the texas caver

a magazine written by and for cavers

September 2015



New TSA Project
big news in big bend

Discover Caving in Nevada
2016 NSS convention invitation

South Dakota Adventure
amazing cave formations

TEXAS CAVERS WIN NSS CONVENTION AWARDS

SEVERAL TEXANS RECEIVED AWARDS AT THE OF THE ANNUAL NSS CONVENTION AWARDS BANQUET. THE 2015 CONVENTION WAS HELD IN WAYNESVILLE, MISSOURI.



SPELEAN ARTS AND LETTERS AWARD

Bill Steele, DFW Grotto, received the Spelean Arts and Letters Award. The award annually recognizes an NSS member who, over time, have advanced spelean arts and letters by significant artistic expression, management, or criticism.



NEW NSS FELLOWS

Over a number of years, the recipients have exemplified by their actions, their dedication to the goals of the NSS, or the Society.



Geoff Hoese,
UT Grotto, Austin



Ellie Falgout,
UT Grotto, Austin

CERTIFICATE OF MERIT

The **Bexar Grotto** received a Certificate of Merit for holding the first Texas Hydro-Geo Workshop in 2014. Geary Schindel was the creator and organizer; and with the help of the Grotto, many industry experts and generous sponsors, had a tremendously successful event. The Workshop offers hands-on field experience, technology, and caving sessions to students and professionals. The 2015 Texas Hydro Geo Workshop, held September 25-27, was even bigger and better – with more modules available to more attendees and an extra half day of sessions. The workshop was held at Cave Without A Name, who for the second time, donated access to the cave and campsite at no charge.



BEXAR GROTTO
Cave
WITHOUT A NAME

The TEXAS CAVER

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SUBMISSIONS

Articles, announcements, artwork, photos, and material for publication are ALWAYS welcome and may be sent at anytime to the Editor.

All submissions must be submitted to the Editor in electronic form, either via email attachment or DropBox (ask for details as needed). Please do NOT imbed images in word, email body, or pdf, as this decreases resolution and you will be asked to re-submit.

The editor reserves the right to edit inappropriate material, errors in spelling, grammar, or punctuation, and to edit for clarity. In the event of significant changes the author will be given an opportunity to review the changes prior to publication.

FROM THE EDITOR

Excerpt: I'm in Hawaii on the big island, the night air is sultry, heady with the scent of white ginger and plumeria. There's a lava tube cave on the property – with a legend. I'm told the ancient Hawaiians used the cave to bury sacrificial victims; but no one knows for sure because nobody has made it down – yet. Supposedly they lowered a camera on a rope; just before the battery died at the bottom someone claimed to have seen a skull. Supposedly, a British caver tried to make it down, but didn't have the proper gear. The shaft is too wide to chimney and the walls are overgrown with vegetation. Impossible to see more than 20 feet down, the cave has a mysterious air, and I have permission to drop it.
To be continued...

SUBMISSION DEADLINES

While submissions are welcome anytime, deadlines for consideration in upcoming issues are:

1st Quarter	February 15
2nd Quarter	May 15
3rd Quarter	August 15
4th Quarter	November 15

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The editor is not responsible for lost or misdirected newsletters caused by failure to notify editor in writing of address changes. Be sure to keep your subscription information up to date with the TSA secretary!

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JAKE KIRK
2nd Place TSA Spring Convention Photo Salon

BACK COVER
JAKE KIRK
"TAG Caving"

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Please contact the editor at publications@cavetexas.org.

EMERGENCIES

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COLLIN	214.202.6611
HAYS	512.557.7965
MIDLAND	432.438.5076
SUTTON	325.450.3905
TRAVIS	512.663.2287

FOR LIFE THREATENING EMERGENCY: 911






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Texas Speleological Association is an unregistered, nonprofit internal organization of the National Speleological Society, and represents the greater caving community in Texas.

The TSA is comprised of both independent members and local grottos, and supports cave exploration and studies in and around the state of Texas.

The organization holds business meetings three times per year, organizes an annual spring convention for Texas cavers, and sponsors caving projects and events throughout the state.

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TCR OCTOBER 15-18

THE ANNUAL GET-TOGETHER FOR CAVERS.

by Ellie Falgout

Behold, Texas Cavers Reunion Circus Spectacular will be held at Paradise Canyon in Rio Medina, Texas on Octoberoo15! Experience an unforgettable weekend with refreshing water, views, food, friends, and unimaginable fun.

This year's theme is "Circus Spectacular." Registration gets you a wristband for an exciting weekend of camping, the "Big Feed", beverages and a chance at door prizes. Bring your own plate, cup and feed tools to get the food from your plate to your food hole.

All the fun will be there...Speleolympics, survey contest, hot tub, swimming, awards, parade, carousing, fun and friends. Bring out your best costume for this year's circus theme. Don Arburn will serve as Ring Master and he needs lion tamers, fire throwers, magicians, jugglers, clowns and any mythical, mysterious creature you can create to make his show complete.

Amazing climbers from around the state will perform their awe inspiring spectacles of strength in the vertical contests, keen cavers will summon their mighty surveying powers, and adults and children alike will thrill at the wonder of riding the trolley through the campground.

Hot showers and potable water are available. Cameras aren't allowed at the hot tub. Musical instruments (except for drums) are welcome but not at the hot tub.

Sunday some intrepid individuals will be making breakfast to raise funds for the TCMA, followed by TSA and TCMA open meetings.

Children and dogs are welcome! They must be well behaved; no biting, fighting, constant screaming or barking. Pooping on the ground isn't encouraged, but if they must, please clean up after them. *Pets must be on a leash.*

Join us for an unforgettable weekend of legendary proportions! Follow the TCR signs to 2220 County Road 2615, Rio Medina, TX 78066.

cavetexas.org/events/TCR/index.html

GOVERNMENT CANYON PROJECT UPDATE

APRIL, MAY, AND JUNE 2015

by Marvin Miller and Arron Wertheim



I had been considering the significance of a chance discovery that occurred when Niki Lake, Kelsey Woodward, and I took a trip to Big Dome Cave on March 24. The date had been set aside to help with a rhadine beetle collecting trip which was cancelled at the last minute. Niki and I decided to show Kelsey, the new resource specialist at Government Canyon, a few of the caves anyhow. She had not yet been underground since starting at the SNA.

In Big Dome Cave we went to look at the Big Dome and then I led the way to the Velvet Underground where there are some nice speleothems. Some airflow had been felt in this area when we surveyed it, so we poked around in all the available holes to see if we could find any leads. Niki and I didn't find anything but Kelsey, by looking up rather than down, saw a hole near the ceiling that obviously opened up into a larger space. More significantly, she felt a good draft of air coming down through the hole. I was pretty certain that the void was something we already knew about so I left the girls there while I went to try to find the place they were looking into. It didn't take long to figure out that the hole led up into the bottom of 5-Way Pit. On the survey sketch for 5-Way Pit, I had noted a small hole in that area. It doesn't appear to be the main drain for the pit but undoubtedly some water makes its way down there during big storm events. More significantly, judging by the feel of the airflow velocities as we traversed back toward the cave entrance, it was obvious that most of the air coming into the cave was being sucked down into the Velvet Underground.

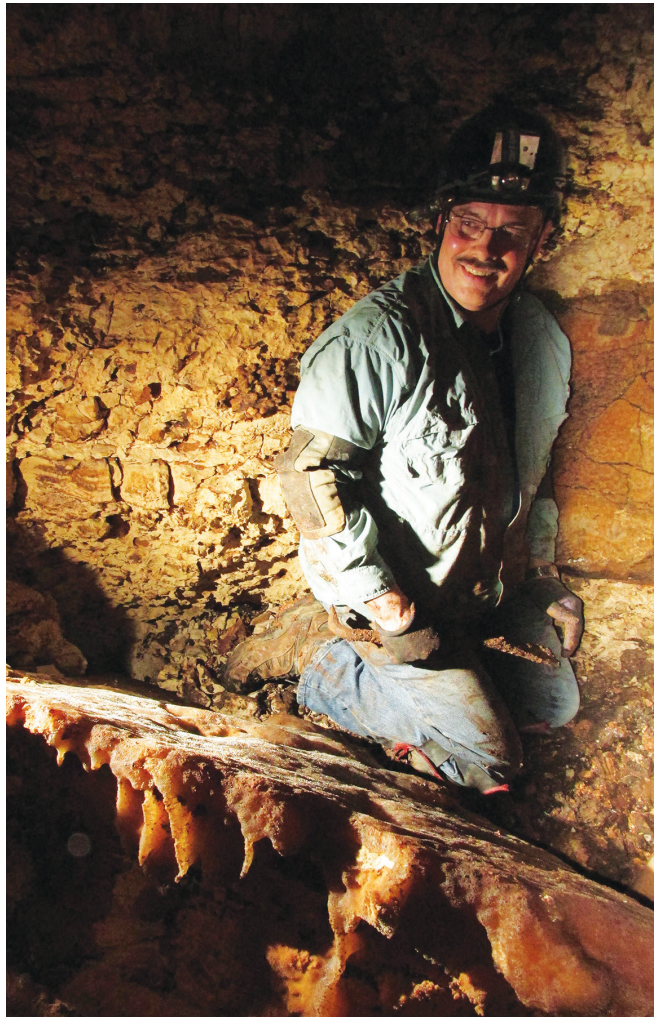
On the April 4 karst project trip I decided we would go do some exploratory digging in the breakdown covered floor of the Velvet Underground. The cavers were Steve Gutting, James McGrath IV, Diana Ulloa, and myself. Unfortunately, on April 4 there was no airflow to guide us. We picked a spot next to an existing small hole in the breakdown and approximately under the hole that Kelsey had found. We dug out small rocks and sticky clay and then it looked like we were going to be stopped by a large

slab of rock that was filling the hole. We managed to manhandle it out of the way. After that, to get further it was obvious we were going to have to break up some large rocks. I went out of the cave to retrieve the micro-blasting supplies left on the surface. By the time I got back James had done a masterful job of clearing out small rocks and mud and now we could see down to a floor about a meter and a half down. We still needed the micro-blasting gear to be able to get to it. At the end of the day I was able to stand on the floor of the hole and there was space to get my feet and legs under the wall and lay down. From that perspective I could see that I was laying on a cobble and mud choke, and less than a meter away the floor dropped into a space that would at least allow movement. The cobbles and mud would need to be dug out first, but we were at the end of the day. It would be something that we could look forward to on the next trip.

Prior to commencing the dig, James and I finished up a little bit of survey at a lead that Tom Rogers had opened up at station DD11 in October of 2014. We surveyed 7.27 meters of new passage. A tight pit drops almost 3 meters to a squeeze at floor level that opens into a nice 3-m-tall room about 1.5 meters wide. Flowstone covers the walls and the passage ends in flowstone. This is the most northern point surveyed in the cave.

Due to the storms of the week prior, park trails were closed on the next project day, Saturday morning, May 16. It was a good reason to go to Solitude Pit, which can be hiked to from the parking lot without using established trails. Christin Miller, Joe Schaertl and I would work at enlarging Superman Squeeze at the bottom of the pit and survey the short bit of passage beyond. Only Niki Lake had been able to get into it on our first survey trip in January.

The hike to the cave took about a half-hour. From outside the cave we could hear the sound of water falling inside. When I went in to rig the rope I saw that the cave was very wet and a small trickle of water was falling down the pit. At the bottom of the pit the air was filled with falling and splashing drops. Joe and Christin found places to sit out of most of the wet while I climbed the meter-and-a-half down to the very bottom where the drain passage exits. I drilled a hole, inserted and plugged the charge, and we heard the satisfying boom and the tinkle of broken rock when we touched leads to battery. I cleaned out the broken rock and then noticed that the main impediment for getting into the passage was simply the rocks and mud filling up the bottom of the pit. Joe started working at it and soon was able to slip through. I followed him while Christin chose to stay in her dry spot. Three would have been a crowd in the small passage anyhow. We traversed to a small room at the end of a 7 meter crawl. The room was approximately 2.5 meters long by 1.5 meters wide and a little over a meter tall. It was plenty big enough for two people to sit up in and turn around in. The entrance to the room is at a little pour-over on the floor and half of the floor area was taken up by a pool of water about 15 cm deep. The water was held back by a dam of rock and dirt. At the far end of the room the ceiling came down and the walls constricted to a space .5 meters wide by 10 cm tall. Just after the constriction the ceiling rose a bit again and it looked like the floor could be dug out enough to possibly make it through. The passage ahead was still small but we could only see to a corner about 2 meters ahead. There was good airflow coming out of the passage and the water in the pool was draining down the passage. We left the dig for another day and surveyed out to the bottom of the pit, setting 4 stations for 8.89 meters. The cave is now 27.53 meters long and 12.85 meters deep.





I set up a special project trip for the Houston Grotto on the weekend of July 18 and 19. In the end, a scheduling conflict with another cave trip kept all but one person, Steve Beckwith, from travelling to San Antonio for the weekend. Several Bexar Grotto members also participated and some good work was done.

On Saturday, the 18th, Arron Wertheim, Victoria Sommers, and Richard Silver went to Lilyhammer Cave with the intent of mining through a hard rock constriction into the next visible room in the cave. Nature got in the way, however, and here is the trip report in Arron's own words:

We set off with a set of rock-breaking tools to locate Lilyhammer Cave and enlarge a constriction in the passage. Prior exploration noted a series of belly-crawls, 2 rooms, formations, and a tightened constriction leading into another possible room.

On this trip we found the cave using GPS quite easily. After a short lunch break we checked the entrance to determine who should go first- all 3 of us had the same grim look after peeking into the opening. The cave was full of harvestmen…more than any of us had ever seen in one location.

Well none of us had ever been terribly deterred by an armful of bouncing legs like this so we did as is done and grabbed a stick to knock them off the walls and out of the way. That scattered thousands of them.

Down in the entrance the look was grimmer then expected – the initial crawlway was much tighter than anticipated and the whole of it, including every nook and cranny, floor and ceiling, was covered with harvestmen.

To be fair we didn't give up easily. We tried pushing through. We tried breaking some rock to enlarge the crawl. We tried everything we could think of to move or scare out the harvestmen. If it had only been ten thousand of them we might have made some progress. But one hundred thousand was too many. Did you know harvestmen excrete a self-defense odor to scare away predators? Did you know 100,000 of them can excrete enough of this odor to ruin the air quality? Well we know now. There is such a thing as too many daddy-longlegs in a cave entrance.

After our defeat we set off to locate Government Canyon Blowhole, about 100m from Lillyhammer as a secondary backup plan. But we didn't have coordinates or a description. After searching around in big circles we found 2 other features that had been previously flagged for inspection (probably by Zara Environmental). Neither feature resembled a blow-hole or a cave. Strike 2.

So we went on to our tertiary location: Feature 20-54. On the way we found feature 20-22(maybe20-27) also marked as FC-016. This was a nice round cave entrance with cool air blowing out of it about 2:30PM. A body-width tube in solid rock dropped into a small room. Again, it was packed with daddy-longlegs.

Since it wasn't on the project list, not indicated on our map, unknown about its biological importance, and we were tired of having daddy-longlegs walk all over us, we gave it a once-over and moved on.

Eventually we came to 20-54, or approximately where 20-54 was supposed to be. The project notes contained 2 different descriptions of what 20-54 was supposed to look like. We were unable to locate either description or any marking tape. Our best guess is the coordinates we were following may have been on a shear bluff face looking over a dry creek bed. The bluff itself was full of small features and drainage but nothing looked like a cave. Strike 3.

We found one large armadillo beneath an overhang and two baby buzzards, plus their mother, beneath a second overhang.

We were all hot and tired and scratched raw from busting brush all day. It was a fun

day but unfortunately not very productive. Maybe we can try again in the wintertime.

On the 18th also, I led Steve Beckwith and Gerry Geletske to Big Dome Cave to work on the lead that had been opened up on the April trip. We also encountered thick mats of harvestmen on the walls and ceiling of the entrance crawl. Fortunately the entrance crawl is short and there were far fewer of the critters to clear. We stirred them up with a stick and let them climb out of the cave to find shelter under tree trunks and other shady spots, or move to parts of the cave that we didn't need to crawl through.

When we got to the dig in the floor of the Velvet Underground I went down first and started filling the dig bag with rocks and mud from the floor. Confines were tight at first but as I dug I got more freedom of movement. I managed to extract some larger rocks at my feet and hand them up through the opening to Steve and Gerry who were doing the hauling and dumping above. Just half-a-meter ahead I could see larger space. After working for a while I gave the lead to Gerry, and then he to Steve. Steve cleared the remaining rocks and made the opening passable, but in the small space he couldn't get his legs maneuvered behind him in order to get turned head first. It was my turn again so I went down to try it and got through without any trouble. Steve's legs were just too long, as were Gerry's when he tried to follow me.

Past the opening Steve had cleared I belly-crawled ahead approximately 2 meters to where there was a small channel in the floor. I knew we were under the floor of 5-Way Pit and was hopeful that the drain might come down to this area and provide a going passage. The channel might be the continuation of the drain but I saw right away that it was plugged up with breakdown. However, I also noticed that the ceiling did not come all the way to the wall, but instead broke upward into a sloping crevice that widened into larger space as it went up. It was just wide enough at the bottom for me to maneuver up and around the corner. I climbed up about 3 meters into a small room with breakdown wall on one side and cavern wall on the other. The ceiling was also breakdown and there was no obvious continuation. My hopes for finding large cave were dashed again.

I surveyed the little room and then surveyed out to Steve at the bottom of the original dig pit. As I sketched Steve and Gerry connected in to the original Velvet Underground survey. We surveyed 12.91 meters and it turns out that the station at the end of the short belly crawl, where the ceiling breaks up, is the new low point of the cave at -18.5 meters. The cave is 329 meters long.

On Sunday, July 19, it was just Steve and me. We were going to spend about a half day on the project and a perfect goal was to check in on Turquoise Sink. This cave is a void that opened up several years ago when a 3-meter-diameter section of its ceiling collapsed. I wanted to check on the plant community growing on the floor of the cave, and check the water flow in the small pit at the bottom of the breakdown scree slope.

The medium-sized live oak that had fallen in with the collapse and that we found alive and prodigiously sprouting on our first visit to the cave, was now dead, but a new generation of fauna is starting to fill the void. There were several large ferns, some oak saplings, clump grasses, vines, and moss. A toad, cliff-chirping frogs, various beetles, and a snail were also noted. At the bottom of the scree slope I could hear that the water channel was flowing much faster than what I had previously seen. This was obviously the result of all the rain in the previous months. The water comes from a small tube in the wall of the cave approximately a meter below the mouth of the pit. It is obviously the cause of the pit as



DEEP CAVE SURVEY

by Joe Mitchell

DEEP CAVE CONTINUES TO REVEAL NEW SECRETS AS THE SURVEY PROJECT PROCEEDS.

Deep is a complex 3D maze with a mix of cemented breakdown. There is also true wall passage, vast rooms, areas highly decorated with speleothems, and extensive – sometimes painful coral, and helictites.

New areas are being discovered at all levels, with a special focus on the lower areas along south and north central sections of the cave.

The three most recent trips were very productive, bringing the length of the cave to 5518.3 m and making it the 8th longest cave in Texas.

20 September 2014

Marvin Miller led a team with Gerry Geletzke and Reece Thompson to the Crooked Broomstick Room to look for a potential downward lead toward the Highway 69 area, which underlies this location. (Highway 69 is where on old soot "69" mark was found on a previous trip but it was thought unlikely that anyone got to that area by the route that the team had taken, so the suspicion was that there was another route.) They checked everything they could find but found no leads. They did survey into a very nice helictite room which was previously undocumented which was surprisingly close to a main travel route through the cave. They named it the Seahorse Grotto, due to the seahorse shaped helictite formation guarding the entrance.

They then went to have another look at the JJ survey, which was surveyed a few years ago during the first survey trips of the revived project effort. They decided that climbing down was not possible, so they went to survey another lead. This lead went to the bottom of the pit and then connected to the P survey. They then checked another lead that was blocked by rocks. They knocked the rocks loose and Marvin climbed down. He had to break some more rocks as the lead continued down but couldn't enlarge it enough to get through. However, while looking through the hole, he was surprised to spot station RA13 further below which was at the end of the Highway 69 survey. Highway 69 was previously only accessible from Miller Time in a completely different part of the cave! Although they were unable to physically connect, this could be near the suspected area where Highway 69 was accessed in the 1960's. While exploring, Gerry found a large vertebrae and other bones that appear to be in the matrix. The team surveyed 15 shots for 43.62 m.

Ellie Falgout led a team with Galen Falgout and Wade McDaniel to Norm's Room and nearby areas. The lead in Norm's Room did not go, so they proceeded to a lead further down in the LA survey. This was found to connect to the Glass Castle but was too tight for some team members. No leads were found to go anywhere but connect to existing survey. They surveyed 2 shots for 6.32 m.

Steve Gutting led a team with Lindsey Smith, Mike Harris, and Gregg Williams to work on a lead off of the Entrance Hall that had been found on a previous trip blowing air. Unfortunately, they ended up surveying the wrong area. They looked for the

alcove containing a drop into the breakdown expecting to find an exposed drop requiring a hand line, which they did. The area appeared devoid of survey stations, which encouraged them to go further. They did not realize they were in an area previously surveyed in 1999 with disintegrated stations. They could not find the pit they sought but did close a loop on the existing survey. They surveyed 10 shots for 57.95 m. Unfortunately, none of this counts toward new length of the cave, but did tighten up the closure on the cave, actually resulting in the cave becoming deeper!

Bennett Lee led a team with Joe Schaertl and Pam Campbell to hunt for any possible leads going off of the KB survey that may head northwest. Starting at KB4, there were passages visible, but the leads to them were not passable. However, Joe found a small hole nearby that he used to access those passages. He explored 3 levels, all of which led to various points of the New Crystal Waterfall area. All routes were tight and not recommended for travel or survey. They then explored all the downward leads between KB7 and KB10. All leads terminated against the downward sloping, solid bedrock wall with no visible cracks or fissures along the entire length. The bottom was typically a dirt floor about 1 foot wide, wedged between the bedrock and flowstone.

They then returned to KB6 and surveyed the room above. They tied into a tight squeeze back to another part of the KB survey that was blocked by a rock horn cemented in the floor. They then surveyed down a tube that connected to the D survey and split, but neither side was passable, so they approached from the easier D survey side. They also found some slanting narrow canyon passage that drops down about 20-30 feet, and may connect to the KC survey. They surveyed a total of 14 shots for 34.1 m.

My team on this trip was comprised of Linda Palit, Arron Wertheim, and Vicki Sommers. Our objective was to work on the lower level section along the north central boundary of the cave, specifically starting from Lilly's Leisure, where some possible leads were noted in the survey. After a rather challenging trip for the team to get to that location, we discovered that Lilly's Leisure was filled with good looking leads in all directions. We started with the most obvious one at the back of the room heading in the direction we wanted to go. After a small area of formations, it bifurcated. The first route led into the Rabbit Hole, which was a long descending tubular passage that eventually terminated. The other route into the Mad Hatter's Room also continued for several stations until it reached a too-tight squeeze. However, it opened up to a good-sized room on the other side. and most interestingly, there appeared to be a carbide mark on the wall just out of reach through the squeeze and possibly scuff marks on the floor. However a route to this room has not yet been found. Back near the bifurcation, Aaron found that the shelf on the right could be climbed over into another room that continued. From this room, a nasty sharp coral lined crawl and climb dropped down to another level. It was named the Cheshire Pit since it looked promising but ended up being all teeth. After losing some clothing chunks, we made it through into a room that opened up in two directions – to the left was a very highly decorated area with numerous pristine white formations. To the right was a short climb down which led to a large room – in fact on of the largest in that part of the cave. Also another passage with a nice pool of water reconnected back to the white formation area. The leads of this area were numerous and good-sized and it was all I could do to stop the team from scooping. We finished surveying the area up to the large room and called it a day, surveying a total of 16 shots for 52.52 m.

17 January 2015

Steve Gutting led a survey team with Matt Zappitello, Chris Lafferty, and Gerry Geletzke. They had a short trip to their lead, which was the pit partway down the Entrance Room slope along the north wall, which they had not successfully located on the previous trip. This time, there was no difficulty in finding the lead and tying into the resurvey done on the previous trip. The pit however proved to be too tight for most of the team to fit through. Chris managed to make it down and found station A103. Consulted the line plot in an effort to try and find an alternative route, they saw that A20 connected relatively quickly to A103. So, they set off in search of A20. But instead came upon a 20 meter drop that forced them to look for alternatives. They scrambled around the breakdown until they came to a spot that had a bunch of very large loose rocks secured with rope to prevent them from dropping. Above that they saw station number A90. Once again consulting the line plot, they found a route to A103 and were able to successfully navigate to it through the breakdown. From there, they surveyed up through the connection. They also found a smallish room (about 4 meters in diameter that you can easily stand in) and a fairly sizable, un-surveyed passage leading back to other known survey. The team decided to go back and meet up with Steve at this point, rather than survey the new passage since they had not anticipated being separated for quite as long as it took to find and make the connection. The team surveyed a total of 9 shots for 19.88 m.

Team X was led by Geary Schindel with Mike Harris, Gregg Williams and Kimberly Hartzog. The team worked along the upper route to Bear Scratch Hall. They started by having to recreate the last station survey. It was a slow start for this as well as the first shot coming over a slanted rock to

a high point to proceed down a drop that Gregg had explored. Meanwhile, Kimberly explored an already surveyed lead and saw some beautiful flowstone with water droplets and white calcite. Mike photographed a nice stalagmite in this area.

The team proceeded down the drop and got into a smooth survey groove. Mike took photos throughout this area documenting features including bright yellows & rust and the cutest small pink stalactite. They located the phone line and tied in to another previously surveyed point to wrap up the survey. The team surveyed 8 shots for 30.13 m. On the way out the team detoured to show Kimberly the Forest of Columns and Cupola where Mike took more photos.

Bennett Lee led a team with Wade McDaniel, Pam Campbell, and Michelle Smith to survey some of the many leads off of the Lilly's Leisure area. They explored the leads, most of which ended up meeting up with the high level N survey that goes up to the Topout Room. One of the team's Suuntos had a bubble in it so they had to pass the remaining instrument back and forth, which made surveying take longer. Michelle and Wade pushed a lead that ended up going to a new route that continued. It goes to a very cool area with black mud, fluorescent orange on rocks and lots of wet dripping rock. Also there was an area that needs a hammer to open up further passage. They surveyed 6 shots for 27.01 m.

My team consisted of Linda Palit, Arron Wertheim, and Vicki Sommers. We returned to the Wonderland area we had explored on the previous trip. Initially, we finished the survey through the White Queen's Room and then picked up the survey in Looking Glass Hall. This is one of the larger rooms in the back part of the cave, being about 15 m long, 5 m wide, and 6 m tall. We surveyed a couple of small routes out of the back of this room. One ended but had a hammer lead. The other went to a couple of small rooms but had a reconnection to another lead out of the Looking Glass Hall (this lead has not yet been surveyed or fully explored). We continued with route to the east (the Drink Me Hall) that started out big and promising but turned small and ended in a few interconnecting over and under rooms. Back in the main part of the Drink Me Hall was a climb that got larger and larger, leading into upper level rooms – however after several shots these eventually ended. Back in the Drink Me Hall, was a small, steeply descending hole through nasty grabby coral. Vicki checked it out and found it continued, naming it the Jabberwocky Crawl. Since it was small, only she and I continued the survey into going passage. She explored ahead but did not find an end. After shooting a few more stations, we elected to conclude the survey for the day. We surveyed 22 shots for a total of 74.05 m.

1 August 2015

The day before this survey trip, Don Arburn, Mike Harris, Jill Orr and I worked on setting new trail markers in the cave. Replacing and extending the former routes. We replaced the main route down to the Forest of Columns and established a new route to the Crystal Waterfall. Eventually there will also be a route up through Bear Scratch Hall. That evening several of us returned to see how many bats were exiting the cave and were surprised to see thousands of crickets massing on the rock wall behind the entrance with waves of additional crickets coming up from the entrance. Suddenly they all took off across the landscape in all directions with dozens of crickets soon visible even a hundred feet from the entrance. Shortly thereafter, the bats began to emerge with about 5-6 per second coming out until it got too dark to see. I had not seen activity like that at Deep before.

Ellie Falgout led a team with Gary Donham and Wade McDaniel to finish off two leads in the Crystal Waterfall and Junction Room areas. Starting at the Crystal Waterfall, they followed a lead down into a small standing room with sharp aragonite covering the floor, rocks, and walls, making naps impossible. The passage then got small leading into another small standing room with some formations and soft, wet moonmilk on the walls. Wade found one up-going lead that ended up being too tight unless he broke formations in the way. They then surveyed through a tunnel that ended the area. While Ellie was finishing the sketch, Wade went around the Crystal Waterfall and made a connection back to Ellie through the too-tight tunnel.

The team then went through Gotham City to another lead in the Junction Room at LA13, which was another aragonite covered, no-napping area. The route went up and over dropping back down to tie into the NB survey. They surveyed a total of 12 shots for 26.8 m.

Bennett Lee led a team with Pam Campbell and Lindsay Smith to continue their previous survey off of Lilly's Leisure. The passages were generally awkward, requiring painful contortions of various body parts to get accurate shots. They found connections to a route above the Square Ceiling Room and the bottom part of Bear Scratch Hall, the latter of which was named Graybeard and the Bloody Stool for two formations along the way. Graybeard is only visible from the top entrance whereas the Bloody Stool is toward the bottom squeeze to Bear Scratch Hall. There was a large room visible from two short passages off a central point in the survey but no one could fit into any of the squeeze areas.

The team did not exit the cave until 12:30am making for a 15 hr. trip and were pleased to see that the enormous proliferation of crickets observed the previous evening at the entrance had evacuated along with the bats. The team surveyed 14 shots for 36.2 m.

Saj Zappitello led a team with Matt Zappitello, and Tom Rogers to work on one of several leads in the Rust Room. Tom Rogers took them to their lead, but they got off to a slow start because the notes said the lead went up so they started surveying in the only direction that went up; however, that had already been surveyed, as Saj eventually convinced the team. So, after a more careful evaluation of the notes, they decided a little room down and to the side was where they needed to go. It wasn't much, but they figured they could just mop it up and go to a different lead. Matt was on lead tape at this time and set three stations to lead into the room, at which point they all though it was done. Then Matt looked up and saw a not-so-inviting, tight, little climb that looked like it might lead to more passage. So, Matt went up there and found that there was a room past a tight (for him) squeeze; he had to exhale to get through, but it left him in a very beautiful, decently sized room they named the "Burgundy Bunker". They could see passage continuing down and away from the room and it looked like it got bigger, which excited everyone. They surveyed up through the passage and into the room, then Matt went down the slope to see where it led. There was whooping and hollering as Matt became more and more excited at the huge passage they had just broken into. Then, the audible excitement was suddenly cut off and Matt said, "Oh no, some flagging." The flagging was not survey, but it led to the Bear Scratch Hall, which did have survey stations clearly set. At this point, Saj said she found an "X" scratched into the wall back in the Burgundy room that might be an old survey station. They didn't have any notes for this area, but they did have a line plot that showed some passage going through this area. So, they ended up spending the next hour or so trying to find any survey stations that would indicate if this large area we had found had already been surveyed. In the end, they ran out of time and had still not been able figure it out and didn't want to risk resurveying this area. With their spirits having been super high, then somewhat low, they now just tentatively held out hope that this are might be un-surveyed.

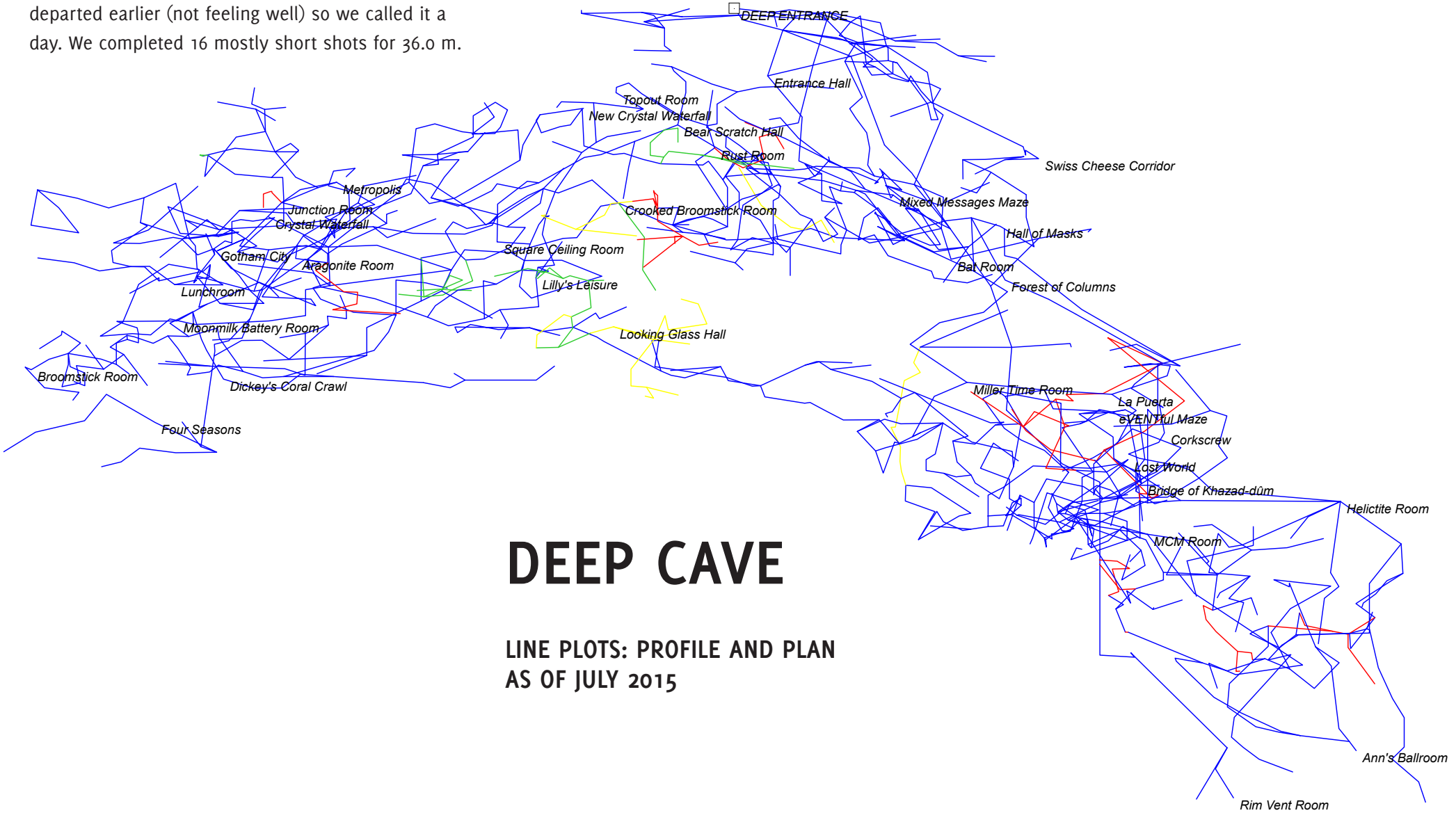
Back at the cabin, they entered their survey notes and looked at the line plot. It turns out that this huge going passage was in a big survey void. Nothing was even near it. There is no survey where it appears to be leading, either, which is down, down and further down. They scooped the passage for 100 feet or so to get an idea where it was going and it is very promising. The team completed 8 shots for 18.4 m, but needless to say, they are all quite excited about returning to this lead!

Marvin Miller led a team with Gerry Geletzke and Jake McLeod to start on the final lead in the Miller Time area, which has provided survey for many teams over the last few years. The lead took them into a maze of breakdown leads and some larger rooms that went back under the Forest of Columns. The main room in this area was named "Under the Forest." They tied into some older station on the C survey and the LW (Lost World) survey. However, it turns out that it was not the final lead, since they found 12 new leads. While looking down a pit in the Lost World section, they heard voices from below. At that moment, I was climbing up into a small room to check a lead and heard Marvin above me. From Marvin's perspective, the floor was 6 m down with a solid floor and from mine there was a tiny 2" hole in a solid ceiling. Shining our lights we were able to see that there was a connection, but it is impassable. Deep has often thrown such voice and light connections at us without having a passible route. Marvin also thinks that the pit has not yet been surveyed. For a "final" lead his team surveyed 25 stations for an incredible 123.5 m (about 18 of which were tie ins). Go Marvin!

Don Arburn led a team with Arron Wertheim, Vicki Sommers, and initially Mike Harris, although he elected to continue work on trail markers through the Forest of Columns area and eventually hooked up with Marvin's team. Don's team continued to the Helictite Room where he planned to take a nap. Don talks in his sleep, so after a few funny and interesting cave stories, Arron and Victoria explored leads off the left of the room which all pinch out. Don then led the way to Bikini Bottom where Arron and Victoria closed a few survey loops and Don sketched. Victoria crawled down a tube that looked into a deep room. They marked and did a distance shot to the bottom. Then they went to Ann's Ballroom, where Arron climbed up to the top and saw the marker for the tube Victoria had crawled into. It looks like this extensive maze below the Helictite Room is finally starting to be wrapped up. The team completed 7 shots for 28.3 m.

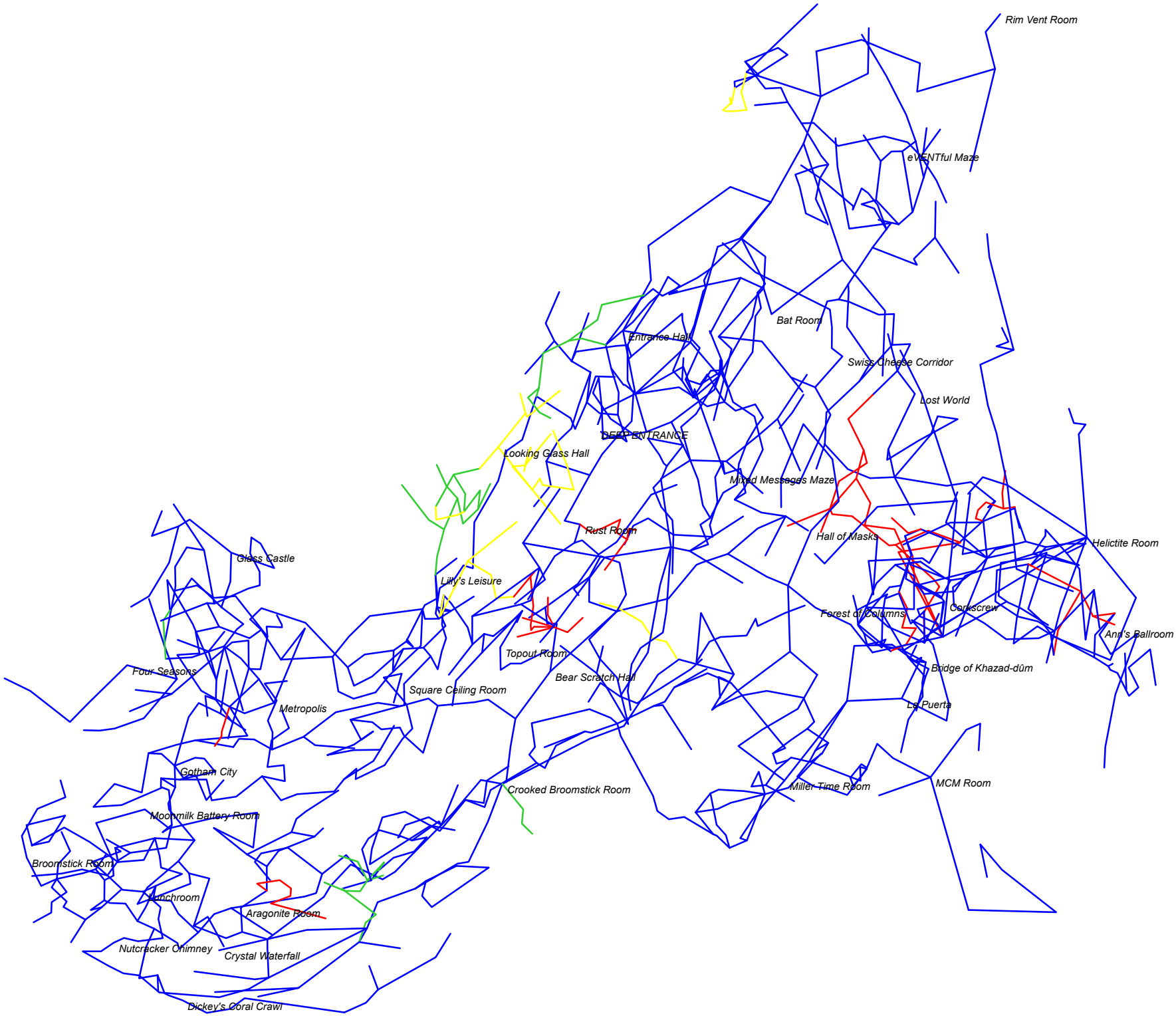
My team was Jill Orr and Galen Falgout. We headed to the Mud Crack Mansion to check for any potential remaining leads and to collect a mud sample. The room was very impressive with some extremely thick-bedded mud in two very distinct layers. There were numerous gypsum flowers, old mud-tites, and a very well-persevered skeleton. However, no promising leads were found that did not loop right back into the room. We continued on to the Helictite Room, briefly meeting up with Don and checking one lead for him that did not go. We continued down into the JF survey below the Helictite Room but back under the Forest of Columns to work on some leads there. Rather than using conventional instruments, I decided to go with the Caveatron on this trip, although I did do some supplemental sketching in a few cases. The main wait time when I wasn't doing sketching was in route finding, choosing and marking stations since the shots only took seconds to complete. The first two

leads connected to Don's PC survey. The next lead that Galen found spiraled up, eventually ending in a boulder choke. Finally, when we thought we were done, we found a missed lead that led up into a room over the main survey, and up into a small room with airflow where I communicated with Marvin. By this time it was down to just Jill and I since Galen had departed earlier (not feeling well) so we called it a day. We completed 16 mostly short shots for 36.0 m.



DEEP CAVE

LINE PLOTS: PROFILE AND PLAN AS OF JULY 2015


Rim Vent Room
eVENTful Maze
Bat Room
Entrance Hall
Swiss Cheese Corridor
Lost World
DEEP ENTRANCE
Looking Glass Hall
Mixed Messages Maze
Rust Room
Hall of Masks
Helictite Room
Glass Castle
Lily's Leisure
Corkscrew
Forest of Columns
Ann's Ballroom
Topout Room
Four Seasons
Bear Scratch Hall
Bridge of Khazad-dûm
Square Ceiling Room
La Puerta
Metropolis
Gotham City
Crooked Broomstick Room
Miller Time Room
MCM Room
Moonmilk Battery Room
Broomstick Room
Mushroom
Aragonite Room
Nutcracker Chimney
Crystal Waterfall
Dickey's Coral Crawl

CRITTERS OF DEEP


Photo: Arron Wertheim


Photo: Mike Harris


Photo: Joe Mitch


Photo: Marvin Miller


Photo: Mike Harris

DEEP THOUGHTS

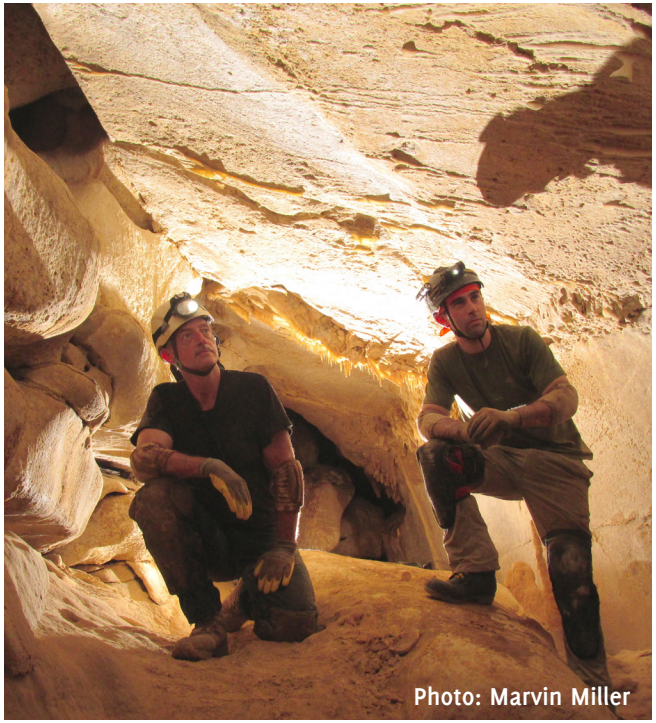

Photo: Marvin Miller


Photo: Marvin Miller


Photo: Marvin Miller


Photo: Joe Mitchell


Photo: Joe Mitchell


Photo: Marvin Miller



BIG BEND RANCH STATE PARK

A NEW TSS PROJECT

by Ben Hutchins

Texas is over 90% privately owned. But, that doesn't mean that we don't have some big open spaces to get lost in. If you're seeking solitude, Big Bend Ranch State Park is hard to beat. A bit smaller than its neighbor, Big Bend National Park, the state park is still an enormous wilderness of 311,000 acres, and it receives a fraction of the visitation seen in the national park. Although the park is comprised mainly of volcanic rocks, over 65,000 acres of Cretaceous limestone crop out in the far eastern corner of the park around a spectacular geologic formation called the Solitario. Earlier this year, the Texas Speleological Survey entered into an agreement with Texas Parks and Wildlife to begin a cave survey project in the park. I would like to introduce Texas' caving community to the project and invite participants for the first formal cave survey effort, which will take place this November.

Ben Hutchins and Guin McDaid scramble up to Three Windows Cave in 2013. Photo: Sean Lewis.
Cavers entering the Lower Shut-Up in 2013. Photo: Sean Lewis.





Road to the Solitario. Photo: Ben Hutchins.

Sean Lewis on limestone typical of the Solitario ridges. Photo: Guin McDaid, 2013.

Getting There

Through some geographic anomaly, the Solitario and surrounding limestone of Big Bend Ranch State Park is somehow the most distant point from all other points in the state. From the Austin area, the entrance to the park (which is on the far west side) is a long, eight hour drive. From there, another two hours of slow driving on dirt roads is required to transect the park, affording some great views of beauty and desolation. Then the road gets rough as a 2-track goes up, over, and into the heart of the Solitario. Factoring gas, food stops, check in, and slow crawling, count on a 12 hour trip to our base of operation, the Tres Papalotes Campsite in the heart of the Solitario. The walls of the Solitario are comprised of concentric layers of limestone tilted up at a steep angle and dissected by deep canyons. The geologic history of the Solitario, which is clearly visible from space, is complicated but involves magma (always good) forcing the once flat-lying limestone (and a bunch of other rock) upwards into a dome which subsequently eroded to become the crater-like feature it is today. And there's nothing else around. The nearest campsite is on the other side of the Solitario, and the end of the road is about a mile past the campsite so there isn't much in the way of through-traffic (I usually see about one visitor per day if I'm at the campsite, and I've never run into another visitor while hiking).

The night sky is spectacular, light pollution from the distant towns of Presidio, Lajitas, and Terlingua is blocked by the ridges of the Solitario. The campsite itself is also quite pleasant. It's big enough for up to 12 people and comes complete with two picnic tables, a fire ring, compost toilets, and a solar-powered well for non-potable water.

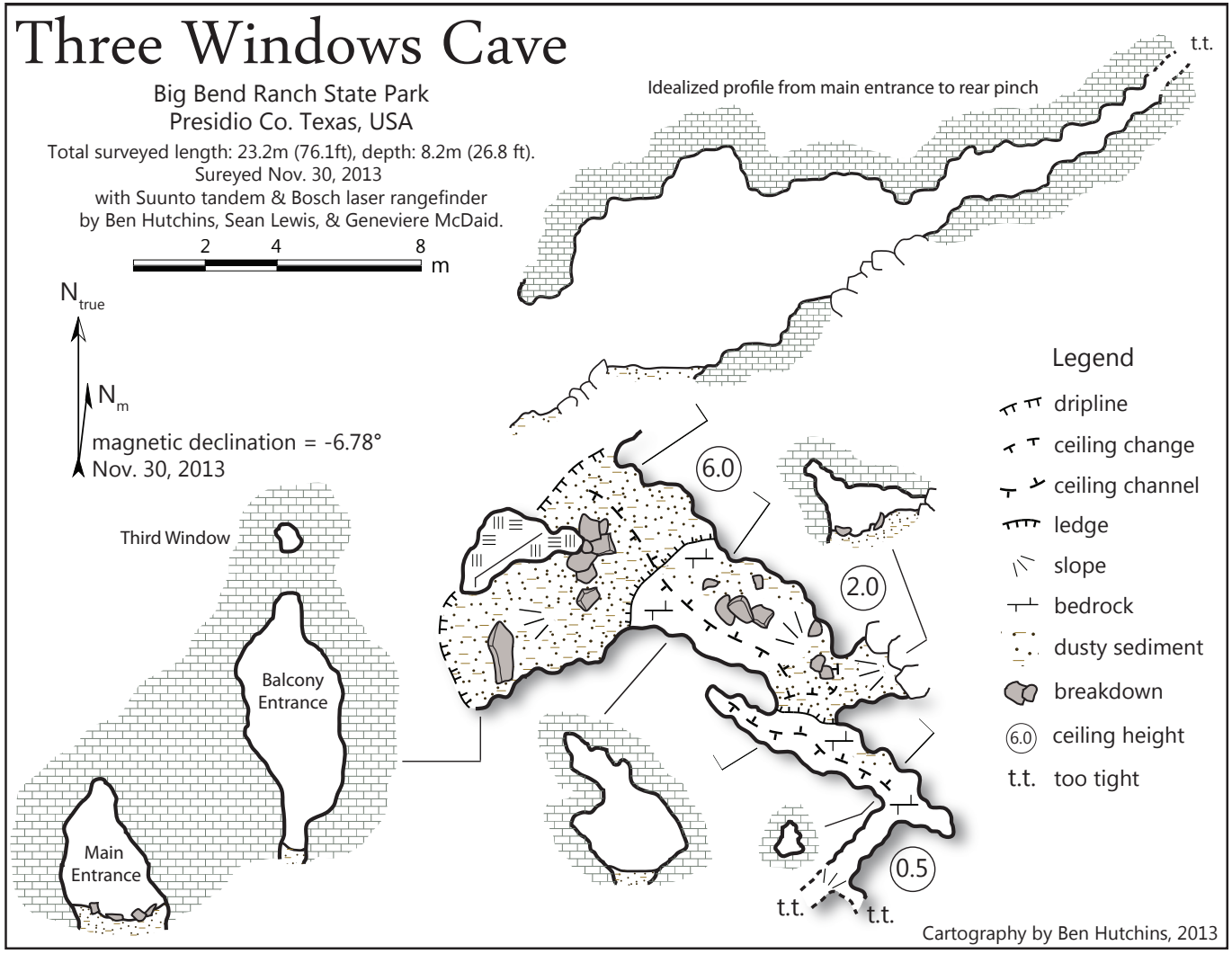
Caving Prospects

To be clear, Big Bend Ranch State Park does not appear to be a place for extensive, hard-core caving. Several, informal groups have gone to the park over the last several years in search of caves. The caves we've found so far are short and dusty-dry. In 2013, the only cave survey to date, was undertaken in Three Windows Cave, which was 23 meters long and not much to write about, aside from the view out the main entrance across a deep canyon called the Right-hand Shut-up. So, if the caving promises to be modest, why do we keep going back? For me, the freedom of being able to scramble over 257 kms of limestone without

the worry of crossing fences and obtaining landowner permission is a strong draw. And to be sure, what's lacking in cave potential is made up for with sweeping views through deep canyons, over sprawling limestone ridges, and across expansive volcanic horizons.

November 2015 Expedition

This year, as in years past, I'll be leading a group over the Thanksgiving holiday, leaving on Wednesday November 25th and returning on Sunday, November 30th. Entrance and campsite fees will be waived for volunteers, but group size is limited to 12 individuals. High clearance, 4X4 vehicle is recommended, although the drive has been made in a Subaru Outback. Extra fuel and two full spare tires are also recommended. Nights drop well below freezing and there is no potable water. Hiking is typically in full sun and not for the casual stroller: nothing is close, and every day that we go to survey or ridge walk will involve multi-mile hikes over rough terrain and poor to non-existent trails. But the views are great and we'll have a Thanksgiving potluck dinner to look forward to on Thursday. The primary objectives include: 1) survey of several small caves that have been entered but not surveyed, 2) relocation and survey of one lost and several rumored caves, 3) entry and survey into several potential cave entrances on cliff faces that will require rope, and 4) continued ridge walking. Folks are also welcome to take off from cave efforts to enjoy other parts of the park or just hang and relax at the Solitario Bar (kooks, freaks, and weirdos welcome). Anyone interested should contact me with questions or to sign up. hutchbt2@yahoo.com





Cavers entering the Lower Shut-Up in 2013. Photo: Sean Lewis.



Waiting For Your Discovery...

CAVING IN EASTERN NEVADA

by Deanna Stever and Eric Stever,
Northern Nevada Grotto

Photos by Charlie Nelson,
San Joaquin Valley Grotto.

In a remote and mountainous corner of Nevada, hundreds of undiscovered caves lay within the remnants of an ancient seabed, lifted high above the valley. These are the caves of Eastern Nevada.

Though the area is cold and dry today, the carbonate rocks which house many of the caves were deposited between 250 to over 500 million years ago, when Nevada was covered by a shallow ocean, bordering a continent near the equator. Millions of years of mountain building extensively fractured the carbonate rocks. They were subsequently buried with ash and lava until around 16 million years ago, when extensional forces began stretching the Earth's crust. Normal faulting lifted up sections of the old seabed, and created hundreds of parallel mountain ranges divided by broad valleys. Areas where the limestone from the seabed was particularly thick were ideal for the formation of caves.

More recently (in a geological sense) lakes, streams and alpine glaciers developed during the cold and moist ice ages of the Pleistocene, about 2 million years ago. This is likely when many of the caves began to form, as some contain fossils of giant short-faced bear (*Arctodus simus*), camel and as well as Pleistocene mega fauna.

Caves are scattered across the numerous mountain ranges of Eastern Nevada, and are typically found in Cambrian, Devonian and Mississippian limestones (carbonate rock). The complex geology of the area makes predicting cave locations difficult and most are fairly remote. Due to the extreme distance from larger populations, and the difficult hike to reach them, these caves receive limited visitation. Many have never been explored.

Hypogenic

Most caves in this area are hypogenic, meaning they are formed from an upwelling of water. These caves have no relation to the present topography or local drainage pattern, which makes predicting their location difficult. The irregular caverns of these hypogenic caves contain unique features such as Gypsum crust, ceiling cupolas, crystalline linings, folia, floor vents and other uncommon speleothems. Lacking fluvial sediment, the cave floors are generally covered in dust or mud derived from weathered bedrock.



Epigenic

Very few caves in Eastern Nevada have an epigenic origin (formed from descending waters) but those that do are the largest in the area. The Baker Creek System at Great Basin National Park is over 2 miles long, including 7 hydraulically connected caves all of which formed by stream capture of Baker Creek. Some of these caves periodically flood during spring runoff and water levels in others are in constant fluctuation.

Another well-known example is Cave Valley Cave, which was first reported by the survey party headed by George Wheeler in the 1870s. Cave Valley Cave is located right at the valley level and connects to a nearby stream. It is over a mile of branching passages filled with unpleasant clay that requires a great deal of scraping to remove from your clothing. Abandoned boots litter one muddy stretch of the cave.

Vertical Caving

In Eastern Nevada, vertical gear is sometimes required to reach cave entrances, or to enter the caves themselves. Some cave entrances are located high in cliffs and can only be accessed by a rappel. Others have drops ranging from 20 ft. to over 200 ft. Additionally, some of the alpine caves have multiple drops and the hypogenic caves offer great climbs.
Additional Resources

Explorations of George Wheeler

Preliminary report upon a reconnaissance through southern and southeastern Nevada, made in 1869
https://archive.org/details/preliminaryrepor02unit

Preliminary report concerning explorations and surveys, principally in Nevada and Arizona. (1872)
https://archive.org/details/elementslogicde02coppgoog

Address of Lieut. Geo. M. Wheeler, December 23, 1874, before the American Geographical Society
https://archive.org/details/cu31924028910269





We hope you can join us!
NSS 75th Anniversary
Ely, Nevada
July 16-23, 2016

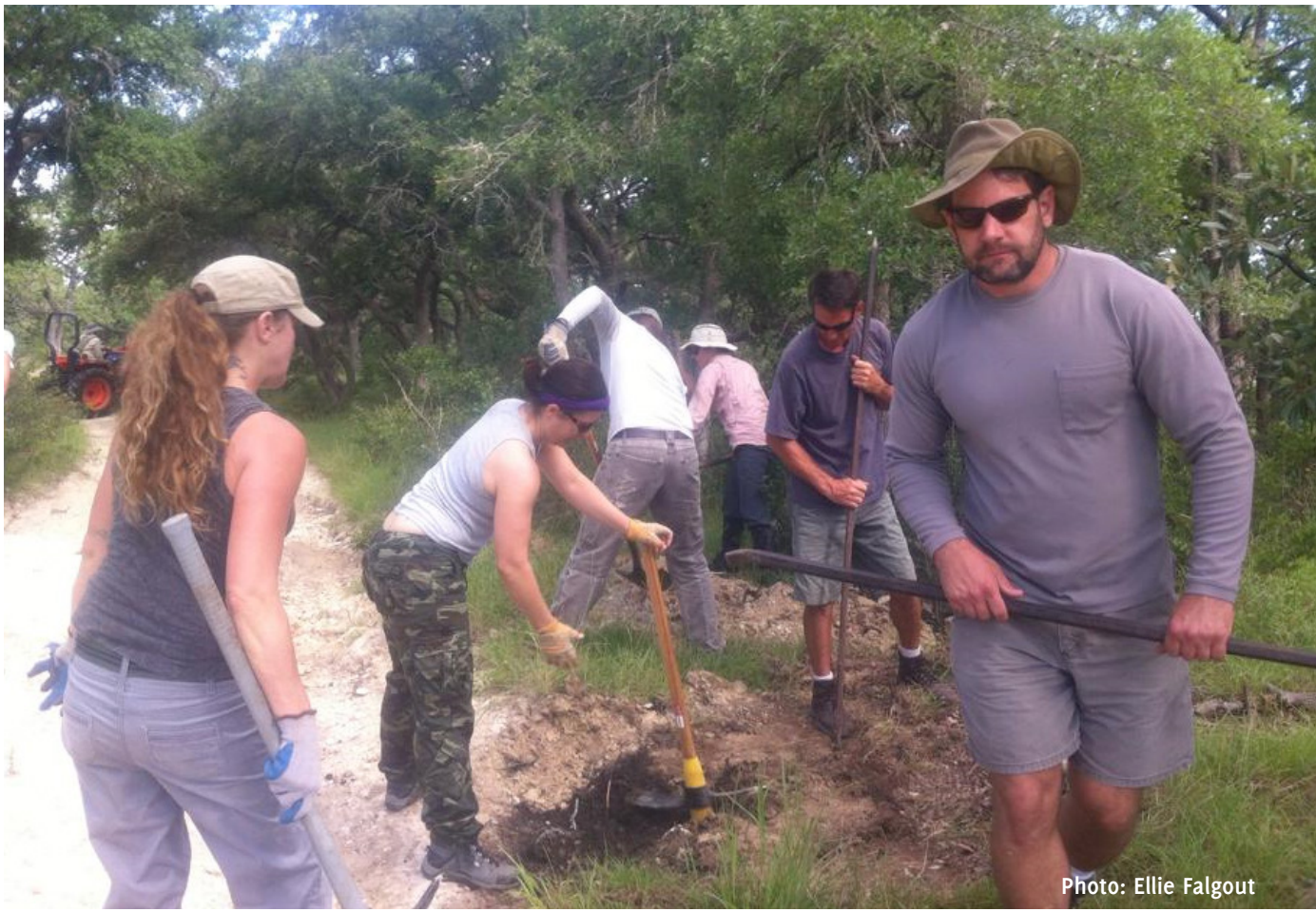
Honey Creek Road Repair Project

by Ellie Falgout

Cavers had a work day at Honey Creek Cave property on June 6th and 16 volunteers showed up to work on making preliminary road repairs. The old ranch road has about 6" to 1' berm along both sides of most of the ½ mile ranch road from the highway to the cave shaft. Heavy rains, bound by the berms, cause the road to become a river so, during our January 2014 Tank Haul trips to Honey Creek Cave, we began making plans to divert water from the road.

On June 6th, Kurt Menking had a tractor out to dig several sections of trenches through the berms and cavers continued the work with picks, shovels, and rocks bars. Volunteers were: Rob Bissett, Pam Campbell, Ellie Falgout, Kim Freund, Jean Krejca, Bennett Lee, Guin McDaid, Kurt Menking, Amy Morton, Jill Orr, Tim Ramon, Tom Rogers, Richard Silver, Victoria Summers, Arron Wertheim, Rich Zarria, Andy Zarria

The day was very hot and we were glad to have segments of shade while we worked. The preliminary work of beginning the trenches is done and we eagerly await the next rain to see if the trenching was effective. We will have more work days out at Honey Creek to continue road repairs and assist the landowner with tasks - so please volunteer!



Volunteers Guin McDaid, Amy Morton, Tom Rogers, and Arron Wertheim work on water diversion.

SOUTH DAKOTA CAVING:
A PHOTO ESSAY

PHOTOS FROM GHG CAVER AMY MORTON'S EPIC SUMMER JOURNEY. SHE WAS JOINED BY JILL ORR IN THE BLACK HILLS AND BADLANDS OF SOUTH DAKOTA, WHERE THEY WERE GUESTS OF THE PAHA SAPA GROTTO INTO REED'S, BARTON'S, WIND, AND JEWEL CAVES. Photos by Jill Orr











Top Left – right to left: Steve Langendorf, of the Paha Sapa Grotto, lead Amy and Jill into Reed's Cave, located in a quarry with a ladder in a shaft for the entrance. After assisting in cleaning up an old survey, they were treated to many exquisite decorations deeper in the cave.





Right: Walking back to camp after our night trip into Wind Cave, we encountered a lone buffalo standing in the middle of the road. After a short discussion we agreed to a wide detour around him; this one was photographed from the safety of the car.

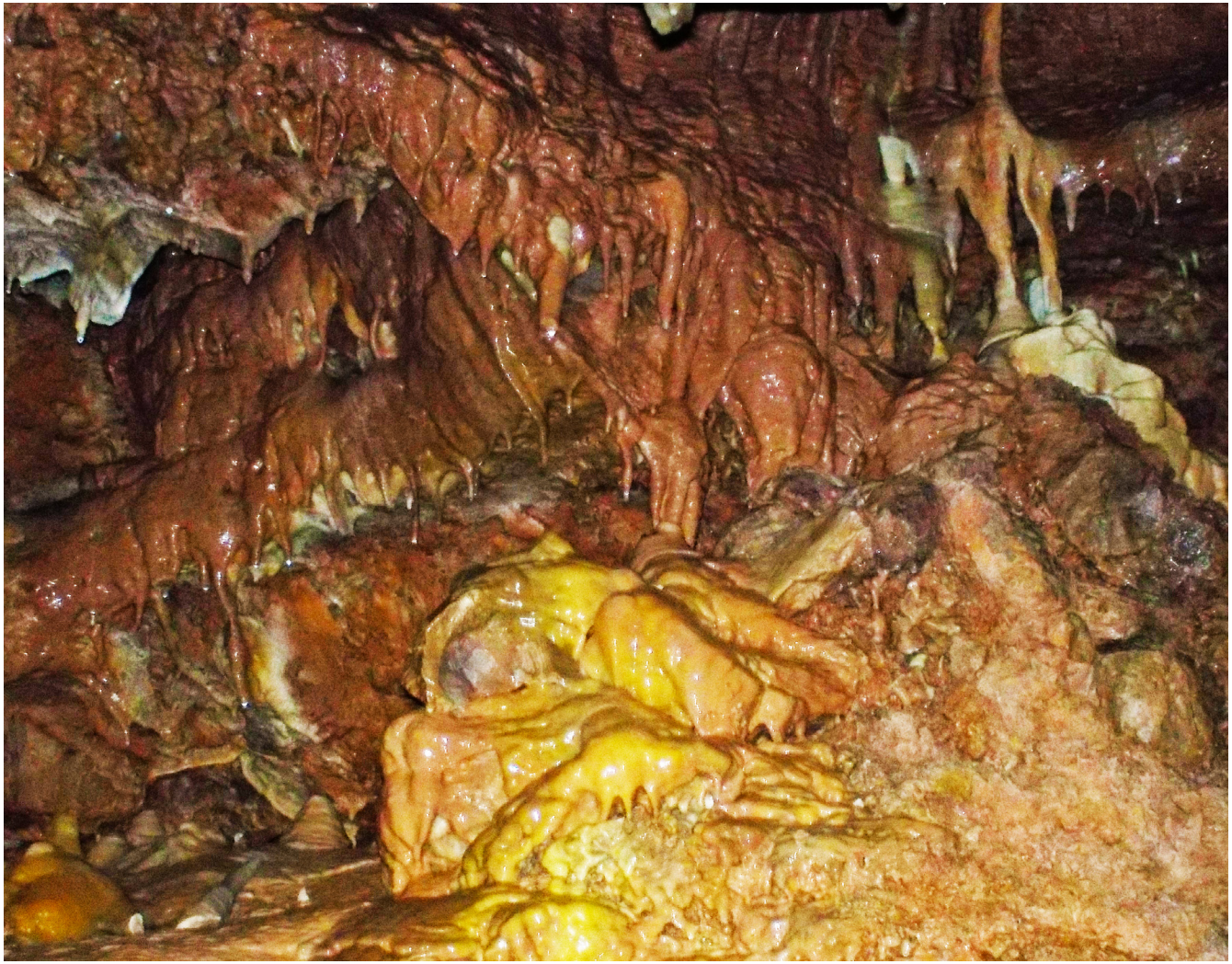


Above Left: Steve Langendorf in Reed's Cave. Above Center: Grotto president, Dan Austin (center) arranged all of the trips and led Amy and Jill into Barton's Cave and a 300 foot belly crawl to an aquifer (below).



We were fortunate so see some very rare speleothem: hydromagnesite in Jewel Cave, and boxwork in Wind Cave. Unfortunately, we didn't end up with photos of these amazing formations, Google them for a look.







TEXAS SPELEOLOGICAL ASSOCIATION