

THE DEATH CORAL CAVER

NUMBER 11

OCTOBER 2001





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El Mirador

Pat Shaw photo

**Dedicated to the exploration, study, and conservation
of the caves and karst of Purificación**

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Editorial

With this issue, I have taken my first jab at electronic page layout. I would like to thank Kevin Stafford for doing the e-layout on the past two issues, paving the way for the future. Bill Mixon provided valuable help with PageMaker. Thanks also to Kevin, Dan Green and Bev Shade for drafting many cave maps from the PEP files. With this issue, we have now published 207 cave maps in the *Death Coral Caver*.

Peter

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Rob Garrett in Pozo Diamante de Kirsten

Peter Sprouse photo

Front Cover: Dale Chase watches as Carol Vesely climbs the drop in Cueva Mentos, near Revilla. Photo by Pat Shaw

Inside Cover: Gustavo Vela at the cave he just discovered, Sima el Viejo. Photo by Peter Sprouse

Back Cover: Karla Lara about to descend her first pit, Pozo de la Virgen Karla. Photo by Jean Krejca.

Brinco Camp VII - The pursuit of Batwing Boulevard

by Peter Sprouse

It had been five years since the discovery of the Batwing Boulevard lead during a Camp VII expedition in Cueva del Brinco, the principal upper entrance to Sistema Purificación. Discovered somewhat by accident, Batwing immediately took on significance due to strong airflow and the way it was climbing steeply up the flank of an anticline. If it could be followed far in this direction, it could lead to a higher entrance. On that first trip, the limit of exploration was just past a split in the passage, with both routes ending at the base of technical climbs. Another surface push a few years later got up these lead climbs, which joined and continued to another climb. The survey stopped below this climb, but they had led the climb, leaving it rigged for the next trip to survey. Somewhere along the way, Vivian Loftin lost her rappel rack. Now, as we prepared to continue the effort, Vivian reminded us to look for her rack. Seven cavers made their way up to Conrado Castillo on 18 November 2001: Rob Garrett, Hal Lloyd, Erin Lynch, Terri Treacy, Gustavo Vela, Cathy Winfrey, and myself. Cathy and Hal stayed on the surface while the rest of us headed into Brinco a few days later to reoccupy Camp VII in the World Beyond passage.

We splashed our way down the Río Verde passage, using a handline to lower the duffle bags down Flowstone Falls. It was a 7-hour trip to Camp VII, where Gustavo discovered that most of his gear had gotten wet. Apparently the lids on his Daren drums weren't screwed tight, so he spent much his camp time trying to dry his sleeping bag. The next day we set out for Batwing Boulevard, not far downstream from our camp. The first order of business was lowering the dam at the Sheep Dip, which Rob and I did. The strong wind and spray made it hard to work in there, and seeing a waterfall go up instead of down was an interesting experience. After some work we had lowered the dam 15-20 centimeters, a big improvement. We made our way up the climb series, getting thoroughly muddied in the Gear Dope Tubes. At the vertical loop that had been mapped on the last trip, we climbed the drop on the right side of the loop to reach the end of survey. Rob and I scouted ahead with rope while the others mapped behind us. We climbed the last fixed rope left by the previous team and continued on through a virgin crawl. Typical of many caves, the horizontal parts were tight and the vertical parts wide and open. Rob rigged a short climb which got us to a spacious dome room with three climbing leads and two crawls. I did two of the climbs free, but they got small, with little air. We each pushed a crawl, which joined then got too small. So there was nothing left but the last climb lead. I decided to tackle this, setting two pieces of protection before backing down. Rob took my place and completed the climb, discovering a decent passage formed on the strike with numerous formations. We left it for the day, and met the surveyors as they were just catching up with us. On the way back, we descended the pit on the other side of the vertical loop, but the rigging was awkward, in need of bolts and a slimmer rope. The thick mud made descenders hard to use on the stiff 11mm rope. I only got wet to the knees going back through the Sheep Dip, much better than the full body dunk of previous trips.

After a day off for resting, four of us went back up to the lead. A narrow canyon on the left side of the strike passage went up 4 meters, but got too tight. The strike passage went about 20 meters, dipping to the left side with numerous stalactites to avoid. It narrowed to a squeeze right where it intersected a clean-washed pit. Rob had to squeeze through feet first into the black void, find some footholds, then begin a free climb up the dome. Below him, the pit floor was about 4 meters down, but we never dropped it. It appears to go, presumably another route back to where we had come from, but who knows? About 12 meters above the squeeze, Rob ran out of rope on a ledge with a 5-meter climb remaining. This will need to be bolted, as there is no natural protection and plenty of exposure. This was the sixth rigged climb up the Batwing route. We set a good anchor bolt and left, leaving one 10-meter rope farther down for future pushes. We got back to camp after a 10-hour trip. The next day we packed our duffles and headed upstream toward Brinco, exiting 6 hours later. The cozy fieldhouse never felt better.

So Batwing continues, but a hammer drill needs to be hauled in and carried through a lot of tight passage to do it. It won't be pleasant, but that's not always the main consideration, is it? Besides, we never did find Vivian's rack.

Cinco años después de su descubrimiento, se continuó la exploración del 'Batwing Boulevard' en la Cueva del Brinco, principal entrada superior al Sistema Purificación. Se requería continuar escalando con la posibilidad de llegar a una entrada superior a este sistema. A través de pasajes horizontales estrechos y pasajes verticales espaciosos se subieron y topografiaron tres escaladas, alcanzando con estos un total de seis tiros en este boulevard. A partir del Campamento VII los espeleólogos regresaron a Brinco después de 6 horas de viaje río arriba.



Gustavo endures his wet sleeping bag in Camp VII
Peter Sprouse photo

Infierno Canyon

No calling it quits

by Jonathan Wilson

23 March 2001 ExxonMobil Dock, Mobile AL, elevation: 1m

My boots hit the dock before the mooring lines were thrown. The curt words of the captain followed me across the parking lot to my truck. I made a brief stop in Lafayette, Louisiana to pick up my bag, packed a month earlier, and then on to Austin, late as usual. Peter Sprouse greeted me with a hoarse voice resulting from a respiratory infection he was currently recovering from. Mad frantic sorting of gear filled the time until Ron and David Ralph arrived. They were going to give us a ride to the top of the Canyon on their way to Real de Catorce. A midnight marathon drive brought us to Victoria by the time the sun crept over the Sierra las Cautivas. Peter's truck was left with a friend in the small village of Los Angeles. The road continued on to Nuevo León where we picked up the Germans, Bernhard Koeppen and Michael Denneborg. There was more mad frantic sorting of gear, as one of Michael's bags didn't make it to México. The gear and the people piled higher in the back of Ron's truck, and again the pavement rolled under the wheels. Well after sunset, we were finally tucked away snug and warm in five star accommodations at the Hotel San Francisco, Zaragoza. Traveling from Mobile Alabama to Zaragoza in two days is a wonderful way to rest up for a long trip.

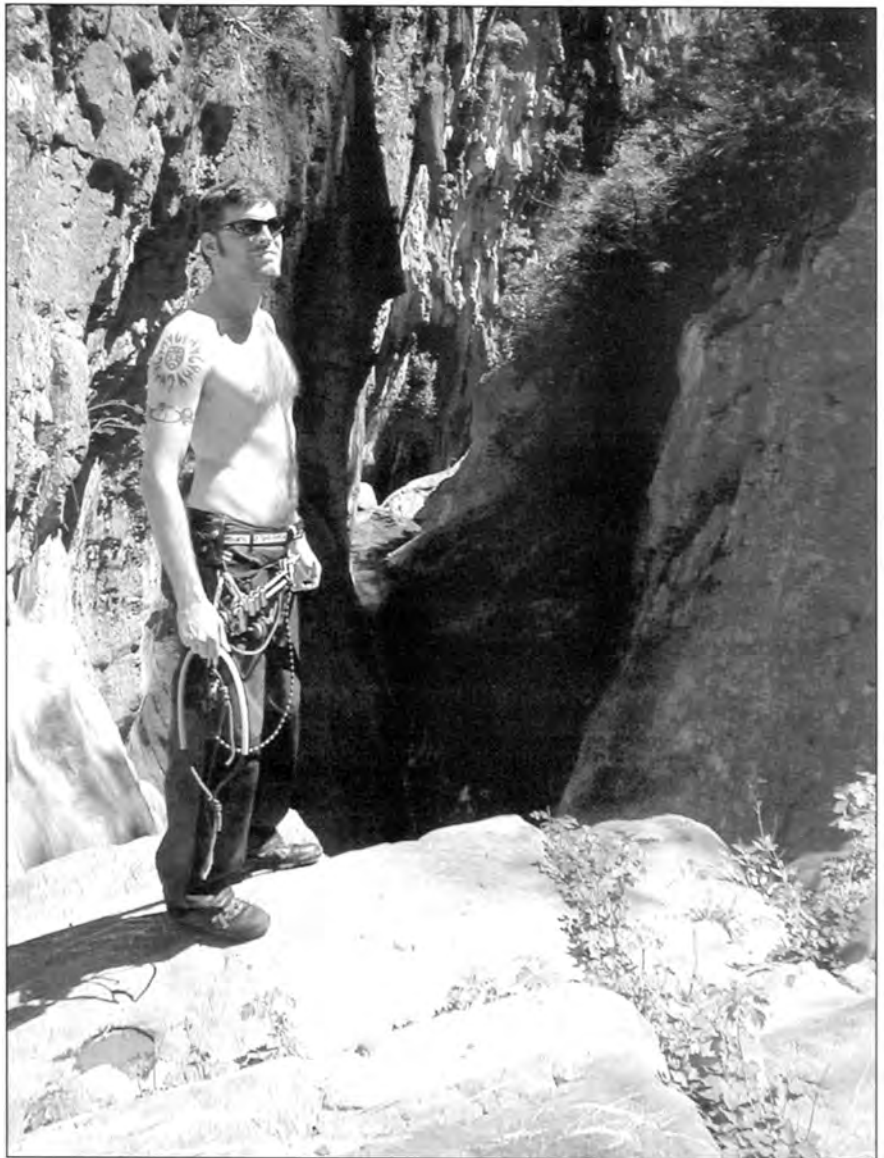
25 March 2001 Hotel San Francisco, Zaragoza NL, Elevation: 1400m

Peter started the morning hacking up a lung; the dust in the hotel room did quite a number on his respiratory system. Gustavo Vela and Victor Chavez arrived soon after sunrise and the mad frantic sorting of gear began again. During the organizational chaos that ensued Peter made an announcement that we all knew was coming: he would be dropping out of the trip. We all agreed that this was a prudent course of action and began to scavenge through his gear like vultures on a fresh kill. I made out with his lightweight sleeping bag, pad, and some of his freeze-dried food. We loaded up Ron's 2WD Dodge and proceeded up the dirt road into the mountains and the clouds. High above Zaragoza Ron, Dave, and Peter dropped Gustavo, Victor, Michel, Bernhard, and me off on the muddy road. I hoisted my Gonzo Guano Gear PEP pack on my back for the first time. We did not have a scale but I would venture to guess it weighed in at about 20-25 kilos. I swear it got heavier the farther we hiked down the road. We soon came across a small canyon, which the road crossed. We were very close to where we needed to be, almost

on the map. The light was growing dim so we set down camp at the head of the canyon. What a way to spend my birthday!

26 March 2001 Camp I, Infierno Canyon, Elev: 1700m

The morning snuck up on us at Camp I. The fog had coated everything with moisture. It didn't matter much, because as soon as we entered the canyon we hit the water. We were in wetsuits by ten in the morning, swimming in a slot canyon. After a couple of kilometers Bernhard started to recognize this upper part of the canyon from his previous trip. We passed a farm that would turn out to be the last sign of other humans we would see for eight days. Soon after the farm we were back in the water. I found it easiest to wear my vertical gear rather than carry it. An advantage of this set-up was that it gave a convenient place to tether my pack for swimming. I was the tug and the pack was a barge I was towing. I had packed all of my gear in double river bags, which fit into the PEP pack. This kept my gear dry every day as well as providing buoyancy. After a 200-meter swim we



Jonathan prepares to descend Infierno Canyon
Gustavo Vela photo

came to our first drop. It had been rigged with 3/8" bolts the previous year. We placed a 'Stafford Sling' (a wire hanger) and replaced the nut. We double-rigged our 8mm rope and placed a maillon in a knot. The tail end of the rope was fed through the Stafford Sling and back through the maillon. This allowed the five of us to descend the 12 meters into the water, then pull the rope down behind us. There is a certain feeling of commitment when one pulls down the rope. To solidify this feeling of commitment we had another 10-meter drop immediately after the first one. Our fate now lay in the canyon.

The canyon changes every couple of hundred meters, from rock-hopping on river boulders to bone chilling swims to gravel river bed. Soon the sun went away and the fog rolled in again. We settled down in the middle of the canyon, perhaps only 10 meters wide at this point. The sides of the canyon were covered with poison ivy. I set up the tent and started a fire. The Mexicans were soon conversing in Spanish and the Germans in their own language. Being educated in America, and monolingual, I didn't add much to the campfire chit-chat. We found no caves in this part of the canyon, but we had much more canyon to explore.

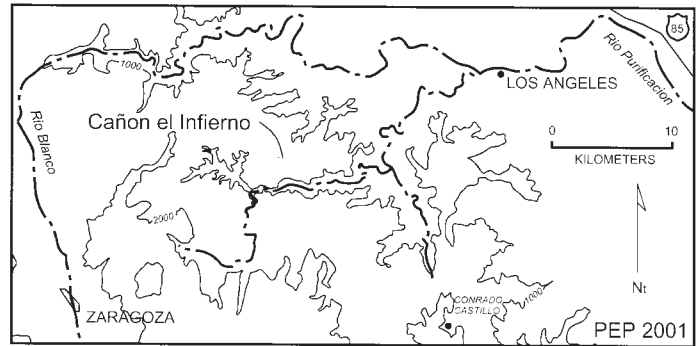
27 March 2001 Camp II, Infierno Canyon, Elev: 1450m

The packs didn't seem to get any lighter; they may have even been a little heavier from water. The canyon walls were very high. We spent most of the day walking in 100-meter-deep slot canyon. The terrifying reality of rockfall came to mind every time we passed shattered bits of rock along the canyon bottom. We hit some more technical sections after a morning of dry walking. The first drop was a 5-meter descent into a shallow pool. None of us wanted to get wet at that point, so I found my way traversing the wall around the pool belayed by Bernhard from a tree. Around the opposite side of the pool I found a chock stone and secured the 6-mm line. The packs were sent down once the Tyrolean was tensioned up. The others traversed the same way I had. Not 10 meters farther down the canyon we were in the water, swimming for two long, chilly stretches. So much for staying dry.

One more rappel on the doubled 6-mm line and we got into a very slow part of the canyon. Filled with boulders from the size of Power Wagons to the size of houses, the trick was finding the right way though. All this bouldering with a heavy pack really tired the crew out. After five hours of this I was walking like a drunken old man. Being the weakest member of the team, I found myself bringing up the rear.

We came across several cave entrances during this hike. The first entrance on the right side of the canyon was 20 meters up a sheer wall with 30 meters of cliff above that, inaccessible for the moment. The next entrance was 2 meters up on the right side of the canyon. Bernhard scoped this one out only to find it plugged with flowstone 15 meters in, with no air flow. The last cave of the day was 60 meters up the canyon wall about 20 meters before Camp III. It was also out of reach of our team.

As we settled down in camp we started to discuss water. By this point we were using the canyon as our water source, but the canyon had all but dried up during the last half of this day. If there was no more water in the canyon we would be in big trouble, and might have to abort via our only known escape route, Los Membrillos.



28 March 2001 Camp III Infierno Canyon, Elev: 1135m

This was the beginning of the Big Swim. Our team was wet for most of the day in beautiful green water up to 6 meters deep. We swam continuously as the canyon varied from 1 to 10 meters wide. On one of the rare dry sections of the day, we spotted a cave entrance up on the wall. The climb was exposed, but not too hard. The entrance was a 20-meter-diameter opening in highly folded limestone. The cave sloped downward at a 45° angle in big passage for 110 meters to a sump. The sump pool was 15 by 20 meters of clear green water. The trend looked to continue into the sump. The floor of the cave was covered in dry mud, making everything the same shade of brown in the twilight. Back at the entrance, the high water mark was quite visible. The cave is possibly the resurgence for the Cretaceous Park caves, which are on the ridge above. Outside the cave, we pulled out Bernhard's eTrex GPS to record the position of this find, only to discover that the unit was not as waterproof as we thought. We marked the cave on our map by dead reckoning and continued down the canyon.

At this point we were concerned about our progress down the canyon. Projecting our daily advance into the future, we feared that we were going to be a few days short on food. All swimming was quite refreshing, but the chill would set in if we stopped moving. Throughout the day we ran into several plunge pools. One of these was a 3-meter drop, a little risky to jump, but that was much quicker than rigging a rope.

29 March 2001 Camp IV Infierno Canyon, Elev: 935m

Camp IV was on a group of flat rocks in the middle of the river. The Germans were on one island with the Mexicans and me on another. We had to look long and hard for some dry wood to burn, but the sound of gurgling water made for a restful night. Upon finding that the first aid kit was swamped, we fed most of it to the fire. The first light of morning started with a ball-chilling swim off the rocks of Camp IV down the canyon. This day turned out not to be the best of days. At the first drop we discovered the drop rigged with webbing that read 'FROMEN MILLS JONES 3-14-2001'. They had dropped in from Los Membrillos 15 days before us and did this section of the canyon. And what a section it was, with beautiful waterfalls cascading down the sides of the canyon. I'll be lucky to see such a beautiful sight again. A little way down, Bernhard slid down a small rock and twisted up his ankle. He could walk but not with his full load of 25 kilos on his back. We continued on to find a suitable place to camp and discuss the matter. At the next drop I slipped under an overhung lip and pinned my misplaced hand between the rope and rock. Removing it took all the skin off a good portion of the backside of my hand. It took a long time to

get everyone down this drop and hypothermia was close to setting in. We finally found a camp, started a fire, and took stock of the situation. We split up Bernhard's pack to lighten his load for the next day. In the canyon there is no calling it quits.

30 March 2001 Camp V Infierno Canyon, Elev: 720m

With heavy packs, we set out in the morning for one of the hardest days of hiking yet. We made excellent progress down the canyon, but no caves were found along the route. Low elevation and changes in geology made the chances of finding anything significant slim, so we focused more on getting some mileage under our feet. After days and days of freeze-dried food and candy bars, we were ready for some real food and beer!

31 March 2001 Camp VI Infierno Canyon Elev: 475m

As we become hiking machines to get out of the canyon, the energy level among the team dropped. Twenty ounces of food per day gets burned up quickly under the loads we were carrying. Several times on this day the water disappeared into the gravel. Each time we feared the water was gone for good, so we filled our bottles for a long dry spell. But the water reappeared and we would have to swim yet again. We would spend one more night camped on the beach. We ate the last of our food, which meant that it was all or nothing the next day.

The Last Day in Infierno Canyon

Our team came across the first signs of human life on this day. A burro trail made the going easier. The trail turned into a road, and jungle turned into farmland, which turned into the town of Los Angeles. We sat and gorged on junk food and beer until we were satisfied that we had returned to civilization.

Cinco espeleólogos de diferentes nacionalidades exploraron completamente por primera vez el Cañón el Infierno. Su objetivo fue la localización de posibles resurgencias del Sistema Cretácico ubicado en la parte alta del cañón. El recorrido comenzó a una altura de 1700m en la parte alta de la sierra cercana a Zaragoza, Nuevo León hasta llegar a Los Angeles, Tamaulipas a 474m sobre el nivel del mar. Después de ocho días encontraron cuatro cuevas, en especial una entrada de 20 por 20 m de alto y ancho en caliza muy plegada que sigue por 110m en un pasaje amplio hasta llegar a un sifón, posiblemente esta es la resurgencia del Sistema.



Gustavo leaps into a pool
Jonathan Wilson photo

The PEP would also like to thank those who donated to the Death Coral Caver Endowment. The \$6395 raised will be invested to provide future funding for the Death Coral Caver.

The PEP would like to thank the following for assistance in 2001:

- | | |
|----------------|------------------|
| Dale Chase | Bev Shade |
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| Patrick Lynott | Jonathan Wilson |
| Gary McDaniel | Proyecto Cheve |
| David McKenzie | Gonzo Guano Gear |
| Charley Savvas | |

- | | |
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| Troy Lanier | Steve Taylor |
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| George Love | Cyndie Walck |
| Gary McDaniel | Jack White |
| Bill Nasby | Terri Whitfield |
| Dale Pate | |

PROSPECCION EN EL SUR DE NUEVO LEON

Por Gustavo Vela Turcott

Eran las 16 hrs. del 21 de julio 2000 cuando salieron las dos camionetas con los nueve espeleólogos rumbo a La Escondida, localidad situada en el sur del estado de Nuevo León. Unos días antes los espeleólogos empezaron a llegar a Austin, otros ya los esperaban en la ciudad. Se realizaron las compras de las provisiones que se utilizarían en los nueve días de la prospección de la zona.

El grupo se separó en los dos vehículos que había. En la camioneta de Peter Sprouse (Austin) lo acompañaban Barbara Luke (Las Vegas), Terri Treacy (Illinois) y Karla Lara (Ciudad Victoria). En la camioneta de Andy Gluesenkamp iban Jean Krejca, Charley Savvas (los tres de Austin), Laura Rosales y yo (ambos de la Ciudad de México).

El recorrido duró doce horas desde Austin hasta la ciudad de Monterrey en Nuevo León (incluidas las 3 hrs. que se esperaron en la aduana para poder sacar el permiso de la camioneta de Andy para poder cruzar la frontera hacia México). En la madrugada, en la ciudad se reunieron con otros dos espeleólogos mexicanos, Victorio Calvo y Alejandro Rojas. De esta manera los once espeleólogos se dirigieron rumbo al pueblo de Zaragoza.

Zaragoza es un pueblo pintoresco y pacífico que esta ubicado a 1370 msm con una temperatura muy agradable y una comida deliciosa. A las 10 de la mañana comenzaron sus compras de los percederos que necesitaban.

- pa' donde van señorita?...
- vamos a La Escondida a faldas del Cerro el Viejo.
- ah! que caray hija está refeando el camino, podrán subir con sus muebles?...
- yo creo que si, hemos subido ya varias veces en las camionetas.
- oiga... y qué van hacer por allá?...
- vamos a buscar cuevas!
- ahhhh pus que bien. Han de tener cuidado con las víboras, orita con estos calorones están muy bravas y ya ve que tienen rabia...
- querrá decir que tienen veneno...
- puss es lo mismo, si le muerden puss dice el doctor que se puede morir uno...
- gracias Doña Elena tendremos cuidado.....

Después de un rico almuerzo y cargar combustible iniciaron la ascensión en las camionetas 4x4 por la ruda y sinuosa terracería. Ya en la tarde la inmensa e impresionante masa calcárea llamada Cerro el Viejo apareció ante sus ojos con sus 3500m de altura y embellecía la zona de La Escondida, lugar donde establecieron su campamento base, entre un bosque de encinos de los que colgaban barbas de heno. Ante un cielo increíblemente estrellado, una abundante fogata que los calentaba y unas buenas canciones que interpretaba Peter con su mandolina descansaron para la exploración del día siguiente.



Barbara empezando tiro 3, Cueva de Más Cable
foto por Peter Sprouse

El domingo 23 de julio se organizaron tres equipos de trabajo: Andy, Jean y Karla salieron a caminar cuesta abajo, a una hora del campamento encontraron tres sótanos. Al primero le pusieron "La Virgen" porque era la primera cueva vertical a la que descendía Karla, al segundo le pusieron "los temblores" por los muchos escalofríos que sentían debido a la granizada que los empapó, el tercero se quedó sin nombre porque ya no tuvieron tiempo de topografiarlo. Los dos primeros tuvieron 15m de profundidad respectivamente.

En el segundo equipo estaban Peter, Terri, Barbara y Victorio los cuales salieron a la Cueva de Más Cable, descubierto en 1995 con una profundidad de 150m. Fueron a revisar 2 pasajes con ligera corriente de aire, pero desafortunadamente no siguieron por lo que tuvieron que salir sin triunfo alguno. En el tercer equipo se encontraban Charley, Laura, Alejandro y Gustavo, ellos se dirigieron al Pozo Primero de Septiembre descubierto en 1984 con su tiro de entrada de 108m. Bajaron para revisar en la grieta final a -139m la corriente de aire.

Mientras los 3 primeros espeleólogos descendían, Don Cleofas habitante de La Escondida le relató a Gustavo una historia muy buena...

- *puss vera joven, hace como dos años en un rancho que tenía mi hermano allá pa'ya (señalando hacia el sureste) algo así como cinco hrs. caminando de aquí, había un pozo así como éste (refiriéndose al sótano), algo así como de 40 o 50m de hondo. Puss un día resulta que dos toros muy grandes empezaron a pelear, cornadas por aquí, cornadas por allá. Poco a poco empezaron a acercarse al pozo, hasta que uno cayó detrás del otro y lamentablemente los dos se mataron...*

- *Huy Don Cleofas ... qué historia tan triste.*

- *perese! ahí no termina la historia!!!...*

- *bueno, bueno termine Don Cleofas.*

- *como eran dos sementales muy buenos, pus la carne estaba mayugada pero se podía comer, nos juntamos los dueños porque uno era mío y el otro de otro señor, Don Pablo. Total que nos dispusimos seis personas para bajar y sacar la carne que se pudiera rescatar. Primerito bajo mi hermano, luego bajo un pariente de Don Pablo, cuando estaba bajando el tercero otro hermano mío....*

- *Espérese Don Cleofas ¿cómo dijo que estaban bajando?, dice que tenía como 40 o 50m de profundidad, si ustedes no tienen equipo, ¿cómo fue que empezaron a bajar?*

- *puss verá...se amarraron un mecate a la cintura y en la parte de arriba nosotros con las manos los íbamos bajando uno por uno. Bueno como le iba diciendo, cuando el tercero estaba bajando se empezó a poner muy nervioso, se movía de un lado a otro y cuando estaba a la mitad del tiro, gritaba que lo sacaran que ya no quería seguir bajando! Una vez que lo sacamos a la superficie le preguntamos por que no quiso seguir bajando? y contesto que se había atorado con algo y que estaba patas pa'arriba, y los 20 m que lo habían regresado lo había hecho de esa manera, totalmente de cabeza! Después de eso no quería ni acercarse a 30m de distancia del pozo. Con este suceso ya nadie quiso seguir bajando.*

- *y ¿sacaron la carne o no?*

- *sólo los 2 primeros que bajaron lograron recuperar una pierna de uno de los animales....*

- *muy bueno su relato Don Cleofas... después me cuenta otros, ya que ya es mi turno para bajar a la cueva, hasta luego.*

- *hasta luego, que le vaya bien.....*

Lamentablemente cuando los cuatro espeleólogos encontraron la grieta final, la corriente de aire era bastante leve por lo que decidieron no seguir. Sólo sacaron fotografías del hermoso tiro vertical y nada más. Ya en el campamento junto a la fogata y unos buenos guisados, los grupos intercambiaron las impresiones del día.

Para el lunes en la mañana Laura, Victorio y Alejandro necesitaban regresar a sus trabajos por lo que Peter acompañado por Karla les dieron un aventón al pueblo de Zaragoza, no sin antes tomarse la fotografía del grupo. Ese mismo día se organizaron 2 grupos de exploración, en uno estaban Terri y Jean y en el otro estaban Charley, Andy y Gustavo.

El primer grupo salió a caminar hacia el sur y después de algunas horas de caminata encontraron 3 pozos. El primero tenía buen inicio pero al descenderlo y topografiarlo se dieron

cuenta que sólo tenía 11m de profundidad. Lo denominaron "Pozo Poza" por haber creído que continuaría. El segundo "Dos Pozos con Puente" tuvo 5.7m de profundidad. El tercero le pusieron "Pozo Gemelo" con sus 10 m de hondura era muy parecido al primero.

El otro grupo salió hacia el sureste y después de unas horas entre el bosque, caminando con el GPS en la mano, el azar los condujo a un pozo y por eso el primero del día se llamó "Pozo Buena Suerte" con 12m de profundidad. El segundo pozo se veía interesante, pusieron la cuerda y casi al llegar a una repisa se le acabo la cuerda a Andy. Como ya estaba entrada la tarde decidieron colocar una cuerda más larga, Andy se cambio de cuerda y siguió descendiendo hacia el fondo, obteniendo una profundidad 15m.

Ya en el campamento después de una rica cena llego doña Camila a decirles que al dueño del terreno no le gustaban las visitas y que por favor se movieran de ese lugar. Después de hablar entre ellos, concluyeron que lo mejor sería mover el campamento a la base noreste del Cerro el Viejo, cerca del caserío de Agua Escondida y de esta manera estarían más cerca para poder subir aquel macizo de caliza, que desde años atrás muchos lo habían querido subir sin haberlo logrado. Y después de esta ascensión bajarían para dirigirse al sureste del Cerro el Viejo. Cruzarían 50km de La Escondida a Conrado Castillo, localidad donde se encuentra "Cueva del Brinco", una entrada alta del Sistema Purificación. Y finalmente descenderían por la terracería hasta Cd. Victoria.

Al día siguiente se dispusieron a moverse, pero antes Jean y Charley fueron a recuperar la cuerda del Pozo Primero de Septiembre. Terry, Barbara y Andy fueron a terminar la topografía del "Pozo Después de Cenar", teniendo una profundidad de 35m, llegaron a un conducto estrecho donde ya no pasaron pero la corriente de aire era muy buena, decidieron que en otro viaje continuarían la topografía. Después de que Jean y Charley terminaron con la recuperación de la cuerda, le ayudaron a Peter a recoger el campamento.

Alrededor de las 16 hrs. se fueron en las camionetas rumbo a Agua Escondida. Después de 2 horas y de unos paisajes abruptos pero muy hermosos llegaron al caserío, donde buscaron un guía para que les enseñara el camino a la cima del Cerro el Viejo: Ezequiel, 13 años, estudiante de primero de secundaria, trabajador del aserradero.

- buenas tardes señora...

- buenas tardes jóvenes

- ¿se encontrará Ezequiel?...

- déjeme ver... ¿quién lo busca?

- somos estudiantes y otros investigadores, andamos buscando cuevas y pozos y queríamos subir al cerro por lo que necesitamos un guía y nos dijeron que tal vez Ezequiel nos podría llevar.

- a ver déjeme ver...mijo... mijoooo

- ¿qué pasó amá?

- estos señores quieren un guía pa' que los lleve hasta la torre

- ¡hola!...

- hola

- ¿te animarías a llevarnos hasta la cima del cerro?...

- sí pues!!!

- bueno te esperamos mañana a las 8 hrs.,
 allá en el llano donde
 acamparemos...
 - hasta mañana
 - hasta mañana...

El campamento estaba situado a 2700m de altitud, a la orilla de la brecha, en la arista más alta, antes de iniciarse las pendientes más abruptas. El viento corría por entre los árboles por lo que la noche era fría, sin embargo la fogata calentaba a los 8 integrantes, en los cuales el ánimo estaba bastante bien por la emoción de encontrar alguna cueva a buena altitud.

A las 8 hrs. del miércoles llegó Ezequiel al campamento, después de los preparativos la caminata se inicio aproximadamente a las 9 hrs. por la cuesta tan empinada y penosa, el desnivel sería de 800m en menos de 1 km de distancia. Después de detenerse algunas veces para recuperar el aliento, buscar cavidades o tomar fotografías llegaron alrededor del medio día a la cima. Todo transcurría normalmente, todos comieron, apreciaron el bello paisaje, descansaron, algunos recolectaron insectos y otros tomaron fotografías.

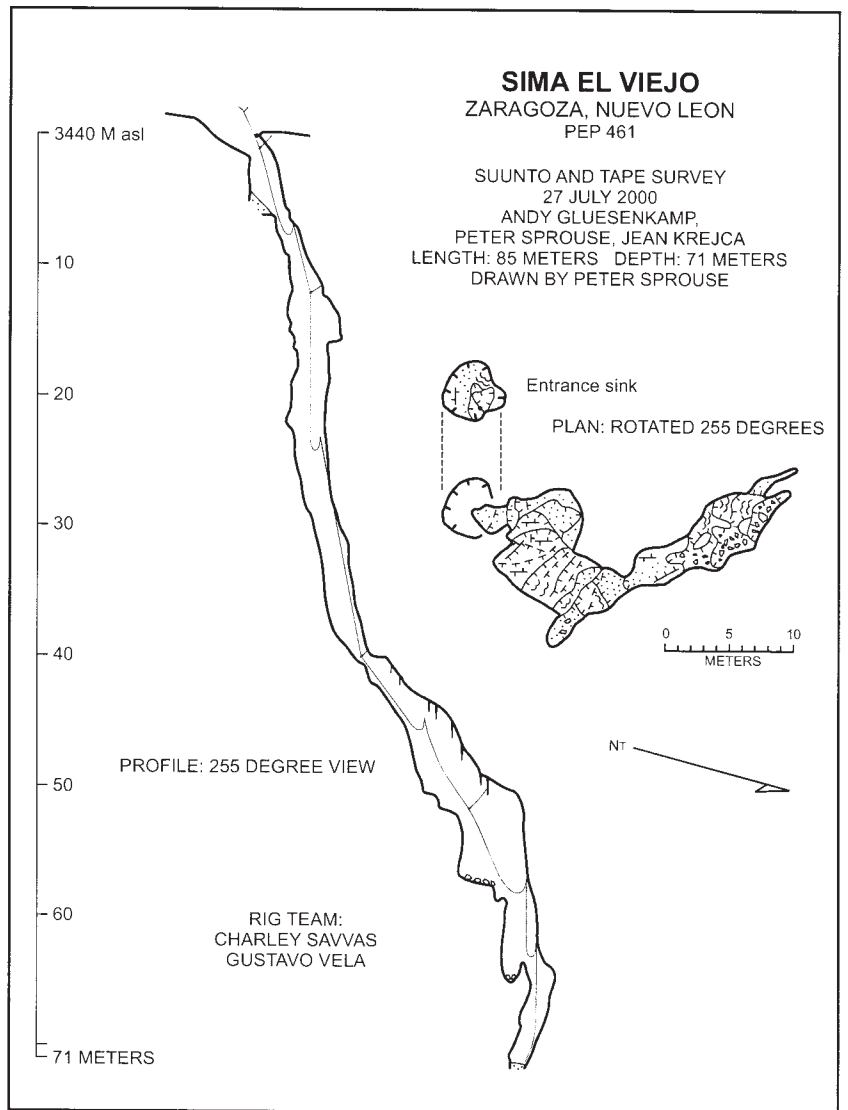
Finalmente iniciaron el regreso al campamento sin sospechar la sorpresa que los aguardaba. Caminando alegremente algunos descendían por la vereda y otros lo hacían cerca de ella cuando Gustavo quedó sorprendido por el hallazgo que vio. Llamó a los demás para que vieran la entrada de la cueva que se le había cruzado en su camino. La excitación creció ante ellos.

Arrojaron una piedra, cayó y cayó y contaron los segundos y empezaron a especular, uno dijo que tal vez eran 60m, otro que -100m, otro que no era realmente profunda que a lo más tendría 150m de profundidad. Se dieron cuenta que tenía no menos de 100m de profundidad. Volvieron a arrojar otra piedra para cerciorarse de sus cálculos. Y efectivamente, no tenía menos de 100m de profundidad.

Después de tomar algunas fotos, de posicionar la cueva con el GPS y de una gran alegría descendieron al campamento. Sacaron los mapas y después de una evaluación se dieron cuenta que el potencial aproximado de profundidad sería de 150 m aproximadamente. La entrada de la cueva estaba a 3340m es decir 60m abajo de la cumbre.

Todas las posibilidades rondaban en la cabeza de los espeleólogos, ¿continuará?, ¿será profunda?, ¿será una cuevita con 70m de profundidad y nada más? ¿será un gran sistema?. Esperaron una larga noche muy emocionados para desentrañar la gran duda de "Sima el Viejo".

El jueves por la mañana Charley, Gustavo y el guía salieron con el material necesario para descender a la cueva; cuerdas, taladro, baterías, etc. Después de 2 horas de ascensión llegaron a Sima el Viejo, seguidos del grupo que realizaría la topografía de la cueva (Peter, Andy y Jean). El exceso de piedras sueltas que había en la entrada ocasionó un retraso en el tiempo de armado, ya que había que limpiar muy bien para evitar cualquier



accidente.

Había transcurrido una hora cuando Charley se dio cuenta que la batería del taladro estaba descargada. Revisaron en las mochilas para encontrar otra, pero oh! terrible sorpresa, era la única batería que se había empacado y sin ésta la instalación de los anclajes sería imposible y por lo tanto también el descenso al pozo sería inaccesible.

Ezequiel fue el asignado para ir al campamento buscar otra pila y regresar, tardando tan solo una hora y media de bajada y de subida! Mientras tanto los espeleólogos esperaron bajo una tormenta de granizo y relámpagos muy poco amistosos y una ansiedad por saber la profundidad de aquel pozo. Con la pila en el taladro y los ánimos bien puestos se inicio el descenso por el peligroso pozo, ya que a pesar de la limpieza las piedras seguían desprendiéndose del piso y las paredes. La cavidad por donde iban descendiendo poco a poco era fría y vertical.

- roooock!
 - please, be careful!
 - yes, but the walls and floors are sliding and crumbling!
 -rooooooock!
 -ouch!

Y entre desprendimientos y avisos de piedras que caían, Charley y Gustavo llegaron a una repisa en la cual se podían apreciar las cicatrices o lascas que tenían las paredes, causa de las rocas tiradas por ellos o por el grupo de topografía que les seguía. Bajaron más y más, a la profundidad de 70m aproximadamente, las piedras ya no les pegaban pero aún se escuchaban al momento de su caída y se observaban en las paredes algunas cicatrices.

- *What's going on guys?*
- *nothing Andy ... just the cave ended!*
- *really? Doesn't it continue?*
- *unfortunately NOOOO!*
- *it's a shame because the potential is more than -1000m*
- *yeah... but such is life!*
- *ok...take some pictures and we'll see you at the entrance.*
- *ok....*
- *esta bien.*

Y por más que revisaron el paso estrecho donde terminaba la cueva no sintieron ninguna corriente de aire y con el corazón casi roto recorrieron de regreso los 74m que tenía la cueva. Bajaron de la montaña cansados pero satisfechos consigo mismos por que todo les había salido bien y tenían la esperanza de encontrar alguna otra cueva en los siguientes días en la zona de Conrado Castillo.

Una vez en el campamento, revisaron los resultados obtenidos y en realidad no eran tan malos, porque habían encontrado la cueva más alta de México hasta el momento. La segunda es «Pozo las Bolas» con 7m de profundidad, a una altitud de 3395m, localizada en Mesa de las Tablas, Coahuila, trabajada por el PEP, encontrada en el año de 1996. La tercera es «Cueva de Chris» con 5m de profundidad, a una altitud de 3140m, localizada en Cerro del Tzizintepetl (3250m) en la Sierra Negra de Puebla, encontrada por el SMES en el mes de mayo de 2000.

El viernes por la mañana levantaron el campamento y salieron rumbo a Conrado Castillo, pero antes pasaron a darse un buen baño ya necesario y a ver unas pinturas rupestres que estaban de paso. Ya para la tarde estaban en la brecha que los conduciría a su destino, la lluvia hacia sus apariciones y desapariciones repentinas mostrando a ratos la majestuosa Sierra Madre Oriental. Avanzaban por la brecha pero la lluvia que había iniciado ligera se había tornado en una lluvia abundante. La tierra se había transformado en lodo que posteriormente se transformaría en aceite, el gradiente de lado de la carretera hacía pensar que la camioneta pronto se deslizaría al desfiladero, pero gracias a la destreza de los 2 conductores iban recorriendo el camino con mucho cuidado.

Después de una hora se pararon para decidir si debían seguir o no. Más adelante no sabían si se pondría más difícil de lo que estaba o tal vez pararía de llover y no tendrían más problemas. La brecha donde estaban no era transitada y si pasaba algún accidente o crecía un río quedarían incomunicados y pedir ayuda podría tardar días o hasta semanas. Evaluando esto decidieron que lo más prudente sería bajar de la sierra a un lugar más seguro.

Como no se veía que la terracería se ensanchase para poder darse la vuelta en «u» y regresar, tuvieron que remontar 500 m

aproximadamente en reversa por una cuesta bastante inclinada y peligrosa por el riesgo de salirse del camino, hasta que encontraron un pequeño lugar para dar la vuelta y regresar.

Tras una acertada decisión se dirigieron a Zaragoza. Ya en la comodidad de un hotelito y las ideas bien claras pensaron que si no habían logrado su último objetivo de llegar a Cd. Victoria pasando por Conrado Castillo, sería buena idea ir a gastar los 2 días que les quedaban en revisar unas dolinas interesantes marcadas en el mapa en la «Sierra Pablillo» al sureste de donde se encontraban, a 3 hrs. de camino.

El sábado en la mañana salieron rumbo a su destino final. Rodeados de un bosque muy acogedor, instalaron el campamento, en el se quedaron Jean y Andy, el resto se dirigió a la gran dolina. Después de 40 minutos de caminar el la cuesta llegaron. Gran asombro tuvieron al ver la circunferencia de la depresión, 200m aproximadamente y unos 80m de desnivel. Charley bajo a revisar si había alguna cueva o sótano al cual pudieran explorar. Después de un tiempo y de infructuosas revisiones encontró nada. Nuevamente en la veredita se dirigieron hacia arriba para revisar la zona de calcáreas en la que se encontraban. Finalmente solo vieron un bello paisaje y tuvieron una caminata sin hallar nada. Regresaron al campamento y disfrutaron de su última noche en medio de la naturaleza tan pacífica y mágica como suelen ser en la gran parte de las montañas de México.

El domingo en la mañana salieron Andy, Jean y Charley en una camioneta rumbo a Austin. Peter decidió junto con Terri y Barbara que le darían un aventón a Karla y Gustavo a Cd. Victoria para después dirigirse a Austin.

Todos los espeleólogos quedaron fascinados y con ganas de regresar de nuevo a la zona sur del estado de Nuevo León y noroeste de Tamaulipas para seguir desentrañando los misterios de las profundidades de la madre tierra.

Eleven cavers from the U.S. and México prospected for caves around Cerro el Viejo, Nuevo León in July 2000. They found a number of small pits around La Escondida, and looked for possible leads in Cueva de Más Cable and Pozo del Primero de Septiembre. On an ascent of 3500-meter Cerro el Viejo, they discovered 71-meter-deep Sima el Viejo. At the end of the trip they looked at a large open-air pit near Pablillo, NL.



Jean Krejca en Pozo Poza
foto por Terri Treacy

A PEP Christmas

by Pat Shaw and Dale Chase

It seemed but a blink from the time Dale Chase and Pat Shaw arrived in Austin from Vancouver, B.C. until we were on our way south to the Mexican border at Laredo. Dawn the next morning found Bill (Carlos) Nasby and Pat careening down the highway a few hours from Ciudad Victoria in his 1954 Dodge Power Wagon loaded with a ton and a half of caving gear, gas and food for the 3-week Christmas 2000 expedition. Peter Sprouse (Austin) who had set off at nearly the same time with Dale Chase (B.C., Canada) Terri Treacy (Illinois), Barbara Luke (Nevada), Charley Savvas (Texas), crossed at Reynosa and met us in Cd. Victoria.

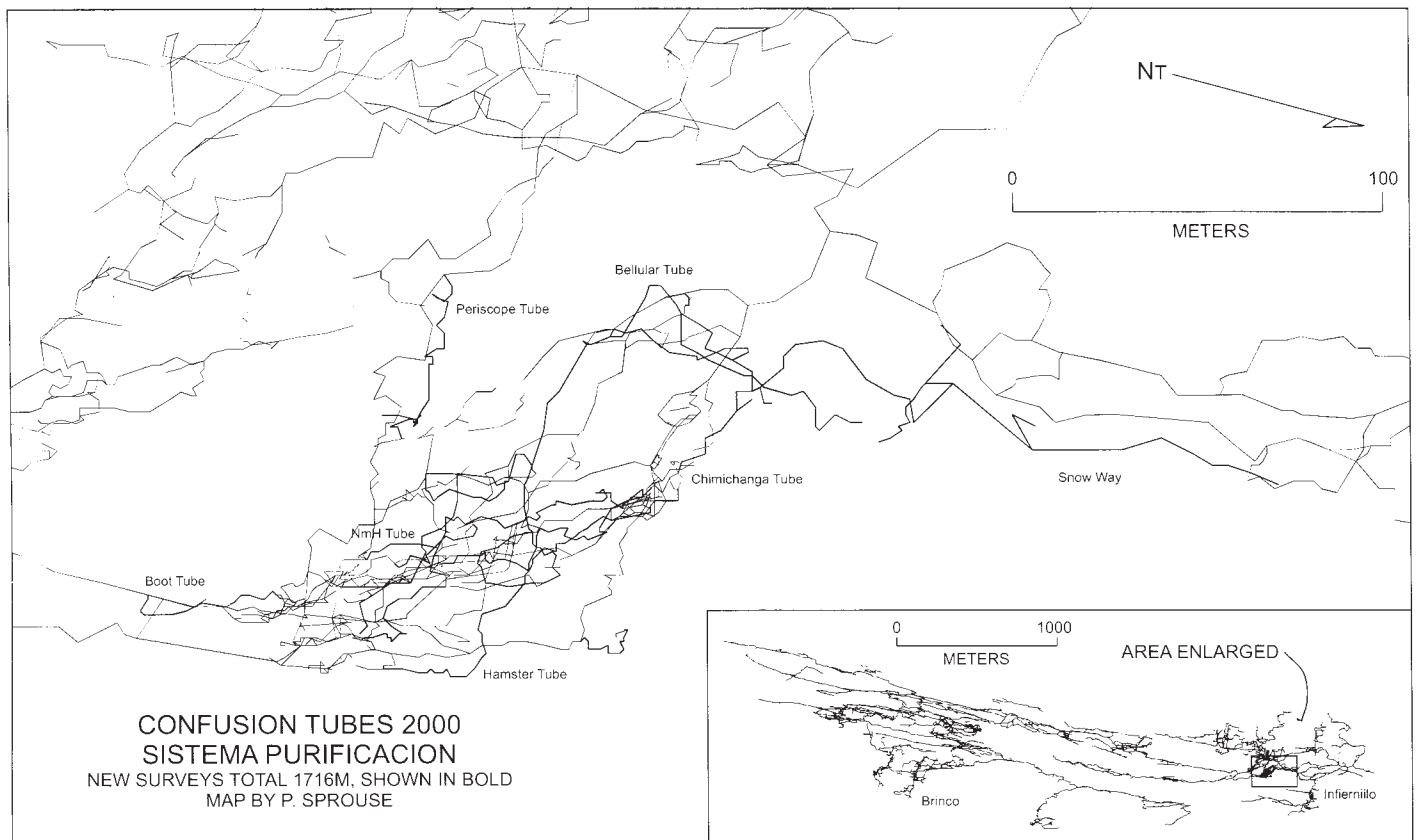
The next 3 weeks were divided into weeklong segments in different parts of the PEP study area in and above Sistema Purificación. The first was a week of survey and exploration in the "Confusion Tubes" from Camp I near the Infiernillo entrance. From there, we would move to the field house at Conrado Castillo to scout new leads in the vicinity, and then finish up with a camp higher up on the ridge, beyond Revilla.

After a surprisingly smooth rendezvous in Victoria, the assembled mass of folks from Texas, joined by Erin Lynch (US and more recently, UK) and Rob Garrett (UK) and Laura Rosales (Mexico) set off for the camp at the arroyo below Infiernillo. With expected road clearing and repairs, we settled into camp well after dark.

A requisite festering period filled the next morning, with packing and repacking of duffles, as we reconsidered luxury items for camp. Carlos opted to remain on the surface as camp watch, where he planned to spend some of his time hiking and working on the truck. By early afternoon, nine of us set off up the arroyo to Infiernillo. I hope that the old hands at caving in this entrance haven't gotten jaded by its truly spectacular setting. It is a massive, black opening 30 meters above the plunge pool in the arroyo, truly a beautiful sight. Dusk was just setting as the last person finally climbed the drop. Three hours later we were passing around Charley's tequila stash, which he'd cleverly labelled as a "pee bottle".

The main goal of the week at Camp I was mapping in the Confusion Tubes. These tubes seem to have a typical dimension of about 1.5 x 1 meter, usually not round in cross-section. A typical survey would start at or near the "7-Way Junction" in "The Original Tube". Usually there would be a long, steep up-climb for perhaps 30-40 meters, a short section of horizontal passage, then a steep down-climb to a 6 or 8-way junction in surveyed passage. Peter, with his usual thoroughness, provided each survey team with a line-plot of the entire Confusion Tubes area. With this, it should have been simple to get back to the Original Tube, but it would usually take at least a half hour to find the way back to the main passage.

We split into three exploration/survey parties for the Confusion Tubes. At intervals through the tubes, each group slipped off into the day's project area. Terri, Laura and Pat were first away to the Chimichanga Tube, into new passage within 20 meters of the Original Tube. With the first shot complete, Terri was climbing up to take my place, lost a handhold and fell, first to the floor below and then on into a smaller phreatic



tube below. Her total fall was probably 6 meters or so, with a few bounces.

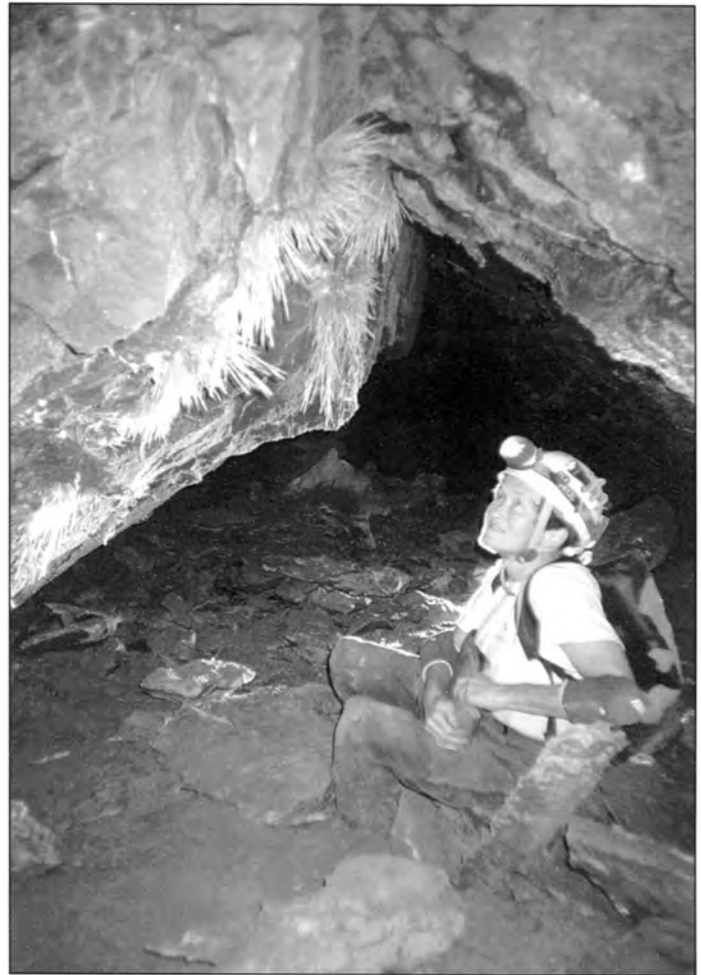
Terri was conscious, but pretty shaken up. We quickly sized up the situation, moved her to a comfortable spot, and headed off briefly to see if we could catch the others to help with getting Terri to camp. The area's not called the "Confusion Tubes" for nothing – Laura and Pat were soon back, thinking that our getting lost wasn't going to be the best tack for anyone! By this time, our patient had regained her more usual calm composure, and we all made plans to head out as well as we could. Terri's ankle and lower leg were very painful, although there was no apparent bone displacement. We all suspected (hoped for) a sprain/strain. With the ankle stabilized with a PEP survey bag, bandana and first aid tape and fortified with a few aspirin, Terri set off.

Luckily, we had a 10 meter length of climbing webbing that came in very handy for the few climbs on the way to camp. Travel went remarkably well, with Terri variously crawling very gently and being carried piggyback, and we were to the entrance to Mixon's Tube in good time. From here, a few wrong turns unfortunately occupied an extra hour or two and an extra few hundred meters of travel.

Terri was just trying to negotiate the Jumping Rock climb when we were joined by Peter, Dale, and Erin on their way back to camp from Rubik's Tubes. The extra hands helped, and all were back to camp in another few hours. The whole trip from the fall to camp had taken about 8 hours. Later that evening, Barbara, Rob and Charley returned from Up Your Tube, where they'd managed to connect it to yet another passage, the 17 Hour Tube. It's a maze.

After a night's sleep assisted by some more potent analgesics at camp, Terri's ankle had swollen and was extremely tender. Peter decided the best option was a trip north to medical facilities in Texas. With Rob, Barbara, Peter, Laura and Pat to help carry gear and assist when needed, Terri set off from camp for the end of the arroyo. With now characteristic stoicism, Terri again crawled to the entrance, rappelled the 40m to the arroyo and hopped/crawled/piggy-backed to the vehicles. Carlos, who'd been at the trucks, joined Peter to clear the road from camp to the arroyo, shortening the crawling distance considerably. Terri had made it from the Tubes to Camp I, then out to the vehicles almost entirely under her own steam, with no complaints and zero sniveling. With Terri comfortably tucked into Peter's truck, the two with Laura set off for Brownsville while Barbara, Rob and Pat returned to the underground camp.

Next morning, the remaining assembled masses split into two survey crews. Barbara, Rob and Pat set off to the Chimichanga Tube where Terri had fallen. Taking a lower tube, they carried on for some distance, up a steeply ascending tube into extremely dry fossil passage above. Floors and ceiling of the 2-3m diameter tube were covered in gypsum crystals. Higher, the passage opened into a fine 4m high x 6m wide passage decorated with fine bursts of aragonite crystals and the occasional displays of dry flowstone. Much of the passage was littered with mummified bat carcasses, suggesting that the area was blocked quickly, perhaps by a rockfall. This passage, large by Tube standards, ended unceremoniously in a diggable sediment plug. Returning to a good lead near the start of the large passage, we mapped into another ascending tube, with numerous side-



Barbara admires aragonite in the Confusion Tubes
Pat Shaw photo

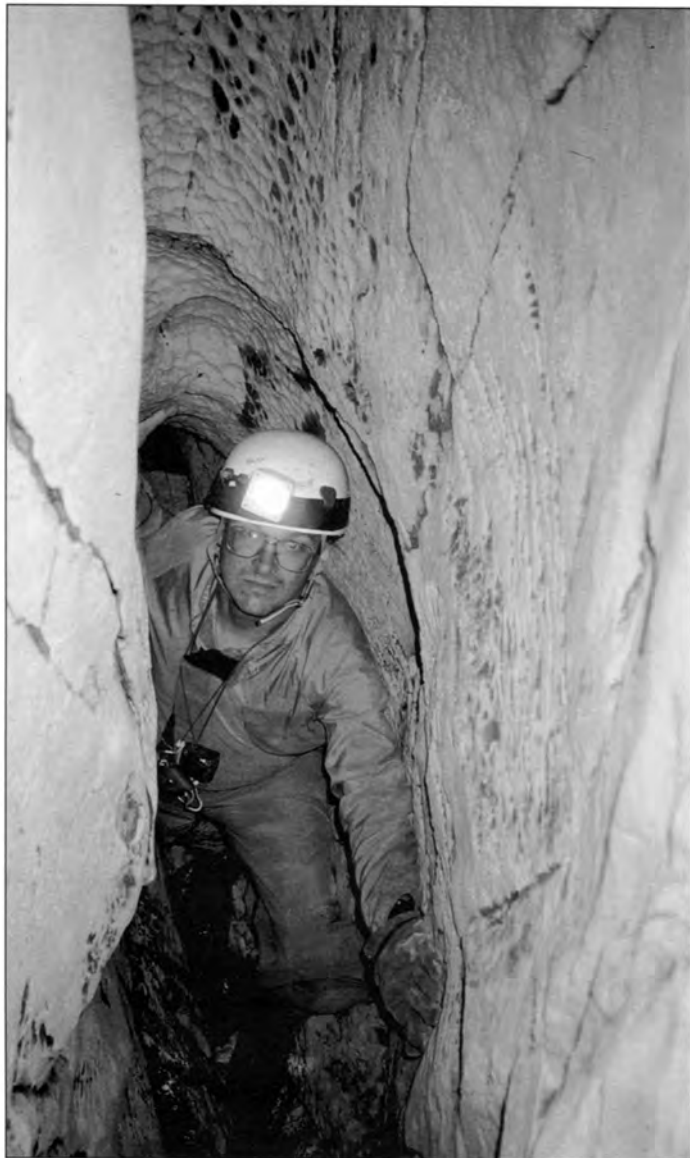
branches and floor-pits. This was a fascinating area, with abundant gypsum and occasional manganese crystals. Total surveyed passage for the day was about 440 meters, with lots of leads remaining.

The highest parts of the tubes are dusty dry. The outer centimeter of limestone is soft enough that one can scratch a station mark with a fingernail, or even a pencil eraser. Most of the passages are quite colorful, with ochre, yellow and brown shades and occasional small crystals, unusual patterning and helictites. Altogether, it was quite exquisite.

Seeking easier prey, everyone set off for leads in the Twin Hole Tubes, nearer the entrance. Not surprisingly, these leads were not the hoped-for easy glory, so we broke again into two survey groups and headed back into the Confusion Tubes. Charley, Erin and Pat set off for what seemed an excellent lead into a blank space on the map. The "Granola Tube" main passage was snug, and the leads were often quite a bit smaller, with a fine coating of miniature death coral. Despite conditions, it was a delightful day with another 50 meters of surveyed passage to add. Barbara, Dale and Rob had better luck back in the Chimichanga Tube, returning with more than 150 meters of new passage mapped and still remaining leads.

The crack "Granola Team" spent the following day on a photo trip in passage from Camp I to the entrance, and into the

Confusion Tubes. Just as they were setting up the first shot, Peter arrived back in camp with Bill Farr (California), George Veni (Texas) and Carlos. Peter had gotten Terri to Brownsville where doctors determined that she'd broken both the tibia and fibula, and would need further work to pin the distal tibia. Off they went to Austin, and from there Terri returned to Carbondale to await surgery. When the surgery was complete a week or so later, there were 7 screws holding her together. Dale was impressed until he learned that she'd broken *both* bones in her lower leg, and was then awestruck. George was particularly welcome at Camp I, since he arrived with 6 Tecates for Charley, only one of them damaged in transit.



Bill Farr climbs through the scalloped Confusion Tubes
Peter Sprouse photo

The new four set off to survey, with Carlos and George leaving after mapping the Anxiety Tube. Peter and Bill continued on to the Space Station Tube, mapping a number of loops, and finishing I the Up Your Tube area. This being Christmas Eve, Charley graciously shared his beer bounty amongst the assembled and we all considered how nice it was to be so far

away from the traditional frenetic Christmas. Peter and Bill arrived back somewhat later. The Space Station Tube had led to new passage (The Tibia and Fibula Tubes), ending at the Carbon Tube. A high lead led to the Nickel Metal Hydride Tube, and back into known passage. All told, we had mapped 1716 meters of new passage in Infiernillo.

Next morning, it was a pack-up and head for the trucks. An uneventful exit followed, and within hours we were rebuilding sections of the road to get George's fine new truck back to the main road to Conrado Castillo. We arrived at the field house in late afternoon to join Pete, Colin, and Evan Strickland, Jocie Hooper, Linda Palit, and Ed Sevcik (all from Texas). A quick flurry of activity ensued as we each scored tent spots.

The following morning, Peter and a few others were off to Galindo to search for leads. Meanwhile, Dale, Carlos, George, Ed, and Pat headed off with guide David Ledesma to locate and drop new and possibly new pits near Agua de las Vacas. The first of these, about an hour's walk from the field house, seemed from rock-drops to be about 45-50 meters deep. Off went Carlos down the drop, and while placing the first rebelay he noticed another bolt set across the pit. This turned out to be Sótano de la Mujer Esqueleto, dropped by Bev Shade and Bill Stone the previous summer. So they were off to the next lead, a fine shaft with a boulder pile at the top right next to the trail. With some careful rope threads and creative deviation through the boulders, Carlos, George and Charley set off down the shaft (Pozo de Reeces). Those on the surface spent the time admiring the spectacular vista and scouting around, but to no avail. Several other caves were explored around Agua de las Vacas on following days.

Peter and others spent the week locating leads for the crew. Around Cuauhtémoc they found 8 pits up to 100 meters deep, and lots of new entrances from Revilla to Las Chinas. At La Metalera a number of small caves were mapped, including Cueva Mentos (18m deep), Cueva de la Metalera (8m), Pozo 446 (6m), Pozo Moscas Como Caballos (16m). Around Conrado Castillo, three blowing holes were found near Cueva de los Allarines, and several seep spring caves were located at Santa Verula, where 21-meter-deep Pozo Taqueria Arandas was explored. Another advance during the week was Bill Farr's solo push in Cueva de los Allarines. Exploration had been stopped for decades by a low, wet bellycrawl. With Bill reporting an imminent breakthrough, it was easy to recruit Rob and Erin to help with mapping. Being Brits/near-Brits, they were itching to get into some low, wet, and tight water crawls to assuage their conscience for having caved a week in large, dry, mostly walking-height passage.

Barbara set off home to Las Vegas. She'd hired David Ledesma (from Conrado Castillo) to guide her down the mountain on an old footpath. Carlos decided to go along for the stroll. His own description of the 2-day return was a "Mexican Death-March" – 1000-1500 meters of elevation gain/loss and many kilometers. He took another day off to ease the feet.

A few days were also spent scouting the ridges above Conrado Castillo. Dale, Ed and Pat set off one day to traverse the ridge-crest. Few holes were worth pursuing, but there was spectacular karst with 10-meter high blades and pinnacles in some places. The find for the day was a probable mine, which cut under an old mining road about halfway from the village to the ridge-crest. The same crew, with Charley, returned to sur-

vey the find, which did seem to have a short section of solution cave passage. Following the road through pinnacles and over the ridge, it ended at Mina San Cristobal, home to two quite startled tecolotes. Gingerly peeking in, we found that about 40 meters from the entrance, the air temperature and humidity rose; a chamber to the right was filled with flowstone. Too late to check it that day, but it may warrant a return trip to explore/map the cave that the mine obviously intersected. Another high point for the day was discovery of a patch of ripe prickly-pear fruit. "Delicious, but watch for the spines", says Dale, with a fuzz of small spines from both lips, fingers, and likely elsewhere as well...

We spent another day in the area of karst pinnacles surveying a short thru-mine/cave which we called "Cave of the Stemples". There were plenty of wooden props in place, which we think the miners used to stand on and chip minerals from the walls and ceiling. Another mine was found which had a more stemples and rotten ladders, and descended steeply with a strong in-draft, something to check next time.

Back at the field house, the departure of the Stricklands and Ed was balanced by the arrival of Cathy Winfrey (Austin) with Jonathon Wilson (homeless), Matt Covington and Charles Brickey (Arkansas) just in time for New Year's Eve. A fine evening of fiddle and mandolin around the fire, with visitors from Conrado Castillo sent off the old year in style.

With the start of the New Year in place, we packed up and moved to a camp between Las Chinas and Revilla, in "The Land of the Deep Pits". No question that this was an area hazardous to walk or even drive on. Drivers were constantly distracted by the 30-60 meter shafts just a few meters from the roadway. At one point, there was a meter diameter pit with some dubious looking boards over it, on the other side of the road was a steep drop-off - a real "devil and the deep-blue-sea" situation. George managed to miss the pit, but got one wheel off the edge. The camp was particularly comfortable for Carlos, who settled into a small cave (Cueva del Hombre Dormiendo) about 10 meters behind his truck (later mapped by Cathy and Carol).

The first day at high camp, Jonathan, Charley, Dale and Pat set off to an opening Charley had found. A nice 45-meter deep cave in two drops was explored and mapped, named Charley's Rat Trap. They then headed off for an excellent lead that Peter had scouted the previous week, eventually reaching it after being distracted by 18-meter "Pozo Nunca Llueve en Vancouver". The objective turned out to be a shaft with a 45-meter main drop, followed by a 6-meter drop to a large dome. High on one wall, well beyond sensible access without gear, is a tantalizing lead awaiting another party. This one was named Pozo Siempre Llueve.

Meanwhile, Bill, Carlos and Charles had dropped and surveyed another 45-meter pit within 5 minutes walk of camp named Pozo Dos Puentes. They tidied up the remaining leads in a follow-up trip with Carol, Carlos and Pat, mapping a section of horizontal passage and an adjacent 8-meter pit.

Quite a few folks were involved in exploration of Cueva Jardín, a fine cave between camp and Revilla. Peter had been shown the entrance on a previous trip, and hopes were high.



Linda Palit and Dale Chase check out the end of Cueva Jardín
Peter Sprouse photo

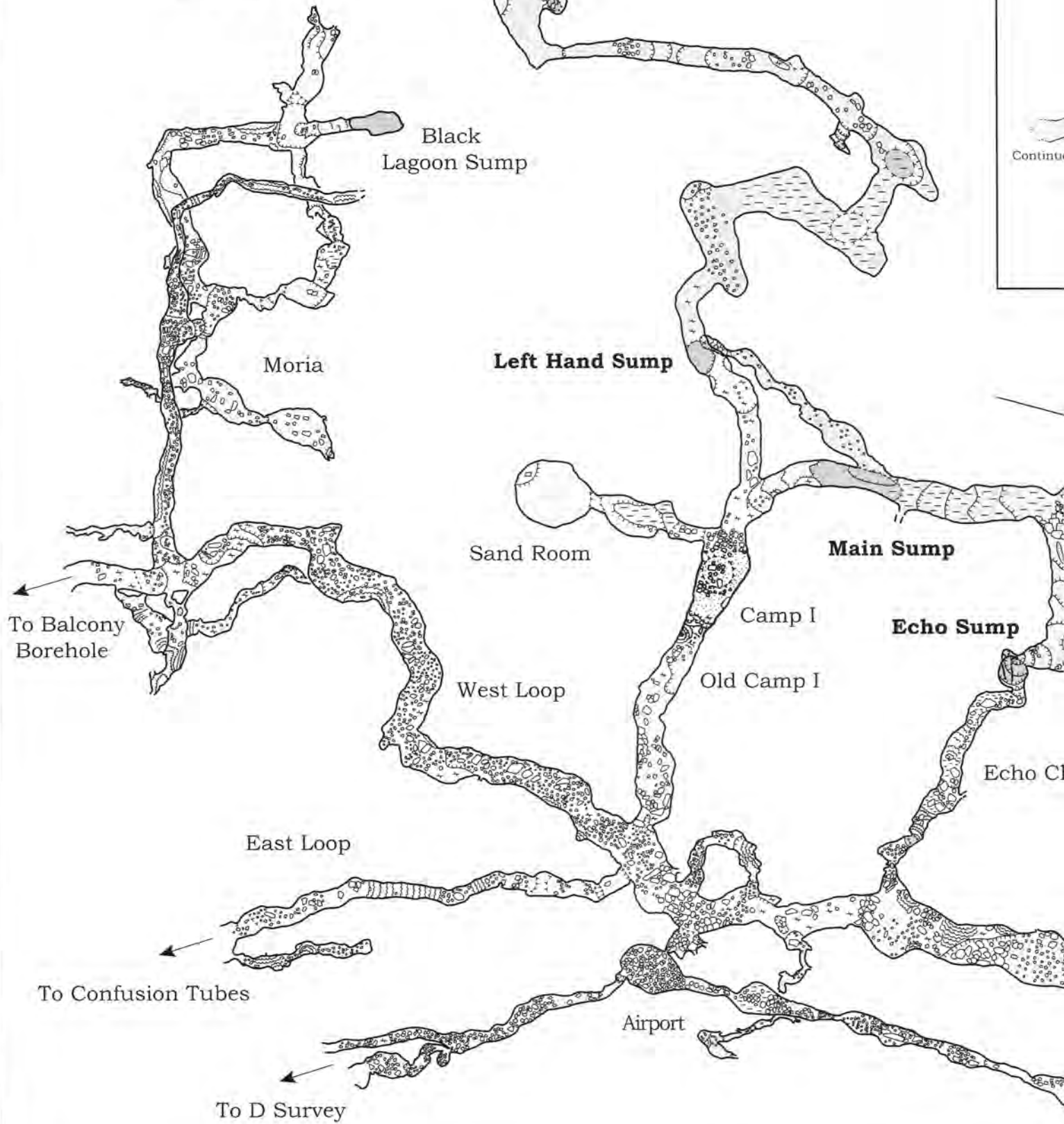
The entrance is beautiful, classic Mexico, large and black. Nearly at the ridge-crest, the 6x10 meter entrance looked like a fossil swallet. The passage spiralled down for 112 meters, ending in a large rubble-choked room. Charley checked out one high lead on the wall, which led to about 80 meters of large well-decorated passage, ending abruptly and mysteriously. The cave was named to commemorate the extensive gardening needed to make a safe descent.

A fascinating day was spent when Peter escorted all to the fire tower, at the highest point on the ridge. We took in the amazing view from the somewhat creaky tower, then we went off to drop a number of deep shafts in the vicinity of Rancho Nuevo. After a quick tour of the many pit leads, we split into three groups and chose our holes. Dale, Erin and Jonathan headed for one, Pozo de Linchar, which turned out to be a 35-meter blind shaft. Charley, Linda, Matt and Pat headed for a sweet 1½-meter diameter shaft, Pozo del Maguey Rojo, which was free for 30 meters to a steep slope, then descended another 30 meters in several less convenient drops for a total of about 65 meters. The prize of the day was a deep shaft, with a slight airflow and a flowstone lip at the surface. Bill and Rob dropped in while Carol tended Brian. The two, later joined by Erin, found a 50-meter drop, which continued for what sounded like quite a distance.

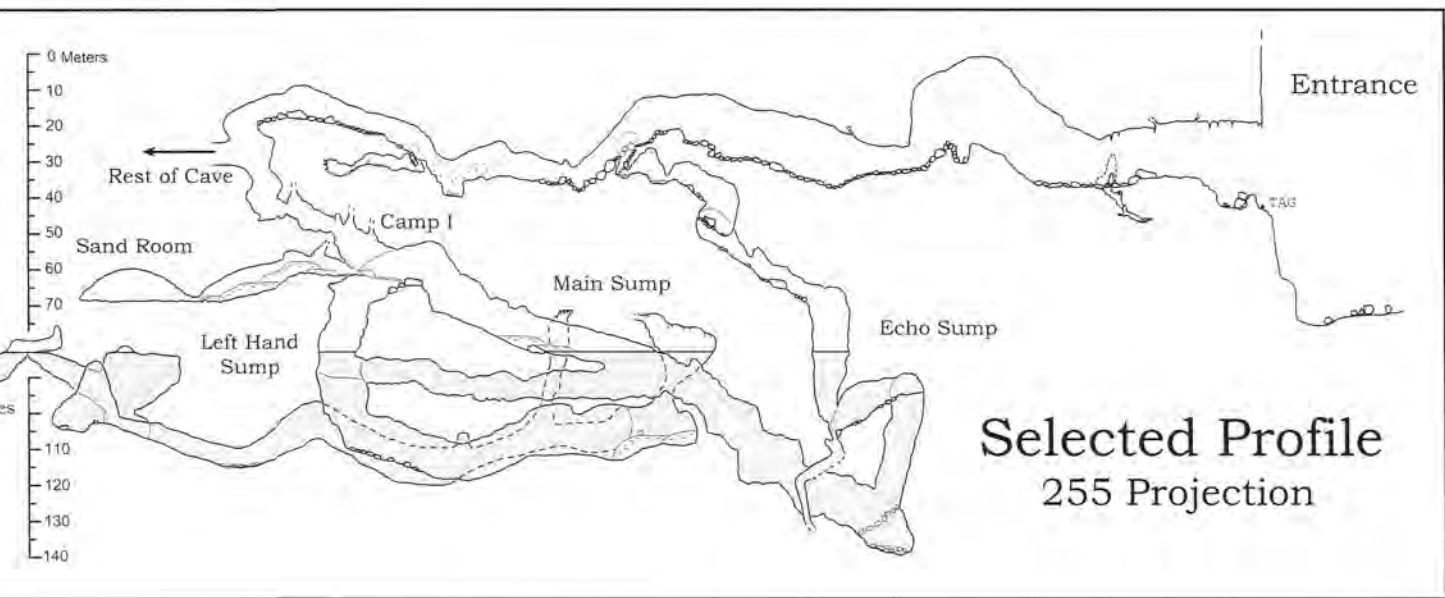
On the final day of the expedition, Rob, Matt and Peter returned to this cave, named Pozo Diamante de Kirsten. Enlarging a squeeze, they descended another 45-meter drop to a pinch into another shorter drop without air. The total depth was 102 meters. The remainder of the crew hiked off to a large open-air pit south of Mesas Juárez that Peter had spotted on air photos. With approximate GPS coordinates, we managed to hike straight to it. It was a fine-looking opening, which we hoped would be hundreds of meters deep. Well, even in México, it's good to take a short length of rope to good prospects. From the pack with the 125-meter length of Cancord we pulled the 25-meter piece, which proved perfect for the 22-meter drop. It got named Pozo Brazo.

Continues

PLAN



Continues



Selected Profile
255 Projection

The Infiernillo Sumps
Cueva Infiernillo, Sistema Purificación
Tamaulipas, Mexico

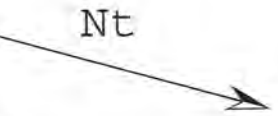
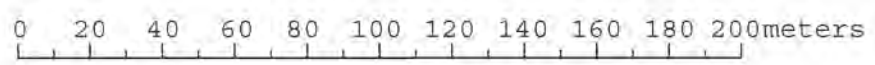
Dry Cave Survey Courtesy of
Proyecto Espeleológico Purificación

Underwater Survey by
U.S. Deep Caving Team
May 1993

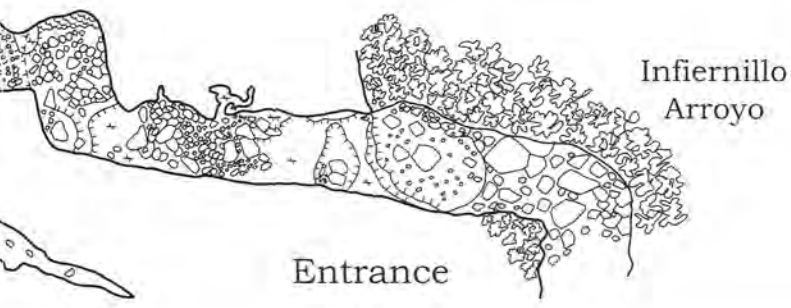
Kenny Broad, Jim Brown, Barbara amEnde, Steve Porter,
Noel Sloan, Bill Stone
April 2001

Jim Brown, Pete Mulholland, Bill Stone,
Robbie Warke

Drafted by Bev Shade and Bill Stone
July 2001



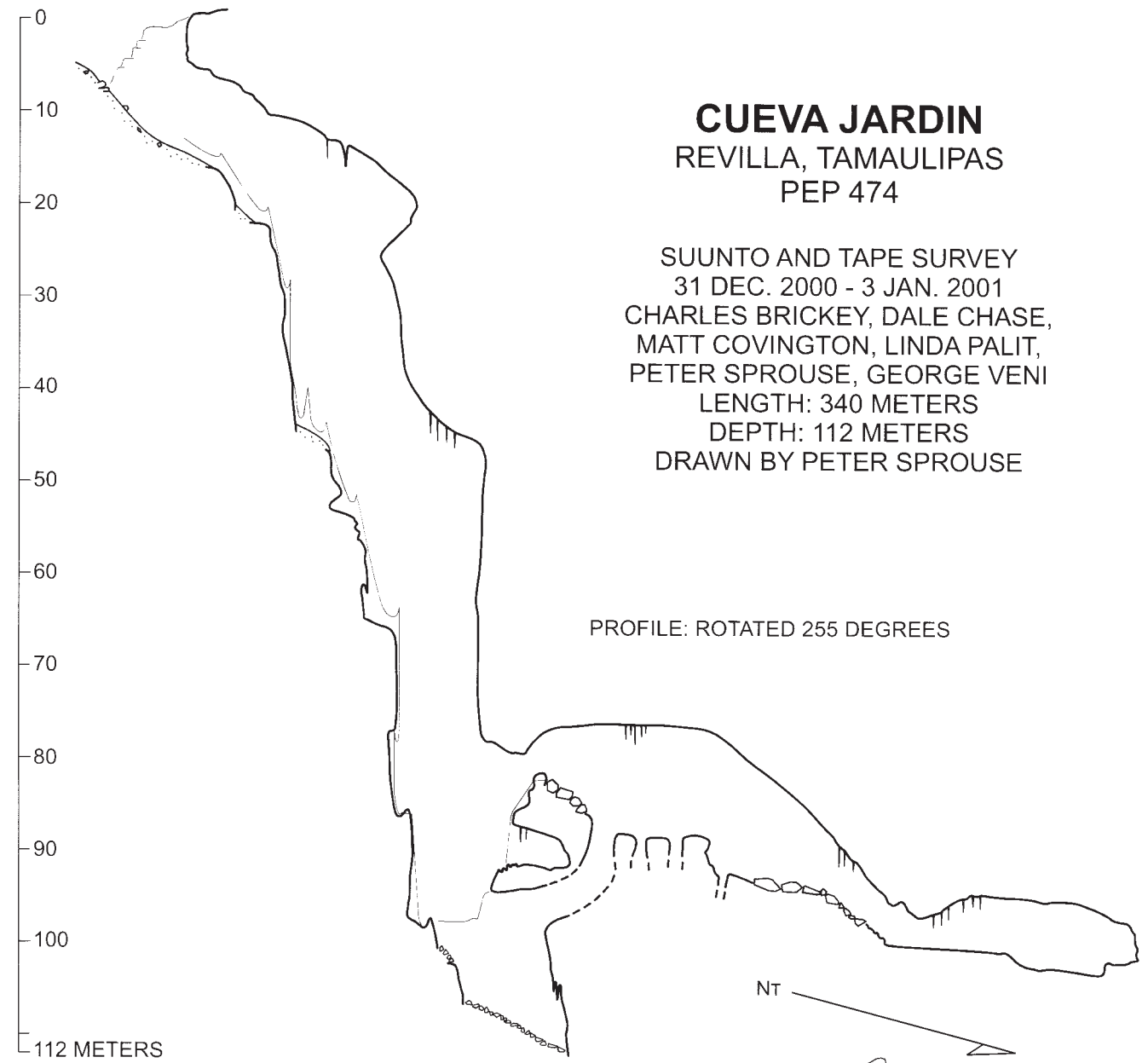
number



CUEVA JARDIN
REVILLA, TAMAULIPAS
PEP 474

SUUNTO AND TAPE SURVEY
31 DEC. 2000 - 3 JAN. 2001
CHARLES BRICKEY, DALE CHASE,
MATT COVINGTON, LINDA PALIT,
PETER SPROUSE, GEORGE VENI
LENGTH: 340 METERS
DEPTH: 112 METERS
DRAWN BY PETER SPROUSE

PROFILE: ROTATED 255 DEGREES





Bill Farr enters Pozo Dos Puentes
Bill Nasby photo

The expedition was dwindling and the end was near. All packed up, and three vehicles – Carlos’s Power Wagon, Cathy’s Toyota and Peter’s 4-Runner – dropped (almost literally!) to San Pedro for a peek into the entrance of Tecolote and then on to Ciudad Victoria. En route, we did a quick stop at El Hundido, a 100-meter+ open-air pit, for a rock toss and a gawk. We had a meal in Victoria, and then headed north.

Participants:

- | | |
|-----------------|------------------|
| Charles Brickey | Charley Savvas |
| Dale Chase | Ed Sevcik |
| Matt Covington | Pat Shaw |
| Bill Farr | Peter Sprouse |
| Brian Farr | Colin Strickland |
| Rob Garrett | Evan Strickland |
| Jocie Hooper | Pete Strickland |
| Barbara Luke | Terri Treacy |
| Erin Lynch | George Veni |
| Linda Palit | Carol Vesely |
| Carlos Nasby | Jonathan Wilson |
| Laura Rosales | Cathy Winfrey |

Many thanks to Peter Sprouse for the use of his trip log in writing this report.

En esta expedición Navideña se visitaron tres diferentes partes del área de estudio del PEP. La primera semana se centró en la exploración de pasajes cercanos a los Tubos de Confusión desde el Campamento I, cercano a la entrada de Infiernillo. Terri Treacy sufrió una fractura en su tobillo por lo que regresó a Texas. Los demás continuaron con la exploración, topografiando 1716m en nuevos pasajes. Durante la segunda semana se buscaron nuevas entradas cercanas a la casa en Conrado Castillo y la tercera la exploración de la parte alta de la sierra más adelante de Revilla. Exploraron unos 20 pozos, incluyendo Poz Diamante de Kirsten con profundidad de 102m, y Cueva Jardin, con 113m de profundidad.

PURIFICACION SPELEOMETRY

compiled by Peter Sprouse

LONG CAVES	length(m)
1. Sistema Purificación, Tamaulipas	93,755
2. Cueva del Tecolote, Tamaulipas	36,562
3. Sótano de Las Calenturas, Tamaulipas	8,308
4. Sistema Cretacico, Nuevo León	5,908
5. Cueva de La Llorona, Tamaulipas	3,540
6. Sótano de la Cuchilla, Tamaulipas	2,716
7. Cueva del Río Corona, Tamaulipas	2,301
8. Cueva Paraíso Difícil, Tamaulipas	1,799
9. Sistema Manicomio Paralelo de Satanás, NL	1,562
10. Cueva del Borrego, Tamaulipas	1,464
DEEP CAVES	depth(m)
1. Sistema Purificación, Tamaulipas	953
2. Cueva del Tecolote, Tamaulipas	424
3. Cueva de La Llorona, Tamaulipas	412
4. Sistema Cretacico, Nuevo León	465
5. Sistema Manicomio Paralelo de Satanás, NL	321
6. Sótano del Caracol, Tamaulipas	282
7. Sumidero Anaconda, Nuevo León	278
8. Sótano de la Cuchilla, Tamaulipas	207
9. El Hundido, Tamaulipas	186
10. Cueva Paraíso Difícil, Tamaulipas	178

PEP MEMBERSHIP 2001

- | | |
|------------------|--------------------|
| Aaron Addison | Bill Mixon |
| Bob Anderson | Rae Nadler-Olenick |
| Jon Bojar | Bill Nasby |
| Don Broussard | Linda Palit |
| Scott Chaffey | Dale Pate |
| Allan Cobb | Bev Shade |
| Yvonne Droms | Peter Sprouse |
| Aldo Guevara | Kevin Stafford |
| Pete Hollings | Bill Stephens |
| Bernhard Koeppen | Tag Swann |
| Jean Krejca | Steve Taylor |
| Troy Lanier | Terri Treacy |
| Susie Lasko | George Veni |
| James Lopez | Cyndie Walck |
| Barbara Luke | Robbie Warke |
| Gary McDaniel | Jack White |
| David McKenzie | Terri Whitfield |



US Deep Caving Team Expedition

By Bev Shade

On 1 April 2001, nine cavers of the US Deep Caving Team regrouped in Ciudad Victoria following an extended reconnaissance expedition that had begun in Oaxaca in late January. Participants were James Brown (WA), Bart Hogan (MD), Yvonne Droms (VA), Joe Meppelink (TX), Mark Minton (NM), Peter Mulholland (UK), Bev Shade (TX), Jose Antonio Soriano (MX), Bill Stone (MD) and Robbie Warke (UK). After some quick re-supply we headed up the mountain, and reached the campground near the end of the Infiernillo road. We had to do some minor road repair at one arroyo that had been partially washed out since the Christmas 2000 trip.

The next morning we rigged the Infiernillo entrance of Sistema Purificación, and with a concerted group effort hauled all the diving and camp gear to the entrance and up a tyrolean. It was extremely dry, as we were at the end of the dry season, and so the canyon leading up to the cave was very dry and hot. Most of the group helped haul gear from the entrance back to Camp I the following day, while Mark and I hiked up the steep arroyo directly to the west of the entrance. We gained about 250 meters of elevation from the canyon floor, and went a short distance both north and south at this elevation before being stopped by cliffs that would not be safe to climb without protection. We found one shelter cave with formations and a hanging valley that we were not able to climb into due to its steepness, but no obvious caves. Both the shelter cave and the hanging valley had significant cascades of tufa or old flowstone associated with them.

That evening, we left James, Bill, Pete and Robbie to begin a week-long camp aimed at pushing the Infiernillo sumps. The rest of us drove to Conrado Castillo, arriving about midnight. On April 4th we continued past Revilla to Sótano del Caracol, and rigged the entrance drop. We also carried some gear down the first several drops and pulled out the remainder of the big heavy gauge wire used on previous digging projects.

The campsite there is very nice, although small, so after 2½ months of camping I felt a definite desire to slack around camp. Fortunately, the entrance hike was so short, about 3 meters from my tent, that you could almost go caving by accident! The next day the entire team entered the cave, and proceeded to the base of the 45 meter pitch, where we spilt into a survey team and climbing team. While the climbing group looked at a 'boost lead' at the base of the 45, the survey team rigged the last 2 drops of the cave and went to the previous end of exploration to survey back and tie into the existing survey. This took the depth of the cave from 232 to 255 meters. At the base of the final drop I noticed a shallow pool with a couple of inches of airspace that had good airflow (in). The airflow here was strong enough to make standing waves in the pool. Since water levels in the cave were much lower than normal, it is probable that this small space was sumped during its original exploration. The boost lead did not go, so everyone came down to look at this new lead. Mark then started out to work on a grappling hook lead in the wall of the 45-meter drop, while several of us began a tentative dig at the new lead. We found that it was very easy digging,

mostly moving gravel mixed with clay. On April 6th, Bart, Soriano and I returned to the dig, and made a couple of meters progress. We also raised the ceiling at this low spot by several inches, to prevent possible sumps in the future. The next day Yvonne and Mark continued digging and got through the gravel plug. They emerged into a phreatic tube of stoop-walking size, which they followed about 80 meters to a short climb.

Bart, Soriano and I surveyed this new section of cave the following day, and continued along the basic northwest trend of the cave to 270 meters depth, where the passage suddenly took a sharp left turn and promptly dead-ended against a rock wall. A short climb by Soriano revealed that there was a very narrow crevice on the other side of this wall, but the airflow, which is so prevalent in the rest of the cave, was weak. The bottom of the same crevice was marginally passable for a few meters. The passage basically made a sharp switchback to the southeast for about 15 meters before returning to a northwest heading, but it was very small.

On April 9th we returned to Conrado Castillo to meet the diving team. They reported several successes: the Left Hand Sump had been connected with the Main Sump; the Main Sump (previously believed to be the way on), had connected to the Echo Sump; and that an open circuit dive from the Echo Sump (bypassing many meters of diving) had found a passage continuing on to the northwest. Since several people were leaving at the end of the week, we decided to return to Caracol as a group and continue working there.

During the next week at Caracol, we investigated two climbing leads: one in the 45-meter drop, the other in the 90 meter drop, but neither inspired great hope, although they did not definitively end. Robbie, Yvonne, Bart, Bill and I returned to the bottom of the cave to see if the airflow felt at the dig could be found lower in the cave. Robbie and Yvonne did some re-rigging on the way out. While lacking enthusiasm for the 40-meter-long wet, cold, painful belly crawl, Bart, Bill and I persisted, and we found ourselves in a bigger breakdown-floored chamber. There are several leads with airflow leading out of this chamber, which is at 282 meters depth. The cave now has a length of 677 meters. The previous surveyed length and depth of this cave was 232 and 323 meters, respectively.



Joe Meppelink at the second drop in Caracol
Bill Stone/Bev Shade photo

Sótano del Caracol

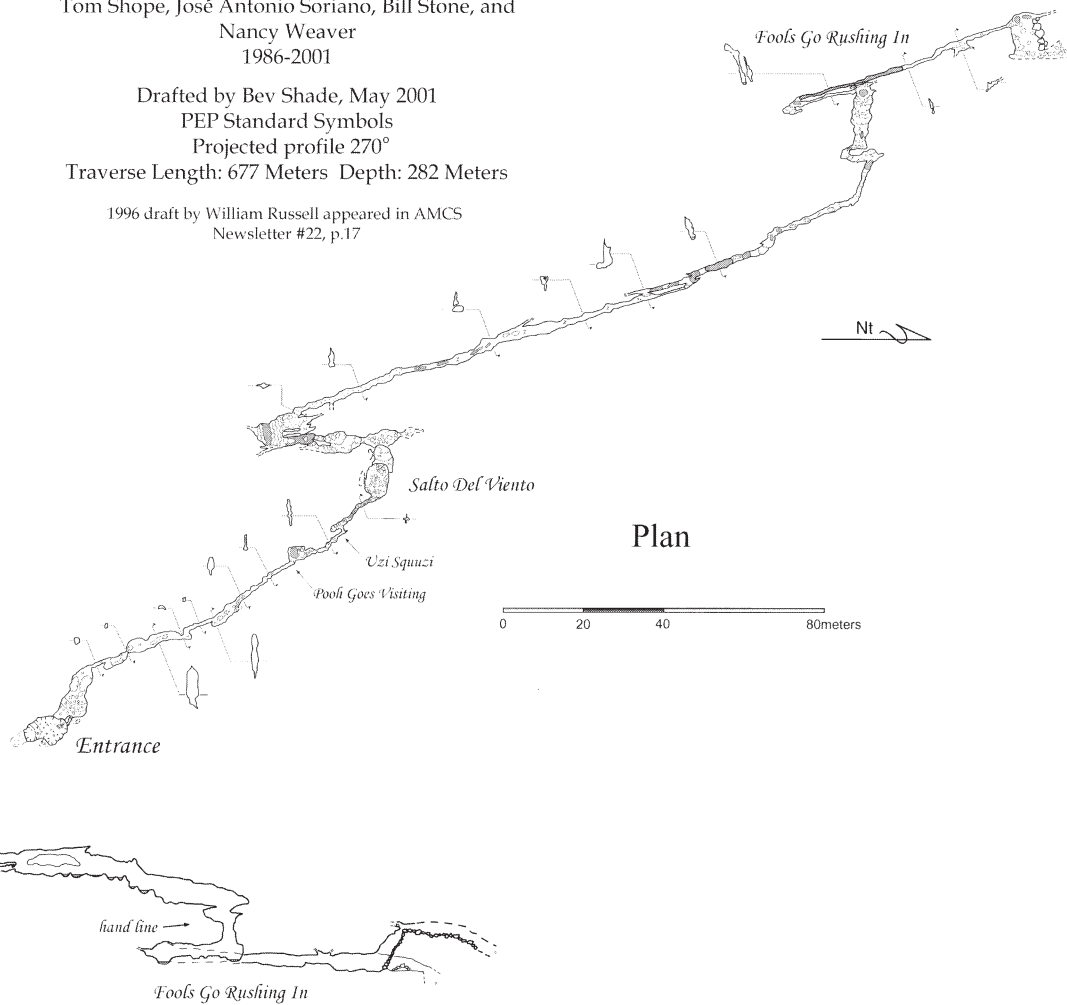
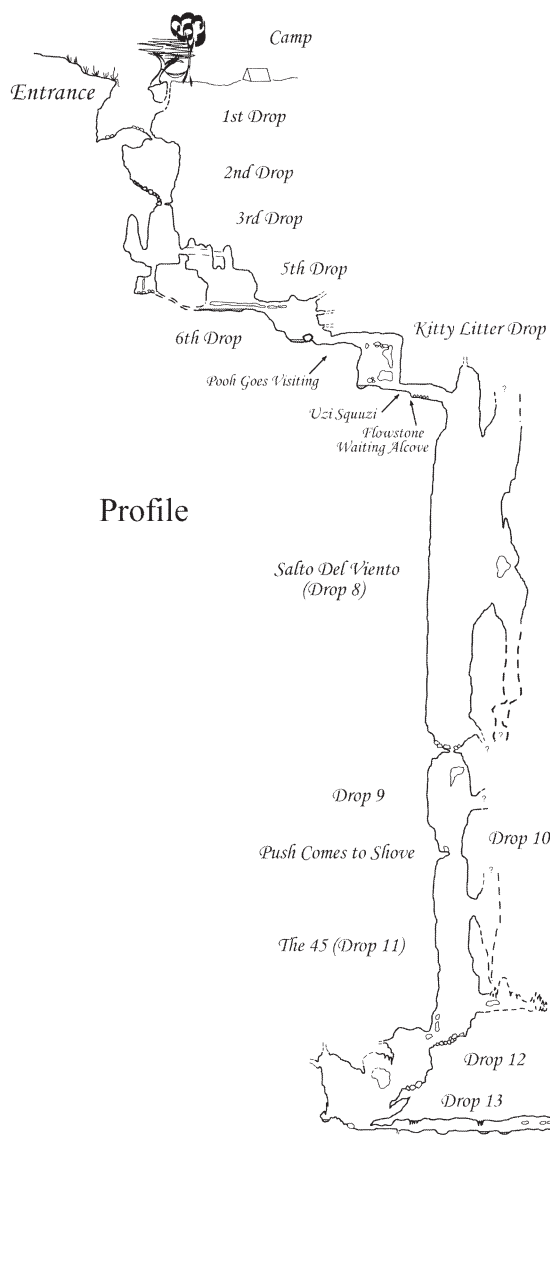
Ejido Revilla

Tamaulipas, Mexico

Suunto & Tape survey by
 Wayne Bockleman, Yvonne Droms, Bart Hogan, Joe
 Meppelink, Mark Minton, Terry Raines, Bev Shade,
 Tom Shope, José Antonio Soriano, Bill Stone, and
 Nancy Weaver
 1986-2001

Drafted by Bev Shade, May 2001
 PEP Standard Symbols
 Projected profile 270°
 Traverse Length: 677 Meters Depth: 282 Meters

1996 draft by William Russell appeared in AMCS
 Newsletter #22, p.17



After 2 weeks Mark, Bart, Yvonne and Joe departed; the remaining 6 cavers went back to Infiernillo for a second camp. The focus of this camp was to push the new discovery in the Echo Sump, since we were out of good leads in the Main Sump. In 1993, divers reached a penetration in the Main Sump of 224 meters. The maximum depth in the Main Sump then, and currently, is 57 meters at a bend in the tunnel immediately below the rock used for the line tie-off in 1993. In 2001 we extended the line to 375 meters penetration. This is 151 meters beyond the former limit, going up a large silt covered breakdown tunnel (12 meters wide x 9 meters tall) to a depth of just 12 meters, then descending the southwest side to a depth of 48 meters.

Where this tunnel rises to 12 meters, a side passage heads up and connects to the Echo Sump. Since the sides of the Echo Sump are nearly vertical, a platform was constructed out of some boards and rope. This lumber was custom sawed at Revilla while we were working in Caracol. The boards were hauled into the cave and assembled at the head of the drop leading to Echo Sump, then lowered to water level, where it was from four bolts. On the platform, a diver equipped with a re-breather could suit up and slip conveniently and safely into the water. The platform could also accommodate a second person to help with gear. From here, exploration in the southwest tunnel (heading from the Main Sump) continued. The southwest tunnel gradually pinches down as it descends. Exploration stopped at a constriction 2 meters wide and 1 meter high. There was a sand slope leading down to this constriction, covered with around 3 centimeters of silt, which ultimately led to zero visibility. Sand deposits, such as the one found here, are usually located on the downstream sides of sumps. Shortly after the big tunnel began its second descent there was a large dome leading up sharply to the west.

The deep tunnel ending in the silty constriction parallels the overhead dry tunnel leading to Echo Sump, suggesting that perhaps it receives back flow when the cave floods. In any event, there was no discernible flow at the constriction and on the next dive a full day later, the silt disturbed during the original exploration still remained suspended. The main tunnel from Echo Sump back to the limit of exploration in the Main Sump in 1993 was reinvestigated, and no side tunnels were found. The deepest point in the sump was revisited and found to only be a dark corner at a sharp bend in the passage.

The Left Hand Sump was pushed in 1993 to a penetration of 195 meters from dive base. This was extended in 2001 to a distance of 486 meters. Approximately midway through, the passage reached a maximum depth of 37 meters, then began a gentle rise. Two air-bells were found in 2001 just beyond 250 meters penetration. Both had flowstone covered walls, and one might have a small tunnel leading off, but a full investigation would have required a complete de-kitting in deep water. The main route rose through another small air-bell near the end before going back underwater to a depth of 8 meters at the present penetration limit. The Left Hand sump remained large in cross section throughout its length, approximately 10 to 12 meters wide by 8 meters tall, with very good visibility. The tunnel was trending west-southwest where we turned around.

A side tunnel discovered off the Main Sump in 1993 was hypothesized to connect with the Left Hand Sump, and, in fact, was connected in 2001. The total through trip was 114



Robbie helps Pete and Jim as they enter the Main Sump, bound for the dome leads in the Left Hand Sump
Bill Stone/Bev Shade photo

meters, and reached a depth of 11 meters. The tunnel begins on the south wall of the main sump approximately 20 meters from shore, and on the northwest wall of the Left Hand Sump barely 10 meters from the beginning of the dive line. A total of 591 meters of underwater tunnels were discovered in 2001, bringing the total underwater length of the Infiernillo sump complex to 1038 meters.

El 'USDCT' continuó la exploración del Sótano de Caracol, alcanzando una profundidad de 282m y 323m de longitud. En el Sistema Purificación se exploraron los sifones cercanos a la entrada a Infiernillo. Se topografió la conexión entre el Sifón Principal y el Sifón del Eco así como el Sifón Principal y el Sifón de la Mano Izquierda. En el Sifón de la Mano Izquierda se llegó a una longitud de 486m, casi 300m más que en la última expedición. Se descubrieron un total de 591m de túneles subterráneos durante 2001, alcanzando un total de 1038m en el complejo de sifones de Infiernillo. Finalmente se hicieron reconocimientos a lo largo de la sierra al noroeste de Infiernillo, en la pared del cañon.

TECOLOTE 2001

by Aaron Addison

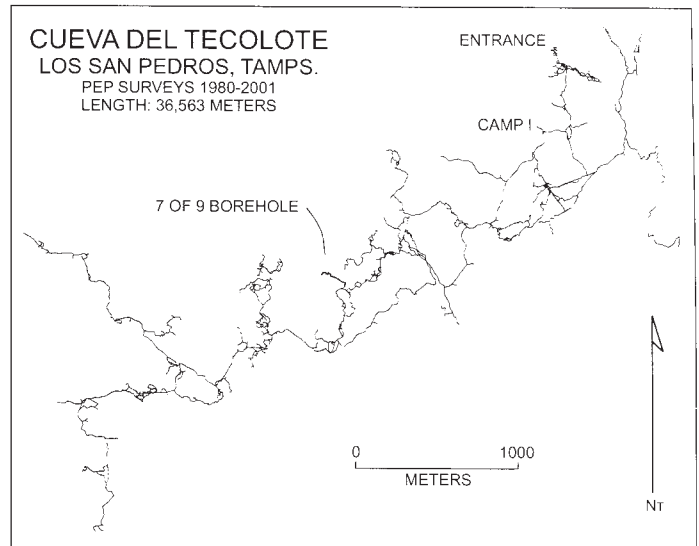
Cueva del Tecolote is the only Mexican cave that has ever been of any interest to me. I know that there are other magnificent caves in the PEP area and around México for that matter, but for some reason Tecolote is “it” for me. I cannot explain it, nor do I wish to, but I can tell you that I’m not the only caver in that group. Tecolote is a big cave. If you have been there you know what I am talking about, and if you haven’t, there are no words to describe it. The cave is not insanely deep, it is not particularly difficult, it’s not got the best formations around, and it’s not the longest cave in the world. It’s just big.

Before leaving Texas, Peter Sprouse and I had talked about returning to Tecolote to continue pushing leads left by the 1999 expedition (see DCC #9 December 1999). Peter indicated that he was interested, but could not commit to the trip, so we decided that I would lead the return expedition. Given the rainy season, and to have lead-time for the trip, dates for early Spring 2001 were selected and T-2001 was a “go”.

On February 10th, six cavers left Austin for Cueva del Tecolote: Aaron Addison (IN), Rebecca Jones (TX), Ray Craig (GA), Bill Stephens (TX), Will Harris (TX), and Melanie Alspaugh, (Switzerland/TX). This crew was supposed to be the same size as in 1999, but, due to several last minute cancellations, only six were left. So we loaded up two trucks and headed for Ciudad Victoria. Arriving after dark, Melanie recalled a hostel that she had stayed in on an earlier trip to Victoria. We crashed for the night just as a light rain began to fall.

The next morning everyone ate breakfast at a small café around the corner and talked of caving. Bill and I were the only two on the trip who had been to the cave, and we both knew that we didn’t want to be there if it started raining. The skies were still cloudy and sprinkles fell every now and then. I spotted a small Internet café in a strip mall. The radar sites showed little rain activity for the area, and we confirmed this after talking with a couple of locals. So the decision was made to continue, and we headed up the mountain. I was a “little concerned” about whether I would remember all of the turns, since I had only been up the road once before and that was as a backseat passenger.

We wound our way through the flats and found the turn-off fairly easily. Any doubts that we were on the wrong road were quickly squelched, as the road to Los San Pedros is unmistakable. The roads were dry and the way was bouncy as usual, but everyone made it to the “edge of the world” without incident. Well, almost without incident. Becky’s truck was on its maiden México voyage. Apparently at a brief rest stop the tailgate did not latch properly and soon our companions were on the radio. “Hey! Is this your stuff all over the road?!” I radioed back... “Yup, but the road is too steep to stop”. Finally I found a semi-flat spot in one of the switchbacks. Becky and Ray ran back down the road to retrieve the boxes that had fallen out. We then headed on down to camp in the small field next to the entrance.



We caught our breath and headed over to meet with the comisario of the ejido. We found him leading an effort to pull start a 2 ½ ton dump truck! They were not having much luck, so they didn’t seem to mind taking a break to talk with us. All of the locals were very nice and interested in what we were doing. After several minutes of talking broken Spanish and trying to communicate our request to enter the cave, everyone seemed to approve of our trip. We also arranged for the comisario’s son to watch our trucks for the week, as there have been reports of some vandalism on past trips.

Once we were back at camp, Ray, Bill, Melanie and I headed into the cave for a rigging trip. There are thirteen ropes on the way to Camp I. Since we had such a small group, we reasoned that the more rigging we could do ahead of time the better. We were tired from a long day, but the crew managed to get the first seven drops rigged before heading out for a good night’s rest before the trip to Camp I.

The next morning was spent packing cave duffles and making last minute checks of gear before heading into camp. Those who had stayed out of the cave the night before were elected to enter the cave first, picking up the rigging chores for drops 8-13. This turned out to work pretty well as the second team waited on the surface for a while before entering. The two teams didn’t catch up to each other until the 25-meter Salon del Puente drop just before Camp I. Getting to camp was a relief, as several of our team had never carried camp duffles before.

Monday morning everyone awoke and started shuffling about the day’s activities. Since Bill and I were the only sketchers, it seemed logical for each of us to lead a team. Bill took Rebecca and Ray, and Will and Melanie were with me. Everyone wanted to head out to the Tasmanian Trunk/South Park discoveries from 1999. Since I had also taken over drafting duties for Tecolote the year before, I wanted to use part of the trip to familiarize myself with various parts of the cave around Camp I, where many leads still remained.

Everyone traveled together as we left camp and entered the Russian Dancer Borehole. I took my group and headed towards the end of survey in the Extreme Borehole, and Bill’s team headed to the Tasmanian Trunk area. I wanted to see some of the Extreme Borehole for sketching purposes: both Solo (Jack

White) and Peter Sprouse had indicated that there was a dig lead at the end of survey. The lead was enlarged on the trip when Peter had broken his arm, and no one seemed to remember whether or not anyone had been back. The passage was much wetter than expected, but we followed it until we reached a squeeze that would have been difficult for some of our team. Realizing that neither of my teammates had ever been in the cave and more importantly that there were walking high leads waiting in the Tasmanian Trunk, we returned to the Russian Dancer Borehole and made our way to the Fantasia Borehole and on toward new cave passage.

Unfortunately, we never made it to the leads, as one team member was having some trouble with knee pain and the decision was made to return to camp. The rock in this section of Tecolote is very sharp, brittle, and generally annoying. One false step, or even a well placed one, and it can end anyone's day of caving. Bill's team was 18 hours out before returning to camp with 187 meters of new survey off of the Tasmanian Trunk. They reported some walking, more crawling, and good air in some sections. Bill and I talked about the leads while he grabbed something to eat. We each commented that the farther West the leads could be pushed, the more likely they will somehow connect to Research Boulevard. Wiped out, they forced down some food and hit the bed just as our team was leaving on our second survey trip.

Not wanting to push injuries, we stuck closer to camp. We headed out to the Fantasia Borehole and into the Spine Line to see if any leads had been missed during the 1999 trip. We did not find any new leads, but Melanie did come across an old stuff sack containing some matches, a carbide lamp bottom and a small knife. On the way back to camp we investigated Paul's Passage.

Arriving at camp, we found people just waking up from a well-deserved sleep. Ray had become somewhat ill and wasn't looking too healthy. After long discussions, everyone decided that given our limited resources, it would probably be best if we just got some sleep and headed out of the cave. So, with extra food in tow, we headed out after only three days and one good survey trip from camp. The trip out was slow, but Will and I managed to de-rig over half of the drops, including all of the longer ones. We reached the surface after about a six-hour trip.

The next morning we headed down the mountain and back to Austin. All in all, the T-2001 trip was a learning experience for me. I had not really anticipated the special limitations of a smaller group. We really didn't have any "extra" people, so when one person had trouble, the entire group was affected. We still had a good time, several folks got their introduction to cave camping and to Tecolote. Even though we only netted 187 meters of survey, we came out with more leads than when we started. The group had also pushed the total survey over 36 kilometers. I will be back to Tecolote to continue pushing one of the significant caves of the world. Right now, T-2003 comes to mind....

Seis espeleólogos continuaron la exploración de la Cueva del Tecolote, cerca de Los San Pedro, Tamaulipas. Se visitaron las áreas de Tasmanian Trunk/ South Park, concentrándose en revisar los pasajes inexplorados al oeste, buscando una nueva conexión con Research Boulevard. Se topografiaron 187m y encontraron nuevos pasajes, con estos la Cueva de Tecolote tiene más de 36 kilómetros de pasajes explorados.

EL MOLINO AND LA ENCANTADA

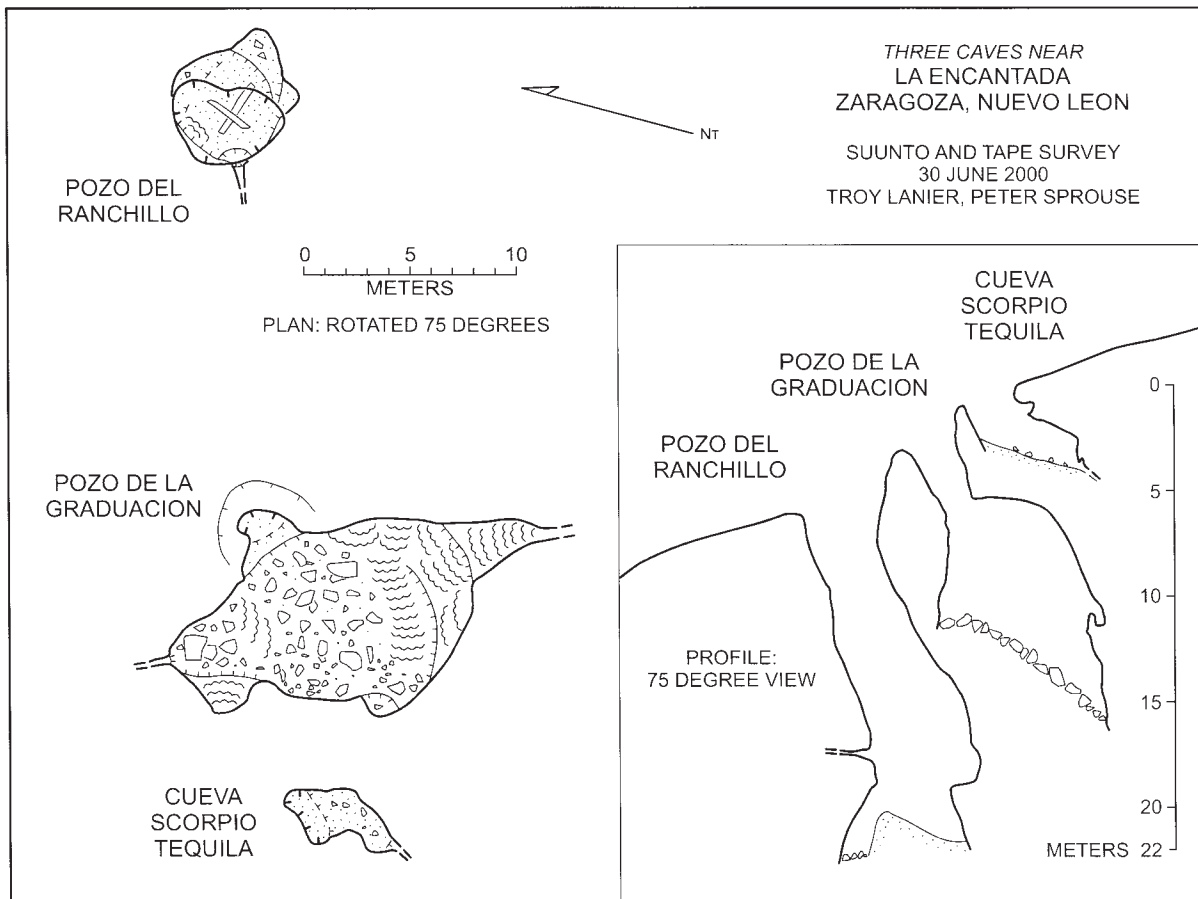
by Peter Sprouse

In June 2000 Troy Lanier and I had the opportunity to visit a cave at El Molino with Blanca Estela Zapata. Blanca, who lives in Ciudad Victoria, had invited us down to participate in a Tamaulipas ecotourism conference, after which we set off to find the cave that she knew about. We picked up Blanca's friend Sandra Laura Gómez, then drove up Cañon de la Peregrina just northwest of Victoria. As our road climbed above the river toward the ridge, we had to stop and clear numerous landslides of loose shale. Finally we stopped at one that was too big to clear, and we camped there for the night. We discovered later that we had missed the turn for the road that was currently in use.

The next day (June 27th) we continued our journey on foot, a steady ascent on the abandoned road as we approached the limestone cliffs above us. We went through a pass, only to discover we were in the Asunción valley, not the Molino valley. A little backtracking got us over to El Molino. We stopped at the cabaña that we had been given the use of, courtesy of the owner of El Roble logging company. We looked for Blanca's cave lead but couldn't find it, so we went to a cave on the south side of the valley that I had seen about 15 years before. It only went 20 meters, but we mapped it, naming it Cueva Metallica after the resident opilionids, whose species name is *metallica*. As we were getting out of the cave, Manuel, the ranch hand, showed up and took us to Cueva del Molino, the cave we were looking for. This began as an awful, dusty rat dung crawl, causing Troy histoplasmosis flashbacks. But after 50 meters it teed into a damp trunk passage. To the right we mapped 20 meters to a 10-meter pit into a large room, which we didn't do for lack of rope. We didn't explore the left lead, going 4 meters wide and 1.5 meters high, as we were running out of time. We bivouaced for the night in the cabaña, scrounging cans of tuna since we hadn't brought food for the night.

The next morning it took only an hour to hike down to the truck. We drove into Victoria to eat and leave off Blanca and Sandra. After buying maps at INEGI, we met up with the biologists at Victoria Tec. Paco García de León had a group of students who wanted us to take them to the Gachupinas spring in the northeast corner of the project area. Fernando, Mago, Andrés, Rocio, and Omar followed us in Paco's Bronco. After a few wrong turns we made it to the canyon at dusk. I retrieved a mop trap from a small spring which I named Lampazos, a few hundred meters downstream of the main resurgence, and found a new species of *asellid* isopod in it. We camped on the beach by the resurgence. In the morning the biologists netted fish while Troy and I packed our stuff and headed west to Zaragoza, where we were to meet Kevin Stafford.

By the next morning Kevin hadn't showed up, so we drove up the mountain southwest of town to the village of La Encantada, a promising karst area that we had not scouted before. The comisario of the ejido set us up with a guide. He showed us seven caves, two of which took some drainage. Afterwards we took the guide back to the village, then set up camp above town at 3000



meters elevation next to some of the leads he'd shown us. We mapped these, two blind pits and one small cave. The first one, Pozo del Ranchillo, was 17 meters deep. The second, Pozo de la Graduación, had a 5-meter drop into a nice room. Its name was inspired by the sounds of the Graduation Day party that drifted up from the town. The cave, Cueva Scorpio Tequila, was only 5 meters long. It was quite cold that night, a refreshing contrast to the Austin heat that time of year.

The following day we broke camp and met our guide back in Encantada. He took us up the mountain to the south to a place called El Cuervo, where we saw a number of small pits. Though not too exciting, they are high in elevation in a lovely spot, so we'll be back to check them sometime. Back at La Encantada we were shown a choked resurgence and a flowing resurgence cave within 100 meters of each other. Then it was time for us to head north to Monterrey for some caving with the ITESM cavers.

Arriba del Cañon la Peregrina se exploraron 70m de la Cueva de El Molino hasta llegar a un tiro. Se topografió la Cueva Metallica habitada por opilionidos de la especie metallica, contando con 20m de longitud. En Nuevo León, cerca de La Encantada, un guía local los mostró siete entradas a cuevas en el área, de las cuales se topografiaron dos tiros con una profundidad de 17 y 5m, además de la cueva Scorpio Tequila con 5m de longitud. También se visitaron algunos pequeños tiros al sur de La Encantada.



Sandra and Blanca prepare to enter Cueva Metallica
Peter Sprouse photo



PURIFICACION AREA CAVE DESCRIPTIONS

Contributions by Kevin Stafford, Bev Shade, and Peter Sprouse

Fauna lists compiled by James Reddell

All UTM coordinates NAD27



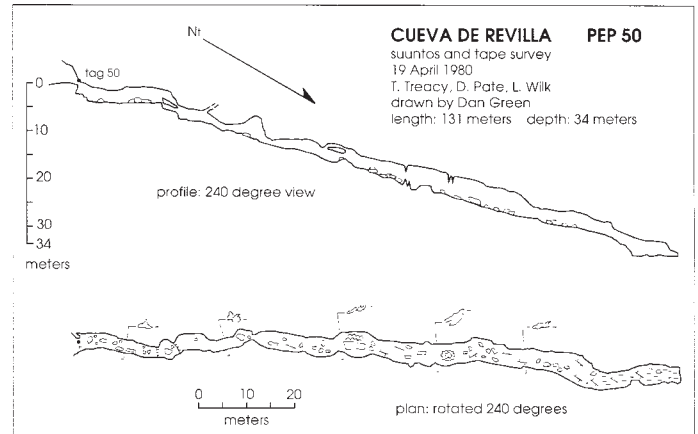
Peter Sprouse at the entrance to Cueva de Revilla
Dale Pate photo

CUEVA DE REVILLA

PEP50

Revilla, Tamaulipas
Length: 131 meters Depth: 34 meters
UTM coordinates: 451099E 2647489N

Cueva de Revilla is located at the north end of the village of Revilla, at 2334 meters elevation. It is just up the slope from the main road, across from the first houses. The cave consists of mostly crawling passage developed along the regional trend. It slopes down to a sediment fill. This cave is well-known to local residents, and was shown to David McKenzie and Roy Jameson on 22 August 1973. Dale Pate, Terri Treacy, and Lisa Wilk



mapped the cave on 19 April 1980. (PS)

Collections were made in the cave on 22 August 1973 by David McKenzie and Roy Jameson and on 19 April 1980 by Leslie Clarfield, Dale Pate, Terri Treacy, and Lisa Wilk. The following is a fauna list:

Pseudoscorpions: *Pseudoscorpionida* undetermined

Spiders: *Phrurotimpus* n.sp.

Scotinella n. sp.

Strotarchus sp.

Coryssocnemis abernathyi (troglophile)

Modisimus rainesi (troglophile)

Modisimus reddelli (troglophile)

Harvestmen: *Leiobunum viridorsum* (troglaxene)

Centipedes: *Lithobiomorpha* undetermined

Millipedes: *Mexicambala russelli* (troglobite)

Cleidogona sp.

Strongylodesmus n.sp.

Myrmecodesmus sp. (troglophile)

Cave crickets: *Exochodrilus* sp. (troglaxene)

Ground beetles: *Mexaphaenops sulcifrons* (trogllobite)

Mexisphodrus purgatus (trogllobite)

Aderid beetles: ?Aderidae genus and species

Darkling beetles: *Eleodes (Caverneleodes) sprousei* (troglophile)

Flies: Diptera undetermined

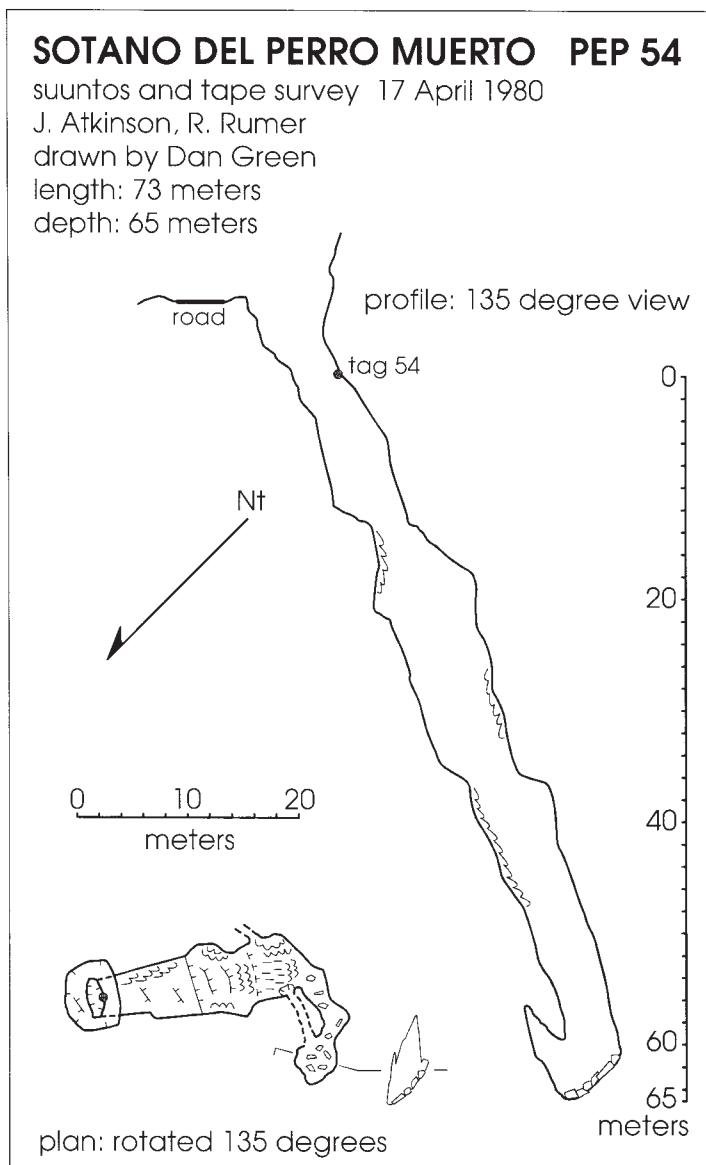
SOTANO DEL PERRO MUERTO

PEP54

Revilla, Tamaulipas
Length: 73 meters Depth: 65 meters
UTM coordinates: 451459E 2647152N

This pit is located just southeast of the village of Revilla at

2325 meters elevation, on the west edge of the road. The entrance is very obvious and could even swallow a vehicle. It has been used as a place to dump trash, including the bodies of dogs and bears. The pit consists of a very steep flowstone slope down to a rubble plug. It was mapped on 17 April 1980 by Jerry Atkinson and Randy Rumer. (PS)



SOTANO DEL PUENTE NATURAL PEP 69
 Las Chinas, Tamaulipas
 Length: 27 meters Depth: 17 meters
 UTM coordinates: E 455,373 N 2,637,310

This pit is located 350 meters southeast of the old Las Chinas fire tower, at 2771 meters elevation. It is just north of Sótano de la Torre. The entrance has an oblong shape, and drops 10 meters to a ledge. The second part of the shaft drops another 7 meters to its terminus. Peter Sprouse and Terri Treacy discovered this pit on 2 November 1979. Paul Fambro and Jim Feely mapped the cave on 28 November 1980. (PS)

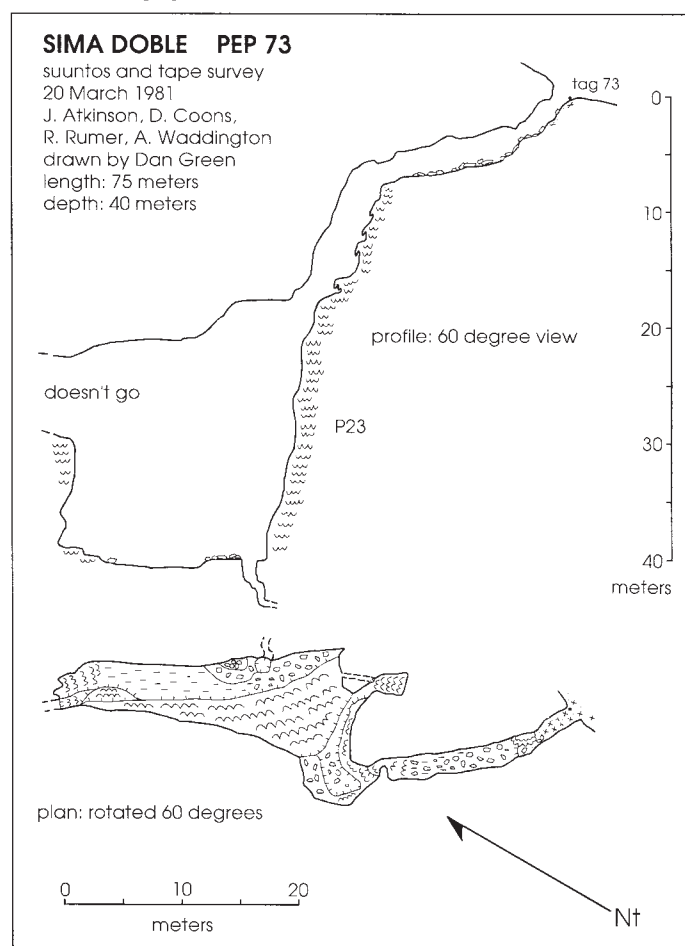
SIMA DOBLE PEP 73
 Conrado Castillo, Tamaulipas
 Length: 75 meters Depth: 40 meters
 UTM coordinates: 451568E 2651070N

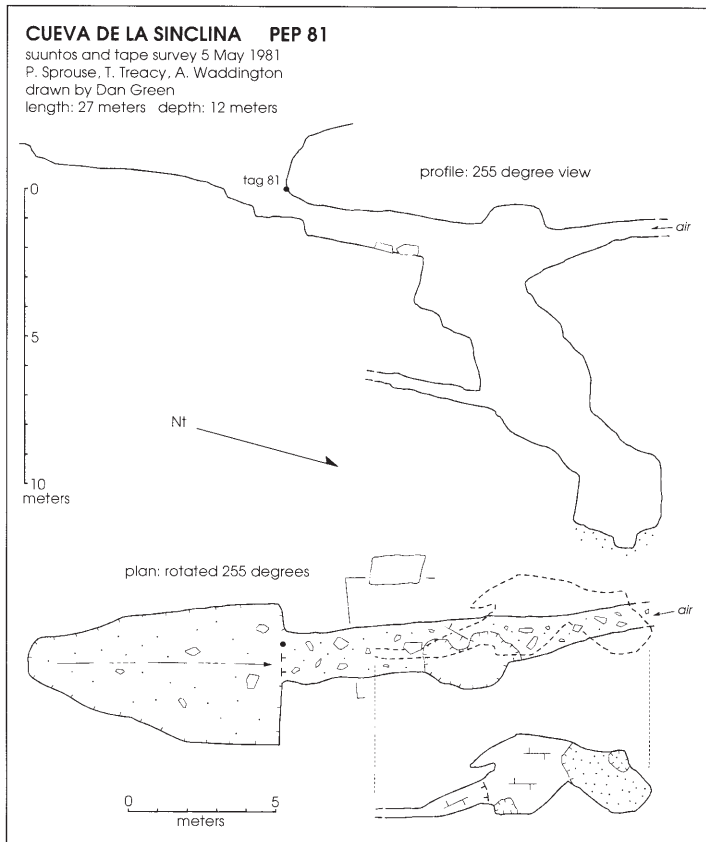
Sima Doble is on the west flank of the Allarines Valley, 1300 meters north of Conrado Castillo. It lies on a steep slope at 1969 meters elevation, below the Puerto Vaquerillo road. The entrance passage heads northwest into the hillside, sloping down to a 23 meter drop. This lands in a tall chamber, where a small streamway leads down to a digging lead. At the far side of the chamber is a high lead that doesn't go.

Sima Doble was discovered on 11 March 1979 by Peter Sprouse and Leslie Turpin. Jerry Atkinson visited it two days later and explored to the top of the drop. On 20 March 1981, Jerry returned with Don Coons, Randy Rumer, and Andy Waddington to map the cave. Jon Bojar, Aldo Guevara, Jason Richards, and Bev Shade went to Sima Doble on 27 May 2000 to look at remaining leads. The lead climb didn't go, but they did notice airflow where a waterfall was entering the dig lead. They dug on it awhile, progressing 1.5 meters, but it will need a lot more work. (PS)

Randy Rumer and Gerald Atkinson collected in the cave on 20 March 1981. The following is a fauna list.

- Harvestmen: *Hoplobunus* new species near *boneti*
- Mites: Acarida undetermined
- Ground beetles: *Mexisphodrus purgatus* (troglomite)
- Darkling beetles: *Eleodes (Caverneleodes) sprousei* (troglophile)





CUEVA DE LA SINCLINA PEP81
 Los Caballos, Tamaulipas
 Length: 27 meters Depth: 12 meters
 UTM coordinates: 450314E 2650231N

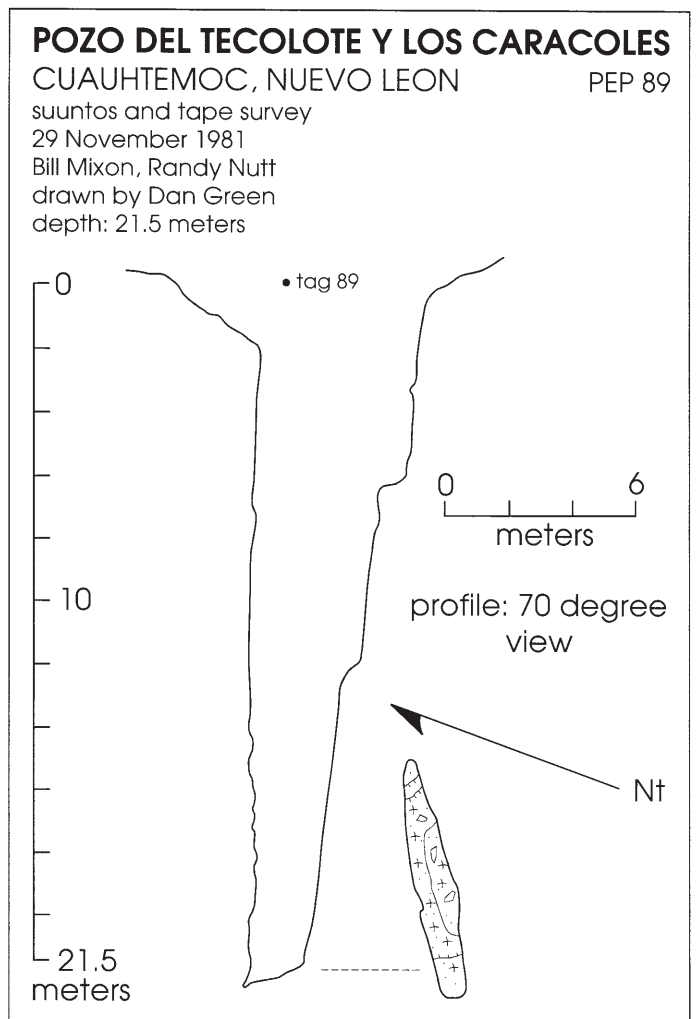
Cueva de la Sinclina is located 1200 meters west-north-west of Conrado Castillo, at 2047 meters elevation. It is east of the Los Caballos-Revilla road, in a drainage. The entrance, 2 meters wide and 1 meter high, is formed in a small syncline, and water can be heard falling inside of it. Five meters inside the cave is a 5-meter pit with scalloped walls and a small cascade. A further 2-meter climbdown leads to a mud fill. Peter Sprouse, Terri Treacy, and Andy Waddington discovered and mapped this cave on 5 de mayo 1981. (PS)

Peter Sprouse collected in the cave on 5 May 1981. The following is a fauna list:

- Spiders: *Modisimus reddelli* (troglophile)
- Harvestmen: *Hoplobunus* n.sp. nr. *boneti*
- Millipedes: Rhachodesmidae genus and species

POZO DEL TECOLOTE Y LOS CARACOLES PEP89
 Cuauhtémoc, Nuevo León
 Depth: 21.5 meters
 UTM coordinates: 452162E 2642411N

This pit is located 2 kilometers south of the village of Cuauhtémoc, at 2244 meters elevation. It is in the Calabasa Valley. The pit entrance has a long, narrow shape. It stair-steps down to a plug at -21.5 meters. Bill Mixon and Randy Nutt mapped this cave on 29 November 1981. (PS)



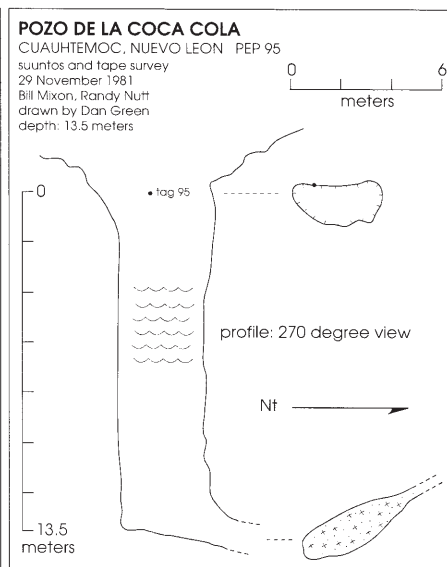
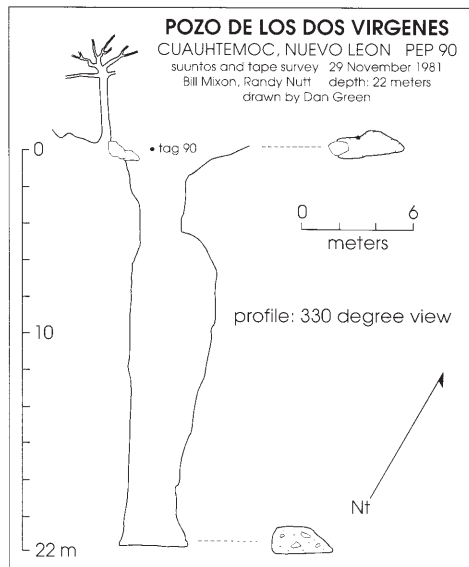
POZO DE LOS DOS VIRGENES PEP90
 Cuauhtémoc, Nuevo León
 Depth: 22 meters
 UTM coordinates: 452137E 2642386N

This pit lies 2000 meters south of Cuauhtémoc, at 2245 meters above sea level. It is adjacent to PEP89. It is a blind 22-meter pit, explored and mapped on 29 November 1981 by Bill Mixon and Randy Nutt. (PS)

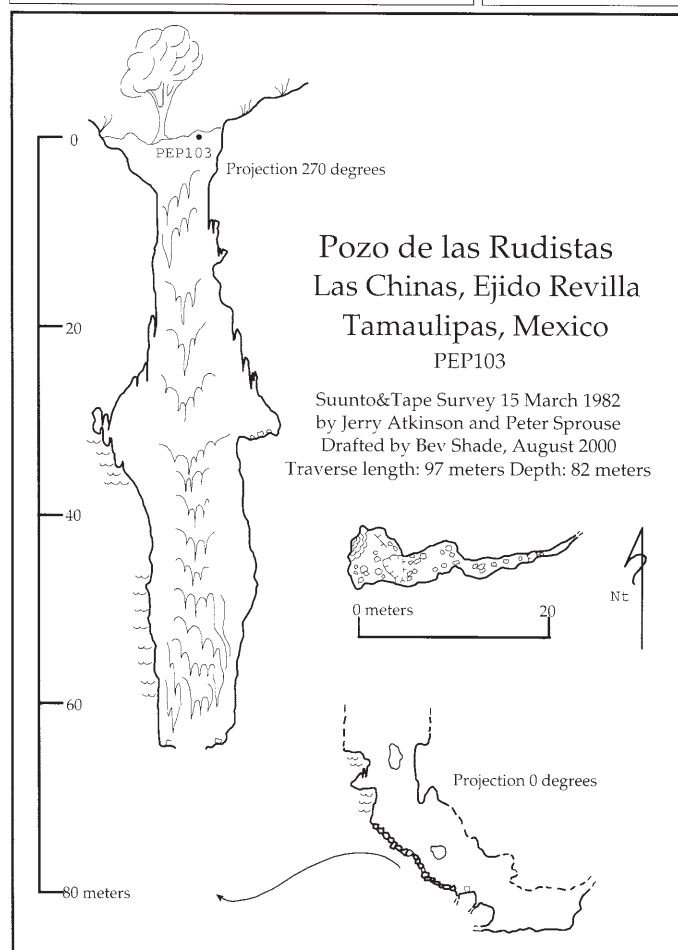
POZO DE LA COCA COLA PEP95
 Cuauhtémoc, Nuevo León
 Depth: 13.5 meters
 UTM coordinates: 452253 2642084

Pozo de la Coca Cola is located 2200 meters south of Cuauhtémoc, at 2219 meters elevation. It is developed on the regional trend, with a crevice going off the bottom too tight to negotiate. This pit was explored on 29 November 1981 by Bill Mixon and Randy Nutt. It was named for a component of Bill Mixon's diet. (PS)

POZO DE LAS RUDISTAS PEP103
 Las Chinas, Tamaulipas
 Length: 97 meters Depth: 82 meters
 UTM coordinates: 454090E 2640272N



Earthworms: Haplotaxida undetermined
 Spiders: *Modisimus reddelli* (troglophile)
 Harvestmen: Leiobuninae n.gen. nr.
Nelima and *Paranelima* n.sp. (troglaxene)
 Mites: Acarida undetermined
 Centipedes: Lithobiomorpha undetermined
 Millipedes: *Cleidogona yerbabuena*
 Slender entotrophs: Campodeidae genus
 and species
 Insects: Insecta larvae undetermined
 Cave crickets: Rhabdophoridae genus
 and species (troglaxene)
 Ground beetles: Carabidae genus and spe
 cies
 Trechinae genus and species
 (troglomite)
 Round fungus beetles: *Ptomaphagus*
 (*Adelops*) new species 1



Ptomaphagus (Adelops) ?mckenziei (troglomite)
 Phengodid beetles: ?*Cenophengus* sp. (accidental)
 Darkling beetles: *Eleodes (Caverneleodes) sprousei*
 (troglophile)
 Chironomid flies: Chironomidae genus and species

POZO DE LA RATA PEP112
 Las Chinas, Tamaulipas
 Length: 29 meters Depth: 28 meters
 UTM coordinates: 454108E 2640233N

Pozo de la Rata is situated 1200 meters north of Rancho Nuevo, at 2636 meters elevation. It is just west of PEP103. The cave consists of two drops. The entrance pitch drops about 8 meters to a round room with a natural bridge, leading to the second drop. This drop is 18 meters deep, and is plugged by organic matter, rocks and dirt. This cave was explored in March 1982 by David Honea and Jeanne Williams. No leads were located. (BLS)

Dave Honea and Jeanne Williams collected in the cave on 15 March 1982. The following is a fauna list:

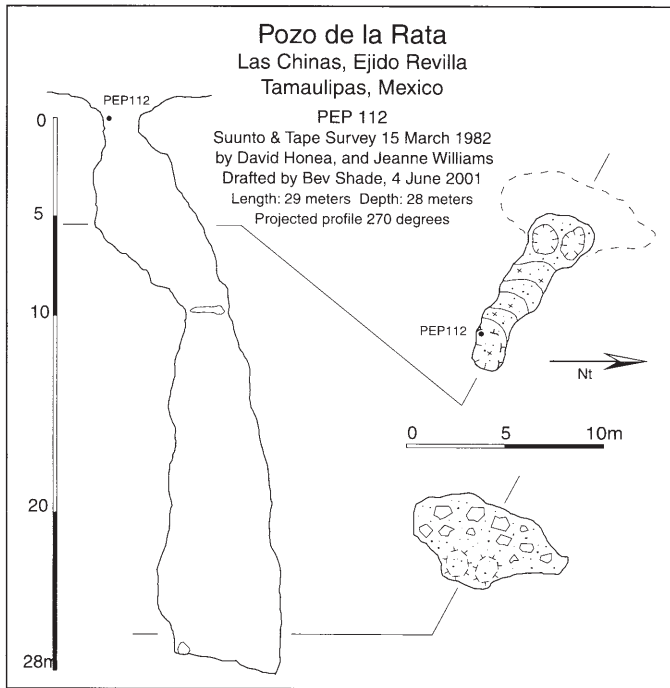
Harvestmen: Leiobuninae n.gen. nr. *Nelima* and *Parnelima*
 n.sp. (troglaxene)
 Mites: Acarida undetermined
 Darkling beetles: *Eleodes (Caverneleodes) sprousei*
 (troglophile)

POZO DEL MADROÑO PEP113
 Las Chinas, Tamaulipas
 Length: 37 meters Depth: 19 meters
 UTM coordinates: 453915E 2640510N

Pozo de las Rudistas is located 1200 meters north of Rancho Nuevo, at an elevation of 2643 meters. It is east of the Revilla-Rancho Nuevo road, down an old logging spur. The entrance pit drops 63 meters to a steep rubble slope. This pinches out at a depth of 82 meters. David Honea and Jeanne Williams discovered this cave in early March 1982. It was explored and mapped on 15 March 1982. (PS)

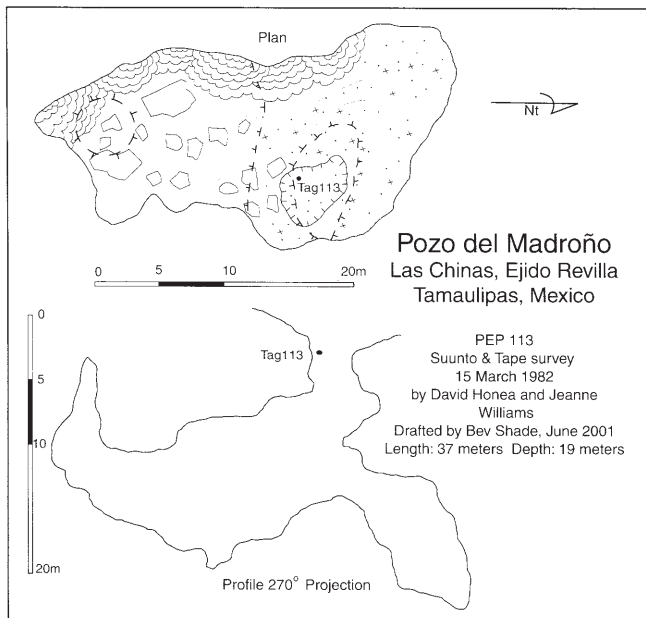
Peter Sprouse collected in the cave on 15 March 1982. The following is a fauna list:

Pozo del Madroño is located 1400 meters north of Rancho Nuevo, at 2660 meters elevation. It lies just west of the Revilla-Rancho Nuevo road. It consists of one room, which is entered by means of a narrow entrance shaft. The entrance drop is about 12 meters, and lands on a debris pile of dirt, rocks, and organic matter. One side of the room is well decorated with flowstone. This cave was explored on 15 March 1982 by David Honea and Jeanne Williams. No leads were found. (BLS)



Dave Honea and Jeanne Williams collected in the cave on 15 March 1982. The following is a fauna list:

- Leeches: Hirudinea undetermined
- Spiders: *Aysha* sp.
- Modisimus reddelli* (troglophile)
- Harvestmen: Leiobuninae genus and species (troglaxene)
- Leiobuninae n.gen. nr. *Nelima* and *Paranelima* n.sp. (troglaxene)
- Mites: Acarida undetermined
- Centipedes: Chilopoda undetermined
- Millipedes: Diplopoda undetermined
- Slender entotrophs: Campodeidae genus and species
- Cave crickets: Rhaphidophoridae genus and species (troglaxene)
- Ground beetles: Carabidae genus and species
- Darkling beetles: *Eleodes (Caverneleodes) sprousei* (troglophile)
- Sphaerocerid flies: *Spelobia robinsoni* (troglophile)

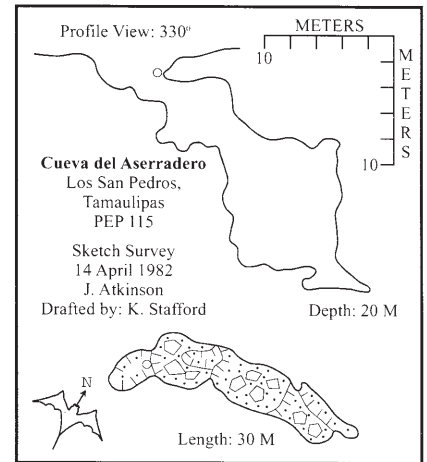


CUEVA DEL ASERRADERO

PEP 115

Los San Pedros, Tamaulipas
 Length: 30 meters Depth: 20 meters
 UTM coordinates: 461225E 2638465N

Cueva del Aserradero is located southwest of the Los San Pedros sawmill at 1450 meters elevation. It consists of two small drops over a breakdown and soil covered floor, terminating at 20 meters depth. It was discovered and sketched by Jerry Atkinson on 14 April 1982. (KS)



CUEVA DE LA TINAJA

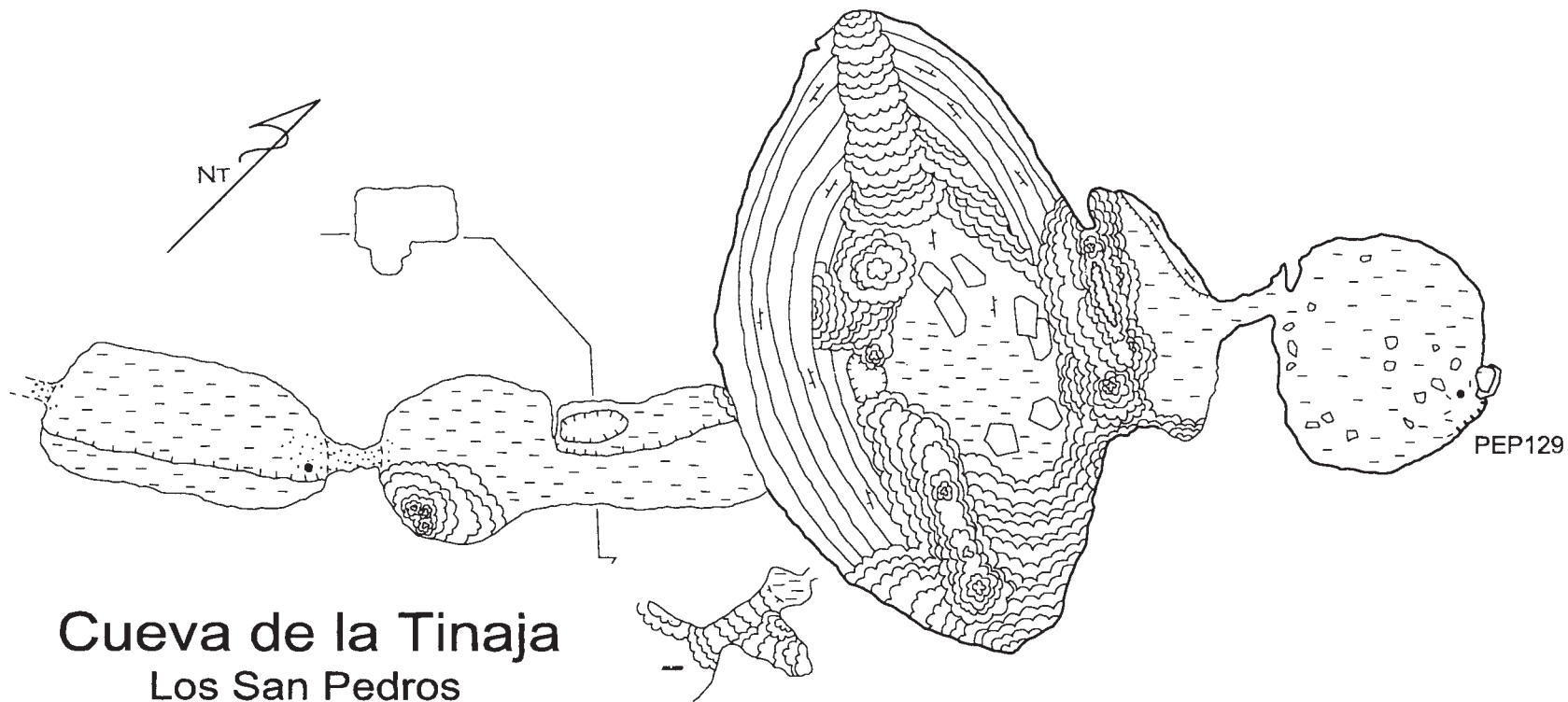
PEP 129

Los San Pedros, Tamaulipas
 Length: 90 meters Depth: 12 meters
 UTM coordinates: 460540E 2639040N

Cueva de la Tinaja is located 800 meters west of Los San Pedros, on the east flank of a hill at 1585 meters elevation. A small entrance leads directly to a spacious, mud-floored entrance room. A flowstone climb leads to the largest room in the cave, 15 x 30 meters wide. This room is well-decorated chamber, oriented perpendicular to the rest of the cave. A small hole in the flowstone floor of this room leads to two more chambers. The cave ends in a sand/mud blockage at a restriction in this tunnel, that may be passable with digging. A local guide showed this cave to Bill Mixon, Peter Sprouse, and Terri Treacy on 19 November 1984, at which time they explored the first two rooms. It was surveyed on 21 November 1984 by Paul Fambro, Bill Mixon and Alan Williams. (BLS&PS)

Collections were made in the cave on 21 November 1984 by Gerald Atkinson, and on 27 November 1984 by Dale Pate. The following is a fauna list:

- Snails: Gastropoda undetermined
- Isopods: Isopoda undetermined
- Spiders: *Ctenus* sp. (troglophile)
- Mites: Acarida undetermined
- Harvestmen: *Leiobunum viridorsum* (troglaxene)
- Millipedes: Diplopoda undetermined
- ?Fuhrmannodesmidae genus and species (troglomite)
- Rhachodesmidae genus and species
- Slender springtails: *Oncopodura susanae* (troglomite)
- Slender entotrophs: Campodeidae genus and species
- Insects: Insecta larvae undetermined
- Crickets: Gryllidae genus and species
- Ground beetles: *Mexaphaenops sulcifrons* (troglomite)
- Mexisphodrus purgatus* (troglomite)



Cueva de la Tinaja
 Los San Pedros
 Tamaulipas, Mexico

PEP 129

Suunto & Tape Survey 21 November 1984
 by Paul Fambro, Bill Mixon
 and Alan Williams

Drafted by Bev Shade, August 2000
 Length: 90 meters Depth: 12 meters

