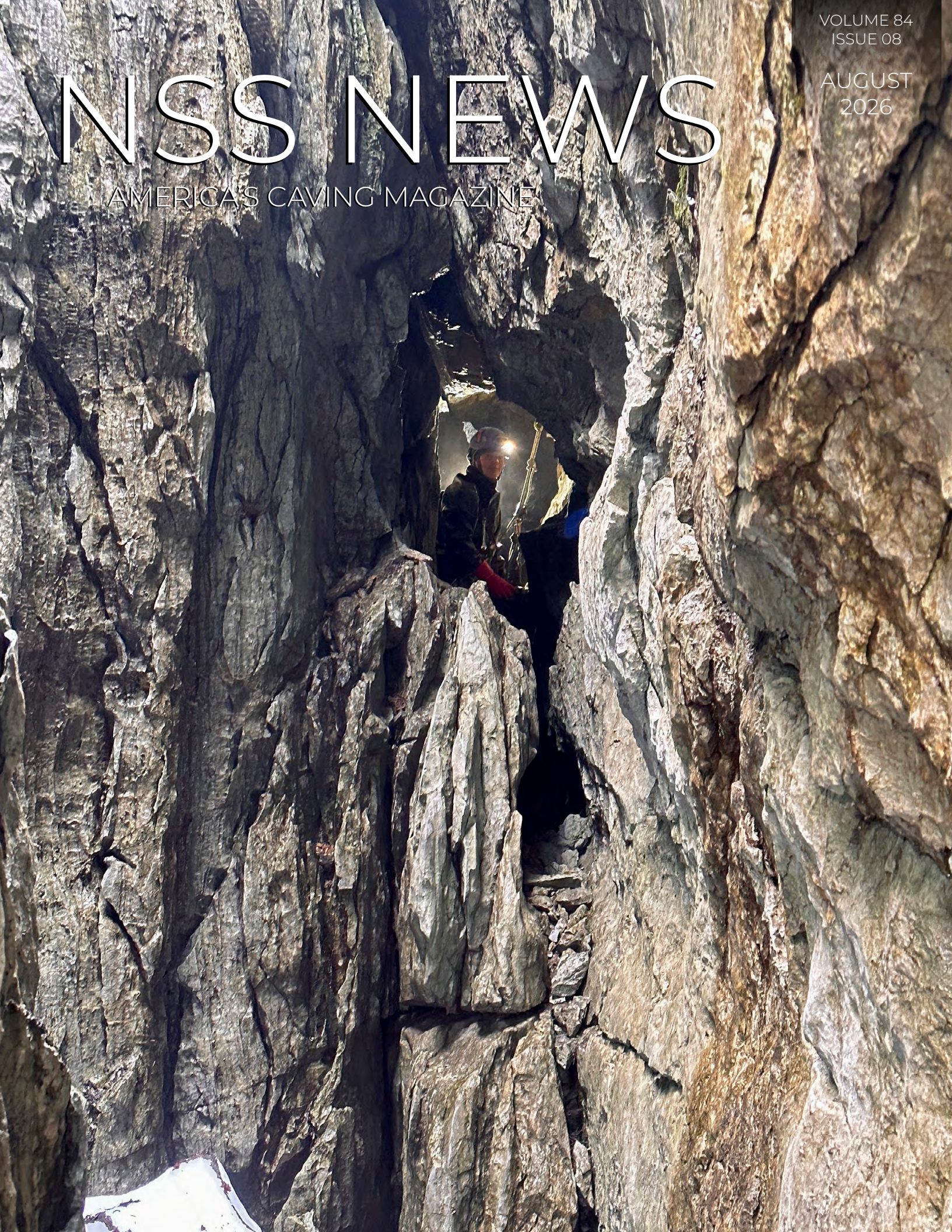


VOLUME 84
ISSUE 08

AUGUST
2026

NSS NEWS

AMERICA'S CAVING MAGAZINE



NSS NEWS

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Please include "NSS News" in your subject line when e-mailing news content, to help sort it out from spam. Thanks!

Feel free to ask questions about submitting features and photos.

Style and submission guidelines can be found on the NSS website:

<https://caves.org/nss-news-submission-guidelines/>

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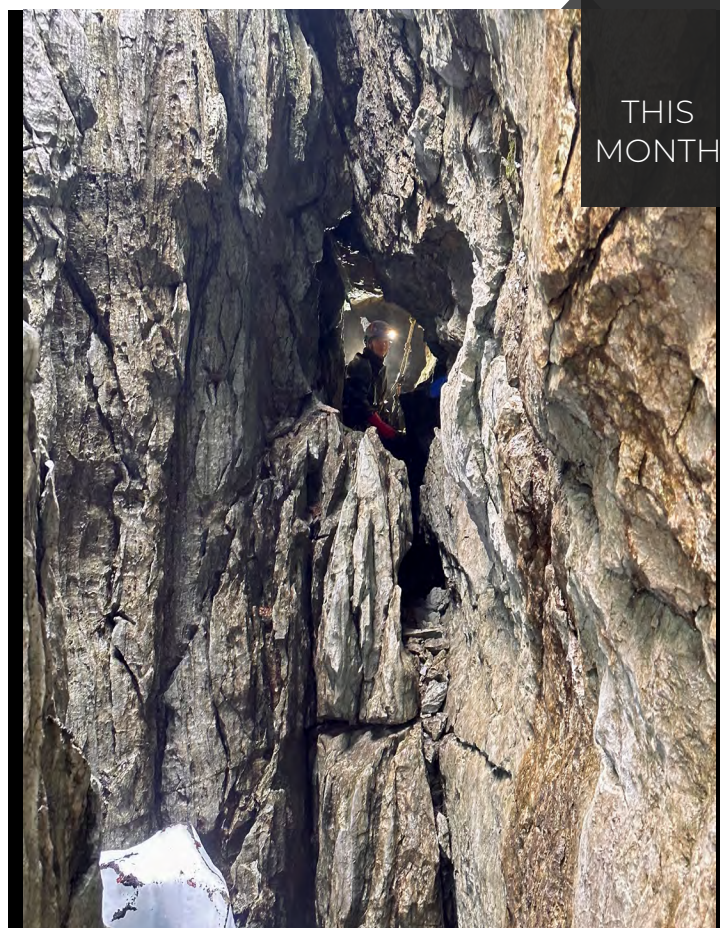
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MONTH

THIS MONTH'S COVER

Reilly Blackwell in a window between
Cranberry and Parsnip. From feature article on page 6.
Photo by John Dunham

Note: To some, the rock shape makes this photo look slightly
distorted. The photo was selected for this neat optical effect.

CALENDAR OF EVENTS

Sept. 3 to 7, 2026

75th Annual Diamond Reunion - Old
Timers Reunion *The Original Underground
Party; Come as you were!* - Dailey, WV

The year was 1950 and the NSS was only
nine years old. Cavers throughout the
region were busy discovering and
exploring caves in West Virginia, and
celebrated that by establishing an annual
Labor Day weekend tradition. Long-time
OTR attendees will have no trouble
reaching into their personal way-back
machines to draw on their own rich
histories of OTRs gone by. New OTR
attendees are invited to choose from any
of our past themes and imagine what
those past decades were all about! Themes
started in 2000, but even before then, the
DooDah Parades were a vast display of
caver creativity. Come join the spectacle
and become a part of OTR history!
Website at: <https://www.otr.org> and
<https://otr.org/2026/01/otr-themes-since-1999/>

September 13, 2026

Celebrate! The International Day of Caves and Karst is on
September 13th!

This is a day set by UNESCO to tell the world about the
importance of caves and karst. Local cave and karst activities
will make the outreach day successful! It's a worldwide
opportunity to tell YOUR world about why we systematically
explore, study, and protect caves and karst! Register your
Dave of Caves Events at: <https://dayofcaves.org>

October 8-11, 2026

2026 TAG Fall Cave-In - Mentone, Alabama

The TAG Fall Cave-In is an annual caving event hosted in the
TAG (Tennessee, Alabama, Georgia) region. This event
celebrates caving and community and is a longstanding
tradition. Hosted by the Dogwood City Grotto (DCG) with the
assistance of grottos from all around, it features a weekend of
caving, socializing, a large bonfire, entertainment, and much
more. The event is also a major fundraiser for the grotto and
proceeds go back into the community to support
conservation, research, and rescue efforts.
<https://dogwoodcitygrotto.org/TAG-Fall-Cave-In>

April 29 to May 2, 2027

NSS Spring regional meeting of the
Mississippi Valley Ozark Region,
April 29 - May 2, 2027 at Shrine
Camp, Buckhorn, MO (past NSS
Convention site). Website is not up
yet, but information will be
available on facebook page [MVOR-](https://www.facebook.com/MVOR-MVOR.ORG)
[MVOR.ORG](https://www.facebook.com/MVOR-MVOR.ORG)



June 14-18, 2027

2027 NSS Convention - Del Rio, TX

!Bienvenidos! For cavers, there's a
reason to return to the Lone Star
State for the fifth time: our biggest
and best convention yet!



Texas cavers welcome everyone to the border city of Del
Rio for the 2027 NSS Convention, June 14-18. This will be
a real Tex-Mex Convention, with piñatas, mariachis, and
of course, caves on both sides of the border.

Website at: <https://caves.org/convention/2027-convention>

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BACK COVER

Reilly Blackwell in Cupola Cave.
From the El Cap article in this issue.
Photo by John Dunham



SOCIETY NEWS

A Message from the NSS Board of Governors

By now, most of you know that Dr. Annette Engel's service as Executive Director came to a close on July 13, 2026. Annette gave real time and energy to the Society, and we're deeply grateful for that and wish her well.

We also know the news came as a surprise to a lot of you, and we understand why. As with any personnel matter, we're not able to get into specifics. That's not a dodge; it protects everyone involved. What we can say is that the decision followed our governance process, was reached unanimously, and came only after careful deliberation.

We would like to remind everyone in our community that each member on the Board has their own personal experience that make them want to give back. Each member is a caver that cares about this Society so much, we volunteer our time and energy to try and further the NSS's mission. All our decisions are made with the best interest of the NSS in mind to the best of our abilities – as we always seek to improve in this regard. As always, please feel free to reach out to us directly with comments, thoughts, and questions to bog@caves.org.

Additionally, what we can do is be transparent about what's happening now, ensure members are involved in what comes next, and provide a clear opportunity for candid feedback.

With this in mind:

Kristine Ebrey has stepped in as Interim Executive Director, and day-to-day operations, member services, and our programs are all continuing without interruption. Kristine is not a newcomer to this work. She has served the NSS in nearly every capacity over the last ten years: as a Director on the Board of Governors, Chair of the Board, Secretary-Treasurer, President, and Finance Division Chair, among others. Few people understand how the Society functions as well as she does, which is exactly why the Board asked her to step in during this transition.

Her focus right now is on supporting

our Division Heads and staff, including several new full-time employees who recently joined the organization, and on strengthening our relationships with partner organizations.

We also want to speak plainly about the Society's finances, as we know it's on people's minds. No one person controls the NSS's money, and by design, no one can. It is the very fabric of how the NSS is organized and built to operate. That said, here are some notable updates regarding how things will operate during this transitional period: The financial approvals that previously ran through the Executive Director now route to the Chair of the Board of Governors, Josh Schultz, deliberately keeping approval authority and financial oversight in separate hands. We have also incorporated the review of audit reports monthly by the finance review committee for any changes to vendors, payroll details, and expenditures missing memo lines. All of the above changes have been approved by our auditors, which we discuss further below.

At the beginning of June, the Board engaged an independent third-party, Mauldin & Jenkins, to conduct a financial audit, which will test our procedures and offer further recommendations to strengthen our financial controls. This process is currently ongoing and is set to finish in the late fall. Once that audit is complete, the Board will conduct a thorough financial review and share findings, as well as proposed changes, with the membership.

The Board has also started the search for our next Executive Director. We're in conversation with The Moran Company, a firm that specializes in non-profit executive searches, to assist in this process. This past week, we sat down with staff and Division Heads to gather their input and advice before beginning the search. As soon as the updated job description is finalized, we'll circulate it to all members. Your networks are one of our best tools for reaching strong candidates, and we'll be asking for your help.

Finally, we want to hear from you – not through email, but directly. Once

the job description is finalized, we will hold a member town hall where the Board will take your questions and hear what's on your mind. We'd also like to use this town hall as an opportunity to collect your thoughts to use during the interview process. Details will be distributed in a forthcoming email to all members.

None of this changes what the NSS is here to do. Our mission of exploring, conserving, and understanding caves is still the same one it has always been. The people who show up for that mission, our members, are what keep this Society moving forward. We appreciate your patience and your support while we work through this transitional period together.

Sincerely,

The NSS Board of Governors



Photo of Kristine Ebrey,
Former Director on the Board of
Governors, Chair of the Board, Secretary-Treasurer, and NSS President



NSS NEWS CHANGES COMING FOR 2027

BY ADAM WEAVER, NSS NEWS MANAGING EDITOR

Hello everyone, as you can see, we have placed this update on the *News* at the start of the magazine this month. There are some big changes coming to the *News*, and I wanted to give every reader, contributor, and subscriber an up-front understanding of what is going to happen! At this year's NSS Convention I received a ton of feedback from members. Almost all of this feedback was positive, but one recurring theme is that folks want the magazine to be "more professional." People have repeatedly said they like the more polished products we made in the *Nature Preserves* and *NCRC Special Editions*. As I explained to everyone who asked, changing the regular magazine to have the more polished look and feel is going to require some changes to how we collect stories, as well as how we put the magazine together. With that being said, I am a cave explorer! So, we are going to explore new options and ideas. So, we will try something for 2027, and if that doesn't work, we will try something else.

Each month in 2027 is going to have a specific theme driving the content for that month. As material comes in, it will get placed into the theme/month that best corresponds with the article. I hope it also drives new contributors to be part of these theme-based issues.

Finally, don't worry, the recurring columns, *Spelean Spotlight*, *Underground Update*, *Spelean History*, *Society News*, etc. will continue to appear in each issue. The planned schedule will be published at the end of each *NSS News* to help contributors target their contributions.

As always questions and submissions should go to nssnews@caves.org both Sarah and myself receive this correspondence and we are working to streamline submission intake.



The 2027 Calendar of Issues:

January – American Caving Accidents (ACA) – ACA serves as an educational resource for cavers and cave rescuers. Each issue of the ACA includes incident summaries based on collected information, along with comments, analyses, editorials, and feature articles on caving safety and accident prevention. Readers of the ACA benefit from the shared experiences of others, have the opportunity to learn from those experiences, and become safer cavers.

February – US Exploration – Stories of discovery, survey, and cartography from across the United States.

March – International Exploration – Stories of discovery, survey, and cartography from across around the world.

April – The Conservation Issue – An annual open-source *News Special Edition* which is free for members and non-members alike, focusing on cave and karst conservation. This issue highlights subterranean stewardship, ecosystem protection, karst-aware policy, and global cave/karst conservation reports.

May – Fortuitous Eccentricity – This theme is because cavers just don't conform well to rules. We find a way around obstacles and some of us can be a bit odd. So, two months out of the year I'm leaving for wonderful stories and art that just don't fit anywhere else.

June – Show Caves of the United States – Working with the National Caves Association (NCA), the Cave Preservation Network (CPN), and Gary Soule, we are going to produce a guide to America's show caves. The goal is to make this issue a showpiece of the magazine, as well as a cherished member benefit to NSS Members, released in time for use on the drive to Texas for convention.

July – US Exploration – Stories of discovery, survey, and cartography from across the United States.

August – International Exploration – Stories of discovery, survey, and cartography from around the world.

September – NSS Convention Issue – A wrap up of the NSS Convention in Texas, with the best photos, art, maps,

presentations, and stories from the event. Also, we'll include an in-depth look at the 2028 Convention plans.

October – Science and Techniques – Submissions about new equipment, new scientific discoveries, and new, vetted methodologies in speleology.

November – Fortuitous Eccentricity – This theme is because cavers just don't conform well to rules. We find a way around obstacles and some of us can be a bit odd. So, two months out of the year I'm leaving for wonderful stories and art that just don't fit anywhere else.

December – BIG Exploration – This issue will focus on the biggest and most interesting discoveries around the world in 2027. We are also going to work with Paul Burger to bring a published list of the year's big changes in the longest and deepest caves.

I hope these themes have your mind whirling with ideas and ways to contribute to these issues. The final change coming to the *News* requires some clarification on what we hope to receive for obituaries. As the organization continues onward, we tend to get more and more obituary requests each month. Going forward, obituaries will be placed into two distinctive groups:

Standard Obituaries: Due to space and logistical limitations, obituaries need to be 250 words or less, and contain only one photograph. All photographs must be submitted as a separate file, and not embedded in any other document. The content may contain links to longer works on other platforms.

Expanded Obituaries: These can be of variable length but will only be accepted for past members who have earned the distinction of one of the Society's highest honors or are a past President of the NSS or UIS. These awards are the *Outstanding Service (OS)*, *Honorary Member (HM)* or *Lew Bicking Awards (LB)* recipients. If you have plans to write an expanded obituary for the magazine please contact the News staff and we will work to get these into the proper themed issue to best represent the contributions of the fallen member.

Thanks for reading this message to the end, and let's get ready for 2027!



Exploration of Sistema Buttersweet (POWIE 2023-2024)

by John Dunham and Christian DeCelle

The Buttersweet tale begins during the Prince of Wales Island Expedition 2023, on July 11 (day three of our time camped in the alpine karst on El Cap Peak). Resenting the prior sunny days, the weather had become unlovely. We all awoke to falling damps and thick fog — much more typical weather for Alaska. The boys from Fast and Heavy (Christian DeCelle, Michael Ketzner, and the indefatigable Alex Fischer) were wandering camp in their already-wet cave gear from the day before, despondently chewing half-reconstituted dinner mix. The rain gear that had seemed like irrelevant weight the previous two days was on full display. Still, we were all excited about the day's potential.

While the boys went off to try to bottom Fast and Heavy (see the other article in this issue of the *NSS News*), Amelia Fatykhova, Reilly Blackwell, and I headed for a deep sinkhole at the center of the El Cap knob. We'd seen this on LiDAR and in person the day before, and Fast and Heavy seemed to be pointed toward it, along with all the significant fractures in the area. Multiple interesting sharp sinks ringed the major pit collapse, and we hoped for a good lead among them. We climbed past Cupola Cave (mapped the previous day) and down into the giant collapse area, but the bottom was too plugged with snow and loose rock to provide any options. We also climbed up several razor-edged ridges to peer down enticingly round and deep shafts, but all of these appeared to end so de-

finitively that they weren't worth rigging. Heading out along the next long collapse area — between Cupola and Fast and Heavy — we worked our way through a series of very good-looking holes in rillenkarrren-covered flat limestone. These all ended in debris and — of course — rain, which picked up as we went along. Finally, cutting down through a long canyon with debris base, snow, and sharp walls, we found an opening worth pursuing.

At the far end of the canyon, a fissure in the wall immediately opened into a round carved pit and a continuing fissure. We could see a bottom about 30 feet down, but it seemed to continue beyond that. Reilly climbed up to start bolting for a rappel and found an ancient piton wedged in the wall. Someone else had been down here, but what had they seen? We could also see a light leak through the fissure horizontally ahead, so while Reilly set bolts, I climbed over the hill to look for the other end. I found it in a sink entrance we'd all been hiking by for a couple of days now, and which had been on the list as a small thing to check. The fissure brought me back through to Reilly on the opposite side of the pit, but it didn't provide better access. I dutifully went back around, and we all rappelled in, only to find a dead end at the bottom. We surveyed nonetheless and, joking about being the non-YAM team, named it Sweet Potato.

Since Sweet Potato went through the

hill into the fissure sink entrance, we carried on from there, noting continuing passage through a window up a wall beyond an ice plug. Labeling this entrance "Parsnip," we climbed back up and crossed the surface to the next entrance, a large, round sink that appeared to drop into a continuing passage heading back toward Parsnip and Sweet Potato. This rappel had a near-rub point, but could be managed carefully and wasn't that long, so we all headed down and started survey. In fact, it connected right across the top to the window we'd seen in Parsnip, but with a pit in the middle. This we bolted and rappelled down to a canyon at the bottom with loose debris and hole continuing downward.[1.1] The sound of rocks falling was promising, so we tried digging a little, but the pile only became looser as we went. When it became clear we weren't going to get through, we finished up the survey by tying into Parsnip and Sweet Potato, with Reilly dubbing our third entrance Cranberry.

Although we were a good way through the day, we still had several hours to work with, so we figured the thing to do was to keep dropping into each hole systematically. The next one proved to be a tight solution hole with good air, no rope required! Kicking in a few rocks, I was able to squeeze down into a standing-height room. Several passages ended immediately, but we surveyed it as Salted Butter Cave and continued on. At the next sink, Amelia and I sur-

veyed a one-shot tube we named Garlic Butter, and Reilly half-squeezed herself between breakdown into a fissure she could see — and probably get into, but wasn't sure about getting out of. We labeled that Trunk Pizza and moved on.

The next hole on the LiDAR had a note next to it on the map from Christian's extensive wanderings: "rocks fall +/- 30ft, looks bad." We rigged a rope anyway to go down and check it out, and it did indeed drop 30 feet to a solid ledge, and then around a corner and down a hell of a lot farther. Rocks I chucked through the hole fell another 50 feet to big echoes — jackpot! The bolting went quickly, and soon all three of us were rappelling a 55-foot pit in a carved canyon. Partway down, we passed an igneous sill like those we'd seen elsewhere in the karst, but this one had a near-fold right in the middle. At the bottom of the pit, we came upon two deer skulls with interlocked antlers and multiple bones; a gruesome end for these earlier explorers.

From the bottom of this first pit, a narrow hole continued, but it opened up again right away and dropped into a steep debris slope. Using a rock as a hammer, we quickly peeled off some of the fractured wall, making the narrows passable, and then rigged a safety line off a couple of bolts to explore farther. When I reached the end of the debris slope, I was in a large, wide pit, with a big space some 50 feet below. The only hitch was a large, sketchy rock hanging on the edge, with a few more on top of that. Just don't touch it, right? I searched for good solid wall areas and set two bolts on either side of the pit to allow a Y-hang that would stay clear of the rock, though one of the bolts was a bit of a reach (Amelia regretted my choice there the next day). By this point, though, we were pushing our out time, so we left dropping the pit for tomorrow and headed out to meet back up with the other team.

On the surface, the rain had passed, and little patches of blue sky were opening up. We had been considering a name for this cave and stayed on our theme roots and butters; salted butter, garlic butter, sweet butter? Buttersweet; this cave surely is.

The next day was bright and sweet again, with scattered clouds as we woke, partly packed up our camp, and then rushed to do some more exploring before we had to hike down at the end of the day. Amelia, Reilly, and I went directly back to Buttersweet and quickly surveyed down to our endpoint from the day before. Amelia rigged

the over-wide bolts I had set from the day before, and we rappelled down the pit, only to find the least likely of alpine Alaskan passages: horizontal walking passage. One direction, which we opted for, quickly became a small borehole.

I first scouted the other direction, only to find a flabbergasting thing: footprints coming out. This smaller horizontal route had a single set of ancient boot prints coming to the edge of our pit. Had they come in the way we had (perhaps scrambling over where we broke some rock to get through, IRT rigging the whole way)? Or from some entrance elsewhere? I scouted about 150 feet farther down this passage, which continued horizontally for that distance, but I could see it opening into a big space ahead.

Leaving the Footprints Passage for later, we opted to survey the downward-trending passage in the other di-

rection. After a short distance, it split in two directions, with a steep, high canyon leading up to the lip of a 40-foot pit, while a larger borehole continued down and left. We surveyed left, also noticing a vertical fault and slickensides that our passage was following. The lip of the breakdown into the continuing Fault Borehole was itself almost a 15-foot drop, and Amelia bolted a solid part of the wall and rigged a redirect to keep the rope free. We rappelled down and continued survey, staring up at carved tubular infeeder passages as we climbed over the boulders. A snaky chimney down between rocks brought us out into a room with a steep slope of loose debris and an apparent end, but before heading back up, we took a quick look into a crawl under the wall — and kept going.

The crawl opened into another large room with a slippery, fractured lip dropping 12 to 15 feet into breakdown below, and a tantalizing dark hole on



JOHN DUNHAM CHECKING ROPE POSITION WHILE RIGGING THE ENTRANCE SERIES - AMELIA FATYKHOVA PHOTO

the far side. There was also a wide crawl to the left that looked like it might offer a better way down, so we started in that direction, but it led instead to a dome (later found to connect to the 40-foot pit above) and a climb into a different pit. The limestone here changed from brecciated to solid, and the bottom of this small pit was through loose fractured rock, and then through wedged debris. Rocks kept falling here, but with no walls to work with, we decided to abandon this sketchy route and went back to our iffy climbdown.

The question was whether to bolt it or climb it, so I started peeling off loose rocks from the edge. After a few minutes of that, and wishing I had a crowbar, enough of the loose material had been cleaned that I felt moderately okay about it, even though the surfaces were coated in fine, slimy mud. Really, we should have given it a safety line. Successfully reaching the breakdown floor, I scouted across while Reilly sketched from above. We set a station on the far side, right by the black hole. Beyond was another pit, close to 50 feet deep according to the disto shots, into a large room at least 30 feet wide. The floor ahead looked like carved limestone with fins and running water. But we were out of time. With some regret, we left this lead for the next expedition, stashing our rope for it and heading back toward the surface. Back at camp, we reported our excellent find, grabbed our packs, and started down.

One weekend later in the summer,

Christian returned to our cave and did some cowboy shit, soloing a 189-foot pit off the far end of the Footprints Passage (Daughter Pit) and reaching a tight constriction above another (Mother Pit). His phone made an exploratory descent. However, Christian did not find another entrance to explain the footprints, and this first visitor clearly didn't climb up the pits from below. Presumably, someone did indeed solo scoop the first drops with IRT at some point in the misty past.

Christian picks up the story of getting through the constriction to Mother Pit:

I made my return to Buttersweet to dig open the lip of the Mother Pit and get as deep as possible. I climbed the peak on Saturday night and came back down Monday evening; I took the day off to give myself more time on Saturday to recuperate from a long week of field work. My primary goals were to widen the opening into the pit to make it safer (i.e., make it wide enough for a normal person to fit through) and to survey what was below. My Saturday evening hike started with a mushroom hunt and ended with me being eaten alive by bugs as I watched the sunset over Dry Pass with Kuiu Island in the distance.

On Sunday morning, I got up, rigged, and rappelled down into the cave. Now a familiar trail, hardly bothered by the death stack in the entrance series, I quickly found myself 400 feet deep and walking towards my objec-

tive. I laid out my gear and started to assess exactly where, at the lip, I would focus my digging efforts. After some geotechnical scrutiny, I patted myself on the back for the careful planning, and I fetched my drill and 12-inch bit. When I brought them together, I was met with an unfamiliar resistance. So, I pulled the bit out, looked at the square, non-SDS shape of its shaft, and, like a toddler with a square block and a round hole, tried to marry the drill and bit by use of force. With a scowl of failure, I looked — and this time truly observed — the obviously non-SDS-compatible base.

Had I brought the spare? Of course I had. Had I brought it down into the cave? Of course I hadn't. So, I jettisoned all my gear (except the safety essentials: spare batteries, lights, and a warming kit) and made my way to the surface, back up the 400 feet of rope. On the ascent, the Daughter Drop felt much taller than usual, my legs felt heavier, and I found myself sweating profusely in the heavy British suit that I had found a few months prior. A temperature of 37.8°F just isn't as cold as I remember. My efforts slowly turned to annoyance, especially as dehydration became apparent. Evidence of this annoyance is now found in the entrance series, where a large protrusion at a pinch point was replaced with a small protrusion decorated by several blows from a large rock.

An hour later, I found myself back at the lip, shorter bit in hand and nearly



REILLY BLACKWELL CHECKS OUT THE DEAD END IN SWEET POTATO - JOHN DUNHAM PHOTO

ready to dig. By the time the pit was an appropriate size, I had wasted most of the day and most of my drill battery. Nevertheless, I was through, and the fun part could begin. I looked back at my survey gear and decided that it could wait until tomorrow. I grabbed my white-out to set some stations, took all the rope I had, and heaved it over the edge. The whip of the loose strand and the thud of the coils sounded far below. Following them, I dropped into the void. The six-second rockfall from weeks prior made it seem all but certain that I would be dropping down a huge pit, reaching 700 or even 800 feet deep! But as always, a stone's throw tends to tell lies to a tired man; my six-second drop quickly became a three-second free-fall upon return. Still, Mother plummeted down a respectable 182 feet, just a hair shorter than the 189-foot Daughter drop, just above.

On the way down, I almost immediately passed a familiar, green sill. It dipped towards me and was offset by about four feet at the pit. It seemed like it had been cut by a fault running perpendicular to the passage I had come from. Although upon closer look, I struggled to see any more evidence of this possible fault. A little further down, a passage

looked to be continuing ahead. A bit below that, a crack going back the way I came appeared. This crack had a few wide spots, which looked like potential leads. A team could spend a few hours attempting to swing around Mother and rig into these leads.

Reaching the bottom, my eyes immediately darted to the crack that continued. A darkness in the crack gave promise of something deeper. After a quick look at my watch, getting close to my callout time, I pulled the hanging rope towards the crack. I stemmed over a bit and looked down. Muddy water flowed over the blue limestone just 25 feet below.

Unhooking the drill from my harness, I pulled the battery and clicked the indicator. One out of the five lights flashed. It was nearly dead. With a whimper, the drill pushed through the questionably sounding breccia and died. A tight turn of the wrench later, I pulled the hanging rope as much as I could and tied it to the bolt. It swung 10 feet off the ground below, but gave me just enough room to see what was beyond. There would be another pit for tomorrow. Dangling, I checked my watch again. I should really go. The way out was just as laborious

the second time. I need to drink more water.

The next day, I returned to an uneventful survey. I strived for frontsights, accepted backsights, and, to the chagrin of today's proper cavers, never achieved both at any one station. I bottomed the crack and reached the pit I had seen the evening before. I looked another 30 feet down into a room where two razor-thin pillars reached upwards. I collected my wet pile of rope to go down.

Now drill-less, I stemmed over the pit to a horn and yanked on it. It was a good horn, but suspicious, as they often are. I climbed up a few feet and pressed all my weight into the protrusion. A few heel stomps later, I was mostly satisfied. While it was a bit more directional than I'd like, I rigged the horn and backed it up on a questionable — but hopefully unnecessary — safety. I descended.

My boots touched down in a puddle. The room extended a short length ahead and narrowed where the water flowed. I flicked off my ascenders, somewhat fumbling with the small, muddy clasp on my croll, and walked forward to meet my next obstacle. I peered under some rocks, and it seemed to get too



REILLY BLACKWELL IN THE FAULT BOREHOLE - JOHN DUNHAM PHOTO

Buttersweet Cave

and other caves of Sistema Butter
Prince of Wales Island, Alaska

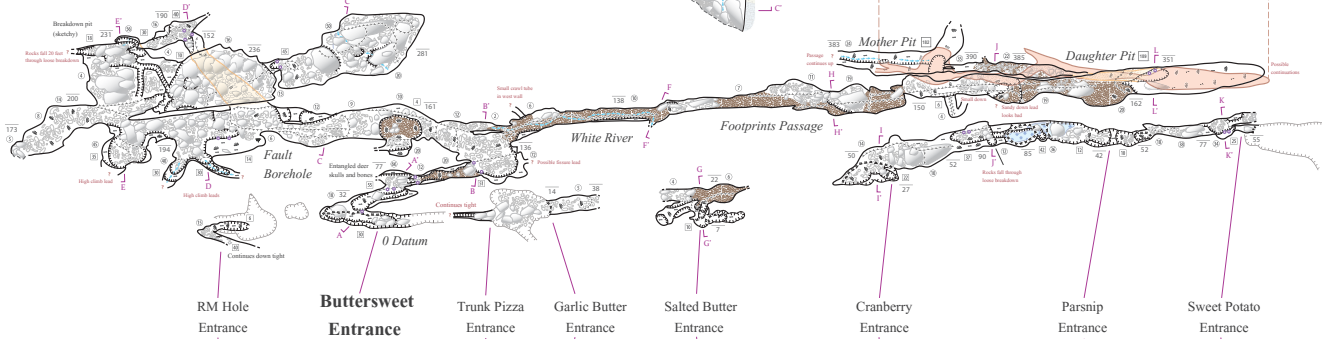
Surveyed Length: 1980 feet
Surveyed Depth: 652 feet
Coordinates (WGS84): reduced 3

Grade 5 Survey 2023+2024 with DistoX2 by:
Reilly Blackwell, Christian DeCelle, John Dunham, and Amelia Fatykhoa

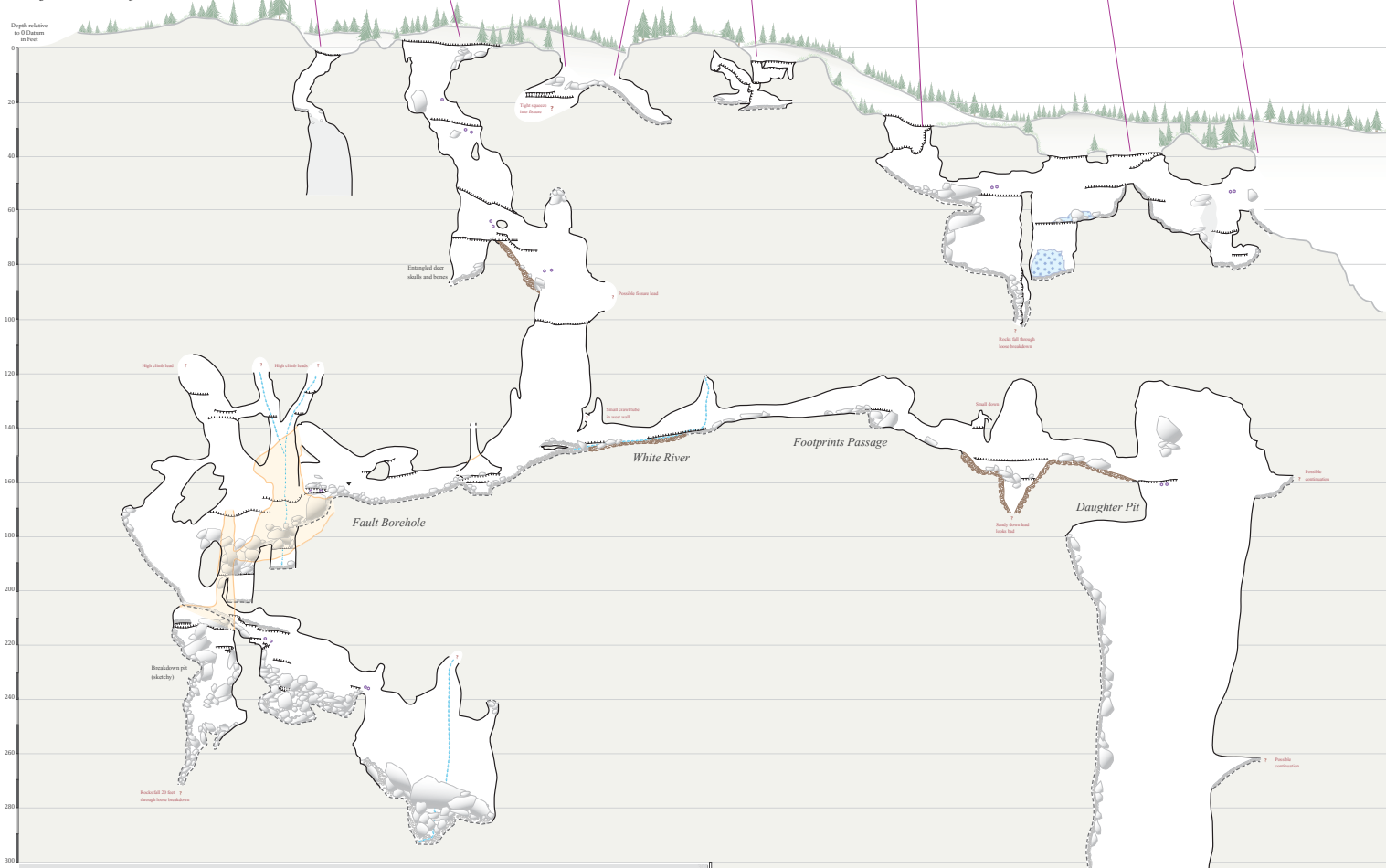
Cartography by John Dunham
0 20 40 60
Scale in Feet



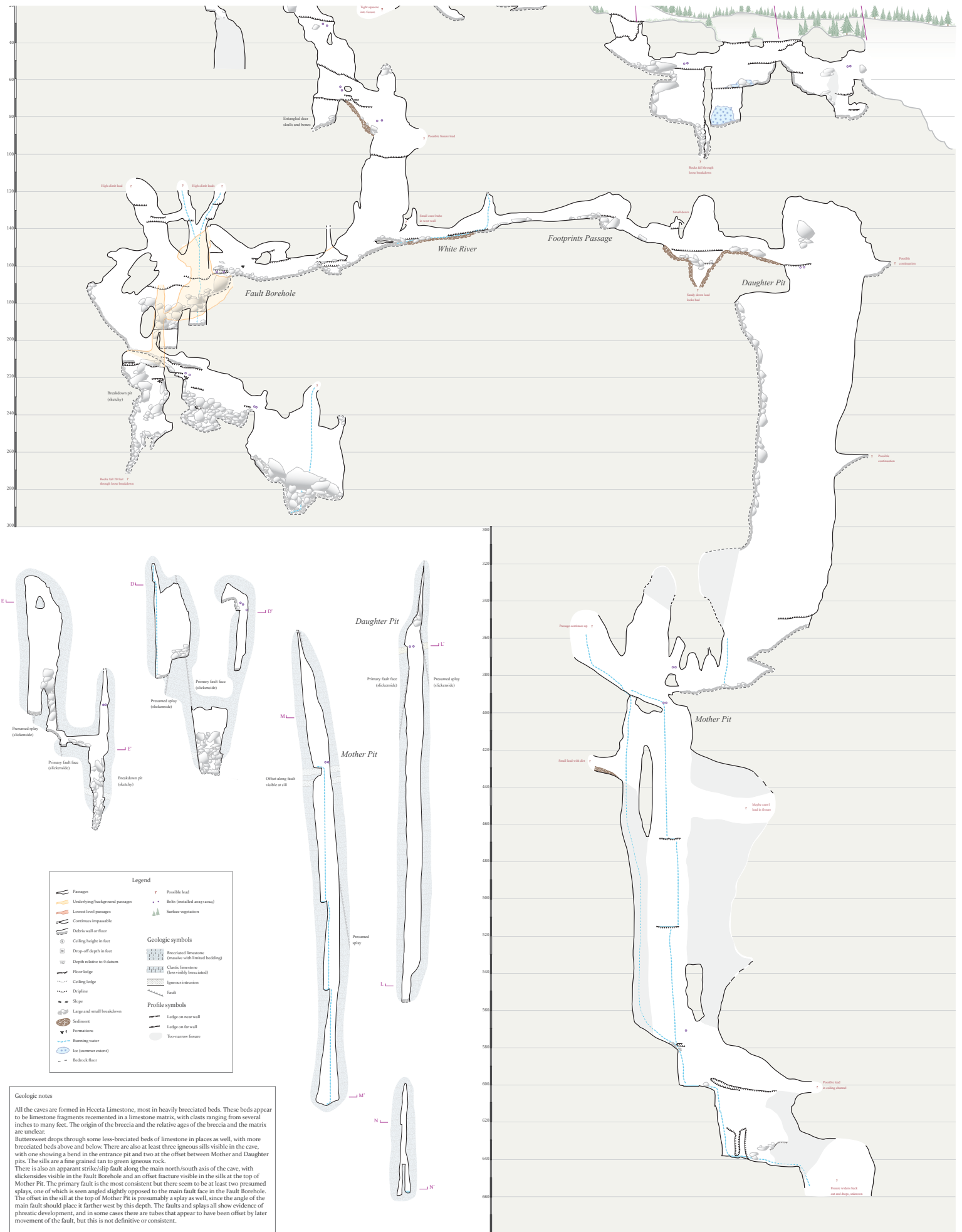
Plan



Projected Profile



Editor's Note: Due to the extreme height and great quality of this map, the map has been duplicated across this spread. This was done to allow readers to view its profile and plan view connects as intended by the cartographer.



tight. Clambering over them, it did the same. I jammed my face into the slot. My helmet ground against the muddy walls with the familiar sound of termination.

Staring forwards, I did what cavers often do and searched for some reason to believe that this 10-foot-long by four-inch-wide crack was not the end. And, like any respectable caver, I found that hope. At the end of the constriction, the walls seemed to move outwards, and the floor seemed to disappear. Surely there was a room ahead. Shooting through with my Bric confirmed it. Somewhere in that blackness beyond the construction, there was a void that was larger than four inches wide. Maybe it was 10 feet wide! I couldn't say. I have stared down enough constrictions to know that a four-inch crack can make a five-inch room appear like a subway tunnel. So, I wasn't hopeful about the prospect of that impending dig. And already, intrusive thoughts of derigging nagged at me.

But ten minutes later, while doing my duty and sketching the profile, I shot my laser into a ceiling channel high above. I shot a few splays along it and ended up back at where I had stemmed across and rappelled in. This was the same channel I dropped through, and it continued all the way over to the other side of the room, over top of my construction! It was maybe a bit too wide and slimy to stem, but it would do! It's a lead — a hopeful way into the blackness beyond the narrows.

I smiled a bit, glad to see that my mission to find the bottom was not a complete success. By the end of the day, I surveyed about 468 feet of passage, adding to the 587 feet I surveyed in late July and the 663 feet surveyed by John, Reilly, and Amelia during POW-IE 2023.

During POWIE 2024, we camped in a different area and didn't make it back to Buttersweet, but Reilly and Christian returned a bit after the expedition to finish out what leads they could. Christian reports the final outcome from July 27:

Reilly and I woke up at eight in the morning to the sound of heavy rain. Our sleeping bags were soaking through as water seeped through the walls of our tent. We had borrowed a tent and found that the rain fly only covered half the tent, and one pole was broken. With a sour face, I packed for the day and told Reilly, "I am not sleeping here tonight."

We had warmed up a bit by the time

we got to the cave, but our clothes had become completely soaked. We quickly undressed and put on our undersuits and coveralls. As soon as I was dressed, I rappelled in, eager to get out of the rain.

Coming down the entrance drop, I passed the buck skulls, still intact. Then I clambered over and down the death slope, reaching the rebelay to bring me down to the main room/junction of the cave. On the way down, I looked up at the precariously wedged pile of boulders above me and hoped for the best, as one must always do when entering Buttersweet. Reilly was right behind me, and when she hit the floor, we set off down the large passage to the left. Along the way, we pointed out the scalloping on the walls and the phreatic tubes in the ceiling/walls.

On the way to the first lead at B19, I drilled two bolts to rig the sketchy 15-foot climbdown that John and Reilly had done the year before. When we got to the pit, I rigged two more bolts and rappelled 45 feet to the floor. The room here was maybe 15 or 20 feet wide and quite tall. The ceiling had a few domes in it that widened the crack above. The floor was covered in large boulders that sloped away from the pit. On the far side of the room, water dripped down from above, washing the rocks clean. I poked around the room for about 10 minutes as Reilly sketched from B20. My best guess for a way on was to try to get underneath the boulders where the water was dripping. I managed to get about five or 10 feet below the floor into a mess of scary, moving blocks. There, I could see the water dripping another five feet down, hitting a floor with smaller cobbles and maybe some sand. I squeezed my way back up and declared this part of the cave dead.

There was still another decent lead to do back at B10/B10A. Reilly went up with the drill to rig it while I worked on carrying the 450 feet of rope out of our ill-fated lead. When I reached her, she was just finishing up her last bolt, setting a redirect to keep our fancy eight millimeter rope off the lip. Reilly zipped to the bottom, and I shot a station over to the lip and then down to her. After a bit of deliberation, I decided that since we shot from B10A, the next station should be B10B. Reilly did not love this idea, but I am quite insistent. Later, we found out that B10B already existed (as a splay), but I excluded it from the survey data.

This drop was about 40 feet deep. As I rappelled, I heard Reilly tossing rocks below. She said it should go with some digging, and she quickly opened a thin

slot that dropped into a pit. Before we rigged it, Reilly asked for the current Buttersweet map. After some quick mental measurements, she frowned and said that she believed we were about to drop down into the small room at B17.

I squeezed through the narrow slot and set a few bolts. Looking up, the dome continued 20 or 30 feet, maybe farther out of sight. Going down, I quickly recognized the room and found B17. Reilly yelled from above and shot down to me, closing the loop (the loop closed "Good" in Compass). After finishing the survey, I climbed up and removed the hangers from this area of the cave.

To end the day, Reilly and I walked down the footprints passage towards the Daughter Drop. I was happy to see that the White River remained white; the passage here has a trickling stream lined with a shiny, white, potentially biogenic coating. We gingerly stepped by it and made our way to the edge of the 189-foot pit. I tossed a few rocks down it, reminded Reilly that this was the pit where I dropped my phone, and then we turned back to check out the upper inverted-keyhole lead that I had marked the year before.

When we reached the lead, I struggled to access it. It was about six or seven feet up, and I did some weird, wide-chimney stemming before mantling on a lip of dirt to get in. I had expected to find myself looking up a dome towards Cranberry cave, but crawled five feet in and looked down a three-foot diameter tube. This tube angled downwards and seemed to slope back under the main passage. I tossed some rocks in, and they did not seem to roll far. I was ready to go home, so I said screw it, popped out, and left it as a lead. If it goes anywhere, I figure it'll drop down into the tight fissure along the fault between the Mother and Daughter Drop.

On the way out, Reilly and I stopped in the room halfway down the footprints passage with a large phreatic cross-section. We had pondered this passage on the way in. The passage seemed to have two tubes continuing, both bisected by a fault in the middle, giving them opposing semi-circle shapes. The upper tube is tight and seems to end quickly. The lower tube is the one the passage continues in and is quite round, except for a flat wall on its left side, where a joint/fault is slightly enlarged. I believed that the tubes had just run along the fault, but the fault was generally resistant, so it did not appear rounded on that side. Reilly believed we were looking at faulted and offset phreatic tubes (the passage forms, then the faults off-

set them). I did not originally see it, but I think this is the more likely explanation at this time.

Finally, we were heading out of the cave. Reilly stage-derigged, I wrestled

ropes out, and we reached the surface around two in the afternoon. We easily had enough time to get down and home in the light.

The surveyed length now stands at 1,980 feet, and the deepest point in Buttersweet is now -652 feet, making it the fourth-deepest cave in the Tongass after Snow Hole, Viva Silva, and Fast and Heavy.



AMELIA FATYKHOVA AT THE BOTTOM OF THE 50FT PIT -
JOHN DUNHAM PHOTO

EXPLORATION ON ALASKA'S EL CAPITAN PEAK

BY CHRISTIAN DECELLE

Located on northern Prince of Wales Island within the Tongass National Forest, El Capitan Peak has long been at the heart of Alaskan caving. Despite measuring a meager 2,572 feet, its geography is dramatic. The peak rises immediately up from the ocean, and its three-mile-long ridge is flanked by steep cliffs, hundreds of feet high. The dramatic relief, combined with thick limestone and a wet, rainforest climate, merge to form some of the deepest and most interesting caves in Alaska. Today, much of the peak is managed as a Geologic Special Interest Area, prioritizing the ongoing exploration, inventory, and survey of its karst and caves.

The mountain hosts some of the island's finest caves, including El Capitan Cave — the state's longest cave and only tour cave — as well as El Capitan Pit. Dropping 598 feet, the pit has been known for decades as the deepest limestone shaft in the US. While the mountain's peak is capped by an insoluble conglomerate, the ridge itself is defined by the Heceta Limestone, which generally reaches elevations of 2,200 feet and extends down to its contact with the non-carbonate Bay of Pillars Formation at 1,000 feet. This contact acts as a hydrologic boundary, and springs dot the mountain's flanks at this elevation, with the notable exception of the southern drainage, which discharges from El Capitan Cave near the coast.

The Heceta Limestone is a 420-million-year-old record of the ancient, tropical seas that formed along an island arc somewhere offshore of the ancient continents. The regional volcanism quieted just long enough for the massive, Silurian reefs to flourish. Sadly, the Klakas Orogeny, a mountain-building event, marked the end of the Silurian reef buildup, capping our limestone at a maximum thickness of a few thousand feet. A little more than a thousand feet of limestone underlies much of the ridge on El Cap.

Organized cave exploration began at El Capitan in 1987 when Kevin and Carlene Allred made their first trip to the island (now known as POWIE I). Their work mapping El Capitan Cave quickly transformed from a one-family vacation into years of full-on expeditions, with cavers traveling from across the coun-

try to join in. By 1988, the discovery of El Capitan Pit by Kevin Allred, David Hatfield, and Harvey Bowers solidified the mountain's reputation as a place for deep caving in America. By the close of the 1990s, the effort had documented at least 22 caves around the mountain, six of which were found on the alpine ridge, setting the stage for the modern expeditions that continue to push deeper into the mountain's unknown.

The most significant caves found during this time were El Capitan Cave, Eagle's Roost Cave, El Capitan Pit, Snowhole, and Blowing in the Wind Cave. El Capitan Cave, at 12,512 feet long, still holds the record for the longest cave in Alaska. Snowhole, for a time, was the deepest cave in Alaska at 649 feet deep, sporting a 328-foot entrance pit. By the end of the 1994 survey, Blowing in the Wind was 5,663 feet long, 578 feet deep, and one of the more fascinating alpine caves in Alaska, with passages shooting off in all directions — not just straight down.

After the mid-1990s, exploration of El

Capitan waned as cavers' focus moved to other areas such as Dall or Heceta Island. A few pit caves were reported by local cavers and forest service employees in the mid-2000s. In 2010 and 2011, efforts around Snowhole and Blowing in the Wind were revived by Erin Lynch, Johanna Kovarik, Mark Fritzke, Kevin Allred, and others. They would push these caves further and deeper, with limited support compared to the expeditions of the 90s. These would be the last recorded trips up high on El Capitan for some time.

In 2021, I worked as a Forest Service intern and, after getting comfortable with the idea of being alone in the deep woods of Alaska, ventured up the ridge to explore the area and relocate El Capitan Pit. On this trip, I saw more intense karst than I had seen anywhere else and found a seemingly innumerable number of holes to check. One of these, which I had believed was El Cap Pit at the time, would later become Fast and Heavy. These would be the first caves found on El Cap in a decade and would kick off the most recent exploration.



Alex Fischer showing off what it's like to hike up El Cap. Photo by Reilly Blackwell



The 2024 POWIE Crew (L-R Back Row: Ian Clarke, Hannah Keith, John Dunham, Anna Harris, Jared Higgs, Christian DeCelle, Reilly Blackwell, Alex Lyles, Gooseberry Peter. Front row: Michael Ketzner, Alex Fischer, Amelia Fatykhova). By Michael Ketzner.

In 2022, the Prince of Wales Island Expedition was revived as a joint effort between the Tongass National Forest and cavers from across the country. These cavers included Alex Fischer (NM), Amelia Fatykhova (MA), Ellen Whittle (WY), Ian Chechet (WY), Jess Coffey (WA), Gooseberry Peter (AK), John Dunham (VT), Michael Ketzner (TN), Hannah Keith (AK), and Alex Lyles (CO). This expedition primarily worked in the lowlands around Prince of Wales because a good trail up El Capitan was not known. But some long, miserable day trips by myself, Jess, John, Alex Fischer, Michael, and Amelia would blaze a new trail up El Cap and produce survey in two new caves: Jessica's Razorblade Rodeo Cave and Fast and Heavy Cave. These were high up in the alpine karst and were left at the end of the expedition with leads still going down fast!

In 2023, POWIE returned with a similar team, plus Reilly Blackwell (VA) and Ian Clarke (AK). A small team camped on top of El Cap, leading to successful pushes into numerous small caves, the discovery of Buttersweet Cave, and the completion of Jessica's Razorblade Rodeo and Fast and Heavy. In Fast and Heavy, the author, Michael, along with Alex Fischer and Reilly, would find the bones of a 3,770-year-old raven. They

would also discover the Bass Drop, a 380-ft-deep pit dug open by Alex after proclaiming the cave dead just a few days before. They would push it down to a depth of 760 feet, making it the deepest cave on Prince of Wales Island. However, it was still the second-deepest in Alaska, behind Vive Silva on Heceta Island. Nearby, after finishing the Razorblade Rodeo, John, Reilly, and Amelia made a mad dash to push the newly found Buttersweet Cave to nearly 300 feet deep, intersecting hundreds of feet of horizontal passage, usually unheard of in the alpine. Buttersweet surprised Reilly, John, and Amelia when they found footprints in a creek passage — a confusing relic from an old scooper — left in a cave that they had to dig open! Buttersweet would later be surveyed to 1,980 feet long and 652 feet deep, with two pits over 180 feet deep beyond the Footprints Passage.

POWIE 2024 returned to El Capitan in full force, with everyone camping in a large sinkhole on the north side of the mountain. They explored, rain or shine, until they literally got washed off the mountain by an atmospheric river. This year focused on the area around Snowhole Cave, away from their earlier expeditions to the south. Despite the intense karst, countless sinkholes, and more than 10 people on the mountain,

it was surprisingly difficult to find anything new piercing into the mountain below, so most discoveries were made in previously known caves. Gooseberry, Hannah, and Ian Clarke successfully walked above Eagle's Roost Cave, dropping a new pit that led down into a passage in the cave, previously known for its warm air and the weird smell of death.

Following Mark's strong urging (who was simultaneously being washed off a nearby mountain), the author, Alex Fischer, and Reilly spent nearly all of POWIE 2024 freezing to death in Snowhole. Every day, they would wake up in a soggy, cold tent to hike up to the obscure slot, rappel down hundreds of feet, and slowly rig and survey their way through the slimy, wet, 37-degree cave. Every night, they would climb out into the pouring rain, take off their suits, and fall asleep in their wet underlayers, hoping they would dry by the next morning. After each trip, the cave grew muddier, wetter, and colder until, finally, a small trickle of water disappeared into the rubble. By the end of the expedition, they had surveyed 300 feet deeper than before, making Snowhole 911 feet deep, the deepest cave in Alaska!

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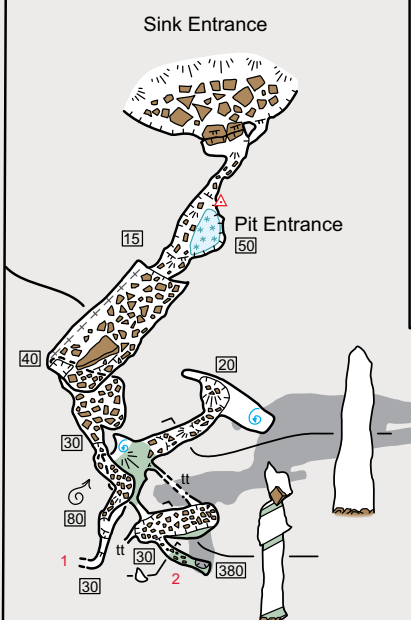
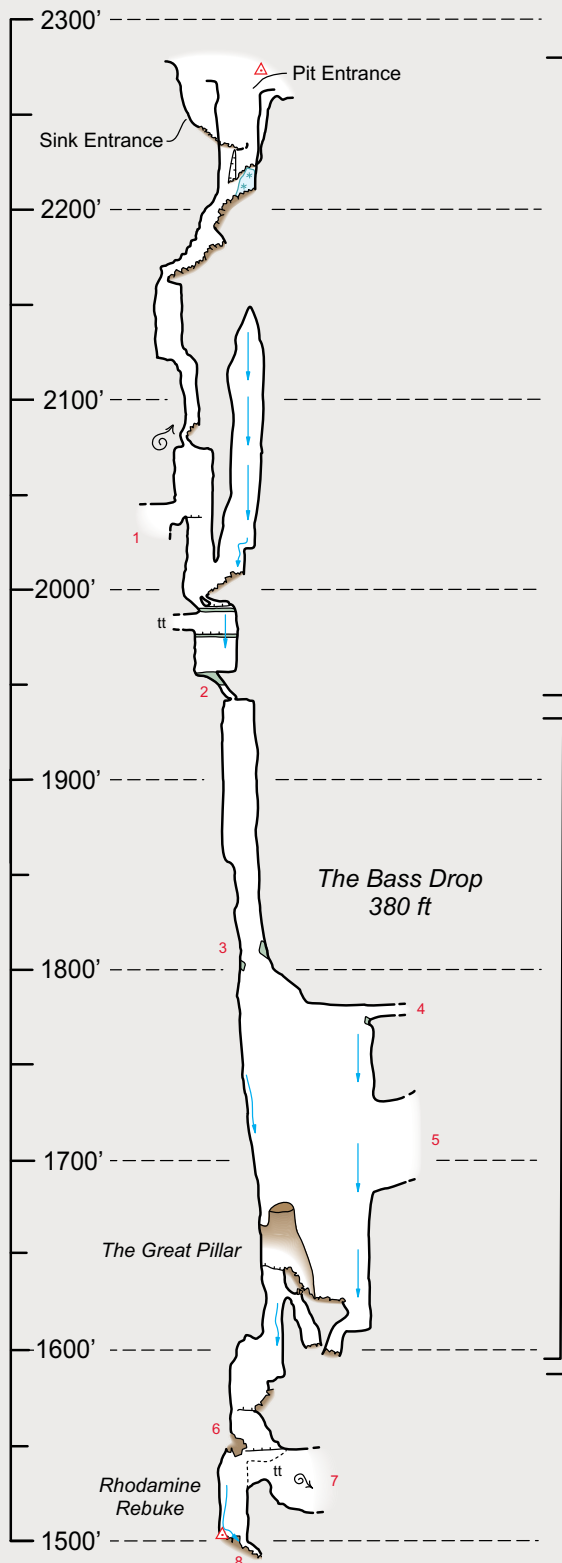
From 2021 to today, El Capitan has seen thousands of hours of work by cavers and hundreds of sinkholes checked. These efforts have more than doubled the number of known caves on El Cap

from 29 to 62. The meticulous survey of these caves, large and small, has revealed a wide network of vertical shafts and horizontal levels all across the mountain. While the story these

surveys tell us is still hazy, I have no doubt that continued work will bring a geologic history of this mountain into focus.



AMELIA FATYKHOVA IN BLOWING IN THE WIND CAVE BY JOHN DUNHAM



Fast and Heavy

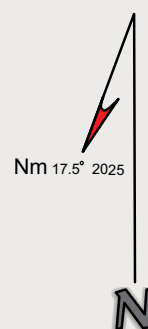
TONGASS NATIONAL FOREST
PRINCE OF WALES ISLAND, ALASKA
TONGASS CAVE PROJECT

Grade 4 Survey with Bric4
Reilly S. Blackwell, Christian DeCelle,
Alex Fischer, Michael Ketzner

Surveyed length: 1548 feet
Vertical extent: 771 feet
Depth of Bass Drop: 380 feet

© 2025 Christian DeCelle

Bedrock is Heceta Limestone (Silurian).



1. tight slot to 30ft drop
2. 3,770 year old bird keel collected
3. vertical fault, north side 4 ft lower offsets a dike
4. 5H3W horizontal passage perched on dike
5. large fissure with debris slope continuing upwards
6. thin beds 176/37w
7. inch wide gap may widen after 5 ft
8. drain completely plugged by cobbles confirmed after digging

LEGEND

- passage wall
- - - wall of underlying passage
- 10 vertical drop, depth in feet
- tt dipline
- breakdown
- underlying passage level
- cobble and rock fill
- water flow and falling water
- slope (splays downward)
- igneous dike
- survey point
- tt passage too tight for entry
- air movement
- snow fill
- higher change in ceiling height
- fault

BOGAR & BENNETT CAVE DOCUMENTATION

BY ROBERT GRACE, RICHMOND AREA SPELEOLOGICAL SOCIETY

In late March 2026, I stumbled across a video on social media of a man saying, "This is the sinkhole in my parents' backyard." Like any other caver, as soon as I saw that mesmerizing black void, I couldn't resist. I immediately messaged the video's poster, Mr. Bogar, with some questions.

Mr. Bogar informed me that this land has been in his family for several generations and was his family home while he was growing up. The sinkhole was always there, but there was only a small hole at the bottom, just big enough for him to crawl into as a child. After moving away for 20 years, he came home to find that the small hole he used to play in as a kid had grown with him. After locating the property and applying a LiDAR overlay, I saw his sinkhole (highlighted green in the photo) but could not help but notice the monster insurgence to its west. Mr. Bogar told me it was a cave called Bennett's Cave that he had explored as a kid.

After looking in the Caves of Virginia

book, we found that only the location and name of the Bennett Cave entrance were documented. There was no data for the sinkhole, and nothing yet from the Virginia Speleological Survey (VSS).

Finally, on Friday, April 24, I had the chance to visit the sinkhole and assess the situation. I arrived at the property in Covington, Virginia, at 1 pm and met Mr. Bogar at the front door. I introduced myself and told him I was excited to see his sinkhole!

After a short walk to the back of the property, we came upon a massive sinkhole measuring approximately 30 feet in diameter and 20 feet deep. We walked to the bottom, and finally, my excitement was satisfied.

At the bottom of the sink was a cave mouth three feet tall by six feet wide. I stuck my helmet into the mouth, and my light illuminated an entrance passage about 30 feet back, about 15 feet deep, and on a 60-degree slope. Although it was hard to tell whether air was pushing or pulling through the

cave because of the cave's neutral air temperature, there still seemed to be a slight breeze.

At the bottom, there was about 10 feet of passage to the left and to the right; both paths were dead ends. On the back wall of the entrance room, there were several back-filled phreatic tubes that seemed promising digs, each with a small gap I couldn't see to the end of, but I could feel air moving through at least one of the tubes. After that, I noticed 60-80 small stalactites along a fissure in the roof of the intersecting back passage. I headed back up. On my way out, I noticed a 10-foot vertical upclimb into a small upper room. I stopped there and exited the cave.

After taking a few more pictures, we walked back to where I parked, and I asked him if he knew his neighbor with the massive insurgence. He told me they had bought the property while he was away and hadn't met them yet, but that they wave to him every time they pass one another. "I'm sure you could go knock on the door," he said.



SCREEN CAPTURE FROM ORIGINAL VIDEO POSTED.
PHOTO PROVIDED BY AUTHOR

Without a second thought, I thanked Mr. Bogar, told him I would keep in touch, and went next door.

I knocked on the neighbor's door, and a woman answered. I told her who I was and why I was there. She told me that only two other trips had been taken to the cave since she moved there in 2013. Those groups were Virginia Tech's VPI Cave Club and a man saying he was with the Smithsonian. She told me there was a dirt road that I could use to drive closer to the cave. Once I reached the insurgence, the view was astonishing. There is a creek winding through the shale, running right into the lime-

stone outcrop, which spills into the entrance on the left side of the photo.

The mouth of the active system, with the creek flowing into it, was about six feet by six feet. Mr. Bogar claims that when he was a kid, the water ran into the rock face very quickly and was too rough to even step in. He believed that if he did, it might just sweep him away into the mountains! Today, this mouth is much larger, and the water is much less violent. There were two raccoons asleep inside, and I didn't want to disturb their nap. I didn't do much; I just peeked inside the entrance. Afterward, I moved on to the other entrance,

which was much larger.

This is what I believe to be the original entrance, named Bennett Cave. It is a massive entrance with a six-foot ledge at the bottom. I traveled about 25-30 feet into the cave before I had to crawl and could see another 40 feet ahead of me, but I didn't keep looking because I was alone. There is a lot of feces at the entrance, from what I could only hope were the two raccoons I saw in the stream entrance. There are lots of side leads to be explored and much more to check out!



LIMESTONE OUTCROP AND BENNETT CAVE ENTRANCE.
PHOTO PROVIDED BY AUTHOR

SPELEAN SPOTLIGHT

OF JENNA CRABTREE

BY APRIL GOCHA

How did you first get interested in caving?

Jenna: I visited Carlsbad Caverns when I was 11 and got bit by the caving bug. Throughout middle school and high school, my science projects were all about caves. I made cave dioramas. I grew up with cave pictures with Pat Kambesis on my wall (I didn't know who she was at the time, but it was a pretty picture!). So I guess the passion and the interest have kind of always been there. When I was in college at Texas A&M, I changed my major from history to environmental studies after seeing a marmot for the first time. My academic advisor suggested that I join an outdoor or environmental club to make friends, so I joined the Aggie Speleological Society (ASS). ASS introduced me to their off-campus affiliate club, the Aggie Grotto, an outlet into the caving community. Everything happened quickly — in October 2021, I went on my first wild cave trip ever with the Aggie Grotto, and by June 2022, I was already at Convention with an internship lined up at Carlsbad Caverns for the summer. Soon afterward, I came out of a cave and saw the surface, and I remember thinking, 'This is what I'm going to do forever.' I didn't know how or what, but I knew it was my thing now. I've been on that path ever since.

What about caving hooked you?

Jenna: I had a bit of a rough childhood — my parents were divorced, and I just didn't know who I was, what I was doing, or where I wanted to be. So, going to Carlsbad the first time was a very spiritual experience. Seeing how everything was so imperfectly yet perfectly laid out made me think: if these stalactites manage to form, weirdly enough, and somehow all of these forces came together, then perhaps I also have a weird purpose. Not only was the cave beautiful, but it also felt like home. Every single time I go to Carlsbad, it's like my atoms and Carlsbad's atoms were right next to each other during the Big Bang. My nickname is GI Jenna because I was in the army, and I'm not a very sappy person and don't cry often. But all of my friends bully me a little be-

cause as soon as we turn into the park and can see the sign for Carlsbad, even when you can't yet see the cave, I'm in tears. It's a mixture of awe and wonderment, but also kind of spiritual, like I should be here. It feels like a hug and a kind of reset for me. I get a little weird if I haven't gone in like six months; even if I'm visiting other caves, I'll get stressed out and grouchy. But then I go back to Carlsbad, and I'm fine. Nothing is the same as that cave.

You had an internship at Carlsbad Caverns National Park — what was that experience like?

Jenna: I applied for the internship through the Mosaics in Science program. It was designed to get minority groups into parks to help with diversity by providing a pipeline into the National Park Service (NPS), while also giving hands-on experience in parks doing something we're passionate about. I was very fortunate to get the internship in summer 2022, and my manager was Erin Lynch. When I started at Carlsbad, I had only been to two wild caves, so there was really just raw excitement and passion.

The experience allowed me to grow as a caver, and I look at Carlsbad as where I grew up and took my first baby caving steps. My job was the Night Skies Assistant, so even though it wasn't directly focused on caves, I got to do a lot of cave-related stuff with the small teams at NPS. I learned about cave management, which is really my interest. We did radon monitoring in backcountry caves that are closed to recreation, and I think that was really good for me because I was able to visit like eight caves in four days. Living in College Station, TX, our nearest cave is Whirlpool, two hours away. So having all these trips at my fingertips at Carlsbad was really explosive for my growth. It was also really rewarding to build the night skies program at Carlsbad because there hadn't been a monitoring program like it before.

I visited Washington, DC, during my internship to present my research to the Department of the Interior. I met Deb

Holland, the first Native American Secretary of the Interior, and Charles Sams III, the first Native American Director of NPS, so that was a really big moment. I also visited my first vertical caves and learned to survey that summer, too. Ultimately, it was some of the best days of my life during those five months. I got to live in the park too — when I was younger and visited Carlsbad, I told my dad that I was going to live and work here. I pointed out one of the houses on the hill, and that's the house that I got to live in during my internship. So it was a really cool 'circle of life' moment.

What's next for you?

Jenna: I recently quit my job as an administrator for the Texas A&M Hospitality, Hotel Management, and Tourism Department. I'm really glad that happened, because I was working 70-hour weeks and only caved like twice in six months. So it really took me to my breaking point and made me realize that if it's not for cavers or for a cave, then it's just not for me. I start working at the National Cave and Karst Research Institute (NCKRI) in August 2026 as Administrative and Conference Coordinator. I have realized that I want to be in the caving community somehow, and it just so happens that I am extremely type-A, and so admin seems to be my groove. I think part of making yourself known in the caving community is plugging in where there's a deficit and where you have a strength. I was a Chaplain's Assistant in the US Army for seven years, which kind of primed me to deal with large groups spread out geographically. It's been nice to find my niche. I would love to work at Carlsbad someday, but the climate is just not there right now, so I'm biding my time.

Can you tell us about your involvement with the Aggie Speleological Society and Aggie Grotto?

Jenna: I am probably the proudest member of ASS/Aggie Grotto; it really is my passion project. I joined in 2021; in May 2022, I became the Secretary, and in May 2023, I became President. Since May 2024, I've been the Cave Community Liaison, acting as an advisor. When



I joined the grotto, we were primarily a party grotto and had been left in ruins by COVID. We had a huge institutional knowledge gap and barely any experience. After joining and getting my feet wet at Carlsbad, I was able to better understand what constitutes good caving practice versus what I had been told by someone who had been in the grotto a semester longer than I was.

In the past few years, we've really had this golden age where the Aggie Grotto has returned to its true mission since its founding in 1973. Back in those days, they weren't a social club — they were there to cave, and if you weren't caving, you probably weren't in the club. We've rewritten the Aggie Grotto constitution and actually established a vertical training program, and now it's kind of crazy because other student grottos are asking us for advice. We've been able to help other grottos like the Roadrunners Speleological Society at UT San Antonio and the Cavers of Central Kentucky at the University of Kentucky. And it's been really amazing to see our club grow from ~20 to ~110 members when I was president.

As an advisor, I could not be prouder because many ASS/Aggie Grotto members work and are taking full course loads, and this is one of their extracurricular commitments. We'll drive eight hours on a Friday night to get to a cave, sometimes even going to Oklahoma and New Mexico, so it's really incredible how big the barriers are to actually getting into caves, but how much caving we're actually accomplishing. We've started producing like a lot better cavers, too, and are starting to get positive name recognition. It's kind of hard to explain to 20-year-olds why stewardship is so important. But it has been easier to show them — if you don't want to cave with jerks or unsafe people, then it behooves you to do your best while you're in the grotto for these two to four years, and then you know in 20 years you're going to have super skilled, super safe, super smart people to cave with. We're planting the seeds now, and we're going to reap them later. So it's been really exciting to see the evolution. It's like a big snowball, and we just keep picking up speed.

What's your favorite caving activity?

Jenna: I work a lot on cave repair with Mike Mansur in the Cave Formation Repair Project. Getting to work with him is my favorite type of caving — when you make a match, and it's a really good one, he lets out this squeal that's better than a fresh Dr. Pepper after Lechuguilla. I love when pieces kiss, you get to put them back together, and all is right in the world. Also, a big

part of it is just being able to hang out with Mike and get his life advice. If you kind of listen low, he says some really funny stuff sometimes! I'll be running some restoration projects at the end of this year, going into next year, that I'm really excited about.

Do you have a caving bucket list?

Jenna: I do, but I only have one item left on my list, which is kind of crazy because I'm only 26. I wanted to go to the top of Carlsbad, which is the Spirit World, and the bottom of Carlsbad, which is Lake of the Clouds — I've gotten to do both of those. Another item on my list was Lechuguilla, and I recently took a really awesome trip there. I was more interested in Lechuguilla for the spirituality rather than the name. But my last bucket list item is to see the Snowy River in Fort Stanton, and I'm going on a trip there in September. So then I guess everything else will be a cherry on top!

Do you have a favorite piece of gear?

Jenna: My cave harmonica. I can't play, so I think it's funny when people are trapped like 1,200 feet underground, and they can't escape it. I'm trying to learn how to play, and I think everyone around me wants that to happen too.

Is there something you've never done in a cave but you would like to do?

Jenna: There are show caves where you can take kayaks or boats through, which is mind-blowing to me. I can't really swim, and I hate water — it's just so gross. I hate being wet in a cave. But I love the concept of being protected in a raft and not having to swim.

Do you have any caving quirks?

Jenna: I extremely enjoy show caves. A quirk of mine is that every show cave I go to, I'm investigating all sorts of really niche nerdy things. Like what the pathway is made of — is the composition of the limestone in the pathway matched to what is in the cave? I also have a Carlsbad tattoo on my knee, and I named my new Subaru Carl!



JENNA CRABTREE RAPPELLING INTO HELEN'S CAVE, NM. PHOTO BY KEVIN LIOW



A Lost Sky Record: The Vanished 1910 Halley's Comet Engraving of Cueva del Indio, Puerto Rico

by Ángel M. Nieves-Rivera, Madeliz Gutiérrez-Ortiz and Ángel A. Acosta-Colón

Introduction

Comet 1P/Halley is a well-documented periodic comet. Its 1910 return triggered widespread public anxiety and intense press coverage, whereas the 1986 return unfolded in a very different context, with coordinated scientific campaigns (International Halley Watch) and modern observational instrumentation (NASA/IHW 1980; Yeomans 1991). Puerto Rico offers a useful contrast between these two moments: more ephemeral, popular-material responses during the 1910 apparition and institutionalized scientific observation in 1986. Here we bring together field and archival evidence linking two cave engravings/graffiti to the 1910 apparition which left marks before the Puerto Rican scientific contributions during the 1986 return employing the late Arecibo Ionospheric Observatory.

The 1910 passage of Halley's Comet generated intense public interest and, in many places, fear. Sensationalist press and speculative commentary about "poisonous gases" in the comet's tail provoked behaviors ranging from commercial spectacle to panic in some communities (Silva and Mirabel, 1988). Histories of the 1910 apparition emphasize the mix of scientific curiosity and popular anxiety (Hart, 1985; Yeomans, 1991; Kean, 2025). The 1910 return of Halley's Comet was a globally visible event documented in newspapers and memoirs; it produced both scientific observation and popu-

lar panic in many localities, including Puerto Rico. Contemporary accounts indicate that the comet was spectacularly visible in April and May 1910 and provoked strong reactions in the press and public. Cultural responses to the comet — ranging from satirical prints to personal refuges — have been noted in historical analyses. In Haiti, a voodoo doctor sold comet pills to ward off the comet's evil influence (Ridpath and Murtag, 1985).

Puerto Rico's archaeological record shows long-standing attention to celestial phenomena (for example, indigenous alignments and coastal petroglyphs). Prehistoric and historic-period material culture, instruments such as astrolabes, and manuscripts likewise document local interest in astronomy (Academia Puertorriqueña de la Historia, 1985; Oficina Estatal de Conservación Histórica, n.d.; Rodríguez Álvarez, 2010). Ana Roqué de Duprey (1853–1933), an active scientific correspondent, recorded comet observations in the late nineteenth and early twentieth centuries (Roqué de Duprey, 1923; Roqué de Duprey, n.d.). These textual sources provide a local observational context for interpreting material traces that may represent imagery of the 1910 comet. Field recording followed standard nondestructive rock-art protocols (metric mapping, photography), and no sampling was carried out. Archival research involved reviewing digitized Puerto Rican newspapers and selected secondary sources on Halley's ap-

paritions. Comparative iconographic assessment relied on published site reports and photographic documentation (Acevedo-González 2006; local archival photograph from Villar-Roces 1976). Attribution rests on iconographic correspondence, documentary context, and surface weathering visible in historical photographs and during in situ inspection prior to recent covering.

Ayoroa Santaliz (1990) reported the presence of the engraving in the cave in his prose work on the folkloric aspects of northern Puerto Rico. However, no date is provided, and it is unclear whether he saw it firsthand: "Arecibo was La Cueva del Indio [The Indian Cave], and its romantic inscription chiseled in stone: VISITA DEL COMETA HALLEY EL 18 DE MAYO DE 1910 [VISIT OF HALLEY'S COMET ON MAY 18, 1910], with the celestial body sculpted in bas-relief; and the humorous-erotic question of Ramón del Rivero, Diplo, to every pretty tourist who visited the country: 'Don't you know La Cueva del Indio?'"

Cueva del Indio (Arecibo)

A black-and-white photograph preserved in a local encyclopedia (circa 1975) shows a bas-relief comet motif with an inscription reportedly reading "VISITA DEL COMETA HALLEY EL 18 DE MAYO DE 1910" (Villar Rocas, 1976; Ayoroa Santaliz, 1990; Acevedo-González, 2006). On-site inspection (Nov–Dec 2025, Jan 2026) located the



Page 20: Figure 1 - Cueva Indio
Above: Fig. 4 Engraving Halley Comet circa 1975

panel on a sheltered vertical limestone face roughly 13 meters above the tidal bench. By January 2026, the motif had been largely covered in cement, although a preserved fragment of the tail remained visible and corresponded closely with the historic photograph. Measurements derived from the photograph suggest a maximum motif extent of about 1.2 meters, with incised lines forming a cometary head “coma” (about eight centimeters in diameter) and a pair of tails, tapering outward to ~15–30 centimeters and to 24.13 centimeters in width at their widest point. The scraping is three millimeters wide and about five millimeters deep in some parts. The incision technique — shallow linear gouging with a consistent tool-striation signature — is somewhat similar to that of the pecked-out Taíno petroglyph tradition observed elsewhere in the cave (which displays percussion pitting and use-wear consistent with prehistoric styles). Stratigraphic weathering patina suggests the incision is historic.

According to local oral accounts (*vox populi*), the bas-relief was allegedly covered with cement during the filming of a motion picture; however, no tangible evidence supporting this claim is currently available. Several movies and

documentaries have been filmed in the area. The disappearance of the Halley’s Comet motif is temporally constrained between 1975, when Villar Rocés (1976) published a photograph documenting its presence, and 2005, when Acevedo González (2006) reported that it had already been covered with cement. Allowing for a margin of error of up to one year prior to publication in both cases, we infer that the alteration likely occurred sometime between 1975 and 2005. Notably, a fantasy and erotic film directed by Solé (1980) was shot at Cueva del Indio in Arecibo during the same time frame, showing the cemented wall. While there is no evidence to suggest that the film production was involved in the aforementioned alteration or vandalism, the temporal coincidence is noteworthy.

Southern Puerto Rico Cave Graffiti

Interdisciplinary documentation also records a figurative graffiti element depicting a comet-like form positioned above a tomb-like motif. Iconographic features and oral-history contexts associate this image with the 1910 apparition; the motif was documented and described during recent fieldwork (Méndez & Acosta-Colón 2026). Direct dating was not possible. However, sev-

eral lines of evidence support attribution to Halley’s Comet (1910): (1) strong iconographic similarity to popular 1910 representations (star-like head with extended tail and the inscribed date on the Arecibo panel); (2) contemporaneous press reports and manuscript observations indicating public concern during the 1910 apparition; and (3) surface weathering and comparative photographic evidence demonstrating that the motif was already present by the mid-twentieth century. Taken together, these elements support a working interpretation of both motifs as historic responses dating to the 1910 apparition.

Puerto Rican scientific facilities participated in organized monitoring campaigns during 1985–86, including radio observations reported in the professional literature (Bajaja et al. 1987). This participation reflects a clear shift from popular or material commemoration toward coordinated, instrument-based science conducted within international frameworks (NASA/IHW 1980). Local optical observations and public outreach activities also documented the comet’s 1986 appearance in Puerto Rico.

The engraved and graffiti motifs repres-

ent rare material testimonies of a popular response to a global astronomical event in Puerto Rico. They illustrate how communities materially commemorated and reacted to ephemeral natural phenomena, and they highlight the contrast between early twentieth-century public anxiety and the later professionalization of astronomical observation. The irreversible alteration of the Cueva del Indio panel (cement covering) underscores significant preservation challenges for coastal karst shelters affected by vandalism, tourism, and development. Rapid nondestructive documentation of comparable historic panels is therefore essential. Important limitations include the absence of direct dating and the partial loss of the Arecibo motif. Future research should prioritize (1) expanded archival searches for photographs, diaries, or municipal records that could confirm the authorship and date of the inscription; (2) high-resolution imaging and non-invasive surface analysis of toward coordinated, instrument-based science conducted within international frameworks (NASA/IHW 1980). Local optical observations and public outreach activities also documented the comet's 1986 appearance.

The engraved and graffiti motifs representing surviving motifs; and (3) collaboration with local heritage agencies to help prevent further loss.

In summary, two historic-period cave motifs in Puerto Rico — one photographed at Cueva del Indio and now cement-covered, and another documented in a southern cave — likely represent local material responses to Halley's Comet during its 1910 apparition. These records complement documentary sources, including Roqué de Duprey's notes, and stand in contrast to the organized scientific participation in Puerto Rico during the 1986 return. Preservation and focused archival research remain essential for recovering and interpreting similar forms of ephemeral heritage.

Acknowledgments

We thank Walter Díaz Rodríguez for field assistance and the State Historic Preservation Office and Instituto de Cultura Puertorriqueña for access to reports. Thanks to colleagues who provided comments on an earlier draft.



Fig. 2 Ana Duprey

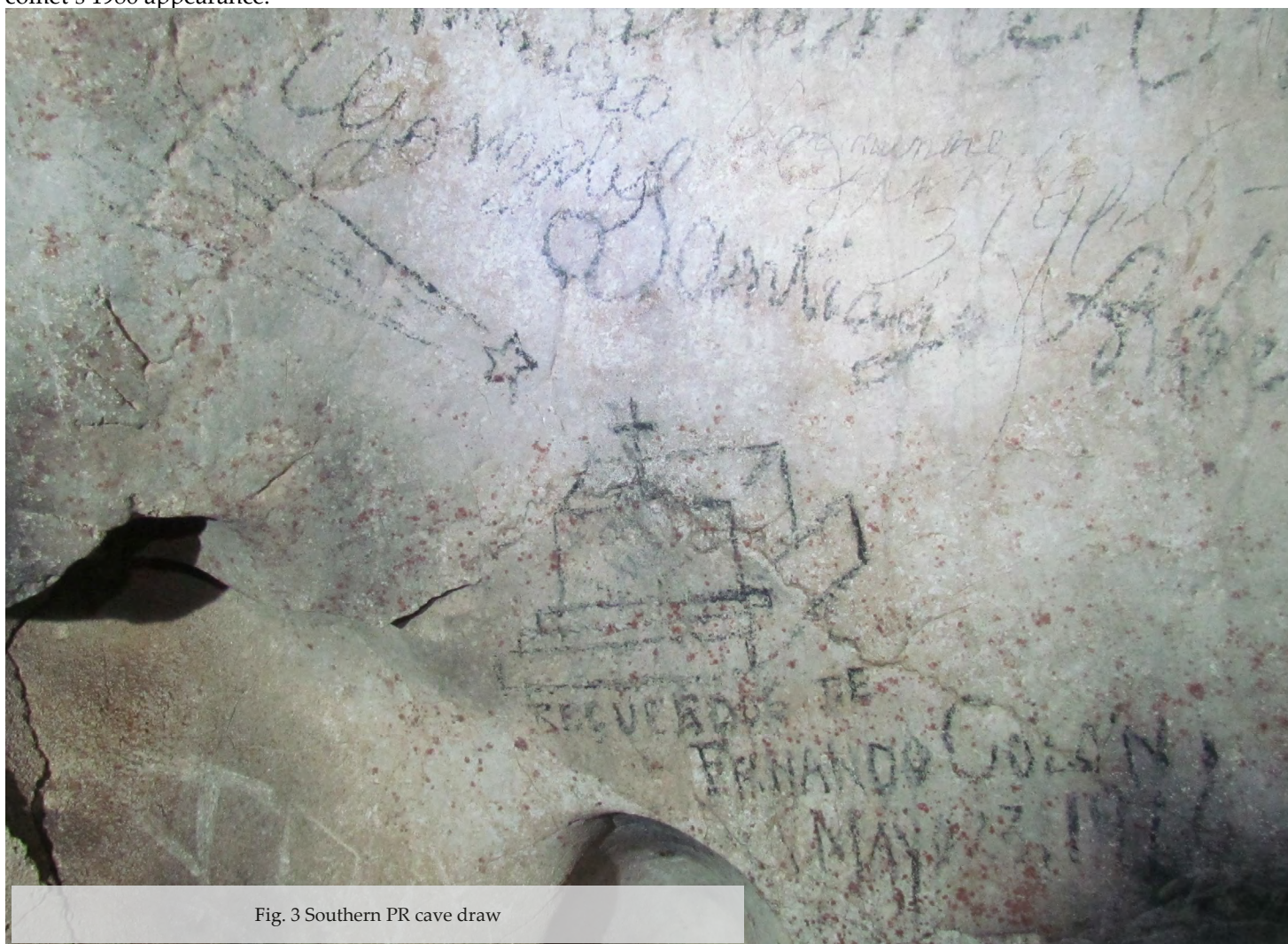


Fig. 3 Southern PR cave draw

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Above: Fig. 5 Drawing Halley Comet and Fig. 6 Actual Engraving



Valhalla In Art by Van "Cave Rat" Cain

My dad, Larry Cain, is a pretty good artist; he has been drawing for years. However, he is not a caver. Sure, he will go into one or two commercial caves, but he won't go into wild caves. I'm a caver and have hundreds of caving photos, either taken by me or given to me.

For my birthday in 2006, my dad wanted to do something for me: draw me on canvas. So we sat down and went through every caving photo I had, and he picked one out that he liked. It's of me at the bottom of Valhalla pit in Jackson County, Alabama. The picture was taken on July 20, 2002, as I touched down and started to get off rope at the bottom of Valhalla — a 227-foot, free-fall pit that drops into a mile-long cave. At the time the picture was taken, Valhalla was not yet my deepest pit, but it remains the best one I have done. Many TAG Cavers have done Valhalla and know the cave's history. It was bought by the Southeastern Cave Conservancy (SCCI) in 2002 after many years of closure, and you must go through them to get a permit to visit. I think my trip was the third permit issued after it was reopened.

The total depth of Valhalla is 279 feet, and the total length is 5,197 feet. You can rig two ropes at the lip. It is a mile long and multi-level, with ropes rigged so you can reach the higher parts of the cave. The cave was also a tragic scene in 1984 when a huge boulder broke off the wall and crushed two Georgia Tech students to death. If you rigged the pit right, you will land on this rock at the bottom.

In 1965, a farmer led a group of cavers from Huntsville, Alabama, to the pit. After the pit was checked out — where it was bounced for the first time that very day — it was named Valhalla.

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In 1967, a trail was placed in Valhalla for the NSS Convention. A 300-foot steel tape was lowered, and the pit measured 227 feet. In 1970, a re-mapping of the cave was done. On this trip, the virgin Mega-dome was found. Mega-dome is a 100-foot-tall dome room. The drive to the pit involves a road that you need four-wheel drive to traverse. When I visited, the road had just been graded, and I used a high-clearance vehicle. I also used a 350-foot rope to rig the pit. If you do go, make sure to pad the lip; cavers' rope has been cut there.

You've got to be careful when you explore Valhalla. It has a steep slope that takes you down to the lip. It is almost like a sinkhole. If you slip there, you can get into an uncontrolled slide that will put you into the pit. Make sure you are on

rope when you start down this slope. When you get to the bottom of the pit, you will encounter a rope rigged to a high ledge. This will take you up into the higher parts of the cave.

I had done Moses Tomb, another 230-foot-deep pit in Alabama, a year before Valhalla. I was looking to break my depth record, so when Valhalla came open, I went and did it. I found out later that Moses was still my deepest until I did Mystery Falls in Tennessee. The great thing about Valhalla is that it is in an area of Alabama with two other SCCI caves within five miles of it. You can spend a weekend exploring three caves without going too far.

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