

THE DEATH CORAL CAVER

NUMBER 14

JULY 2009





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Front Cover: Nick Johnson at the Milk River in the Meager Borehole, Sistema Purificación. 2006 Photo by Bev Shade

Inside Front Cover: Aaron Moses in the flowstone squeeze below the Octopus Drop, Sistema Los Toros. 2008 Photo by James Hunter

Inside Back Cover: Vickie Siegel and Bev Shade survey loops off the Polkadot Passage in the Western Confusion Tubes. 2006 Photo by Chris Krejca

Back Cover: Tanja Pietraß on the Octopus Drop, Sistema Los Toros. 2008 Photo by James Hunter



EDITORIAL

The Purificación survey record is crucial for PEP cavers who weren't around—many not even alive—when the project's big caves were first explored. Continuing exploration in known caves is possible because over thirty years of survey notes are carefully organized and the survey files are current. In this regard the PEP is built upon the strongest of foundations. Maintaining high survey standards and exceptional records becomes easier when a single, simple question is asked: What will future explorers need to find and push leads in the Purificación Karst?

Digital storage solutions are developing so quickly that the lofty long term goal of capturing all the data, sketches and speleological information in a master project file appears nearly possible; hundreds of leads, faunal lists, trip reports, maps, rigging lists, etc., may one day be easily available for searching and planning. Bev Shade has been rebuilding the PEP data set into a digitally indexed archive by scanning and filing the fifty-plus project sketchbooks, plus cleaning up the survey files and organizing maps. The project notes will be as user-friendly as ever. Continuity is the very soul of the PEP. --Dan Green

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2006 Photo by David Ochel

Thanksgiving 2003

Conrado Castillo, November 22-29

by Bev Shade



Photo Colin Strickland

I MUST ADMIT that along with much of the material in this issue of the Death Coral Caver, this trip report is sorely overdue. It is the tardiest of the bunch, as the trip took place only a month after the last Death Coral Caver was published. Now, six years later, the trip report finally sees the light of day. Many thanks to Chris Krejca and Tom Haile for the descriptions of this trip that they recorded in the field house log book later on, since it had been forgotten on this trip.

To quote Chris, this trip was a circus and I was the ring leader. She's right: in all, we were 31, far larger a group than I had intended for this "training" trip. But somehow we all jammed our cook gear into the field house and even went caving! Well, except Jonathan, who forgot all his gear at my house. We'll blame it on jet lag. I suspect that we might have even had fun. A few folks showed up later, but in all we were: Dale Barnard, Aimee Beveridge, Carrie Beveridge, Joy Cuckierman, Justin Daniel, Kim Davis, Kara Dittmer, Paul

had more good news: Andy found a blind cave scorpion (*Troglocornis willis*) near the previous end of survey. The next day, Andy and Faith and I returned to the lead armed with a hammer and pretty quick we were all through. We mapped some great passage at several different levels. In all, we surveyed 193 meters in this new section of cave. We stopped at a short pit we didn't have rope for, with some windy holes in the ceiling over the pit as well. Does it go? You'll have to read the next trip report to find out.

The rigging crew spent two days in the cave, route finding and deciding which climbs warranted ropes. The rigging crew was Ed, Fofu, Chris, Shannon, Tom and Dale. After leaving the cave on the first rigging day, Dale slipped on a rotten log and impaled his hand on some rotten but jagged wood. It was a pretty nasty cut and they spent a lot of time cleaning all the rotten wood out of the wound.

Jubal Grubb and Kori Jones arrived a couple of days later than

the main group, driving straight through from Austin as soon as they could leave town. They had minor trouble getting lost in the middle of the night around La Curva, but sorted it out on their own and joined us in Conrado Castillo in the wee hours of Tuesday morning.

Finally, a crew from San Antonio joined us just in time to celebrate Thanksgiving with a great dinner. Linda Palit, Libby Overholt and Joe Ranzau came up in Joe's truck, which suffered greatly on the drive up. While most folks were getting ready for a great feast, Andy, Matt, Nathan and I slipped off to Cueva de la Cuchilla, where

Andy discovered yet another *Troglocornis willis*.

Ed Goff, Chris Krejca and Faith Watkins surveyed 120-m-deep Pozo de Francisco y Ramiro (PEP519) on 20 November, about 3 km south of Rancho Nuevo.

Resumen

En noviembre de 2003, 31 Espeleólogos viajaron a Conrado Castillo, 30 provenientes de Texas y uno de Monterrey. Existían 3 metas para el viaje: 1.-Aprender la ruta hacia Dragon River a través de la Entrada Oyamel e instalar la ruta. 2.-Continuar la exploración en Allarines. 3.- Dar entrenamiento a algunos nuevos espeleólogos y ayudarlos a aprender las rutas dentro de Brinco. Todas las metas se cumplieron. Además un equipo topografió el Pozo de Francisco y Ramiro (PEP519) a aproximadamente 3Km al sur de Rancho Nuevo.



Ed Goff, Chris Krejca and Tom Haile installing additional rigging in Oyamel. Photo by Faith Watkins



Part of the group heads out to go caving (L to R): Paul Fambro, Dale Barnard, Denise Predergast, Pete Strickland, Kori Jones (back row). Jonathan Wilson, Katherine McClure, Linda Palit, Jubal Grubb, Joe Ranzau. Photo by Faith Watkins

Fambro, Andy Gluesenkamp, Ernie Garza, Ed Goff, Rodolfo (Fofu) Gonzales, Jubal Grubb, Kori Jones, Tom Haile, Chris Krejca, Katherine McClure, Libby Overholt, Linda Palit, Nathan Parker, Denise Pendergast, Sammy Pizzo, Susan Pizzo, Joe Ranzau, Matt Reece, Christie Rogers, Bev Shade, Pete Strickland, Shannon Summers, Faith Watkins and Jonathan Wilson.

The goal of this trip had been two-fold: a training trip to give some new folks a chance to see Sistema Purificación and get experience in a big cave, and also to scout out the route for a camp trip into Oyamel the following spring. Both of these things happened over the course of the week. As well, we revisited the lead in Allarines. Peter Sprouse had sent Chris and me to a wet lead at the bottom of this cave the previous spring (2003), when we were in the area to do a through trip. At the time, we didn't have rope and had turned around at a down climb that I thought was a drop, only to get back to the field house and find that it was indeed climbable. On this trip, while some folks were rigging in Oyamel and some were checking out Brinco, I sent a few more to Cueva de los Allarines to see where the lead went. Good luck! Matt, Andy and Faith not only found their tie-in stations, they surveyed about 100 meters to a restriction. Faith wiggled through the squeeze and reported more passage on the other side! And the group

Conrado Castillo Congregation

Spring 2004

by Philip Rykwalder

PERSONNEL: Carl Bern, Amy Bern, Jonathan Wilson, Philip Rykwalder, Bev Shade, Charley Savvas, Nancy Pistole, Matt Oliphant, Bill Stevens, Ed Goff, Andy Gluesenkamp, Matt Stephens, Chris Krejca, Shannon Summers, Faith Watkins, Tom Haile, Cathy Winfrey, Kara Dittmer.

SPRING OF 2004 saw a large group of very capable cavers at the SPEP fieldhouse in Conrado Castillo. The goal of the trip was to push leads in the Dragon River of Sistema Purificación. A number of leads have been found on past trips, ranging from climbing to digging and crawling. The traditional way into the Dragon River is in Brinco, down to the World Beyond and through the Mud Funnels. The Mud Funnels have been sumped for a few years now, however, as was confirmed in the spring of 2003 (*Death Coral Caver #13*). An alternate route is through the Oyamel entrance. Oyamel lies further up-cave from the Brinco route, and is at a lower elevation, so technically it is a shorter path to the Dragon River, but its squeezey and difficult nature isn't as grandiose or scenic as Brinco. But, since the Mud Funnels appear to be permanently sumped, Brinco is no longer an option into the Dragon River. Thus, Oyamel. Our plan was to use short cave camps via the Oyamel entrance to pursue virgin cave in these leads.

Fallout from the then recent British cavers' non-rescue-rescue in March put us in a bit of a worrisome tizzy over our border crossing. Would there be fallout with other foreign cavers entering Mexico? Would the word 'caver' turn us the caving equivalents of Jimmy Hoffa? Unable to predict if we would attract attention we panicked a bit before the border. Bat stickers were peeled off, trucks repacked and shirts changed. Now we were just smelly climbers with really muddy gear. Nothing happened at the crossing, but Bev and I went to Victoria anyway to talk to the Semarnat (Secretaria de Medio Ambiente y Recursos Naturales) delegate for the state of Tamaulipas while Carl Bern, Amy Bern and Jonathan Wilson headed up the hill to Conrado Castillo and the fieldhouse. There, they met up with a number of people who had already arrived, and were ready to go caving.

In Victoria Bev and I met up with Paco, a friend of Peter and Jean's. He invited us to stay at his house while in town and to help interpret when we went to speak with the Semarnat guys of Tamaulipas. Semarnat is a kind of natural resource management department of the Mexican government. Over a few days we met with various people and eventually the Semarnat delegate himself. At his house. Interrupting whatever he was doing with his day. He graciously entertained our presence, and answered as many questions as he could, eventually surmising that he knew of our project and appreciated the years of cooperation and updates, but that Semarnat

did not have the authority to approve anything we did. He advised us not to get any media attention and to not get arrested. He offered a business card and cell phone number in case we ran into real trouble. As the meeting concluded, he stood up and gestured toward his large living room bay windows, which faced east, toward the Gulf of Mexico. "Looks like rain", he said, and laughed. This proved to be excellent foreshadowing.

Our accommodations in Victoria couldn't have been better; we got a room and bathroom at Paco's newly remodeled house, and he escorted us around town to parks and tasty taco stands. He also suggested that we visit the new Museum of Natural Science, but it turned out to be so new that we couldn't get in without a press pass.

Back in Conrado Castillo, there were a whole pile of other people in addition to Carl, Amy and Jonathan. Charley Savvas, Nancy Pistole and Matt Oliphant made Conrado Castillo a stop on their way back

from a longer trip that included southern Mexico and Guatemala. In celebration of years of caving with and learning from Charley, and in anticipation of the major booty to be scooped in the Dragon River, Jonathan and I had spent our last day in Austin stenciling "Team Savvas" t-shirts for everyone. As well, Bill Stevens and Ed Goff had both driven from Dallas, while lots of people had come from Austin. This group included: Andy Gluesenkamp, Matt Stephens, Chris Krejca, Shannon Summers, Faith Watkins, Tom Haile, Cathy Winfrey, and Kara Dittmer.

Such a large group of skilled cavers not able to go caving is a dangerous thing. By the time Bev and I had finished exchanging letters with his office and paid for our visitor permits, the rest of the group had arrived, drunk all their alcohol and were waiting for the word that we were OK to go caving. In that order. As soon as we arrived, the rigging team took off. The next trip in Oyamel was to check out the route down and into the Dragon River. I'd heard all sorts of horrors about Oya-Hell. This being my very first trip in the PEP system I was a spot nervous, but then again, I'm always nervous before a big trip. Our group of seven slogged to the entrance the next day in patently sordid weather. This group was Jonathan, me, Carl, Bill, Amy, Bev, and Faith.

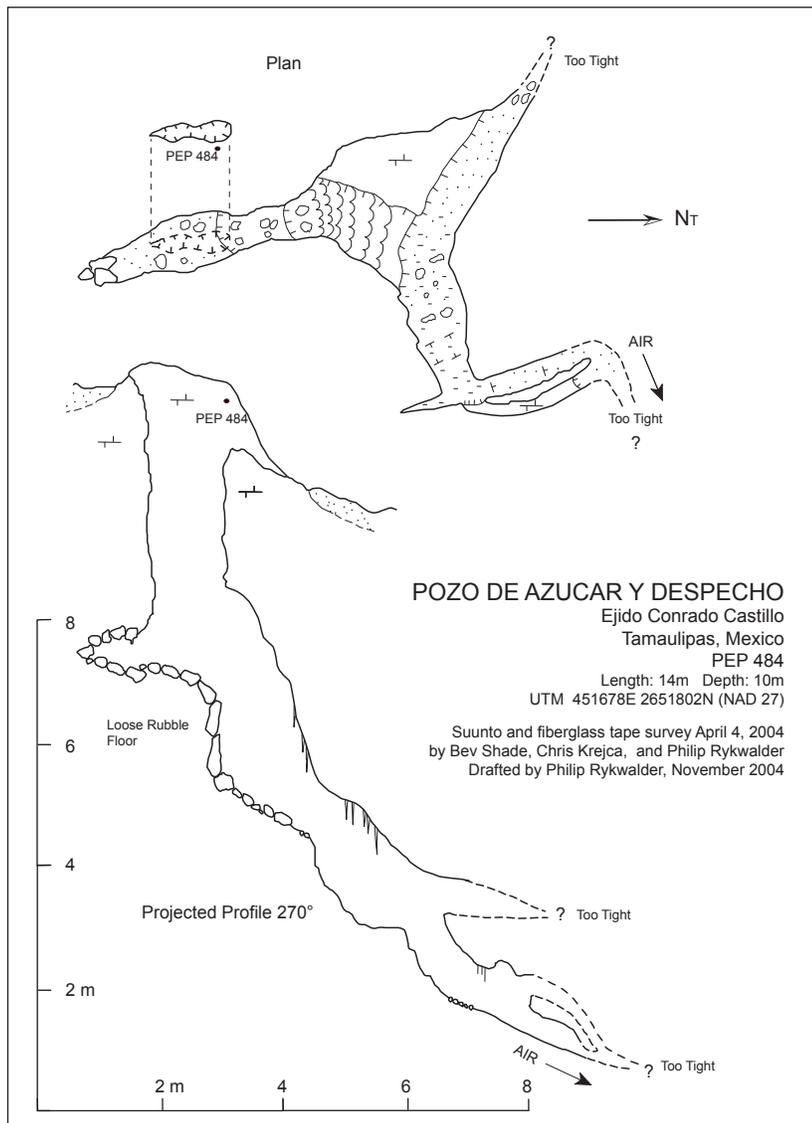
Slipping down the entrance drop at the lead, Jonathan Wilson was off like a gun, eager to see the Dragon River. I followed, hot on his heels, salamandering through the watery passage after him. We



Photo Colin Strickland

dropped down, down and down. I saw Carl Bern and Bill Stevens intermittently, but mainly I was focused on Wilson's ass. I love caving fast, moving with the cave, following its ins and outs, especially in difficult and wet caves. This was definitely my kind of trip. And the climbs—I love to climb, so Oyamel and I got along quite well. With a camp duff it certainly would have its position in one of the lower levels of hell, but on the recon trip I had an absolute blast.

The outcome was that far below Locomotive Breath, which is between the Oyamel entrance and the Dragon River, was sumped.



There was no airflow at all in the cave, an indication that the sump was real. Our main impetus had dissolved. The trip would need a new focus. Out we headed into the fog.

Team Savvas was sort of at a loss of what to do next. Teams organized the next day and transects were conducted to search the surface for another way into the Dragon River further up the valley. The hillsides above Oyamel were combed, Veni-style. Over the next few days, as the weather many karst features found were flagged, GPS'd and described and Bev and I set out to dig our own entrance armed with a slew of yard tools.

A boy's dream come true? With the ridge walking done for me, I had only to dig—or sometimes just walk into—virgin caves. And, to go digging with a hot chick—what else could I want? Two kinds

of booty. Shannon and Carl joined us later and in a few days we had dug into several new small caves, though none of them promised to be an Oyamel bypass into the Dragon River. Ridgewalking on Cerro Vaquerillo, Bev, Chris and I found a pit that seemed alluring at first but turned out to be tight, sharp and short. We mapped it named it Sugar & Spite (Pozo de Azucar y Despecho).

While the cave and digging finds were entertaining enough for me, others were finding different things to do. Faith's evaluated the school house at Conrado Castillo in hopes of removing bats and bat-

proofing it on a future trip. Currently, a group of bats has moved in and is making the school house smelly and uncomfortable. As well, a mop-up trip in Allarines was mounted – Andy, Bill, Faith and Nancy surveyed 50 meters, but the lead headed toward the surface, not a connection with Oyamel, as we had surmised. The pit we had left the previous fall, Truffle Pit, proved to be blind and the rest of the upward-trending leads pinched out. Later, another group set off back down into Oyamel one more time to derig the cave. Again, no airflow was felt in Oyamel, indicating that its connection with the rest of the cave was still sumped. Bit by bit more people were trickling north leaving a group of nine at the fieldhouse. We decided to pick up camp and head west into Nuevo León and to the town of Tinajas.

The small berg of Tinajas is located west of Conrado Castillo further along the same logging road. After a missed turn a logging truck was met heading down the road we were grinding up. Shenanigans involving a hasty retreat driving in reverse down the mountain and 16 point turns in the middle of the road ensued, but then we arrived in Tinajas. We drove into town and talked with the current comisario, explaining our interests and goals. He had heard about the fiasco in Cuetazalen, and was concerned about any caving in their community. He did recall past uneventful trips to the area by cavers, but still felt that he should talk to Semarnat of Nuevo León, who we had not spoken to yet. Conveniently, it was Semana Santa, and no one in Mexico was doing business. We decided to camp in an area that had been used before, and managed to find a way to drive down to it as dark fell. In the several years since cavers had been there, lots of brush had grown up, so it was hard to find a place to drive. We also paid for a great dinner of scrambled eggs, cooked by the comisario's wife.

In the A.M., woken by the motor of a truck of locals intentionally driving through the middle of camp—watch out Shannon!— we piled out of bed.

The truck belonged to people at the road intersection, not Tinajas. They have arranged with Tinajas to have permission to cut Spanish moss out of the trees, which is eventually sold to the US to use to line hanging baskets.

We split into two teams to ridge walk. One headed up Cave Canyon (enticing name, eh?) and mine walked in search of caves along a shale/limestone contact. I found a little 10m cave way the hell up on this ridge overlooking Arroyo Luna—a beguiling sight in itself—and then spotted a humongo sinkhole way far down the same ridge. My own Brinco! Shannon and I ran off down a steroided-out Guads style hillside to get to the sink before sundown. We found a fissure cave in the sink that involved an Indiana Jones move around a corner to a 10m drop. Without vertical gear and unable to explore the cave,

we headed back towards camp and met Bev along the way. The three of us ambled down to join the rest for a dinner of cabrito, potatoes, beans and eggs in Tinajas, courtesy of the best cook in Mexico. We all (at least, all of us who eat cabrito!) ate until we were completely full!

Tinajas was not doing it for the group, so most elected to head east for the beaches leaving Bev, Shannon and I, with everyone driving back to Conrado Castillo first to collect gear. Having spent most of our time digging and walking around the woods, the remaining three of us decided to do some caving. Bev had a small passage to mop up survey in Sotono de Cuchilla.

Entering Cuchilla we dropped down the nylon highway to the bottom of the easy part of the cave, and passing through the Hurricane Crawl we were soon off to Bev's lead. Leads always grow in the mind over time. They also grow in girth, height and overall friendliness, and this one was no exception.

The passage we mapped was a slimy mud fest. We surfed along in a brown soup, sliding along like penguins. Between stations I cleaned mud from the sights of my instruments with my tongue like a lover. By the end the brown ooze had gone beyond a mere coating and we were Children of the Mud.

Finishing up, with passages becoming soporific, we slithered back up the ropes wondering the time. I guessed midnight, but the moon overhead grinned and the clock told a different story, 5 A.M. We had long dreamed of a taco dinner with real beef, brought to us by cutting edge advances in vacuum packing technologies. And the hour wasn't going to stop us from having it! An onion was sautéed up, avocados sliced, the meat heated, cheese added and tacos were had. It was a real treat. Soon, however, the sun and moon started their daily hello and goodbye and we turned in, exhausted.

Having been somewhat productive in Cuchilla, we set off to

Brinco for a day of fun tourist caving. A more classic trip there is not. There are many different components to caving. Climbing, crawling, swimming, slithering, squeezing, manipulating and so forth. I've long sought after the one elusive cave that would test all. My vertical work had gotten a lubing in Cuchilla, and now everything else was called upon in Brinco. It was a dream, my own Nirvana.

In to the Changing Room and down into the water. Through the Crack of Doom, turn around and slither up. Up over the Lunar Way, follow the water and slosh through the Rio Verde, squirrel down through the Toilet Bowl, bop through Main Squeeze. Through the Mud Ball, salamander along and then into the Canal. With my 0.04% body fat content, I sank like a rock. Fortunately I was wearing boots that turned my paddle-like feet into cloven hooves, but the ceiling was a berth of stals, so I jungle-gymed my way along, dipping an ear here and there. Climb up—then down—and into the World Beyond. This trip truly was one of the



Team Savvas paying homage to their warrior chief. Photo by Jonathan Wilson

most spectacular bits of cave passage I've seen. It has just the right amount of everything.

The next day we were to revisit Cuchilla. On our first trip we had noticed a number of rusted maillons and some less than desirable rigging, partly due to time and partly due to heavy use during the cave's hey-day. A bit of maintenance was due. We stage de-rigged the cave, pulled hardware, checked out each drop's rigging and noted what could use a bit of spiffing up.

The next day we gave the fieldhouse a top to bottom scrubbin' any ma would be proud of and then headed down the hill after a final 'adios' to Conrado Castillo and a weak attempt to herd the pigs out of the yard. Eighteen hours, a border crossing, a few fleeting shots of tequila, a six pack and a pint of rum later we were back in Austin.

Resumen

Durante Marzo y abril de 2004 hubo una expedición al Sistema Purificación. El plan era el de explorar algunas continuaciones interesantes en el área de Dragon River. EL grupo era muy entusiasta, pero no obstante malas noticias pronto llegarían. Espeleólogos Ingleses involucrados en un rescate y escándalo público en Cuetzalan habían hecho que la opinión pública acerca de los espeleólogos bajara considerablemente. Justo el día que el grupo cruzaba la frontera el presidente de México anunciaba que los espeleólogos extranjeros no eran bienvenidos. De esta manera muy preocupado el grupo acerca de romper alguna ley en el viaje de exploración, se reunieron con SEMARNAT Tamaulipas para hacerles saber de la presencia del grupo.. Así mismo el grupo siempre ha contado con una Buena relación con los habitantes del área de Purificación sin necesitar algún permiso de gobierno, por lo que se continuo con el viaje. La mala suerte se volvió hacer presente, algunas lluvias intensas elevaron el nivel de agua, sifonando Oyamel así que no se pudo llegar a Dragon River. De la misma suerte los Mud Funnels estaban sifonados por lo que tampoco se podía llegar a Dragon river vía Brinco. Bev no tenía un plan B, los integrantes se aburrieron y desesperaron una vez que la emoción había pasado. Se hizo prospección sobre el área Dragon River / Cuchilla pero solo se logro encontrar una cueva (PEP484, Cueva de Azúcar y Despecho). También las continuaciones en Allarines fueron exploradas. Se fue al área de Tinajas por dos días, pero sin la lista de las cuevas conocidas del área, el entusiasmo era poco como para hacer prospección. Además residentes de la Tinaja estaban preocupados por las noticias de Cuetzalan. Todos viajaron de vuelta a casa excepto por Bev, Phillip y Shannon, quienes hicieron algunos viajes en área de Brinco, involucrándose en una continuación al fondo de Cuchilla. Para este momento el nivel de agua había bajado y sin lugar a dudas los sifones estaban abiertos por lo que se sentía una fuerte corriente de aire, pero era demasiado tarde, el viaje había terminado.

Car Capers in Chupaderos

May 3-14, 2005

by Bev Shade



The fatal jump start. Photo by Bev Shade

This is a summary of a trip report first presented in AMCS Activities Newsletter Number 29.

NATHAN PARKER, MIKE Michael, JJ Noyola and Bev Shade left Austin Friday night, May 3, 2005. We bivied just north of the border, then picked up Samuel Rodriguez Muñiz in Monterrey, which took several hours since he had to finish work and pick up gear across town. Confusion between the drivers and the navigator led to a very roundabout drive toward our destination of the west side of the Purificación area, but managed to get to Zaragoza by the evening, where we stayed at the economical Hospedaje San Francisco, the traditional lodging spot for PEP trips to the west side of the project area.

The next morning, May 5, Samuel and I met with the alcalde of Zaragoza to let them know we were caving in the area. Since it was Cinco de Mayo, there were parades and festivities all over town; the alcalde was understandably busy. It was a very pleasant meeting, we

presented him with some recent Death Coral Cavers and he gave us official sanction to be caving in the area.

We promptly headed up the mountain, excited to be caving after all the delays. Unfortunately, JJ's 4Runner broke down on the steep switchbacks leading up to La Escondida. After several hours of replacing the fuel filter and various other bits, it became apparent that we couldn't get it running. With several ideas of what might be wrong, JJ packed up a light bag and hiked back down to Zaragoza to search for parts,

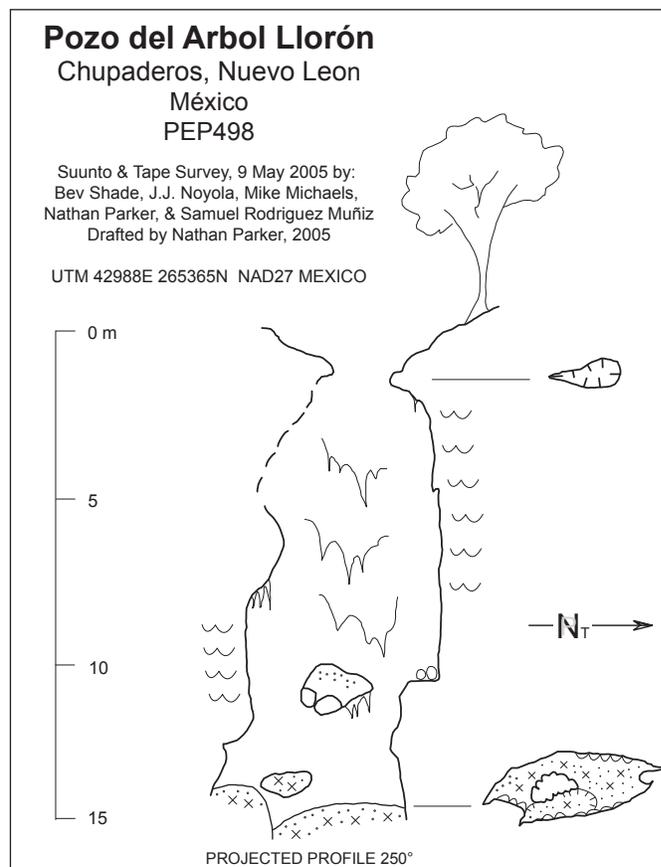


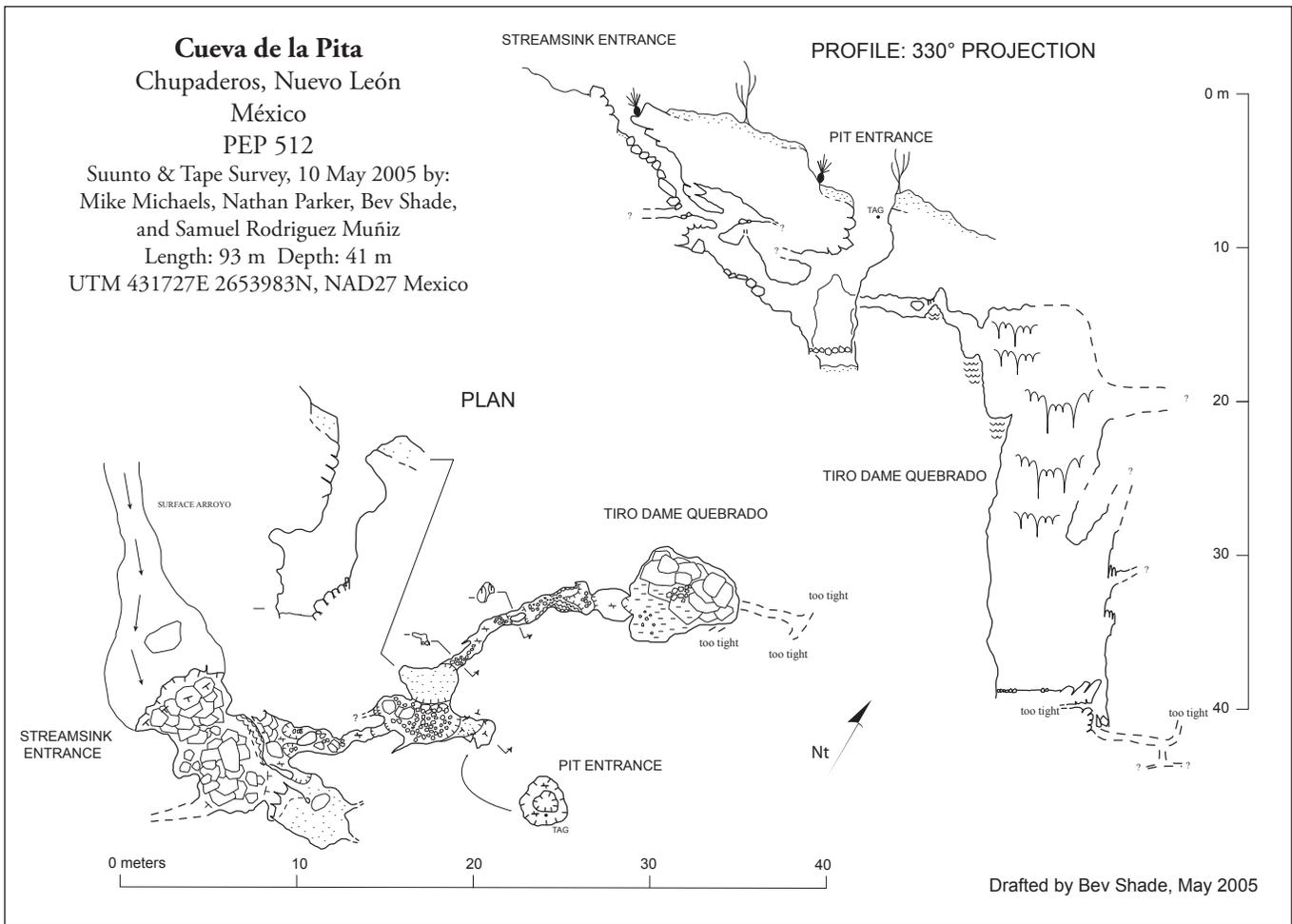
Mike Micheals set the ID tag at Pozo Arbol Llorón. Photo by Bev Shade

presumably by busing to Monterrey or Laredo. The remaining four of us loaded into my truck. We drove a short distance and by dark were camped close to La Escondida, convinced that our slew of delays was finally at an end.

The next morning, Nathan, Samuel and Mike got up early and visited some known caves close to our campsite while I repacked the truck. Our original plan had been to camp near Margaras and try to hike to some reported high leads to the southwest. After breakfast, we continued the drive to Margaras, pausing at the turn to Cretaceous Park so that everyone could familiarize themselves with the road. Samuel hiked down the road a short distance to La Cienega, where he found a stalled truck in the road. A rancher from Zaragoza, Leonicio

Francisco Reyna, had been visiting their ranch nearby and their truck had broken down. It had stopped in front of a house belonging to Francisco Rosales. The truck had a variety of problems, but the beyond-dead battery was the most pressing one. We were pressed into service to help, and eventually ended up putting my truck battery into the ranch truck and giving it a good push start. It worked, but replacing the battery in my new truck set off the factory car alarm. Never having had a car alarm, I did not know that they can usually be bypassed by a valet switch. After some efforts to bypass the alarm by pulling fuses, I left Mike, Samuel and Nathan with the truck, a GPS, a topo map and directions to do some ridge-walking; I hiked down to Zaragoza, figuring, like JJ, to take the bus to the border and hopefully meet someone who could bring my factory truck key with the alarm shut-off button. If not, I figured I could just take the bus back to Austin and get the key.





On the hike down, I noticed that JJ's truck was not where we had left it, and some fairly bashed-up trees and vegetation nearby. I spent a few minutes looking downhill of its steep parking spot, wondering if perhaps someone had broken into the truck and rolled it downhill. I did not find any sign of JJ or his truck, so I kept walking. Several more hours got me to the base of the mountains and onto the flat section of road. I caught a ride with a local New Age medicinal plant herbalist named Javier Quintero who had a great early 90's Toyota truck. He gave me a ride to the bus station, where I just missed the last bus out of town. I walked slowly back to the Hospedaje, very tired from my fast hike down the mountain. Much to my surprise, in the courtyard of the hotel, I found JJ's truck! And JJ! With help from a local tow-truck owner, he had gotten his truck down the steep mountain road by tying trees to the back of it as a giant sand anchor and then coasting downhill using the engine and emergency brake. His parents live close to Harlingen, and his father and uncle were on the way to fix the truck or tow it home. The cavalry! Some quick phone calls improved my plan as well: my factory truck key went on the overnight bus from Austin to San Benito, and came with



JJ Noyola descends Pozo de Flor de San Pedro.
 Photo by Bev Shade

his dad the next day. The cavalry arrived late in the evening of May 7, with a big suburban, a trailer, lots of 4Runner parts, and my truck key. They spent all of May 8 trying to fix JJ's truck, finally determining that the motor was seized, among other problems.

Very early on May 9, JJ and I saw them off back to Texas with the 4Runner in tow, then hiked back up to El Viejo. On the way out of town, we got another ride from Javier Quintero, who kindly took us up the mountain to La Escondida. We rejoined the rest of our group at La Cienega in the afternoon. Since the little battery in the factory key was dead, it wouldn't disarm the vehicle alarm, but armed with the new concept of "valet switch", we got the truck started with no problems. We surveyed a 15 m pit near camp that Mike, Nathan and Samuel had found. Samuel named it Pozo del Arbol Llorón (PEP 498) for a nearby tree.

The next morning, May 10, we packed all five people and gear into my truck and moved camp closer to Chupaderos, where Mike, Nathan and Samuel had found several other leads. It was more than a tight fit! On the way, we surveyed a small pit close to the road, with an entrance draped in the vines and white flowers of a plant called Flor de San Pedro. We named the 14 m pit Pozo de Flor de San Pedro (PEP 499). Further down the road, we found a nice camp along an old logging spur close to a cluster of leads they had found while I was down in Zaragoza. From camp, we hiked to one of these leads, Cueva de la Pita (PEP 512), and began exploring and mapping it. It is close to the road, up a steep slope that



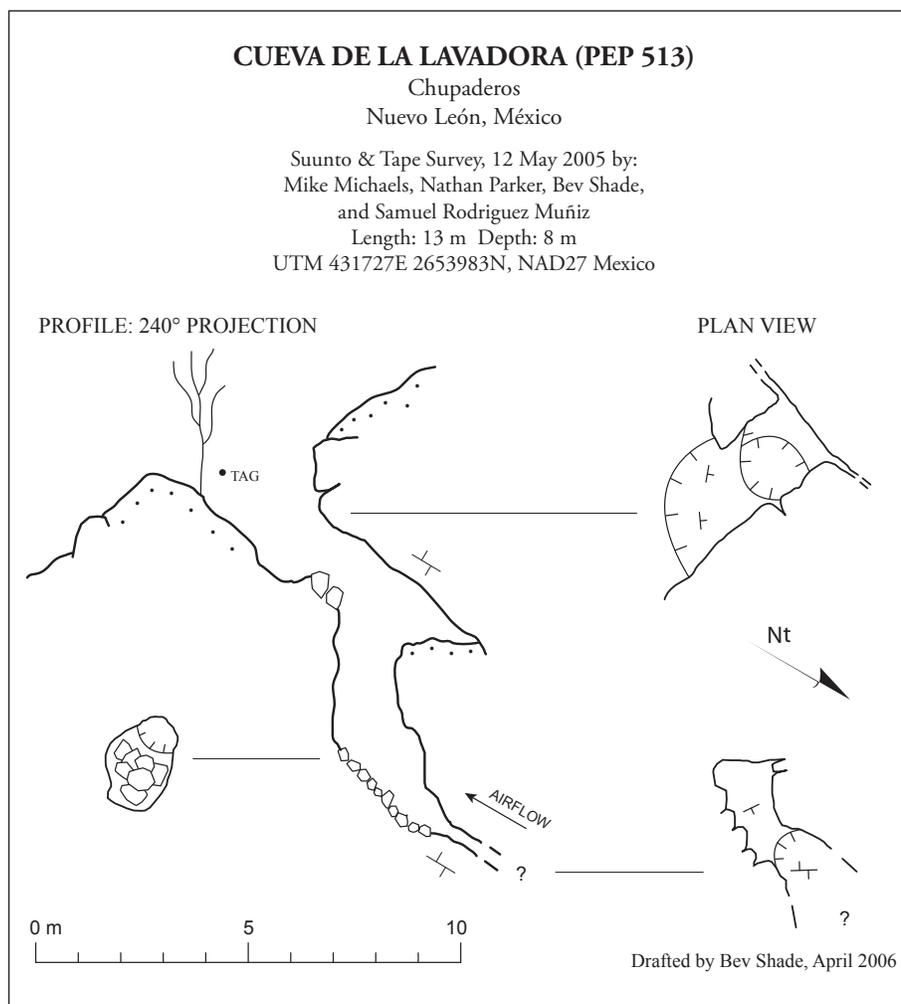
Samuel Rodriguez in front of Cueva de la Lavadora.
Photo by Bev Shade

has recently burned. We spent the rest of the trip dusty from the ash and erosion in this area.

On May 11, I finished surveying Cueva de la Pita with Nathan and Mike, while JJ and Samuel went ridge-walking to check some aerial photo leads east and southeast of La Escondida. The next day, I got up early and drove JJ back to La Escondida, so that he

could hike back down to Zaragoza and take the bus to Harlingen to rejoin his truck. Then Mike, Nathan, Samuel and I continued ridge-walking and checking aerial photo leads. We surveyed Cueva de la Lavadora (PEP 513), a small stream-sink that clearly takes significant water, but pinches into a grim bedding plane at the bottom. Peter spotted a series of big sinkholes from Leonard's plane several years ago, but Cueva de la Lavadora was the best. The rest of them were plugged with sediment from the steep hill above. We contoured along the mountainside, south from camp past the entire line of sinks, in an area that had been recently burned in a forest fire. It was dry and dusty everywhere, and festooned with the nasty plants that come back first in disturbed areas, like cats claw. On the way back, we opted to head down to the main road on to Margaras to return to camp rather than retrace our steps through the ash fields. On our hike back, we got soaked by a heavy rainstorm and hailstorm that continued until about 8 pm. Samuel's tent and sleeping bag also got wet in the storm. Getting a fire started and drying gear out took a long time, and it was surprisingly cold.

We continued ridge-walking on May 13, uphill from Cueva de la Pita, ranging up to the eastern edge of known caves around La Escondida, but did not find much on this steep slope. On May 14, we squeezed the four remaining cavers and their gear into my truck and drove down to Monterrey. We dropped off Samuel in Monterrey and had some barbecue, and drove back to Texas on May 14.





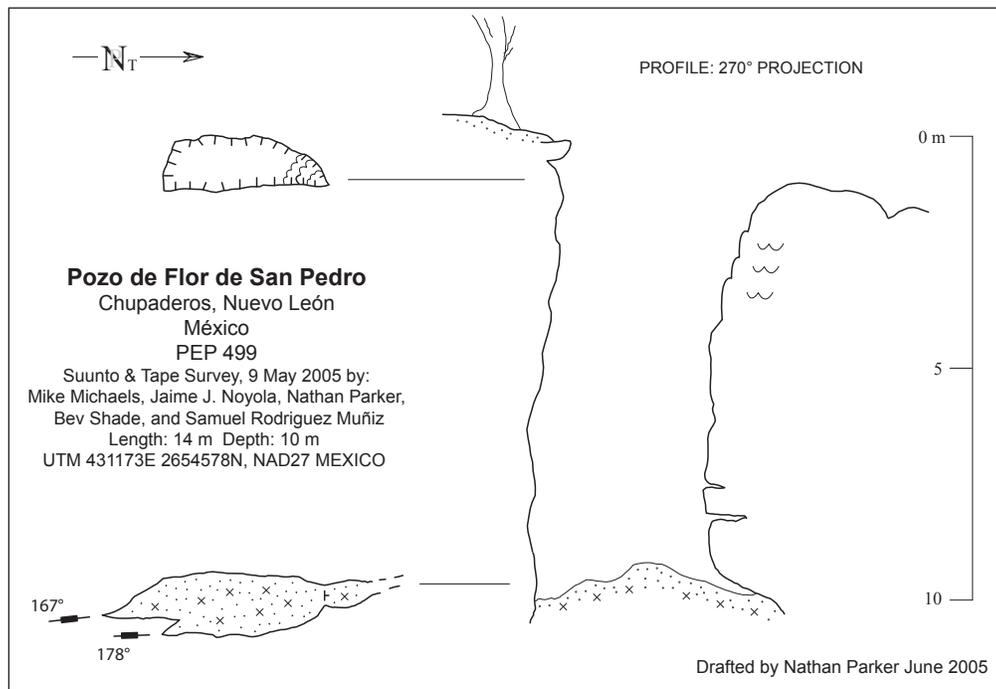
The Noyola clan descends to rescue JJ's 4Runner.
Photo by Bev Shade



View of Cerro El Viejo from the Hospedaje San Francisco in Zaragoza.
Photo by Bev Shade

Resumen

Del 3 al 14 de Mayo de 2005, cuatro espeleólogos de Texas y uno de Monterrey visitaron la parte Oeste del área del proyecto Purificación. Ellos eran Mike Michael, JJ Noyola, Nathan Parker, Samuel Rodríguez Muñiz y Bev Shade. El grupo tuvo un poco de problemas para llegar debido a que la camioneta de JJ se averió y no pudo ser arreglada en Zaragoza. El padre de JJ y su tío manejaron hasta Zaragoza desde Brownsville en un trailer para montar la camioneta y transportarla a Texas para ser reparada. Sin embargo JJ se quedo para el viaje tomando un autobús de regreso. Se hizo mucha prospección en el lado este del Cerro El Viejo y en dirección a Chupaderos; Se encontró y topografía cuatro nuevas cuevas: Pozo del Árbol Llorón (PEP498), Pozo de Flor de San Pedro (PEP499), Cueva de la Pita (PEP512), y Cueva de la Lavadora (PEP513). Por un lado los incendios recientes hicieron la prospección más fácil ya que no había vegetación, pero por otro lado los escombros del incendio habían tapado algunas grietas, además la roca superficial estaba bastante frágil por el calor del fuego. También había polvo y ceniza por todos lados. El plan original de las continuaciones más al sur, pasando chupaderos, se vieron imposibilitadas al no tener la segunda camioneta para realizar el recorrido en tiempo.



Trips with Tec– Part 1

Conrado Castillo, November 2005

by Bev Shade



Pass of Death in the fog.
Photo by Pawel Skoworodko

IN LATE NOVEMBER of 2005, I headed to Monterrey with Philip Rykwalder and Chris Krejca to meet a group of cavers. They were mostly from the Monterrey Tec caving club, but the group included a few from further afield. These were: Franco Attolini Smithers, Marcela Ramírez, Pawel Skoworodko (Poland), Alex Álvarez (Yucacan), Jesús (Choy) Tamez, Vladimir (Blade) Ramírez, and Juan Carlos Carrillo (DF). The goal of this trip was to improve cooperation with young, active Mexican cavers and introduce them to the Purificación project; hopefully they'd fall in love with the area like many of us have, and be motivated to come back and get involved in exploration.

We met up at Franco's house, located not too far from the university, and right on the highway to Ciudad Victoria. Luckily Franco had access to a big Dodge truck and was able to haul everyone that didn't fit in my little Toyota.

Before heading up the mountain, we stopped at the Ledesma lumberyard in Cd. Victoria to check in with Chenco Ledesma and pay the annual rent. Franco did a good job negotiating on the new price, up to \$150 USD from our former \$100. Then, off we went! We had gotten a late start with the detour to Cd. Victoria, and darkness caught us on the drive. No problem, says I, I've been up here plenty of times, nowhere to get lost really! Unbeknownst to us, several tourist cabins (no tourists in evidence yet) had been built nearby the ejido of Puerto Purificación past the turn at La Curva, along the track of the "new road" folks are always talking about. The construction had changed up the roads a bit, so we sure did get lost. We camped at these cabins, and were able to find the correct turn in the daylight.

The fieldhouse needed a good cleaning, as always, and everyone pitched in. Then it was time to go caving. Mostly we took fun trips into Brinco and hiking around the area, but Choy, Alex, Philip and Vladimir also bopped into Cuchilla. We had a night of heavy rain so the next day, trying to avoid surprises at finding the canal closed, Pawel set up a great ropes course in the big pines behind the outhouse, and everyone got to practice their skills, including things we don't see as often, like guided rappels (a.k.a. slack line/taught line). It was pretty dry around Conrado Castillo, and the springs had almost stopped flowing, so we opted to collect water from Presa Cerveza in Brinco.

First day of caving we got to the Main Squeeze in Brinco, taking some time to learn the way. On following days we split into two groups with the objective to be faster and get as far as we could in the World Beyond. One group made it to Lisa's Lamp Fall, but the second group got turned around in the Canal, going down Speedway instead of taking the Speedway Bypass.

We camped at the end of the road in Infiernillo Canyon on the trip down, so that everyone could learn where the Infiernillo entrance is. The next morning we found to our surprise that the canyon was flowing! I was especially surprised since Conrado Castillo had been so dry. Shows how unpredictable rain and recharge can be in the mountains. Everything was bright green and the evil poison ivy was much less evident – a real improvement from the standard hot, dry springtime trips. There was a beautiful pool at the base of the Infiernillo entrance where we swam, reminding



Bev descends the now unused Trash Pit in search of stolen items.
Photo by Pawel Skoworodko

Dinner in the fieldhouse (Philip, Bev, Chris, Franco). Photo by Pawel Skoworodko





Left: Choy climbing on Pawel's Ropes course.
Below: Serious barbeque.
Photos by Pawel Skoworodko



us why those hot, dry trips happen in springtime: too much water in the cave. After swimming and cleaning up, we took another detour to Victoria to drop off Alex and Juan Carlos to start their long bus ride back to the Yucatán, and Philip to join another trip further south. Then north to Monterrey and a barbacoa party at Franco's place.

Resumen

En Noviembre de 2005 diez Espeleólogos fueron a Conrado Castillo. Alex Álvarez (Yucatán), Franco Attolini Smithers (Monterrey), Juan Carlos Carrillo (DF), Chris Krejca (Texas), Marcela Ramírez (Monterrey), Vladimir (Blade) Ramírez (Monterrey), Philip Rykwalder (Texas), Bev Shade (Texas), Pawel Skoworodko (Polonia), y Jesús (Choy) Tamez (Monterrey). El propósito de este viaje fue el de ampliar la cooperación con los espeleólogos mexicanos e introducirlos al proyecto Purificación y claro también para pasar un buen rato. Durante el viaje se visitaron los dos extremos del Sistema Purificación, usando la mayor parte del tiempo para aprender rutas en Brinco y visitar otras varias cuevas en el área. Así mismo se visito la entrada de Infiernillo.



Left: Chris Krejca enters Brinco.
Photo by Pawel Skoworodko

Right: The whole group heads into Brinco (L to R):
(top row)
Pawel Skoworodko
Chris Krejca
Vladimir (Blade) Ramírez,
Juan Carlos Carrillo
Bev Shade, Philip Rykwalder
(front row)
Jesús (Choy) Tamez
Marcela Ramírez
Franco Attolini Smithers
Alex Álvarez
Photo by Vladimir Ramírez.

Trips with Tec— Part 2

The Western Confusion Tubes, June 2006

by Chris Krejca

We weren't truly purged of ill fate until several people vomited while on rope.

IT FELT LIKE ages since we'd last gotten a group together to explore one of the best cave systems EVER: Purificación. Our last dip into Purificación was from the upper entrance, Brinco and had been mostly a familiarization trip for cavers who hadn't yet visited the system. The trip this June proved fruitful with about 990 m of new cave surveyed.

We had a sizable group of cavers from all over the place: the Austinites were Bev Shade (our fearless leader who abandoned us, see below), Philip Rykwald, Vickie Siegel, David Ochel (from Germany), Marlena Cobb, Paul Bryant (really from San Antonio but we'll get him to move), and myself. Dan Green flew in from Calgary, Alberta, and without him we wouldn't have had a clue where the leads were. For many hours he poured over survey notes and line plots, compiling leads. Nick Johnson was the only mid-westerner; he joined us from Minnesota. Marcela Ramirez, Alex Álvarez, Pawel Skoworodko, and Franco Attolini Smithers were the trip's Spanish speakers, although Pawel hails from Poland. (Pawel goes by many names, depending on his location. In Mexico he's known as Pablo or Pavo—his Polish name proves difficult for most to pronounce). The other Spanish speakers were from Monterrey, except Alex who regularly dives in the Caribbean from Yucatán. Jon Lillestolen bussed into Austin from Tennessee, but his gear ended up elsewhere. Jon's lost gear was only the first bit of bad luck.

Jon reckons we averaged about three bad luck incidences per day, at least initially. The run-down: two Mexican cops were bribed, Pawel was denied access at the border, Bev and Pawel spent the first weekend of the trip waiting for Monday in the thrill-seeker's town of Loredo, the rest of us got lost for three hours in Monterrey, one of us [name removed to protect the guilty] backed into a guy's shiny-new car in Monterrey, my vertical gear did a disappearing act, and a few of us rolled around naked in poison ivy. All of this happened in the first three days of the trip, before we even got to the gaping entrance of Infiernillo. We were starting to wonder when the locusts would descend but all's well that end's well and none of these mishaps proved unmanageable. Well, actually

Dan's poison ivy was awful. It got progressively worse throughout the trip. By the end he had oozing, open sores and swollen track marks like an extreme heroin addict. I won't end this paragraph with such an image...instead imagine the spring below the surface camp at Infiernillo. Perfectly clear, crisp water cascading into an ample pool in

a steep slot canyon filled with huge boulders, which are almost entirely covered with the evil ivy.

We had finally made it to the entrance. Dan, belayed by Jon, climbed the somewhat sketchy bolt ladder, which apparently needs to be re-bolted as the old bolts have weathered since they were first installed. While everyone else climbed into the entrance, Franco and Dan were off to route-find their way to Camp One. Thankfully, various people throughout the trip were kind enough to lend me his/her vertical gear each day, since mine had apparently decided it wasn't interested in this trip. (As it turned out, the wee vertical-gear bag I was using ended up tucked underneath a foam mattress in Bev's camper shell...evading my every attempt at finding it. I believe it served as a pillow once or twice). Because Bev and Pawel were delayed at the border (his FM3 visa from a previous trip had to be cancelled before the Mexican aduanas could issue him a new one), they joined the rest of us a day after we made camp. When they arrived, all of us were still out on our first day trip in the cave, a slow-moving but much needed familiarization trip to Ithilien.

The following day we divided into groups and ventured off in different areas of the cave to survey. Bev, Vickie, and I headed back to the Ithilien and mapped about 100 m off the Polkadot Passage that we called Snackopatomus, after my insatiable appetite. Dan, David, Alex, Pawel, Marcela, Franco, and Jon headed out to leads in the Northwest Passage. On his way out,

Pawel re-rigged the sketchy rigging on the Balcony traverse. We were lucky to have Pawel along as the re-rigger, even though there weren't too many drops in that part of the cave. At an upclimb in the Puppy Glue Tube, David took a 5 m fall and injured his ankle. Jon ambled back to camp with David, who managed to stay in good spirits despite his newfound impairment. We didn't realize that he'd actually broken



Vickie Siegel and Chris Krejca mapping the Polkadot Tubes. Photo by Bev Shade



Franco Attolini Smithers in camp. Photo by David Ochel



Photo by Bev Shade

his ankle until after he had spent another three days underground, hiked back to the surface camp, hiked down to the spring for a swim on the last day, danced in a reggae club in downtown Monterrey, and finally got it checked out back in Austin. Our bad luck had finally run its course and things never got worse than a broken bone. It took loss of gear, a scare of deportation, a hellacious bout of poison ivy, a car wreck, garden variety Mexican bribery, and a broken bone, but it seemed the worst was over. However, we weren't truly purged of ill fate until several people vomited while on-rope or on the road.

While Jon and David headed back to Camp 1 due to ankle stress, Philip, Marlana, Nick, and Paul were surveying two leads in Manifest Destiny. One lead petered out and the other went about 20 m to a restriction, which opened up to a room with water and airflow. This same team, sans Nick, returned to the area the following day, the 15th of June, to push more leads; however, none of these seemed to be really going. That same day a large team headed out to the Meager Borehole together and then broke up into smaller groups to explore different leads. Nick and Bev began their survey at the end of the Meager Borehole in two separate leads. They mapped about 55 m in what they came to call the Blarg Tube. One lead ended in a less than

promising tiny passage while the other is a going lead. They turned around at a 5 m pit that seemed to continue at the bottom, despite the numerous helictites that nearly choke the passage. Franco, Pawel and Alex mapped in several leads past the end of the Milk River, reaching a pit/dome combo that appeared to continue both up and down. They resolved to return with more rigging gear. Dan and Jon had an excellent going lead from the previous day in the Northwest Passage and I joined them to return to it. We were hoping the passage would trend west, off the map; however, it made its way east and looped back into old passage. There's plenty of mop-up survey to be had in the area that could eventually go west, with any luck.

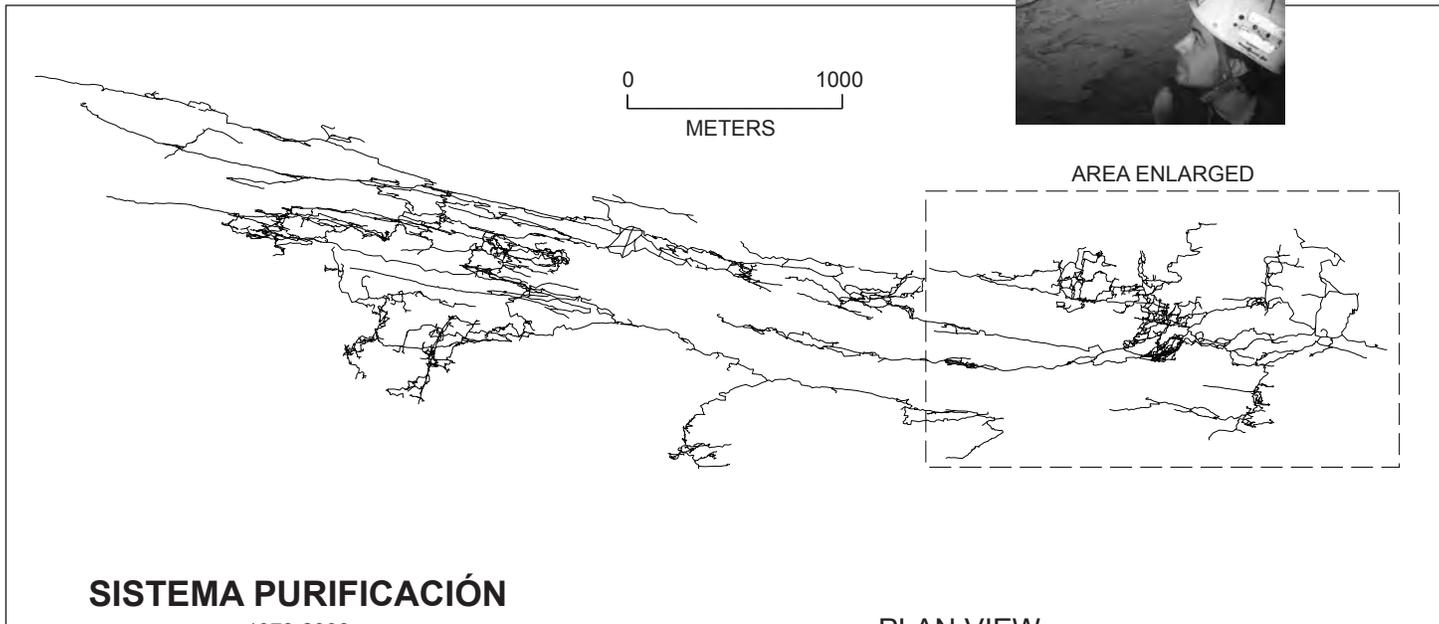
On the 16th Dan, Nick, Alex, and I headed to a nearby lead in the Twin Tubes. We were suspicious of a lead so close to camp one and we soon discovered why. Nick had to turn around at a particularly chest-squeezing upclimb, luckily for him. Sadly, the rest of us fit, Alex having to really fight for it. We surveyed a staggering 25 m in about two hours worth of fighting through the passage. There were squeals of occasional pain from Dan as the cave threatened him with castration. We got excited when we could let the tape run out for three meters. We called it quits after we remembered we were in Mexico.



Philip Rykwald mapping Manifest Destiny. Photo by Marlana Cobb



Nick Johnson, Paul Bryant, Marcela Ramirez, Franco Attolini Smithers, Marlana Cobb and Philip Rykwald in the Western Confusion Tubes. Photo by Nick Johnson



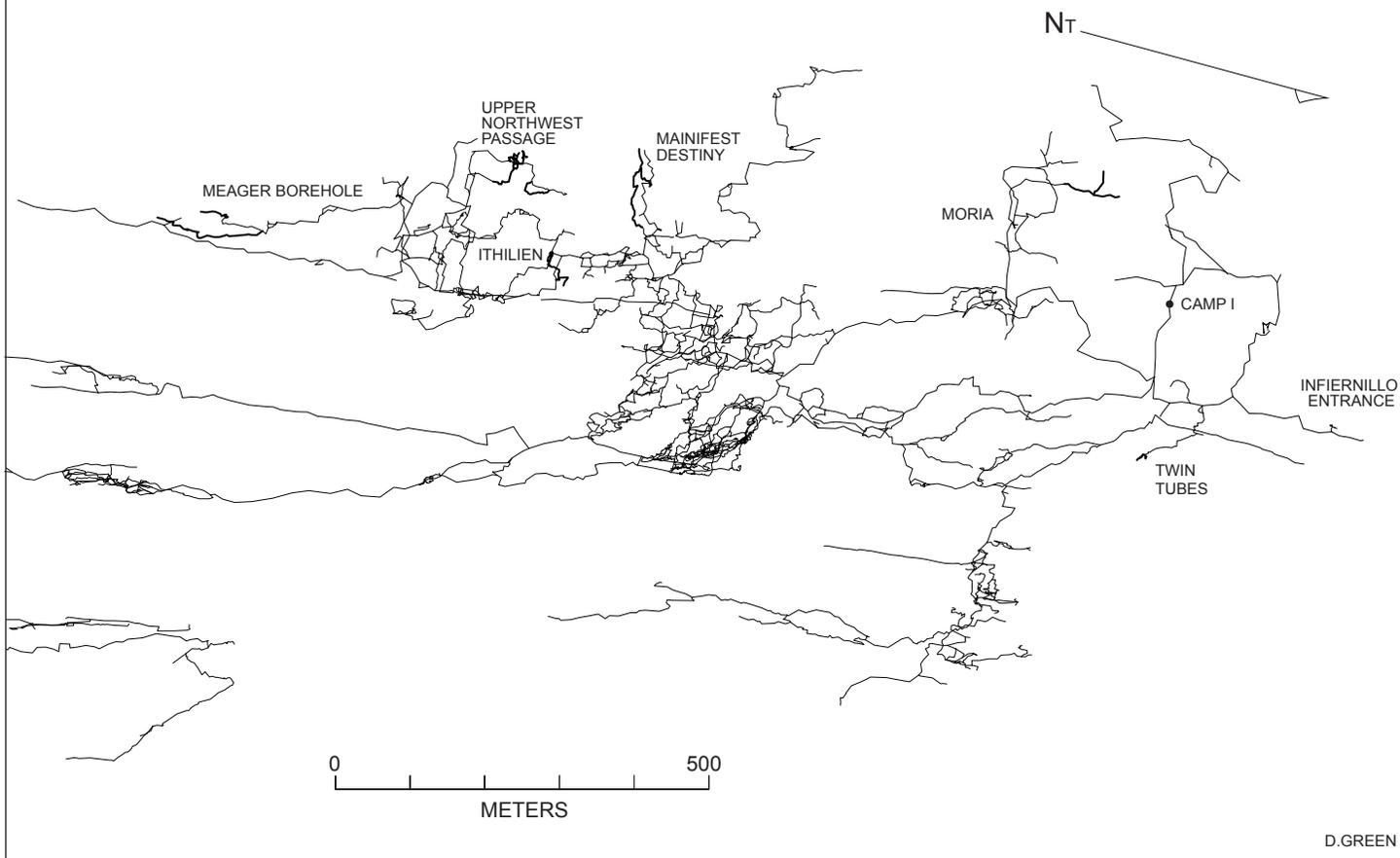
SISTEMA PURIFICACIÓN

1973-2006

PLAN VIEW

CONFUSION TUBES 2006

PROYECTO ESPELEOLÓGICO PURIFICACIÓN
2006 SURVEYS SHOWN IN BOLD



D.GREEN



To give the passage credit, it did have excellent airflow and some other schmucks should go back (read about said schmucks in the May 2007 report). Bev, Marcela, and Vickie surveyed 120 m in a lead above Moria at the end of the West Passage, down some nice walking passage that ended in a couple of big breakdown-floored rooms. These passages ended above but very close to the Black Lagoon Sump and were coated in mud. When water levels are high, these passages must flood from below then slowly drain, covering every surface with mud. They were planning to check out some leads in the lower levels of Moria but the down-climb was a bit too exposed for their tastes; when we got home, Peter confirmed that spot is actually a

rope drop! Pawel, Jon, and Franco went back to their lead in the end of the Meager Borehole and mapped 100 m. They named their passage Niño Enfermo after Paul, who began the day with them but had to turn around due to illness. They also connected a pit at the beginning of the Meager Borehole with Jello Pit in a known lower level of the cave.

Marlena and Philip had exited the cave the previous day to have some quality time with the poison ivy down at the spring below the surface camp. We were expecting them to return but they hadn't by the time we were ready to exit the cave a good 24 hours later. Bev, Pawel, and Franco decided to carry out their camp duffs, figuring that there had been some problem at the surface. Sure enough, Philip had been vomiting his way up the canyon and up the entrance rigging. He was a paler version of himself when we ran into him at the entrance. While Pawel and Franco derigged the entrance, Philip consolidated his and Marlena's light packs into one and carried it back down the canyon. He and Marlena continued to feel ill for almost a week following the trip.

We made it back down to Monterrey, this time under the guidance of people who knew where they were going, and headed out to get some yummy street tacos. We then rallied every bit of energy we had to go dance at Clandestino! At some point I fully expect to hear about Clandestino! in the news. I could see the headline: 30 Dead After Roof Collapses in Downtown Club. Moonlight comes through the roof, as do the elements, as you stand at the foot of the stage admiring (or tolerating) the cover band. We bought cases of beer and danced ourselves silly (Jonathon Wilson, you were missed!) to mostly Bob Marley covers. It was fantastic. We closed the place out, dancing our way back to the trucks.

The drive back to Austin was uneventful until we reached Bev's house. She was in the process of putting the house's utilities in her name and therefore the electricity and water lapsed and turned off. We were welcomed home by the reek of rotting refrigerator sludge on her kitchen floor. Heroically, Vickie and Pawel immediately launched into tossing all the dripping nasties in garbage bags. We sat drinking beer on the porch, trying to decide what our next move would be when it began to rain. We all scattered, making our way to non-stinking houses. The next day consisted of cleaning, cleaning, cleaning, and

some doctoring of David (leg) and Dan (poison ivy). All in all it was a fruitful trip, even though we didn't find the borehole heading off the map. Next time.

Resumen

En junio de 2006, 14 espeleólogos visitaron durante una semana Campamento 1 en Infiernillo. Ellos eran Alex Álvarez, Franco Attolini Smithers, Paul Bryant, Marlena Cobb, Dan Green, Nick Johnson, Chris Krejca, Jon Lillestolen, David Ochel, Marcela Ramirez, Philip Rykwaldler, Bev Shade, Vickie Siegel, y Pawel Skoworodko. Once integrantes partieron desde Austin en tres camionetas, pero Pawel tuvo problemas en la aduana en Nuevo Laredo por una visa FM3 no cancelada. Así que Pawel y Bev se tuvieron que quedar ahí por unos días. Las otras dos camionetas y nueve integrantes fueron hasta Monterrey, donde encontraron a Alex, Franco y Marcela. Afortunadamente Franco había pedido prestada una camioneta Dodge Ram, así todos tenían como llegar arriba a Infiernillo. Todos excepto Bev y Pawel, que estaban aun en Nuevo Laredo, armaron el Campamento 1 y empezaron a conocer las rutas hasta Balcony Borehole y los Western Confusion Tubes, donde comenzaron a explorar las continuaciones. Finalmente Pawel y Bev liberados del trámite se incorporaron al grupo al día siguiente. Se topografía 990m de galería en este viaje. Se trabajo en las áreas de Ithilien, Northwest Passage, Manifest Destiny, Meager brorehole y Milk River; tambien en Twin Tubes(entre Campamento 1 y la entrada de infiernillo).

El viaje en la cueva de salida fue muy rápido y en lugar de acampar al final del camino, todos se subieron a las camionetas y manejaron directo hasta Monterrey de forma que pudieron ir al Clandestino! y escuchar Reggae.

Como siempre, atención con la hiedra venenosa en el canon.



Trip Participants

- Alex Álvarez (MX)
- Paul Bryant (TX)
- Marlena Cobb (TX)
- Dan Green (CAN)
- Nick Johnson (MN)
- Chris Krejca (TX)
- Jon Lillestolen (TN)
- David Ochel (GER)
- Marcela Ramirez (MX)
- Philip Rykwaldler (TN)
- Vickie Siegel (TX)
- Bev Shade (TX)
- Pawel Skowrodoko (POL)
- Franco Attolini Smithers (MX)

Trips with Tec— Part 3

Conrado Castillo, December 2006

by Bev Shade



Participants:

Texas: Paul Bryant, Marlena Cobb, Saj Pierson, Philip Rykwaldner, Bev Shade
 Tennessee: Jon Lillestolen
 Monterrey: Jesús (Choy) Tamez, Marcela Ramírez, Franco Attolini
 Andres (Topo) Castro, Vladimir (Blade) Ramírez
 Saltillo: Monica Ponce, Javier Bandas

Marcela Ramirez and Andres 'Topo' Castro in the First Stream.
 Photo by Bev Shade

ILEFT TEXAS December 10 with Paul, Saj and Jon. Marlena and Philip departed a few days earlier. Monday, December 11, we paid rent in Ciudad Victoria. Rent is up to \$170, which the Tec Club paid. Many thanks, guys!! Then we drove up to Conrado Castillo, once again finishing the drive in the dark, and once again getting lost near the new Puerto Purificación tourist cabins. Drove around by way of La Ventanita, which is the main route these days. The road that passes through Galindo is barely used and has some serious washouts, as I found out with Ediger in summer 2008.

Tuesday, December 12, we broke into several groups and had familiarization trips into Brinco, as several people did not know the route, and as a refresher for those who'd only been in a few times in November 2005.

Wednesday, December 13, Jon and Paul checked the lead at the back of Cueva Magnolia. The water was foul from dead bats and guano, and lead did not look compelling. There was some flow out of entrance. The steep cliff makes GPS navigation difficult.

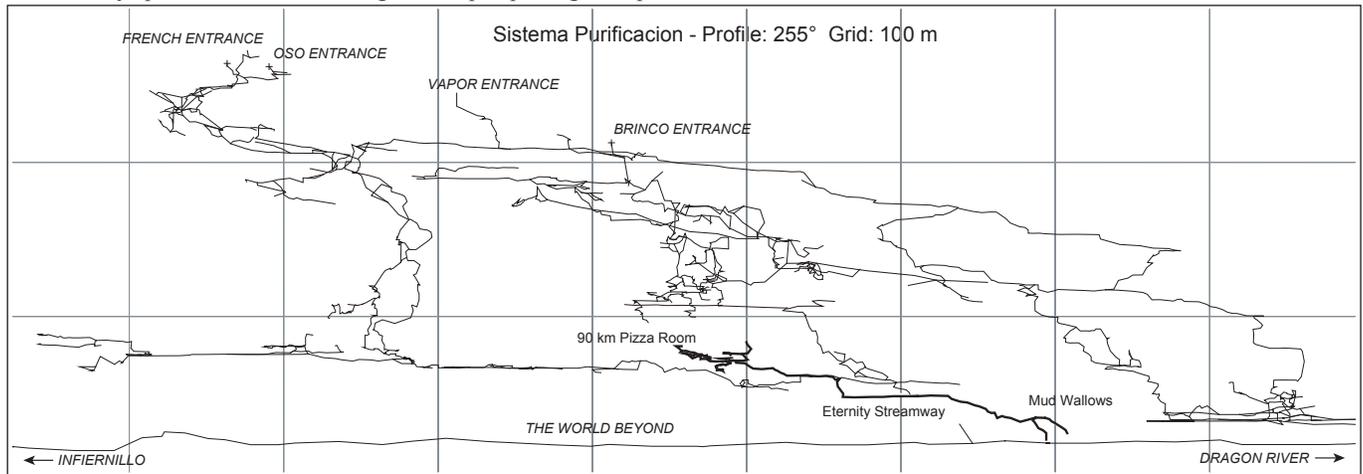
Franco, Vladimir, Topo, Monica and Javier went to locate and push El Violín. This cave is located in a cliff face, and has to be spotted from the opposite side of the drainage. The spotting team can then use radios to guide the push team to rig directly above the cave. This is a sunny day activity, and while they were hiking to the cave, the fog came in with a vengeance. Not too unusual for Conrado Castillo in winter. They spent several hours hiking around prospecting in hopes

that the day would clear, but no luck.

Bev, Marcela, Philip, Saj and Choy headed down the Guano Groat to the Eternity Junction, which they split into two teams: Philip, Saj, Choy to check the Pig Wallows and Bev and Marcela to push leads upstream of Eternity Junction. Philip's team dropped the Pig Wallows and pushed some other little holes in the area, but it was a no go. They surveyed 42 m. Bev and Marcela surveyed the first lead near



Choy, Marcela, Saj and Philip contemplate the map in Silvertip Boulevard.
 Photo by Bev Shade



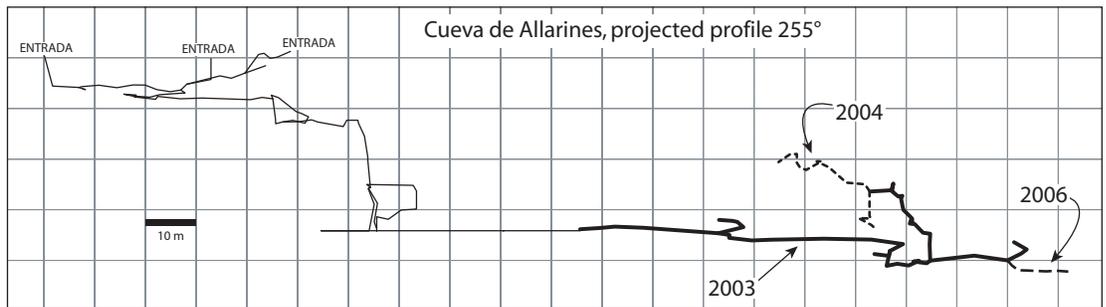


Topo prepares to descend the first climb in Brinco. Photo by Bev Shade

the 90 km Pizza Room. They surveyed 38 m in tight boneyard, but the uptrending passage had airflow and got larger where they stopped. They got totally soaked getting to the lead, so they turned back because of being cold. There were several interesting leads where they stopped.

Thursday, December 14: Franco and Marlena pushed some muddy leads in the KA survey of Oyamel. Jon, Paul and Vladimir mopped up in the KB, surveying The KB-33 Spillway and Anchovy Pit Overpass. Philip, Saj, Monica, Javier and Bev went prospecting on the east side of Cerro Vaquerillo. Another foggy day.

Friday, December 15: Marcela, Topo and Bev went to Brinco to push some leads in Fernwood, but could not locate enough of the 1970's survey markers in the 1st Stream survey to find the leads. Philip, Marlena, Monica and Javier drove about 1 hour past Revilla



to the Las Chinas area and surveyed two caves: Cueva de la Gringa (PEP514) and Cueva Rybacopo (PEP515). Heading back to the truck at the end of the day, Javier found a new pit. Jon and Paul mopped up leads in the Borrego boneyard, they hammered through several restrictions and closed some loops but did not find any continuing passage. Franco, Saj and Choy returned to the KA leads in Oyamel, tying in a hanging survey from the previous day, and pushing an upstream water crawl to a sump.

Saturday, December 16 was one of the rare sunny days: Bev and Vladimir pushed a final lead in Allarines; a previously unchecked



Marcela heads upstream from Eternity Junction. Photo by Bev Shade



Marlena, Vladimir, Franco and Paul head out for Oyamel. Photo by Jesús (Choy) Tamez

hole in the floor on the Tentacle Chamber. They got only 14 meters in a clean-washed stream passage before reaching an impossibly narrow slot that was not receptive to hammering, not even with the sledgehammer they'd carried in as the walls are just too narrow. They could hear water falling down a drop beyond the slot, headed toward Oyamel, where passages at the same level are only 60 m away. Philip, Marlena, Monica, Javier and Paul returned to the pit they'd left in Las Chinas the previous day. They surveyed it, now 46-m-deep Sótano de

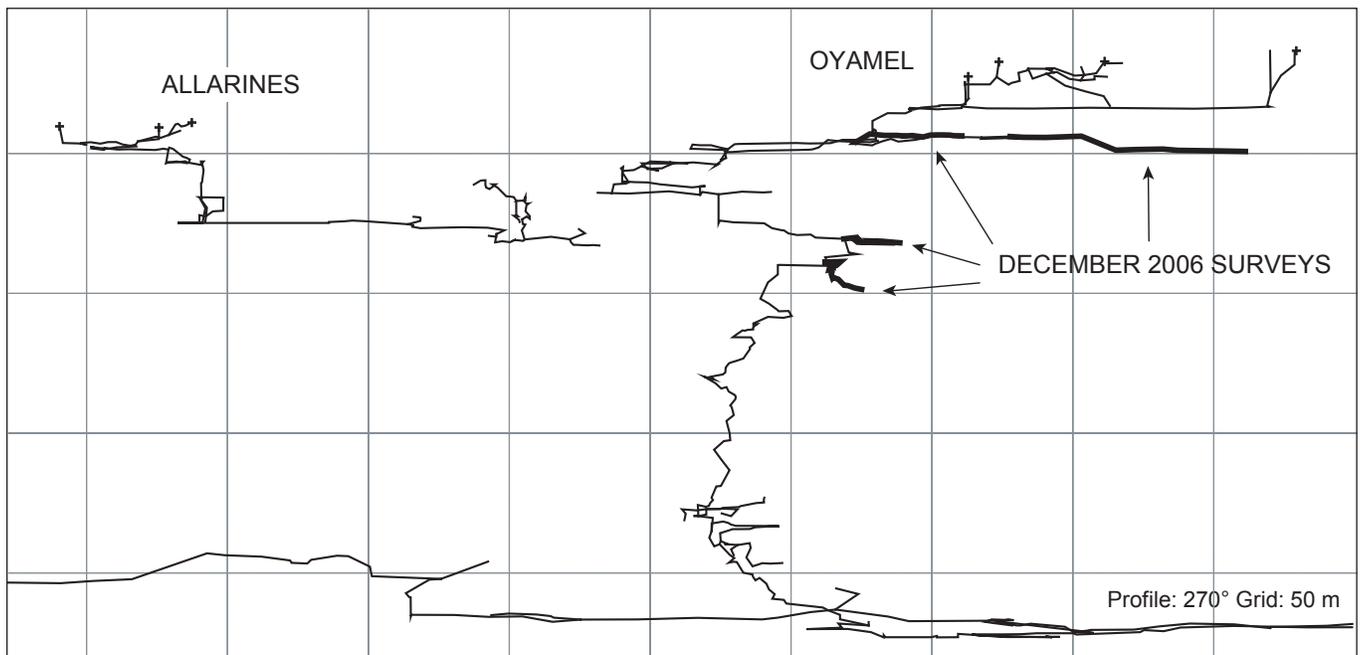
la Vibora (PEP548).

Sunday, December 18 was yet another foggy day. We got a pretty early start down the mountain, and headed home. In the push to clean and tidy the fieldhouse, coals from the wood stove were disposed in the outhouse – this started a small but humorous fire that we extinguished with the last of our water. Unbenownst to us, the fire continued to smolder and broke out again after we left, entirely consuming the outhouse! Fortunately, there was no other damage.

Resumen

En diciembre de 2006, 14 espeleólogos visitaron Conrado Castillo para continuar conociendo las cuevas del área, explorar algunas continuaciones y para hacer prospección. Ellos era: Franco Attolini, Javier Bandas, Paul Bryant, Andres (Topo) Castro, Marlena Cobb, Jon Lillestolen, Saj Pierson, Monica Ponce, Marcela Ramirez, Vladimir (Blade) Ramirez, Philip Rykwalder, Bev Shade, y Jesús (Choy) Tamez. Se reviso la cueva Magnolia, pero el pasaje de la continuación, estaba demasiado perturbador con guano y murciélagos muertos, como para llegar a su fin. Se intentó encontrar la cueva El Violín pero no fue posible por la niebla. También se exploraron continuaciones y se tipografiaron varias cuevas nuevas en el área de Las Chinas: Cueva de la Gringa (PEP514), Cueva Rybacopo (PEP515) y Sótano de la Vibora (PEP548). Así mismo se exploró una continuación en el fondo de Allarines hasta una estrechez donde el agua aparenta fluir en dirección de Oyamel, lo que es menos de 60m de distancia. En Borrego algunas continuaciones fueron exploradas, pero todas ellas se conectan a pasajes conocidos. En el Sistema Purificación se exploraron continuaciones cerca de Eternity Juntion, en Pig Wallows y cerca de 90-Km-Pizza Room.

El grupo del Tec pagó la renta de 2006 de la casa de campo, la cual fue de \$170dl. También se quemó la letrina por accidente, pero no se presentó algún otro daño.





Claudia Mendoza and Gill Ediger assemble the new outhouse, replacing the old one accidentally burned to the ground. Photos by Bev Shade



Long Caves

Length (m)

Deep Caves

Depth (m)

- | | |
|--|--------|
| 1. Sistema Purificación, Tamaulipas | 94,889 |
| 2. Cueva del Tecolote, Tamaulipas | 40,475 |
| 3. Sótano de Las Calenturas, Tamaulipas | 8,308 |
| 4. Sistema Cretacico, Nuevo León | 6,065 |
| 5. Cueva de La Llorona, Tamaulipas | 4,091 |
| 6. Sótano de la Cuchilla, Tamaulipas | 2,769 |
| 7. Cueva del Rio Corona, Tamaulipas | 2,301 |
| 8. Cueva Paraíso Difícil, Tamaulipas | 1,799 |
| 9. Sistema Manicomio Paralelo de Satanas, NL | 1,639 |
| 10. Cueva del Borrego, Tamaulipas | 1,509 |

- | | |
|--|-----|
| 1. Sistema Purificación, Tamaulipas | 957 |
| 2. Sistema Los Toros, Nuevo León | 517 |
| 3. Sistema Cretacico, Nuevo León | 465 |
| 4. Cueva del Tecolote, Tamaulipas | 419 |
| 5. Cueva de La Llorona, Tamaulipas | 412 |
| 6. Sima Chupacable, Nuevo León | 399 |
| 7. Sistema Manicomio Paralelo de Satanas, NL | 326 |
| 8. Sótano del Caracol, Tamaulipas | 301 |
| 9. Sumidero Anaconda, Nuevo León | 278 |
| 10. Sótano de la Cuchilla, Tamaulipas | 208 |



PURIFICACIÓN SPELEOMETRY

Compiled by Dan Green, 2009

Photo Golin Strickland

Infiernillo Dive Trip

May 2007

by Bev Shade

IN EARLY MAY of 2007, James Brown, Paul Bryant, Colin Massey, Vince Massey and Bev Shade drove from Texas in two trucks—mine and James' big red monster. The trip was without serious incident, we only had to stop and repair the side road that goes into Infiernillo Canyon. This is a washout that often needs repair. Six months later we tried to blow it off since we only had light trucks, and I ended up putting a wheel through the logs. Luckily the other three wheels pulled me out.

It was great sunny weather driving up, and since we arrived to camp at a decent hour, we ran up to the cave entrance and rigged the main rope before dinner, while James started organizing gear into hauling loads. The next day we rigged the tensioned line to haul gear since we had a TON and only four people, then it was time to start hiking the loads up to the cave from camp. There were about four trips per person? Well, it was a lot, whatever the number was, and it began to seem like more when a freak storm dropped hail on us! By comparison, pulling loads along the traverse line into the cave was relatively easy. Then packs back on to haul all the bags from entrance to Camp 1. Good thing its not too far to camp.

We set up camp and while James was unpacking his gear and getting organized, we went to Moria to check some leads. We surveyed two leads out of the Travis County room – one got real small real fast, while the other climbed up toward the floor of the West Loop, until choked by clean washed boulders with airflow moving through the boulders.

Back in camp, the level of the sump was higher than at the last dive trip in spring of 2001, but lower than during the camp trip of the previous year. It looked like it was dropping, but slowly. James did a first test dive to retrieve his lead from the previous trip. The high water level was not a great sign for doing the long-distance dives to reach the end of the Left Hand Sump exploration, and visibility was lower than in 2001, probably due to the recently fluctuating water levels. Several test dives were made, and James kept finding little problems. Then he would have to spend a day or two trying to fix the new problem. Then main trouble was that Bill Stone was almost done designing of a new class of rebreathers, and the ones he had available to loan to James were getting outdated. It was getting harder to find replacement parts, and many parts were not interchangeable. The primary non-interchangeable part was a mouthpiece.

Well, since James was well occupied and we couldn't be any help to him, we set out to do more caving! We took a pile of sketch notes and line plots and figured our way through the Confusion Tubes. This was a great learning opportunity for all of us. I'd only been through it once, at the end of a through



Smoke break! Handy that we've got that entrance nearby.
Photo by Bev Shade

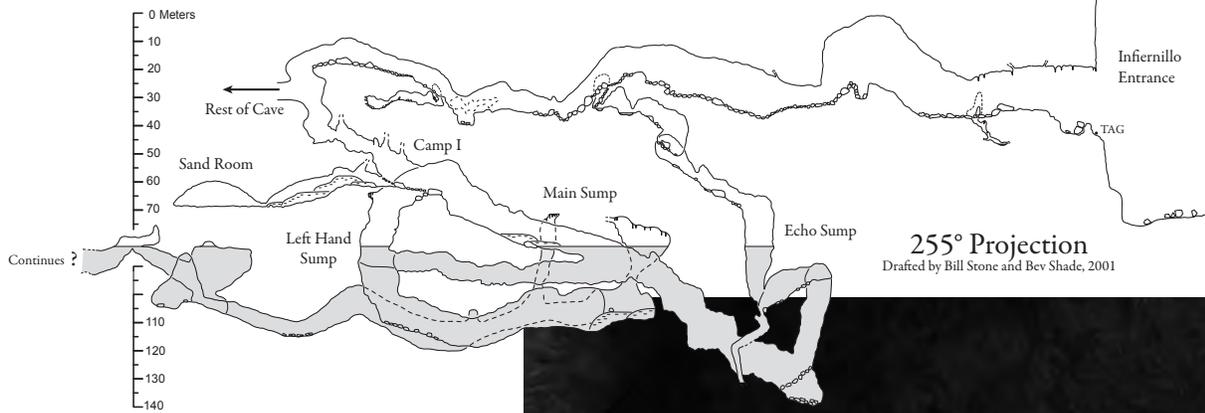
trip several years ago, and it was totally new for Colin, Paul, and Vince. We had run out of notes, but the passage was pretty simple, so we pushed on through Lakeland and the Dark Borehole, then looked for the breakdown crawl to get into the Monkey Walk and head for the Netherhall. While searching, a handhold broke under Vince and he got a good gash in his forearm. We pushed on into the Isopod River, but finally decided to call it a day and head back to camp to check on James.

Still having trouble on the diving front, so we set out to check leads in the East Loop. Paul and I surveyed about 20 m up a steeply climbing infeeder while Colin and Vince checked some other leads. We checked several leads at the end of Arrakis, including the Sword Throat lead. They didn't go, but we had a good time finding our way through the complicated passages. Finally, We returned to the Twin Tubes leads that Dan Green had left in 2006. As normal, we had to do a little digging at the Sand Sump to get into the passage. Dan's lead started off tight, and got tighter, leading into some double hairpin turn gymnastics. Paul and I surveyed about 30 m, eventually it got too tight for Paul, even with the sledgehammer.

After a final test dive, further diving was aborted due to a major leak in the rebreather. The leak was caused by one of the canister housing O-rings being pinched during rebreather overhaul the previous Thanksgiving/Christmas. Since the diving was done, it was time to head home. No good diving unless all the gear is working just



Ready to start lowering gear to the canyon floor.
Photo by Bev Shade



right. So, whole thing in reverse: pack up camp, shuttle loads to the entrance, lower bags down the tension line, haul enough bags back to the trucks to make a surface camp, sleep, wake up to RAIN, get up and start hauling the rest of the loads down the slick canyon in the rain. Well, at least it was warm rain. Despite the rain, our repairs to the road washout held up, although that section of road looked REALLY narrow as James drove across it in the big red truck. We stayed the night in a hotel in San Fernando on the way home, and got to see a local politician sneaking around with a woman who was clearly not his wife. The best part was that he had a campaign bumper sticker on his car so it was really obvious who he was! A lost cell phone at the border, then on to Austin. While its always hard to predict the weather, future diving efforts may have better success a few weeks earlier in the season, in mid-April.

Resumen

James Brown, Paul Bryant, Colin Massey, Vince Massey y Bev Shade viajaron a Infernillo en Mayo de 2007. Ellos estuvieron por dos semanas con la esperanza de bucear y explorar una continuación. En 2001, James Brown lidero la exploración del Left Hand Sump, y el gran pasaje continuaba. Este es un buceo largo que requiere Scooters(DPV). Se cargaron los Scooters, baterías, y todo el equipo de buceo a la cueva. Sin embargo la continuación no pudo ser explorada debido a los problemas recurrentes de los recirculadores(Rebreathers). El problema principal era que Bill Stone casi había terminado de diseñar una nueva clase de recirculadores, y los que pudo prestar a James eran un poco viejos. Era difícil conseguir las piezas de repuesto y como todos eran prototipos la piezas no eran intercambiables entre si. El nivel de agua en el sifón era varios metros mas alto que en la primavera de 2001, no obstante el nivel bajaba lentamente mientras la expedición corría.

Mientras James trabajaba en el equipo de buceo y hacia varios buceos de prueba, los otros espeleólogos revisaron algunas continuaciones en las cercanías de Moria, Twin Tubes y Arrakis, topografiando 100m Aproximadamente. Ellos también aprendieron la ruta a través de los Confusion Tubes y hasta Isopod River.

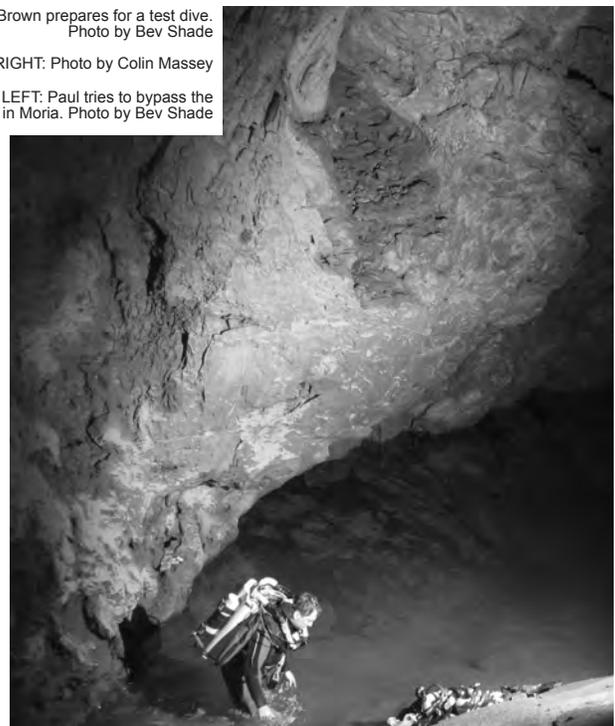
Mientras James trabajaba en el equipo de buceo y hacia varios buceos de prueba, los otros espeleólogos revisaron algunas continuaciones en las cercanías de Moria, Twin Tubes y Arrakis, topografiando 100m Aproximadamente. Ellos también aprendieron la ruta a través de los Confusion Tubes y hasta Isopod River.



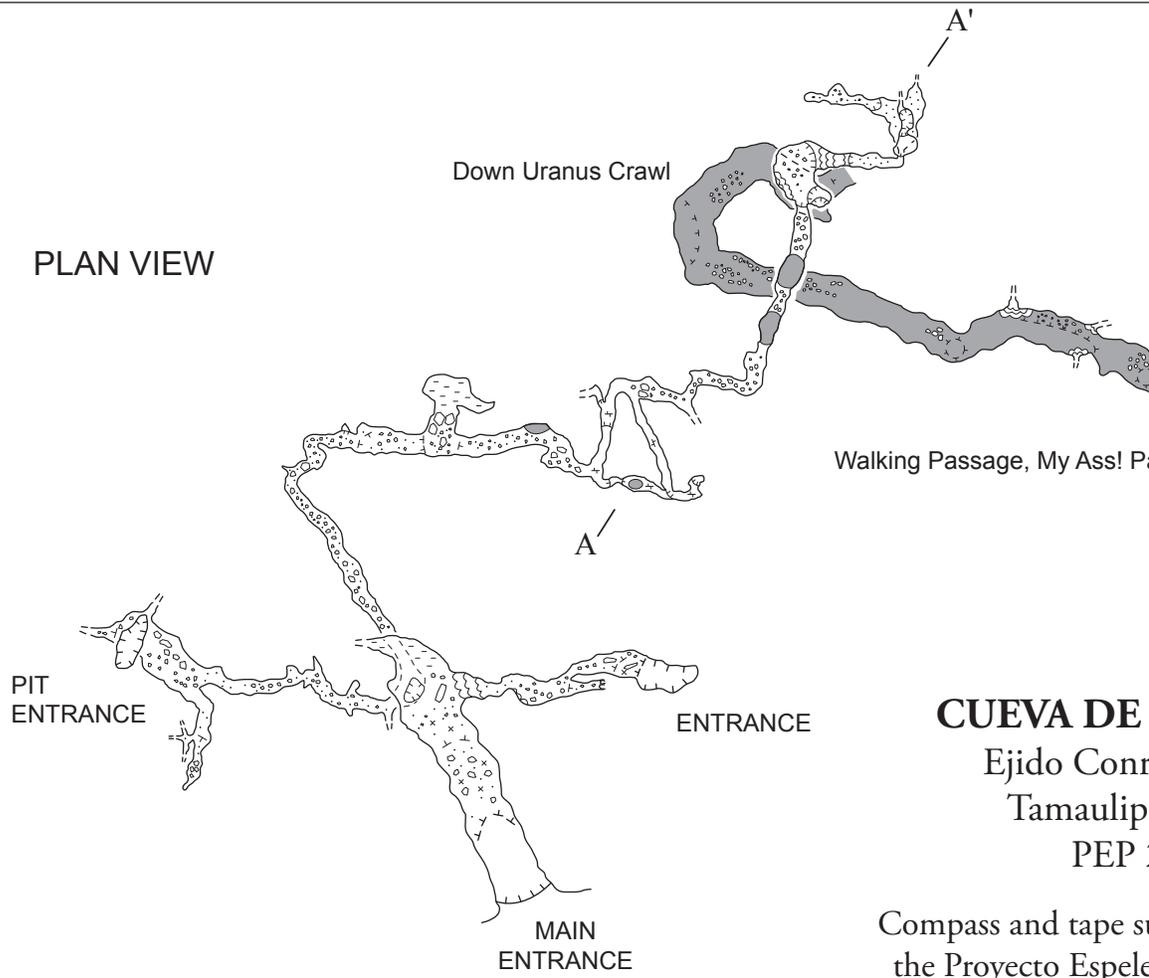
TOP: James Brown prepares for a test dive. Photo by Bev Shade

RIGHT: Photo by Colin Massey

BOTTOM LEFT: Paul tries to bypass the breakdown choke in Moria. Photo by Bev Shade

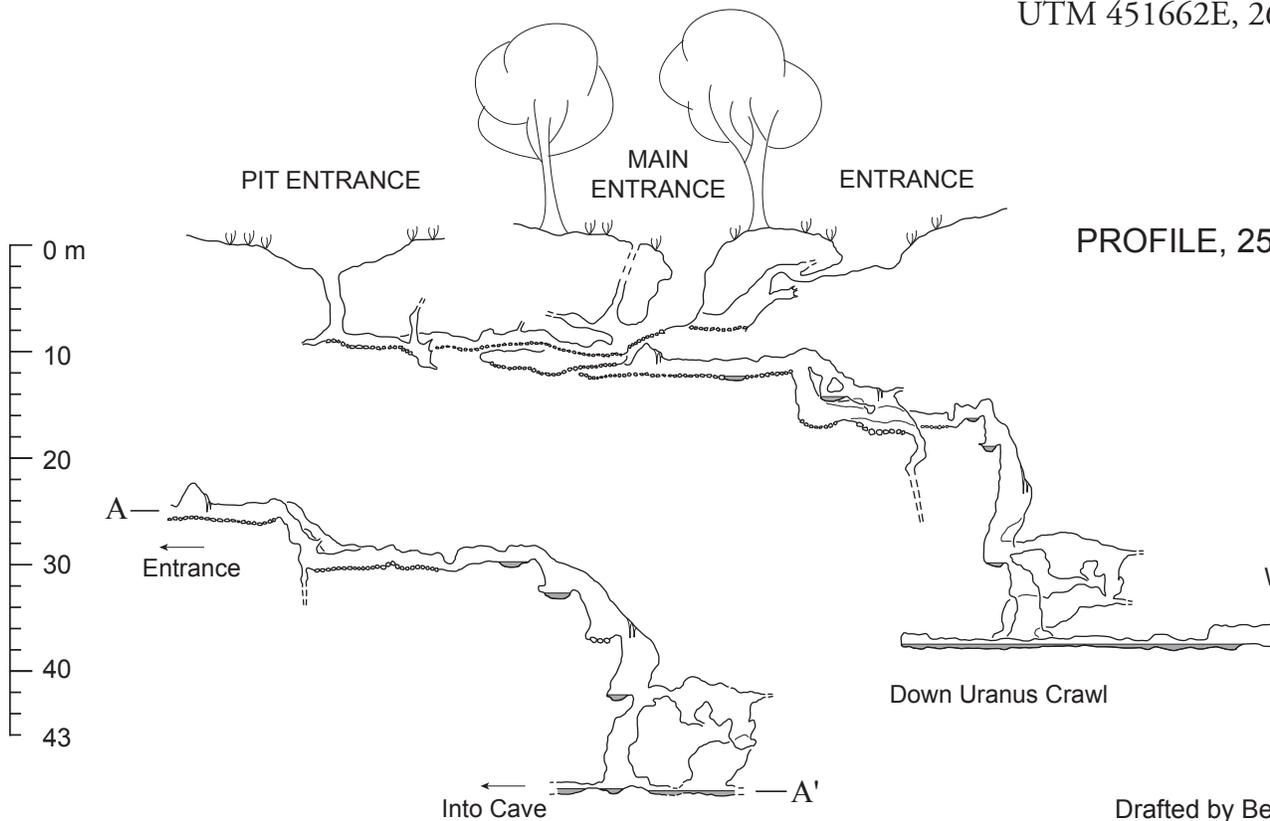


PLAN VIEW



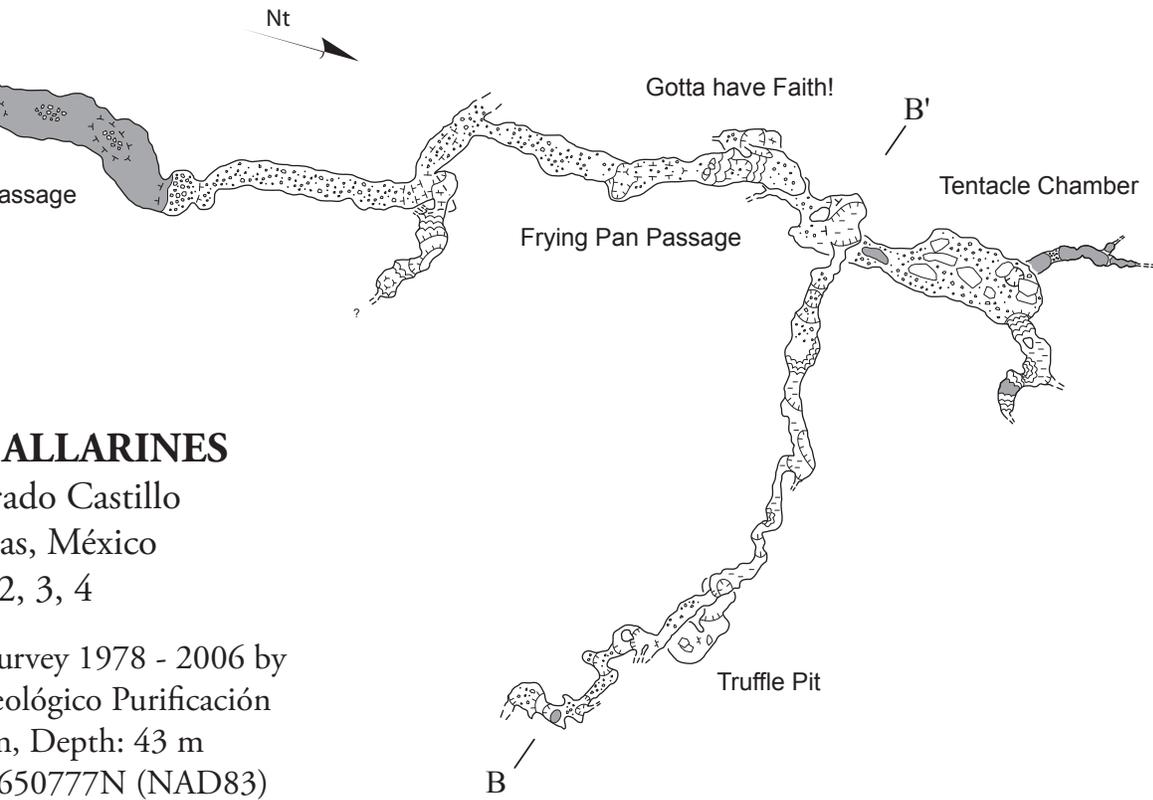
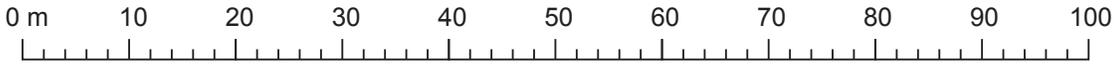
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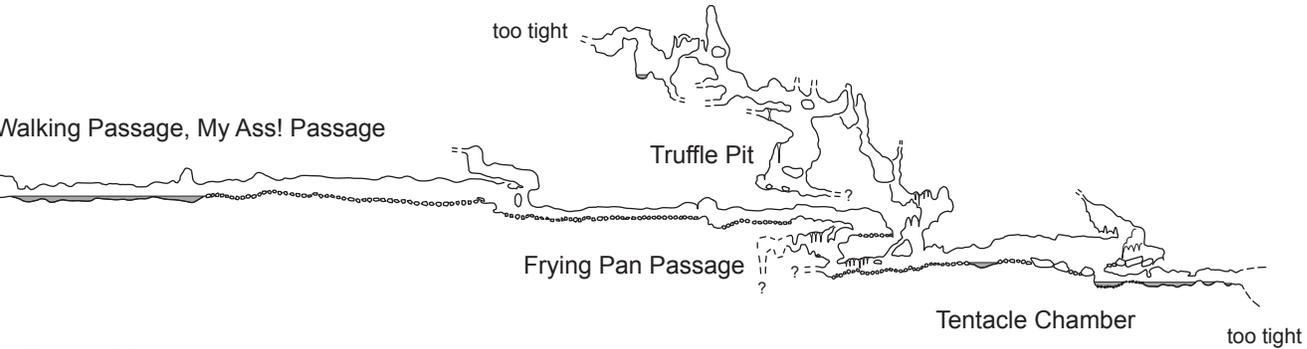
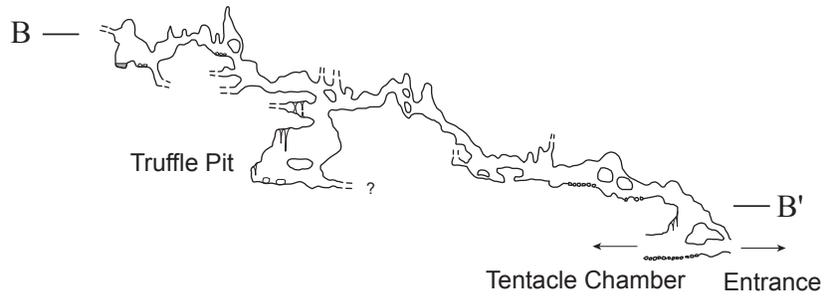
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5° PROJECTION



Shade, 2007

Reminiscences of Infiernillo

An Accident, December 2007

by Saj Zappitello

THIS WAS MY second trip to the Purificación system, and I was ready. We were planning to camp in Infiernillo, and I was so excited. I read and re-read Bev's ultra-light cave camping suggestions. I re-packed 3 or 4 times before we went in the cave (my pack ended up being the second lightest). The crew = Bev Shade, Jonathan Wilson, Matt Zappitello, Shannon Summers, Stephen Bryant, Paul Bryant, Wes Schumacher, Sandi Calhoun, David Ochel, and me. The drive out was perfect, beautiful weather with a scenic stop at the Pass of Death where many were challenged to pee off the edge. We had to stop and re-build a log bridge on the road to Infiernillo. Stephen and Paul ran ahead to rig the entrance while Shannon did a professional job of cutting down fresh trees, and the rest of us helped bridge build. We spent one night in surface base camp at the parking area which was, unfortunately, infested with poison ivy. I think we all managed to escape that hazard for the most part. The next day was full steam ahead. We hiked up the canyon, climbed up to the entrance, and started caving.

Bev's plan was to get in and establish camp; then we were going to work on some survey leads and permanently mark the route through the Confusion Tubes. She also intended this to be a familiarization trip for all of us to start learning the route for the through trip. The trip in was amazing—huge walking passage paired with sketchy, slippery climbs including the infamous Jump Rock. I was very happy that I had been practicing rock climbing. After a 7 hour trek through the cave, we arrived at a sandy section Bev had scouted out on a previous trip. We dubbed it Camp 1A because it was somewhere between Camp 1 and Camp 2. Camp was cozy—I recommend finding a spot out of the wind. It was chillier than I anticipated but not horribly, and the latrine was downwind *most* of the time.

The next day was xmas eve, and we set off toward the Netherhall. It is a huge underground room with a mountain of breakdown that we had to climb. After you climb up to the top and then down the other side, you have to climb further down the breakdown in a smaller passage because the ceiling comes down almost to the floor. I didn't make it that far. I was hanging back with the end of our group, and many of the others had gone ahead where I couldn't see them anymore. I was almost to the place where I would duck under the ceiling and follow them when I heard a small but distinct rockslide. I held my breath. Then I heard Bev



Paul Bryant, Bev Shade and Jonathan Wilson route finding.
Photo by Stephen Bryant

call out in an unusually high pitched voice, "*Jonathan! Are you all right?*" followed by the sound of more rocks sliding. Jonathan had fallen several feet after a rock gave out under his foot and some of the rockslide landed on top of him. Bev waited above while David came up to check on Jonathan and provide assistance. He was conscious and alert and very shaken up. His lip was cut clean through— a rock had hit his abdomen which caused us to be concerned about internal bleeding, and he didn't find out until he got to the truck that he had broken his tailbone. We all turned around at that point and headed back to camp. Jonathan decided that he wanted to get out while his adrenaline was going strong and get to a hospital that could check for internal injuries. Bev, Shannon, and Stephen headed out immediately taking only the essentials and left everything else for the rest of us to carry out the next day. Those of us that remained behind had a somewhat somber xmas eve feast trying to eat as much leftover food as we could. Bev took Jonathan straight to the ER in Brownsville. He checked out okay with a broken tailbone and some very neat stitches in his lip and chine—no internal injuries, just some heinous bruises.

Xmas day we hiked back to Camp 1. Matt and Paul headed out to meet Shannon and Stephen at surface camp. The rest of us chose another night in the cave over the surface poison ivy camp. We had abandoned the original plan—without Bev we didn't know where any of the survey leads were, and we were all fairly shaken by the accident. We spent a night at the Fieldhouse by the Brinco entrance to finish out the trip. I led a short trip for the uninitiated through the historic section.

On our drive back to Austin we stopped at Bev and Jonathan's house in South Padre. Jonathan showed us his heart-shaped ass bruise, and the driveway looked like a Toyota pickup truck rally.



Saj Zappitello, cave snack.
Photo by Stephen Bryant

Resumen

En diciembre de 2007 se organizo un viaje a un nuevo campamento ubicado entre Campamento 1 y Campamento 2 en el Sistema Purificación. La meta era marca una ruta permanente a través de los Confusion Tubes, y familiarizarse con la parte baja de la travesía, para así aprenderla posteriormente. El día de Noche Buena un derrumbe de piedras en Netherhall golpeo a Jonathan Wilson. El sufrió de, una extensa cortadura en su labio, un fuerte golpe en el estomago, y , como después se supo, una fractura en su cóccix. Algunos espeleólogos ayudaron a Jonathan para llegar a la entrada, posteriormente Bev lo llevo al hospital en Brownsville. El no sufrió de lesiones internas, solo sufrió de grandes contusiones. El resto de los espeleólogos se quedaron algunos días más en Infiernillo y en Conrado Castillo.

Photo by Stephen Bryant



David Ochel, Paul Bryant, Saj Zappitello, Jonathan Wilson, Matt Zappitello, Stephen Bryant, Bev Shade, Sandi Calloun and Wes Schumacher. Photo by Shannon Summers

Sistema Los Toros

Second-Deepest Cave in Purificación

Christmas Expeditions 2005-2008

by Mark Minton



Arroyo Luna Canyon where Los Toros resurgence cave is. 2005 Photo by Yvonne Droms

I HAD LONG wondered what caves might lie in the vicinity of Los Toros, Nuevo León, just west of Arroyo Luna. The village has a road going to it shown on the topo map and visible from other roads in the area when driving by. Yet when I asked Peter Sprouse and Bev Shade, they said they didn't know of any exploration in the area. In 2005 we finally decided to check it out, and quickly discovered why no one had gone there. The road descends into Arroyo Ramírez and turns to follow the creek bed. Not surprisingly, it was completely washed out for a considerable distance. However after crossing the arroyo three times, it climbs a hill and is in excellent shape beyond.

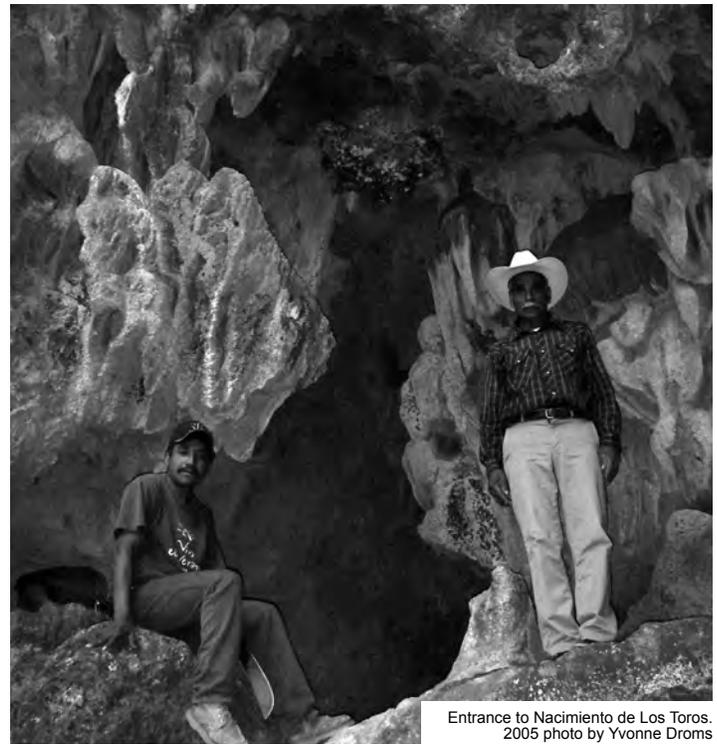
2005

That first year our team of six (Yvonne Droms, James Hunter, Mark Minton, Tanja Pietraß, Bill Steele and Diana Tomchick) walked the three kilometers to the village and asked about caves. The first person we spoke with said there weren't any, but it sure looked cavey, so we went on to the upper part of town. There we met a friendly patriarch who told us he knew of a cave with water coming out of it all year long! He took us to the edge of the world and pointed down into the deep Arroyo Luna canyon. "It's down there," he said, "a long walk." (Always a bad sign when the locals say it.) There was not time to go see the cave that day, and since it was nearly Christmas, our host would not be available for three more days to guide us. We spent the next few days prospecting in the vicinity of Cañada Verde, finding some nice pits but nothing going.

When the appointed day finally arrived, we excitedly headed back to Los Toros and met a couple of local guides for the trip into the canyon. The hike was long and steep. Sometimes we were confined to a narrow ledge with cliffs above and below. It took several hours to reach the cave, which was indeed as advertised. A nice stream flowed out from beneath old, weathered flowstone and a beckoning entrance. Downstream the water went through a couple of gour pools and plunged over a 100-meter drop into Arroyo Luna. Inside the cave a narrow passage over deep water led to a wider section with the sound of a waterfall in the distance. To proceed would have required full immersion, but we had a long hike back out of the canyon, so we decided to save it for another day.

Back at the top of the mountain we encountered a couple of girls herding goats. They said they knew of a couple of pits and showed us some nice-looking shafts. Then Yvonne had the brilliant idea to ask if they knew of any place where air blew out of the ground. They said yes, they had one of those too! Nearly at the crest of the ridge they showed her a hole the size of a grapefruit at the base of a tree, but it was blowing strongly enough to lay down the grass half a meter away. We were very excited, but it was nearly dark and we still had to hike back to our trucks, so we left it for the next day.

The pits they showed us were 30 to 50 meters deep but didn't go. Meanwhile we dug open the blowing hole. Surprisingly, the more we dug, the stronger the airflow became. I had to keep my mouth and eyes closed while digging to keep out the flying debris. This promised to be a significant find! Soon we had opened a short



Entrance to Nacimiento de Los Toros. 2005 photo by Yvonne Droms



Tanja Pietraß Carrying 200-m Rope. 2006 photo by Yvonne Droms



Diana Tomchick in the Entrance of Nacimiento de Los Toros. 2006 photo by Yvonne Droms

James' truck hauling rock for the Los Toros road reconstruction. 2006 photo by Yvonne Droms



Mark Minton on the second drop in Soplo with 200m of rope. 2006 photo by James Hunter

drop, which I descended. Immediately there was another drop over old, eroded flowstone with great airflow, but it was late so we planned a big trip for our last day.

Carrying all the rope we could manage, we again hiked back to the top of the mountain and our new cave. The next drop was 35 meters over flowstone all the way down. However it ended in a small room with a flat floor and some nice formations but no way on and no airflow. Knowing we had to have missed something, we took to the walls. James was finally able to climb a crumbly corner to an alcove and a crawl with a howling gale blowing through it. This led immediately to another drop. Drop after drop we descended, passing some nice formations along the way. One was especially notable – a meter-long soda straw with a helictite bush growing from its center. We finally ran out of rope in a small room after eight pitches, but there was another hole under one wall with the wind blowing in our faces. Yvonne wanted to tie our harnesses together to make a ladder, but it would have been to no avail – we could see yet another black hole in the floor below.

We surveyed to a depth of 81 meters with a length of only 129 meters. The cave is somewhat of an enigma, with its entrance nearly on top of the ridge and no catchment to speak of. There are no arroyos leading to it, and no sink at the entrance. Nevertheless there are formations and flowstone almost all the way down. It seems like the current entrance must have been part of an older system that formed when the surrounding land was much higher, and has subsequently been eroded away. We named the cave Soplo de Los Toros, a pun on the airflow and the name of the village. It is probable that on a single day we were shown the upper and lower entrances to a new system over 900 meters deep. We couldn't wait to get back!

2006

On our return over Christmas of 2006 we decided to rebuild the road so that we could drive to Los Toros. It was too inconvenient camping at Cañada Verde and hiking up and down the mountain every day. Our crew of eight (Yvonne Droms, James Hunter, Mark Minton, Tanja Pietraß, Marion Smith, Bill Steele, Diana Tomchick, and Adam Zuber) spent an entire day rearranging boulders and building a ramp in the stream bed before we were able to drive through just at dusk. The next day we found a great campsite on an abandoned logging road above town

less than a kilometer of easy walking from the cave. We also were able to get drinking water from the village spring, which saved us from having to haul it in from Arroyo Luna. Another small spring near camp came in very handy for washing gear. The stage was set for a good push on the cave.

The first push team of Adam, Bill, Diana and Marion got down only three short, muddy drops past last year's stopping point before encountering a near sump with the wind whistling past. Undeterred, Adam stripped down to only his boots and spent two hours half underwater and perched on ledges while bashing at the narrow slot on the far side of the deep pool. He was finally able to squeeze through and quickly came to a deep drop, which they did not descend. Our hero! The next team of James, Mark and Yvonne was able to rig a rope across the pool and opened a larger hole above it so that we could get across and stay dry. The pool was named Zuber's Bath tub and the next drop Adam's Pit. The passage beyond the pool contained some of the stickiest mud we had yet encountered, a common theme in days to come.

Two days later Adam, Mark, and Yvonne descended Adam's Pit. It dropped 20 meters to a ledge with a pool and two-meter-long soda straw columns on the wall. Below the ledge a series of short drops and narrow, braided canyons finally opened out into larger passage with even worse mud. We decided that Soplo has the dubious distinction of being the muddiest vertical cave we have ever done, surpassing our previous worst, Pinos (see DCC No. 12, 2002). It is a tribute to ascenders that they can function under such conditions. The larger passage ended abruptly at a deep pit, which we named the Soplo Shaft. It dropped 50 meters completely free. A wet flowstone cascade joined in from an inaccessible passage halfway down. We were now nearly 200 meters deep and things were looking good!

After a gonk day, Adam, James, Marion and Tanja pushed beyond the Soplo Shaft. The passage walls were nearly pure white, while the floor was covered with sticky red mud. The bedding was also highly inclined, where it had been nearly horizontal further up. A traverse and short drop led to a large, 40-meter-deep shaft, the Whiner's Pit. This landed in a massive

breakdown room, the biggest in the cave so far, with another drop at the far end, which was left for another day.

While the others were pushing Soplo, another team of Bill, Diana, Mark and Yvonne made a trip back down to the resurgence cave. This time we had full backpacks with caving gear and wetsuits. The hike was as long and steep as we remembered it to be. It took about 4 hours and we covered over 5 kilometers of distance and about 1000 meters vertically each way. When we were finally in the cave and jumped into the water to swim around the corner, we found only a tiny cascade making the rumbling sound we had heard before. So much for the supposed waterfall. We saw about 150 meters of good-sized passage with deep water and nice formations much of the way. We stopped at a narrow constriction with lots of mud and no airflow, so I suspected a sump was near. We made a compass and pace survey and headed out. It's a good thing we had a GPS, because we got temporarily lost in the dark on the long hike back up to camp. (In the intervening year we discovered that our Nacimiento de Los Toros was the same as the Nacimiento de Hervores that Charles Fromen had found by climbing up from Arroyo Luna back in 1993. Since Cañon los Hervores actually begins further downstream and contains other rises, we decided to keep our name.)

The final push of 2006 took place on December 27, the one-year anniversary of the day we dug Soplo open. Adam, James, Marion, Mark, and Yvonne headed to the bottom ready for bear. We made good time and were soon descending the pitch out of the Whiner Room. It went down 20 meters past huge breakdown blocks that formed the floor of the room above. A sloping passage soon led to the next pit, the Hanging Boulder Drop, so named because of a huge boulder perched precariously on the edge. The bedding in the lower half of this 40-meter pit appeared to be nearly vertical. At the bottom a steeply sloping breakdown room led down to a pinch where a boulder nearly blocked the way. The passage beyond dropped in a series of short pitches (the Silver Staircase) to a final 20-meter drop into another room. At the top of the last drop was a clearly defined anticline in one wall, with a highly shattered layer above it. There were at least two holes leading down in the floor of the final room, but we were out of time, and nearly out of rope. On that last 16-hour trip we added 125 meters of depth, bringing the cave to -366 meters. Soplo was well on its way to becoming the second-deepest cave in the Purificación area (only 100 meters to go, and we still had the wind).

After we had so painstakingly rebuilt the road to Los Toros the locals told us that there was another way to drive to the village, from Dulces Nombres to the west. No wonder they had not rebuilt the other road, and didn't seem surprised when we arrived in our trucks. This new road is not on the topo map and is essentially invisible on the ground from the main part of the village. It looks like no more than a cow path on the far side of a field. We took this road out, and since we were already so far to the west, we continued in that direction, emerging at Zaragoza. It took about six hours, the same as coming from the east. This would become the preferred route for future expeditions.

2007

An even larger group of ten gathered in Zaragoza for the 2007 Soplo expedition: Matt Cavanaugh, Yvonne Droms, Charles Fromen, James Hunter, Colin Lee, Mark Minton, Eva Osmer, Tanja Pietraß, Adam Zuber, and Emily Zuber. We spanned six decades of ages, from young Emily at 19 to Purificación veteran Charles at 63. We found the road heading west from town now paved as far as the turn off toward El Viejo, and there is even a road sign for Dulces Nombres, a nod to the Caracol mine there. We made it to our Los Toros camp after the usual six hours of rough four-wheel driving.

After riggering some of the upper drops, we headed to the bottom of Soplo. Beyond the room at -366 meters where we stopped in 2006, a 15-meter drop led to a smaller, lower room with only a tight canyon in its floor. From there the character of Soplo changed dramatically. Instead of large drops and spacious passages we were now in a tight, sinuous canyon barely wide enough to fit through and carrying a trickle stream. We named it the Small Intestine. By hammering our way past



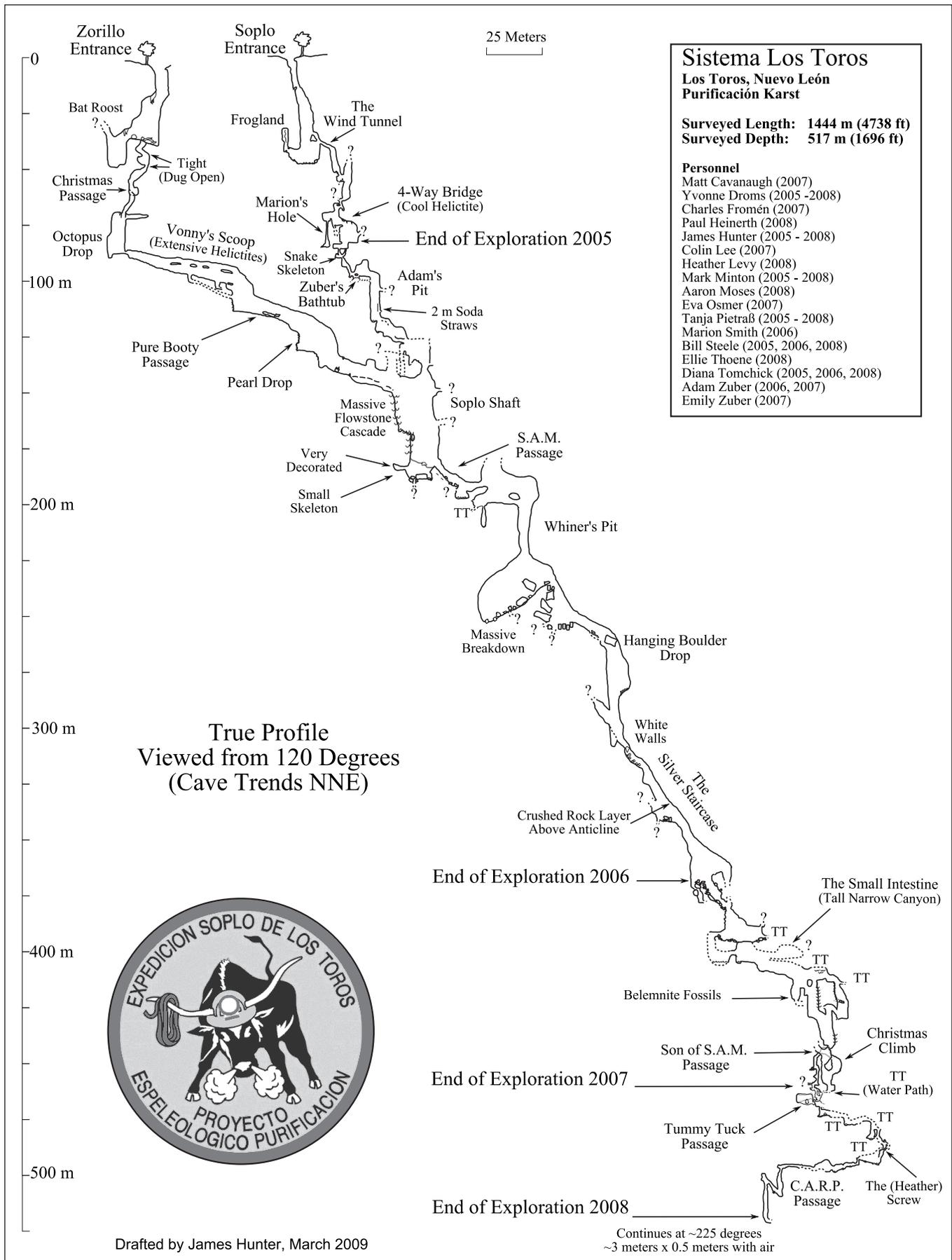
Helictites on Soda Straws in Zorillo. 2008 photo by James Hunter



Mark Minton on the Last Drop in Soplo. 2007 photo by James Hunter



Ellie Thoene With Medusa Formation in Zorillo. 2008 photo by Yvonne Droms



ledges we slowly worked our way down to a 9-meter drop that looked a bit larger. At the bottom of the drop I noticed odd, pencil-like fossils sticking out of the walls. They turned out to be belemnites, from an extinct squid-like creature. A tight drain continued down, but a ledge halfway up the pit looked more promising. James traversed around to it and reported two pits there and another traverse in larger, dry passage. This reinforced our observation that whenever we are with the active flow in Soplo the passage is tight, whereas when we are in abandoned phreatic passage the cave is larger and more comfortable.

The two pits going down from the ledge connected and the passage went down another drop, which then constricted at another tight canyon. This almost immediately went down another short drop to where the stream from the Belemnite Pit came back in. We descended one last 10-meter drop before running out of rope at a continuing fissure with the stream. For the entire expedition in 2007 we had gained only 94 meters vertically in Soplo, less than on the final push of 2006. The depth was 459 meters, only a few meters shy of overtaking Purificación's second-deepest, Sistema Cretácico.

While exploration in Soplo was going on, Yvonne and Charles were digging in Poza Zorillo, one of the pits originally shown to us by the goat girls and only a short distance from Soplo. Although the main passage ended in a blind pit about 45 meters down, Yvonne had noticed airflow in some breakdown off the bottom of the entrance drop. This year she led the effort to dig there. After three trips they opened a short drop, which led to another dig. Another trip opened that one and gave access to a small room and another drop. We named this section the Christmas Passage. The passage below sloped steeply down and led to a 17-meter drop with a very tight flowstone squeeze at the top. It was called the Octopus Drop because when looking up from below, the stalactites rimming the hole looked like tentacles. Only Yvonne went down, and explored a well-decorated horizontal section to another drop. This gave us another tantalizing lead for next year.

2008

The most recent expedition to Los Toros occurred in December 2008. Once again we had ten people from across the U. S.: Yvonne Droms, Paul Heinerth, James Hunter, Heather Levy, Mark Minton, Aaron Moses, Tanja Pietraß, Bill Steele, Ellie Thoene, and Diana Tomchick. Again we had trips into both Zorillo and Soplo running concurrently.

Aaron, Heather and James went to the bottom of Soplo at -459 meters. The passage became too narrow at floor level, but by climbing to higher levels and hammering open squeezes they were able to get through and eventually go back down again. At the end of their 22-hour trip, however, they had still not gotten as deep as the previous end, but at least they had a going lead with airflow. Bill, Ellie, Mark and Yvonne went to Zorillo and surveyed the passage below the Octopus Drop that Yvonne had explored solo the previous year. Continuing beyond the end of the known cave, the next drop (10 meters) opened up to very nice dimensions with beautiful formations. At the bottom of the next pitch (Pearl Drop) we found a single, perfectly formed cave pearl 2.5 cm in diameter lying in a dry gour. Just beyond, Bill exclaimed that he was in passage 3 meters wide and 15 meters tall, so we named it Pure Booty. We hoped that Zorillo would continue on its own, but alas, at the next pit Yvonne spied a rope hanging in the distance. We had connected partway down the 50-meter Soplo Shaft at about -150 meters depth in Soplo, where we had previously noted the wet flowstone cascade. We got down to a ledge, but did not have enough rope on that trip to get to the bottom of the pit and survey the tie-in.

The connection of Zorillo with Soplo was our Christmas present. Even though we were sad to see such wonderful passage come to an end, everyone agreed that Zorillo was a better way in than the Soplo entrance. It avoided most of the mud as well as Zuber's Bath tub, and the passage was generally larger and easier to negotiate. The Zorillo-Soplo connection was physically made and the surveys were tied together on December 26 by Heather, Mark and Yvonne on the next trip, giving birth to Sistema Los Toros.

Meanwhile Bill, Diana, Ellie, Paul and two local guides with mules packed down to the resurgence, Nacimiento de Los Toros, in the Arroyo Luna canyon. Their three-day plan was to do a proper survey of the cave and dive the presumed sump at the back. They were successful in both, with 200 meters of "dry" cave and 70 meters of



Yvonne Droms descending the second pitch of the Soplo Shaft connection. 2008 photo by Mark Minton



Bill Steele in Nacimiento de Los Toros. 2008 photo by Paul Heinerth



Tanja Pietraß in Pure Booty Passage in Zorillo. 2008 photo by James Hunter



Mark Minton sketching the Zorrillo connection to Soplo Shaft. 2008 photo by Yvonne Droms

underwater passage mapped. Paul, the diver, came up into air-filled passage going two ways, one with a small waterfall. This bodes well for the lower parts of the system not being completely inundated. There were several large, cave-adapted isopods in the sump. Paul noted that this dive was one of the most remote he had ever done, at least with respect to the amount of gear hauling required to get to there.

Using the Zorrillo entrance, Aaron, Heather, James and Tanja had another 22-hour trip to the bottom of the cave on December 27. They continued to push the tight canyon there, going up and down and back and forth but gaining only a little new depth. A hammer was often necessary to open tight squeezes. At the same time Yvonne and Mark did a bolt traverse to a passage on the far side of a pit at -410 m, just beyond the Belemnite Pit. They got into well-decorated passage and descended a pit with unusual chocolate- and butterscotch-colored flowstone and good air flow, running out of rope at another drop. Unfortunately the next pit connected back into known cave on the next trip, dashing our hopes for a new deep route.

Success finally came on the last day of the year. On December 31 Aaron, Heather and James headed to the bottom again with the goal of breaking 500 meters depth. After bashing through more tight, gnarly passage, they finally broke out at a 17-meter drop. The passage at its bottom seemed to be getting larger and had the air – a great lead for next year! They made it out after 16 hours, and a tally of their survey data put the depth at 517 meters.

After four expeditions Sistema Los Toros is currently 1444 meters long and 517

meters deep. It surpassed Sistema Cretácico to become the second-deepest cave in Purificación, and also surpassed Pozo de Montemayor to become the deepest cave in the state of Nuevo León. Although downward progress was painfully slow again in 2008, netting only 58 meters of new depth, we hope that we are finally past the tight section. Due to the depth and difficult conditions at the bottom of the cave, underground camping will almost certainly be required in order to continue. We look forward to returning in 2009 and pushing on toward the resurgence.



Long helictites in Soplo. 2007 photo by James Hunter

Diana Tomchick and Paul Hauling Tanks in Nacimiento de Los Toros. 2008 photo by Paul Heinerth



Resumen

En 2005 Mark Minton llevo algunos espeleólogos a una nueva área cerca de Los Toros, Nuevo León, justo al Oeste de Arroyo Luna. No había conocimiento de espeleólogos en esa área. Guías locales les mostraron una resurgencia baja con entrada de cueva, la cual tiene que ser nadada. Ese mismo día mas tarde les enseñaron una estrechez que soplabá, ellos la ampliaron y la llamaron Soplo de Los Toros. Topografiaron -81m en vertical.

En 2006 los espeleólogos arreglaron el camino y acamparon cerca de la cueva. La cueva continuaba bajando, y se alcanzo la profundidad de -366m. Un equipo regreso a la entrada baja y exploraron 150m de buen pasaje con partes con agua profunda y formaciones. Se detuvieron en paso estrecho sin flujo de aire.

El viaje de 2007 añadió otros 97m de profundidad para hacer Soplo -459m de profundidad, pero ellos dejaron la cueva en una fisura con agua fluyendo. Algunos espeleólogos abrieron una estrechez cerca de Poza Zorrillo. Ellos exploraron 3 pozos antes de encontrar una sección horizontal decorada con formaciones para detenerse en un pozo.

En 2008, Zorrillo fue conectada con Soplo a -150m para crear Sistema Los Toros. Zorrillo se convirtió en la entrada favorita para la cueva. El grupo topografió la resurgencia, Nacimiento de Los Toros, en el cañón de Arroyo de Luna y Paul Heinerth buceó el sifón. Los 270m de la cueva fueron tipografiados, incluso debajo del agua. Otro equipo exploró la continuación profunda de Los Toros y topografiaron hasta -517m, donde la cueva se hace mas grande y tiene corriente de aire. Ahora la cueva es la segunda más profunda en el Karst de Purificación.

Spring Break in Conrado Castillo, 2009

A Digest of Select Adventures

by Saj Zappitello



Photo by Colin Massey

Texas, USA

Alex Benavente
Oscar Berrones
Paul Bryant
Sandi Calhoun
Joe Datri
Gill Ediger
Gary Franklin
Dave Kennington
Ben Sternfelt
Colin Strickland
Pete Strickland
Wes Schumacher
Justin Shaw
Shannon Summers
Corinne Wong
Saj Zappitello

Alberta, Canada

Henry Bruns
Gavin Elsley
Katie Graham
Dan Green
Colin Massey
Vince Massey

Coahuila, México

Jose Fernandez Arronte
Juan Isidro Juarez Avila
Cynthia Esparza Flores
Nancy Esparza Flores
Monica Grissel Ponce Gonzalez

Monterrey, México

Claudia Mendoza
Jesús (Choy) Tamez
Luis Saracho
Daniel Battarse
Johnatan Verger

SANDI CALHOUN AND Gill Ediger worked for several months on organizing a Spring Break trip to the Brinco entrance of the Purificación system. Thanks to their hard work, the trip turned out to be an international success with cavers coming together from across the continent. México, Canada, and the US were all represented.

The Texans and the Canadians rendezvoused in Austin at Wes Schumacher's abode on Saturday morning. After much milling about we agreed on a loose caravan, with those who wanted to go ahead meeting us in Barretal. Little did we know that we would spend six hours at the border waiting in line for visas and truck papers. Apparently the Mexican consulate was understaffed because they were giving their personnel extra leave time in preparation for the crowds that would be coming through at Easter.

Late, late that night we finally arrived near Barretal and set up camp so that we could start fresh in the morning for our drive up the mountain. The next day we spent a few hours collecting fresh provisions and rendezvousing with the Mexican cavers from Coahuila, and then started our drive up to Conrado Castillo. The drive was as beautiful as ever, though slightly slow with such a large caravan. The GPS coordinates and track log collected by Bev Shade, Paul Bryant, and Saj Zappitello on a previous trip were extremely useful for wayfinding on the logging roads. We arrived at the Fieldhouse in Conrado Castillo near sunset and set up base camp. That was by far the most tents I've ever seen set up around that cabin.

The next day the Canadians and Paul Bryant set out for Camp VII to push some survey leads (discussed the Lower Ulysses article). Corinne Wong, Joe Datri, and Saj Zappitello went in to the World Beyond with them to help

carry gear and learn the route. Paul and Dan Green were the only ones who had been to Camp VII before, and it had been several years. Dan did an amazing job of scouring old Death Coral Caver notes and maps to make a list of landmarks to help us find our way.

Back on the surface, Gill worked on the cabin with the help of many people. He also led a couple of karst hikes to show interested folks where other caves entrances are located. Some of them have been explored and surveyed, but many have not.

The Mexican cavers from Monterrey ran into some serious troubles with their trucks on their trip up. They arrived later than they had planned, all five of them in a single cab pick-up truck. They had to leave much sooner than they wanted to as well. They did make it down to the World Beyond before they had to leave.

Oscar Berrones, Alex Benavente, Gary Franklin, Joe Datri, and Corinne Wong all worked on a puzzle that Gill suggested. According to Gill, the French entrance connects to the Brinco entrance and makes a nice through trip. He suggested that it would be a simple thing to figure out following the map. Oscar and others worked on

Joe Datri and Oscar Berrones. Photo by Gary Franklin



trying to find the connection for four days. They started by going in the French entrance and trying to find their way, but that was not successful. They finally had a breakthrough on the last day that we were there and found the connection in Tin Can Alley. It does exist. It is not easy to find, and the map may need to be revised according to their findings. Oscar did flag the route, but you would have to ask him what color it is. The key part of the route is a long, tight belly crawl through Argonaut's Passage that was discovered on day 2, but they didn't realize that was the connection. Some

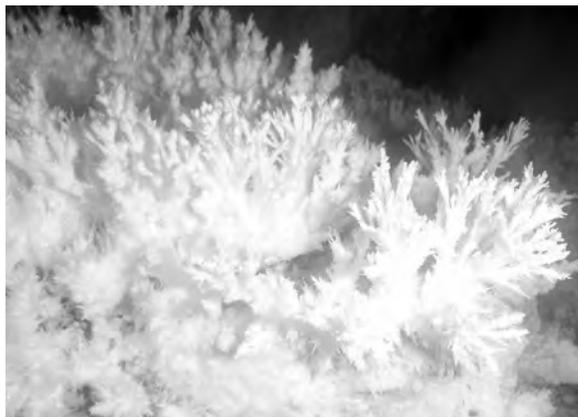
of the flagging in Tin Can Alley is pink and could be mistaken for the flagging for the route to the World Beyond, so watch out for that. Pete Strickland, Colin Strickland, Ben Sternfelt, and Dave Kennington took a day trip to the top of the Flowstone Falls. This was Ben and Dave's first caving trip. Pete reflagged parts of the route because he didn't want anyone to get lost.

Justin Shaw and Gary Franklin explored and mapped a small cave uphill from the Brinco entrance. Apparently the cave had a large population of very small ticks.

Shannon Summers went in to Camp VII on Tuesday, accompanied by Oscar Berrones and Gary Franklin, to join up with the Canadians and work on the survey. He stayed for three nights. Wes Schumacher, Sandi Calhoun, and Saj Zappitello went in to Camp VII on Wednesday to meet up with the Canadians. They stayed for two nights. While they were in the cave, they investigated the lead at the Aragonite Sump. They verified that it is too pretty to break even if there is passage behind it. Any attempts to get in to the passage behind it from that passage would destroy the aragonite bush.



Corinne Wong and Paul Bryant in Brinco. Photo by Saj Zappitello



The Aragonite Sump. Photo by Saj Zappitello

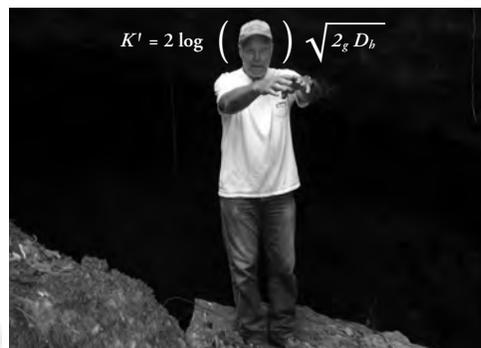
Gary Franklin and Corinne Wong hiked to the top of the mountain above the cabin. They found an old tower that they climbed up above the trees for an amazing 360 degree panoramic view of mountains, valleys, and clouds. Joe Datri, Corinne Wong, Monica Ponce, and Alex Benavente explored some nearby cave entrances. Joe, being our professional photographer, took some photos in Tecolote Cave. Corinne found a promising lead at the back.

On Friday everyone came out of the cave. Gill and Pete had water delivered and set up the solar shower so that, with much help from Colin Strickland heating loads of water on the stovetop, everyone could take a camp shower. Most of us started the drive back on Saturday morning. We all got back to Austin at various times on Saturday night and on Sunday.

Justin Shaw and Gary Franklin explored and mapped a small cave uphill from the Brinco entrance. Apparently the cave had a large population of very small ticks.



Justin Shaw mapping near the Fieldhouse. Photo by Justin Shaw



Ediger explains karst. Photo by Saj Zappitello

Resumen

En Marzo de 2009 Sandi Calhoun y Gill Ediger organizaron un viaje largo durante Spring Break a Conrado Castillo, en el que estuvieron más de 30 espeleólogos en la montaña durante esa semana. Hubieron varios proyectos diferentes tomando lugar dentro de las cuevas como

fuera de ellas. Un equipo de 11 espeleólogos estuvo la mayor parte del viaje en campamento VII, explorando continuaciones debajo de Angel's Staircase (ver Reporte Lower Ulises en este volumen); Muchos espeleólogos hicieron viajes por el día al sistema y lograron familiarizarse con la ruta desde Brinco hasta World Beyond; Oscar, Alex, Gary, Joe y Corrine estuvieron varios días figurando la ruta entre las entradas French y Brinco; Gill lidero las caminatas dentro de áreas inexploradas de Conrado Castillo; Justin topografio una cueva superficial en la pendiente arriba de Brinco; Joe hizo muchas fotos, cerca de la cueva Tecolote, para el calendario de desnudos; Colin Strickland trabajo su proyecto Dad's Big Dig en la parte histórica de Brinco; Colin y Pete llevaron a Ben y Dave a su primer viaje en la cueva, viajando hasta las



Gavin Elsley and Saj Zappitello. Photo by Saj Zappitello



Dave Kennington checks an entrance. Photo by Colin Strickland

Flowstone Falls; Gary y Corrine caminaron hasta la cumbre de la montaña arriba de la Fieldhouse y escalaron en la vieja torre de acero por encima de la copa de los árboles; y Gill continuo con su masiva reparación de la Fieldhouse(ver reporte en este volumen). Todos salieron de la cueva al final de la semana, tomaron 2 duchas de agua caliente cortesía de Gill, Pete y Colin, y tuvieron una fiesta animada por Colin el canadiense, quien paso su cuerpo desnudo por el marco de una raqueta de tenis. Todos bajaron de la montaña el Sábado, excepto Gill, quien se quedo trabajando en la Fieldhouse.

Lower Ulysses

Sistema Purificación Camp VII, March 2009

by Dan Green

Camp VII. Photo by Colin Massey



IN MARCH A small group of cavers from Canada and Texas established a four-night camp at Sistema Purificación's Camp VII to push some leads in the Ulysses Maze. The Ulysses Maze is a horizontal area three-quarters of the way down the Angel's Staircase that had been mapped during the first Camp VII trip in 1996, and some good leads remained. Our plan was simple but ambitious— we had about 100 hours to establish camp in the World Beyond

borehole, rig the Staircase down to Ulysses, push the leads, derig and return to the surface before the vehicles headed back to Austin. With the late start from Texas and a long Saturday afternoon delay at the border, I worried about the time. Our leads, after all, were 500 meters below the entrance and we'd never been down there before.

The ten cavers heading into the Brinco entrance Monday morning included three load haulers accompanying the campers to the World Beyond borehole. Thankfully Paul Bryant decided to join us in camp because he knew the way down there much better than me (I'd been down there just once nearly a dozen years earlier, and the route was foggy). The Crack of Doom ate some camp packs and the group got turned around a few times, but after about eight hours we finally crawled through into the awesome World Beyond. Following a short break, the load hauling team of Corrine, Joe and Saj dumped off group gear and turned back for the surface. After some easier going through the borehole, our remaining group of seven finally swam ashore onto Camp VII's gravel beach, our home for the next four days.

The next day we were all tired from hauling camp packs, but with the compressed schedule we continued pushing ahead as planned. I used my line plots and the old notes to navigate down the Angel's Staircase with Gavin, Colin and Katie. The route finding was sometimes challenging and took extra time, but we just kept following the water and eventually made all the right turns. The Staircase is a Five Star steeply descending water passage dropping 400 meters below the World Beyond. Full of flowstone climbs, travertine washes and sharply carved canyons, with lots of climbing and swimming. All of the passage is sporting, wet and clean— this alone was worth the trip. Gavin went out front and rigged about eight pitches down 300 meters before reaching the pools and swims of the Canal of Ulysses. We swam the Canal and pulled out of the water just before the final series of pitches descend to the sump 100 meters further below. This was our junction. A short rope climbed into the horizontal and mostly dry walking passages of the Ulysses Maze— an abrupt change in passage character up to this point.

Our leads were at the southern end of the maze, an area with pits

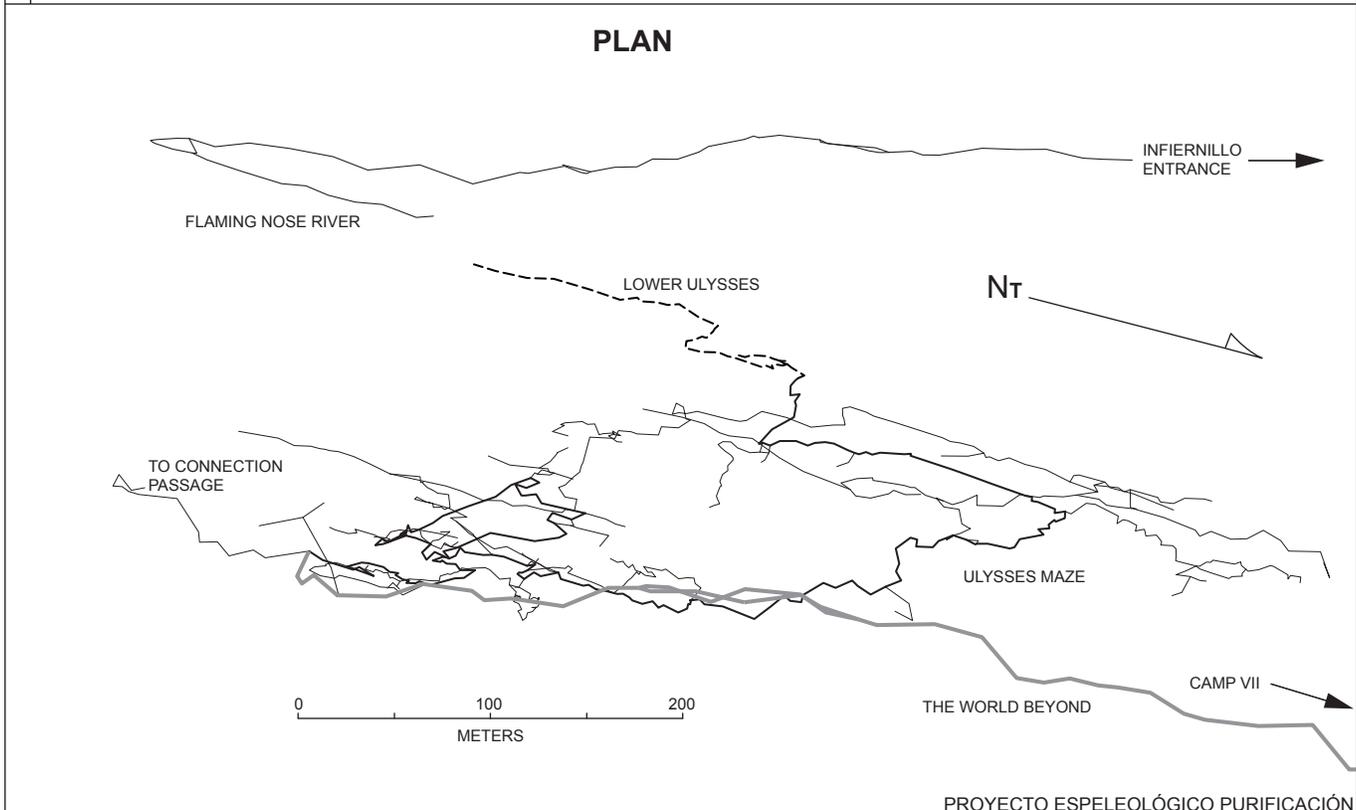
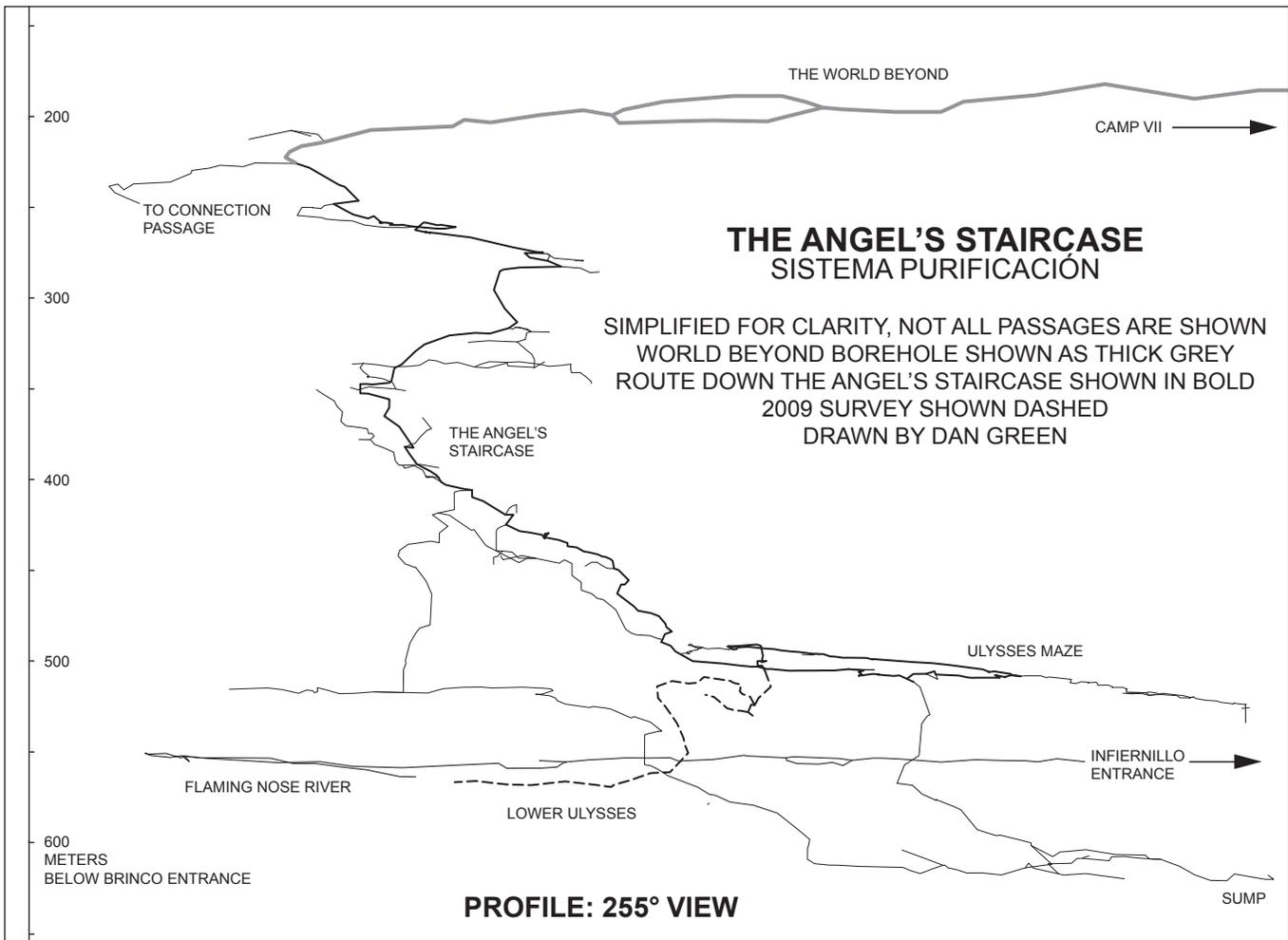
dropping out of it discovered at the end of the 1996 expedition. After navigating a few hundred meters to the south, and mistakenly taking an off-route and horrible cheddar-shredding crawlway, we dumped the last of our ropes and rigging gear in a small junction room. Katie and I went ahead to check out the lead, following some crawly passage that suddenly stood up into the clean-washed walking tube accurately described in the 1996 trip report. The passage

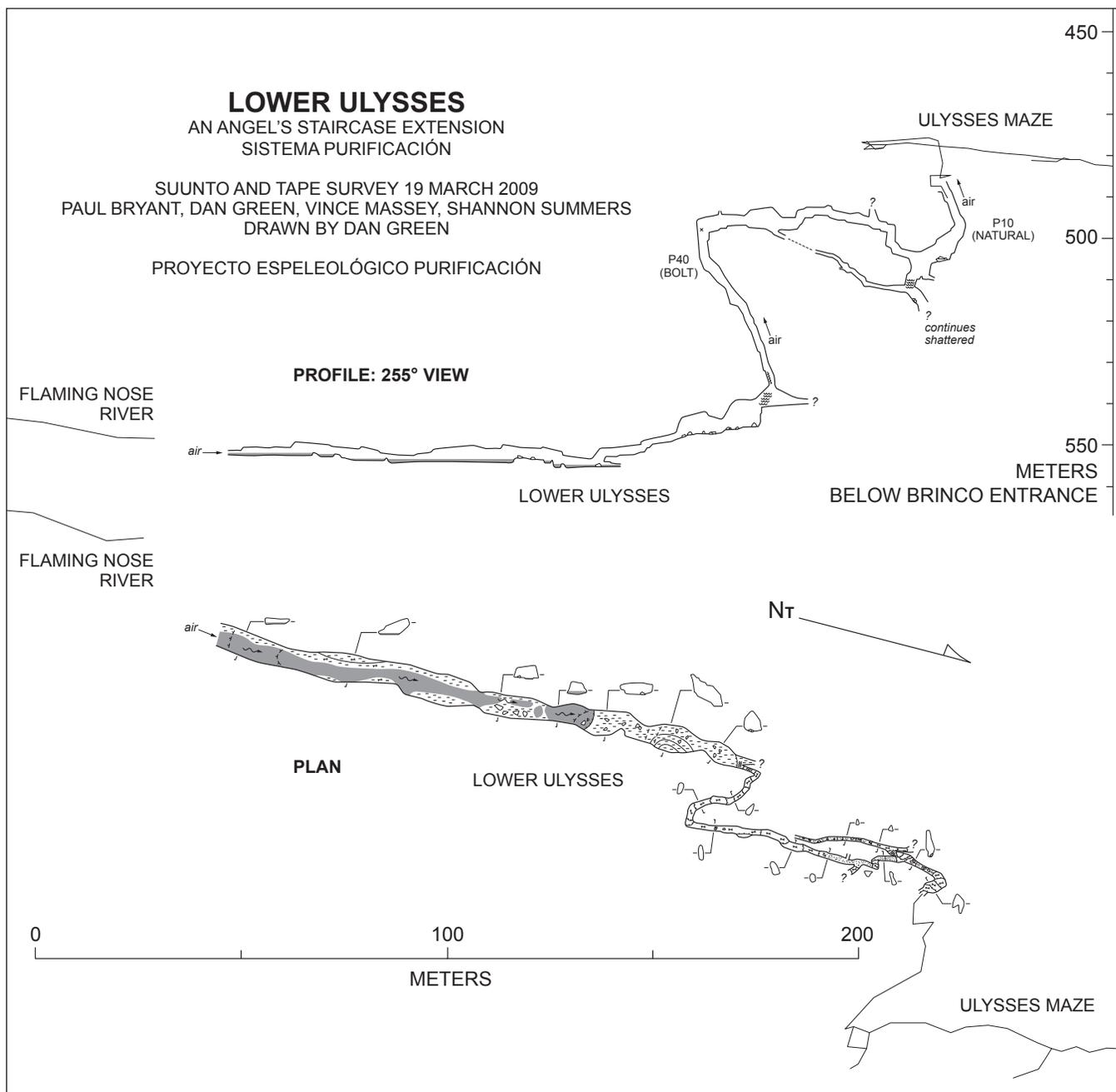
snaked downwards, getting steeper and cleaner before the previous survey ended at station NC152 where it could be seen continuing vertical for at least 10 meters. Lots of air poured up from below. It was a great lead and we knew it would go. It took us almost four hours to climb the 300 meters back up to camp, and those fighting thick wetsuits were totally exhausted.

While we were down the Staircase route, Paul and Vince spent the day investigating the Aragonite Sump passage and learning some of the route through to the bottom Infiernillo entrance. The Aragonite Sump lies at the end of a long southern passage— the delicate aragonite bush blocks the way forward. This needed some further investigation to see if there was a careful way around. Paul confirmed that there wasn't, and no airflow either. Back in camp, Shannon had arrived solo from the surface with 60 meters of rope and his usual superhuman strength. Henry had remained in camp, guarding The Cube from inevitable attack.

On the third day I led the fresh team of Shannon, Paul and Vince back down to the lead. With the ropes in place and the route familiar, our fast team crossed the Canal of Ulysses after just 2 1/2 hours and we were soon at the lead. Paul quickly rigged the clean pit as we started the survey. The passage soon branched along the same steep fracture angle that defines much of the cave, with good airflow seemingly everywhere. We surveyed a few directions in lesser passages until Paul climbed up into a nice walking tube and set a hand-line for us to follow. The phreatic passage climbed up some steps, leveled off and got bigger, and the airflow was still great. It was some of the finest passage any of us had surveyed in the Sistema, and it felt good to be heading south into the mountain where much more cave is presumed to be. We mapped past a few small side leads. Further ahead we could hear Paul's hammer blows setting a bolt and we knew it was getting good.

When we caught up with Paul he was rigging a long steep tube that eventually dropped 45 meters into a large room. We mapped down the steeps, most of which was climbable but easier with the rope at times. Paul returned from below and announced we'd hit a river





Wes Schumacher combusting The Cube. Photo by Colin Massey

passage! We bottomed out 370 meters below Camp VII, dropping into a stream passage about five meters wide with muddy banks of death coral. Upstream went south into the strong air, and downstream the water went into grim low passage. After a dozen long shots in a muddy sump area the passage lowered and continued through a watery-gravel dig. The air was so strong it rippled the water! When I caught up on the sketch we'd been pushing for almost ten hours and had mapped 320 meters. We turned for camp and made the climb up in about three hours and stumbled into camp around 2am. Earlier in the day Wes, Sandy and Saj had

arrived at Camp VII to get familiar with the area and see what we were doing down there.

Colin, Gavin and Katie derigged the Staircase on the fourth day while some of us rested. The inexhaustible Paul showed the others the way to the Aragonite Sump. Everyone returned to camp early in the evening and, as usually happens when there are too many cavers in camp for too long, we amused ourselves with fire. Gavin remarked how the white gas mood lighting dotted about camp was quite 'atmospheric'. When The Cube resisted cremation, the assault moved to the nearby Flaming Volcano. It was so bright down there

that headlamps weren't needed...until the thick smoke appeared. Oh, right...

We headed for the entrance early the next morning. Some of the group got drawn in by sucker flagging and wandered around Tin Can Alley with camp packs for a while, but everybody was out in 4-6 hours to the welcome Fieldhouse surroundings and hot showers thanks to Gill, Pete and Colin.

Our deep lead appears to be aligning with the Flaming Nose River coming in from the south. When the FNR was originally mapped from Camp IV in March 1986 (Camp Challenger, AMCS Newsletter #16) it ended in a sump, so either the sump is now open and we were in it, or somewhere in between is a branch taking the strong airflow. We passed a few other smaller leads to check on the way down to the river passage, plus there are more good pits dropping from the Ulysses Maze. A return to this area is worthwhile.

Resumen

En Marzo de 2009, un equipo de Canadá y Texas planearon un viaje corto a Campamento VII en el Sistema Purificación, para explorar algunas continuaciones por debajo de Angel's Staircase. Una buena continuación en Ulises Maze a -500m debajo de la entrada de Brinco, fue topografiada por 315m hasta un río ancho proveniente del Sur. Ellos se detuvieron en una baja y mojada estrechez, con mucho aire. Esta podría conectar con el fondo de Flaming Nose River, cual fue tipografiado en 1986 desde campamento IV, pero en 1986 era un sifón. Angel's Staircase es emocionante, es un pasaje con muchas escaladas. En esa área hay mas continuaciones buenas y esta planeado un viaje para 2010.



The Angel. Photo by Gavin Elsley

Katie Graham on the Angel's Staircase. Photo by Gavin Elsley

Angel's Staircase Rigging Notes March 2009

The main water route down the Angel's Staircase uses natural anchors. Most of the ropes are staged in the cave near the drops, above the waterline. Some of the drops are climbable but best rigged for tiring trips back up. 100 meters of rope is stashed at the Ethiopian Sponge Tube junction (NB25), 75 meters at the start of Batwing Boulevard (plus some dynamic), and another 60 meters in Camp VII above The Cube. Bring a half dozen rope protectors for the Angel's Staircase, as even fat ropes were getting badly worn on the active coarse flowstone. Old Goldline remnants and shredded anchor tat has accumulated above some drops- it should be removed.



The Fieldhouse

Upgrades to PEP HQ

Story and (most) photos by Gill Ediger



Bev Shade and Charley Savvas putting the finishing touches on the siding, 1997.

A few things in the world are unfixable but usually not field houses--they can be dealt with. --Ediger

WHEN EXPLORATION OF Cueva del Brinco and other caves around Conrado Castillo started in earnest in 1976, we used a wonderful flat and shady campsite a couple of dozen meters distant from the Brinco Entrance. Although that was good, Peter Sprouse located an unoccupied house in town that belonged to Juan Ledezma who was living in Victoria at the time—tending to a lumberyard which he owned there. It consisted of a kitchen house with counters, shelves and a dirt floor, and another house for sleeping/living. Both were wood framed and sided and rented for something like \$75 a year. The price has gone up over the years but not too drastically. The kitchen unit was in poor shape when we moved in but trussing and patching and banging more nails into the roofing tin kept it mostly usable for the next 30 years. When some used sheet metal came available in Austin, Peter and others thought it might be good to build a new kitchen to replace the old leaky one and asked me to design one which would utilize the available sizes of sheet metal. In 1997 it was decided to build onto the downhill side of the existing living quarters. That would require some long posts cut by some of the local Mexicans from nearby oaks. Although we allowed for the potential of another room to eventually be excavated and built beneath the new structure, there were no immediate plans made to do that. It was my intention to come back within the next few years and build permanent stone or concrete columns to replace the temporary oak piers. Because of that, the piers were intentionally offset from the proper loading points to leave room for later construction.



The original campground in the 70s.

That was all well and good but I failed to foresee my departure from Texas and attention to the fieldhouse when I took a job driving freight trains in Maryland. For eight years the fieldhouse and its offset supporting structure were subjected to abuses of gravity, the weather, and wood boring beasts. As the posts rotted the house settled in over them like an old hen protecting her chicks from the rain. Doors wouldn't open; the table leaned to the west; frying eggs wouldn't stay on the comal. A crew visiting there over Christmas '07 came back with tales of fear and loathing. A picture shows a warped beam.

I abandoned the railroad in March of '08 and by June Bev Shade had cornered me into going to have a look and seeing if the problem could be arrested and the fieldhouse saved. A few things in the world are unfixable but usually not field houses--they can be dealt with. The first order of business was to get some temporary supports under the main beams and to raise the parts which had sunk below normal floor level. I decided to use 4x4s to construct temporary cribbing which allowed me the ability to safely use hydraulic jacks to raise the building incrementally (amidst a lot of creaking and groaning and loud popping) around its perimeter. To complicate things, the old house had not been leveled before the new one was incorporated into it, so when leveling the new one again, the old one had to be adjusted to be out of level--as it had been before.

In planning the repairs I realized that a new storeroom could be had for a bit more time and money than just sticking in some new piers. So I spent most of the winter and spring of '09 going back and forth between Austin and Conrado Castillo, waking up more mornings in the latter than the former. I hired one (sometimes several) of the locals to do a lot of the excavating and other work. Since the house was built over a sloping hillside a lot of material had to be removed. It made a nice berm to the rear of the house.

Footers were excavated in a progressive sequence that allowed the house to be supported on the cribbing as walls were built beneath it. Cinder blocks are quick and easy to install and relatively



Left: After a decade on the original posts, the warping and bending are obvious. The outside corners the house had settled over 25 centimeters. Below: The fieldhouse sitting on new block foundation walls, Spring 2009.



strong when supplemented with rebar and concrete. No mason was available so I took it upon myself to get on with the laying of block. Then Spring Break arrived and along with it about three-dozen cavers. Some of them were pressed into service laying block and mixing mortar. By the time they left about 1/3rd of the house had a supporting wall under it and the cribbing was adjusted to allow excavating of the remaining footers. From there the concrete work was rather mundane, except for having to smash up a large boulder that showed up in the midst of the retaining wall alignment. This time a mason was summoned up from town and he made quick work of getting rid of the remaining blocks. I turned myself back into a carpenter then and finished off the supporting walls and let the house down gently onto them, driving a few long nails in order to antagonize my

carpal tunnel problems. By the end of May the basement was capable of being locked up although I didn't do it. The earth mounds that once supported the cribbing still need to be excavated from their former ground level down to the height of the new floor--which may be finished in my life time if I can work up the nerve. I also installed drains for a shower should enough water ever be available.

The floor is level; all the doors open and close; and the eggs and hotcakes stay in the middle of the pan. Thanks to



Hired help: Mario demolishes the large rock where the walls will stand. Around him is the 4X4 cribbing used to jack up the house.

the few who helped and those who donated a few dollars to the project. The fieldhouse ought to be good until at least the end of The Hundred Year Plan for the PEP.

Resumen

Espeleólogos de Austin, Texas, rentaron una casa desocupada en Conrado Castillo poco después de la exploración de la Cueva el Brinco en 1976. Había una cocina con un piso de tierra, y otra casa para dormir y estancia, las dos casas eran de madera. Varias mejoras se hicieron en esos años, pero en 1997, el carpintero de PEP, Gill Ediger diseñó y construyó una nueva cocina en la parte del terreno inclinada junto a la casa existente. Columnas temporales de roble fueron puestas, para sostener el nuevo cuarto, fuera de la posición apropiada, los cuales eran planeados remplazarlos con postes permanentes de piedra y cemento. Pero Gill se fue inesperadamente de Texas y las mejoras nunca tuvieron lugar. La Fieldhouse se hizo vieja y se inclino debido a, la gravedad, polilla y clima. Las columnas se pudrieron y los huevos ya no se mantenían en el comal. Gill regresó a Texas en 2008 y las mejoras a la Fieldhouse comenzaron. Usando un gato hidráulico la cocina fue levantada y sostenida con bloques de madera. Durante varias semanas entre invierno y primavera, Gill llevó a cabo un proyecto masivo de excavación y cimentación. Algunas veces contratando locales para ayudar con el trabajo, los tabiques fueron puestos, el cemento vaciado, piedras picadas y paredes reconstruidas. Para Mayo, Gill había gentilmente dejado la casa sostenida sobre paredes cimentadas. Una nueva puerta de acero fue instalada en el sótano, así que la Fieldhouse ya tiene una bodega que se puede cerrar. El piso esta nivelado de nuevo y los huevos se cocinan en el centro del comal.



The relationship of the original field house (distant) and cook house (near), probably on the day we moved into it and unloading my GMC.



The framing members of the new kitchen spend their first night together, 1997.



The fieldhouse prior to the 2009 renovations.



May 2009: Only some flashing remains before the new room will be dried in. A retractable porch will extend at the 2nd floor level when the job is finished.



Ediger operating the excavator on the helper's day off. About 120 centimeters of material had to be excavated just to get to floor level on the high end. The bottom of the footer was another 30 centimeters lower.

Ediger, fieldhouse champion 2009 photo by Justin Shaw





Purificación Area Cave Descriptions

Contributions by Bev Shade, Dan Green, Philip Rykwaldler and Peter Sprouse. All UTM coordinates are NAD27.



Data entry.
2006 photo by Javier Bandas

CUEVA DE ALLARINES

Conrado Castillo, Tamaulipas

Length: 603 m Depth: 43 m

UTM Coordinates: 451695E, 2650576N (NAD27)

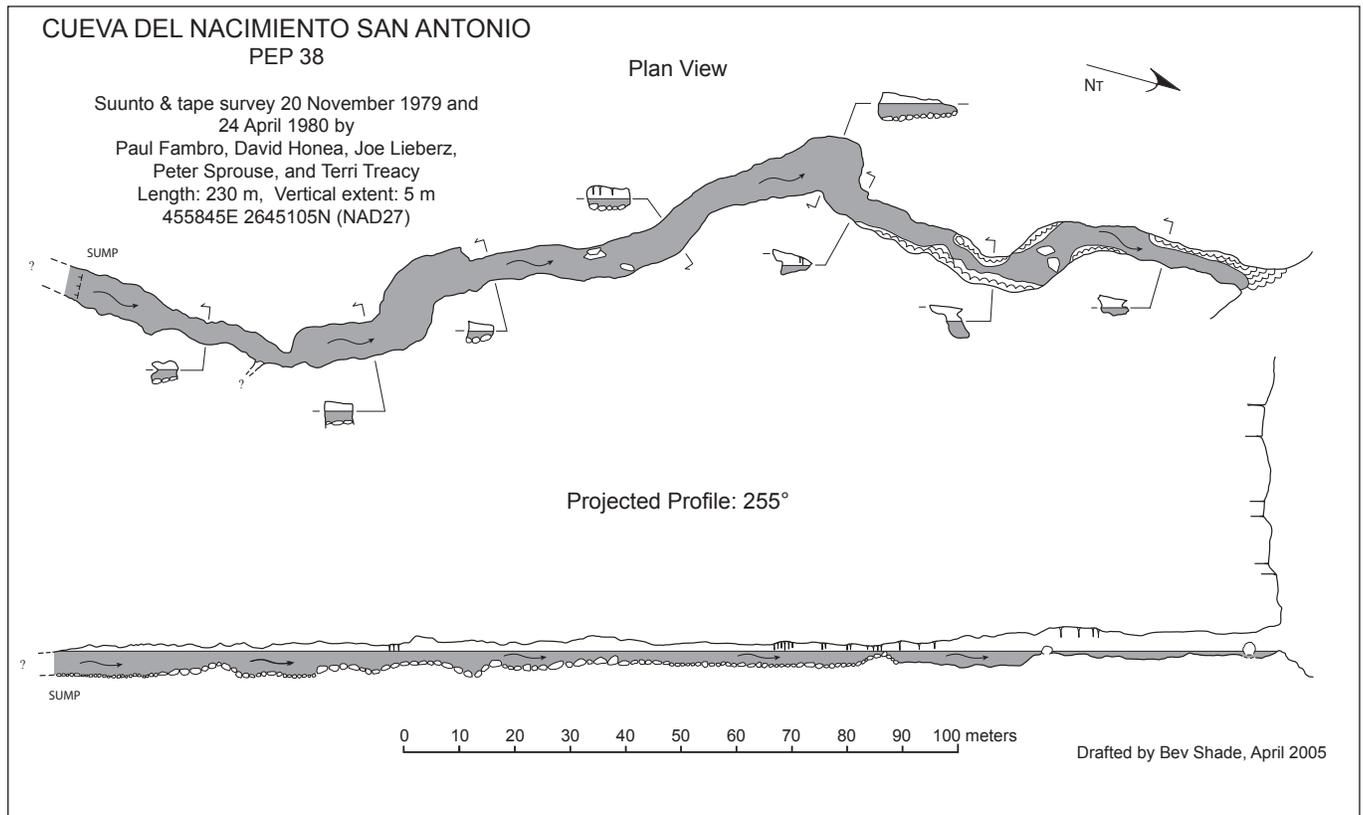
PEP 2, 3, 4

becomes impassable not far beyond Truffle Pit. The passage at the bottom of Truffle Pit is also too tight.

The cave has three known entrances. The easternmost is a squeeze, the middle is a comfortable walk in entrance, and the westernmost is a short pit. All entrances lead to the same horizontal level. Just inside the main entrance, a hole drops from the horizontal passage to an underlying passage which meanders about 100 m to a set of down climbs. The pits drop into an active stream passage at a depth of 35 m. The stream passage is low and wide, with a gravel floor and ample flood debris in the ceiling. It stretches about 150 m to a tight squeeze (Gotta Have Faith) that drops into a set of horizontal passages at 40 m depth. A hole in the floor of the Tentacle Chamber drops to an active vadose streamway that is impassably narrow. Beyond the restriction, water can be heard falling down another pit. This point is about 60 m south of passages in Oyamel at the same level. Another passage leads up from the Tentacle Chamber with airflow, and likely connects to the surface, but

This upper portion of the cave to the bottom of the pits was surveyed on 8 and 12 March 1978 and 13 November 1979 by Hal Lloyd, Peter Sprouse, and Terri Treacy. Bill Pharr and others returned to the cave on 30 December 2000, and found that the passage at the bottom of the pits was open, and surveyed Down Uranus Crawl. On 25 November 2003, Andy Glusenkamp, Matt Reece and Faith Watkins returned to the cave, surveying Walking Passage My Ass!, the Frying Pan Passage, and stopped at a restriction. Glusenkamp and Watkins returned to the cave the following day with Bev Shade, surveying passages at the level of the Tentacle Chamber and up to Truffle Pit. Glusenkamp, Nancy Pistole, Bill Stevens and Watkins returned on 1 April 2004, pushing Truffle Pit and leads in that area. Shade and Vladimir Ramirez returned on 16 December 2006, and explored the lowest stream passage to the restriction. (BLS)

Observed fauna: blind cave scorpion (*Troglocornis willis*)



CUEVA DEL NACIMIENTO SAN ANTONIO

Conrado Castillo, Tamaulipas

Length: 230 m Depth: 5 m

UTM Coordinates: 455845E 2645105N (NAD27)

PEP 38

This pit is located 2100 meters southwest of Los San Pedros on the south flank of Cerro de la Cruz. This horizontal cave is formed along a series of northwest-southeast fractures. The passage is typically tall and narrow, with breakdown floors. The entrance is a 10 meter pit formed by collapse into one of the taller passages. It is a fissure maze, with airflow likely caused by multiple small entrances. Gabino Torres showed the cave to Harvey DuChene, Dawn Reed, and Peter Sprouse on 30 November 1991. (PS)

The Nacimiento San Antonio issues from a cave at the base of a cliff. The cave goes horizontally 230 m upstream, until the passage dips completely underwater. The passage is an active streamway 5 m tall by 5 to 8 m wide. The cave lies about 800 m west of Paraíso Difícil, in the Arroyo San Antonio. It was surveyed on 20 November 1979 and 24 April 1980 by Paul Fambro, David Honea, Joe Lieberz, Peter Sprouse, and Terri Treacy. (BLS)

CUEVA DEL CUERO

Ejido Yerbabuena, Tamaulipas

Length: 57 m Depth: 14 m

UTM Coordinates: unknown

PEP 231

This cave is in the Llorona area. It consists of a main chamber 20 m long by 10 m wide that follows a steeply dipping bedding plane, reaching a depth of 14 m. On the east side of the chamber, a narrow fossil infeeder follows the strike of the bedding. The cave was surveyed by Chris Green, Susie Lasko and Peter Sprouse on 23 November 1990. (BLS)

SOTANO DE CERRO DE LA CRUZ

Los San Pedros, Tamaulipas

Length: 164 m Depth: 19 m

UTM Coordinates: 459908E 2637447N (NAD27)

PEP 245

POZO DE AZUCAR Y DESPECHO

Conrado Castillo, Tamaulipas

Length: 14 m Depth: 10 m

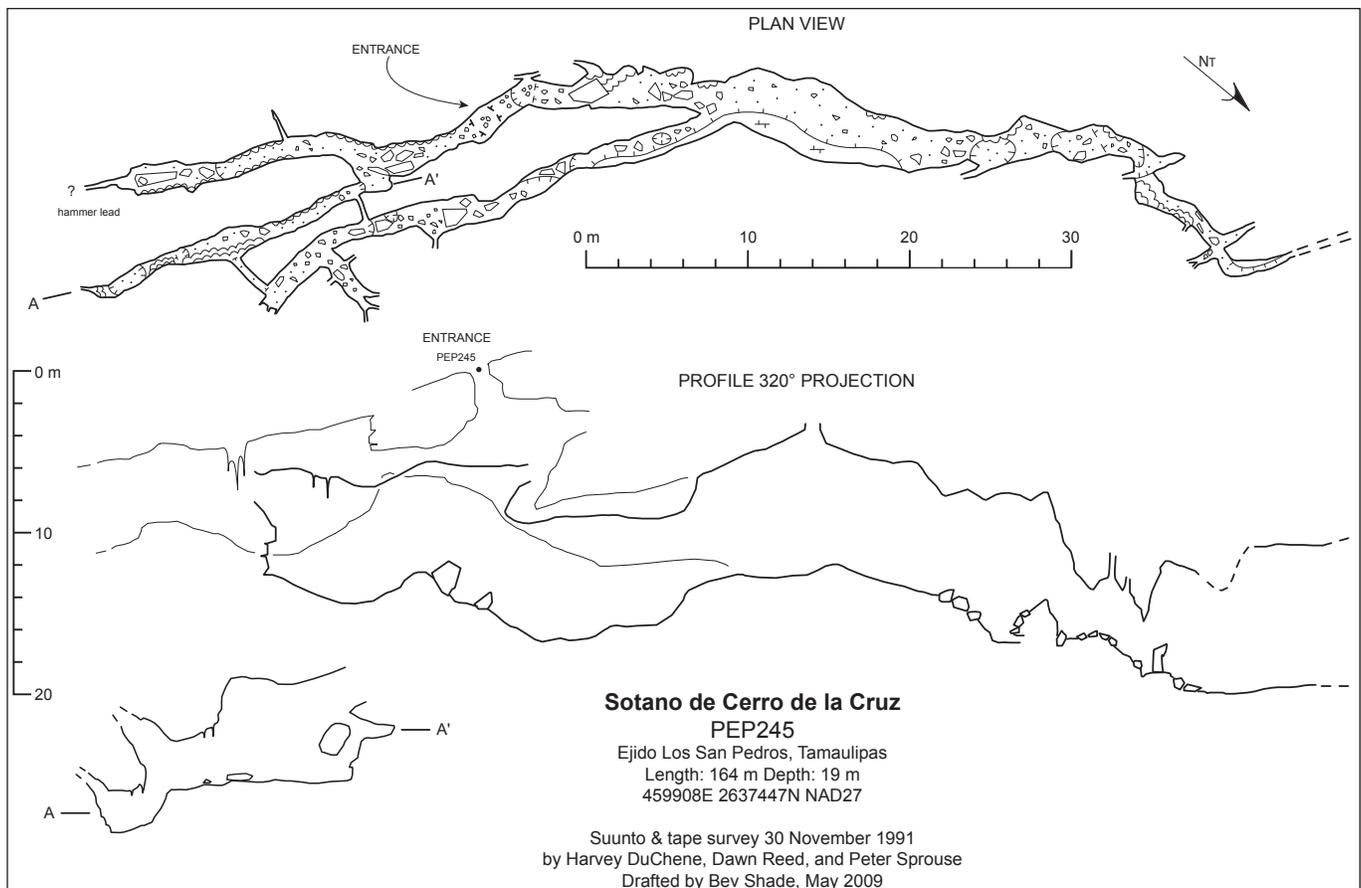
UTM Coordinates: 451678E 2651802N

PEP 484

Pozo de Azucar y Despecho is located above Conrado Castillo in the Cueva de Cuchilla area. It was found during a surface traverse led by Charley Savvas above the Oyamel entrance to Sistema Purificación in early April of 2004 and surveyed on April 4, 2004 by Bev Shade, Chris Krejca and Philip Rykwalder. It has a narrow fissure-type pit entrance 4 m deep. The floor of much of the cave consists of very loose rubble. The passage below the pit was initially blocked by rubble. A few medium sized rocks were removed and much collapse ensued, opening the passage to a stooping sized opening. The bottom



Philip Rykwalder sketching, 2006 photo by Marlena Cobb



of the cave has a lead that was blowing air but was not persued. It is an awkward passage to dig in because of a ninety-degree bend in the passage immediately before the lead. As the group was exiting the cave, part of the rubble slope below the entrance drop collapsed and temporarily trapped the rope, removing several stations. Due to the continuous shifting of rocks and sharp passage walls, but nice airflow, the cave was dubbed "sugar and spite". (PR)

POZO DEL ARBOL LLORÓN PEP 498
 Chupaderos, Nuevo León
 Length: 19 m Depth: 15 m
 UTM Coordinates: 42988E 265365N (NAD27)

This cave was explored 9 May 2005 by Mike Michaels, JJ Noyola, Nathan Parker, Samuel Rodriguez Muñiz and Bev Shade. It is a 15 m deep pit with walls covered with eroded flowstone. The bottom of the pit is blocked by collapse and surface debris. (BLS)

POZO DE FLOR DE SAN PEDRO PEP 499
 Chupaderos, Nuevo León
 Length: 14 m Depth: 10 m
 UTM Coordinates: 431173E 2654578N (NAD27)

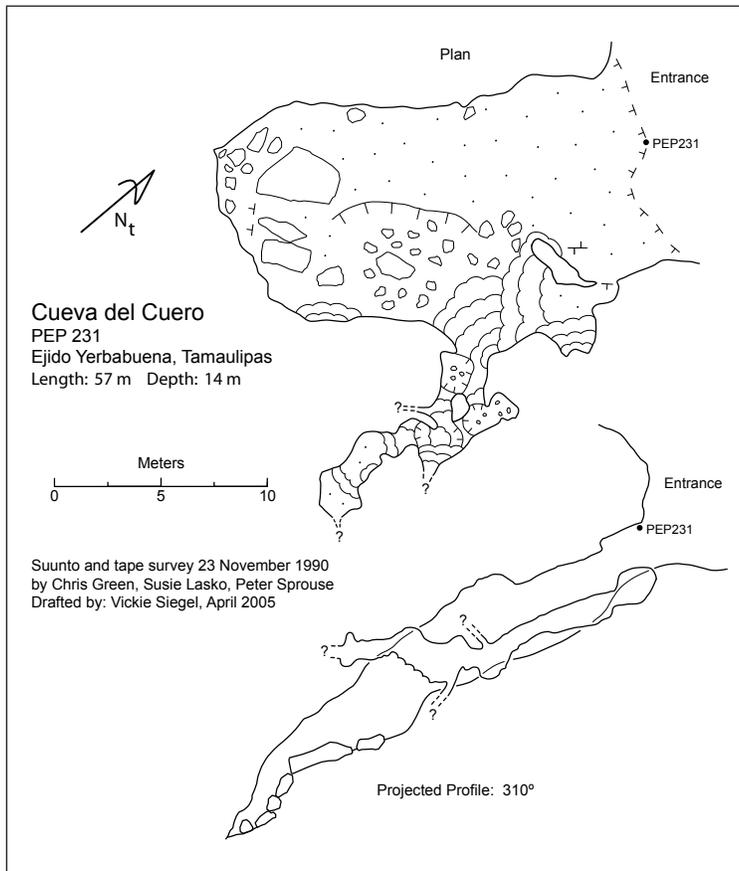
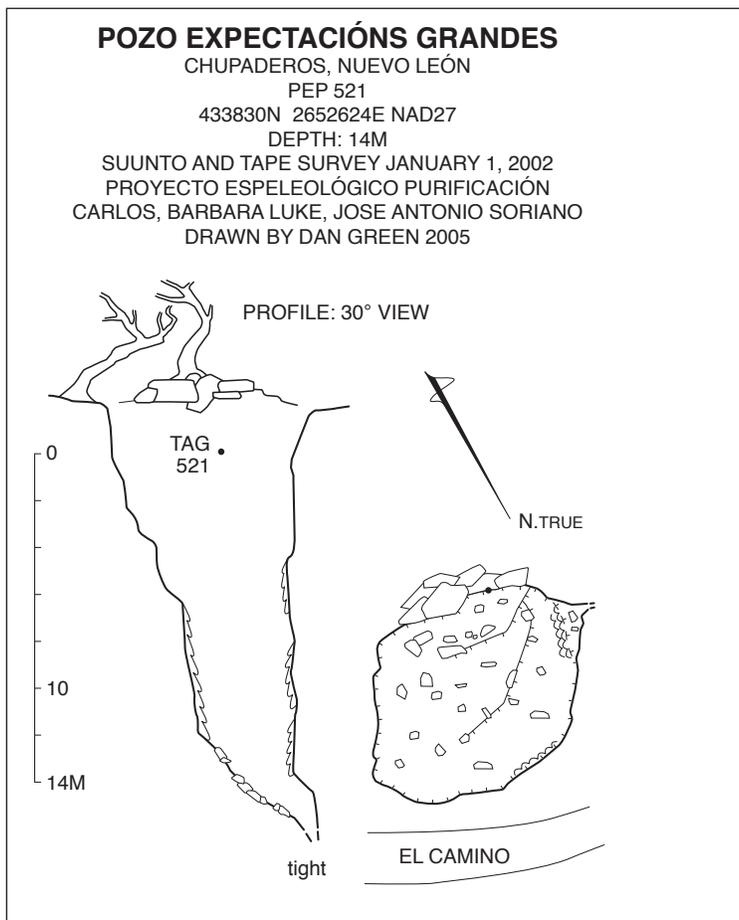
This cave was explored on 9 May 2005 by Mike Michaels, JJ Noyola, Nathan Parker, Samuel Rodriguez Muñiz and Bev Shade. It is a 10 m deep pit with bedrock walls and a floor of surface debris and rocks. The pit is 5 m long by 1.5 m wide, formed along a vertical fracture bearing 167°. (BLS)

CUEVA DE LA PITA PEP 512
 Chupaderos, Nuevo León
 Length: 93 m Depth: 41 m
 UTM Coordinates: 431727E 2653983N (NAD27)

This cave was explored 10 May 2005 by Mike Michaels, JJ Noyola, Nathan Parker, Samuel Rodriguez Muñiz and Bev Shade. It was found by Samuel while prospecting on a previous day. The cave has two entrances. The upper entrance is a stream sink in a steep drainage which leads to a low room following an east-dipping bedding plane. Several crawlways and squeezes lead to a climb down into a chamber that is 8 m long by 5 m wide by 8 m tall. The pit entrance is a collapse into this chamber. A climb up from this chamber leads to a 7 m long crawl that opens into the 25-m-deep Tiro Dame Quebrado. The pit was blocked by rubble, with several impassibly tight crawls down through the boulders. (BLS)

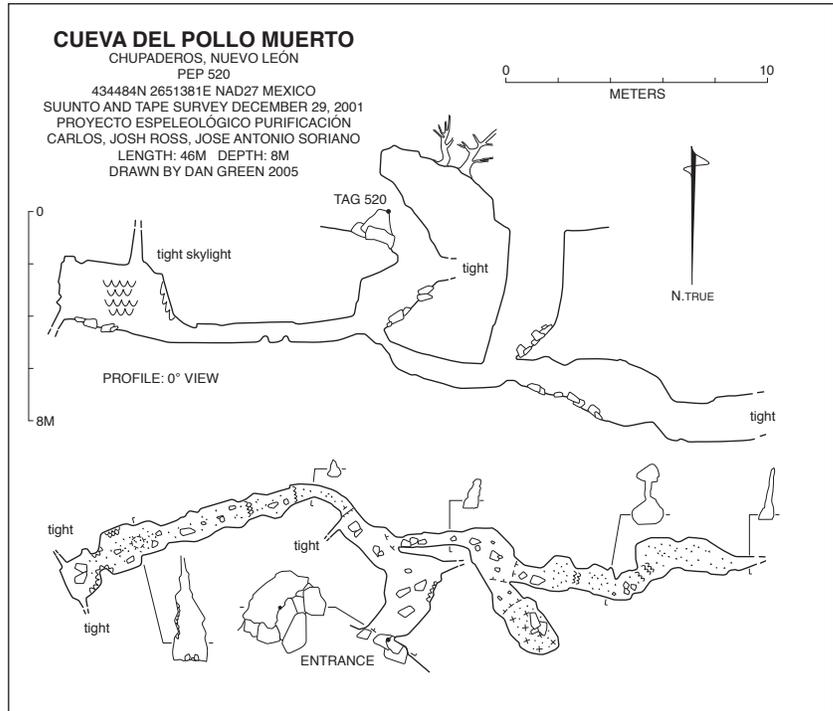
CUEVA DE LA LAVADORA PEP 513
 Chupaderos, Nuevo León
 Length: 13 m Depth: 8 m
 UTM Coordinates: 431727E 2653983N (NAD27)

This cave was explored on 12 May 2005 by Mike Michaels, JJ Noyola, Nathan Parker, Samuel Rodriguez Muñiz and Bev Shade. Its entrance at the bottom of a dolina leads to a tight and twisting passage that drops to a north-dipping bedding plane. The cave was blowing air and clearly takes water, but is impassibly tight. (BLS)





Monica Ponce in Brinco. 2009 photo by Joe Datri



POZO CUZCO

Chupaderos, Nuevo León
 Length: 12 m Depth: 12 m

UTM Coordinates: 433496E 2650223N (NAD27)

Pozo Cuzco is located 2400 m north-northwest of Margaras, in the Chupaderos valley. It is a blind pit 12 meters deep. Aldo Guevara and Peter Sprouse mapped it on 31 December 2001. (PS)

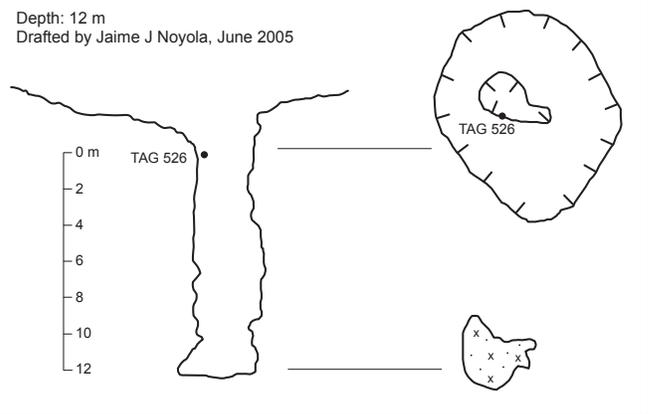
PEP 526

POZO CUZCO

PEP 526
 Chupaderos
 Nuevo Leon, México
 433496E 2650223N (NAD27)

Suunto & tape survey 31 December 2001 by Aldo Guevara and Peter Sprouse mapped it on 31 December 2001

Depth: 12 m
 Drafted by Jaime J Noyola, June 2005



CUEVA DEL POLLO MUERTO

Chupaderos, Nuevo León
 Length: 48 m Depth: 8 m

UTM Coordinates: 434484N 2651381E (NAD27)

This cave was mapped in December 2001 by Bill (Carlos) Nasby, Josh Ross and José Antonio Soriano. The cave has two entrances, one of them a pit that soon connects to the main trend of the cave. Both the east and west extensions of the cave end in tight passages that were not explored. (DG)

PEP 520

POZO EXPECTACIONES GRANDES

Chupaderos, Nuevo León
 Depth: 14 m

UTM Coordinates: 433830N 2652624E (NAD27)

This short pit is located two meters from the road. It continues in a tight continuation downwards, but was not pushed. It was surveyed on January 1st, 2002 by Bill (Carlos) Nasby, Barbara Luke and José Antonio Soriano. (DG)

PEP 521



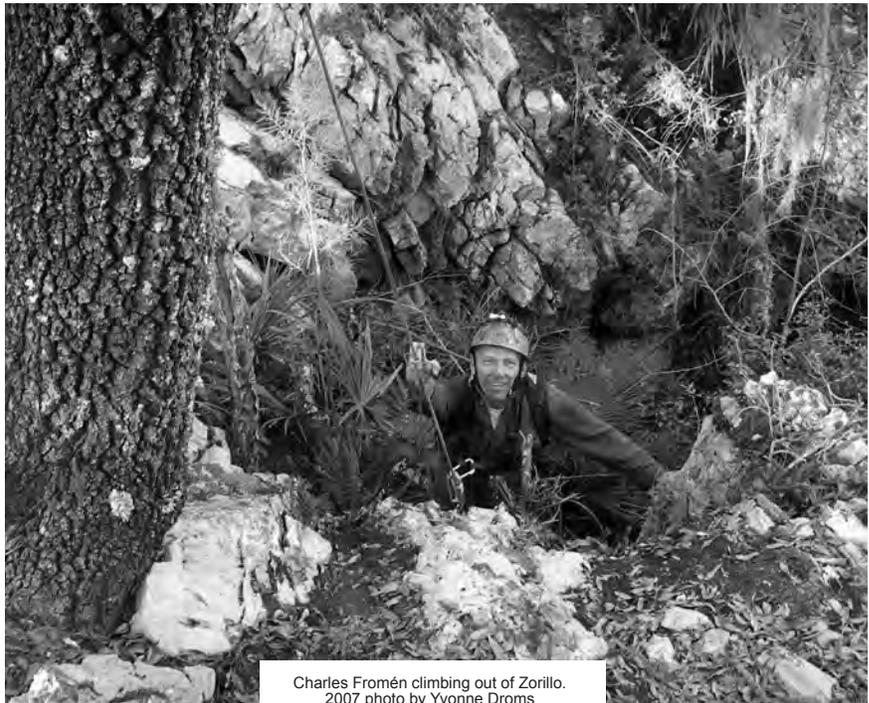
Adam Zuber at the top of Whiner's Pit in Soplo. 2006 photo by James Hunter



Chris Krejca.....2006 photo by Bev Shade

SISTEMA RANITA PEP 523, 523
 Chupaderos, Nuevo León
 Length: 229 m Depth: 35 m
 UTM Coordinates: 434584N 2652331E
 (NAD27)

Sistema Ranita has two entrances aligned above its north/south trend. The northern entrance passage descends steeply over ledges and breakdown before windowing into the cave's main passage. The southern entrance room immediately splits into two drops. The northern drop one was rigged and dropped 17 meters into the largest room in the main passage. The cave was mapped by Bill 'Carlos' Nasby, Matt Kramar, Pat Shaw and Peter Sprouse on January 2nd and 3rd, 2002. There are some leads in the southern extension, including a 4 meter climb that requires aid. The northern extension ends in a small pool. (DG)



Charles Fromén climbing out of Zorillo.
 2007 photo by Yvonne Droms

