

TAG CAVER



Vol 14 Issue 1



TAG Caver

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Cave Fest 2023 Edition

Connect with the Grotto

If you are new to the Grotto, here are a few ways you can get to know other members:

- Join us on a Grotto cave trip, survey trip, or cleanup
- Sewanee Mountain email list/Google Group. After you have joined the grotto, join our mailing list to keep up to date with cave trips and meetings.

Address:

Sewanee Mountain Grotto
900 Old Sewanee Rd
Sewanee, TN 37375

Important links:

Email: sewaneemountaingrotto@googlegroups.com
sewaneemountaingrotto@caves.org

Webpages:

Facebook Group: www.facebook.com/groups/SewaneeMountainGrotto/
Facebook public page: www.facebook.com/SewaneeMountainGrotto/
CaveFest Facebook group: www.facebook.com/groups/SMGCaveFest/
Website: www.smg.caves.org

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TAG Caver is the official newsletter of the Sewanee Mountain Grotto & is published periodically. Sewanee Mountain Grotto is a non-profit internal organization of the National Speleological Society dedicated to the exploration, mapping and conservation of caves. If you are interested in joining the Sewanee Mountain Grotto we invite you to attend one of our monthly grotto meetings. Meetings are held the second Saturday of each month at various locations in the heart of TAG. A typical meeting starts with a potluck dinner at 6pm CST, followed by the meeting at 7pm. On occasion we also have special presentations following our meetings. Annual dues are \$10 per person and are due in January. Please email

<mailto:sewaneemountaingrotto@caves.org>
or one of our officers for more information.

You may also visit our website at:

<http://www.smg.caves.org>

2022 Sewanee Mtn Grotto Officers:

Chairperson: Jules Jenkins
 VC & Programs: Anne Grindle
 Treasurer: Kyle Lassiter
 Secretary: Amanda Tidwell
 Member at Large: Lauren Laurino
 Conservation Chair: Maureen Handler
 Survey Chair: Kyle Lassiter
 Webmaster: Kyle Lassiter

Tag Caver Editor:

Shari Lydy slydy9293@gmail.com

Email articles and photos for submission to the editor (formats: docx, pdf, tiff, jpeg). Content may include articles and/or photos from non-members as well as other caving regions.

Statements and opinions expressed in the TAG Caver do not necessarily reflect the policies or beliefs of the Sewanee Mountain Grotto or the NSS.

Content Contributors

Foster Murray, PESH, Anne Grindle, Maureen Handler

Photo credits

Front cover: Artwork by Tina O'Hailey and Foster Murray

Back cover: Cave Fest auction donors

Greetings and salutations! Welcome to the 2023 edition of Sewanee Mountain Grotto's Cave Fest!

This year we are celebrating the underground where we are strangers visiting a new land. When I came up with this year's theme, I had no idea that this would be the year the government finally admitted that aliens really exist. Like those aliens, we are alien to the environments we seek to explore, leading to many adventures!

As cavers, we know we need to protect this environment, leaving no trace, taking only memories, encouraging others to do the same, inviting new "aliens" to join us on our journeys. Our party in Paradise supports protecting this environment, donating the proceeds to cave conservation, education, cave rescue, and the caving community as a whole. Many of the donations this year came from the caving community to support the caving community, current, past, and future. We thank our donors for their generous support! The crown jewel of Cave Fest is our auction. We had incredible support and our donors were incredibly generous. Thank you again to all of our donors! The auction looks spectacular this year, make sure you bring your wallets and bid to win!

As chair this year and a volunteer myself, I want to thank those who volunteered their time to making this event the place to be for Labor Day weekend. This event doesn't happen without volunteers! To our volunteers, thank you for your help in making Cave Fest happen! Special thanks to Kris Weatherford for running Registration and volunteer central, Katie Balazs for being our Social Media Ambassador, Anne Grindle for organizing cave trips, Blaine Grindle for brewing up those delectable homebrews, Jules Jenkins and Kelli McGuffey for cooking the meats for the dinner, Maureen Handler for hosting the event at Caver's Paradise, handling the little details and being our Boss Bitch in Charge, Martha Bryant for handling the yard sale and gathering local donations, Kyle Lassiter for maintaining the website, Christina Harris for printing out and donating the stickers for the event, and Tina O'Hailey for making sure the t-shirt design and logo turned out amazing! We will have volunteer opportunities at the event and afterward- please inquire at the registration tent!

Let's party hard, cave softly, bid hard and high, and enjoy the company of friends old and new!

Foster Murray
Cave Fest Chair 2023



Cave Fest 2023 - Schedule of Events

All times Central

Friday 9/1/23

7:00 am – 12:00 am

Noon – 6 pm

All day

6:00 pm

7:00 pm

Saturday 9/2/23

7:00 am – 3:00 pm

8:00 am – 9:00 am

All day

9:00 am – 5:00 pm

5:00 pm

7:00 pm

Sunday 9/3/23

8:00 am – 9:00

TBD

All day

6:00 pm

8:00 pm – 11:00 pm

Monday 9/4/23

Registration open

Yardsale

Caving and led trips. See registration.

Leave campground for Nickajack Cave

Homebrew at the Pavillion

Registration open

Yoga

Caving and led trips. See registration.

Yard sale

Potluck dinner – meat provided

Auction and Homebrew at the Pavillion

Yoga

Yardsale

More caving and led trips. See registration.

Leave campground for Nickajack bat flight #2

Live band at the Pavillion.

Cave Fest is officially over – See you next year

Important Things to Remember

- Sign up and meet for Cave trips and Float trips at Registration (only sign up for float trips if you need a boat).
- Beer at the Pavilion is only served to those who are over 21 and purchase a wristband. Bring your own cup or purchase a Bonnaroo cup for \$1.
- Do Not SPEED! Please be careful when you are driving around the campground and watch for children and dogs at play.
- Please pickup after your furry kids and ensure their good behavior and know their whereabouts.
- Keep your campsite free of trash and make sure all food is secure from animals.
- Recycle all glass, plastic (no caps), and aluminum in the bins provided.
- Watch for snakes and spiders around woodpiles.
- Have a great time!



Cave Fest 2023 Staff

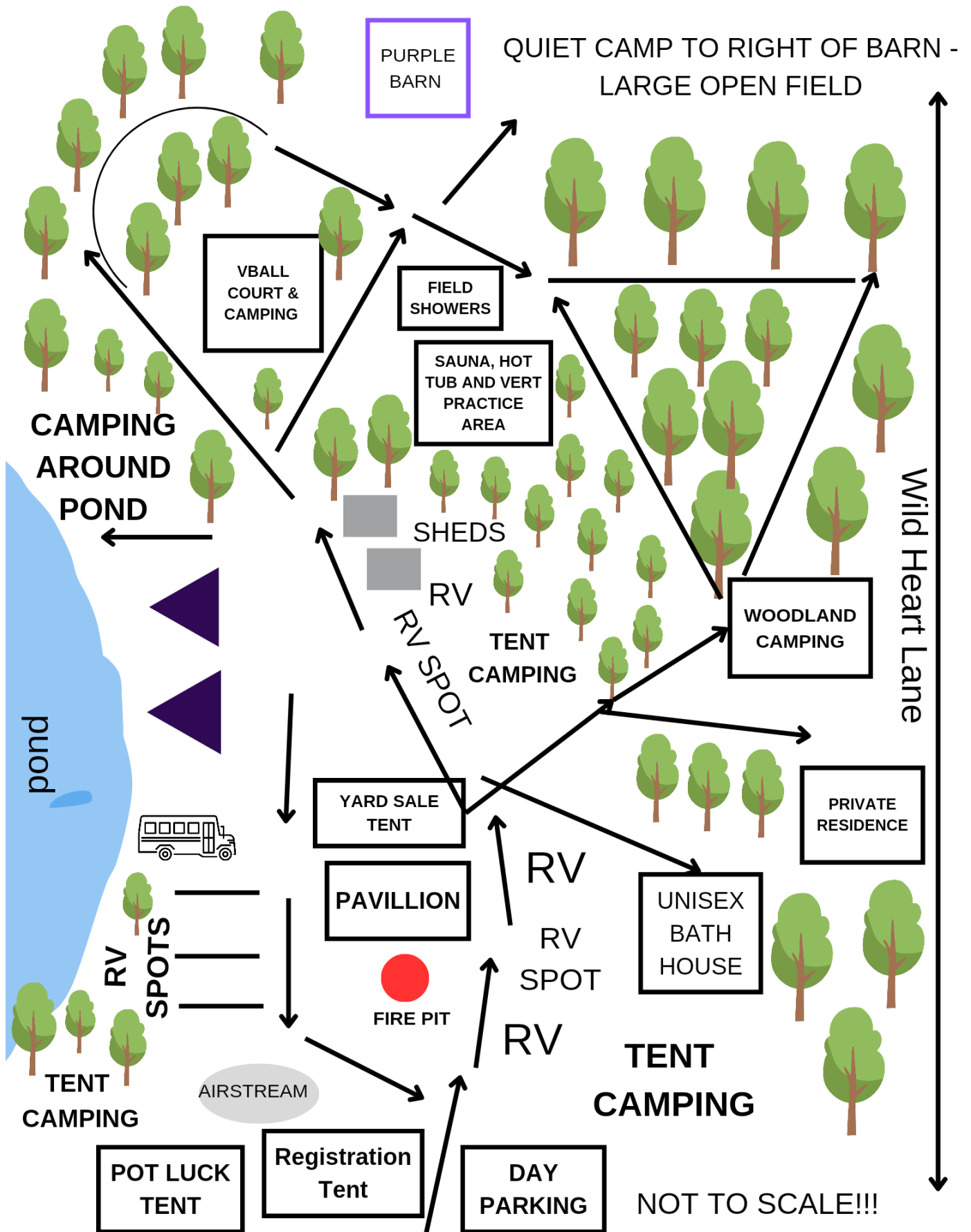
Chair:	Foster Murray
Pre-Registration:	Kyle Lassiter
Registration:	Kris Weatherford
T-shirt design:	Tina O’Hailey and Foster Murray
Yard sale:	Martha Bryant and Tina O’Hailey
Auctioneers:	Maureen Handler and Phillip Rykwald
Guidebook:	Shari Lydy
Potluck	Shari Lydy, and Leslie Lytle
Potluck Meat:	Jules Jenkins and Kelli McGuffey
Brewmeister:	Blaine Grindle
Trip Coordinator:	Anne Grindle
Bat Flight float	Maureen Handler
Social Media	Katie Balazs
Facilities/Recycling	Maureen Handler, Les Campbell

And a huge Thank You to our all volunteers who make Cave Fest possible!

Cave Fest Vendors

Flintnapping	Terry Ragon
Paint Rock Agate	David Rowe
Homecrafted Soaps	Kris Weatherford
Toxic Frog	Vince Murdock
Crystals and such	Albert Ogden
Kierismatic Design	Kierston

Map of Cavers Paradise and the Party Zone



The History of Cavers Paradise

by Maureen Handler

I purchased my Sewanee property in 2002 and finished building the house in 2004. Behind my 30 acres was the 120 acre Wild Heart Ranch, which shut down commercial operation in 2004. In 2008, they put some of their property up for sale including their private campground, which was 10 acres. The campground was literally in my back yard. I didn't want someone else to own a campground in my back yard! So I bought it! The day of closing, I went to the campground to take a good close look at it and I wondered 'what am I going to do with this?'. I'll open it to CAVERS! Then all my friends could have a place to camp, but what to charge?? We all know cavers are cheap. We want pay the least we could pay for ANYTHING! Well, I figured \$5 was worth a hot shower, flush toilet and a place when no one would mess with our stuff while we were out caving. So, Cavers Paradise was born. It took a while to repair stuff that wasn't working, since it hadn't been used as a campground for 5 years, some of it was in disrepair. In 2010, we moved what had been the Sewanee Mountain Grotto Pup Fest to Cavers Paradise and renamed it Cave Fest! In 2011, the SERA Summer Cave Carnival needed a place to hold the event. There were about 250 people camped on the property and it was a fantastic event. Since then, it has become a regular hang out for TAG cavers looking for a place to camp. In addition, out of town grottos have been camping there on their TAG trips. Boston Grotto, Bald Eagle Grotto, Nitany Grotto, Philly Grotto, West Virginia University Student Grotto, VPI Grotto, Dallas-Ft. Worth Grotto, Greater Houston Grotto have all been there at various times for their TAG trips. Others come solo, or in groups of 2 or 3. Cavers raised money to help replace the worn out, wood fired hot tub. The new, larger hot tub was fired up for the 2016 Cave Fest. In 2017, the wood fired sauna burned down. The new, better sauna was just completed in August 2018 and is ready for sweating at Cave Fest this year. The best thing about owning a caver campground, is - it's like camping every weekend, but I get to sleep in my own bed. Cavers Paradise is open to cavers year round. Still only \$5 per night to camp. Check us out on Facebook or www.caversparadise.com. Come on up and visit anytime!



Trip Report – Moody Cave by Anne Grindle

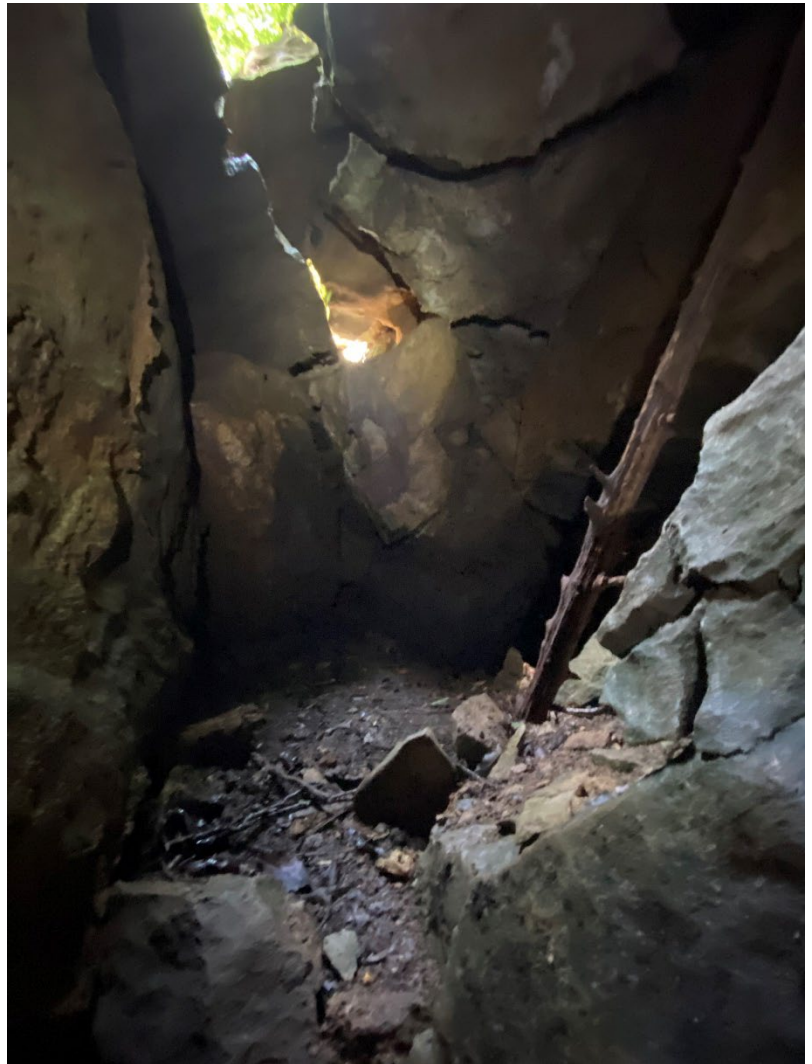
Four Sewanee Mountain Grotto cavers set out on the Alabama back roads, to visit the SCCi new acquisition, Moody cave. John McMacken, Vello Virkhaus, Blaine Grindle, and I made the short walk to the valley floor Sinkhole entrance and delighted in the natural AC as we climbed down .

We knew there was some crawling ahead of us, so we were prepared....we thought! It is not often that you must turn sideways in a belly crawl, but we did , with some choice words in our conversation. We did laugh too!

Soon, we popped out into decent passage, with a stream, which emerged from underneath rock and then flowed downstream into breakdown. Darn, we could not follow the water. So we poked around and found yet another crawl (through more pretties!) that led us to a large room....well decorated! After enjoying that room, we found 2 more large well decorated rooms. Nice surprise! Looking for a way beyond that room, Vello and I checked out a stream passage that was 2 feet wide and 3 feet tall. Got into sucking mud! But the passage did not improve in size, so we turned around. Passing back through the large rooms gave more time for photos. We hunted for more ways to go, but did not push small passages. (wimps!)

Swishing along through the crawlways gave us a second mud layer to take home with us...hee hee! A fun caving trip!

Upper right: entrance climbdown
Lower right: old formations
Photos by Vello Virhaus









Photos by Vello and Anne



Sneak preview of some of the donated goodies in the auction

ON ROPE ONE

- Deluxe Pack (red)
- Knee pads
- 2 head lights
- Small Otterboxes
- 6 locking carabiners
- Mini rack with double hyper bar
- Left handed handled ascender
- Petzl Vertex helmet
- Life support belt



KESON

- Chalkline
- 100 foot retractable tape

KARST SPORTS

- 2 T-shirts
- 10 headlamps

Holly Lynn Selvwv Handcrafted necklace

PMI ROPE



Inner Mountain Outfitters



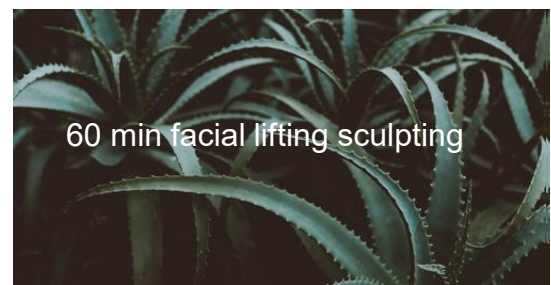
Mooneys Emporium



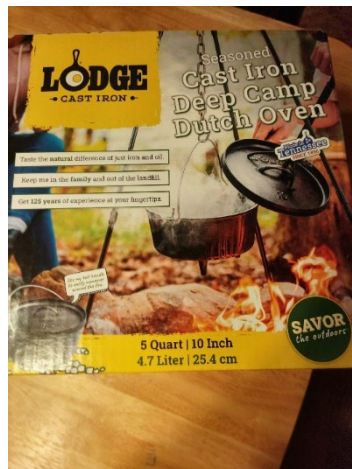
River High Brewery



Li Ho Skin Company



A u t o z o n e



The Caverns 2 sets of 2 tickets



Shenanigans



NSS Bookstore



Tiny O’Hailey books Absolute Darkness, Where Darkness Begins, and Dark Drink



Wandering Flame scented candles



Elations of East Ridge Sexual health gift basket



Mill Kat Healing Arts 60 min massage



Ruby Falls Gift Certificate for two adults and two children. (Must make timed reservations on line)

Len Foote Hike Inn Amicalola Falls State Park – one night stay for two adults which includes dinner and breakfast. Expires 2/28/2024. Instructions for redeeming are on the certificate.

Reflection Riding and Arboretum and Nature Center (Chattanooga) – 4 day passes. Expires Sept 1, 2024. Instructions for redeeming are on the certificate

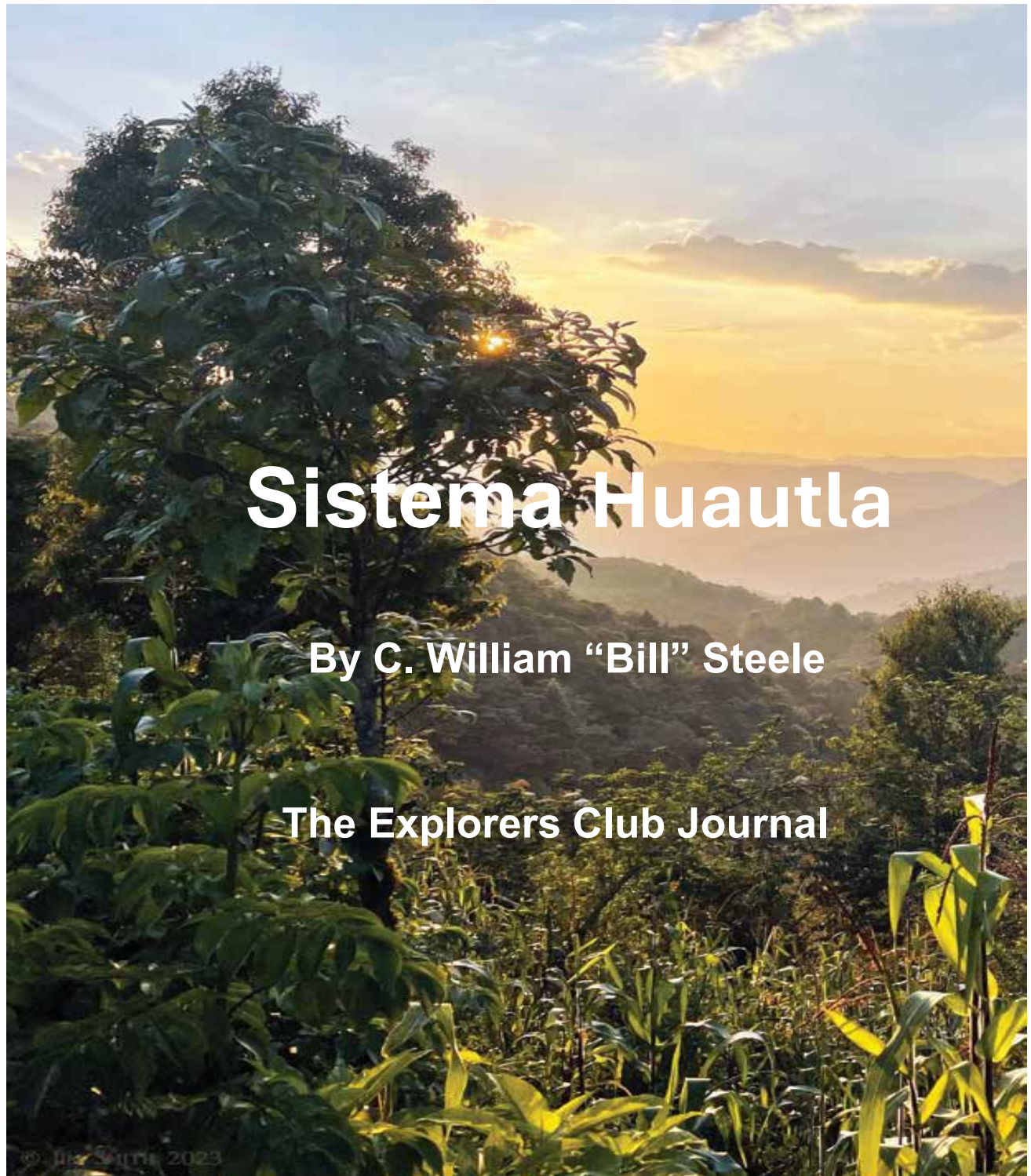
The Caverns Gift Certificate – 2 Certificates. Each certificate is good for 2 tickets (excluding sold out shows or PBS tapings). If tickets exceed this value you must pay the difference. Instructions for redeeming are on the certificate. Expires 12/31/2023

Creative Discovery Museum (Chattanooga) – 4 Tickets. Expires 12/31/2023. Reservations required.

Hunter Museum of American Art (Chattanooga) – 4 guest passes.

Big Bad Breakfast (South Pittsburgh)

Sewanee Mountain Grotto has been a long-time financial supporter of Proyecto Espeleologico Sistema Huautla (PESH). This article, printed in the Explorers Club Journal in 2023, is reprinted with permission of PESH in appreciation of that support.



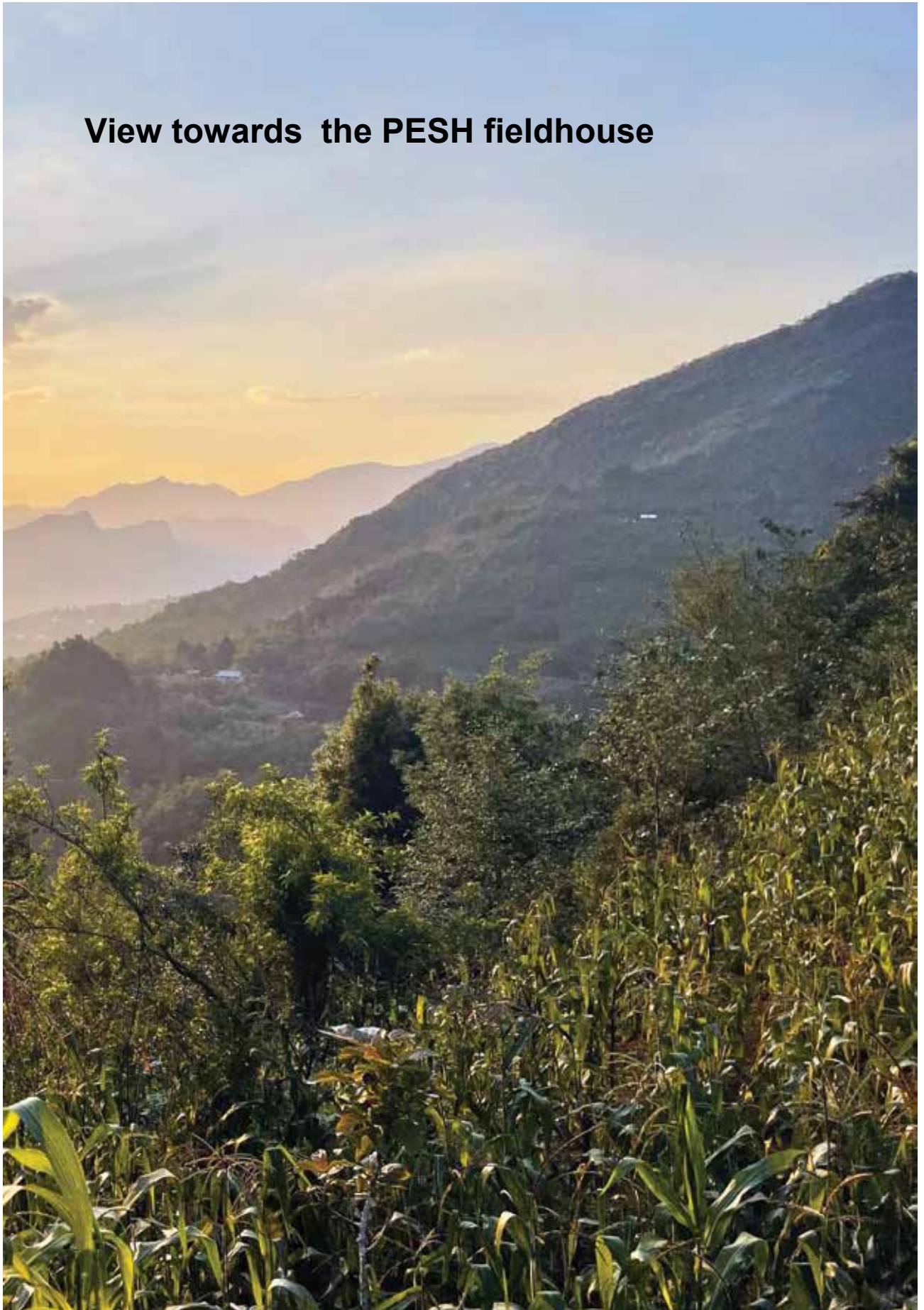
Sistema Huautla

By C. William “Bill” Steele

The Explorers Club Journal

© Bill Steele 2023

View towards the PESH fieldhouse



A FELLOW OF THE EXPLORERS CLUB SINCE 1979, C. WILLIAM “BILL” STEELE HAS BEEN ON 22 EXPLORERS CLUB FLAG-CARRYING EXPEDITIONS, OF WHICH 13 HAVE BEEN INTO SISTEMA HUAUTLA IN THE MEXICAN STATE OF OAXACA. IN 2014, STEELE RETIRED AFTER A 34-YEAR CAREER WITH THE BOY SCOUTS OF AMERICA. HE IS THE AUTHOR OF TWO CAVING BOOKS, *Yochib: The River Cave* and *Huautla: Thirty Years in One of the World’s Deepest Caves*.

It has been 46 years since I first rappelled into the depths of Sistema Huautla, an immense network of integrated caves in southern Mexico, now known to be the deepest in the Western Hemisphere. And in that time, I have led 25 expeditions to this extraordinary recess in the Earth, during which our teams of cavers have added 99 kilometers in length and more than 950 meters in depth to its labyrinthine passageways—from an initial 1.2 kilometers in length and 612 meters in depth to more than 100 kilometers in length and 1,560 meters in depth. And, if several nearby caves, such as one dubbed “Elysium” to the north—a 10-kilometer-long system discovered in 2019 and mapped in 2022 and 2023—turn out to be connected, as we suspect it is, this will add to the total length of Sistema Huautla. With such impressive dimensions, it should come as little surprise that the sheer size of Sistema Huautla has tended to grab the headlines, eclipsing much of the hard science that has been conducted in the caves in the years since they were discovered by geologist John Fish, then a graduate student at the University of Texas, and six of his fellow weekend spelunkers in 1966.

Through our current series of expeditions— carried out under the rubric PESH (Proyecto Espeleológico Sistema Huautla) since Tommy Shifflett and I jump-started a new campaign there in 2014—we are aiming to redress this editorial imbalance as the cave continues to yield a wealth of data in all areas of speleology that is as impressive as the dimensions of the cave itself. In this case we are talking geology, biology, paleontology, and paleoclimatology, as well as in the realms of archaeology, anthropology, and, most recently, oral history, with a new project launched to collect stories handed down through the ages by the Indigenous Mazatec of the area. Collectively, this cave and the time- frame of its formation and providing a window on past climate, as well as abundant information about the creatures that continue to dwell in its chambers. Our work has also revealed that we are far from the first humans and other animals to enter Sistema Huautla—willingly or otherwise. Given the region’s thick uplifted limestone and the abundant evidence of a large karst subterranean drainage basin, John Fish suspected he just might find one of the deepest and longest caves in the world just a few kilometers east of the mountain town of Huautla de Jiménez in the state of Oaxaca. As our expeditions over the years have revealed, he was right, with Sistema Huautla currently ranked 28th longest in the world. Yet, it would be two decades after Fish’s first foray into the cave that the first in-depth geological study of Sistema Huautla would be undertaken—carried out by Explorers Club fellow James Smith, who penned his master’s thesis, *Hydrogeology of the Sistema Huautla Karst Groundwater Basin*, at Western Kentucky University. Smith simply had to wait for enough entrances to be discovered and underground streams to be reached so that his extensive subterranean dye tracing studies could be conducted. His work has since been complemented by research undertaken by one of his own graduate students at the university, Mexican caver Fernando Hernandez, whose master’s thesis *Hydrogeochemical Characterization and Speleogenesis of Sistema Huautla in Oaxaca, Mexico*, was accepted in 2020. Smith and Hernandez have theorized convincingly why the vast system exists, as a dendritic pattern of ancient conduits that began to form some 15 million years ago, which carry an average of 2.5 meters of annual rainfall down to the deep Río Santo Domingo canyon to the south. This

implies that there is much more of the cave system to discover, map, and study into the future. As we've explored 100 kilometers of passages and reached gigantic chambers deep in the mountain range, we've wondered if we might be able to chronicle their formation, knowing that there are two main ways to determine age—carbon 14 analysis of pollen in sediments that have washed in from the surface and/or uranium isotope analysis of its stalagmites. In Sistema Huautla, however, there are few places with enough existing sediment due to the massive amount of rainwater that flows through the chambers annually—leaving us with stalagmite analysis as our best option. Just before our 2018 expedition, I reached out to Matthew Lachniet at the University of Nevada, Las Vegas, a top researcher in the field of paleoclimatology, asking if he might be able to help us with this. He asked that we bring out a sample stalagmite from deep in the cave system for him to analyze to determine the quality of its uranium isotope content. This we did, retrieving a 40-centimeter-long stalagmite that had broken off in a drippy and still very active zone deep in the cave.

From that small piece alone, Lachniet was not only able to obtain a date for the sample's formation of around 112,000 years ago, but, based on its high uranium and low detrital thorium counts, determined that Sistema Huautla just might prove to be an ideal location to carry out speleothem paleoclimate work, if we could recover samples that were chronologically continuous as the one we had provided offered but a brief climate snapshot. During our 2022 expedition we set out to do just that, retrieving a meter-long stalagmite that had broken into four pieces from a depth of 500 meters within the cave. Its tip yielded a date of 110,000 years, its base, a date of 425,000 years. From Lachniet's isotope analysis and the stalagmite's rate of growth, it was clear that the climate varied considerably and changed quickly—from times of slow growth during glacial periods, when it was substantially drier than it is today, to sudden stretches of accelerated growth during the interglacial periods. While Lachniet's work is still in its early stages, he told us that he had rarely seen tropical stalagmites that were as good in terms of isotope content and that it just might prove to be a "Rosetta Stone for Mexico's paleoclimate."

We have been fascinated by Sistema Huautla's cave-dwelling denizens ever since we collected the first troglobitic scorpion we found there in 1980. At that time, we reached out to Oscar Francke at Texas Tech University for help in its identification, thus beginning a collaboration that has continued for more than four decades. Since 2014, the biologist has sent a number of his graduate students to collect specimens. They have identified several previously unknown species of arachnids near the cave's entrances, as well as a newly discovered species of tarantula, which, in a flattering gesture, they named after me, *Hemirrhagus billsteelei*.

The cave has proven be among the most biodiverse in the world, particularly in troglobitic, or cave-adapted (blind, white) lifeforms. In a 2021 paper, Francke and his colleagues reported that the conditions within the cave play an important role for achieving the highest terrestrial troglobite diversity in Mexico. Sistema Huautla contains a total of 35 known species, of which 27 are possible troglobites, including numerous arachnids, millipedes, springtails, silverfish, and a single, described species of beetle. "With those numbers," they wrote, "Sistema Huautla is one of the richest cave systems in the world."

Cave entrances are natural traps for animals. This is especially true with vertical shaft entrances

where animals can fall to their death or find themselves injured and unable to climb out—and this has clearly been the case at Huautla.

We have found the remains of at least four mountain deer (*Navahoceros fricki*), a Pleistocene species adapted to steep cliffs that has been extinct for more than 11,000 years. They either jumped, fell, or perhaps were driven by predators down a 12-meter entrance pitch, which lies at the back of the natural shelter entrance passage. The deer survived to negotiate an 18-meter breakdown slope and left their tracks on a mud floor en route to a 12-meter flowstone drop and a final 18-meter pitch into a terminal room measuring 21 by 49 meters. In this last chamber—which is floored by mud, “popcorn” (a type of calcite formation that looks like popcorn), and flowstone—there are perhaps a hundred tracks all of sizes commensurate with the mountain deer. Two steep mud banks contain skid marks terminating in tracks. One fully articulated and several partly articulated skeletons are present along with scattered bones of at least one other individual. They likely tumbled down into this final chamber and were not able to get out.

During our 2014 expedition, Tommy and I rappelled into a 50-meter-deep entrance pit to recheck the cave for additional passages. We discovered one. Following air flow blowing into jumbled rocks at the base of the entrance pit, we reached a room with a scattering of large bones across the floor. Knowing they weren't from a cow or a horse, we snapped photos, complete with the usual scale. Once back in Texas, I contacted Joaquín Arroyo-Cabrales, a paleontologist with Instituto Nacional de Antropología e Historia (INAH) in Mexico City, who identified one of the bones as scapula of a long-extinct Pleistocene ground sloth. Some of the other smaller bones appeared to be those of an animal resembling a porcupine, but of an unknown species. His curiosity piqued, he asked if one of his graduate students, Iván Alarcón, might join us in the field the following season, which he did. Alarcón, who has since completed his doctorate and is now a paleontologist with INAH, made an incredible find in that bone-bearing chamber, where he spied the top portion of a large skull protruding out of the floor sediments. It turned out to be first skull to be found of the aforementioned Pleistocene ground sloth, extinct for 13,000 years and previously known only from a mandible found in El Salvador 40 years before—its scientific name *Meizonyx salvadorensis*. The rest of its skeleton remains in the cave, and there are plans to retrieve it on an upcoming expedition.

Near many of the entrances we have found ceramic vessels, bones, masonry walls, and, in one case, a natural chamber that contained 40 human skeletons, many of which evinced deliberate molding of their skulls in infancy and filing of the teeth. Both were common practices among the ancient peoples of Mexico and Central America, particularly the local Mazatecs and the Maya to the east, for whom caves hold particular spiritual significance, being gateways to Xibalba, the underworld realm of powerful gods and ancestors.

We know these earlier peoples ventured deep into the caves. How they reached such deep recesses without the aid of lights and modern climbing and rigging equipment, we do not know. Some 10 kilometers away from Sistema Huautla, cavers rappelled 100 meters down a cliff in the Peña Colorada canyon only to discover a stone altar and 2,000-year-old human footprints

Whenever we come upon something we suspect may be of archaeological interest, such as ceramics or human remains, we photograph the finds, complete with a scale and send it on to INAH. We have also had the good fortune to have Janet Fitzsimmons, a noted specialist in the field of cave archaeology, a fellow of The Explorers Club, and, for the sake of full disclosure, my former wife and now close friend and colleague, as part of our team since 1978. Her expertise has proven invaluable.

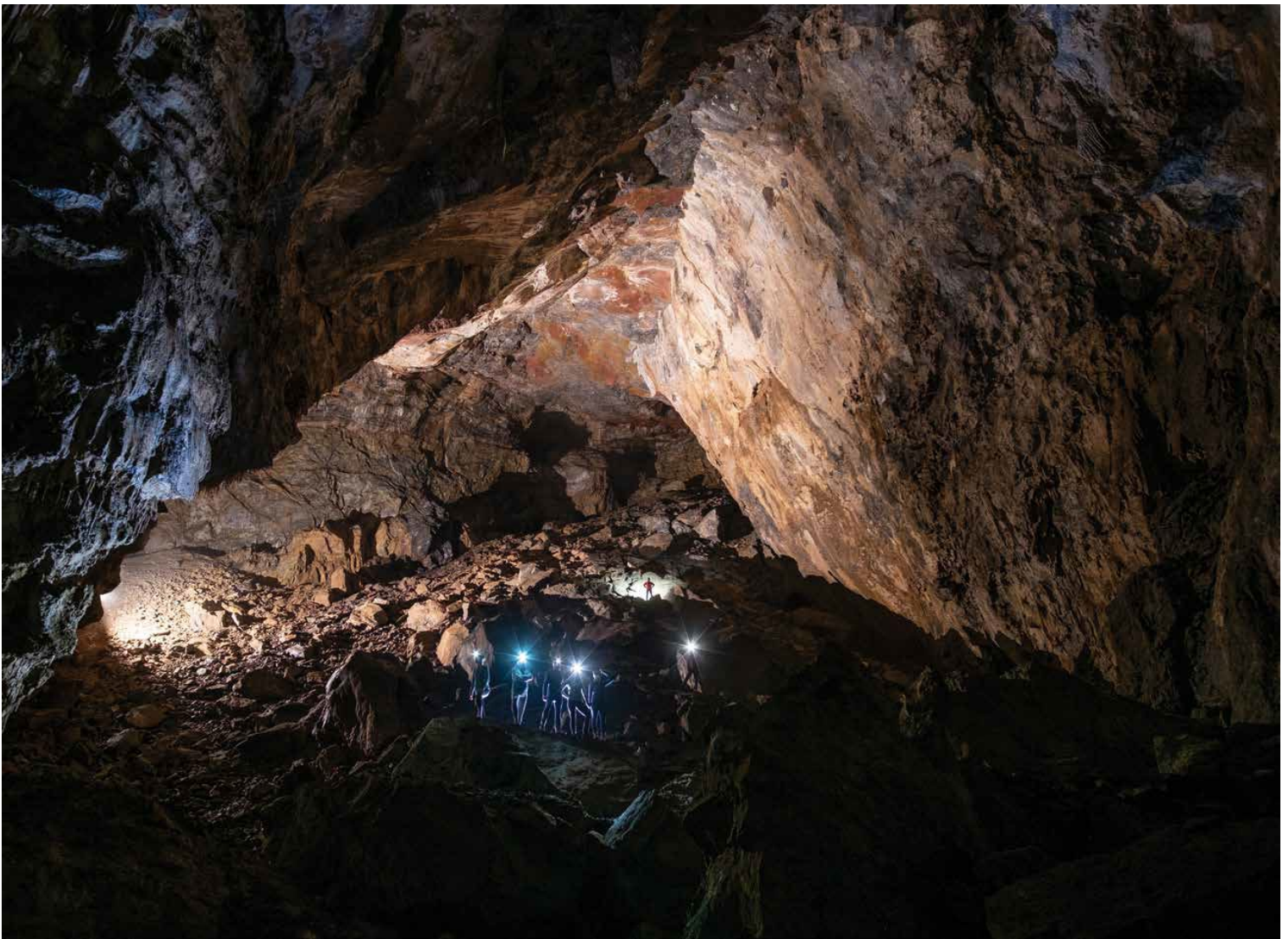
The caves of the Sierra Mazateca—Sistema Huautla included—are a salient feature of the landscape and continue to hold ritual significance for the Mazatec, who have lived around them for at least 2,000 years, based on evidence found in the caves. And, as corn has been shown to have been domesticated in the nearby Tehuacán Valley more than 10,000 years ago, the Sierra Mazateca and its cave entrances have probably been visited for many thousands of years beforehand. This has given rise to a rich oral tradition in the region.

During our 2018 expedition, we welcomed a group of teachers and students into an easily accessible part of the cave. Among them was Montserrat “Montse” Peralta Méndez, a young woman who had sought out the one local teacher who was able to teach her to read and write her Indigenous Mazatec language. There are approximately 200,000 Mazatec speakers. Of them, only around 20 can read and write the language. Montse, who has since graduated from law school, has become important to our project—working as our primary diplomat and translator. In addition to learning the art of caving, Montse has since embarked on an oral history project to record the folklore surrounding the caves. She has been noticeably moved by the reverence we have shown these recesses in the Earth, knowing the ritual significance they have for her people. Since rebooting the PESH project in 2014, we begin each season with a “puja” of sorts, in concert with a local Mazatec *curandero*, in which we beseech the cave spirits for permission to enter and to be granted safe passage.

It is clear, after so many seasons of work, that we still have far more exploration of passages and mapping to do. And while we’re there, we’ll continue to gather specimens and data so that we may learn all we can about what there is to be found in one of the world’s most magnificent caves.



THE LARGEST CHAMBER YET DISCOVERED WITHIN CUEVA ELYSIUM, A 10-KILOMETER-LONG CAVE SYSTEM TO THE NORTHWEST OF SISTEMA HUAUTLA THAT MAY SOON BE CONNECTED AND INTEGRATED.



DEREK BRISTOL CLIMBS TO A LEAD WITHIN ELYSIUM. IMAGE BY MATT TOMLINSON.



CAVER SCOTT TRECOTT TRAVERSES A SECTION OF THE CAVE DUBBED “NITA NASHI,” WHICH WAS FOUND TO BE CONNECTED TO SISTEMA HUAUTLA IN 2022. PHOTOGRAPH BY GREG ROEMER-BAER



TOMMY SHIFFLETT DESCENDS INTO ELYSIUM.
PHOTOGRAPH BY JESSICA PRUITT.



TOP AND BOTTOM RIGHT: THE SKULL OF A PLEISTOCENE MUSK SHEEP (*EUCERATHERIUM COLLINUM*) AND A PLEISTOCENE PIG. PHOTOGRAPHS BY MATT TOMLINSON AND GERARDO MORRILL, RESPECTIVELY..

BOTTOM LEFT: *HEMIRRHAGUS BILLSTEELEI*, A NEWLY DISCOVERED SPECIES OF TARANTULA NAMED IN HONOR OF THE AUTHOR. PHOTOGRAPH BY JORGE MENDOZA.



THE FIRST BIG CHAMBER INSIDE THE SÓTANO
DE SAN AGUSTÍN ENTRANCE OF SISTEMA
HUAUTLA. PHOTOGRAPH BY DAVE BUNNELL



JOHN YOUNG RAPPELS DOWN ALONGSIDE A
WATERFALL DEEP IN SISTEMA HUAUTLA.
PHOTOGRAPH BY CHRIS HIGGINS

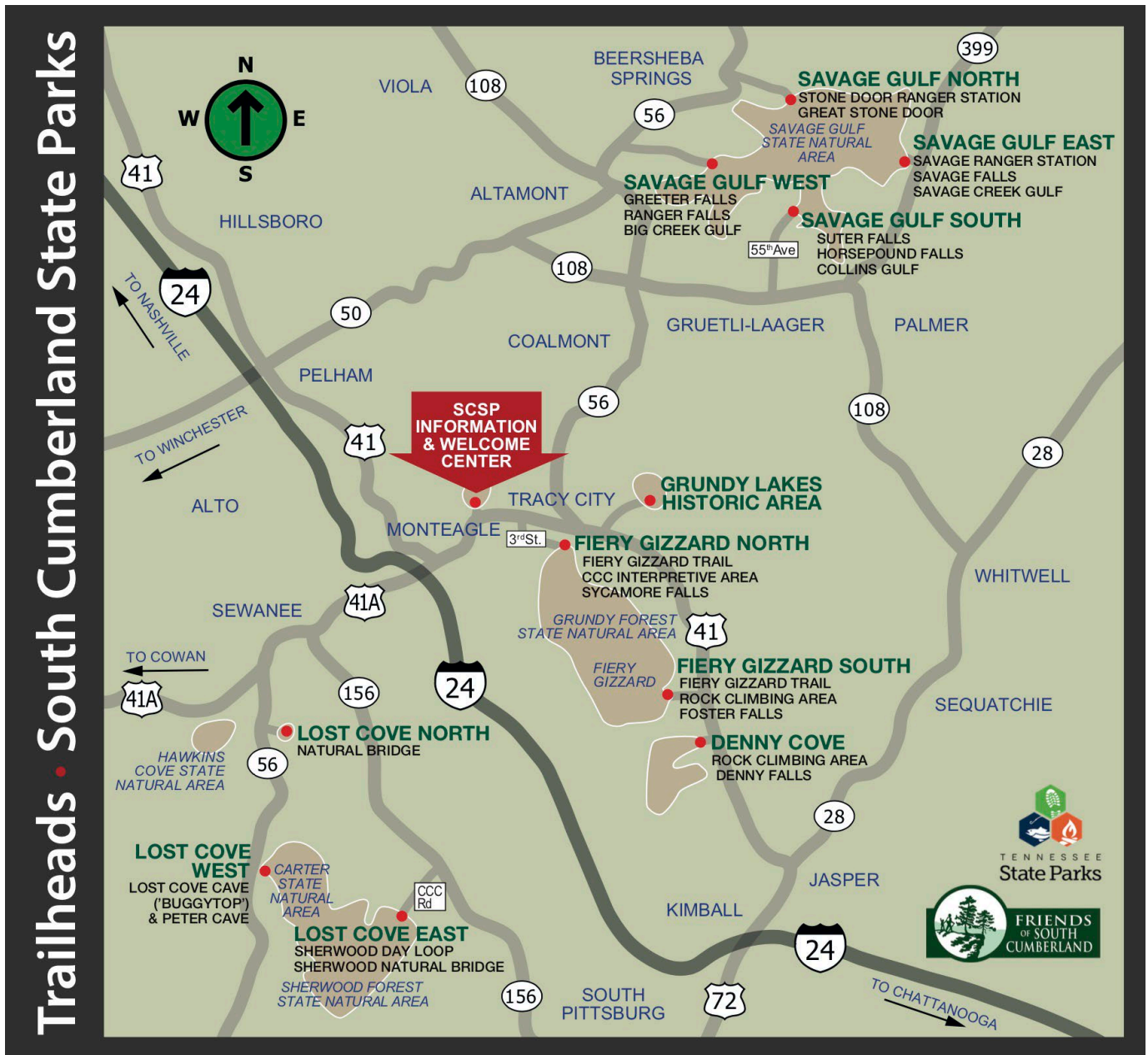


TOP: A 2,000-YEAR-OLD CERAMIC “BLOOD COLLECTOR” IN THE FORM OF A HUMAN ARM. PHOTOGRAPH BY AUDREY STEELE BRIGGS.

BOTTOM: THE PESH TEAM WITH EXPLORERS CLUB FLAG N°228.
PHOTOGRAPH BY BILL STEELE



Let's Go Hiking



For free downloadable offline use GPS maps, go to the following links:

Savage Gulf: https://store.avenza.com/products/savage-gulf-state-park-tennessee-state-parks-map?utm_source=vendor_link

Fiery Gizzard: <https://store.avenza.com/products/south-cumberland-state-park-fiery-gizzard-tennessee-state-parks-map>

Lost Cove: https://store.avenza.com/products/south-cumberland-state-park-lost-cove-area-tennessee-state-parks-map?utm_source=vendor_link

NOTE: Buggytop Cave (Lost Cove) is closed Sept 1. You may hike to the entrance but please do not enter.

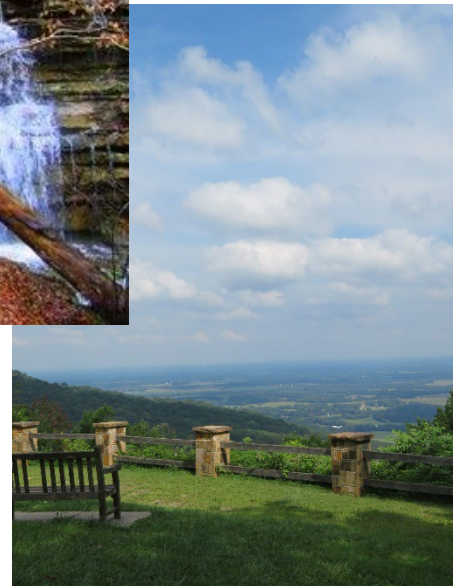
Hiking at the University of the South

The Domain has more than 65 miles of hiking trails for daytime hiking. The signature Perimeter Trail, is a 20-mile loop that circles much of the Domain and is an exceptional hike covering all types of terrain and difficulty. There is smooth paved pathway in the southern sections to steep single-track and exposed rock along portions of the northern section. Total elevation change for the trail is less than 400 feet, but elevation change can happen often and abruptly. The trails wind along miles of bluff overlooking the surrounding valleys and dip below the bluff into mature hardwood forests. Follow the blue metal trail blazes. Secondary trails are blazed in white and branch off of the Perimeter Trails at several locations connecting multiple recreational and focal destinations on the property.

Please remember, The University of the South is private property and trails are primarily for the use of the faculty, staff, students, and alumni of the University of the South. Guests are welcome, but the University reserves the right to grant or deny permission to others who seek access to University property and users assume their own risk. Trails are intended for daytime use only.

Link to the latest trail maps on the University of the South:

<https://new.sewanee.edu/files/resources/trailmap2019c-georef1.pdf>



Sewanee Mountain Grotto Recycles!

Maureen Handler

The Sewanee Mountain Grotto has been active in recycling at caving events since our founding in 2004. The grotto feels this effort coincides with our goal of being conservation minded in all of our endeavors. The funds we receive from recycling aluminum cans goes right back into the caving community in the way of donations to the NSS, SCCI and Chattanooga, Walker County and Huntsville Cave Rescue Squads, to name a few. Please help us with the conservation effort by recycling aluminum cans and plastic bottles at your campsite.

Recyclables can be dropped off at the cans by the pavilion. Thanks for your support of cave conservation!

The Ten Commandments of Recycling

1. Thou shalt separate recyclables from trash
2. Thou shalt NOT throw aluminum cans in trash cans
3. Thou shalt dump out thine own backwash before putting cans in the recycle container
4. Thou shalt separate thine own aluminum and plastic containers
5. Thou shalt NOT dump last night's left over spaghetti in the recycling bag
6. Thou shalt encourage all of thine friends to recycle
7. Thou shalt throw NO TRASH OR GARBAGE in the recycling barrels
8. Thou shalt remove caps from plastic bottles before placement in the recycling barrels
9. Thou shalt recycle whenever possible
10. Thou shalt NEVER take the name of recycling in vain





Thank you to our donors!

