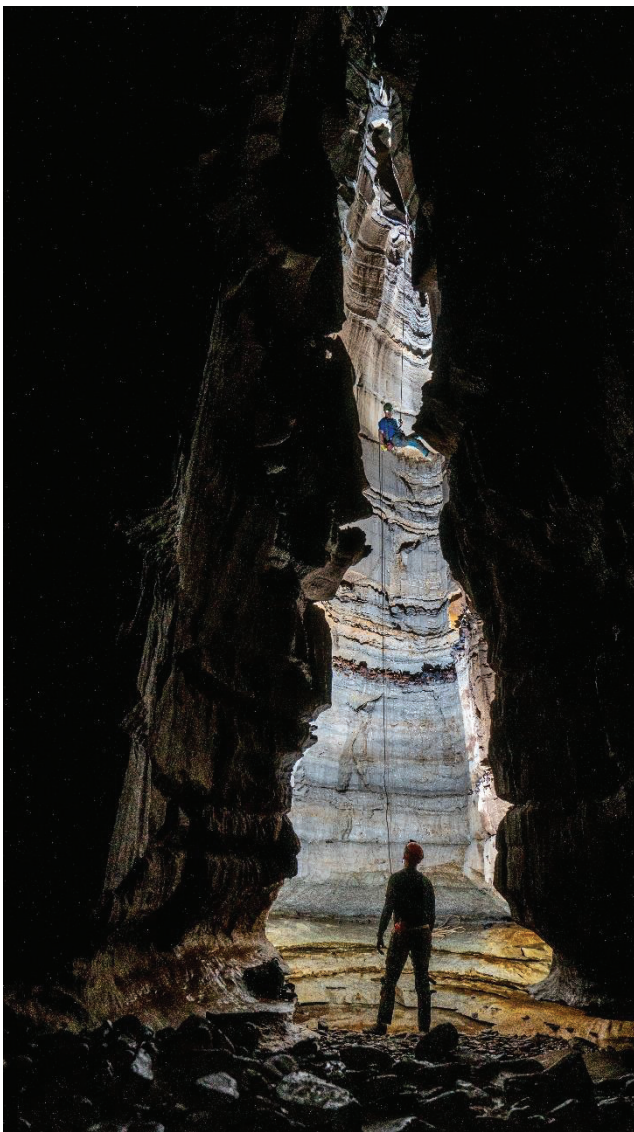
2nd Place: Annabelle Dempsey, "Morgan Pit"

3rd Place: Jason Lavender, "Calfkiller Saltpeter Cave"
Honorable Mention: Annabelle Dempsey, "Capshaw Cave"

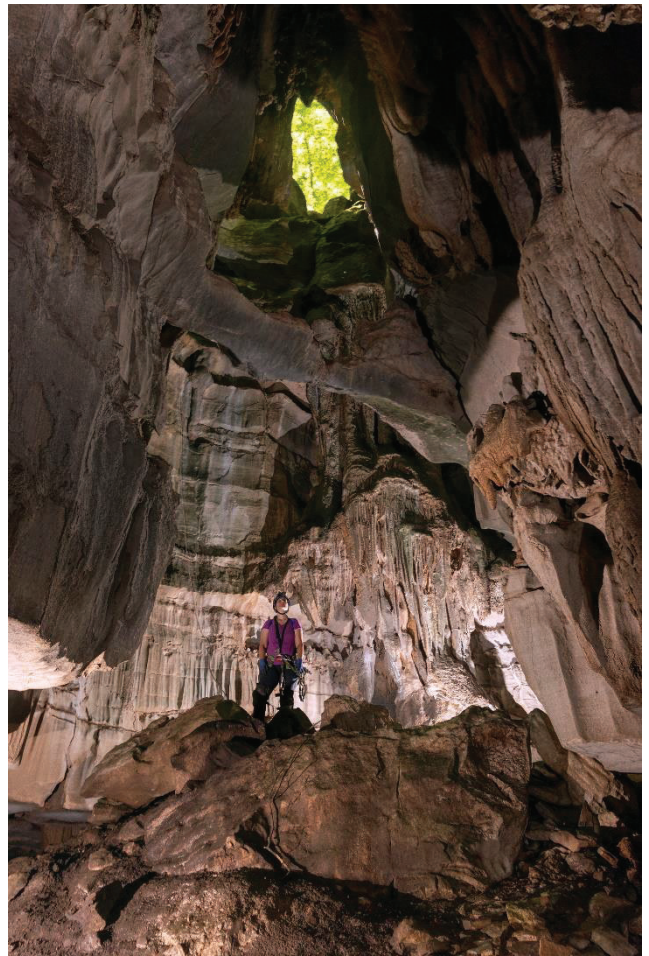
Best of Show: Warren Wyatt, "Helictite"

Art Salon:

1st Place and **Best of Show:** Kyle Evans, "Caver on Rope"



Justin Huffman, on rope, and Chris McMichael, foreground, 49-ft. pit, Heart of Gould Cave, TN, Jim Fox photo.



Julie Hudson, Robinson Cave twilight, Overton Co., TN, Chuck Sutherland photo.



Jon Zetterberg, Mayapple Cave twilight, Steve and Nancy Attaway Preserve, Grundy Co., TN, Chuck Sutherland photo.

Searching for a Heart of Gould: The Mapping and Continuing Exploration of Heart of Gould Cave, WH349

Zeke McKee, NSS 67250

August 4, 1990 Doug Plemons attached himself to the rope and leaned over the drop. Fifteen feet away the sunlight dissolved as the entrance withdrew from view. Several cavers were below him, expecting his delivery of more rope to descend further pits. Above his head, shattered blocks of Hartselle sandstone defied gravity, hanging like a row of jagged teeth pointed down into the void. Doug had stumbled across the cave while searching for undocumented holes on Goulden Mountain earlier in the spring. The mountain lies five miles north of Sparta, Tennessee. More in physical appearance to a plateau than a mountain, the majority of the highland's top is a thin flat cap of Hartselle sandstone, averaging an elevation 350 feet above the sinkhole plains and valleys below. Near the center, two remnants of the Bangor limestone yield to the peak at an elevation of 1515 feet above sea level. The mountain is a remnant of the Cumberland Plateau, isolated from the plateau proper by the valleys of the Calfkiller River and Cherry Creek. During his search, Doug had found a sinkhole with a cave entrance six feet high and fifteen feet wide, located just below the sandstone cap on the east side of the mountain. A small stream trickled off the Hartselle and sank on the west side of the depression, though signs of flood debris and a rocky stream bed indicated that during heavy rains a creek would flow directly into the entrance of the cave, which formed at the contact of the sandstone cap and the cave-bearing Monteagle limestone below.

Altogether eleven cavers, representing four grottos, were exploring what had been dubbed Heart of Gould (HOG) Cave, WH349. Two previous trips had descended the thirty-foot followed by twenty-five-foot offset entrance pit series to going cave. To the left, a climb down to a short pit was not the goal for the day, nor was the passage ahead, fifteen feet above the floor, accessible via an aluminum extension ladder. Both of those had been explored to quick terminations in the proceeding months. The goal for this early August trip was to bottom the cave. At the valley floor, just to the east of HOG, Plemons had noticed a large spring which was a major contributor of water for Cherry Creek, and his assumption was that if HOG could be followed downward, a drain passage would lead to big stream cave, i.e., the source of the spring water. The party of eleven proceeded in a line, ducking below a ledge to the right of the ladder. From here they would stem over the top of a fifty-five-foot pit and then crawl ahead in a low, wide passage resembling a "T", with a narrow canyon winding below the navigable top section. Dropping into the narrow canyon, before it cut under the wall, led the party to the top of a forty-eight-foot pitch. Quite the traffic jam occurred with so many cavers in such a small area, as cries of "faster, faster" were discharged from Gerald Moni anytime the procession slowed. Just beyond this drop the cavers climbed down into a canyon, which led to the edge of a fifty-nine-foot rappel into the largest room of the cave. The ceiling stretched up over one hundred feet forming a massive dome, with air ripping into a small crack at the base. Two of the cavers squeezed through the tiny crack and reported a low belly crawl in water beyond. The explorers retreated, estimating the cave at 220 feet deep and 560 feet long. The lead at the bottom was noted but perceived as grim, the original exploration was called, and the lead was passed by Moni to Marion O Smith (MOS) at breakfast in Sparta the following morning.

Over the following years the cave was sporadically visited with just a handful of trips claiming original exploration as their goal. One such attempt was instigated by MOS, who convinced local Spartan, Robert Oakes, to bottom the cave and try to enlarge the passage at the end. After expansion, the wet belly crawl was pushed for less than fifty feet before the cavers retreated to the surface. Beyond the occasional recreational trip, the cave was mostly forgotten.

On the brisk winter morning of December 20, 2019, Jim Fox and Zeke McKee climbed the flank of Goulden Mountain laden with ropes, bolts, and all manner of vertical caving equipment. The plan of the day was to assess Heart of Gould Cave, in particular the large previously described dome at the end of the cave, indicated to be over one hundred-feet tall on Plemons' sketch map. The allure of the dome was undeniable. Surely nothing but glory could await cavers above that arbitrary line dividing the double- and triple-digit numbers concerning vertical cave pitches. On the way to the dome, new bolts were set for the pits and a traverse line over the top of the fifty-five-foot pit was installed for safety. Upon inspection of the dome, it was estimated to be well over 100 feet tall. Noting an aid climb could begin from the top of the last pit shown on the sketch map, giving the climber a seventy-foot vertical advantage, Jim decided to begin the climb, with Zeke on belay. Hefting his Bosch Bulldog hammer drill over his head, Jim proceeded to place 3/8-inch wedge bolts in sequence up the wall, clipping to one in order to climb a few feet higher, repeating the process until he reached whatever may lie above. After installing his bolt ladder, Fox had reached 3-foot-wide sloping ledge over one hundred feet from the floor of the dome below. From this point it was estimated the ceiling was still at least seventy feet up, but by traversing along the ledge, it appeared there could be passage development near the current level as well. The climb was abandoned for the day, leaving most of the gear on the wall with the intent of returning in the near future.

Nearly a month later, on January 17, 2020, Jim returned to the cave with Marion Smith and Justin Huffman. Rigging a static traverse line across the narrow ledge and down the 107-foot drop, MOS and Justin joined Fox on a false floor of boulders wedged between the walls of the dome. Black holes in the floor reminded one of the yawning abyss below. The trio proceeded further into the unknown. Hours of belaying by Justin was met with little in return. Jim had climbed diagonally up and across the dome to the south, finding a final termination. A small waterfall emitted from a too-tight crack, marking an end in this direction, but over the main dome, passage continued beckoningly upward. The team, cold and tired, and with not much to show for the strenuous day's activities, decided to retreat, leaving the gear for a future assault to the top of the dome. Justin was first back to the small, sloping ledge and began to rig into the 107-foot drop to the floor of the dome. During this time, Jim, a few feet behind Justin, was rappelling a seven-foot rappel to the false floor. Suddenly, rocks above Jim dislodged and began raining down, knocking him to the floor while pummeling him in the back, chest and head in the process. While he was still attached to the rope and unable to escape, a large boulder fell from the ledge, landing on his left leg, breaking the femur and pinning his leg across a hole in the breakdown floor. Upon hearing the screams behind him, Justin hastily reversed direction. He was able to roll the rock away and Jim was able to negotiate away from the dangerous chasm below him. Marion quickly joined Jim on the ledge as Justin exited the cave in a blistering twenty minutes to call for a rescue, just as the sun was setting.

Three hours later, dozens of rescuers had found their way to the cave and were in the process of implementing a technically complex cave extrication. Marion had sat with Jim for hours, descending the hundred-footer to retrieve over the counter pain medication and bringing it back to the Jim to provide

any relief possible. Marion also shared his jacket with Jim and ultimately donated his walking stick to be used as a splint on the broken leg. Justin returned with medics who set Jim's broken leg and packaged him into a SKED for transport across a narrow, uneven floor of boulders, over one hundred feet above any solid ground. Next, rescuers would rig a rope and lower Jim from the ledge, and then face the obstacles of getting him up the forty-eight-foot pit, through a narrow canyon, over the top of the fifty-five-foot pit and, finally, out the offset entrance series, where a haul team had been waiting in the cold January night to lift the victim onto the surface. Portions of the canyon above the forty-eight-foot pit were too narrow for the SKED and required blasting to facilitate passage of the injured party. Members of the White, Knox, Warren, Hamilton, and Huntsville Rescue squads worked in tandem with a plethora of cavers who had responded from as far away as West Virginia. Jim was safely removed from the cave and in surgery at Vanderbilt Hospital, in Nashville, by the following morning.

Four months later, Jim clipped his rack onto the rope and leaned over the drop. Fifteen feet away, Zeke aimed a red laser at a block of shattered Hartselle hanging beside Jim. Fox placed a dot of white-out on the jagged tooth and wrote "A1". His left leg aching slightly as he descended to the floor, it would take more than a fractured femur to keep Jim from caving. The day's goal was three-pronged but simple, begin to survey HOG, let Jim acclimate to caving after a serious accident, and primarily to show the cave that it had not won. It was a success on all accounts. The duo was able to survey half of the known cave, stopping just beyond the fifty-five-foot pit and was even rewarded with about sixty feet of narrow virgin canyon that was accessed by swinging on rope to a mid-level passage, emitting a small waterfall partway down this last pit. The team left the cave optimistic that no more than two more trips would wrap up the project.

On August 7, 2020, Jon Zetterberg and MOS joined Jim and Zeke to advance the survey of the cave. With four people the work went smoothly and quickly. Within a few hours, "B8" was written on a rock in the low stream lead where original exploration had ceased. The passage was eighteen inches tall and six feet wide, a cobble floor was just below two inches of water that babbled off into the unknown. No one dressed for a water crawl, and for the day, the survey was called in this direction. Jim was anxious to revisit the site of the accident so he and Zeke proceeded up the 107-footer, ending the day's survey on the breakdown saddle where Jim had spent hours in anguish. Another trip would be needed to survey up to the end of the last bolt climb and de-rig the ropes. On this return trip, it was speculated, the wet sacrifice at the bottom of the cave could also be made. The passage would probably end just around the corner and would satisfy the inquisitions of the surveyors marking the end of the project. The cave had other plans.

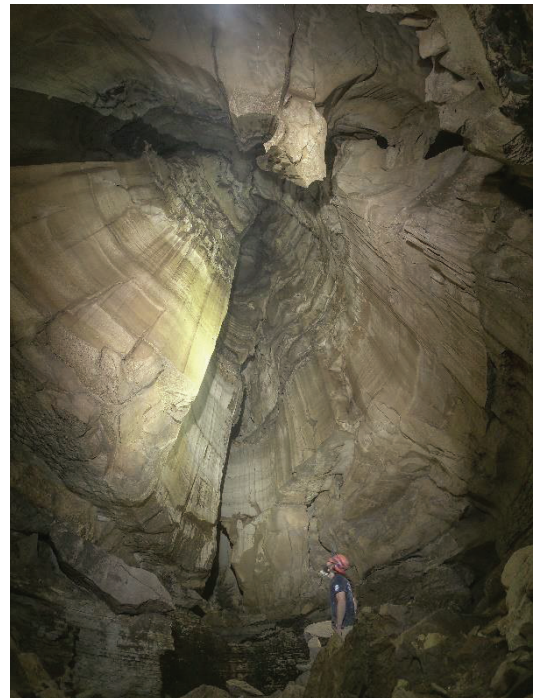
A week later, Fox was back at the accident site, encouraging Zeke to descend a hole in the breakdown floor. The duo had noticed that a ledge was developed forty feet below them, seventy feet above the bottom of the dome and on the opposite side from which the entrance lay. By rappelling through the breakdown hole, they could access this ledge. The entire accident site made Zeke uneasy, but Jim promised that checking this last level would placate his final interest. Within minutes the extent of this intrigue was unfolding. The cavers surveyed through a short belly crawl at the south end of the passage, immediately popping into a large canyon twenty feet wide by forty feet tall. A two-foot-wide drainage rift snaked from the entrance crawl across the room and leading off into a passage to the left. The survey recorded this room, with two high leads and a small parallel passage. Continuing the exploration, stations were set following the drain out of the room in a hands and knees crawl (completely missing the walking passage directly above). Jim crawled out of the drain whooping,



Zeke McKee, rappelling from the 107' ledge into what would become the Fort Knox Extension, Jim Fox photo.

echoes bouncing off the walls. Zeke quickly caught up the sketch and joined Fox in a one-hundred-fifty-foot-high dome room with a large drippy pit on the far side with wind disappearing down the drop. Just to the left, another pit was seen with an upper level leading off, but needing a traverse line. This lead was flanked by a massive breakdown slope reaching up out of sight. With no rope to descend the pits or cross the upper level, the two did the next best thing, spending at least fifteen minutes tossing rocks off the ledge, guessing depths and fantasizing about what lay beyond! Finally, when the excitement subsided, the team surveyed up the breakdown pile, into another canyon. This one eventually being plotted to another pit, estimated at thirty feet deep. With no obvious horizontal leads remaining, the team exited the cave having doubled the known length.

The following Friday, Marion Smith climbed a newly rigged sixty-eight-foot rope from the bottom of the large dome, which represented the historic end of the cave and the site of the January accident, now named Fractured Femur Well, to a Y-hang and traverse line into the newly discovered portion of the cave. Navigating the rigging was difficult, requiring a far reach to the traverse line while straddling both walls of the pit at a narrow spot, relieving enough pressure from the ascenders to unclip from vertical climbing to horizontal progression. Marion cursed as he manipulated his antiquated climbing system, which was inefficient at such ridiculous rigging all too popular these days. Zeke, Jim and Robert Oakes proceeded just ahead of MOS, leading the way to the deep, drippy pit encountered the previous week. Bolts were set, the lip cleaned, a pad placed over the break of the floor to protect the rope, and the descent was made. The survey showed a depth of seventy-seven feet, with a small stream running south to north, coming from a fifteen-foot waterfall and disappearing under a ledge on the north side of the room. The ceiling dropped to just a foot above the bedrock floor, but immediately after the short squeeze the cavers found themselves in a clean-washed limestone tube a couple of foot wide and six feet high, a small stream trickling at their feet. Heavily scalloped walls suggest this passage carries large amounts of water at times. The survey was continued down this drain, as air whipped past the surveyors, beckoning them onward. The passage grew taller as the canyon progressed and a thin



Zeke McKee in 153-ft dome in Fort Knox Extension, Jim Fox photo.



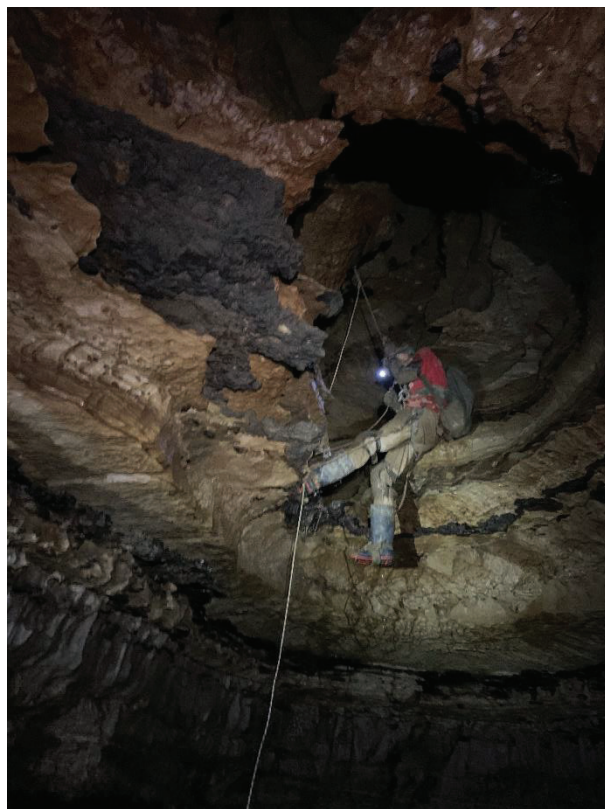
Robert Oakes rappelling 77-ft pit beyond Fractured Femur Well, Jim Fox photo.

gypsum coating covered the upper half of the conduit. After several hundred feet, Robert noticed the time and had to route to the entrance. Marion and Zeke continued surveying while Jim scouted ahead. He quickly returned with reports of a pit which he was intending to rig. Disappearing back toward the entrance, Jim hurried for gear while the survey progressed to the edge of the drop. The water disappeared in a pothole a few feet from the edge, which allowed for a dry rig, though it emerged from the pit wall ten feet down. MOS and Zeke, cold and tired, allowed Fox to rig and descend the pit, while they chose to defer the privilege

until the near future. Jim described a short passage to another pit, which would require more bolts and rope on the next trip. Could this be Plemons' drain to the spring? The trio speculated as they retreated to the warm surface of a late August evening.



Zeke McKee on rope in one of several small pits in the cave, Jim Fox photo.



Zeke McKee in another of the small pits encountered before the river discovery, Jim Fox photo.

The following week, the four cavers (Fox, McKee, MOS and Oakes) found themselves in a mud-covered crouch way, one hundred and twenty feet deeper than they had carried the survey the previous week, by means of forty-nine-, twenty-one-, ten-, and twelve-foot sequential pits and gently sloping streamway. Remains of sticks and leaves on the ceiling of the four-foot-high passage was evidence that the cavers were now approaching the base level of the cave and that, at times, the conduit completely flooded. Confidence was waning as the team were now soaked from the spray of waterfalls of the preceeding pits and the chilly breeze steadily blowing through the uncomfortable “freezeway”. The survey swung ninety degrees, to the south, and the passage narrowed to a two-foot wide, seven-foot-high slot when, unexpectedly, it intersected a large underground river with passage eight feet high and twenty feet wide. The team surveyed upstream for three stations then abandoned the survey in favor of strictly scientific upstream reconnaissance, nearly running up the river, mentally noting side leads and counting cave adapted crayfish in the stream. After fifteen-hundred-feet of upstream exploration, the surveyors exited the cave with confidence that they had intersected the main drain for the nearby spring and had extended the depth of HOG to over three-hundred-forty feet, making it the deepest known cave in White County.

Over the following weeks, Ben Miller, Calla Goins, and Jeff Patton assisted in pushing the upstream survey to within a couple hundred feet of a currently impassible breakdown collapse. Chris McMichael, Justin Huffman, and Brian Ham provided support in the downstream efforts extending the main Goulden River to a breakdown plug, which was bypassed for a short distance before a wet crawl became too low to continue. Several dome climbs and additional pits off of the upper levels of the cave have yielded further results. As of January 2021, there are currently twenty-six known vertical pitches in the cave, the deepest of which is one-hundred-seven feet. Two miles of horizontal cave have been explored, with 8,418 horizontal feet currently mapped, with a surveyed depth of 356 feet. Several blowing crawlways off of the river passage, along with mysteriously windy leads in the upper levels of the cave, tease of yet undiscovered territory awaiting the continuing speleological assault. While leads in the cave are beginning to relent, survey and documentation are far from over. Heart of Gould Cave joins a growing list of recent discoveries, evidence that miles of undocumented cave still lie below the surface of TAG, anticipating the unrelenting caver.

Sources:

Plemons, Doug. “More Goulden Opportunities: Heart of Gould and Montgomery Cave” *Speleonews Vol 34, No 5* pp. 88-93

Fox, Jim. “2020 Cave Trip Reports: 1/17/20 Heart of Gould Cave”



Bottom of the cave, the river discovery, Jim Fox photo.

Original Exploration by:

- | | |
|------------------|---------------------|
| Jody Bond | John Fred Hutchison |
| Mike Bose | Bryan Jones |
| David Crabtree | Bill Kelly |
| Joe Douglas | Hal Love |
| E T Davis | Gerald Moni |
| Jerry Fant | Doug Plemons |
| Johnny Gallagher | Loretta Towe |
| Sarah Gayle | Gary Tripp |
| | Brent Wilkins |

Heart Of Gould Cave

TWH 349

Survey in progress 5/8/20-12/18/20

Horizontal Length: 8418 feet

Depth: 356 feet

Grade 5 Survey

Jim Fox

Calla Goins

Brian Ham

Justin Huffman

Zeke McKee

Chris McMichael

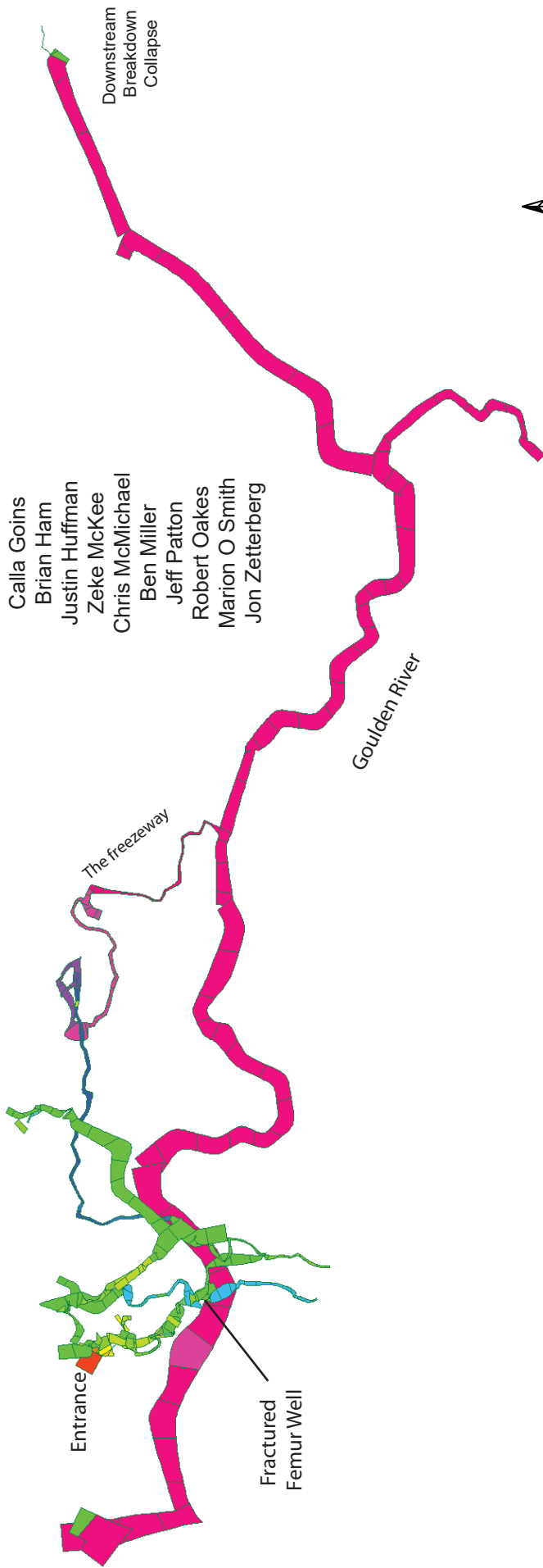
Ben Miller

Jeff Patton

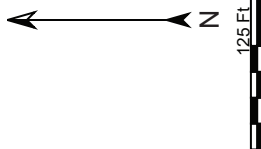
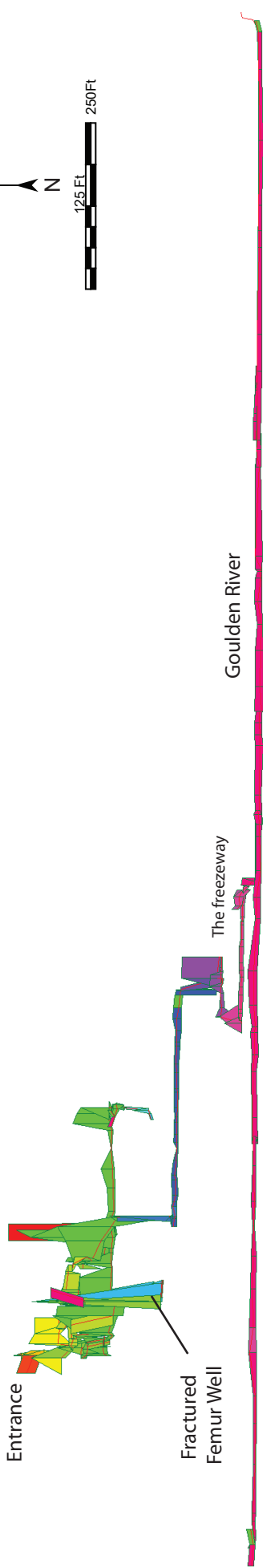
Robert Oakes

Marion O Smith

Jon Zetterberg



Profile View



The Gourdneck Cave Survey Project

Kyle Lassiter, NSS 58423

In June 2017, Sewanee Mountain Grotto (SMG) began the significant undertaking of resurveying Gourdneck Cave. A classic among the caves of Sweden (Sweeten) Cove near South Pittsburg in Marion County Tennessee, Gourdneck is a well visited Southeastern Cave Conservancy (SCCi) cave preserve due to its sporty wet canyon passage and nice decorations in upstream sections. A survey was done by members of the Chattanooga Grotto in the late 1970s, and a map of the lower portion of the cave system was completed by Mark Wolinsky in 1978, ending at a 27-foot-high waterfall called Hans Falls. This waterfall was first aid climbed around that time and thousands more feet of passages were found beyond, ultimately terminating in a large dome around 200 feet high. A map was not completed for the passages beyond Hans Falls by the time the rope up Hans Falls was removed in the late 1990s, due to the difficulty in maintaining the rope in proximity to the waterfall.

This cave underlies the slopes of Bolton Point of the Cumberland Plateau in southern Tennessee and has been known for decades; it is featured in Barr's revered *Caves of Tennessee* bulletin from 1961. The cave was dug open by the Adams, who own the cave, and a metal pipe system was installed to extract water from the cave stream. However, it often leaked, so cavers replaced it with durable PVC tubing from the campground showers at the 1998 NSS Convention in Sewanee, TN. This water pipe is still active today and maintained by cavers as part of the lease agreement SCCi entered into with the Adams in 1997. It is one of the more impressive cave water supply projects in TAG, as it penetrates 1,350 feet into the cave in order to overcome the 50-foot elevation difference between the stream passage and the entrance above it.

The entire cave is very sinuous with very few side passages throughout its length. Many features along the way to and including Hans Falls were named after characters and placenames in the book *Journey to the Center of the Earth* by Jules Verne, on the prerogative of the original surveyors from the Chattanooga Grotto. The cave penetrates four major rock stratigraphic units in its journey from its only entrance near the downstream end of the system, upwards into the mountain to its terminus: the Monteagle, Hartselle, Bangor, and Pennington. The entrance passage is a paleo-infeeder route that drops into the stream passage a few hundred feet upstream of the terminal sump. This sump is a bit of a mystery as it is perched well above the valley floor. Dye tracing done in the winter of 2017-2018 proved that the Gourdneck Cave stream discharges into the upper reaches of a different wet multi-drop cave nearby, Sweden Cove Mountain Cave, which in turn drains to the picturesque roadside Gourdneck Spring. Perhaps the stream is perched on a confining layer at the bottom of the Monteagle limestone, or maybe there is a breakdown blockage unseen in the muddy sump water. The cave stream proceeds upwards through the Monteagle limestone in a beautiful tall clean washed canyon exceeding 70 feet in height in places. The water pipe is a frequent companion and obstacle to cavers in this well-traveled section, where numerous short waterfall free climbs are present. In dry seasons the stream is a trickle, but in wet seasons it becomes quite "sporty" and in flood this section of the cave becomes downright dangerous. A 20-foot-high waterfall at the top of this section, Axel Falls, is bypassed via a 35-foot rope climb into a crawl around the falls and then back down into the stream. This used to be an exposed free climb, but a bolted anchor and rope was placed here in 2019 for the safety of the surveying teams and for future cavers.

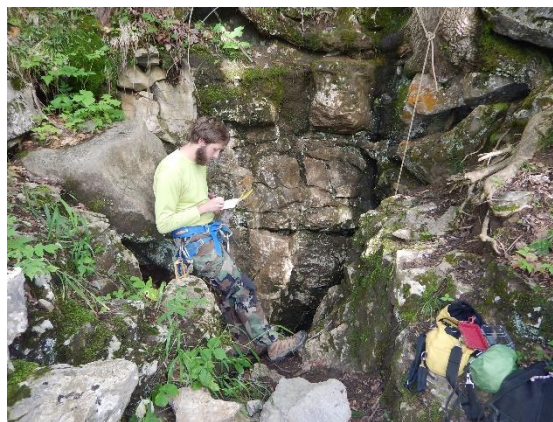
Beyond Axel Falls, the cave traverses the contact between the bottom of the Hartselle shale (there is little to no sandstone present in this unit in this part of Tennessee) and the top of the Monteagle limestone in a series of stooping and crawling passages. This section is also the most prolific in speleothems in the cave. The cave then passes through the Hartselle shale in a breakdown borehole, similar to that seen in the well-known wet multi-drop cave across the valley called Hang 'Em High Cave. The Hartselle is penetrated by Hans Falls, above which is a classic, wet, Hartselle-contact belly crawl in the stream.

The late Lee White reclinbed Hans Falls in December 2017, reestablishing access to the upstream reaches of the cave. Mercifully, the belly crawl only lasts about 75 feet before there is an exit into a paleo canyon passage overhead. The passage continues upstream through a complex area of crawls and breakdown obstacles beneath Honeycutt Pit, a scenic 84-foot deep waterfall pit which is the source of the stream in Gourneck Cave. No physical connection has yet been found between the two caves due to breakdown. Beyond this section the passage continues as dry walking canyon passage, albeit muddy, perched on the Hartselle shale at the bottom of the Bangor limestone unit. The passage meanders about madly for approximately 3,400 feet to the base of Mt. Stromboli, a magnificent 220-foot tall, 130-foot diameter dome at the base that penetrates the entire Bangor formation. At the top lay unknown passages in the Pennington formation; dome climbers Bob Magyar and Gary Morrill of Connecticut attempted to climb this dome in the 1980s but were thwarted by rotten rock near the top. The size of this dome and the airflow present in it point toward a good potential for passage at the top that used to contain a significant cave stream.

The Tennessee Cave Survey (TCS) 2017 records showed an estimated length of 8,000 feet and vertical extent of 400 feet. The 1978 Wolinsky map of the cave below Hans Falls had 4,161 feet of surveyed passage with 158 feet of vertical extent. Clearly, much cave remained to be mapped. Out of a personal desire to see what lay beyond Hans Falls, and to create a complete map of the Gourneck Cave system, Kyle Lassiter organized the resurvey project with Sewanee Mountain Grotto in 2017.

The Survey Begins

The original survey data from 1978 was not available, so a complete resurvey of the cave was necessary. The first survey trip took place on June 6, 2017, with a resurvey of the 381-foot long entrance passage and 30-foot entrance pit. Over the next six months, nine survey trips successfully resurveyed the vast majority of the cave below Hans Falls. Two side passages near the register were bolted and surveyed on a short Saturday survey trip with Marty Abercrombie, Jim Smith, and Kyle Davis in August 2019, finishing the survey of all passages shown on the 1978 map. Marty was



Kyle Lassiter begins survey at the Gourneck Cave entrance. Maureen Handler photo.

instrumental in climbing into the first virgin passages of the resurvey project during January 2019 as well, which are described later.

A wet 2017-2018 winter season stalled surveying efforts for several months, during which time the aforementioned dye trace was completed. Thank you to SMG and Wm Shrewsbury for sponsoring that project, and to Ben Miller, Katie Ingram, Hali Steinmann, Wm Shrewsbury, Kristian Shrewsbury, and Kyle Lassiter for their field work. This trace proved a simple water route for the Gourdneck Cave system, resurging at a single source called Gourdneck Spring after flowing through Sweden Cove Mountain Cave. This is different behavior than Ben Miller has observed in his other dye tracing projects in Sweden Cove, where the water from Hang 'Em High and other caves near Cavers' Paradise (<http://www.caversparadise.com/>) on Sewanee Mountain distributed through several different valley springs, including Gourdneck Spring.

Beyond Hans Falls



Zeke McKee, climbing Hans Falls, Chuck Sutherland photo.

On March 24, 2018, after the winter rains relaxed somewhat, Dutch Sanders and Derek Reneer joined Kyle Lassiter on the first survey trip above Hans Falls. Wm Shrewsbury, a surveyor in Gourdneck during the 1970s, was a primary information source for this survey project. Among other things, he told Kyle about how much nice walking canyon passage there was beyond Hans Falls, so Kyle passed that on to his fellow surveyors to inspire them through the nasty water crawl. The water was still elevated, making for an exciting couple of survey shots. Once out of the water crawl and changed into drier clothes, the team surveyed for a couple hours in some nice decorated grottos and paleo passage. They were then a bit perplexed when the survey continued by following the air through a series of gnarly flowstone squeezes, mud crawls, and breakdown obstacles. Where was all the walking passage Wm said there was up here? They were a good sport about it, and the day yielded 790 feet in 33 shots, ending in a small dome area with several waterfalls entering through ceiling fissures. This room was named the Honeycutt Rain Dome.

More spring rains and life commitments put the next survey trip on July 13, 2018, with Anne Grindle, Kyle Davis, and Kyle Lassiter. Properly prepared for the convoluted cave encountered just beyond Hans Falls, they surveyed 243 feet in 16 shots to finally break out into the fabled walking canyon passage, as Wm promised there would be. A good tie-in station was set and left for the next trip. By this point only a

trickle remained of the cave stream, the rest having come out of dozens of different fissures and breakdown piles in and around the Honeycutt Rain Dome area.

The next trip featured Justin Huffman, Kyle Davis, and Kyle Lassiter, surveying the main canyon route farther into the mountain. Lassiter had acquired the line plot of the original survey of this passage from Wm and brought it with him on this trip, providing a kind of “guide” for the surveyors to follow their progress into the mountain. Unfortunately, the original survey data and sketches had been lost. They surveyed 866 feet in 35 stations in very easy walking canyon passage with a flat mud floor. It was noted that the upper reaches of the canyon here appeared to meander about substantially, providing a number of alcoves and side loops to investigate for possible leads.



Justin Huffman negotiating a flowstone squeeze, Chuck Sutherland photo.

A major survey trip occurred on the weekend of November 17-18, 2018. At this point in the project, it was becoming routine for round trip travel times to the surveying front to be around four hours. Couple that with the hassle of Hans Falls and the numerous flowstone squeezes just past it, and it was beginning to feel like a survey camp would be more efficient. Thus, it was decided that Justin Huffman, Kyle Davis, and Kyle Lassiter would enter the cave on Saturday morning to survey for two days, camping in-cave Saturday night somewhere, to save effort and time

traveling in and out of the cave. Mark Wingard was also able to join the survey team on Saturday for a day trip. Camp was established in a random spot in the passage near a small water source, with Kyle Davis sleeping on the flat mud floor while the others climbed into upper levels that had nice gypsum sand for sleeping. This plan was most successful, as the two-day survey effort netted 2,583 feet of passage in 93 stations, pushing the survey front all the way to the bottom of the terminal dome, Mt. Stromboli. Along the way the cave character gradually changed from a meandering walking canyon, to a complex four-level area with some breakdown, to a wide but lower passage, yet all the way relatively spacious. The last survey shot of Saturday was at the base of an unexpected tall dome about 20 feet wide by 45 feet long, in a room to the side of the main passage. A Disto X2 shot estimated a 190-foot ceiling height. Two small waterfalls were entering on each side of the room and some evidence of a failed bolt climb was seen on one wall. It is still unknown who attempted the climb, but it doesn't look like they got very far.

On Sunday, the survey resumed and passed by numerous side passages that beckoned future exploration. Pristine animal tracks were seen in a mud flat over a mile from the current entrance and in a spot that currently has 360 feet of overburden. Mysterious indeed. A few hundred feet before what turned out to be Mt. Stromboli, the cave intersected a fault/joint of some kind, as the passage went

from meandering canyon as it had been to a nearly straight passage heading just south of due east, straight into the mountain until it hit the terminal dome. Mt. Stromboli measured out to be 130 feet in diameter at the base and 220 feet high, with a waterfall coming in on the east side. The floor of the dome was almost entirely a gooey mud flat, with a modest pile of crumbly shale breakdown in the middle that fell out of the ceiling. An impressive and humbling place for sure. The final survey station of the main line plot backbone was placed at 6:30pm on Sunday, and the team raced out of the cave to surface at 9pm. This completed the resurvey of all previously explored passages, but over 100 upper level leads were identified along the way, promising new discoveries on the next trip.

And the rain cometh down, and led to Salamander Hall



Salamander Hall, Marty Abercrombie photo.

Anyone alive in the southeastern United States during the winter of 2018-2019 knew it was a wet one. Indeed, after the camp trip weekend of November 17-18, 2018, the TAG region endured its wettest winter precipitation season (December – February) since record keeping began in 1895. Thus, almost all of Gourdneck Cave became inaccessible for months while the rain fell in torrents. In the meantime, the survey project pivoted to working on climbing leads still accessible in the front reaches of the cave near the register. A 70-foot-tall dome is present here with several climbing leads seen in the walls. Marty Abercrombie and Kyle Lassiter tackled the first one on December 9, 2018, with Marty on the point. He made quick work of a 15-foot climb beside a flowstone to access a virgin passage in the wall of the dome. They surveyed a short distance, doing a U-bend in narrow canyon passage, and entered a small room with a 16-foot flowstone climb-up. Kyle freeclimbed it first and found that a short crawl from the top of it popped out in a passage near the top of the 70-foot dome seen by the register. It's always nice when a 15-foot bolt climb effort gets you 50

feet off the floor! They surveyed to this point and netted 220 feet in 16 shots, leaving a going virgin passage up there for the next trip.

As the rains continued, Marty and Kyle returned to the going lead on January 8, 2019. A short easy crawl on a flat muddy flowstone crust led to a mud squeeze that popped out into a well decorated passage, with flowstones, stalagmites, and stalactites abounding. Treading carefully due to our muddy gear from the mud squeeze, we traversed the passage a short distance to where a short flowstone climb was encountered.



Mother Slimy Salamander and her clutch of eggs, Marty Abercrombie photo.

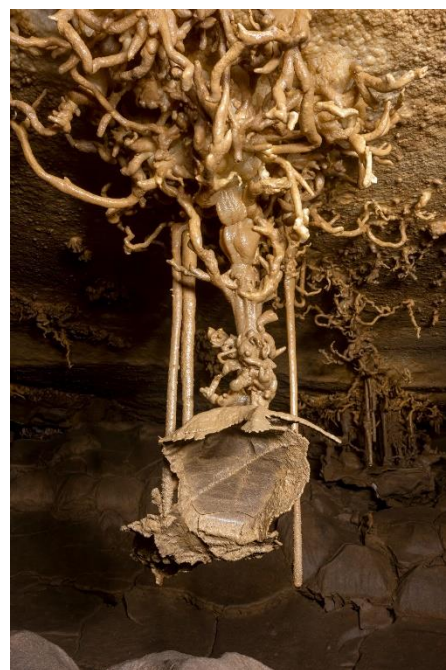
At the top of this, Marty spotted a salamander mother and her clutch of eggs in an alcove in the wall. A rare sight indeed, and thus this pretty virgin passage was named Salamander Hall. However, the hall immediately ended in a flowstone and pebble choke with tree roots and no air. It was later calculated that the final survey shot at the highest point of this passage was only four feet below the surface. 191 feet of virgin passage in 15 shots were surveyed this day, and the decision was made to derig the rope to access this passage due to its sensitive nature and modest extent. Marty made a good photo documentation of the passage and its formations before it was derigged.

The rains persisted throughout the winter and into the spring, keeping the survey project on ice until May 2019.

May progress resume

The rains finally subsided enough for serious survey efforts to resume in May 2019. Work began on the various side passages and loops seen along the main route. On May 19, 2019, Justin Huffman and Kyle Davis once again joined Kyle Lassiter and mapped 387 feet in 27 shots, including a side passage with two very tight spots that led to a small room with nice helictite formations. Kyle Lassiter nearly got stuck trying to climb out of this room but lived to cave another day.

Over Memorial Day weekend 2019, there was a major survey push in Gourneck Cave. Three cavers (Justin Huffman, Rebecca McNabb, and Kyle Lassiter) entered on Saturday May 25 and camped in a flat mud-floored area near the first tall dome to facilitate quicker access to the survey leads. So close in fact that one tie-in station was almost on Kyle's pillow! Some complex multi-level crawls were surveyed that evening, a harbinger of what lie ahead for the project. Five others came on Sunday for a day trip as well: Zeke McKee, Jon Zetterberg, Mark Wingard, Lee White, and Chuck Sutherland. Zeke and Jon came to survey, Mark and Lee came to continue recently begun climbing efforts in Mt. Stromboli, and Chuck came to photo-document the upper part of the cave beyond Hans Falls, which had no modern photography taken of it to that point.



*Helictites in Gourneck Cave,
Chuck Sutherland photo.*

Three teams were able to survey on Sunday between the people and gear available. One team climbed high up into a big upper level canyon in the vicinity of Honeycutt Pit, and established a new high point of the cave survey to that point. They also found a small dome with plastic trash on the floor of it, implying a surface connection of some kind. This dome was later climbed and found to not continue, but LiDAR and survey data confirm only 30 feet of overburden in this area. Another team continued surveying in the area near the campsite just downstream from the first dome, and ultimately mapped five different levels of cave passages. The highest level appeared to be a paleo borehole now filled with sediment, averaging 20-30 feet wide and 2-6 feet high where it was not completely filled with dried mud. The

passage is very linear and in line with a fault/joint structure seen in Mt. Stromboli. Many impressive helictites were seen in this level, and Chuck was able to photograph a sample of them. The other three levels between the upper level and the main lowest level meander madly about and are generally tight crawls with gypsum sand and some helictites. A cartographer's nightmare to be sure, not to mention Kyle Lassiter almost getting stuck twice in these tight crawls trying to follow Justin through wormtubes. Justin and Kyle remained in the cave one more night in order to continue surveying on Monday. All told for the weekend, the survey teams netted 2,325 feet of passages, mostly virgin.

Two more survey trips in early August with Jon Zetterberg, Kyle Davis, Marty Abercrombie, and Jim Smith netted 731 feet of passage.

Beyond Mt. Stromboli

While thousands of feet of upper level side passages were being surveyed in 2019, the truly tantalizing lead remained at the top of Mt. Stromboli. The prospect of significant Pennington cave passage development was high. LiDAR and survey data calculated that the overburden above the *top* of the dome was still over 250 feet, with the trend of the passage leading to the dome taking the cave system even deeper under the mountain slope. Lee White took the initiative to climb the dome in 2019, hoping to be able to climb through or around the bad rock that stymied the Connecticut dome climbers in the 1980s. After the Memorial Day weekend survey trips, Lee had gotten within 50 feet of the top of the dome with the bad rock layers nearly in sight.

On June 24, 2019, Alan Caton visiting from Australia, Kyle Lassiter, and Lee returned to the climb and made the first attempt at topping out the dome. Alan was a much-appreciated gear Sherpa on this day and was a patient groundman while Kyle belayed Lee from a hanging perch 130 feet off the floor. Lee made quick work climbing up the remaining good Bangor limestone for about 30 feet until reaching the first of several bad layers of rock at the contact with the Pennington formation. The first layer was primarily dolomite, which held some marginal bolt placements. However, Lee then encountered a six-foot tall bed of thinly bedded chert and dolomite clay that had no chance of holding a bolt. Defeated on this day, plans were made to return with "alternative" climbing tools to try to climb through this layer.

On July 14, 2019, Kevin Ditamore, visiting from Hawaii, joined Kyle and Lee for the 2nd attempt at summiting Mt. Stromboli, with "alternative" aid devices in tow. Hauling in a three-foot metal stake,



Lee White and Mark Wingard bolt climbing Mt. Stromboli dome, Chuck Sutherland photo.

two two-foot metal stakes, a two-foot drill bit, and other odd metal aid pieces made for some strange pack shapes. It took 3 ½ hours to reach the base of the dome with this gear. Up at the climbing face with Kyle at the hanging belay station, Lee first placed one more bolt, then proceeded to hammer in the three-foot stake all the way in to the bad “rock” for an aid placement. Next, he hammered in the two-foot long drill bit, followed by a two-foot stake, until he was finally able to climb high enough to place a bolt in another dolomite layer. Climbing a little higher, Lee reached a ledge, from which point he saw going passage on the opposite side of the dome, so he bolted a traverse along the ledge to the right until he was below the lead. A conveniently placed breakdown slab allowed Lee to free climb the remaining distance to the lip of the passage. Mission accomplished! Ahead of him lay a 20-foot wide by eight-foot tall passage heading off to the south, and perhaps another one on the east side of the dome as well. Lee proceeded to clean the ledge, which included chunking some enormous pieces of dolomite and shale breakdown into the abyss, and then finished rigging the pit. This all took quite some time due to the traverse, but eventually Kyle was also able to climb up to the lead after being in the hanging belay for over six hours. This bolt climb is one of the most impressive ever completed in the TAG region; Lee’s climbing was simply magnificent. His prowess was on full display in conquering this dome, especially considering the wretched quality of the rock at the top. He didn’t fall once.

Checking ahead a short distance to see if the passage continued, a breakdown collapse was found with a 20-foot climb on one side that may bypass it. The air was still compelling. Out of time and energy on that day, the team descended back to the base of the dome and headed out. The complicated rigging logistics at the top of the dome made for a much longer than expected trip, and the team ended up exiting the cave at 5:30am for an 18-hour trip. Many thanks to Kevin for patiently waiting out the complicated climb on the ground on this long day.

A month later Kyle and Lee returned to tackle the 20-foot climb in the south passage breakdown collapse area, a sketchy traverse on a sloping ledge to access a possible east passage, and to survey whatever they still had time for. With a much lighter climbing kit, they booked it back to the base of the dome in just over two hours. However, by the time all the necessary gear was hauled up the dome, another two hours had gone by. Ironically, Lee ended up being able to free climb the 20-foot climb, then set three bolts for rigging the rope. Kyle climbed up next and we both saw cavers’ nemesis: terminal breakdown in the ceiling. Kyle climbed up into the only interesting fissure, but it didn’t continue. Breakdown wins again! This time the combination of a large Pennington passage combined with the fault/joint structure seen in the nearby dome pit was simply too much for the brittle rock of the Pennington formation to endure. With this lead finished, it was surveyed to be 224 feet long with 70 feet of vertical drop back to the top of the dome from the highest point reached in the breakdown. Lee then set a few bolts to protect a traverse route around the top of the dome pit on a sketchy sloping ledge to access the possible passage on the east side. Kyle followed, and they both observed that the passage didn’t go far, perhaps 100 feet to the mouth of a grim breakdown crawl with little air. Despite this lead not continuing either, it was an impressive view down into the dome pit from there, as the fault/joint structure was clearly visible in the ceiling originating from the east passage. They both remarked that the volume of water that flowed through here at one time must have been immense.

With no leads left to check at the top of the dome, Lee and Kyle surveyed down the dome to the tie-in station and calculated the dome height at 220 feet from floor to ceiling. The rope drop from where the

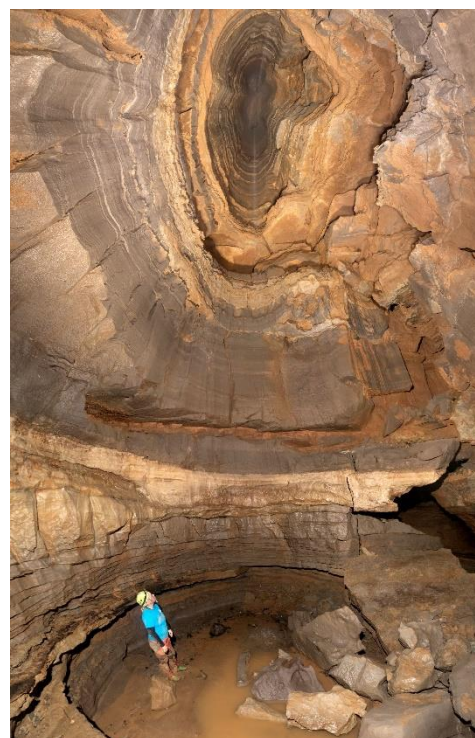
rope touches the ground to the lip at the top is 191 feet, making it one of the deeper pits in the state and top three in Marion County (202 foot Alyson Well in Spasm Chasm, 193 foot Jackpot Pit).

Halfway House Dome, Lee's finale

Having topped out Mt. Stromboli, Lee immediately pivoted to climbing the other tall dome seen earlier in the cave, estimated at 190 feet tall. He named it Halfway House Dome, as it did not have a name bestowed on it by the Chattanooga Grotto explorers of the 1970s. In several trips in late August and early September 2019, he raced up a blank vertical wall to a point 177 feet off the floor, just below a layer of bad rock and loose blocks. Fifteen feet overhead appeared to be a passage four feet high issuing a small stream beckoning for the next trip.

Tragically, there would be no next trip. Just four days later, Lee White was the victim of a car crash while driving to a job site in North Carolina. He was 31. His sudden death stunned the members of this project and the entire TAG caving community. It is the opinion of this author that Lee was the best aid climber in TAG as of the time of his death, and a case can be made that he was one of the best of all time. His speed and competence at scaling walls both straightforward and complex was outstanding, and his presence is sorely missed. His prowess was especially remarkable considering he had only begun seriously caving five years earlier. Many domes in TAG, including Halfway House Dome, will now have to wait much longer to be climbed than they otherwise would have if Lee was still here.

The rope is still rigged in Lee's final climb in Halfway House Dome as of the time of this publication. Perhaps the climb will be completed someday in his honor. A full obituary and tribute to Lee White was published in the November 2019 edition of the NSS News.



*Rebecca McNabb in Halfway House Dome,
Chuck Sutherland photo.*

The Mop-Up

Pressing ahead in the weeks after Lee's death, the survey continued. Four survey trips occurred in November and December 2019, adding almost 3,000 feet of passage. Much of it was in upper level crawlways that were mostly virgin but decidedly unremarkable. Some of the three mid-level crawls were dry enough to have some gypsum sand and a few helictites, but not many. The highest (5th) level was a mud-floored pancake crawl overlying and following the trend of the main (lowest) level.

The beginning of the COVID-19 pandemic in early 2020 stalled further efforts until June 5, 2020, when Kyle Davis and Kyle Lassiter returned for another day of crawling. They were not disappointed. They got thoroughly slimed pushing to the end of one section of the 5th level muddy pancake crawl, and then headed to check out a wet lead down in the main level. It was assumed that this stream was the primary

cave stream sourced from the two tall domes at the back of the cave, but only seen periodically as it was often beneath breakdown or hiding under walls. However, it soon became clear that this stream was a separate infeasible. The Kyles surveyed 315 feet of progressively grimmer stream crawl until calling it quits after all the survey equipment was almost too muddy to use. Davis explored ahead another 75 feet in 1-foot high by 3-foot wide passage and said it continued grim as a sandy cobble crawl, though he heard a small waterfall through a hole in a wall. The lack of air and small volume of water didn't provide much hope of a breakout. Some nice coral fossils were present in this crawlway, a unique find for this cave. This passage was named "The Outer Limits"; it trends out perpendicularly from the rest of the cave passages. All the other side passages closely follow the main route of the cave.

After another survey trip full of crawling in mid-level crawlway loops on June 26, the project was down to seven leads left to survey, down from 100+ at the beginning of the "Mop-Up". All but one was tackled on July 14, 2020, finishing up at the Eiderdown Falls Room, the best formation room in the cave. A 12-foot high white flowstone cascades down a wall and across the floor while a number of stalactites and totems decorate the rest of the chamber. Interestingly, no more upper level crawlways were found between this room and Mt. Stromboli, although some could likely be located via aid traverses in the latter. This left one last passage to survey, the east passage at the top of Mt. Stromboli.

End of Survey

On September 19, 2020, just after the one year anniversary of Lee White's death, Ben Miller and Mike Green joined Kyle Lassiter for the last survey trip. Detailed profiles were drawn by Ben Miller of Halfway House Dome and Mt. Stromboli on the way up to the lead. Mike had to leave early, leaving Ben and Kyle to survey the final passage. Kyle volunteered to be front point and sketch the plan view with Ben running the Disto and keeping profile. Kyle was eager to see "the end" of the cave first on his 31st survey trip and 42nd trip overall since the resurvey began. As expected from when Lee and Kyle had looked at this passage one year ago, it only went about 50 feet before shrinking into a breakdown crawl for about 30 more feet. It appeared to pinch out, but a climbdown in a slit along the left wall was found. This got the team to the mouth of a 2-foot high water crawl heading upstream which is the source of the modest waterfall seen in Mt. Stromboli. Ben cheered Kyle on as he flopped into one last Gourdneck crawl. It looked for a moment like it might continue, but after rounding a corner the crawlway narrowed to 1-foot wide with a rock blocking further progress. Finally, end of survey! Elated, they started heading out after midnight and surfaced at 2:30am for a 15-hour trip. A celebratory beer was had in the parking lot before heading home.

Final Stats and Thoughts

In 31 survey trips, Gourdneck Cave has been surveyed to 18,926 feet (3.58 miles), making it the 3rd longest surveyed cave in Marion County TN and more than doubling the length from the original estimate. With the survey up to the high point in the south passage above Mt. Stromboli, the depth of the cave was increased to 456 feet. LiDAR and survey data computed an overburden of 248 feet at the surveyed high point, meaning there could be a lot of cave unaccounted for. Interestingly, that point is nearly beneath some old coal mines located on the uppermost flanks of Bolton Point. While finding a new high entrance to the cave now seems unlikely, there is still potential for a cave to be found high on

the mountain that has an air connection with Gourneck through the terminal breakdown. There are a handful of dig leads and aid traverse prospects scattered throughout the cave, but they are quite likely to lead to more meandering upper level crawlways squeezed between known passages.

The map was completed in January 2021. It was a steep learning curve for this aspiring cartographer to draw a long cave with extensive areas where five levels of cave passage were near each other. Color shading was utilized to help clarify these areas and floor detail was prioritized for the main level, since the upper level crawls will be rarely visited.

Many thanks are in order for this 3 ½ year project. Thank you to SCCi for being wonderful stewards of the cave and permitting this scientific effort. Thank you to SMG for providing survey equipment and cosponsoring the dye trace. Thank you to the late great Lee White for the aid climbing efforts he conducted throughout the cave. And a huge thank you to the 27 different surveyors who participated, especially to the three who went on numerous trips with me beyond Hans Falls and shared the common desire to thoroughly map all the passages we could fit in: Kyle Davis, Justin Huffman, and Jon Zetterberg. Justin was particularly astute at locating obscure passage entrances and pushing the tight stuff to the bitter end. Their determination was critical to the thorough survey of the complex upper level crawlways beyond Hans Falls.



Looking over the top of Stromboli Dome, Ben Miller photo.

As of the time of this map publication (1/2021), Gourdneck Cave is managed by SCCI and a permit is required for entry. Please visit saveyourcaves.org for more information.



Gourdneck Cave

Marion Co., TN - MN14
Elevation - 805 feet

Length - 18,926 feet
Vertical Extent- 456 feet

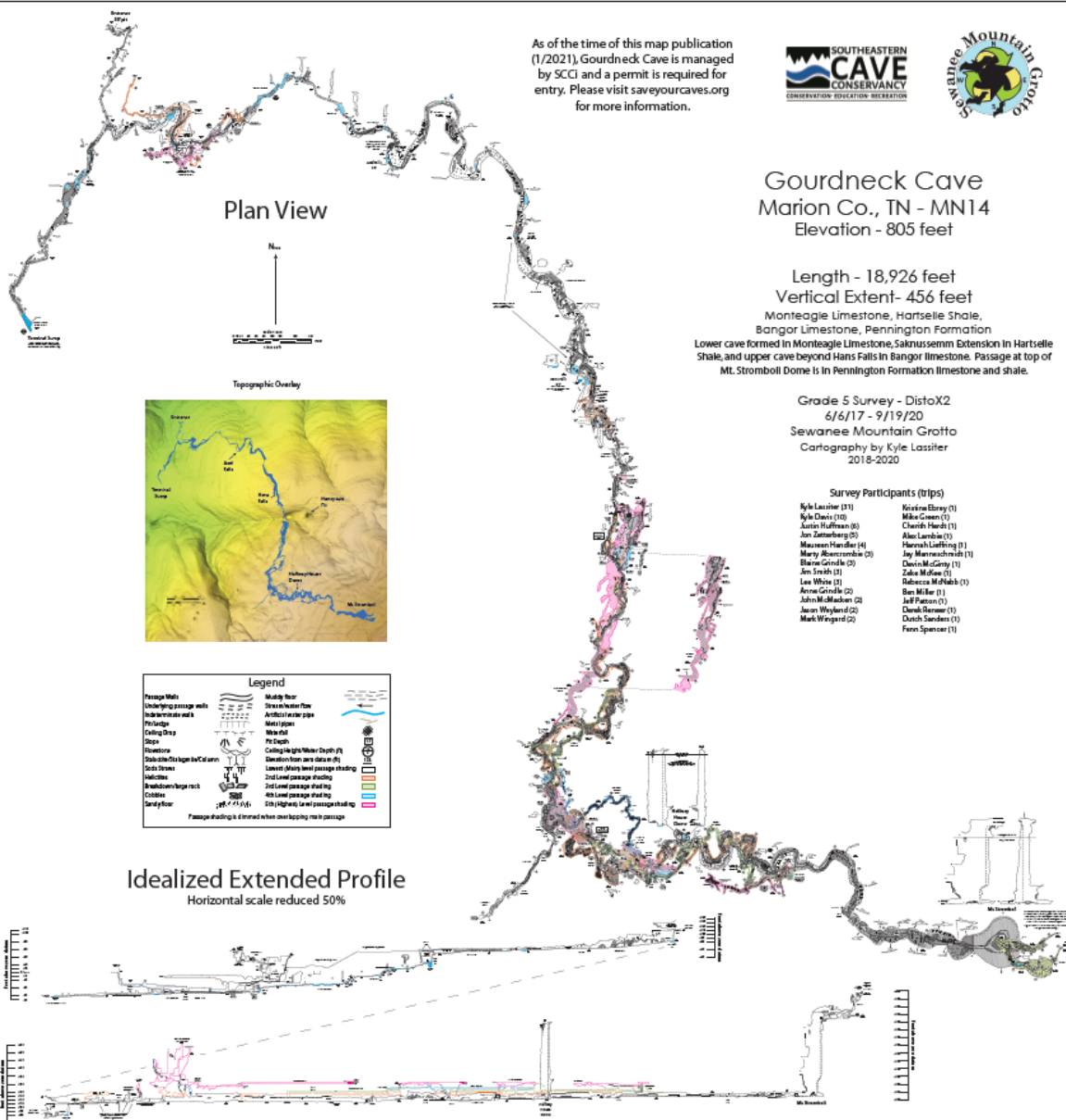
Monteagle Limestone, Hartsville Shale,
Bangor Limestone, Pennington Formation
Lower cave formed in Monteagle Limestone, Sakrussemm Extension in Hartsville Shale, and upper cave beyond Hans Falls in Bangor limestone. Passage at top of Mt. Stromboli Dome is in Pennington Formation limestone and shale.

Grade 5 Survey - DistoX2
6/6/17 - 9/19/20

Sewanee Mountain Grotto
Cartography by Kyle Lassiter
2018-2020

Survey Participants (trips)

Kyle Lassiter (11)	Kristina Barry (1)
Kyle Davis (10)	Mike Green (1)
Justin Huffman (8)	Charles Heath (1)
Jon Zarnberg (5)	Alan Lumbkin (1)
Maureen Hardier (4)	Yvonne Loeffling (1)
Marty Abernethy (3)	Jay Manneschild (1)
Barney Grindle (3)	Dawn McGinty (1)
Sam Smith (3)	Zake Malone (1)
Lee White (3)	Rebecca McHale (1)
Anna Grindle (2)	Ben Miller (1)
John McMillan (2)	Jeff Platten (1)
Jason Weyland (2)	David Barner (1)
Mark Wingard (2)	Dan Sanders (1)
	Fern Spencer (1)



Remembering Dennis “Smitty” Smith, NSS 21633

Julie Schenck-Brown, NSS 30493 RL, FE

With the passing of Dennis “Smitty” Smith, we did not just lose a caver but an incredible source of knowledge about the caves of Tennessee and Alabama. Smitty dedicated his life to the discovery and exploration of caves and maintained a stack of tattered topo maps with an extensive list of leads from decades of ridge walking to look for caves, yellow root, and ginseng- the three things that captivated his attention and exemplified his love for karst landforms.

I met Smitty through my friendship with Mike Moser, which began in the 1980s. While I was living in Pennsylvania as an undergraduate student, I would visit Kentucky and Tennessee frequently. Smitty and Moser always arranged special cave trips, taking time to introduce me to Tennessee and Alabama landowners, which was always as much fun as the caves. These frequent visits to TAG led to my relocation to Tennessee in 1993, which allowed me to spend more time caving, ridge walking, and surveying caves.

As Smitty took me under his wing at this young age, he shared many of his project areas and explained the geology of the Highland Rim, teaching me how to read surface landforms and locate caves with a topo map, which was long before the days of a GPS. It was Smitty and Jerry “Old Rockeater” Reeves who taught me about cavern development in TAG, long before I heard of Dr. Nick Crawford’s perched water table theory. And it was Smitty and Rockeater who taught me the importance of the contact layer as they both joked, “That’s what dreams are made of...” when we came across a sinkhole, especially if it was moving air.

To Smitty, caving was his life and cavers were his family. He was willing to share his cave leads and discoveries if you were willing to put the time in on the mountain and walk with him. Even underground, Smitty was always looking for new passage. It was his keen sense of awareness that led to the discovery of the climb up to the Cathedral Room in Blue Spring Cave. I recall Smitty’s deterrence when he could not fit his shoulders and chest through that newly discovered lead, but he encouraged Mike Stegall to go through the tight squeeze and discover that previously unknown route. We were all thrilled with that discovery. Smitty and Little Mike never received full recognition, but that was okay as they moved on to the next find. To Smitty it was never about the namesake or popularity, but the caves.



Smitty at "The Meander", Tony Merino photo.

Some of Smitty's favorite caving areas were the Highland Rim and the Skyline Management Area of Alabama, especially Crow Mountain and Jacobs Mountain. Making his home in Estill Fork, Alabama afforded Smitty relatively easy access to northern Jackson County and he spent a decade ridge walking Crow Mountain to look for an upper entrance to Tumbling Rock Cave. While the closest he came was Upper Tumbling Rock Cave, Smitty and I had a lot of fun digging open nerd holes in hopes we would pop into the upper levels of the Topless Dome. While on the ridge, Smitty showed me the coal seams that were still being mined, complimenting the determination of people who hiked 3-4 miles round trip to excavate a meager amount of coal.

Being a prolific ridge walker, Smitty also did not hesitate to walk the deep gorge of Bee Branch, a seldom visited tributary to Guess Creek. Smitty spent a lot of time ridge walking this area with the late Emory and Jean Nolan and together they discovered Bee Branch Cave. Although he had initially asked Bill Torode and Joe Skipworth to survey Bee Branch Cave, Bill never published a map, thus I was humbled when Smitty asked me to survey this significant Pennington spring cave. Hearing that I was surveying Bee Branch Cave, Bill Torode suddenly became motivated to draw up his map 20 years after their survey, which gave me an awkward pause. However, Smitty reassured my cartographic skills and promised I would survey more than what was shown on Bill's map. With Julie Uselton, Teri Stephens, Peter Michaud, Hali Steinmann, Shane Stacy, Jon Zetterberg, Crayton Miller, and Stephen Brewer, the cave was surveyed to a horizontal length of 3,704 feet and a vertical extent of 78 feet. We also pushed a downstream lead Smitty had sat on for years, hoping it would be TAG's next big multidrop, but to no avail. To this day, my fondest memory of Smitty telling me about Bee Branch Cave was the excitement he had when he described the Bangor Limestone he saw below the waterfall. Unfortunately, the cave would not allow the physical connection to Mostly Entrances Cave, but our survey still supported Smitty's hypothesis that this area was the relict of a master cave system that had collapsed but remained hydrologically connected.

One summer, when the gates were closed at Skyline, Smitty and I rode our mountain bikes down the road to the headwaters of Bee Branch. Stopping at the edge of the deep gorge, we locked our bikes to a tree and set off to hike through the woods. Our mission was to push a shallow vertical cave he had discovered. Smitty had me rack up and drop the virgin pit and although small, it was still exciting. I pushed a low, nasty crawl to qualify the cave and returned to the surface completely slimed. I asked what we were going to name the cave and Smitty joked we had completed the caver marathon that day as we biked, hiked, and caved. Hence the name, Triathlon Pit. It was also that day, in the late 90s, when Smitty began to joke that I earned another notch in my rack and set a trend of allowing me to take lead or drop a virgin pit first, even though they were his discoveries. It was as if Smitty had received as much enjoyment from watching me discover new cave, as I had exploring and surveying with him.

Perhaps my favorite long-term project that I had with Smitty and Mike Moser was re-opening the Scoop Chute in Haws Spring Cave, a horribly tight passage that my husband, Jon Brown, dug open and explored solo in the 1980s. I made one trip through the Scoop Chute in 1997 with Jon, Daryl Robinson, and Dirk Siron, but the passage became inaccessible due to the massive amounts of sediment that had mobilized through the 84' crawlway. Smitty, Mike Moser and I spent many years digging that passage back open, knowing what was beyond. After 15+ dig trips, I finally pushed through and was back to the hands and knees crawlway that led to the borehole and a mile of cave, not the two plus miles that the scoopers had estimated in the early 90s. Although we knew the risks involved with caving solo, Smitty and Moser told me to go see the master trunk. I told them I would be back in 30 minutes to which they sounded

relieved as they did not want to enter that horrible crawl again. Returning to the other side of the Scoop Chute, Smitty and Moser were so proud I had made it through, but it was their support and digging efforts that made it possible.

Knowing we had opened the Scoop Chute again, Smitty began to talk routinely about my plans to survey this section of the cave, which he had previously visited in the 1990s with Mike Moser, Mike Stegall, and Doug Eiche, a caver friend of ours from Canada. We had the full support of landowners Tony and Melissa Martin, who consider the cave closed, as they knew how special this cave was to us and enjoyed our stories of survey and exploration. Although Smitty did not feel up for the survey, we continued to spend time with the Martins, taking them caving several times when they first bought the property. Tony, Melissa, Chase, Trevor, and Cole Martin, as well as Smitty, Mike Moser, Jon Brown, the late Teri Stephens, and I enjoyed hiking the property as we reminisced about days past and looked forward to our next survey trip. As Smitty was slowing down, he continued to share his knowledge and wisdom, as well as remind the Martins and their sons of what a special place they own. This reflected his perpetual admiration and respect for landowners, as well as the access they granted exclusively to us. Since Teri, Peter Michaud, and I called End of Survey in the section of cave beyond the Scoop Chute, I have been updating the map of Haws Spring Cave and plan to name a major passage after Smitty, a modest tribute since his support encouraged me to dig open the Scoop Chute and continue the survey. Please be aware that Haws Spring Cave and the property is posted as the Martin family considers the caves **closed** and does not want visitors.

After Smitty relocated to a school bus on Mike Moser's property, I saw less of him, but we still stayed in contact. Smitty, Mike, and I camped together at numerous caving events and NSS Conventions and our conversations centered around caving—what survey projects I was working on and what progress I had made. They were always quick to offer suggestions and provided constant encouragement. Smitty continued to share his leads with me and always had suggestions as to where I should survey next. I was truly fortunate to cave with Smitty for more than 30 years, learning so much about ridge walking, geology, looking for known caves, and project etiquette. Although I never told Smitty how much he taught me, I know he will always be with me on the ridge as a mentor and a friend.



Smitty admiring gypsum flowers, Tony Merino photo.



Evan Hart, Capshaw Cave stream passage, Putnam County, Tennessee

Capshaw Cave Speleology

By Chuck Sutherland, Upper Cumberland Grotto

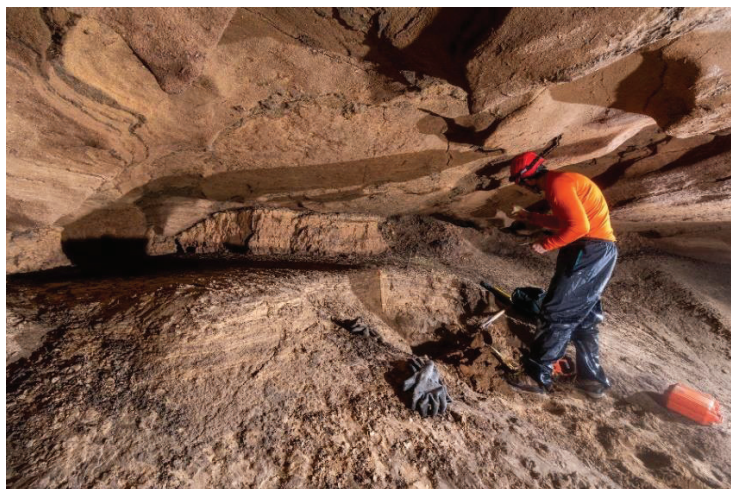
(From a January 2, 2020 blogpost on Chuck's blog "Chuck Sutherland, A Tennessee naturalist's photography, maps, and projects." All photos by Chuck)

Much of Capshaw Cave looks like the above image; subway tunnel passages following meanders of a cold underground river. The floor of the cave is generally gravel, sometimes clean washed and scalloped limestone, sometimes tires and trash. The urban nature of the cave has left it largely devoid of the kind of life one would expect to find in a wet cave of this size. You will find no cave crayfish, no southern cave fish, and no bat species that call Capshaw Cave home.

Today I am assisting TTU geology professor Evan Hart with data collection in the cave. Banks of sediment left behind from floods tell stories to those who listen. Evan's tools include a shovel, plastic siding, toilet paper, and tape. With the "U" shaped plastic siding he removes cross sections of sediment. Looking at the cut he dug with the shovel it's clear there is a story. Finely laminated alternating beds of sand and silt seem to show periods of higher energy and lower energy. The bigger story will require more work.

"More," Evan says as I hand him another wad of toilet paper. He packs it atop the soil sample to preserve its structure. When we've packed it in, it then gets wrapped in tape, labeled, and stored in his backpack to be taken from the cave. The technique of preserving stratigraphic sections was something

he learned from a recent correspondence with archaeologist Sarah Sherwood at the University of the South. She applies it towards rock shelters that Native Americans once inhabited. Here, we are looking at the history of water in this part of Cookeville.

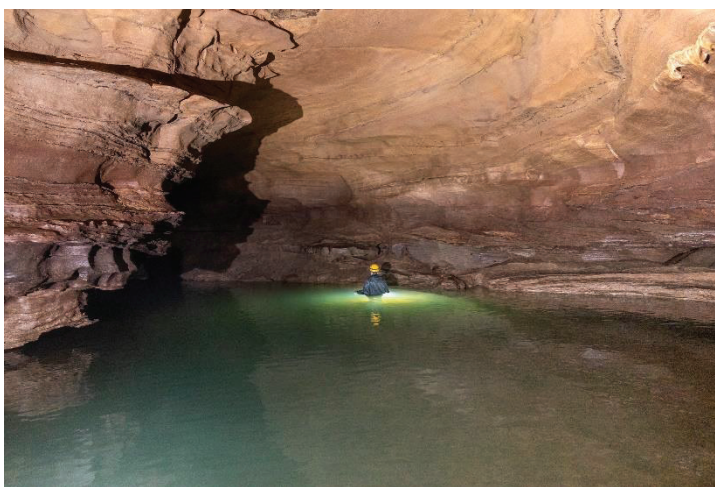


Evan Hart collecting soil samples for stratigraphic interpretation, Capshaw Cave

While Evan works on preparing his samples, I take my photography team and wander a short distance to take a few photos. I know I can take a photo, turn 180 degrees and take another photo and for my audience it may as well be miles apart from the previous shot. It's a truth that all caves look the same, but caves all also look different. I don't know if I can explain that, sometimes it is best to let the photos do the talking.

We are moving again. I'm trying to keep up with long-legged Evan whose strides seem to cut the water. My boots, while being great at protecting my feet in a cave environment, are both naturally heavy, and are currently filled with water. One of us is a dancer, the other is a snowplow. We never go far between places to take photos or samples though.

In moments I'm barking orders to my photo team. "Luke, grab two flashes." "Annabelle, stand over by my finger's shadow" as I wiggle a finger in front of my headlamp to show her where to go. Communication is difficult in cave photography. Lots of things need to happen, and if they don't happen quickly morale fails and folks get bored of working with me. In a wet cave this issue is compounded. Every moment we're stopped we're not generating heat to offset the cooling effect of the 55 degree water we're standing in. Despite this, I coax Luke into wading chest deep into the creek for a photo. A flash fired down into the water produces a pleasing blue glow around the subject. "That looks great. Pack it up," I say. Sometimes I'll make "wow" sounds and invite them over to see the finished product. Generally, I let it ride. In a few days they will see themselves on Facebook.



Luke Hornsby wading in Capshaw Cave

A few more sites for sediment and photo collection and we find ourselves making the free climb through a waterfall, and then out of the cave. We emerge, wet and cold into the frigid winter air.

Bible Springs Cave Survey

By Kelly Smallwood

Jason Hardy and I (Kelly Smallwood) spent most of our Saturday's during the summer of 2020 (8 trips total) re- re- surveying Bible Springs Cave, a local Marion County cave. Yes, you read that correct, the "re- re-survey"! Bible Springs was first surveyed in the early 80's but sadly a map was never produced. Later in 2010, Jason and I helped on the second survey of the cave with Julie Schenck Brown and, yet, sadly again, after 10 years she never produced a map either.

Being that we helped on the survey in 2010 and felt that this popular roadside cave needed a map, Jason and I made the decision to survey the cave, yet again, and we hit it hard with four of our best friends; Jim & Rachel Campbell and Harold & Cindy Geick. We are very proud to say that we were able to update the length of the cave from a previously listed 4,000 feet to 5,547 feet in length, with a vertical depth of 108 feet. In honor of the previous failed survey efforts, we decided to name this survey "The third times a charm survey" because we knew without a doubt that we would in fact produce a fine map of this popular roadside cave for the caving community. The map for Bible Springs Cave was rendered in three panels, included at the end of this article, cartography by Jason Hardy NSS 56383RL.



Jason and Kelly selfie, at Bible Springs Cave, Kelly Smallwood photo



Surveying in Bible Springs Cave, Kelly Smallwood photo



Bible Springs Cave is a wet cave, as the name would imply. Kelly Smallwood photos.

Wonder Cave Survey

By Kelly Smallwood

Wonder Cave, located in Pelham, Tennessee, is the second oldest commercial cave in the state. After being open for tours for nearly 100 years, it was closed for visitation in the year 2000 and has remained closed since.

In 1912, the State Geological Survey of Tennessee began to prepare reports on all the “important” caves of Tennessee, showing what deposits occur in them, the life inside, and any value they may have to the State. They published a partial map of Wonder Cave in their monthly publication, “The Resources of Tennessee” in August of 1912. They did not complete their survey of Wonder Cave and only surveyed to an area known as the “Pyramid Room”.

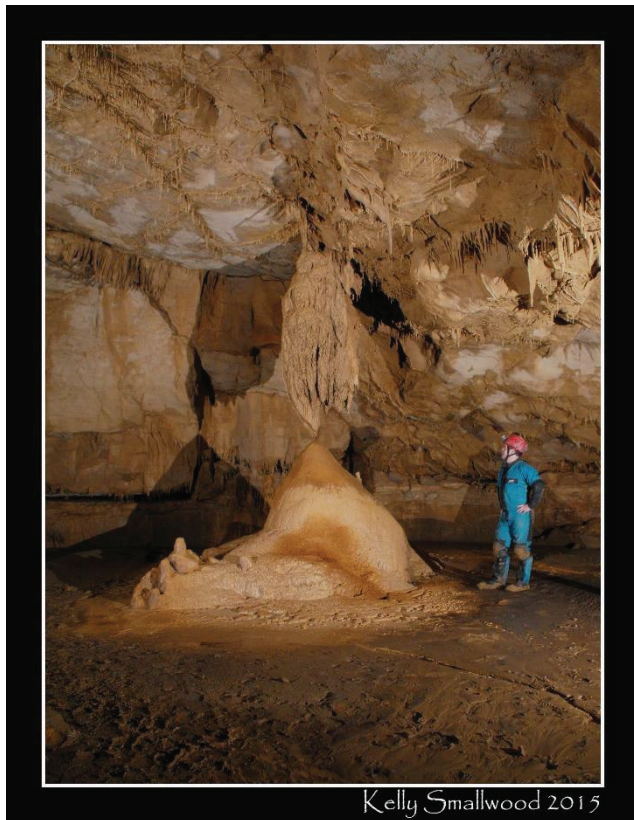
On December 27th, 1953, Tom Barr along with Bill Cuddington, Roy Davis, Bert Denton, Charlie McCary and Hugh Stout (all NSS Members) along with the cave manager & owner, Frank Raulston, spent seven hours in passages beyond the Pyramid Room making additions to the 1912 map produced by the Tennessee Division of Geology. Reports of the survey were published in the NSS News and Tom Barr later published his map in his 1961 book Caves of Tennessee.

In December of 2014, Jason Hardy and Kelly Smallwood began the project to resurvey Wonder Cave with Jason Hardy as the lead cartographer. They spent 16 months surveying the cave and were able to survey the cave to a length of 14,678.3 feet with a vertical extent of 128.21 feet. The cave was previously listed as only 7,000 feet long with the Tennessee Cave Survey so it has been updated from the 149th longest cave in Tennessee up to the 58th longest cave. Another important note to mention is Tom Barr’s addition to the State of Tennessee’s map previously showed Wonder Cave heading east into Layne Cove beyond the Pyramid Room. Jason and Kelly were able to provide an accurate survey which reflected the cave actually trends north after reaching the Pyramid Room. The map is included at the end of the article.

To read the entire article written by Kelly Smallwood NSS 58745 RL FE about the history and exploration of Wonder Cave, please visit <https://tinyurl.com/l5vxyt8> or to watch the NSS Webinar that was given by her, please visit <https://www.youtube.com/watch?v=riaLUyto3T8>.



*Jason Hardy and Kelly Smallwood at entrance
to Wonder Cave*



Jason Hardy in Wonder Cave, Kelly Smallwood photos



Surveying in Wonder Cave, Kelly Smallwood photo

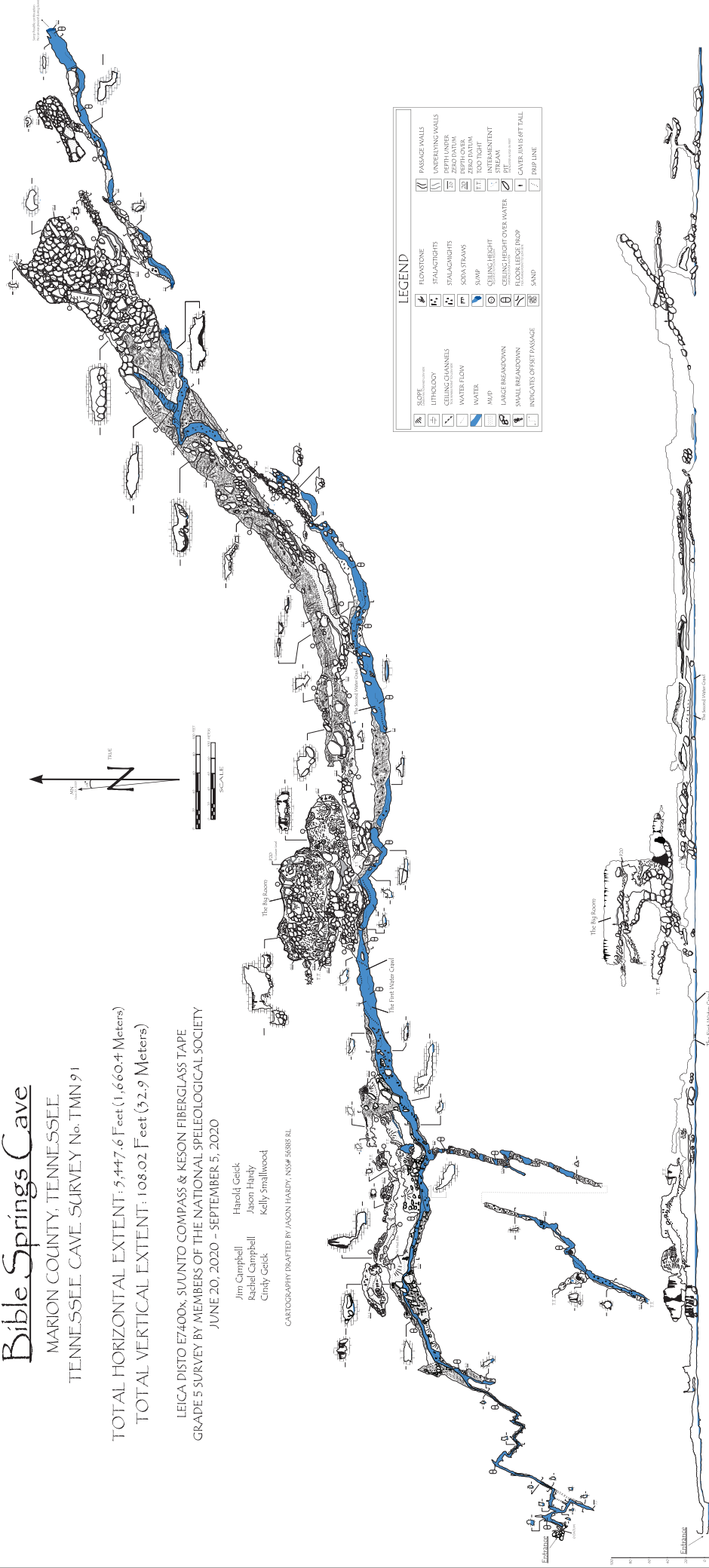
Bible Springs Cave

MARION COUNTY, TENNESSEE
TENNESSEE CAVE SURVEY No. TMN 91

TOTAL HORIZONTAL EXTENT: 5,447.6 Feet (1,660.4 Meters)
TOTAL VERTICAL EXTENT: 108.02 Feet (32.9 Meters)

LEICA DISTO E7400x, SUUNTO COMPASS & KESON FIBERGLASS TAPE
GRADE 5 SURVEY BY MEMBERS OF THE NATIONAL SPELEOLOGICAL SOCIETY
JUNE 20, 2020 - SEPTEMBER 5, 2020

Jim Campbell Harold Geick
Rachel Campbell Jason Hardy
Cindy Geick Kelly Smallwood
CARTOGRAPHY DRAFTED BY JASON HARDY, NSP# 5885 RL



WONDER CAVE

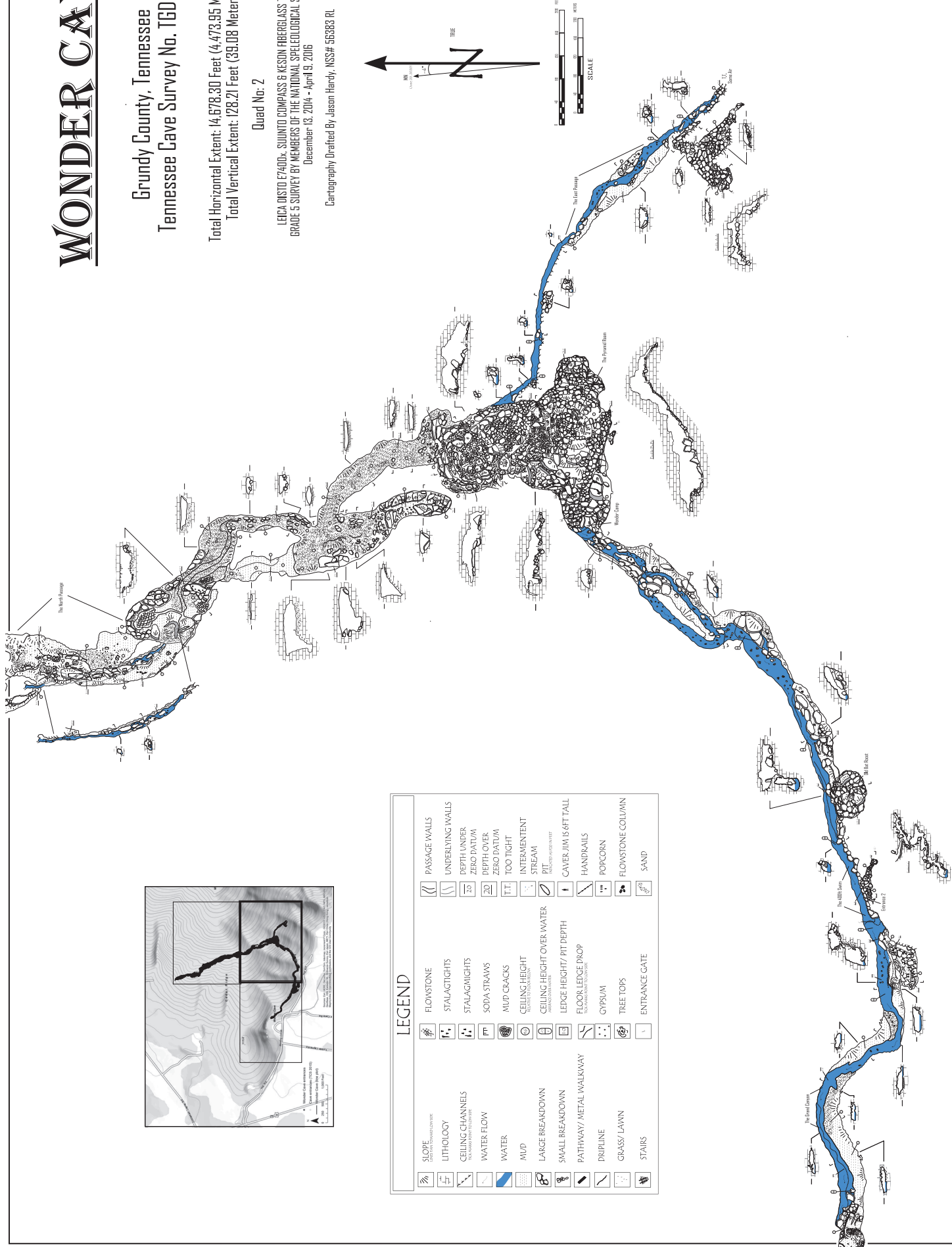
Grundy County, Tennessee
Tennessee Cave Survey No. TGD 30

Total Horizontal Extent: 14,678.30 Feet (4,473.95 Meters)
Total Vertical Extent: 128.21 Feet (39.08 Meters)

Quad No: 2

LEICA DISTO E7400x, SUUNTO COMPASS & KESON FIBERGLASS TAPE
GRADE 5 SURVEY BY MEMBERS OF THE NATIONAL SPELEOLOGICAL SOCIETY
December 13, 2014 - April 9, 2016

Cartography Drafted By Jason Hardy, NSS# 56383 RL



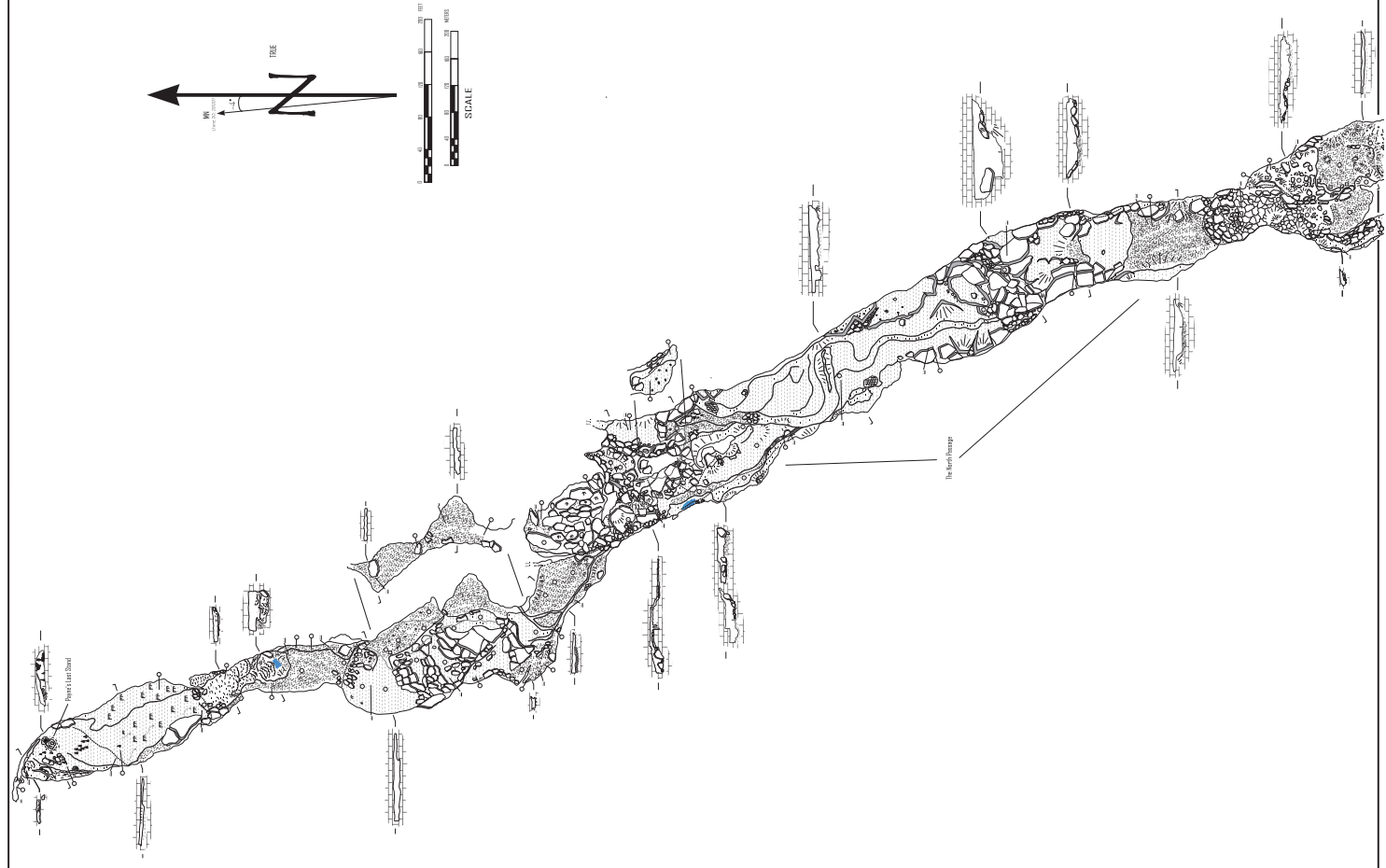
WONDER CAVE

Grundy County, Tennessee
Tennessee Cave Survey No. TGD 30

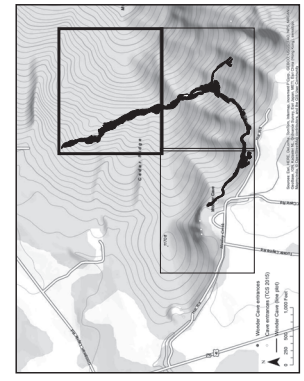
Total Horizontal Extent: 14,678.30 Feet (4,473.95 Meters)
Total Vertical Extent: 128.21 Feet (39.08 Meters)

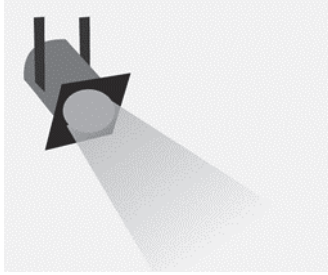
Quad No: 3
LEICA DISTO E740Dx, SUINTO COMPASS & KESON FIBERGLASS TAPE
GRADE 5 SURVEY BY MEMBERS OF THE NATIONAL SPELEOLOGICAL SOCIETY
December 13, 2014 - April 9, 2016

Cartography Drafted By Jason Hardy, NSS# 56383 RL



LEGEND			
	SLOPE TOPOGRAPHIC TO CONTOUR		FLOWSTONE
	LITHOLOGY		STALACTITES
	CEILING CHANNELS TOPOGRAPHIC TO CONTOUR		STALAGMITES
	WATER FLOW		SODA STRAWS
	WATER		MUD CRACKS
	MUD		CEILING HEIGHT
	LARGE BREAKDOWN		CEILING HEIGHT OVER WATER
	SMALL BREAKDOWN		LEDGE HEIGHT/PIT DEPTH
	PATHWAY/METAL WALKWAY		FLOOR/LEDGE DROP TOPOGRAPHIC TO CONTOUR
	DRIPLINE		GYPSUM
	GRASS/LAWN		TREE TOPS
	STAIRS		ENTRANCE GATE
	PASSAGE WALLS		UNDERLYING WALLS
	DEPTH UNDER ZERO DATUM		DEPTH OVER ZERO DATUM
	TOO TIGHT		INTERMITTENT STREAM
	CAVER JIM IS 6FT TALL		HANDRAILS
	POPCORN		FLOWSTONE COLUMN
	SAND		





Spotlight On: Tampa Bay Area Grotto, Landowner Relations Efforts at Tucks and Lucky Lundy Caves

Submitted by Dr. Jeffrey C. Karr, NSS 68408



Tampa Bay Area Grotto Members

Karr from the Tampa Bay Area Grotto and Steven Nemeth from the Florida Speleological Society visited the new owners and reestablished landowner relation (Picture 2) in the fall of 2020. After some gate and cave maintenance at Tuck's cave, the caves were available for visits.

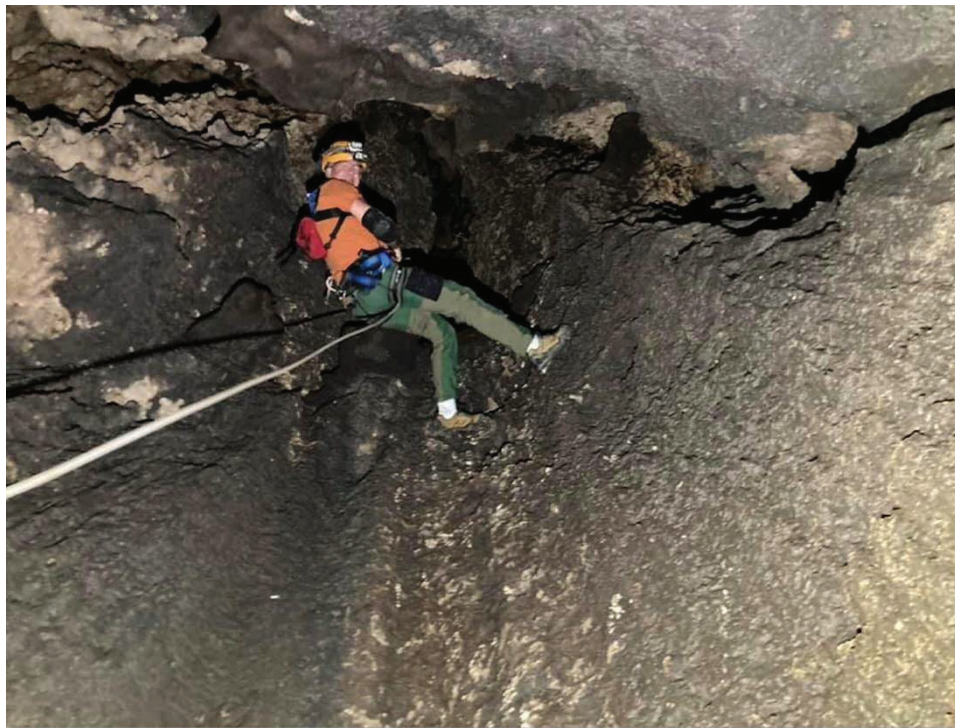
The landowner relationship has been reestablished for Tucks and Lucky Lundy caves in central Florida allowing grotto visits. This is significant news as these caves are very unique to central Florida. Tuck's cave offers the only true through trip in Central Florida and has one of the best domed pits. Lundy's cave had historical significance and is an interesting cave to visit. Originally, there was a single landowner for both caves. For a long time period there was great landowner relationship, allowing grotto and cavort visits. Then the property fell into foreclosure and the caves were closed for about three years. Jeffrey

Tuck's cave is one of the longer and more extensive caves in Florida with 1780 feet of mostly walking passage. Exploring the bedding planes, canyon passages, flowstone, and chert ribbons is what makes this such a very interesting cave. The horizontal section is fairly extensive, crouched to crawling to walking in various areas. Tucks cave offers the only current through trip in central Florida. There are two drops that are accessed from an outside entrance into about a 50-foot dome (Picture 3). At the bottom is a tight passage to the another drop from above that will bring you up to the horizontal upper level to the main cave entrance.

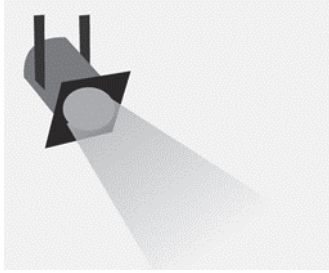
Lundy's cave is rich in history and lore. There was a rumor about an attempted stagecoach robbery in Florida whereby a money box was thrown from the racing Stage into a rocky crevasse of a sinkhole. The rumor goes on that the loot was never retrieved. Fast forward to the 1930's when Tuck Lundy bought land and started exploring the many sink holes on property, ostensibly for the loot. He used tools and explosives to explore further into the ground, looking for the elusive lost loot. As underground cavities were enlarged, the rubble was used to build various structures on the property. As the new caverns became a curiosity, it was decided to charge money to visit them. Up went the gift shop, hotel, and the infamous "Elevator" that would transport you into "deep depths" of the underground.



Picture 2: Jeffrey Karr and Steven Nemeth with the new cave owners, the Prells.



Picture 3, Jeffrey Kerr rappelling in Tuck's Cave



Spotlight On: The Upper Cumberland Grotto, A Year Underground

Submitted by Annabelle Dempsey

2020, despite the ongoing pandemic, has been an eventful year for Upper Cumberland Grotto. UCG participated in a total of 206 trips. 62 of these trips were led by a UCG member. 94 of these caves were a unique cave visit. These members have participated in several acts of community service, rescue efforts, ridge walking sessions, and caving events.

Members of UCG assisted with a rescue effort during 2020. One of UCG's on, Jim Fox, was rescued at the beginning of the year. Hamilton County Cave and Cliff Rescue, Sparta-White County Rescue Squad, Huntsville Cave and Rescue Unit, Knoxville Rescue, many of Upper Cumberland Grotto's members, and other cavers assisted with the rescue in White County, TN. The rescue, which took roughly 8 hours, is a testament to how compassionate and closely knit the caving community is. Upper Cumberland Grotto is grateful for the compassion shown towards Jim Fox during that time period.



The UCG participated in the Jim Fox rescue at Heart of Gould Cave, Chuck Sutherland photo.



UCG participated in the SCCI property cleanup in Blue Spring Cove, Warren Wyatt photo.

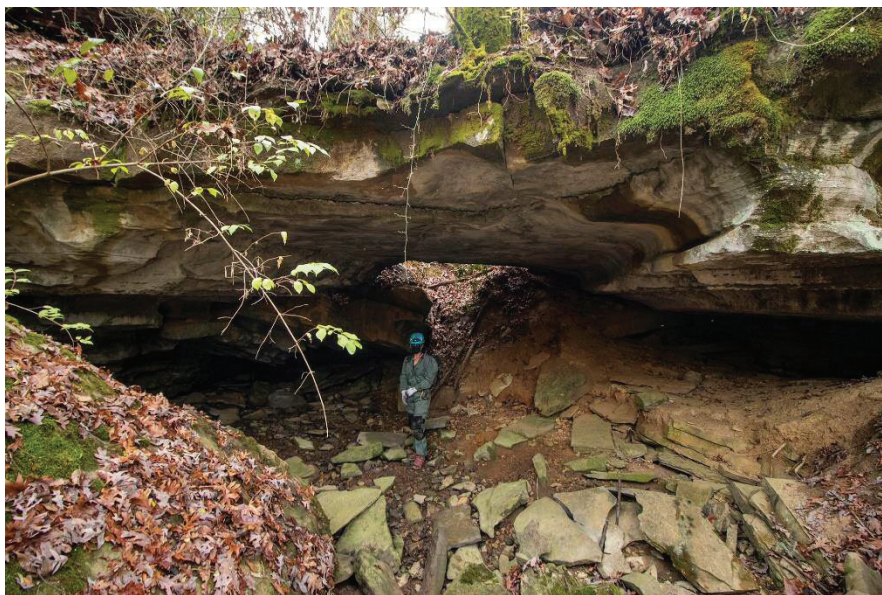
Upper Cumberland Grotto members have participated in several cleanups this year. The first, back in February, was for Thunderhole Cave Preserve. This cave, managed by UCG's Megan Atkinson and Warren Wyatt, was acquired a few weeks before the cleanup. This event was a collaboration between Nashville Grotto, UCG, and several others. In March several grotto members, along with members from many other grottos, participated in the Savage Cove cleanup in Grundy County, TN. September saw the SCCI, along with UCG, clean up an area on the Blue Spring Cave property. Extraordinary progress was made during all of these events and UCG is looking forward to another productive year of cleanups.

The grotto also participated in and attended several cave community and cave education events. At last year's SERA Winter Business Meeting several members won awards in a wide variety of categories including photography, maps, and art. During the month of February, UCG members had the chance to network with the public and scientists at the Cave and Karst Resource Symposium. Various members manned a table and interacted with participants. That Sunday, Chuck Sutherland led a group of attendees through Capshaw Cave, while Annabelle Dempsey led a group through BSC. In September, the grotto held its annual Rope Day event. Hosted at the Black Mountain section of Cumberland Trail State Park, the event had 9 attendees and allowed those present to practice vertical skills in a controlled environment. Members Kitty Blanton, Joelle Marlin, Garret Jordan, and Annabelle Dempsey had the opportunity to assist Dr. Hazel Barton with bacterial sampling in BSC.



Kitty Blanton, Joelle Marlin, Garret Jordan and Annabelle Dempsey assist Hazel Barton during bacterial sampling in Blue Spring Cave, Annabelle Dempsey photo.

Speleopocalypse, the 2020 (69th annual) SERA Summer Cave Carnival, hosted by the grotto at Camp Tubb, Rock Island, Tennessee, was a successful, albeit smaller than usual, event. There were 55 paid attendees, not counting volunteers, camped at Camp Tubb. We made a total of \$1,335.03 from this event. This total includes the \$467 from SERA book purchases after the event and this is what helped us break even. Approximately \$775 of this is from donations and many attendees donated their registration instead of requesting refunds. We would like to thank these donors as they assisted us in getting this event up and running and their donations helped support what we did.



Kristen Bobo in entrance of unnamed newly discovered cave, Chuck Sutherland photo.

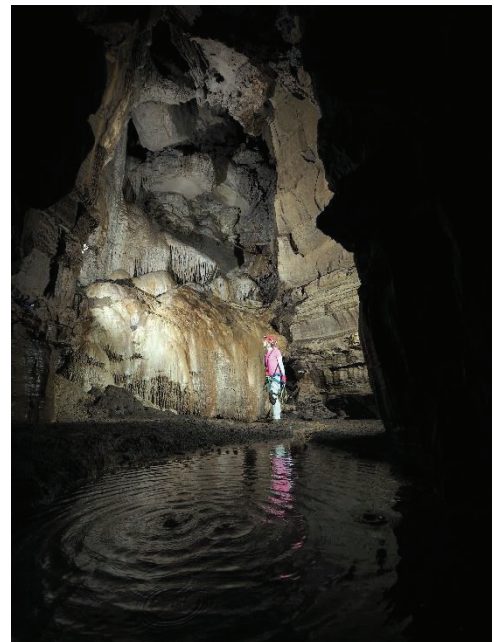
SCCi 2020 Update, 30 Years of Saving Caves

Amber Lehmann, Board Director

Let's be honest, 2020 was a year that presented more than enough challenges that many of us want to forget. Despite 2020 being a chaotic year, SCCi prevailed and remained steadfast in protecting even more caves and karst landscapes than ever before. It was a year we actually want to remember for so many reasons, including THREE new caves acquisitions.

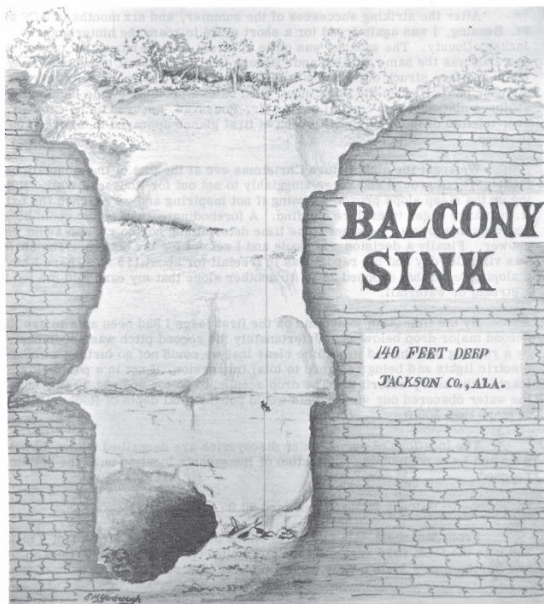
The first one, as many of you already know, was Cyclops Cave in Russell County, Va. This was our first cave in the state of Virginia, and one that local cavers asked us to protect, after they discovered trash, broken formations, disturbed rigging, and graffiti in the cave. With the help of the caving community and many other donors, we were able to raise enough money to purchase the cave, with a little help from our Board. Our Board made the last-minute decision to put the remaining portion on the credit line to protect the cave immediately. We would love to see this cave paid off in 2021, so if you are able to contribute at all, please consider giving as much as you can.

The 2nd significant acquisition came as a gift from long-time caver, John Attaway. In July, he generously donated a 17-acre parcel containing Mayapple and Meander caves. This stunning piece of property is located in Payne Cove in Grundy County, Tennessee. Mayapple Cave has three entrances, all located on the property, with more than 6,000 feet of horizontal passage and 154 feet of vertical cave. Meander is a smaller cave, with 123 feet of horizontal passage. We named the preserve the "Mayapple - Steve and Nancy Attaway Preserve" in memory of John's son, Steve, who passed away a year ago, and in honor of Steve's wife, Nancy, who resides in New Mexico. Steve was an active caver in the Southeast during the 1970's and 1980's and served in cave rescue alongside his father. SCCi Director Kyle Lassiter said, "John Attaway has been an exemplary caver and landowner for over 45 years. He has always been a very active and engaged member of the caving community. It is not a surprise that his children (Steve and his sister Myrna) followed suit and greatly enriched the caving community in their own right. His generous donation to SCCi will allow the Attaway legacy to be remembered for many generations to come."



Erica Sugrue in Mayapple Cave, Bob Biddix photo

Our final acquisition of the year - our 33rd - was one many cavers have waited on for decades - the iconic Balcony Sink, also known as Falling Cave. Balcony Sink is arguably one of the Top 10 classic pits in the Tennessee/Alabama/Georgia (TAG) region of the United States. Like our Valhalla preserve, Balcony Sink is much larger at the bottom than top, with a pit depth of 135 feet. Beyond the pit is a half mile of passage, including a second 34-foot drop. With its large dramatic entrance and active waterfall, Balcony Sink is considered one of the most beautiful and bio--dense caves in Alabama. Because of the urgency of the opportunity, SCCi placed this purchase on short-term credit. We continue to need your help to support this once-in-a-century acquisition.



Balcony Sink drawing by Ed Yarbrough

While acquisitions are exciting and we love to announce them, it isn't the only aspect of what we do as an organization. Another important success of 2020 was developing an actionable plan to manage our 2,400-acre Henson Preserve. We did that through a model we introduced during our Preserve Management Retreat back in March. Not only has this model been instrumental in developing an action plan for the preserve, it is providing a foundation on which to base project decisions across the organization. With more than 30 preserves, understandably, it can be difficult to make decisions across preserve boundaries without applying the weighted model.

In summary, despite a tumultuous year, SCCi had a tremendous year of success. Much of that revolved around doing a million little things right, day-in and day-out. From boots-on-the-ground preserve management to educating the public on the importance of cave protection, we know what it takes to protect over 5,000 acres for future generations. Next year, we will celebrate our 30th anniversary of saving wild caves. We have created a path to sustainability that is vital to our future as an organization, AND the future of our preserves. Sustainability includes the concepts of financial sustainability, as well as leadership succession planning, adaptability, and strategic planning. Without these concepts, there would be no future for SCCi and the caves and land we protect. If you are currently a member, we thank you for your support. If you would like to become a member, you can do so here: saveyourcaves.org/join. We do hope you celebrate with us our important milestone this year and contribute to making the next 30 years as great as our first.



Balcony Sink, Sam Moore photo

30th Anniversary of the IGP Fence Crosser

By Johnny Gatlin NSS 28164

While serving as Chairman of the Nashville Grotto in 1991, I received a phone call from a distraught out-of-state caver alerting me of an issue he had encountered at Indian Grave Point Cave, in Dekalb County, Tennessee. He related that while exiting the cave, he had been approached by the landowner, who was there trying to keep people off his fence so that his cattle would remain secure.

I was able to track down this landowner, who lived off-site in Smithville. Surprisingly, I remember the phone call to this day, most likely because of the extreme measures he was having to go through to secure his land. At this time, visitors would park all up and down the road and cross the fence wherever they chose. He stated that he would sit all day in his truck waiting for people to come out of the cave. He couldn't believe how long people would stay in the cave. He stated that the fence had been repaired so many times that it would not withstand another repair. Something else had to be done.

I proposed for the Grotto to install a fence crosser as a resolution and he gladly accepted. Without hesitation, a group was formed to complete the project. Member **Ned Littell**, having a farm himself, played a major role, as did member **Larry Salts**, who was a welder and was able to construct the iron crosser. I cannot recall all of the member volunteers there that Saturday morning for the installation with the exception of the late **Larry Adams**. Ned provided metal signs that were placed along the fence to direct visitors to use the crosser.

A group photo was taken when the project was completed and it would be nice for that photo to surface now, 30 years later, to commemorate everyone who made this important project successful. I am glad that I could help with a small installment that made such an impact to keep one of the Highland Rim's most visited caves accessible to all.



A recent photo of the fence crossing, still going strong after 30 years.



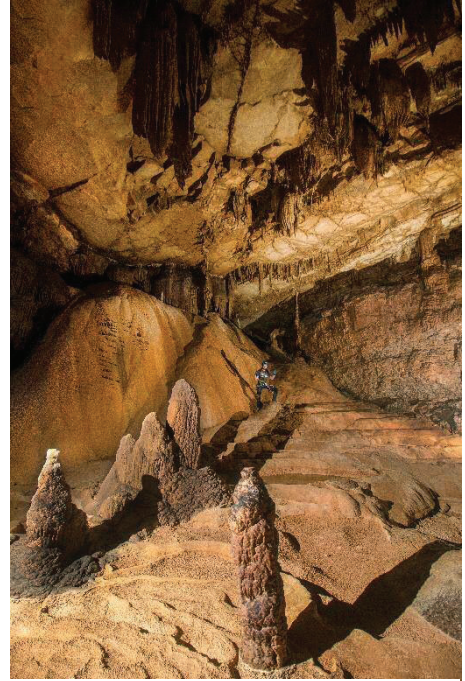
One of the remaining signs directing cavers to use the crosser.

THE GALLERY

An assortment of photographs from several SERA cave photographers



Annabelle Dempsey, GD305, Chuck Sutherland photo.



Craig Yoder, Secret Cave, Annabelle Dempsey photo.

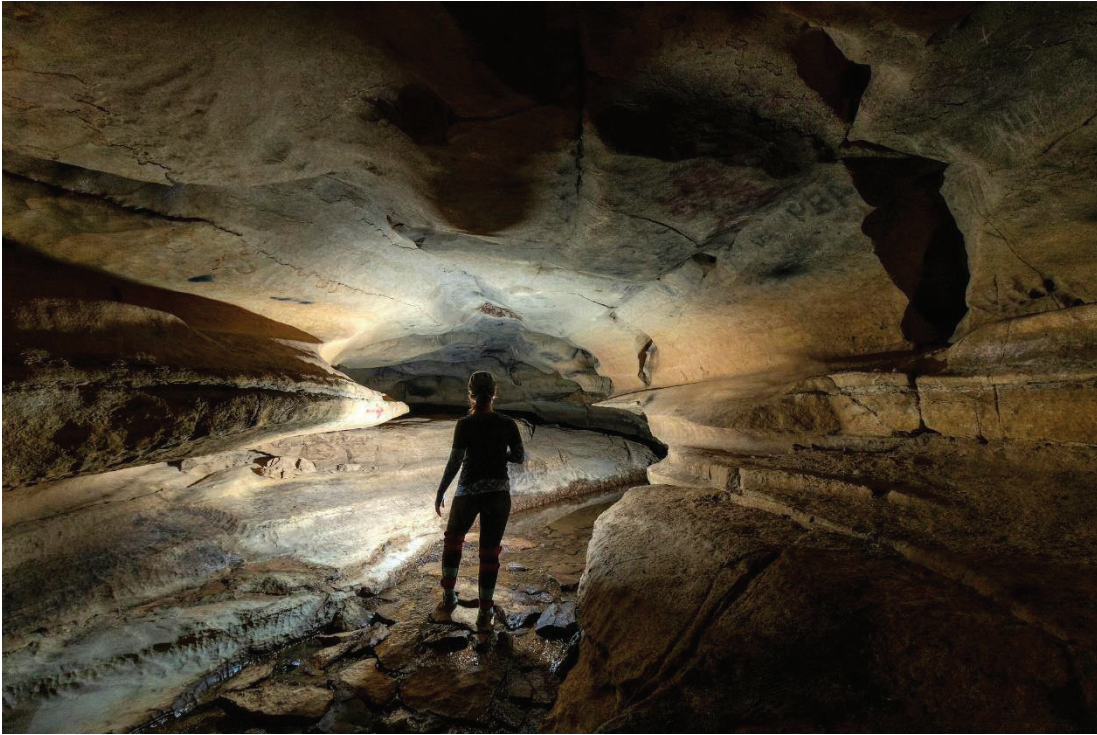


Joelle Marlin, Blue Spring Cave, Annabelle Dempsey photo.



Jim Fox setting bolt in Heart of Gould Cave, Chris Higgins photo.

GALLERY *(Continued)*



Caralynn Strand, A Survey, Campbell Cave, Christian County, Kentucky, Chuck Sutherland photo.



Kristen Garrison, Saltpeter Works, VB147, Chuck Sutherland photo.

GALLERY *(Continued)*



Kelly Lewis, Signal Light Pit twilight, Chuck Sutherland photo.

