CENTRAL
OKLAHOMA
GROTTO
OF THE NATIONAL
SPELEOLOGICAL SOCIETY,INC

C.O.G.nizance

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The Next Meeting will be on Friday October 12, 2018 7:30 p.m. Hosted by Art and Paula Wallace.

The annual October meeting will be held at the house of Art and Paula Wallace!

ANNOUNCEMENTS

*Northwest trips are scheduled the third Saturday of every month. Contract Sue or John Bozeman for details.

*The Next meeting will be Friday, October 12, 2018 at Art and Paula Wallace.

WHITE-NOSE SYNDROME DECONTAMINATION PROTOCOL, APRIL 2016

This is the latest formal revision of the national decontamination protocol to prevent spread of the fungus that causes white-nose syndrome. This document is the product of a collaborative effort with multiple federal and state agencies and several non-governmental organizations. Go to this website to view the detailed suggestions listed to help stop the spreading of WNS.
https://www.whitenosesyndrome.org/news/national-white-nose-syndrome-decontamination-protocol-april-2016

TREASURER'S REPORTS

SEPTEMBER 2018 TREASURERS'S REPORT

INCOME			**EXPENSES**
Dues	$	18.00	
Dividends	$	00.01	
TOTAL	**$**	**18.01**	
CASH ON HAND	**$**	**116.31**	Balance as of **9/7/2018**
CHECKING	**$**	**145.12**	
SAVINGS	**$**	**2164.49**	
TOTAL	**$**	**2425.92**	

PREPARED BY TREASURER JOHN TALBOT

MINUTES

CENTRAL OKLAHOMA GROTTO
Minutes of the meeting of September 14, 2018

Host: The luxury home of Kelley and Jon Woltz
Attendees: The Woltz', Dale Amlee, Sue and John Bozemen, John Talbot, Carol and Dale Town, the Skillful Ogre
OLD BUSINESS a. we had no return-to-Carlsbad report from DDV; Dale Amlee will nudge him to start the process; b. CaveSim thanked us for our $100 contribution; c. we never heard from that university student who wanted our help in accessing gypsum caves.
NEW BUSINESS a. The Bozeman's were contacted by geologist emeritus Kevin Johnson on behalf of a Stephen F. Austin University colleague who is interested in our gypsum caves; we may hear from him.
TREASURER'S REPORT John Talbot gave reports for June and July.
MEETING CHRONOLOGY: we began at 8:13 and ended at 9:11

TRIP REPORT

Trip Report: Prospect Cave, Oklahoma
June 22, 2018
Trip members: Dale Amlee, Sue Bozeman and Jon Woltz
Written by Dale Amlee

This was our next outing to try and map Prospect cave, located in northwest Oklahoma. This was our first trip out after our usual Summer hiatus, and the weather had cooled a bit and was in the high 80s on this sunny Saturday.

The last time we ventured into this cave, the northern entrance was already occupied by a rattlesnake. So this time we voted to head for the southern entrance and continue on where we last left off on our survey. The vultures we saw last spring in this cave entrance were gone, but one adult vulture did circle over

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head as we suited up and entered the cave. We scrambled along in the cave until we found our last survey point, and continued on from there. Sue and I were doing the instruments, and Jon was doing the book.

The passage was frequently crowded with breakdown rocks and boulders, making for numerous uncomfortable survey shots, trying to hold the compass steady while your body is twisted like a pretzel. Between the breakdown, the stream passage at our feet, and several ceiling channels crossing back and forth, Jon really had a job ahead of him trying to draw the map of this portion of the cave.

We spotted several old cow bones buried in the mud of the passages. No way to tell the age of the bones, so it was anyone's guess as to when the cow had died, but the way the bones were spread out along the passage made Jon comment that the cow must have just exploded somewhere.

We ended up mapping over 200 feet of passage, but decided to quit while we were ahead due to the slight chance of rain in the forecast, and not wanting to get caught either inside the cave or on a hilly ranch road in the rain.

POTPOURRI

One of the Deepest Caves in the World is Even Bigger Than We Thought

While trapped inside Mexico's Sistema Huautla by torrential flooding, cavers and scientists discovered new connections—expanding the map of the Western Hemisphere's deepest cave.

By Andrew Bisharat

https://relay.nationalgeographic.com/proxy/distribution/public/amp/2018/06/sistema-huautla-cave-mexico-culture

Katie Graham was trying to escape the cave she'd been trapped inside with her teammates for the past three days. She held her breath and cautiously swam underwater through the turbid flood that was all but completely filling an underground corridor, ominously dubbed Skeleton Canyon, in Sistema Huautla, the deepest cave in the Western Hemisphere.

Only a few inches of air existed between the water's surface and the roof of the cave. When she emerged, she did so face first, her head tilted all the way back to put herself in the best breathing position.

With her nose and mouth pressed to the slimy limestone roof, she calmly inhaled and made a deliberate effort to move forward slowly so as not to create any waves that would disrupt the bell jar of air surrounding her face. When the air pocket ran out, Graham used her legs as antennae, probing her feet around the pitch-black sump to feel for the next pocket of buoyancy ahead of her. Upon locating one, she'd dive under, swim forward, and again come up face first, her head tilted back.

"On the third time, I came up into something really low," says Graham. "I couldn't see anything. I thought, 'this situation isn't OK; I should backtrack back to camp.'"

For the past three days, Katie Graham, Stephen Gladieux, Tiffany Nardico, Elliot Guerra-Blackmor, and Chase Varner had been trapped 2,199 feet (670 meters) underground, at a low camp in Sistema Huautla. Located in Oaxaca, Mexico, Sistema Huautla is one of the deepest, longest, and, some say, greatest caves in the world.

The team had known a light rain was in the forecast prior to entering La Grieta, one of the many distinct caverns connected to the greater Huautla system. However, the team had assumed the portion of La Grieta in which they were traveling would be relatively dry, even in a flood.

When Caves Play Tricks

Meanwhile, a sixth team member, Fernando Hernandez, was stuck outside the cave. Hernandez was tasked with carrying most of the food for the trip and had planned to arrive hours after the rest of his crew. When he reached Skeleton Canyon, he realized the flood had blocked all passage. His teammates were trapped.

"I tried to look for areas to bypass and shouted to see if I could hear them without any luck," says Hernandez. "I thought I heard them once, but maybe it was just the cave playing a trick."

Hernandez returned to the surface to inform the rest of the expedition about the situation.

For three days, the five cavers rationed a small bag of Clif Bar protein bars and continued to do their work in the farthest depths of La Grieta. They completed several new aid climbs, conducted surveys, and discovered a new passage they dubbed "Powered by Bars," which led to a chamber with a dome estimated to be 492 feet (150 meters) tall, or perhaps larger.

"There were a lot of new discoveries," says Stephen Gladieux. "A lot of excitement down there."

At five in the morning of the fourth day,

(Continued on page 3)

Katie Graham made a second effort to escape in order to catch her flight home. She returned to the water-choked Skeleton Canyon and once again

found herself traversing the passage with her head tilted back, her nose and lips pressed to the ceiling, drawing from the pancake of air.

The water levels had gone down, but not by much. Still, it was just enough for Graham, considered one of the best cavers in the world, to make it out.

The following day, with the water even lower, the remaining team members took the opportunity to exit through the watery Skeleton Canyon and up thousands and thousands of feet of rope. Eventually, they all crawled out of an utterly indistinct hole in the ground and into the blinding sunlight.

Original Exploration

You can't tell what lies beyond a cave's entrance by looking at it. And that is one of caving's great allures—exploring what cannot be easily seen from a safe distance or rendered in advance by technology. The thrill lies in the firsthand experience of making the unknown known, going not because "it's there," as the old mountaineering expression asserts, but because you ultimately don't know what's there, and can't know until you take that first step into the dreadful abyss.

"Caving is original exploration. You gotta go to know," says Bill Steele, one of the world's foremost speleologists, expedition cavers, and cofounder of Proyecto Espeleologico Sistema Huautla (PESH).

Every year since 2013, PESH, an official project of the National Speleological Society and the United States Deep Caving Team, has been exploring, surveying, and studying the Huautla-area caves.

As an organization, PESH has committed to 10 consecutive years of expeditions to Sistema Huautla, always in April, reliably the driest month. This latest expedition concluded the fifth PESH trip—a halfway point for the ambitious project—and it was one of the most successful years yet, despite the uncharacteristically wet conditions.

Following a "lead" discovered last year, the 2018 PESH expedition made a significant connection between a cave named Sotano de Agua de Carrizo and Sistema Huautla. This connection added 4.3 miles, or seven kilometers, to the system's length, as well as five new entrances, making one of the longest, deepest caves in the world even longer and more complex.

Sistema Huautla is now known to be 53 miles long and has 25 distinct entrances. With a depth measurement of 5,118 feet (1,560 meters) from its highest known entrance to its lowest reached point, System Huautla is the deepest cave in the Western Hemisphere and the ninth deepest cave in the world.

For reference, most major caves have only one or maybe two entrances—and therefore only one or two routes through the cave system. For example, Veryovkina, in the country of Georgia, is the world's deepest cave, at 7,231 feet (2,204 meters), but it's a mere 7.9 miles long and has just one entrance.

"Carlsbad Caverns is known for one very big chamber called the Big Room," says Steele. "We've got at least 12 of them in this cave area. One of them is twice the size of the Dallas Cowboys' stadium."

It's the sheer complexity of Sistema Huautla that justifies its reputation as perhaps the world's greatest cave. And, despite having been first explored by cavers in 1966, Sistema Huautla remains a frontier of science and adventure.

"After a lifetime of exploration, we have no way to predict how much of it we've explored," says Steele. "My gut tells me that we've probably only reached two-thirds of it, if that—maybe only half!"

Steele, 69, made his first trip to Sistema Huautla in 1977. This year marks his 25th expedition to the region. He calls Sistema Huautla "the masterpiece of my contribution to speleology."

A Perfect Storm of Geology

Caves become longer or deeper only through firsthand exploration—a physical connection must be made from one cave to the next. Sistema Huautla is the substructure of the Sierra Mazateca mountains, a jungle-covered range of limestone hiding a mind-boggling underworld of porous karst tunnels, waterfalls, and chambers.

"Leads" are places where one cave might connect to another. A lead could be the sound of water in the distance or the feeling of wind blowing through a faint crack in the wall. It could be an enormous tunnel or a crack so tiny a person could barely squeeze through.

Leads are identified, marked, and later explored by a team using state of the art tools for surveying. Modest excavation tactics may be used to remove mud, sediment, or rocks impeding travel. The goal is to make that connection in order to extend the cave's depth or length. Ultimately, a more complete picture of the geology begins to take shape.

"Sistema Huautla is just the perfect storm of geology for cave development," says Steele.

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"We found a complete skull there last year, and we think that there may be two of them," says Steele. "We think the entire skeletons may be there." A team of paleontologists is scheduled to begin working on the site in 2019.

One of the more interesting endemic species is alacran tartarus, a troglobitic scorpion, meaning that it's cave-adapted: blind and with reduced pigmentation. It can also swim, but not breathe, underwater. The degree to which the scorpion is poisonous is unknown.

New species of scorpions are always of interest to scientists because they could potentially be used to develop a more effective antivenin, which could have a significant impact given that each year around 50,000 people around the world die from scorpion stings. According to Dr. Oscar Franke, the scientist in Mexico City who is working with PESH on this scorpion, the best way to learn about the lethality of the scorpion is to either collect a living sample, or be stung firsthand.

"We've been told that if someone gets stung, to keep notes," says Steele. "But that hasn't happened yet."

Appeasing the Cave Spirits

Steele was raised in southern Ohio, saw his first cave at age four, and started exploring caves in Kentucky as a Boy Scout, sparking a lifelong passion for subterranean adventures. He went on to become a national-level director of the Boy Scouts in Irving, Texas, where he now lives and is retired.

He has a robust mane of bone-white hair, a scholarly white beard, and glasses. To local Mazatec people, Steele looks like "someone from Mars," he says. Yet he speaks in a calm, unthreatening demeanor—an asset, perhaps, in communicating with people who are stalwart isolationists and inherently suspicious of foreigners tromping around their lands.

The Mazatec people—an indigenous group with their own language and a regionally dispersed population of around 200,000—have long believed the caves to be entrances to the spiritual underworld. Two years ago, members of the Mazatec community asked the PESH cavers to partake in a ceremony to appease the cave spirits.

"They said, 'you've been coming here for years without doing this, so you got a big catch up to do,'" recalls Steele. He was asked to buy a live turkey from a local market and meet the curandero, or shaman, at the entrance to one of the caves. Here, Steele, having by now "bonded with the turkey," arrived to a scene in which the curandero was leading prayers and chanting in Mazatecan. Plumes of incense smoldered all around.

"I was asked throw the turkey down into a 200-foot pit," says Steele. "I questioned three times if that was being translated correctly, because I couldn't imagine he really meant kill the turkey—but that's what he meant."

Afterward Steele says the curandero asked him if he had ever seen any cave spirits.

And though Steele hadn't seen any spirits, he told the curandero that he did feel their presence. "There's been some incidents, where there should've been a fatality but it didn't happen, that seemed miraculous at the time," he says. "Not that there's a fairy godmother watching over you, but there's some things that have happened that make you think."

At this point, Steele sees one of his primary roles as being an ambassador for caving and cavers—especially to the Mazatec people. This is important not just for the future of caving and science in the region, but also for gaining access to higher caves that could ultimately connect into Sistema Huautla, potentially bumping the cave up in the world rankings of deepest caves.

"Things are looking really good for next year to be able to get into some incredible entrances that we haven't been allowed to go into before," says Steele. "We'll see where they go. They might just lead into a whole new [extension] off to the north."

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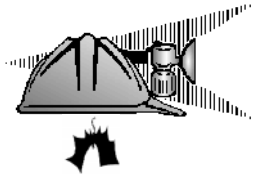
The October meeting will be Friday, October 12, 2018 At Art and Paula Wallace's.



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