THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

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Reprint

The History and Goals of the AMCS

The AMCS was founded in the latter part of 1962 by T. R. Evans to collect information on the caves of Mexico. The original name was the Speleological Survey of Mexico, but it soon became evident that it would be several years before even a small percentage of the Mexican cave areas could be visited; and it was felt that the organization should have a name that did not imply extensive knowledge of Mexican caving areas, so in the spring of 1964 the present name was adopted. Also about this time it was noted that there was a great deal of interest in the caves of Mexico among cavers from all parts of the United States, therefore it was decided to broaden the membership of the organization to include all interested persons.

The AMCS has compiled information on about three hundred Mexican caves about which they have definite knowledge and organized this information, along with many less reliable repor and rumors, into what is probably the most comprehensive file of information on Mexican caves in existence. If members of th organization have specific questions on any area of Mexico, the are urged to write and we will answer any questions that may arise as completely as we can. The AMCS will try to describe most of the well visited cave areas of Mexico in future issues the Newsletter. The next issue will feature caves on the El Ab Range NE of Sd. de Valles. It is hoped to cover all important areas before summer so that the information will be available for those planning summer trips. We also plan to compile speleological road logs of the main Mexican highways that will answe most general questions about Mexican caves.

The AMCS is not a large organization and each member shoul actively recruit as any increase in membership will enable the AMCS to provide more services for each member. All money collected is used to maintain the files and provide benefits for the membership. Copies of maps, reports, and photographs are sent to cave owners and other interested people. We also recei biological collections from Mexican caves and send them to the proper specialists for identification. But the main activity i collecting and distributing information on Mexicancaves, bot to to encourage work in these caves and to prevent duplication previous work. Most of this will be done through reports submi by members and summarized in the Newsletter. This effort will not be a success unless all members contribute.

The AMCS Newsletter is published monthly by the Association for Mexican Cave Studies, P. O. Box 7672 UT Station, Austin, Tex 78712. Membership in the AMCS is $5.00 for the calender year with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications for that year.

Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copy onto a standard or legal size memeograph master or for printing Longer articles with detailed maps are invited for publication in a bulletin. Trip reports are requested from all trips.

Trip Reporst - November 1964

Merydith Turner, Mike Erickson, Ed Alexander, and Philip Hinsborough left Austin the evening of the 24th of November. They spent the night in San Benito, Texas and reached Cd. Valles about five o'clock the next day. The next morning they contacted the owner of Sotano de la Tinaja, Sr. Luis Martinez, who lives in Valles. He unlocked the gate on the road to the cave enabling the group to drive within a few hundred yards of the cave. (The road to the cave heads to the east from Highway 85, just to the north of Valles at approximately Km. 474.5. Keep to the left until reaching the ranch then park.) The rest of the day was spent in establishing camp and rigging the first drops. The next day the group explored the main downstream passage. The passage is a high fissure that descends down a series of small drops to the previous end of exploration. From this point the passage was found to continue over several more drops and small pools until it encountered a very high fissure extending to both the left and right. There was no continuation of the passage they had been exploring, and exploration to the left and right was blocked by a deep lake. This lake is perhaps 40 feet wide where the passages join but it narrows in both directions. Some type of flotation gear will be necessary to further explore this passage. A total of 45 hours was spent in the cave, with the trip down the main passage requiring 23 hours.

David McKenzie, Phillip Schiffert, John Fish, and Orion Knox left Austin on the night of November 25th. First they visited Cueva de El Abra, located just north of Antiguo Morelos, and then they traveled south to Sotano del Tigre, located a few miles NE of Valles. The entrance to this sotano, which is like that of Tinaja, receives the flood waters from a large surrounding area and is a 300 foot vertical drop broken by a ledge 190 feet down. At the bottom of this drop two short passages lead to pits, each about 30 feet deep, which were not descended due to lack of equipment. Next the group went to Sotano de la Tinaja and explored what was thought to be the end of the entrance passage. They found a continuation of this passage above a flowstone slope that lead a short distance to an 80 foot drop into a large room or passage. Lack of equipment prevented further exploration. On the return trip to Austin, Grutas de Quintero were visited and the first section of the cave mapped.

James Reddell, Jim Duke, Dick Smith, Neal Prescott, and Dick Childers accompanied the car with Knox and McKenzie to El Abra and Tigre and the picked up John Fish and went to Sotano del Arroyo to try and map the water passage. Unfortunately they were turned back by deep water. While at Arroyo they attenpted to discover a pre-capture course of the stream that now enters the cave, but no evidence of such a stream bed could be found. On the return trip to Austin the group visited Grutas de Quintero.

Jim Moran, Ken Wyrick, Bob Thomas, and Frank Hiseman left Austin on the 23rd for caves in the Xilitla area. First they visited a pit a few hundred feet from the entrance to Sotano de Tlamaya and at least thirty feet higher on the mountain. This cave was found to connect with Sotano de Tlamaya at about the 600 foot level. This means the system is at least 30 feet deeper than the official surveyed depth. On the way back a group of pits just off the Xilitla - Y Griega road were checked. These pits are located at the bottom of a large sinkhole near a school and basketball court. They were found to be promising but lack of time prevented complete exploration.

John Kreidler, Colly Kreidler, Tommy McGarrigle, Susan Holstrom, Bud Stewart, Dexter Hill, and Bill Russell left Austin in the evening of the 24yh, spent the night at McAllen, and continued on the next day. The first place they visited was El Nacimiento del Rio Mante, where the Rio Mante flows from an underwater cave near the city of Mante, Tamaulipas. The only lead was a small fissure cave that opens on the south edge of the resurgence, but it extends for only about 300 feet to where it is blocked by breakdown. That night they slept at Grutas de Quintero and the next day was spent checking several small caves and pits east of the small village of Venidito. Saturday found them looking for Sotano de Venidito, but fog in the morning hampered the search and the cave was not found. Cueva de El Abra was visited on the return trip.

20 Nov After several hours of hasty preparation Bill Bell, Terry Raines, Bob Burnett, and Benny Martin left Austin at 7 PM in Terry's pickup truck. The trip to Cd. Valles took 14 hours with only stops made at gas stations and the Mexican Customs.
21 Nov While in Valles they ate, bought a few things that had been forgotten, and exchanged money. From here they headed on to the cave area near Xilitla and the ranch of Sr. Modesto Gomez. With the weather as usual, rain and fog, it was dedided to spend the few remaining hours of the day preparing the equipment for the descent the following day.
22 Nov By 7:30 everyone was up and eating breakfast. From here it was only a 3/4 mile drive to the edge of the small village of Tlamaya and the entrance of Sotano de Tlamaya. They entered at 9 AM and remained in the cave for the next 26 hours.
23 Nov Upon arriving back at the entrance they decided to leave the ropes in place for a return trip the next day, so from here a quick trip back to the ranch was made. Sr. Gomez was interested in what had been found and after telling him all that had happened they ate and sacked out.
24 Nov Early the next morning Bob and Terry returned to the entrance of the cave and found, much to their surprise, that the rope was gone. It could not have been removed from the cave since it was tied off 200 feet below, so they figured that someone in need of rope had pulled up as much as he could then cut it. This later proved to be true but for the present it meant that they would have to drive to Xilitla to buy more rope and

therefore loose a day. In Xilitla they went to several stores then decided to buy 300 feet of sisal rope. After doing this and several other errands a collecting trip was made several small caves near Ahuacatlan, the first town west of Xilitla. On the 15 mile trip back a stop was also made at Cueva de la Selva to map the main passage and collect more insects. By 8 PM they were back at Gomez's patio and ready to sack out.

25 Nov The morning was spent readying the equipment and eating. Just before noon everything was loaded in the truck and the drive made down to Tlamaya and the cave. The weather was good and they entered the cave at noon.

26 Nov After spending 31 hours in the cave they returned to the surface just at sundown. It still required nearly an hour to raise the ropes up the last drop but after doing this no time was lost in returning to the ranch. They learned that a party made up of Jim Moran, Frank Wiseman, Ken Myrick, and Bob Thomas were at that time exploring a cave that later proved to connect with Sotano de Tlamaya.

27 Nov Around 3AM the group of explorers returned from the cave and went straight to bed. The next morning experiences were exchanged and then after thanking Sr. Gomez for his hospitality everyone went into Xilitla where Frank had left his car. Here they ate and passed several hours then each group went their seperate ways. Benny, Bob, Terry, and Bill headed to Valles and the El Abra Range to meet several groups who were coming down from Austin. Everyone met at Los Sabinos about dark and from there went into Valles to eat and find out what each other had been doing.

28 Nov The day was spent in Sotano de la Tinaja where insects and blind fish were collected and pictures were taken. That night everyone went north to Mante and Grutas de Quintero where several hours were spent in partially mapping the cave.

29 Nov Everyone left for Austin one group that now consisted of Benny, Bob, Terry, and Richard Smith. They spent the morning in Mante restocking their food supplies and then that afternoon they went to "El Nacimiento" just outside of town where clothes were washed and the truck cleaned out.

30 Nov They headed north from Mante some 20 to 30 miles to Encino a small village on the highway. From there a very bad lumber truck road was taken to the west into the mountains. Good progress was made for 5.6 miles until it started to rain. This turned the undalievably steep road into a mass of slippery mud and rocks that made passing almost impossible even with tire chains. It was decided to turn back and go south then west to Ocampo, also located in the mountains but on a much better road. They arrived just after dark.

1 Dec From Ocampo they intended to go to Tula, the only trouble being that everyone they asked didn't know exactly where the road was. Finally after nearly an hour of driving around an old man directed them to a slippery mud road that headed out across the large farming valley of Ocampo towards the mountains. After passing through several ejidos, taking the wrong roads, and fording two streams, they came to Rancho de Corrales, Ejido P.E.G. Municipio de Ocampo. Here again directions were asked but instead

of just pointing a man told them that the road to Tula was impassable and that they should stay at the ranch where they couldcollect insects and explore caves. Everyone was very friendly and that afternoon Roberto Garcia took them on a collecting tour of the ranch. The time was spent turning over logs, wading through a swamp called "La Laguna", and wandering around in the valley. That night was spent at Roberto's house.

2 Dec Ejido P.E.G. or Rancho de Corrales occupies a large N-S valley that is separated from the larger Ocampo valley by a range of low limestone hills on the east. To the west some 7 or 8 miles away is a range of much higher mountains also composed of limestone that mark the western boundry of the valley. Looking to the south a low, rugged hill is seen in the center of the valley and is called "Cierro Partido" by the local inhabitants. From all indications this is the cone of an extinct volcano that during its active period covered the valley floor with volcanic debris. From the peak the land slopes gently away in all directions.

From Roberto's house, located near the eastern hills, they headed out in the truck for the mountains to the west. It seems the ejido was in the process of building a new road in the order to get corn to the market. As it turned out they spent the whole day driving through corn fields, fording streams, taking down fences, and even chopping a way through the undergrowth. Everyone arrived at the house of Guadalupe Portales around 8 PM after spending eight hours and going 4.4 miles.

3 Dec From Guadalupe's house, located part way up the side of the western mountains, a good view could be had of the valley below and the hills to the east. The morning was spent touring his land and about 11 AM they went down to the truck for the caving gear. Guadalupe told them of several large and beautiful caves in the Cierro Partido but considering how late it was, that it was a 6 to 8 mile walk, and we had to return to Mante that day it was decided to go to a smaller cave about 1 km. above the house. After reaching the area he found that it had grown up so much that he couldn't find the entrance. They returned to the truck and began the journey back to Mante. All the roads were dry which made driving much easier, especially through the construction between Ocampo and Highway 85. The night was spent at El Nacimiento near Mante.

4 Dec The morning was spent cleaning out the truck and getting the equipment in order. At 11 AM they began what was to be a driving tour that would take them through some extremely beautiful country and good possible caving areas. From Antiguo Morelos they turned west, winding their way up through the heavily vegetated limestone mountains to the much drier Central Plateau near Cd. del Maiz. From here on through Tula to Cd. Victoria the mountains were of a completely different nature than those of the more tropical areas like Gomez Farias or Xilitla. In an area of so little rainfall the mountains were nearly completely bare of vegetation as was everything else. With access to them very limited and not many people living in the area, one might have difficulty in locating the large solutional type caves that are most assuredly there.

The afternoon was spent driving along the unbelievably dusty detours around the new highway under construction between Huizache

and Cd. Victoria. Near dark they stopped beside the road just outside Palmillas and camped.

5 Dec From Palmillas they drove on, passing through one of the most beautiful mountain areas in Mexico and arriving in Cd. Victoria around noon. Here they ate lunch then headed south to Gomez Farias, arriving at Sotano de Gomez Farias that afternoon. They went into the cave shortly afterwards and mapped the upper levels, leaving four pits to be explored the next day.

6 Dec They returned to the cave and found many more interconnecting pits in the lower levels than they had thought were there. It took most of the day to map them and find that they all connected to one horizontal passage that ended in mud and a small hole where water disappeared. Late that afternoon they left the cave and drove on up the road as far as they could before dark then camped.

7 Dec It seems the place they camped was the beginning of the very steep part of the mountain road and that without four wheel drive it would be hopeless to try. It was then decided to return to Austin, stopping on the way to tour the commercial Grutas de Villa de Garcia near Monterrey.

THE STATUS OF MEXICAN CAVE BIOLOGY

by James R. Reddell
Austin

Considering the size of Mexico and the abundance and diversity of her caves it is remarkable that no more has been done in the area than has been. The purpose of this report is to indicate what has been done and what is hoped to be accomplished by the AMCS in the field of biology. Later reports will include detailed accounts of the biology of individual caves or of areas or will discuss other aspects of Mexican biospeleology.

The first study of Mexican cave biology was written by D. Bilimek and published in 1867. In this he discusses the fauna of Cacahuamilpa Cave, in Guerrero. As late as 1936 only 14 species of animals, both vertebrates and invertebrates, were recorded from Mexican caves and all of these were from Cacahuamilpa Cave. In 1936 and 1938 the Carnegie Institute published the results of several expeditions to study the caves and cenotes of the Yucatan Peninsula. Over 500 species of animals are recorded in two very important bulletins, edited by A. S. Pearse. Almost all work in Yucatan since this time has been based on Pearse's work. In 1936 Carl L. Hubbs and William T. Innes described the genus, Anoptichthys, from Mexico which came from a locality outside of Yucatan. J. Alvarez followed with the description of two additional species in 1946 and 1947 from Cueva del Pachon and Cueva de los Sabinos. Intensive work has been done on these animals by a number of students since that time. During the early 1940's Drs. F. Bonet, C. Bolivar y Pieltain, and B. F. Osorio Tafall made intensive collections in a large number of caves throughout Mexico. Their work has been published in a large number of papers and some of the results still await

publication. With the exception of work by Alejjandro Villalobos, Enrique Rioja, and Stanley B. Mulaik, all of whom worked with various crustacean groups, work in Mexican caves to the present has been the direct result of the work of Bonet, Bolivar y Pieltain, and Osorio Tafall. Their collections, however, were generally made in large easily accessible and easily entrable caves. Essentially no systematic studies of caves away from the main highways or difficult of entry have been made. Dr. F. Bonet made intensive collections in caves in the Xilitla area, published in 1952, but the animals found there have, in general, not been positively identified in the literature or described. Recent work by a number of mammalogists and bat specialists have resulted in the publication of many records for bats in Mexico and Dr. Paul S. Martin made an intensive and excellent study of zoogeography of the Gomez Farias Region, including many collections of reptiles and amphibians in caves and sinks.

In general, however, Mexican cave work is on a very primitive basis with only the large, well-known caves adequately studied. Even these have turned up significant finds. In 1962 members of the AMCS collected millipeds in Sotano del Arroyo. One of these proved to be the type of a new genus and species, described recently by Dr. Hell Causey as Mexiterpes sabinus. A new genus and species of terrestrial isopod, Mexiconiscus tlamayensis, has also recently been described, in a paper by George Schultze. Several additional new genera and species are either under study or in press and collections have really only begun.

Among the most potentially interesting groups are members of the extremely rare arachnid order, Ricinulei, represented by less than 20 species in the world. To date at least two and possibly three undescribed species have been taken from caves in Central and North- Central Mexico indicatig that the order may prove a common cave inhabitant. This is only one example of many possible ones which might be used to demonstrate the lack of information on Mexican caves and their possible importance to biology in general.

Only the barest beginnings of a study of Mexican biospeleology has been made so far. The study of Mexican cave biology will take many years of collecting and more years of description and publication before it can approach even the lesser known regions of the United States.

THE EXPLORATION OF SOTANA DE TLAMAYA

by Terry L. Raines
Austin, Texas

On November 22, 1964, Bob Burnett, Benny Martin, Bill Bell, and Terry Raines, all members of the University of Texas Speleological Society, entered Sotano de Tlamaya, a pit located in the Sierra Madre Oriental near the small village of Tlamaya, San Luis Potosi. With high spirits and much enthusiasm they hoped to explore and map the deepest cave in the Western Hemisphere. Although this was not the first visit to the cave it did promise to be one of the most successful.

Previously, during February 1964, Frank Wiseman and Bob Thomas had entered the pit, exploring to a depth of 502 feet before turning back. Then, on July 28th Jimmy Peters, Glenn Boydston, and Terry Rains also members of the UTSS explored and mapped to a depth of 841 feet before running out of rope.

This was the situation when the four cavers awoke that morning of the 22nd to find it still raining and a heavy fog blanketing the mountains. They were camped on the patio at El Rancho de Huitzmolotitla, owned by Sr. Modesto Gomez. In previous trips, especially the exploration of Sotano de Huitzmolotitla, Sr. Gomez had provided invaluable aid to the explorers and made many of the fine discoveries in the area possible. Now, on this occasion, everyone ate a good breakfast and prepared his gear for the descent into the cave.

It was a short three-quarter mile drive from the ranch along the truck road to where they parked, a 300 yard walk from the entrance. Located on the southern edge and some 20 to 30 feet above the floor of the large Tlamaya Dolina, the entrance consists of two separate pits. The smaller one is 15 feet in diameter, drops free for 277 feet, and is the one where the rope is usually rigged; the other is 20 feet away, 30 feet in diameter, and drops 150 feet before slanting towards the smaller pit and intersecting it. Both entrances, located in the bottom of an arroyo, now pirate away the flood waters that once ran into the dolina.

Benny and Bob headed on up to the cave with the greater portion of the ropes while Bill and Terry made last minute preparations before joining them. At the entrance the 600 foot Nylon rope was unbraided and lowered into the hole. With each one carrying an additional 300 feet of rope, Terry was given the honor of rappelling in first, followed shortly by the others. From the bottom of this entrance drop the party continued on down the next two drops, 73 and 76 feet respectively, and arrived at the first room. This room is some 30 feet in diameter with a small stream passage 5 feet wide and 25 feet high running tangent to it. The upstream section continues for nearly 200 feet before ending in a dome with a small stream cascading from the top. This is the first point where a flowing stream is encountered and throughout the rest of the cave water is found descending over every drop. As for the downstream section, it immediately drops 12 feet then continues on as a fissure passage for 150 feet until the stream suddenly disappears over a 100 foot drop. Along this passage they relayed the ropes over the small pools and upon reaching the drop a 160 foot rope was rigged. This length was used because the nearest tieoff point was some 40 feet back up the passage. Now with every thing set each of the four rappeled in turn paying special attention to the waterfall and trying to keep out of it. On this drop it was found necessary to loop the rope over certain projections and rappel at a smooth steady pace, for if one became too careless the rope would slip off and he would soon learn that rappelling under a water fall can be a wet, cold experience. Upon arriving at the bottom they quickly skirted a large, deep-looking pool and found a convenient dry spot on the other side where relatively little water fell. It is at

the bottom of this 25 foot in diameter pit that the waters of the cave first divide. One way, the passage the explorers took, continues level for 61 feet before the cold waters again loose themselves in the blackness. As for the other way, a pit located on the opposite side of the room, it also takes half of the water and drops for an undetermined distance. This passage is unexplored. Continuing on down the explored passage a tricky chimney over a deep pool is encountered just before reaching the next drop, which totals 200 feet. Because the longest rope available was 200 feet it became necessary to rig it as close to the edge as possible. This was done by using a short tieoff rope and tying one end to a natural bridge 30 feet back up the passage and the other to the 200 foot rope. With the rope running over his brake bars, Bob disappeared over the edge, again being careful to avoid a soaking under the waterfall. Sixty feet down he found it possible to get out of rappel and climb down some 50 feet before it became necessary to return to the rope to complete the drop. Nearing the bottom, Bob spied a ledge that he was able to swing over to and climb down from, thus eliminating that extra nine feet that the rope lacked. Following his example Terry also put his brake bars to the rope and joined Bob below, being followed shortly by Bill and Benny. After again regrouping at the bottom everyone shouldered his equipment, ropes and a small side pack, and started off. The next couple of hundred feet found the explorers clinging to the walls like flies in order to avoid the numerous deep pools that made up the greater portion of the floor in this section of horizontal passage. As they neared the next drop they could hear the roar of the waters as they tumbled into space. Eagerness was the feeling in the air as they peered into the nothingness below that no other human had ever passed. This was at the 841 foot level - the end of the previous survey. Of note is a stream that enters at this point from a passage some 30 feet up on the right wall and which remains unexplored. Several minutes of searching along the honeycombed walls revealed a small interconnecting hole between two solution pockets what was used as an anchor for the rope. Mapping began at this point so with steel tape in one hand Terry began the rappel. After a free drop of 42 feet he swung over to a natural bridge and could see that the stream continued on steeply but would not require equipment. Bob was next and after taking the azimuth and vertical Benny and Bill followed. Continuing on down the passage for two more stations it was found to suddenly end in a small siphon. This caused some immediate worries but after surveying the situation for amoment it was noticed that the passage didn't have a ceiling. A short 20 foot chimney brought them up into quite a large room that was immediately christened the "Big Room". Although the actual dimentions were 130 feet long, 40 feet wide, and 80 feet high the dim carbide lights and black walls gave one the feeling of being outside on a dark night. By unanimous vote they stopped in one corner, rested, and ate a little snack. After thirty minutes mapping was continued again to the far end of the room. Here another stream was discovered and in it were many transparent earthworms. This of course halted every thing except collecting, for up to this time all that had been collected were millipedes and cave crickets. Along with the worms hundreds of isopods were found of which an adequate number of each were collected. Positive identification of all fauna will be given in future newsletters. They continued

mapping along the most obvious route, the upstream section of this new stream. Unlike the other fissure type passages throughout the rest of the cave this passage was found to be of elliptical cross-section, obviously of purely phreatic origion. It averaged 20 feet high and 25 feet wide with banks of black dirt sloping towards the stream from both sides. After several minutes and 470 feet they came upon what at first seemed to be a formation plug but within a few minutes Benny found a continuation to the passage. It consisted of some five inches of air space over a shallow, cold, muddy pool located at the base of the formations. It was made more promising by the fact that what seemed to be a very large waterfall could be heard on the other side. After several minutes of discussion Benny decided to make the surpreme sacrafice, so with clothes left on a dry mud bank he inched his way through the icy water and arrived in the continuation of the passage where the other three were now waiting. With promises to return soon he roared off. Some twenty to thirty minutes later found Bill, Bob, and Terry deciding who was going in to see what had happened to Benny. About this time the lost explorer popped his head back through the hole and found everyone anxious to hear what had happened. It seems the passage continued on for several hundred feet before intersecting a larger room. Here one large passage continued on to the right and another smaller one was seen up on the wall. He took the larger which soon branched into two, both heading in the same direction for the same distance [illegible] before ending in breakdown. Upon returning he found that the "waterfall" was actually made by air roaring through the small passage under the formation plug. Benny climbed back into his warm clothes and all returned to the Big Room. Here they rested a while then started searching for more leads, discovering the downstream section of the passage they had just explored. With spirits renewed the Brunton and tape were put back into operation and the party continued ever onward. The passage resumed its old familiar shape, a high fissure averaging 8 feet wide, often not having a ceiling, and containing deep pools from wall to wall every few feet. As one can see this requires the explorer to cling to the walls a large percentage of the time and makes traversing this type of passage very fatiguing. Mapping was continued for 893 feet before it was decided to start thinking about returning to the entrance. Of the three baby bottles of carbide the group had brought in, one almost full bottle remained. Finally they decided to stop mapping and continue on only to see what was going to happen. Exploration was extended until half a baby bottle remained, their only way of measuring time since no one had a watch, and they had seen roughly 500 feet more of the same type of passage. From here an estimated four hours were spent in reaching the entrance. This was a reasonably short time since everyone was using Jumar Ascenders and all ropes were left in place since they knew they would return. The only thing of note on the way out was the higher volume of water running over the waterfalls, evidently due to rain during the night. This made everyone a little wetter but caused no other difficulties. Upon reaching the surface, some 26 hours after entering, a dash was made for the truck then to Sr. Gomez's patio. This later proved to be a mistake for when they returned the next

day they found that some person in need of rope had pulled up as much of the 600 as possible (it was tiedoff in two places below) then cut it, letting the remainder fall back into the hole. This caused some trouble since it required a trip into Xilitla to buy 300 feet of sisal rope.

The morning of the 28th found the group again preparing their equipment for a return trip to the cave. This time, due to illness, Benny decided to wait on the surface so after rigging the new rope Terry rappeled in. At the botton he tied the Nylon rope on and Bob and Bill raised it, retieing the frayed end to the tree. They then rappeled in and all three continued on to the point reached two days before without incident. Here all the extra ropes were left behind and mapping begun. As they forged ahead several side passages adding more water to the main stream were noted. One particularly impressive dome rose over 150 feet into the limestone above and contained a good-sized waterfall that issued from some passage far above. When the karst features of the overlying mountains are explored it is very probable that these side passages will turn out to be new entrances to this large drainage system. Some 3 hours later found Bill, Bob, and Terry 1053 feet from the day's beginning point and the drops getting bigger. After encountering an easy 15 foot climb-down a much more difficult 30 foot waterfall was discovered. Several minutes were spent in discussinn and study before Bill managed to find a route down the right wall. The other two quickly followed and mapping continued another 85 feet before every thing came to a complete standstill. At this point the whole bottom dropped out of the cave, or at least that is what it seemed like. From the two observation points, the top of the waterfall and a small "window" just to the left, all one could see was blue mist made by the falling water. Oncemore, a rock thrown down the pit could not be heard to hit above the roar of the falls With mixed emotions the three sat down to contemplate the situation. Several minutes of discussion and deliberation later a decision was made to return the 1259 feet, get the ropes, and come back to explore the drop. So with heavy footsteps and without a word the small group began the long, never ending chimneying over the many pools back to the ropes. Upon arriving Bob decided that due to fatigue it would be best if he continued on to the Big Room and wait for Bill and Terry. Shouldering the one, 100 piece of waterlogged Goldline the party, now reduced to two, turned around and headed towards the drop. It was with little energy and a smaller amount of carbide that the two finally arrived at the drop. They promptly rigged the rope at the window and prepared to descend. Terry, being the first, went down 20 feet, ran along a narrow ledge, then climbed back up 10 feet to a pinnacle that overhung the center of the pit. This was done to avoid the water that still got him partly wet. Bill then took the Brunton readings and afterwards joined Terry out on the pinnacle. They collected several insects then Terry rappeled on down finding the drop to be 74 feet and then immediately followed by another 17 foot drop. At this point the passage turned sharply to the right and continued on. Going only a few feet until he could hear the water continuing in the

distance, Terry returned to the rope and prusiked back up to where Bill waited on the pinnacle. From here they began the long journey back to the Big Room there Bob waited. Upon arriving they ate a good meal and rested before facing the long prusik out. The job was harder for the fact that all the ropes that had been rigged earlier were now soaking wet and weighed considerably more. The progress was very slow but after spending 31 hours in the cave all returned to the surface, tired but happy. Total surveyed length was 3012 feet, and total depth was 1281 feet.

Editor ..... Terry Raines

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THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume 1 Number 2 February 1965

Reprint

One of the groups in the Valles area during the Christmas vacation was composed of Mike Collins, Linn Collins, Sam Young, and Diane Young. Attempting to enter Sotano del Arroyo, we were informed by the children at Los Sabinos that we could not go to the cave without the permission of a certain official in Valles. We left without investigation of the matter. (Are cavers failing to maintain good owner relations in Mexico, the greatest caving area in the world?) We continued on to Sotano de la Tinaja where we explored the "sandy floored" passageway up to the lake. Near the lake an upper level virgin passageway was discovered and explored to the end. Diane collected two blind fish. The following day, Mike and I explored a 130 foot pit about two miles from Tinaja. We dubbed it Collins' Blind Pit. (He left his glasses at the bottom.) After enjoying the New Year's celebration in Valles, we returned to Austin with a short stop at Cueva de El Abra.

During the three days from the 29th to the 31st David McKenzie and Bill Stribling made a short trip to Gruta del Palmito at Bustamante, N. L. While at the cave they made several biological collections and later they hiked and explored in the area above the cave.

26 Dec. We had a routine trip to the border at Laredo. Much hell was encountered at the Mexican side of the customs. Many tourists were thronged together waiting for their visas. We traveled through the night missing many of the sights from Monterrey to Valles.

27 Dec. We awoke to very green, tropical scenery and tremendous mountains. Banana, orange, avocado, and lime trees were growing along the roads. We reached the town of Huichihuayan, S.L.P. and proceeded about 8 miles to the turnoff at Y Griega. We crossed the ferry and began what was to be a most scenic ride to our destination — Tlamaya. We encountered many large sinks and caves along the steep, winding road which leads to Xilitla. About two miles from Xilitla we took the cutoff to Tlamaya. Much hell was had with the truck which was constructed too much like a car to provide suitable clearance. The road winded for 5 miles to where a short road led to our host's house. We talked to Senor Modesto Gomez about our plans to explore the deep sotanos around his land. We then set up camp in a very large patio in his yard and enjoyed a good meal. After this Ted Peters, Jimmy Peters, Glenn Boydston, Terry Rains and I (Danny Evans) hiked down to Sotano de Huitzmolotitla. A rock took at least 5 seconds to hit the bottom of the first drop which is 344 feet deep. We also took a look at the cave we were to partially explore and map located about a mile from Huitzmolotitla on the other side of a ridge. (This cave had been explored to a depth of 1281 feet.) It was thoroughly impressive with the Lower Entrance drop at 277 feet. We were to explore a higher entrance in order to extend the depth of the cave which is yet unexplored beyond the 1281 foot level. Terry and

I decided to hike east of Gómez' into a terrain little traveled by gringos. We hiked up to a high hill and picked a trail which led to an area filled with karst and tropical vegetation. We found one interesting spot which was literally riddled with jagged rocks and holes resembling caves. We took pictures and proceeded toward a limestone face in the distance. We got side tracked, however, and wound up going in circles. The vegetation was very dense and jungly. We managed to find a water hole which the peasants had dug and filled our canteens. We continued onward until we located one cave which had a very impressive entrance but had only an insignificant drop. Banana trees, vines, and dense jungle slowed our progress to another cave which we sighted on the side of a mountain. We hiked up to the entrance where we found some very old looking pottery. The cave was nothing. Raines and I hiked further east encountering some of the most beautiful scenery I have ever seen. But realizing that it was getting late, we continued only 1/4 mile further.

28 Dec. We awoke to the mountain scenery and prepared to enter Sótano de Tlamaya. We got equipment ready, ate breakfast, and proceeded to the cave. The entrance (Upper Entrance) was surrounded with vines and jungle vegetation. We rigged a cable ladder for a 15 foot drop at the entrance. I was given charge of operation of the Brunton and the 800 feet of rope was divided amoung us. We quickly came to a short slope leading to a 100' drop. Raines rappelled holding the tape for a vertical reading; I followed with the Brunton. We came to a small room with a pool of crystal clear water, the others descended. We climbed down a 15 foot drop which took us to a fairly large room floored with breakdown. A small passage leads down to a 50 foot drop which we rigged and descended. A short while later we came to a 167 foot drop, the bottom of which overlooked an 88 foot drop (fissure-like). We then entered a dome shaped room where we ate some grub and took a couple of pictures. An obstacle-filled stream passage led to a 54 foot drop into the Junction Pit, the destination of our endeavors. The Lower Entrance to the cave has a 277 foot and 150 foot and a couple of 100 foot drops leading to this point. A large pool of water and a 50 foot high cascade of flowstone greeted our arrival. From this intersection is a series of drops which lead to a surveyed depth of 1281 from the Lower Entrance and -1354 feet from the Upper Entrance. We turned back at the intersection however. We had mapped and were ready to return to the surface. Terry and I took many pictures on the way out. We had entered the cave about 10 AM and left under the stars at 8 PM.

29 Dec. With breakfast over, we packed enough essentials for an overnight hike into the mountains. Our plan was to go in a northeasterly direction across the mountains in hopes of finding some large sótanos. From Tlamaya we took a well marked trail and wound steeply upward until we reached a small group of huts. Continuing on past for another mile, we came to more huts and inquired about possible sótanos. The villagers knew of one only a 100 yards from the trail but were reluctant about giving us permission to even see the entrance. We discovered that much trouble could have been avoided by obtaining

a letter of introduction from the President of Xilitla. After much talking, though, we were led to the entrance and found it t be only 30 feet deep or so. We continued on down the trail. Shortly, we noticed a tremendous sink which drained a whole valley. All land in the area sloped toward a crater-like depression surrounded by thick vegetation. Our hearts thumped as we rushed to the bottom. We anticipated the Mother of caves, but to our dissapointment, however, the bottom yielded only two pools of water. We ate lunch and replenished our water and hike onward. After a mile we came to the edge of the mountains which stood high over the valley below. We could make out the town of Huichihuayan and the Inter-American Highway several thousand fee below. Hiking down to the town below, we passed near two of the resurgences at the base of the mountains and crossed a river that led from them. From Huichihuayan we rode trucks and walked along the road, arriving back at camp at 10 pm.

30 Dec. Much of the day was spent talking to the hospitable people of Tlamaya then that afternoon the road between Huitz-molotitla and Tlamaya was surveyed. The purpose was to provide a relationship of the road to the caves and the caves to each other. Also it was hoped that some relationship between the caves and the overlying surface features could be discovered.

31 Dec. We got up and packed our caving gear in hopes of exploring Sotano de los Platanos in the town of Tlamaya. We drove the pickup as close as pollible then walked to the entranc The drop was rigged and I rappeled in first. The cave ended, however, with the 87 foot entrance drop. After Ted and Jimmy went down and came back up wehiked around in the area taking pictures. Returning to camp, we packed all the equipment, gave Sr. Gomez a very hearty thankyou and farewell, then headed for Austin.

Caves of the Sierra de El Abra

Part I Tamaulipas

The Sierra de El Abra is a long narrow limestone range extending along the front of the Sierra Madre Oriental for about one hundred miles. The range is located at the edge of the coastal plain directly west of Tampico.in the states of Tamaulipas and San Luis Potosi. It is separated from the higher ranges to the west by a narrow synclinal valley. The El Abra Range rises abruptly from the coastal plain to the east, forming an escarpment that is in places over a thousand feet in height. The maximum elevations in the range are only slightly over 1300 feet, but as the elevations at the base of the range are low there is a large amount of local relief. The west side of the mountains is much less steep, and the floor of the valley to the west is only three to four hundred feet below the crest of the range. The range is cut by two principal passes. The one south of Ciudad Mante is used by the Mante-Valles Highway, and

the one east of Valles is used by the Valles-Tampico Railroad and Highway. Both of these passes are known as El Abra (The Pass). To further confuse the nomenclature the range has sever local names which have been used on some maps.

The city of Valles recieves about thirty inches of rainfal a year, most of it during the summer months. The higher parts the range probably recieve slightly more rainfall. The average temperature is about 76 degrees. Only during infrequent northe does the temperature drop below freezing. This rainfall is enough to support a dense growth of brush at the lower levels and an almost impenetrable jungle at the higher elevations. Th dense vegetation and the effects of solution have almost elemi- nated surface run-off from most of the range. It is estimated that about 1155 million cubic meters of water flow yearly from springs at the base of the range.

Though this is one of the most studied of the Mexican cave areas, none of the larger caves have been completely explored. So far the largest cave systems are located a few miles north of Valles. (These will be described in the next issue of the Newsletter.) But it is likely that the Sotano de Venadito or other as yet unentered sotanos to the east will also comprise large systems.

The caves in the El Abra area appear to have formed in two stages. First there was a stage of phreatic solution during which large voids and passages were dissolved. This was follow by a much later period of integration in which these large and poorly connected voids and passages were invaded by surface streams and combined into large systems. Those caves that are not now receiving streams such as Cueva de El Abra, Grutas de Quintero, andVentana Jabali are relatively undisturbed phreatic voids, and have only moderate length. Whereas caves such as Sotano del Arroyo and Sotano (Cueva) de la Tinaja represent several phreatic voids that have been integrated by surface waters. There are probably many caves in the El Abra area that have been invaded by a surface stream and could not be integrat but these will have been filled with sediment.

The El Abra range is one of the more accessable and inter- esting Mexican cave areas, and though a great amount of work has been done in this region even more remains to be accomplish Much of the early work in this region has been described by F. Bonet in his article "Datos Sobre las Cavernas y Otros Fenomenos Erosivos de las Calizas de la Sierra de El Abra". Th 1956 and the 1963 Corpus Christi Geological Society guide book contain road logs and a discussion of the geology of the area.

Sotano de La Noria

This is a complex pit located about one mile north of the house at the Rancho de La Noria. The cave recieves considerable runo from the field just to the south of the entrance. The entrance itself is an irregular hole about five feet in diameter. This drops about 20 feet to another drop of 20 feet at the bottom of which is a natural bridge. Just above the bridge the cave oper up into a north-south fissure. Continuing on down past the br a short drop and then a climb leads to the edge of a 30 foot pit. At the bottom of this pit are several small passages and fissures. The main passage is blocked by logs and other washed

in debris, and considerable time would be required to clear it. Total depth is about 120 feet.

Sotano de la Tarantula

Located to the east of the ranch house about 100 feet east of the large field. This pit is a 60 foot drop to a breakdown plu From the east side of this plug another pit drops for about 50 feet to the bottom. Several tarantulas were observed at the bottom of the cave.

Puente de La Noria

This is a natural bridge about 50 feet long and wide connecting two sinks. No real cave exists at this place. Located about 100 yards south of the SE end of the field SE of the ranch hous

Sotano del Descanso

This is an elliptical pit about 6 feet by 8 feet dropping free for 105 feet. It is located on the top of the ridge east of Rancho de La Noria, about five feet from the left fork of the main trail leading east from the ranch.

Cueva del Nacimiento del Rio Mante

The Rio Mante flows from beneath a cliff at the foot of the El Abra Range about four miles west of Cd. Mante. The spot is a popular picnic and swimming area and can be reached by follow the signs from the highway south of Mante. The large smount of water emerging here must flow from a large cavern system. Unfortunately the entrance to this system is completely filled wi water. However, the water level has been raised by a dam used to divert the Rio Mante into irregation canals. Local inquirie should be made to find out if the cave could be entered before the dam was constructed. Several people that we asked did not remember any such cave, and as the water at the entrance to the cave appears to be only ten feet deep it could not have been mu lower before the dam was built.

A small cave on the south side of the Nacimiento is develc along a prominent joint. The cave is a high, partially breakdc filled fissure about three hundred feet long. About fifty feet from the entrance a skylight opens to the surface. Several sma pits in breakdown lead to deep water and the cave appears to be inhabited at times by bats.

Cueva del Pachon

The entrance is located on the western side of the El ABra Range near the village of Pachon. It is easily accessable by means of a jeep road and ashort climb up the side of the hill. Maasuring 20 feet wide and 8 feet high at the entrance, the ca quickly enlarges to an average of 15 feet high and 30 feet widc and continues on for 600 feet with only a few minor side passag that end shortly. The floor of this section of the cave is composed of black soil. After walking this distance one encour

a pool containing blind fish and aquatic isopods. To the right a small passage half filled with water siphons after only 66 f while straight ahead the water extends from wall to wall and i quite deep. This small lake is 15 feet wide and 140 feet long after swimming to the far side one can climb up a steep mud ba to a small room at the end of the cave. Members of the Univer of Texas Speleological Society visited this cave on 26 January 1965.

Cueva de El Abra

This frequently visited cave is located just above the Inter-American Highway at Km. Post 542 and to the northbound traffic the 70 foot high by 60 foot wide entrance provides an impressiv sight. From the opening on the side of the cliff the next 600 of passage gradually enlarges until it attains a height of an estimated 140 feet and a width of 35 feet. At this point a pit from the surface intersects the cave and has a depth triangulat to be 245 feet. After rappelling down an 89 foot drop from the entrance passage, one finds himself with a decision to make. climbing up a very steep flowstone slope on the opposite side can explore several hundred feet of passage before coming to a sudden end. Although the first portion of this passage is nic decorated with stalagmites and flowstone the last hundred feet floored with dry, dusty guano and contains no formations. The other alternative the explorer has is to turn sharply to the r to a much larger and impressive passage. The ceiling is more t 150 feet above and the walls average 45 feet apart. The floor slopes down at a 30 degree angle and, being completely covered basketball - size breakdown, descending is rather hazardous. Th slope continues down for 300 feet until reaching the terminatic room, which is 40 feet in diameter. Throughout the first secti of the cave thousands of dead bats were seen on the floor durin the most recent visit (27 Jan 1965) that were evidently the vic tims of some epidemic. Although a highly contagious disease ca nearly wipe out a population, a few bats always remain to propa gate the species. Total length of the cave is 1460 feet.

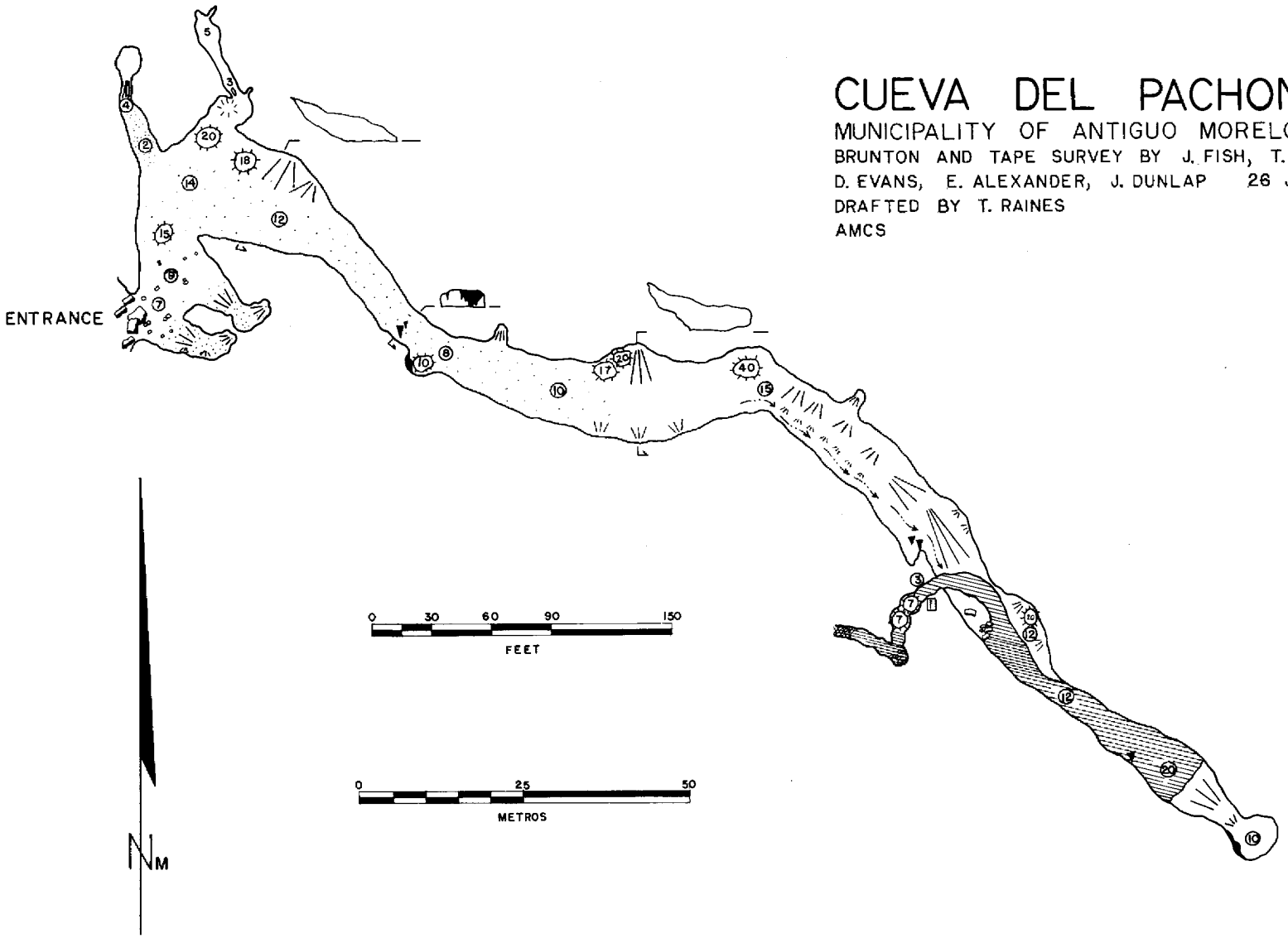
Cueva de Joya de Aguacate n. 1 and n. 2

Located at the top of a ridge of the El Abra Range near a low pass, these two caves have their entrances at either end of a large, shallow sink. The northernmost entrance measures 12 fe high and 40 feet wide and continues back for about 100 feet int a slightly larger room before ending. The whole cave is dry ar of little interest except for a few old names scribbled on the

The cave at the other end of the sink (n. 2) is even small 6 feet high and 15 feet wide, and 30 feet long. Much like the other cave, this one was also dry and contained no fauna.

Grutas de Quintero

Grutas de Quintero is located a few kilometers southwest of the small village of Quintero. Signs point the way to the cave and stone steps have been built from the road up to the mouth of th cave. The cave is entered by a passage about 5 feet high and 6 feet wide. This soon opens into a large rising tunnel 30 feet and 20 feet high. About 50 feet from the entrance two small passages to the right lead into a high fissure-like passage whi


CUEVA DEL PACHON
MUNICIPALITY OF ANTIGUO MORELOS, TAMAULIPAS
BRUNTON AND TAPE SURVEY BY J. FISH, T. RAINES, J. CALVERT,
D. EVANS, E. ALEXANDER, J. DUNLAP 26 JANUARY 1965
DRAFTED BY T. RAINES
AMCS
ENTRANCE
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forms a loop and connects again with the main passage of the ca after about 250 feet. This passage contains much flowstone anc few small formations. About 150 feet from the entrance there i a sucession of large travertine dams and flowstone deposits rising about 10 feet above the level of the entrance. After ar additional 100 feet a skylight rises to the surface. A short distance beyond this point the cave turns sharply west and exte about 300 feet before turning abruptly south. Straight ahead a this turn a sloping passage leads down into an alcove, at the end of which it is possible to climb over 10 foot high traverti dams filled with water. The passage continues beyond this poin but has not been explored. After turning south the main passag extends about 200 feet to where a second alcove leads off to th right. This also leads down to an area of lakes which have not been explored. From the second alcove the passage leads up int a large room about 150 feet long, 50 feet wide, and 40 feet hig A sloping passage on the right leads down to a large lake, whil a sloping passage on the left leads up into a short dead-end tunnel. The only notable formation in the cave, a white stalag about 15 feet high and 10 feet in diameter, is to be found in t room. The main passage from this room extends for about 800 fe to a somewhat smaller, mud-floored passage which ends in a 40 foot deep pit. This portion of the cave has been frequently visited as is evidenced by much vandalism and by the presence o many camp-fires throughout the cave. Past the pit the passages narrow to an average of 15 feet wide and 10 feet high and conti for about 2000 feet. This length is only a quess as several passages remain unchecked and this whole latter section is un-surveyed. Also much mud and water is encountered toward the en

Sotano de Venadito

Like several of the other caves further south in the El Abra Range, the entrance to this cave is located at the end of an ar and recieves much water during heavy rains. The pit entrance measures 20 feet by 40 feet and drops 152 feet with one ledge at the 49 foot level. Arriving at the bottom, one finds himself clinging to the wall above several large, deep plunge-pools. But by climbing 30 feet along the horizontal passage that leave the bottom it is possible to reach solid footing. At this point the cave divides; a seven foot in diameter tube passage cutting back sharply to the left while the larger passage, 15 feet wide by 20 feet high, continues straight ahead. Following this larg

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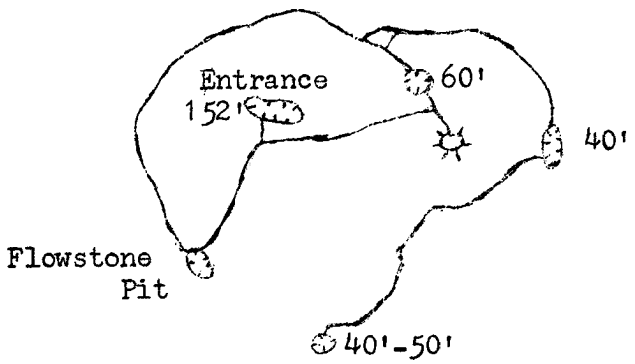
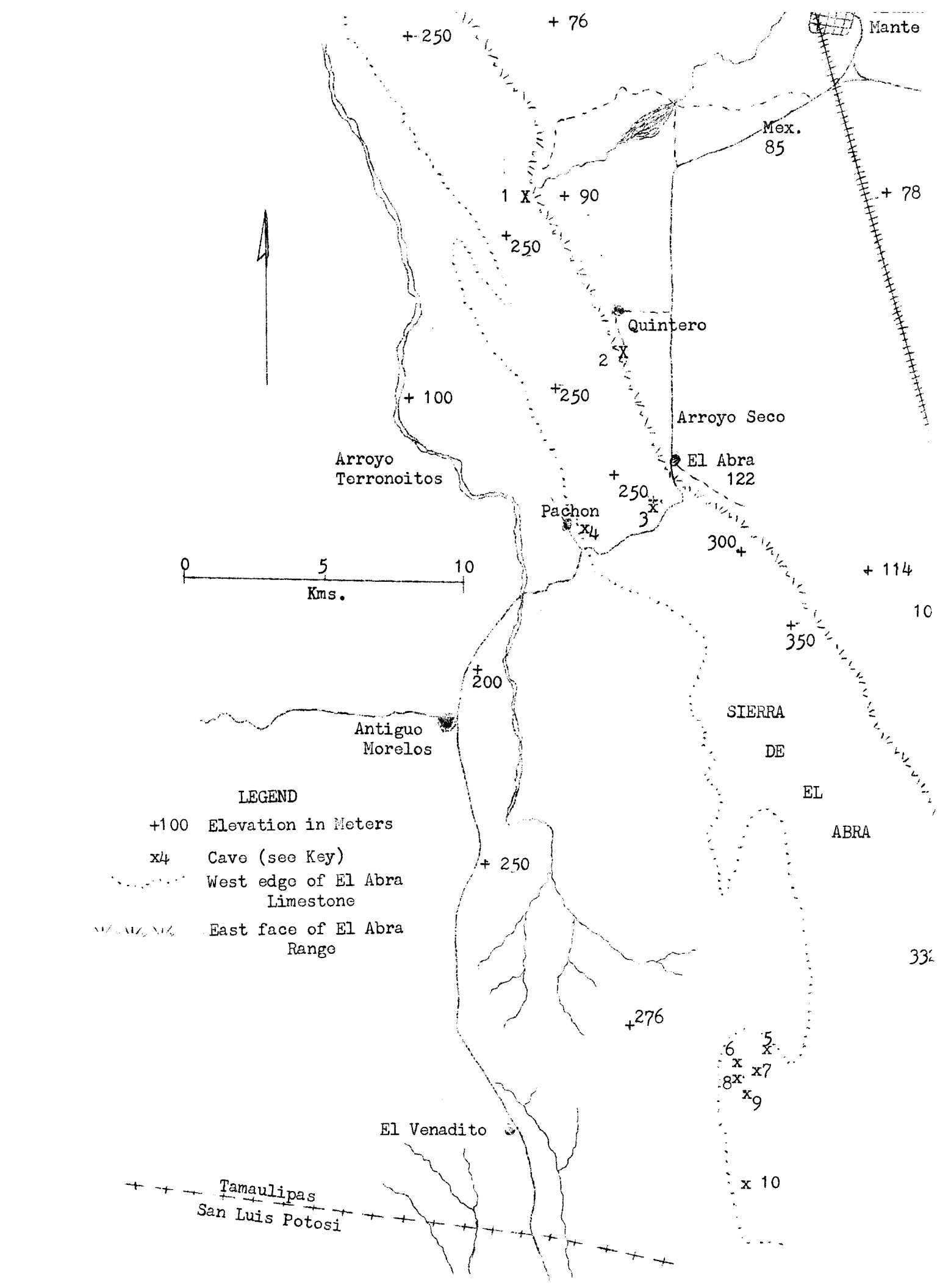
Line map of Sotano de Venadito:




+ 250
+ 76
Mante
Mex.
85
1 X
+ 90
+ 78
+ 250
Quintero
2 X
+ 100
+ 250
Arroyo Seco
Arroyo
Terronoitos
El Abra
122
+ 250
Pachon
x4
3 X
300+
0
5
10
Kms.
+ 114
10
+ 350
+ 200
SIERRA
DE
EL
ABRA
Antiguo
Morelos
LEGEND
+100 Elevation in Meters
x4 Cave (see Key)
West edge of El Abra Limestone
East face of El Abra Range
+ 250
33
+ 276
6
5
x
x7
8x
x9
El Venadito
x 10
Tamaulipas
San Luis Potosi

passage for about 200 feet, a flowstone lined pit 30 feet in diameter is encountered. Exlporation of this pit proved it to blind with a vertical drop of about 100 feet. This is indeed strange because during flood time the large amount of water ent ing the cave must either find an outlet at the bottom of the p: of fill it and follow one of the other passages.

Returning to the entrance and following the tube passage, one quickly discovers that this is the passage that leads to th largest extent of the cave. After 150 feet it divides, to the right where it divides again. This time, by continuing straigh ahead from the bottom of the drop, one loops around until he encounters the flowstone lined pit again. The other passage from the 60 foot drop is found to carry flood water and average 25 feet high and 8 feet wide. At the time of exploration this passage was explored for an estimated 2000 feet to the top of a 40 to 50 foot pit. The top of this drop is between 300 and 350 feet below the entrance. In order to reach this point and con- tinue on one will need ropes for: this last drop, another just preceeding (40 feet), the 60 foot drop, and the entrance drop. Also of great importance is a sump just after the third drop wh is likely to be a siphon except during the dry months between late December and the latter part of April. Explored on 24 Ja 1965 by members of the UTSS.

Biology of the Caves of the Northern El Abra Range

by James Reddell

Very little study has been made of the caves of the El Ab Range in the state of Tamaulipas. With the exception of Cueva El Abra, Cueva de El Pachon, Grutas de Quintero, andSotano de E Venadito no caves in this area have been biologically investiga ted. The presence of unusual forms in these caves is a good indication of the rich collecting in store for the future.

Perhaps the most unusual of the animals recorded from this area is Typhlolepidomysis quinterensis Villalobos, known only f Grutas de Quintero. This is a member of the usually marine crustacean order, Mysidacea. In Mexico this order is known on from caves in Yucatan and from this cave. Other Crustacea rec from caves in the area include two eyeless aquatic isopods of t family Cirolanidae. This family is represented in fresh water

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Key to Location Map

1. Cueva del Nacimiento del Rio Mante
2. Grutas de Quintero
3. Cueva de El Abra
4. Cueva del Pachon
5. Cueva de Joya de Aguacate no. 1 and no. 2
6. Sotano de La Noria
7. Sotano del Descanso
8. Sotano de La Tarantula
9. Puente de La Noria
10. Sotano de Venadito

by cave species, being otherwise marine. Two species, Speocirc bolivari (Rioja) and Speocirolana pelaezi (Bolivar), are known from Grutas de Quintero, while only the latter is reported fro Cueva de El Pachon. A third isopod recorded from the area is a terrestrial species, Protrichoniscus bridgesi Van Name. This blind isopod is common on organic debris in Grutas de Quintero Cueva de El Pachon.

The only milliped known from caves in the area is a trogl philic member of the family Styloniscidae. It appears to belo to an undescribed genus and species and is found only in Gruta de Quintero.

Another unusual animal occurring in the caves of the area a probably undescribed species of the rare arachnid order, Ricunulei. This tick-like animal is represented by only a few species in the New World and the appearance of an undescribed is notable. It is known only from Sotano de El Venadito.

Other arachnids represented in the caves of the area incl pseudoscorpions, spiders, and members of the small order, Phrynichida. Atroglobitic pseudoscorpion, Paravachonium boliv Beier, has been described from Grutas de Quintero. Spiders fr this cave include a large species of the genus Ctenus, commoml found on the walls of the cave. It is apparently undescribed is a species of the genus Loxosceles. Two species of spider h beencollected in Cueva de El Abraand identified as Strotarchu and Loxos eles sp. Only the latter species appears to be a permanent cave inhabitant. Also present in Grutas de Quintero a species of the order, Phrynichida, Tarantula sp.

Three insects orders have been collected from the area. Beetles of the familes Hydrobiidae and Tenebrionidae have been collected in Cueva de El Abra. The first family is represente by an as yet undetermined genus and species, while the second represented by the species, Liodema sp., near kirschi Bates. latter species is apparently a common troglophile or trogloxen bat caves. Troglobitic thysanurans of the family Nicoletiidae common in Grutas de Quintero and may be representative of an undescribed genus. Also present in this cave are crickets of family Gryllidae. These are as yet unidentified, but may be troglobitic.

Of all the fauna of the area none is better known than th blind fish, Anoptichthys antrobius Alvarez. This species was described in 1946 from Cueva de El Pachon and is known only fr that cave.

Nine species of bat are recorded from the caves of the ar Natalus mexicanus, Artibeus jamaicensis jamaicensis, Glossoph soricina leachii, Desmodus rotundus murinus, Diphylla ecaudat and Pteronotus rubiginosus mexicanus are all recorded from Cu de El Pachon; Desmodus rotundus murinus, Tadarida brasiliensi mexicana, and Tadarida aurispinosa are known from Cueva de El Diphylla ecaudata and Mormoops megalophylla megalophylla are from Grutas de Quintero.

Unfortunately it has been possible only to list the spec found in these caves; it is hoped, however, that this will dem strate both the unique nature of the fauna of the area and th lack of knowledge of this fauna. No real idea of the extent diversity of the fauna can be obtained until much more collec is made and more of the collected material has been studied. is not at all unlikely that additional remarkable animals rem undiscovered in these caves.

Acknowledgements

I wish to thank the following specialists for their ident fications of material included in this report: Millipeds – Dr Nell B. Causey, Louisiana State University; arachnids – Dr. Wi J. Gertsch, American Museum of Natural History; thysanura – Dr Pedro Wygodzinsly, American Museum of Natural History; beetles Dr. T.J. Spilman, United States National Museum.

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Members are urged to submit articles for publication. Ma submitted for publication should be of a type suitable for cop onto a standard or legal size memeograph master. Longer artic with more detailed maps are invited for publication as a bulle Trip reports are requested from all trips

Editor.....Terry Raines

Staff.....Bill Russell
James Reddell
David McKenzie
Richard Smith
Ed Alexander

THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume 1 Number 3 March 1965

Reprint

Trip Reports

Persons: Ed Alexander, John Fish, Janie Calvert, Jim Dunlap, Danny Evans, and Terry Raines
Date: 20–29 January 1965
Destination: Mante Area
Reported by: Ed Alexander

The semester break trip to the Mante area in Tamaulipas set out with the primary purpose of locating Sotano de Venadito which was known to be somewhere east of Highwas 85 and Rancho de Venadito. Leaving Austin on Wednesday, 20 Jan., I headed for Mante alone to do some preliminary searching until the rest of the group could join me on Saturday. From Laredo I caught the train to Monterry where, after a short delay, I found the bus station having a bus going to Mante. Arriving in Mante at about dawn on Thursday I boarded the 6:45 second class, local toward Valles. Sixteen stops later I got off at the Venadito sign several miles south of Antiguo Morelos and began the nine kilometer hike along the road to the east to Rancho de la Noria. The ranch lies in a small valley at the western base of Sierra de El Abra, and was in the general area where we believed Sotano de Venadito to be located. However, upon arriving at Noria no one knew of the large sotano and furthermore I would have to return to Mante for permission from Senor Edgar Vibina to enter several smaller sotanos on the ranch. After more talking they finally agreed to show me the entrances to some of the closer pits, and in a matter of minutes had led me to the tops of four sotanos and were talking of more. Thinking it may be worth the trouble to check these pits I hiked back to Highway 85 and caught the next bus to Mante and the required permission from the patrone.

The next day, Friday, I was again getting off the bus at Venadito and hiking along the road to Noria, with a written permit in my pack to enter the sotanos. About half way back to the ranch I met a mule with a rider named Antonio who was to become our quide for the next four days. He said he knew of a large sotano about three kilometers away and proceeded to lead me down an arroyo several kilometers south of Rancho de la Noria After following the arroyo for about one kilometer we were in a canyon about thirty feet deep. Then every thing came to an en and I found myself looking down the entrance of Sotano de Venadi Since I was to be joined the next day by more cavers from Austin we returned to Antonio's house where I spent the night.

After waiting for about half of Saturday morning for the rest of the group, I told Antonio that I was going back to Ranch de la Noria to check the sotanos I had seen there on Thursday. He immediately dropped his corn hasking, got out his mule and came with me. At Noria I entered one of the sotanos and a short shelter cave. On the way to another sotano, the truck arrived from Texas with Terry, Jim, John, and Janie. We decided to make camp and rest up for the trip into Sotano de Venadito the next d

Sunday morning Antonio and his friend Pancho met us and the now enlarged group of seven headed for the sotano. Terry, John, Janie, and I rappeled in the entrance drop of 150 feet and then

down a second drop of 60 feet. From there we chimneyed down a descending canyon for over 100 feet more until we were stopped by a 50 foot drop. The cave apparently continued on and down with no decrease in size. After checking a connecting pit near the entrance drop we prusiked out and returned to camp.

Monday morning early Antonio and Pancho again dropped by our camp and offered to guide us to several caves they knew of in the sierras. Thinking that perhaps they would lead us to some great new caverns, we accepted the offer and followed them up a jungle covered, thorn infested mountain to finally find two amall shelter caves, Cueva de Joya de Aguacate nos. 1 and 2 Back down the two or three kilometers of mountain to the truck, we were then led several miles south along the sierras to Sotan de Don Pedro, a small 120 foot pit inhabited by a single rat. By this time Antonio, who had watched us enter several pits, decided it was time for him to try. We clipped him into a seat sling and watched him disappear over the edge, and then later reappear on Terry's Jumars. Leaving the Venadito area and the newly converted caver we drove to Antiguo Morelos where we camp expecting to meet Danny the next morning.

That morning, Tuesday, we didn't see Danny in the town so we drove on north to the turnoff to the town of El Pachon. While we were stopped there asking directions to Cueva del Pach the second class, local to Valles came by and discharged Danny and his pack beside us. Our full group of six then located the cave just up the hill from the town well and spent several hour mapping, collecting blind fish, and photographing bats. Leavin the cave we drove back to Mante and made camp at El Nacimiento del Rio Mante where we spent the rest of the day reorganizing the truck, catching up on our notes , and swimming in the cryst clear, blue-green water. El Nacimiento is one of the large resurgences along the eastern base of the mountains, indicative of large cave systems somewhere higher up in the sierras. On Wednesday we drove to Cueva de Quintero where we did some mappi and exploring. At the end of the cave we entered several hundr yards of passage, part of which was virgin and the remainder of which had only been entered a few times in the past. That night we again camped at El Nacimiento.

Thursday was to be our last day in Mexico, so we repacked the truck and drove south to the pass through the sierras for a short visit to Cueva de El Abra. Much impressed by the large entrance and enormous sky light we climbed back into the truck and began the long trek back to Texas. We passed through Lared customs at about midnight and arrived back in Austin at 4:oo a.

Persons: Bud Frank, Orion Knox, David McKenzie, and John Porte
Date: 19-25 January 1965
Destination: La Joya de Salas
Reported by: David McKenzie

(Ed. note: The unusually detailed descriptions in this trip report are given in order to familiarize the reader with the Gomez Farias area. It is believed that with further explorati this area will become as important as some of the other pit areas such as Tequilla, Ver. and Xilitla, S.L.P.)

19 Jan. At 6:30 a.m. we left Austin in John's pickup. We arrived in Reynosa at 2:40 p.m. and spent one hour crossing the border. At 8:00, after a 194 mile drive, we reached Victoria and, with some difficulty, found the Juamave road. We camped beside it in the foothills west of town.

20 Jan. We left early and began climbing the scenic range that separates Victoria and the Juamave valley. It is the northern extension of the Sierra de Guatemala which, in the Gomez Farias area, contained caves we hoped to visit — mainly a large rumore sotano at La Joya de Salas. It was our faint hope to find a route on the less precipitous side of the range,-as several recent attempts at Encino failed due to deep, non-traversable ruts in the road. The elevation of Juamave is 750 meters as compared to the 120 m. of Encino, where a steep and narrow lumber road climbs to 2000 m. and then down to 1550 m. at La Joya.

The 38 km. road to Juamave is very impressive; but as it is only partially finished, it would punish a car with low clearance. Two of us rode the pickup's tailgate to see more of the scenery. At the halfway point, where-the road reaches its highest elevation, we stopped at a store-dwelling for "refrescos". We were told of a sotano and several caves in the arroyo just south of there, probably easily approached by the "old road" which goes to a nearby ranch.

We continued west, dropping to the valley floor, and then moved south over extremely dusty roads to the small desert town of Juamave. The vast cactus-treed landscape is remarkable in its contrast to the tropical scenery one encounters near Encino To the east we could see the tremendous and remote canyon of the Guayalejo River which cuts its way through the anticlinal range. At a general store in town we asked if there was a road from there to La Joya, about 35 km. away. But far from it, the was only a rough, seldom-used trail, where one could "get lost and die of thirst without a guide". We weren't inclined to doub this and, as we were anticipating a deep cave, we intended tryi every possibliity of getting our heavy gear to the entrance.

More anxious than ever to reach the cool mountain cloud forest, we drove back to Victoria, bought a few forgotten necessities, and went 48 miles south to Encino. We then drove west, crossed the scenic Rio Sabinas, and continued through spectacular tropical forest to a difficult stretch of road requiring a laborious breaking down of its high center. A noisy flock of parrots and a great variety of butterflies contributed to the new atmosphere. At 4.8 miles from Encino we beat the Juamave dust out of our sleeping gear and camped for the night.

21 Jan. While struggling with the road, we let two lumber truc pass carrying water to the first lumber camp, Julilo, at about 1300 m. The passage of the second truck along this stretch was slow and precarious, and after helping it across we were offered a ride to Julilo. Reluctantly we accepted, having hardly started our climb of the range. An emergency-brake failure, which nearly wrenched off the right door of the pickup had further discouraged us. We hurriedly condensed our equip-ment to four heavy packs and a 1300 ft. collection of rope which included the veteran "600 ft." length.

The 4000' climb to Julilo was truly exciting. Thick jungl usually limited vision to within a few feet of the road, but higher up there appeared impressive views of the plain. When a conspicuous pit entrance 15' from the road came into view, we stopped and dropped in a few rocks. Sotano de Maria, as it is called, is an unentered shaft dropping 90' to a slope or ledge. Other attractions along the road were a recently killed fer-de-lance hung on display and a "murderous" tropical stingi nettle called "mala mujer". A brush with this plant, whose stalk is often over ten feet tall, is like a wasp sping. After the immediate pain, an itching sore will develop and may last for more than a week.

Julilo consists of about six family dwellings and a sawmil whose main product is slats for fruit crates. It is surrounded by a cool pine and hardwood cloud forest, which for eight month of the year, experiences daily rainfall. When we arrived we were shown to a tin-roofed shack where we could stay and store our gear. After eating, we learned that trucks rarely go to La Joya, an agricultural community no longer operating as a lumber camp. Sadly, we would have to hike the rugged 10 km. to La Joya, leaving most of our heavy rope behind.

That afternoon, craving excercise, we hiked toward La Perr a lumber camp 7 km. from Julilo and approx. 1900 m. high. We rode a truck for half the distance. Tall karst pinnacles provide a weird setting for this larger camp. The water source is Agua Linda, where a stream issues from a small cave and sinks within a few hundred yards. Hiking south about 2 Km. we came upon a spectacular panorama at the mountain's eastern drop-off. The edge of the large sink or "dolina" where we stood was in late afternoon shadow, but the plains steeply below us were covered with brightly lit clouds.

We walked back to Julilo, reaching our house at nightfall. We planned to hike to La Joya the next morning, carrying our packs and 400' of rope.

22 Jan. We made an enthusiastic early start. When we had clim about 1000', our morning burst of energy nearly gone, we met two men who convinced us we had taken the wrong road from Julil While this logging road ended within 200 meters, the correct route looped far to the north. They said, however, that La Joy was a mostly downhill walk from La Perra, for which the logs they were loading were destined.

We rode the truck to La Perra, balanced carefully on the huge, shifting logs. On arriving, we bought some Pepsis, candy and crackers at a store counter. We then started northwest through thick pine forest, threading our way through tall limestone spires ornamented with large agaves. Occasionally we checked large sinks for caves but found none, as the thick humus and topsoil allowed little chance for an entrance. Finally we made the top of the range, and the man we had met just previously said we were still six km. from La Joya. We encountered a sotano about 30 ft. from the and hoping to at least collect some cave invertebrates, I quickly checked it. The 70' pit entrance leads to a steep passage dropping an additional 80' to a high, circular dome-room 40' in diameter. We named it 2000 Meter Cave. The fauna was interesting, but scarc due to the dryness.

As the road gradually descended, we noticed the change to a vegetation supported by less rainfall: stout oaks and far less undergrowth among the pines. There was little of the jagged karren which characterizes the eastern slopes of the range at nearly all elevations. After passing the site of an old sawmill, we came to what we thought was a huge sink; but Orion checked and found a narrow canyon continuing down. He also discovered bear tracks near a small pool.

Soon we were standing at the brink of the broad valley of La Joya de Salas. The view was magnificent; we could see the blue gleam of a lake perched behind a remote ridge, but nowhere was there sign of inhabitance. While searching for good camera viewpoints, John came upon an even greater spectacle. Orion's canyon was now an awesome slot, our rocks floating free for seven seconds before crashing on the distant floor! We were later told that the canyon runs south to eventually enter the Rio Boquilla near Ocampo, about 25 miles distant.

The road ended and we began descending the switchbacks of a crude trail. It was late afternoon and, suspecting we had missed the right route, we started hiking cross-country to the lake. The karst of the valley floor was strangely differen from anything we had seen. The level ground was covered by a smooth carpet of grass, now yellowed and dry. And beneath the canopy of pines were scattered innumerable sinks, each denoted by a jumble of exposed rocks. We wandered west for at least a mile, then crossed the ridge separating the northern extension of the valley, which contained the lake and surroundi village. When we told a villager of our plans, he eyed our rop and said the sotano was "muy profundo" - much too deep. He kne of no other caves in the area and was sympathetic that we made such a long futile hike.

We decided to camp in the long, treeless pasture just beyo the lake, where a group of boulders blocked the wind. The sotano, just 300 yards farther, we would face in the morning.

23 Jan. When we sorely crawled out of our frost-covered sleepi bags, we realized how effectively the cloud blanket at Julilo - at about the same elevation - protects it from such a sharp drop in temperature at nightfall. While eating breakfast, we watched the numerous and active teal on the lake.

We truly admired the idyllic setting of La Joya; the small thatched houses did little to alter the area's natural appearance. The only water source for some 300 inhabitants and their livestock is the shallow lake, which drains the long valley meandering north. When it occasionally dries, water is trucked 25 km. from the Rio Sabinas, which resurges at the base of the range northwest of Encino. Our inquiry aupported what Frank Harrison had told James Reddell and myself during a summe visit to the cloud forest at Rancho del Cielo. He said the lak was artificially created when a "resumidero", or sinkhole, was somehow plugged. Harrison also remembers when an unusally long heavy rain rose the lake and caused a violent and spectacular whirl-pool at the entrance of the larger sotano!

We found it situated only two hundred feet in front of the village schoolhouse. It is indeed an imposing shaft; the maxim top dimentions are 40' by 115' with its smooth walls dropping sheer for nearly three hundred feet. At the narrow west end,

however, we could see a ledge about 85 feet down, and from the we could tie our longest rope. There was virtually nothing but smooth rock ledges around the entrance so we used an expansion bolt for a tie-off. While about forty amazed spectators watche we all rappelled to the ledge, where another bolt was necessar I then began a brake-bar rappel to the bottom, somewhat doubti the adequacy of the 200' rope. I reached the rock covered flo with six feet to spare.

There were several ways to go; the most obvious was a bone dry passage leading, as we would have hoped, to another long drop- probably exceeding a hundred and fifty feet. The passag was so thoroughly scoured that a rock for gauging the drop cou be found only at the bottom of a deep pothole. The cause of the extreme dryness was fully realized when the acetylene flame fluttered strongly as I walked back toward the entrance. The cool air pouring in the cave was, of course, a fascinating sign.

The other passages were minor. The longest contained a small pool at the end, where aquatic isopods were collected. One alcove near the entrance contained scores of leopard frogs. The most exciting find was a number of totally blind, white crickets.

Using Jumars, I ascended to the ledge. We then prusiked t the top and discussed our discoveries with the spectators. They were particularly interested in the water.

To say a Mexican cave is "promising" certainly needs to be clarified. As we had jokingly predicted when we left most of our equipment at Julilo, our 400 feet of rope was "wiped out" before we could even escape the twilight zone. Furthermore, the massive lower cretacious limestone in the Gomez Farias region supposedly is of unlimiting thickness. But where is the drainage of this system at La Joya destined? Most likely for one of two large resurgences: the Rio Frio and the Rio Sabinas the latter being the least distant and a good 4500 feet below!

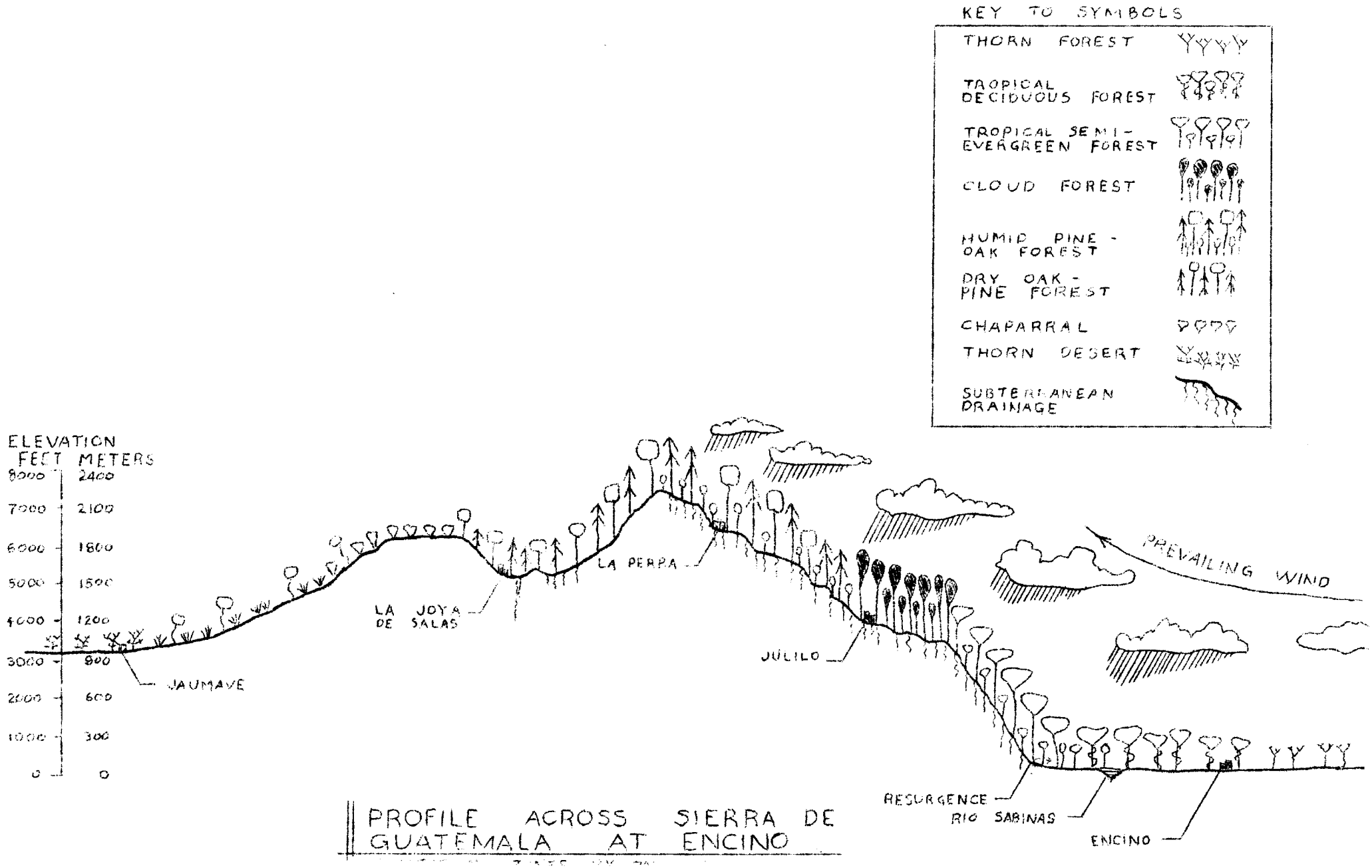
We spent the afternoon seeing more of the surrounding area Crickets were collected in a dry ninety foot crawlway named Cueva de la Escuela. The "maestro", with whom we discussed our plan to return to La Joya, offered us the fenced-in school yard for our campsite.

24 Jan. Early morning was devoted to photography and preparing for our hike to Julilo. John and I would try the 10 km. road; while Orion and Bud would go through La Perra, hoping to find a misplaced hardhat and logbook.

Our route took us through still another type of terrain. We followed a narrow, winding valley containing large oaks draped with Spanish moss. Fortunately we met no problem intersections, and it was about noon when we could relax an the cabin floor. Soon after, Bud and Orion staggered in, having walked about 15 km.

At nearly nightfall we caught a truck loaded with fresh-cu railroad ties destined for Encino. The wild ride to our pickup took about 2 hours. We reached Encino with little delay, our luck with the weather having been remarkable. We drove to Victoria, bought some "pan dulce", and went 30 miles north to camp.

(continued)



PROFILE ACROSS SIERRA DE GUATEMALA AT ENCINO

25 Jan. We enjoyed the morning drive to Monterrey. Encountering few problems, we crossed at Laredo and finally arrived in Austin at 11:00 p.m.

We had used surprisingly little carbide during the trip, but we were now assured that the sotano at La Joya de Salas is well worth the concentrated effort needed to reach it.

Caves of the Sierra de El Abra

Part II Los Sabinos, S.L.P.

The village of Los Sabinos, located about 8 miles north of Valles, is the center of a small area containing more cave passage than all the rest of the El Abra range. Within 5 km. of this village are located six of the largest caves in the range. At present exploration of this area has barely begun. Of the six large caves, mapping of all large passages is almost complete in two, two others have had incomplete but extensive exploration, and two have had only their entrance sections visited. Topographically the area consists of rolling, brush and jungle covered hills. The area is drained by normally dry arroyos that lead into the caves. Elevations in the area range from about 200 to 250 meters. The nearest resurgence is the Nacimiento near the Hotel Taninul 10 km. to the southeast at an elevation of about 90 meters. It is likely that several of these caves will eventually be connected. At present not enough mapping has been done in the area to make it possible to speculate on the detailed speleogenesis. The limits of this area are not known and it is entirely possible that more large caves may be discover

Sotano del Arroyo B. Russell

The entrance to this large cave is located about three miles east of the Cd. Valles–Cd. Mante highway, and about three miles SE of the village of Los Sabinos. The cave can be reached by traveling east from Los Sabinos for about one mile and following the normally dry arroyo to the cave. Near Los Sabinos the arroyo has low dirt banks, but near the cave it goes over several climabable falls before dropping fifty feet into the cave. This entrance is a recaangular slot, almost 200 feet deep except on the north end where the arroyo enters. Several passages lead from this entrrance. Thirty feet above the floor and below the arroyo a passage averaging about eight feet in diameter goes for about 800 feet to where it is almost blocked by flowstone. Even though this passage is thirty feet above the floor of the sink, water appears to enter it during floods. Several other passages leaving the entrance sink at the same level have not been explored. The main passage of the cave leaves the south end of the sink and continues for about 1000 feet to a 50 foot drop. This section of the cave averages about twenty feet wide and thirty feet high, and shows signs of violent flooding. There are several pools from three to five feet in depth that must be crossed in this passage, though after the longer dry periods some of them are dry. About 500 feet from the entrance a right branch

The Water Passage, leads from the base of a small drop behind curtain of formations. This passage extends for about 200 fee to a right turn through a small hole into a deep lake. This l is about 200 feet long with about three to four feet of cleara At the end of the deep water the passage goes over a series of travertine dams and drops into a larger passage that extends f about 1500 feet to where it reduces to a crawlway.

The first drop in the main passage, about 45 feet, leads over polished limestone into a larger section of the cave. Fro the base of this drop a passage about thirty feet wide and six feet high extends to a room. This room is triangular in plan and about 200 feet on a side. From where the main passage ent the room slopes steeply upward to the right, and downward over steep breakdown to a lake. Across this lake is a low section passage with only a few feet of clearance. This passage then enlarges and leads to a drop of about 30 feet to water. It is known if a traversable passage extends from the base of this d

Another passage heads east from the base of the drop lead to the triangular room. This passage first leads up a steep slope to the level of the entrance passage. It then makes a right turn and continues for about 200 feet averaging 15 feet wide and 10 feet high. By making a right turn and climbing through formations it is possible to reach a room about 10 fee high and 20 feet leads for about 300 feet to a lake that forms the end of this passage.

This is the best known of the large caves of the El Abra range, with over a mile of mapped passage. If there are no further discoveries, the map may be completed in a few trips. The entire cave appears to flood about every other year after heavy rains.

Sotano de la Tinaja D. McKenzie

Though none of the large "resumideros" in the El Abra range are fully explored, Sotano de la Tinaja promises to exceed all in size and complexity. At present, about 9000 feet of voluminous passage has been traversed and, aside from many leads, the major drainage channels appear to cantinue undiminished on size.

The cave is approached by following a canyon-like arroyo to its end, where the surrounding walls are nearly 200 feet high. The drops in the arroyo previous to the cave entrance are climable. A descending passage extends east from the entrance and averages 30 feet by 15 feet high. Beyond 500 feet it abrubtly enlarges and attains widths and heights exceeding 75 feet. The floor consists of large, smooth boulders often covered with slippery vampire bat guano. Soon after one traverses alongside a deep lake, an unclimable 25 foot drop is encountered. The cave has been mapped to this point by zoologists from the American Museum of Natural Histor who, in 1947, made a study of the blind fish of the area.

Beyond the drop, which is approximately 1200 feet from th entrance, a 25 by 50 foot high passage leads acutely to the northwest; while the east-trending passage, becoming high and narrow, appears to be blocked by formations about 350 feet further. Recently, however, a narrow side passage was discove above a short climb on flowstone. This quickly leads to a dro of about 60 feet into a large room or passage--as yet unentere

The northwest passage continues a few hundred feet to the

"main intersection". Previous to this is the stoopway entrance to a 500 foot long linkage passage, some parts of which are attractively decorated. At the intersection, a large passage directed NW SE is encountered. To the right it is narrow, passing through formations, and soon reaches a room to which the linkage connects. The main passage continues east several hundred feet to a 30 foot drop. The muddy, debris-covered floor indicates it is a major course for the arroyo's water. Toavoid the lake below the drop, a ledge can be traversed for about 70 feet to a better tie-off point. The passage descends rapidly beyond. It is very high and usually less than ten feet wide at the lowest level. Exploration is tedious because handlines are frequently necessary and pools must be traversed. Finally one reaches a 60 foot drop into a large room apparently denoting a "T" intersection. Its approximate dimensions are 150 feet long, 100 feet wide, and over 100 feet high. Adeep lake requiring floatation gear has limited further exploration.

The passage extending NW of the main intersection is, so far, the most impressive part of the cave. The broad meandering gallery, commonly 50 feet wide and 25 feet high has been followed for about 5000 feet. The floor is a stream-bed, usually dry, with many sand and gravel bars forming undulations. Organic debris is almost entirely lacking. Large columns, stalagmites, and flowstone deposits are numerous and often very colorful. About 3000 feet from the intersection is a narrow section of passage with deep travertine pools which contain the best water yet found in the cave. At this point a side passage has been explored which, by way of a series of rooms and crawls, intersects a large solution room perhaps 600 feet long. With respect to drainage, it seems unrelated to the rest of the cave.

At about 1500 feet beyond the pools a large lake is encountered. (a shallow one just previous is easily passed.) It is about 200 feet long and averaging 40 feet wide, with the ceiling varying from 6 feet to 40 feet above the water. Mostly waist deep, the lake can be crossed by holding to formations. Just beyond, a clay-floored side passage to the left leads to a formation block and crawlway not fully explore

The main passage continues to another lake where progress is halted by a broad natural bridge. Because it siphons beneath, one must pass through the wide crawlway above which leads to a 20 foot sheer drop into deep water. The passage apparently continues with large dimensions, but floatation gea will likely be necessary for further exploration. A connection with S. del Arroyo may well be suspected since this is an "upstream" passage and it appears to trend northwest. Several side passages along its sinuous length remain unchecked.

Another lead worth mentioning is an obscure passage extending northwest at a point just 150 feet from the cave entrance. Its approach is through a 100 foot long "slot" with a drop-down through large boulders at its end. A 40 foot wide passage extends from here, its low ceiling necessitating a crawl over smooth rocks. It contains an air current and obviously takes much of the arroyo's water.

The fauna of the cave, which is quite extensive, will be covered in a future report dealing with the Los Sabinos area. Of primary interest is the blind fish Anoptichthys, common in

every pool of any size. Peculiar objects deposited throughout the cave are the large two-pronged thorns of the Bull-horn Acacia, a bush common in the Valles Area.

Cueva de los Sabinos — B. Russell

The entrance to Cueva de los Sabinos is located about 4 km. east of the village of Los Sabinos, at an elevation of 560 feet. The cave has not been visited by AMCS members, the information in this report coming from a excellent map and report published by the American Museum of Natural History. The entrance to this cave is about 100 feet high and 50 feet wide and leads into a room 200 feet long, and up to 100 feet wide. From this room a large passage extends north and east for about 200 feet. Southwest from the entrance room a 20 by 20 foot passage leads for 200 feet to a 110 foot drop at the bottom of which is a passage of the same size and directio After 100 feet this passage enlarges to form a series of rooms that extend for 500 feet to where the passage appears to end in a pool. Two hundred feet from the drop there is another large passage leading to the SE, that soon turns and leads back almost under the entrance. This passage is about 20 feet wide and high, with much of the floor being covered by deep pc From near the entrance this passage turns south and after 500 feet drop 50 feet into a room. The passage leading from this room is at an elevation of 235 feet, which is 325 feet below t entrance and very near the level of the resurgence at Taninul. The passage at this level is very nearly filled with water and the total length of the passages mapped by the Museum was abou 3000 feet. The purpose of the Museum's visit to the cave was to investigate the biology, especially the blind fish.

Sotano de Montecillos — D. McKenzie

Typical of the other large caves in the area, the impress entrance is situated at the end of a large, deep arroyo. A 50 foot drop must be equipped to enter the cave; a 20 foot drop i the arroyo just previous must be climbed. The cave consists o two parts. The water of the arroyo enters a 20 by 50 foot hig passage leading east to what is known locally as "el sotano". Directly opposite this is "la Cueva", a 30 by 30 foot passage extending underneath the arroyo.

The sotano is encountered about 150 feet within the east passage. A flowstone slope prevents getting close to the pit which is apparently over 100 feet deep and beneath a very high dome. There is water at the bottom — most likely a plunge poo Local people say that the president of Valles once encouraged an exploration of the pit with the intention of installing a water pump if feasable. A platform has been built atop the 15 foot cliff at the entrance.

The west passage enlarges beyond the entrance and contain several massive formations. It continues large for about 200 feet where it lowers to a clay floored stoopway and goes sever hundred feet to become a water passage. From the large sectio two major side tunnels lead south; water is encountered in eac after a few hundred feet. Flotation gear will probably be required.

The fauna included animals common to other caves in the a Spiders, phalangids, silverfish, aquatic and terrestrial isopo

and crickets. Blind fish were numerous in all three passages o the west section. Bats were heard in the dome above the pit.

Sotanito de Montecillos D. McKenzie

The entrance, situated in the floor of the arroyo leading to the previous cave, is a vertical well approx. 110 feet deep. The 8 by 5 foot opening is partially covered by a thick lime-stone slab. From the bottom of the bell-shaped shaft a high, irregular passage averaging 15 feet wide and dropping occasiona leads south. After about 300 feet a cross-passage is reached. To the right, it extends to an unexplored watercrawl. Southeas past a large flowstone curtain, is the passage through which th flood water is directed. It is a large meandering stream chann averaging 20 feet by 20 feet with several high domes. The cros sections are often interesting; one is sometimes winding his wa through a deep, narrow slot cut in the floor. The passage meand so greatly that, at one point, a "cut-off" has formed. One can bypass a loop by climbing through an opening in the thin passag wall. It was explored for about 2000 feet to a lake where flot tion gear is necessary. The passage is still large at this poin

Back near the intersection a steep climb on flowstone lead to a small side passage directed north. This shortly opens int a large irregular gallery containing numerous formations. It descends fairly rapidly reaching a depth well below the level o the water chanel. After 500 feet a 30 foot drop has stopped exploration. An 18 foot drop just previous to this must also be equipped.

Further exploration of this cave will almost surely prove a connection with the other sotano. A survey of the two should be an enjoyable and interesting project.

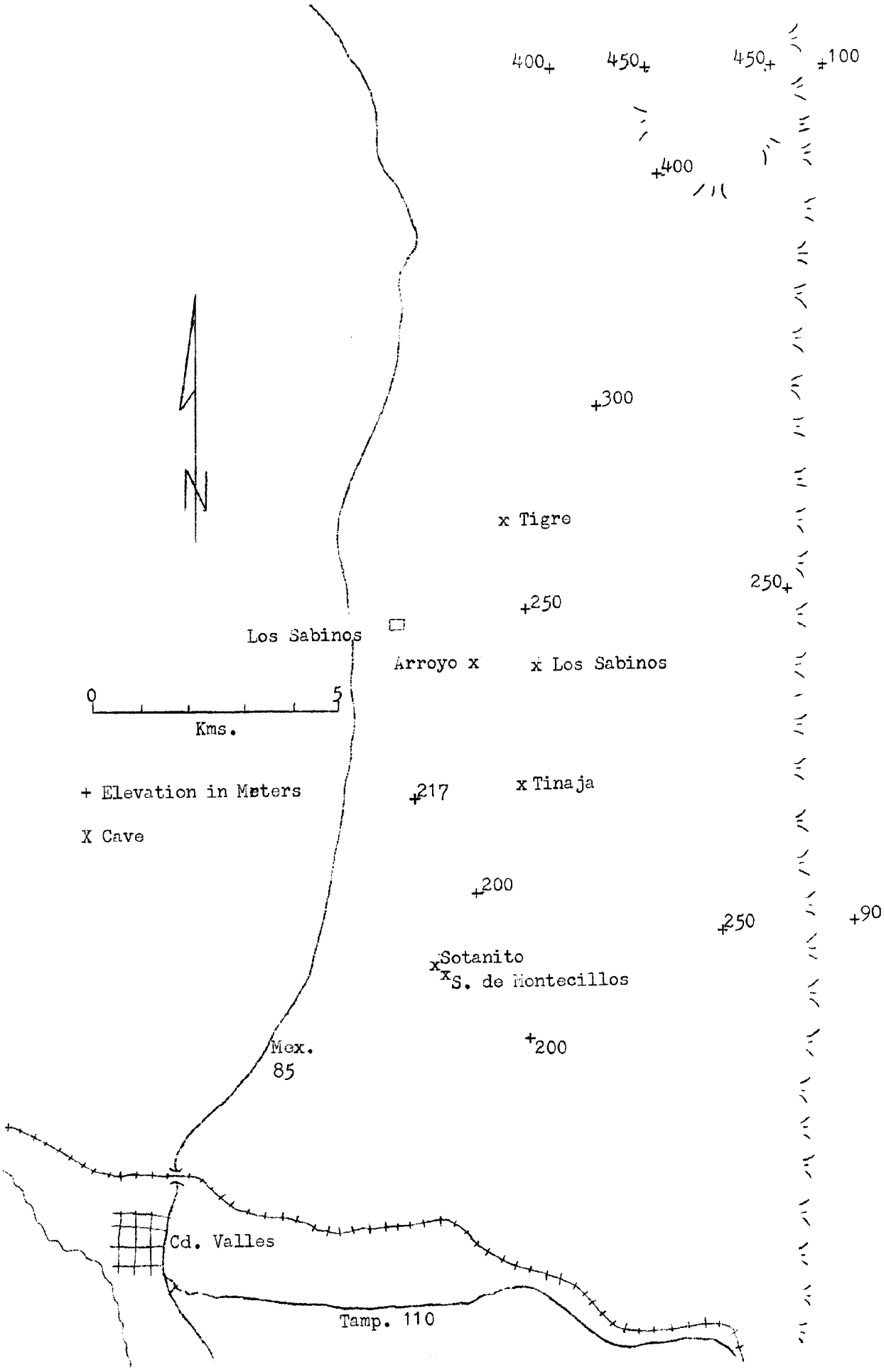
Numerous pools in the water channel contain blind fish. So dormant bats were seen on the ceiling of one small side passage

Cueva de Leon D. McKenzie

The entrance of this small cave is in the north wall of the arroyo, about 100 yards down from Sotanito de Montecillos and about 300 yards down from the large sotano. Though only about 75 feet long, the cave is attractive and contains several domes, one almost 30 feet high. It served as an excellent campsite when the nearby sotanos were visited.

Sotano del Tigre D. McKenzie

This sotano is the northernmost of the chain of "resumideros" and can be reached by a 4 km. road and trail from Los Sabinos. It has been entered only once by AMCS members. The only previous investigation was by the president of Valles who reportedly found it unsuitable as a source of water. The vertical entrance is at the end of a canyon not as large as those characterizing the other sotanos. But the ivy-covered floor and walls provide for a impressive approach. The drop is sheer, with dimensions averaging 50 by 25 feet, and drops 190 feet to a plunge pool. A short offset leads to a 110 foot drop into a high gallery trending perpendicular to the arroyo. Just opposite the drop, a scoured, tube-like passage averaging only 5 feet high extends about 200 feet to


400+
450+
450+
+100
+400
+300
x Tigre
250+
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Los Sabinos
Arroyo x
x Los Sabinos
0
5
Kms.
+ Elevation in Meters
X Cave
+217
x Tinaja
+200
+250
+90
x Sotanito
x S. de Montecillos
+200
Mex.
85
Cd. Valles
Tamp. 110

an unentered domepit perhaps 60 feet deep. The main gallery leads north from below the entrance. At about 300 feet an 80 foot drop into a large dome-room is encountered. About 30 is climbable. Progress was stopped for lack of equipment. A side passage, partially log-jammed was also found to continu

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The AMCS Newsletter is published monthly by the Associati for Mexican Cave Studies, P.O. Box 7672 UT Station, Austin, Te 78712. Membership in the AMCS is $5.00 for the calendar year, with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications for that year.

Members are urged to submit articles for publication. Ma submitted for publication should be of a type suitable for cop onto a standard or legal size Memeograph master. Longer artic with more detailed maps are invited for publication as a bulle Trip reports are requested from all trips.

Editor.....Terry Raines

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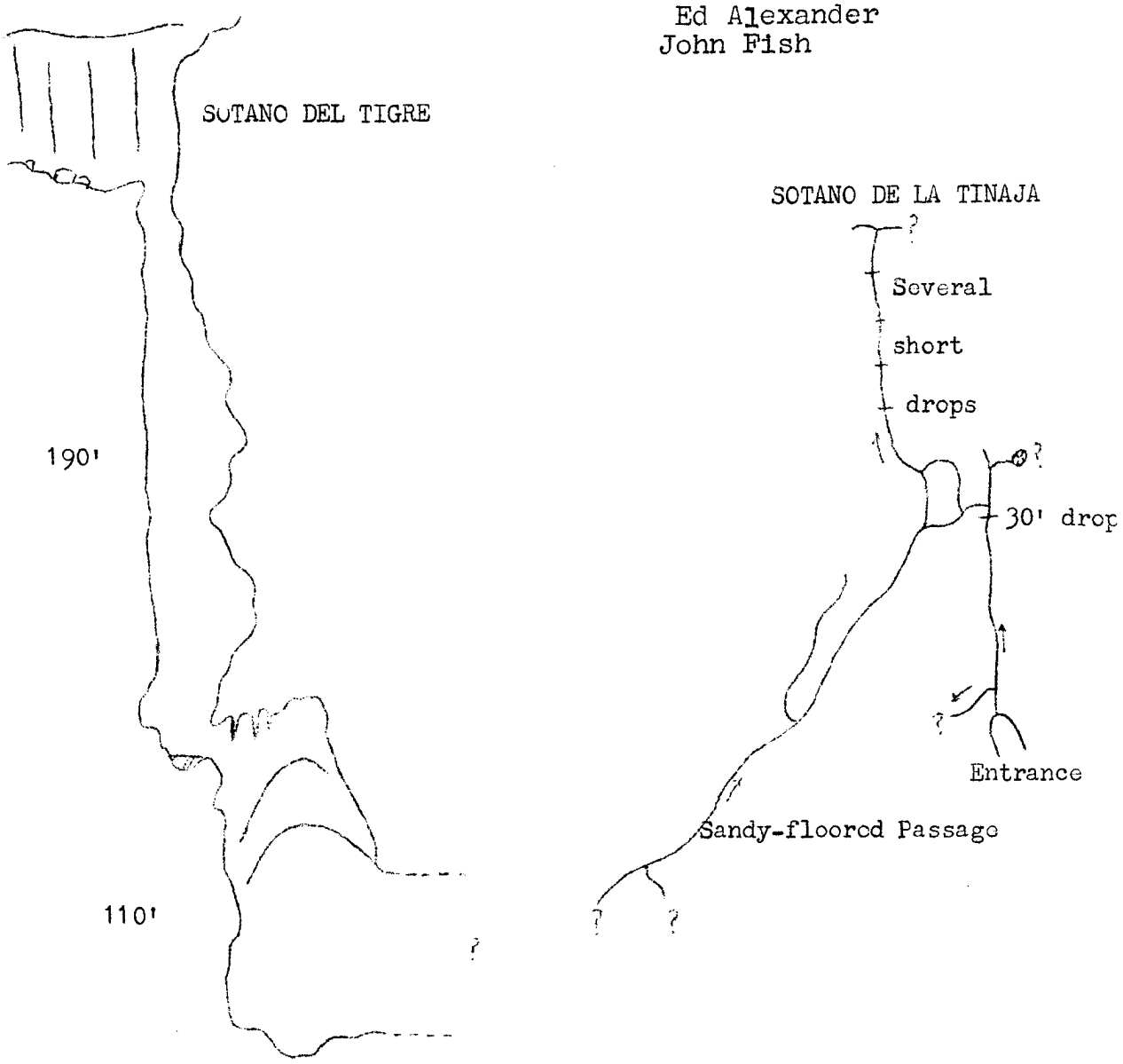


THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume I Number 4 April 1965

Reprint

Caves of the Sierra de El Abra

Part III Tamuin and El Pujal, S.L.P.

by D. McKenzie

The caves near Tamuin and El Pujal, with the following lis of rumors, concludes the summary of caves in the Sierra de El Abra of which the AMCS has some knowledge. This should not be considered a survey because, as suggested by the distribution of these caves, coverage of the range has by no means been systematic. The extensive central portion has been neglected because of cavers' preoccupation with the large, little-explore caves that are well known and of easy access. A topographic map of the area, though not detailed, indicates large depressio on this more elevated region. Reconnaissance will undoubtedly uncover more "resumideros". Much can be learned of the distribution of the blind fish, Anoptichthays, two species of which are separated by the cavernous, 35 mile long region between Los Sabinos and El Pachon.

The following caves are keyed to the location map. More detailed locations of particular caves, if available will be given to those interested. Local guides are usually well worth the nominal fees they charge.

Ventana Jabali

The large oval entrance of Ventana Jabali becomes clearly visible as one drives north of the Valles-Tampico railroad station at Tamuin and alongside an abandoned track paralleling the eastern side of the El Abra Range. Situated one-third of t way below the crest of the range the cave is approached by a na road which zig-zags up the steep face. The road once facilitat extensive mining of nitrates from the cave but is now overgrown hardly recognizable.

The cave consists of a single 1200' long solution tunnel w outstanding features are its large dimensions and spectacular skylights. At floor level the passage is from 40' to 90' wide, but the cieling (when visible) allows for only crude estimation of its height. Broad arches extend to below 150' but the passa is commonly much higher. At one point the ceiling soars to two skylights measured at 503' above the floor and this now stands the longest free drop in any North American cave. When a 200' natural bridge is positioned between an observer and the skylig the broad space above is illuminated with a diffuse blue light. This is certainly one of the greatest spectacles yet provided b Mexican cave.

The floor area throughout has been altered by mining opera and marks of previous levels on the walls indicate a very large amount of fill has been removed. While perhaps conforming to t anticlinal structure of the range, the floor undergoes a rise o 170' in its progression from the entrance. The end of the cave is quite abrupt and here is featured a peculiar limestone parti of solutional origin. A small hole in this 20' high wall gives access to a 50' in diameter floor area where surrounding walls

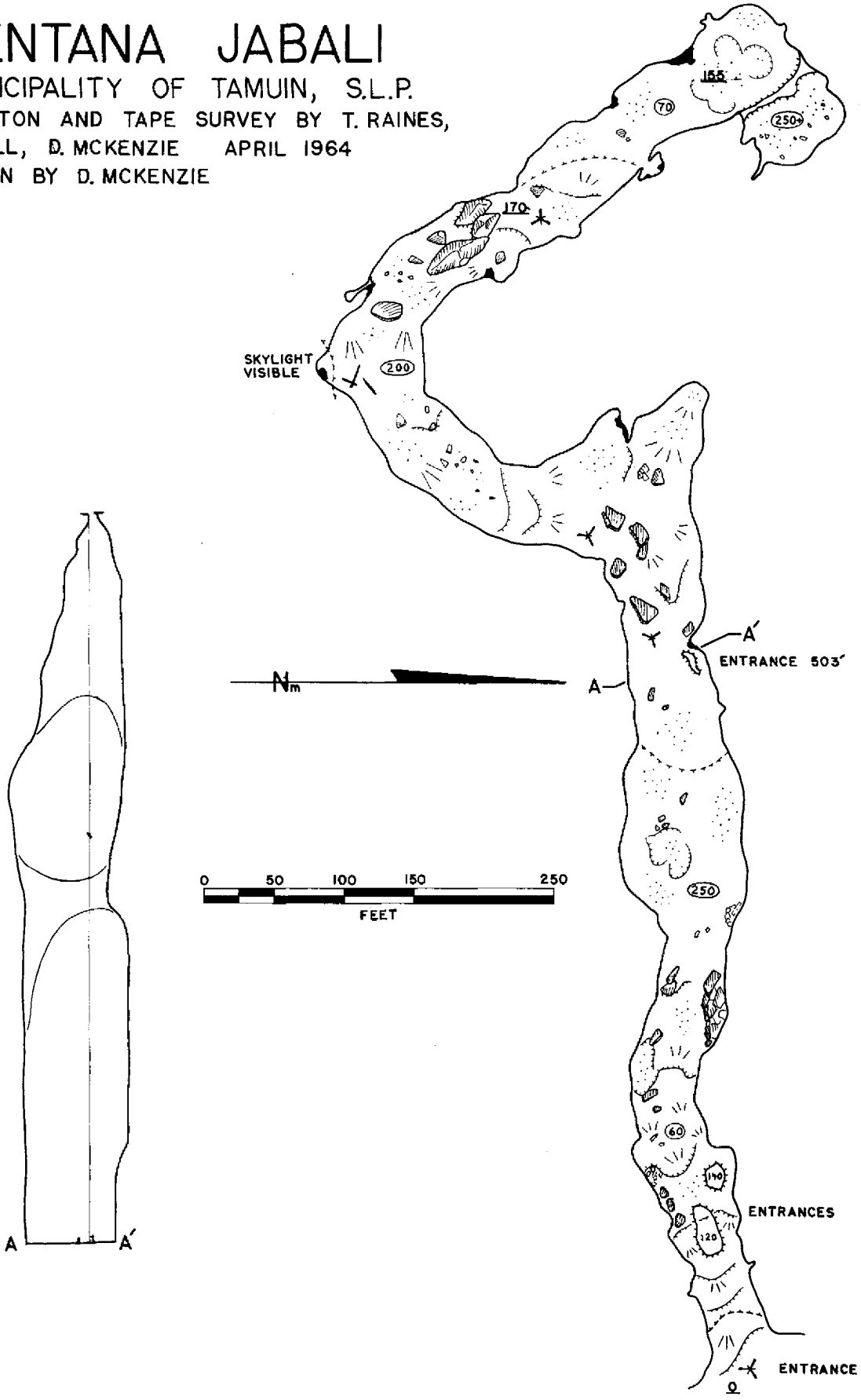
VENTANA JABALI

MUNICIPALITY OF TAMUIN, S.L.P.

BRUNTON AND TAPE SURVEY BY T. RAINES, B. BELL, D. MCKENZIE APRIL 1964

DRAWN BY D. MCKENZIE

AMCS



to well out of sight.

There are at least five skylight entrances to the cave. Besides the two mentioned above, which are 500' from the entrar there is a faint twilight visible another 300' beyond. Though very high this entrance will not allow for an entirely free dr The two others are about 130' high and situated only a short d tance within the cave. For a while during our visit, they were the exit for a cloud layer that swept up the mountainside and entered the 60' high mouth.

The cave was visited in April of 1964 when a survey and bi logical collections were made by B. Bell, D. McKenzie, and T. Raines. On June 1, Bell and Raines returned and descended t record drop.

The following animals were taken from this cave: terrestri isopods, a centiped of the Scutigeromorpha, a whip-scorpion (Mastigoproctus giganteus), spiders (Ctenus sp. and Nesticus sp pseudoscorpions, a schizomid (Schizomus sp.), a bug (Pangaeus docilis), ants (Euponera sp.), dermestid beetles (Dermestes carnivorus), and tenebrionid beetles (Liodema sp. nr kirschi and Zophobas atratus). The discovery of Zophobas atratus and Pangaeus docilis in this cave is of great interest since the first is recorded no farther north than Cueva Ricardo Suloaga, Venezuela, and the latter no farther north than Chilibrillo Ca Panama.

Nacimiento de El Choy (Nacimiento de Taninul)

This impressive river resurgence is developed as an attrac tion for tenants of Hotel Taninul, a popular resort 12 miles east of Valles. The Rio Choy swiftly emerges from a passage 25' high (above the water) and 30' wide. The water is 10' to 15' deep. A small walk constructed above the water ends at a small balcony slightly within the mouth. From there is visible a series of small rapids lighted by a 170 foot high sotano entr The passage beyond appears to be very high, but attendant at th hotel implies that it soon siphons. The cave is not to be con- fused with Cueva del Nacimiento del Rio Coy, a small cave 20 miles south of Valles, near Rincon Grande.

Cueva de Taninul No. I

The cave is situated directly behind the Hotel Taninul and only a few feet from a swimming pool fed by a nearby sulfur spring. The entrance room has been converted to a dance floor with tables and a bar. A 12 foot high natural bridge accommoda a bandstand. The unaltered portion of the cave begins at 150' from the entrance, where an upper level leads to a constriction covered by a wire gate. By crawling underneath, one can contin west for about 300' through a narrow, irregular passage that becomes too small.

Dr. F. Bonet recorded a late November air temperature of 26.6° C and a humidity of 96%.

A small collection of invertebrates made by D. McKenzie and J. Reddell included the following: terrestrial isopods, spiders (Ctenus sp.), a whip-scorpion (Tarantula sp.), two species of ricinuleid (Cryptocellus n.sp. and Cryptocellus osorioi Bolivar), and crickets of the family Gryllidae. The discovery of additional specimens of the ricinuleid, Cryptocellus osorioi, and of a second species, is of the greatest interest since this is considered the rarest of all arthropods.

Cueva de Taninul No. 2

The small sink entrance of this cave is located about 300' north of Taninul No. 1 and 250' above the foot of the abrupt hillside. Lack of equipment prevented a complete exploration. From an intersection near the entrance, the larger passage trends north parallel to the contour of the hillside, while a narrow fissure extending west requires a hand line for its entrance. The former is generally 15 feet high ar wide, continuing approx. 200' to an 8' wide slot in the floor. This must be bridged to enter the continuation of the passage, which appears to remain large.

The floors are of dry silt. Dr. F. Bonet recorded a 23.0° temperature and a 69% humidity.

Cueva de Taninul No. 4

The main entrance can be seen from the Valles-Tampico highway shortly before its emergence from the Valles pass. It is situated about 100 yards west of a railroad tunnel and 75' above the track. The cave is frequently visited and there are steps that extend up the slope. In addition to three cliff entrances, there are at least nine skylights that illuminate the spacious passages. They are well distributed; the 500' long series of rooms can be explored without artificia light. The passage is generally 10' to 15' high and as much as 60' wide. The flat silt floors are free of breakdown, except at the entrances.

A collection by T. Raines included the following animals: epigeal terrestrial isopods, roaches (Periplaneta sp.), crickets (Miogryllus sp. and a posSible new genus near Paracoph and a katydid (Dichopetala sp.). With the exception of the possible new genus of cricket all of the fauma is trogloxenic or accidental.

Cueva Grande

This is the largest of the caves in the less hilly portion of the range south of the Valles pass. It is located about five kms. N-NE of the small town of El Pujal. The 25' by 15' high entrance is situated in a steep, thickly covered slope and would be difficult to locate without a guide. A boulder slope extends to a 40' by 150' long entrance room with a crawlway continuing at its end. The left wall of the room is a partition separating it from the other of two major passages that compose the cave.

The crawlway is an elliptical solution tube whose major trend is eastward. It often enlarges to stoop-way dimensions or greater and there are occasional domes and small rooms that contain bats. The rock floor is quite damp, but other than a scattering of guano there is little or no fill. During our visit the air was uncomfortably warn due to the lack of circulation. An outline map by Dr. F. Bonet shows the passage as 1000' long, but our exploration was incomplete.

The passage leading north of the cave entrance, by contra is large and well ventilated. Two "claraboyas", or skylights, are featured near mid-length and several large aerial roots extend the full 60' to the floor. Initially the gallery is rather wide and irregular, having a few large flowstone formations, but it eventually becomes fissure-like and ranges near 50' high and 10' or less in width. A 35' drop over flowstone must be handlined to reach the end, a breakdown fill The passage is approx. 1100' long.

It was reported that a wounded jaguar was killed in a small side passage near the mouth of the cave. We found that very large rat inhabited the "grotto del tigre".

Some measurements taken by F. Bonet, probably in the west section, showed a 91% humidity and a temperature of 25° C

A small collection made by J. Reddell and D. McKenzie included the following animals from the right-hand tummel: terrestrial isopods, a schizomid (Schizomus sp.), phalangids, a possible new genus and species of nicoletiid thysanuran, ants (Pheidole sp.), crickets of the family Gryllidae, and beetles.

Sotano de Manuel

Near El Pujal, the lower cultivated areas adjoining the El Abra excarpment are characteriqed by scattered sinks and depressions. This cave, visited because of its proximity to Cueva Chica, is one of many small caves that doubtless exist in the area. It is situated within the shallow, indistinct course of an arroyo which winds south to eventually enter Cueva Chica – about two kms. distant. Although locally termed a "sotano", the 15' sink entrance is easily climbable, and the two passages which total approx. 1000' never exceed a depth of about 35'.

From the 10' by 25' entrance room, the most obvious lead extends east as a silt-floored crawl and stoopway sometimes reaching 15' to 20' in width. The passage terminates in fill from an apparent surface sink. At the north end of the entrance room, a hole in the breakdown floor enters a small crawlway which, in an irregular fashion, leads to the larger portion of the cave. This sinuous gallery features a few dry flowstone deposits and several attractive domes.

A collection of invertebrates by J. Reddell and D. McKenz included the following species: terrestrial isopods, spiders (Aphonopelma sp.), mites, a possible new genus and species of thysanuran of the family Nicoletiidae, crickets, histerid beetles, and catopid beetles (Ptomaphagus sp.).

Cueva Sin Nombre

The small pit entrance is located in a cleared pasture between Cueva Chica and Sotano de Manuel. While supposedly rather deep, the sink is covered by a stout bush and is only 2 1/2' by 3' wide — certainly too small to accomodate both an explorer and the 6" in diameter fer-de-lance (Bothrops strox) that slid into the cave on our approach. This deadly snake is called "cuatro narices" by the Mexicans.

Cueva Chica

Cueva Chica is certainly the best known of the many small caves in the vicinity of El Pujal. Located 1/2 km. from the highway, it serves as an important water source for a small ranch. A gasolene moter installed 300' within the cave is periodically used to pump water from a deep permanent pool.

The 20' by 4' high entrance accepts the drainage of a shallow but lengthy arroyo. The passage is irregular at first with large rocks covering the floor. Trending south, it soon features a scoured floor and dimensions of 25' by 10' high. At 350' from the entrance is the first deep pool that must be crossed, and here one can observe the blind fish responsible for the cave's popularity. Beyond, the passage undergoes a narrowing and an increase in ceiling height. At the foot of a 75' long series of travertine pools is a second deep pool, about 50' long, 30' wide, and 10'-15' deep. A narrow, 60' hi dome inhabited by bats is then encountered. Fimally, separate by a low arch, is a 40' in diameter dome above the siphon pool Total length of the cave is about 750'.

With regard to cave fauna, few Mexican caves have receive the attention such as that given to Cueva Chica. The discove of the blind characin, Anoptichthys jordani, in the cave inspi much additional collection. In 1942 Dr. B. F. Osorio Fafall o the Escuela Nacional de Ciencias Biologicas made an intensive study of the aquatic fauna of the cave. His collections and those of others revealed a rich fauna, a list of which follows protozoa: Amoeba sp., Centropyxis aculeata Ehrengerg, Actinoph sp., Coleps cf. hirtus, and Vorticella cf. microstoma; rotifer Lepadella patella (Muller) and Platyias patulus (Muller); cypr ostrocods: Candona sp.; cytherid ostracods (taken from Cambar blandingii cuevachicae): Entocythere sinuosa Rioja and Entocythere claytonhoffi Rioja; copepods: Diapomus (Microdiap cokeri Osorio Tafall, Atheyella cf. pilosa, Nitocra sp., Macrocyclops albidus (Jurine), Eucyclops cf. serrulatus, Eucyc (Tropocyclops) prasinus (Fischer), Paracyclops cf. fimbriatus, Thermocyclops inversus Kiefer; crayfish: Cambarus blandingii cuevachicae Hobbs; Isopods: Protrichoniscus potosinus Mulaik; branchiobdellid worm (taken from Cambarus blangingii cuevachic Cambarincola macrodonta Ellis; a campodeid dipluran: Campodea Wygodzinsky; ants: Pachycondyla harpax montezumia (F. Smith); collembola: Mesaphorura foveata Bonet; a cricket: Paracophus apterus; a polydesmid milliped: Bolivaresmus sabinus Chamberl spiders: Euryopis spinigera O.P. Cambridge, Modisimus texanus Banks, and Wendilgarda mexicana Keyserling; and fish: Anoptich jordani Hubbs and Innes. Of these animals only the isopods, diplurans, collembola, and fish are troglobites. The protozoa rotifers, ostracods, copepods, crayfish, branchiobdellid worms crickets, and milipeds are presumably troglophilic. The remai species are probably accidentals.

Rumored Caves in the Sierra de El Abra

The AMCS has no first-hand information on the following caves. Several of the more reliably located caves are keyed to the location map. They are listed in order of their north to south distribution in the range.

Cueva de San Rafael de los Castros

The cave is either a resurgence or near one of that name. Bonet gives no description. Source: F. Bonet

Cueva de El Mante

It is referred to as a cave with permanent water. (Cueva de El Mante no. 1 is the Nacimiento del Rio Mante) Source: F. Bor

Cave above the Nacimiento del Rio Mante

It is believed located in the side of the range about one-half km. SW of the resurgence. Though not a shelter cave, it supposedly has a very large entrance room. Source: A guard at the Nacimiento

Cave on the Range above Quintero

There is a local name for this cave, whose access is by a trail beginning at the town's intermittent spring. The trip requires several hours. There is a guide available. Source: Inhabitants of Quintero.

Sotano north of El Pachon

A large sotano is rumored to exist on the western side of the range, possibly approached by a route extending north of the village of El Pachon. Explorers from Mante have supposedly descended the pit and partially traversed a large stream course. More reliable information should be obtained at El Pachon. Source: Local explorers of Cueva del Abra

Sotano east of Aotano de Venadito

This is of more difficult access than Sotano de Venadito, but is said to be "mas importante". It is apparently a large "resumidero". Source: "Antonio", a guide near Venadito

Cueva de La Ceiba

The conspicuous entrance is situated in the eastern face of the range, about 20 km. north of Tamuin and near the Rancho Zimapan. It was referred to as " the largest cave in the El Abra Range". It is also rumored to contain Indian burials. Another obvious cave entrance is just south of there at about

the same elevation. Machetes may prove invaluable for their access. Source: Prof. Luis Zuniga of San Luis Potosi

Cueva Pinta

The cave is well known locally and is reached by a 10 km. trail extending SE of Los Sabinos. The entrance is supposedly large, but Bonet's brief reference implies that it is dry, with light penetrating its major portion.
Source: F. Bonet; Miguel Salinas, a guide at Los Sabinos

Cueva de Las Palmas

Bonet only gives its name and indicates its location. It is evidently above the railroad track north of the Nacimient de Taninul. Source: F. Bonet

Caves in the Valles pass

West of a"plant of some sort", probably a quarry, two caves in a large cliff near the railroad track were explored. "Both had huge entrances but got smaller after a few hundred feet." A 30 m. sotano and another about half that deep were also visited but apparently not entered.
Source: G. Reynolds and T. Will, Baltimore Grotto News

Cueva de Taninul no. 3

This small cave is located south of the Valles-Tampico highway in the vicinity of Taninul no. 4. A map by F. Bonet indicates the 30' wide entrance faces west, and from there exte two passages varying from 10' to 20' in width. Each of the NE and SE trending passages contain a skylight, and their respecti lengths are 90' and 50'. Source: F. Bonet

Sotanos near El Pujal

In a list of sotanos, or caves with vertical entrances, Bonet includes the following ones,El Pujal: Cueva de El Mante, Cueva de Ojo de Agua, and two unnamed sotanos. None of these were explored by Bonet, though one of the latter may be Sotano de Manuel. Source: Dr. F. Bonet

Cueva de El Nilo

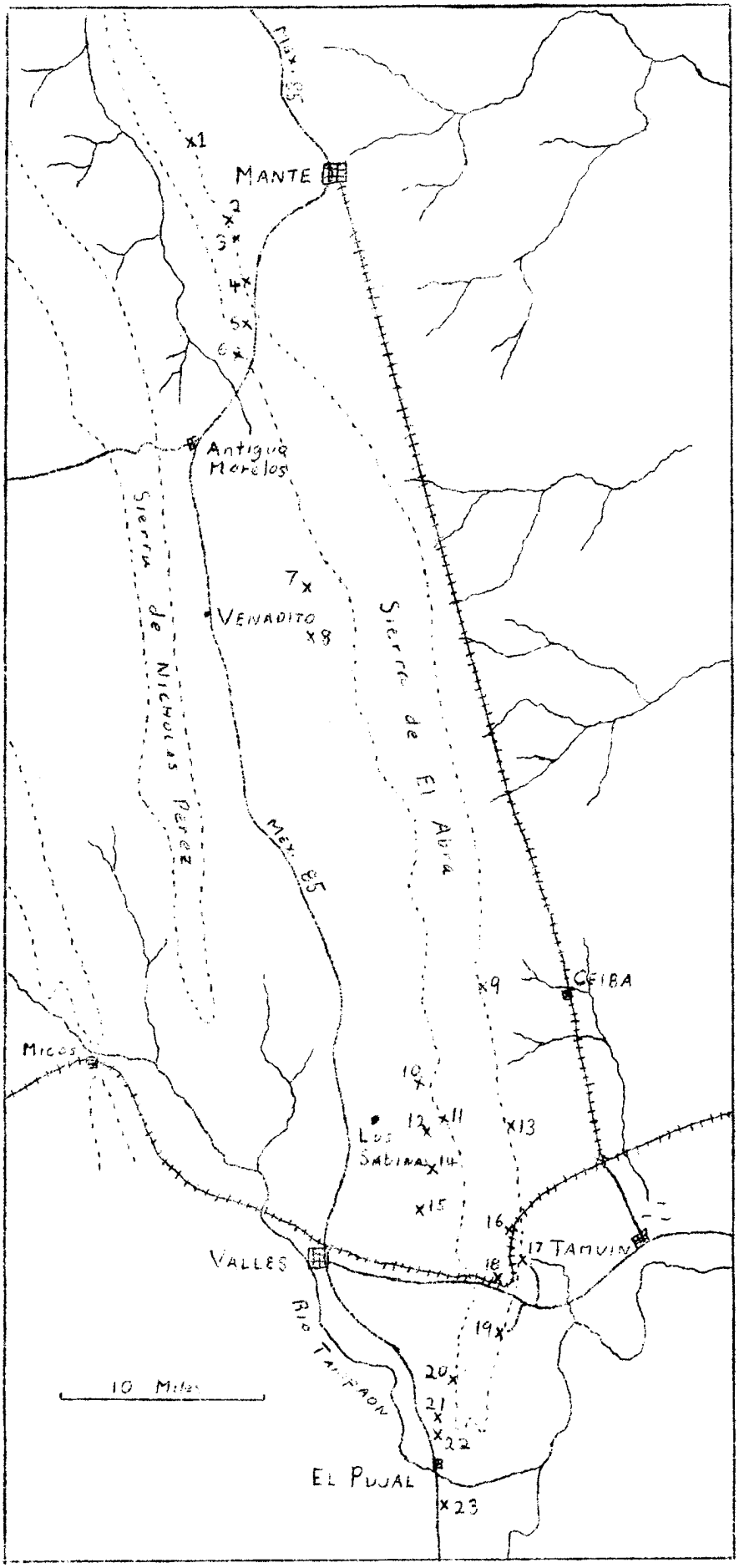
Mohr describes it as "a small cave, partly water-filled, less than 100 yds. east of the highway at Km. Post 451". Vampi bats inhabit the cave. Source: Charles E. Mohr (NSS News, April, 1950)

Bibliography: Bonet, Frederico. "Datos sobre las cavernas y otros fenomenos erosivos de las calizas de la Sierra de El Abra". In: Congreso Cientifico Mexicano Mem., (V.)3, Ciencias Fisicas y Matematicas, Geologia, p. 238-266, 1953.

We wish to express our appreciation to the following systematists for their identification of material covered by this report: Dr. W.J. Gertsch, American Museum of Natural History, arachnids; Dr. Theodore Hubbell, Museum of Zoology, University of Michigan, crickets and katydids; Dr. Ashley B. Gurney, U.S. National Museum, roaches; Dr. A.C. Cole, Universit of Tennessee, ants; Dr. Pedro Wygodzinsky, American Museum of Natural History, thysanura; Dr. Richard Fooeschner, U.S. National Museum, hemiptera; Dr. John Kingsolver, U.S. National Museum, dermestid beetles; Dr. T.J. Spilman, US. National Museu tenebrionid beetles.

Key to Location Map

1. Cueva de San Raphael de los Castros
2. Cueva de El Mante no. 2
3. Nacimiento de El Mante
4. Grutas de Quintero
5. Cueva de El Abra
6. Cueva de El Pachon
7. Caves near Rancho de La Noria
8. Sotano de El Venadito
9. Cueva de La Ceiba
10. Sotano de Tigre
11. Cueva de Los Sabinos
12. Sotano del Arroyo
13. Ventana Jabali
14. Sotano de la Tinaja
15. Sotano and Sotanito de Montecillos
16. Cueva de Las Palmas
17. Nacimiento de El Choy
18. Cueva de Taninul no. 4
19. Cueva de Taninul no. 1 and no. 2
20. Cueva Grande
21. Sotano de Manuel
22. Cueva Chica
23. Cueva de El Nilo


MANTE
Antigua Morelos
Sierra de Nicholas Perez
Sierra de El Abra
VENADITO
MEX. 85
CEIBA
Micos
Los Sabinas
VALLES
Rio Tampaon
EL PUJAL
17 TAMUIN
10 Miles
x1
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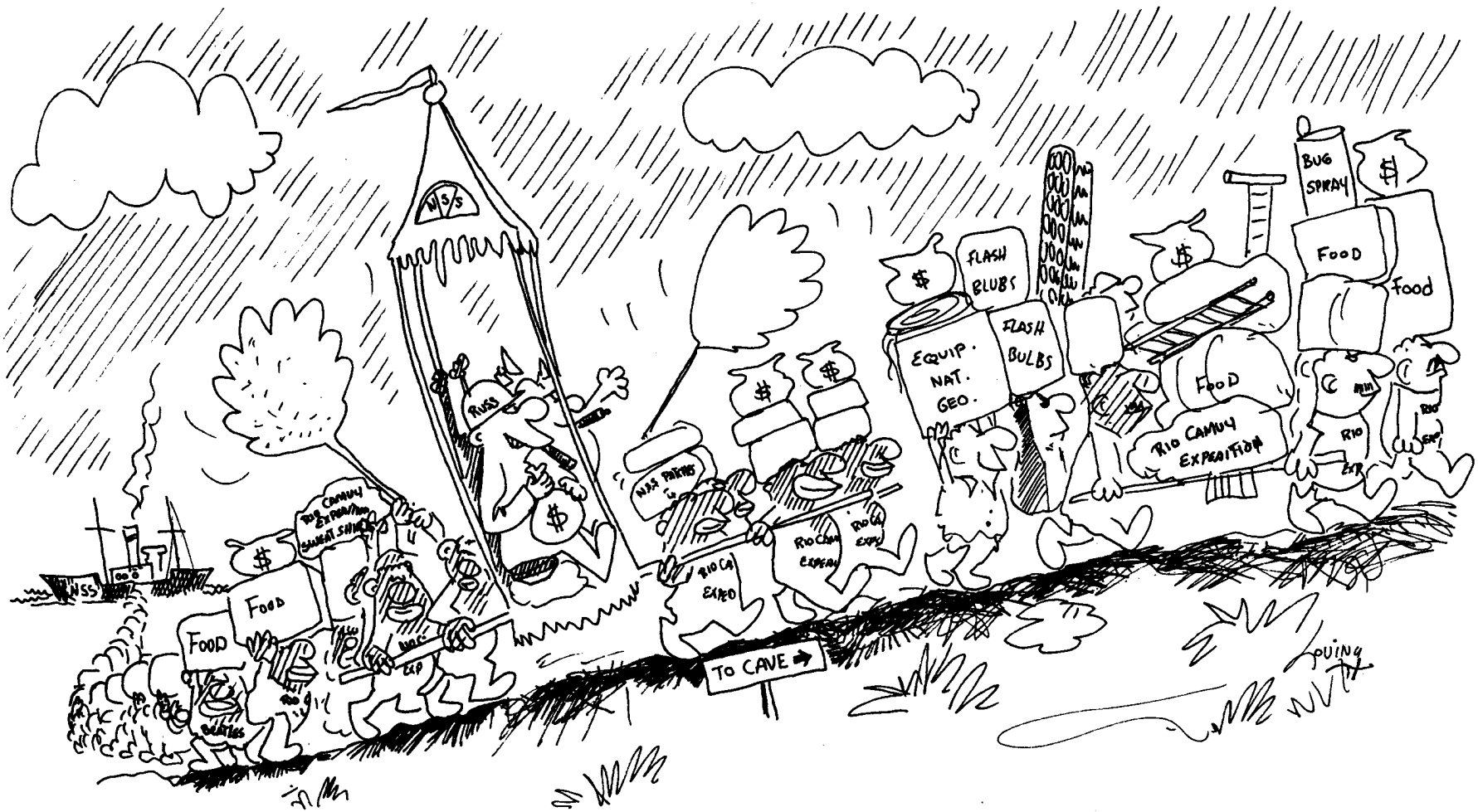
NSS
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FOOD
TO CAVE
FLASH BLUBS
EQUIP. NAT. GEO.
FLASH BULBS
BUG SPRAY
FOOD
FOOD
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RIO CAMUY EXPEDITION

Editorial

by Bill Russell

The cartoon on the previous page represents the view of many who cave in Mexico that the 1964 Rio Camuy expedition to Puerto Rico did not produce results commensurate with the time and money expended. The NSS then proposed a new expedition to Puerto Rico for three, ten day periods between January 16 and February 14, 1965. No mention was made of the method used to select the Rio Camuy area again for 1965. It is possible that the National Geographic Society, which is providing most o: the money and equipment, is interested only in this area and would not support trips to other areas. But if this is not the case and the NGS is only interested in obtaining the best article for its money, and is relying on the advice of the officers of the NSS as to the best area, then the method of selecting the expedition site should be changed. As soon as the NSS is aware that the NGS is interested in a cave article, proposals as to the site of the expedition should be invited from all NSS members. Then from these proposals the NSS and the NGS can agree on areas that would best suit their needs.

Many areas in Mexico suggest themselves. A study of the Joya de Salas area alone would make an excellent article. There is also the mountainous region north of Xilitla and the little known Huatla area SE of Mexico City. Nearer civilizatio are the two underground rivers, the San Jeronimo and the Chontacuatian, which emerge below the great Cacahuamilpa Cavern to form the Rio Amacuzac. Charles Mohr has felt that "the penetration of this subterranean watercourse would be one of the supreme thrills of speleology". It is possible that the Rio Camuy has more to offer, but it is hoped that in the future the leaders of the NSS will at least be open to suggesti

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The AMCS Newsletter is published monthly by the Associatio for Mexican Cave Studies, P.O. Box 7672 UT Station, Austin, Tex 78712. Membership in the AMCS is $5.00 for the calendar year, with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications of that year.

Members are urged to submit articles for publication. Map submitted for publication should be of a type suitable for copy onto a standard or legal size Memeograph master. Longer articl with more detailed maps are invited for publication as a bullet Trip reports are requested from all trips.

Editor.....Terry Raines
David McKenzie

Staff.....Ed Alexander
John Fish

THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Trip Reports

Volume 1 Number 5 May 1965

Trip Reports

Persons: Charles W. Fromen, Jim McLane, James Gamel, and Bill Campbell
Date: August 1964; Thanksgiving Day 1964; 14–19 April 1965
Destination: Gruta del Palmito
Reported by: Charles Fromen

Aug. 1964. James, Douglas, and Charles made their first trip to Bustamante and Gruta del Palmito. James and I decided to return and climb Cabeza de Bustamante. We viewed the large mountain from the entrance of Gruta del Palmito.

Thanksgiving Day 1964. James, Bill, Rickey, and I returned to Bustamante. Bill McLane and Bill Campbell went to the Gruta del Palmito. James, Rickey, and I started to climb. We discovered five unexplored caves on the climb. Three were sinks, one of which took 4–7 seconds for a large rock to stop falling. We were unable to enter any of the caves because we lacked rope and only had superficial knowledge of rope work. We decided to return another time to explore these unexplored sinks. We did not believe we could find some of the other caves again because of the thick growth of oak trees. But today James and I made it to the top of the 7,000 foot mountain. There we took pictures of the superb view. Thorns punctured our plastic (chlorox bottle) water jugs. So we had to spend our second night without water. Next day around noon we reached our cars and water. The climb had been longer than we had anticipated, but we made it. The priest in Bustamante said that he had taken twelve hours to make the same climb. This made us feel better. We had camped at 3,000 feet before we went to the top.

Before Apr. 14. We had obtained 450 feet of Goldline and instructions from Harry Miles on how to use the rope. None of us had ever had any experience with rope work. We practiced on Kyle Field at A & M University.

Apr. 14. James Gamel from the University of Houston arrived at A & M. We packed everything in the trailer and started for Mexico at 1 P.M. That night we crossed the border in record time. We camped beside the road just outside of Villaldama.

Apr. 15. We drove to the parking lot at the start of the trail to Gruta del Palmito. We packed our packs with food and water for a five day stay on the mountain. The packs weighed over 60 pounds each. We wore leggings to protect us from the cactus thorns. We started up the mountain at 11 A.M.

Apr. 16. We reached the sinkhole region which we had discovered previously and set up base camp. We set up 300 feet of Goldline over the most promising sink. I made my first drop into a sinkhole—240 feet. The drop was exciting. No one had ever entered

this sink before and it was my first drop not under practice conditions. The drop went like clock work. The many practices and proper equipment paid off. I made my way down stopping on natural bridges and ledges to lower the rope farther down as it had not gone all of the way to the bottom. At about 240 feet down the vertical shaft I reached a point where the flowstone blocked the way down. I threw stones through a small opening which remained open in the flowstone. The rock fell for what seemed another 30 feet. Happy with the technical success of the drop I prusiked out. That afternoon we discovered three more sinks in the area. This made six sinks within 60 yards of our camp.

Apr. 17. We packed light packs and headed for the top ridge all of the time looking for caves. Near the headwall of the canyon where Gruta del Palmito is we saw a great solution amphitheater with numerous cave openings. The place is not visible from the Gruta or the parking lot due to its position on the wall opposite to where we stood near the head wall. Trees grew out of the cave or openings on the mountain.

After looking over the situation carefully, we decided that it would be possible to climb and rappel carefully down the head-wall of the canyon to the theater. We picked a route down the cliff. James Gamel stayed on top of the canyon and directed Bill and me down the cliff's face. His directions were perfect. (They had to be.) We rappelled vertically the last 70 feet into the amphitheater. A more spectacular setting was impossible.

The amphitheater was 65 feet wide and 25 feet high. The head wall dropped at least 2,000 feet below. The canyon was at our feet. The amphitheater was cool due to the air rushing out of the many cave entrances which lined the back of the amphi-theater. We could see formations back in the small cave entrances. We were unable to enter because of their small size. The caves serve as intermittent springs on the canyon wall. We prusiked up the wall again and were guided up the headwall safely by James. We climbed a high point south of Cabeza de Bustamante and headed to base camp below the Cabeza which we reached that evening.

Apr. 18. We decided to return to the car because we did not have another day's supply of water left. Exhausted we reached the parking lot by noon. A swim in the Rio Sabinas and a case of cokes quickly revived us. We met Bill Russell and party in the canyon of the Rio Sabinas which we explored, finding an interesting opening in the canyon wall.

We continued to the border and Cactus Garden Cafe in Laredo and drove to Palmeto State Park that night.

Apr. 19. We swam in the San Marcos River and then continued back to A & M.

Note: Anyone who wants information on exact locations of the yet unexplored sink holes we found write me: Charles Fromén
814 La Monte Lane
Houston, Texas 77018

Persons: Chip Carney, Jonathan Davis, Phil Schiffert, and Jim Blakemore
Date: Easter, 1965
Destination: Ciudad Valles
Reported by: Jonathan Davis

We left Austin the evening of the Wednesday preceding Easter and drove straight through to Valles via Nuevo Laredo. We arrived in Valles at 2 p.m. Thursday, and by 5 p.m., using broken Spanish, and with the help of a policeman, a cabbie, and the female curator of a local "museum", located the rancher upon whose land Sotano de la Tinaja is located, Sr. Luis Martinez (his house is on the highway, in Valles, on the east side) who gave us permission to enter his land the key to the gate.

We spent the night in an abandoned stick house on the highway north of Valles and spent Friday in locating the cave and packing our gear down to camp, 100 yards inside the entrance. We tried building a fire at this location and discovered that the cave is not as well ventilated as we had hoped. To escape the smoke we went in and rigged the first unclimbable drop (see AMCS Newsletter, vol. 1, no. 3, p. 29) and then returned to camp and retired for the night.

Saturday morning we ate breakfast outside the entrance and sallied forth into the cave. We investigated the unexplored drop (see AMCS Newsletter, vol. 1, no. 3, p. 30; vol. 1, no. 1, p. 2) by throwing rocks into it, as the bottom is not visible, and decided that the bottom is from 100 to 150 feet down and is dry. The nearest conceivable tie-off is 80 feet back from the edge and, as we had only 176 feet of rope, we decided to leave it alone. Expansion bolts would probably be best here.

We followed the Northwest Passage (see AMCS Newsletter, vol. 1, no. 3, p. 29) to the "main" intersection and from there took the northwest or upstream passage. We followed the passage straight to the natural bridge. We found the passage as McKenzie described it except that the lake he called "mostly waist-deep" was mostly eyeball-deep.

We had brought flotation gear so we rappeled into the deep water at the end of McKenzie's exploration, which we found to be about 8 feet deep immediately under the drop and 4 to 6 feet deep elsewhere. This lake is 50 feet long, with a sand bar in the middle. The passage opens 4 feet above the water, 3 feet wide, and 8 feet high, and widens gradually until at 100 feet from the lake it is again a sandy-floored passage 50 feet wide and 25 feet high. It continues with these dimensions for about 500 feet, into another lake.

This lake is 500 feet long, with a sandbar about halfway across. The section before the sandbar is waist to chest deep, while the last section is neck deep with one part which must be swam. We followed the left wall and held on to projections through the deep part. At the end of the lake is a monster sandpile in a round room with two large stalactite formations 75 feet in diameter and 50 feet from water level to ceiling. The passage appears to continue from an opening 15 feet up on the wall, which we couldn't get into, as the rock is friable and every handhold broke off.

The passage is 10 by 10 feet and can be seen into for about 50 feet, to where it seems to bend to the left. We spent 45 minutes trying to get up to the passage, photographed it, and headed back to camp. Scaling ladders may be required to reach the opening, but they will be hard to snake in. There is also a possible siphon in this room, behind one of the formations. In all, we went about 1/4 mile beyond McKenzie's natural bridge. No mapping was done, as we had no Brunton or tape. According to the populace, it rained very hard on Saturday night, while we were in the cave, but we didn't notice any rise in water levels at all, and the arroyo didn't seem to have flooded. Evidently it takes a lot to fill it up, which is a happy thought.

We slept all day Sunday, hauled the gear out Sunday evening, and spent the night in a wide place by the side of the road a few hundred yards from Cueva de El Abra.

Monday we went through Abra, photographing. We then drove for Austin, arriving Tuesday night, delayed only slightly by golfball-sized hail in Mante.

Persons: Ken Evans, Danny Evans, Ted Peters, and Richard Smith
Date: 14-18 April 1965
Destination: Grutas Xoxafi
Reported by: Danny Evans

On the evening of April 14 we left for Mexico to investigate a lead a hundred kilometers north of Mexico City. Loaded in the trunk was an excess of 1,000 feet of nylon in anticipation of a record breaking pit called Grutas Xoxafi (in the PEMEX BULLETIN and in a report written by Charles Mohr).

Driving through the night, we awoke on the out-skirts of Victoria in Mexico. We blasted on towards our goal, noting many impressive dolinas and pits along the way. Shortly past the turnoff to Xilitla at Y Griega we began the fantastic ascent over the towering limestone mountains towards Grutas Xoxafi. About 6:00 p.m. we arrived at the town of Lagunillas at 127 km. post where we asked directions to the cave. Described by Pemex, the location of the cave was easily found and we sacked out at the entrance.

Awakening next morning, we were slightly depressed in surveying the topography of the area. The land was almost desert-like and much of the surface was covered with igneous material associated with volcanic activity in ages past. The limestone that could be observed was very unstable and received little surface water. The entrance itself was even more depressing. Located at the top of a hill, it drained absolutely no water and resembled the collapsed roof of a one-time passage. Leaving the rope in the car, we decided to check out the most promising of a series of passages which branched out from the entrance. Our progress down a dry, grody passage was quickly halted by breakdown at the bottom of a 20' pit negotiable. No passages could be located which led to anything which came close to suggesting a record, so we returned to the entrance in hopes of discovering another lead. Our effort was useless, however, so we packed and made it to the nearest

cantina where we found relief in bottles of spirits. Deciding then to return over the mountains to Xilitla, we drove merrily on—perhaps our caving trip could be salvaged yet.

Driving through the evening, we made it to Xilitla without incident and sacked out in the second class hotel.

Awakening to the predominant peak of La Silleta, we decided to proceed up the road toward Ahuacatlan and check out some of the numerous pits along the way. Lacking time, we checked out two sotanos which led nowhere then proceeded back down the road towards the ferry at La Y Griega. Stopping at an impressive dolina along the way, we hoped to enjoy another good bit of ropework by entering a pit which Richard thought to be 300 to 400 feet deep. Hauling out the 550 foot length of nylon, we rigged the entrance drop and descended within. Our trip seemed well worth while, as we were greeted by a drop spiraling down to a 350 foot depth. After checking out a small passage leading from a small stream at the bottom, we quickly returned to the surface and left.

Our caving fun over we drove to the resurgence (Nacimiento) near Mante where se swam and talked with the local Mexicans. Later that night another group of our caving friends rolled in from their trip to La Joya de Salas. Much talk. Return not significant except wreck with train.

Persons: Bob Burnett, Jim Duke, John Fish, David McKenzie, and James Reddell
Date: 14-19 April 1965
Destination: West of Antiguo Morelos
Reported by: James Reddell

After much preparation and several delays we left Austin late Wednesday night and drove to McAllen were we had a late supper at Jim Duke's home. From here we drove to Encino where we hoped to obtain a lumber truck to take us to La Perra, from which we would hike to La Joya de Salas to explore the deep sotano there. Unfortunately no lumber trucks were running during the Easter vacation so we were forced to abandon our plans. We decided that the best thing to do would be to go west of Antiguo Morelos to cave hunt in the mountains there. By early afternoon we were driving into the mountains between Antiguo Morelos and Ciudad del Maiz. As we climbed into the oak forest we began to notice many sinks and promising karst areas near the road. Those easily reached were checked and, although many were small caves, found to be of only slight interest.

Late that afternoon we located the William Blagg Ranch. The owner is an American who has lived in the area for many years and is quite familiar with the country. David had met him quite some time ago and he had told him of many caves, both on his property and in the surrounding countryside. He was very hospitable and told us of a cave in the creek behind his house into which much flood water ran. This was so intriguing that we

decided to go ahead and see what was there. Mr. Blagg found a man to go with us and loaned us a jeep. In a few minutes we found the cave. The entrance is an easy climb down through breakdown for about 30 feet. Here a room about 40 feet wide, 20 feet high, and 100 feet long is encountered. At the end of this room a passage leads down below the floor to a deep lake, but no passages led out. Back underneath the entrance a passage led to a point where a stream could be heard. Since it was late and we had only two flashlights for the six of us we decided to wait until after supper to finish the exploration. Our guide then drove us on down the valley where we located several pits up to 100 feet deep, most of which remained unexplored.

After supper we returned to the cave, which we named Cueva de La Lagunita, and continued exploration. After soom searching and a little rock and trash moving we were able to drop about 40 feet down into the stream which ran from breakdown through a room about 50 feet high, 100 feet long, and 25 feet wide before becoming very deep and entering a passage with only a few inches of air space. Not wishing to enter this unpromising passage we spent the rest of our time making biological collections and hunting for other leads, which were not found. Of some interest was the discovery of an additional record for the aquatic isopod, Speocirolana pelaezi, which is also known from caves in the El Abra range.

The next morning we arose late and, after some discussion, decided to visit a cave at the Ejido Los Avales, a hike of several kilometers. Mr. Blagg had a guide take us in the jeep to the area, but since the jeep was needed it was returned. Cueva de Los Avales proved to have a sloping entrance dropping into a room with many dead formations. Holes in the formations led into a room about 30 feet high and 40 feet in diameter with many formations, most of which were dead. Some time was spent checking a number of dead-end passages and small side rooms and in making biological collections. When we came out of the cave our guide told us of another cave higher on the mountain side. We were then led up several hundred feet to a small shelter-type slope-in entrance with many dead formations along the back wall. This cave we named Cueva Seca de Los Avales because of the dust in the cave. Two small holes in the formation block led into small rooms, but with no additional passage. The return from the two caves was made by foot and with no trouble. Upon returning to the ranch and after drinking much water we decided to check a cave David had previously reported and only partially explored. This cave, Sumidero de Piedra Paloma, is located several miles west of the Blagg Ranch in a large sinkhole in a cleared field on the right side of the highway to Ciudad del Maiz. A walk-in entrance leads back a short distance to a pit dropping 60 feet to a low sloppy crawl. Bob dropped in and not knowing any better crawled through the muddy hole only to find a second pit, this time about 100 feet deep. After everyone descended the first pit and our rope, ascenders, and other equipment was dragged through the liquid mud we rigged the drop and proceeded to explore it. It proved to end in a siphon. Cursing people who can't tell

"Mexican cave ends" (namely muddy crawlways) we slopped our way out of the cave and broke-in new ascenders on slimy rope.

The morning of April 17th Mr. Blagg showed us several sinkhole areas, but no new caves were found; he also told us of large sinks he had seen from the air and of caves south of El Naranjo on his brother's ranch. We then drove east to the valley of the Rio Naranjo where we turned south to the Dallas Blagg Ranch. Although we were greeted with considerable hospitality no guide was available to take us to caves on this ranch, so we were directed to a cave near the small town of Micos on the Valles-San Luis Potosi railroad. Here we found a guide to take us to the best known cave in the area, Cueva de Puente Morita, located above the bridge of that name. This is really two caves located within a few feet of each other. The left-hand cave is a large walk-in shelter which served as a home for the local inhabitants during the hurricane which struck Tampico several years ago. At the back of this shelter a steep slope leads down for a total of about 60 feet before ending in breakdown and dust fill. Much mining for rumored treasure has been done in the cave and this pit is partly artificial. Another pit is located along the left side of the entrance room, but it also dead-ends. The main cave, however, is located to the right of the large shelter entrance and is entered by a small hole at the base of a large tree. From the bottom of this hole a passage leads a few feet to a nearly vertical drop. Large tree roots supply hand holds for the descent of about 30 feet. The cave is essentially one long fissure-type passage running perpindicular to the entrance and separated into small rooms and drops by flowstone and formations. The total length of the cave is about 300 feet while the total depth is about 100 feet. The principal item of interest was the discovery of the jawbone of an extinct giant rodent whose modern counterpart lives no farther north than Panama.

After leaving the cave we returned our guide to Micos and returned to El Naranjo just ahead of a thunderstorm which would have stranded us on the bad road to Micos had the cave been any larger. From here we drove to the Nacimiento de Rio Mante where we tried to sleep among the starving mosquitoes. We awoke the next morning to find that Richard Smith and crew were there already. After eating breakfast we set off cave hunting in the Quintero areas, but had no luck. We decided by noon that a good place to go would be the headwaters of the Rio Frio where we could combine cave hunting and swimming. We located the downstream of two large springs with no difficulty and after wading the chest deep river arrived at the spring to find that it did not arise from a cave but rather from a series of small holes along the river bed. Determined to find a cave we began hiking around above the river. It was not long before John yelled for someone to bring a flashlight. We all gathered at a hole dropping down over breakdown for about 30 feet. With two flashlights we were able to make only a hasty reconnaisance. We then returned to the car and after obtaining carbide lights, rope, and mapping equipment, we returned to the cave. From the

bottom of the entrance drop the main passage led about 200 feet back as a 20 foot wide, 40 foot high passage. The walls were covered with moist flowstone and the floor with attractive rimstone dams. At the end of the main passage we encountered a tremendous dome-pit about 50 feet in diameter. The ceiling above the pit was about 50 feet high while the pit dropped about 150 feet into a bottomless lake of crystal clear water. Unfortunately no passages led from this pit. While John was exploring the pit, David and I began acting like Texas cavers and started digging out a small hole about 60 feet from the edge of the pit. After a little work we had the hole opened up enough to allow us to squeeze through. After a short crawlway we came to a 15 foot drop which in turn led to a second 15 foot drop. At the bottom of the second drop a passage sloped steeply down for about 60 feet where it ended in a shallow siphon. Several narrow fissures were checked with the result that I came out of the cave practically naked. By the time everyone had come out of their respective passages it was late so we quickly finished our map, made intensive biological collections, and hiked back to the car. From here we drove back to McAllen where we ate breakfast, slept a few hours, and Monday afternoon returned to Austin.

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Editor.....Terry Raines

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THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume I Number 6 June 1965

Trip Reports

Persons: Ed Alexander
Date: 26 May - 3 June 1965
Destination: Chamal and Xilitla areas
Reported by: Ed Alexander

On Wednesday, May 26, John Fish, Orion Knox, David McKenzie, and I left Austin at 7:[illegible] p.m. and drove through to Ciudad Miguel Hidalgo where we slept for what was left of the rest of the night. The next morning we continued on to Ciudad Victoria where we separated, the others taking the car on toward La Joya de Salas, and I heading south by bus to the area around Ocampo, Tamps. During the [illegible] week I rode buses, construction trucks, trains, and horses through some of the better caving areas of Mexico. Some of these areas I will only mention briefly while I say more about others.

Stopping first in Ocampo, about thirty miles northwest of Mante, I inquired about local caves since I was only about 25 miles south of La Joya de Salas, at the foot of the sierras. Although I didn't take time to check the reports there are apparently several caves in the mountains not far from town. In 1959 a couple of these caves were excavated by archeologists from Mexico City who found a very large collection of [illegible] and a number of artifacts. A report on this was published at that time in Anales del Instituto Nacional de Anthropologia y Historia.

From Ocampo I traveled back east, across the low range of mountains, to Chamal, a distance of about ten miles. At about noon on Friday I obtained a guide and horses from the American ranchers who have settled in the area, and set out for a sotano Americans there called Bee Cave, eight kilometers north of the town. At least half of the road which we followed could be traveled by car, and a good truck or jeep can drive to within 200 yards of the cave. The sotano opened on the side of a low hill and dropped vertically on three sides for almost 200 feet. At the top the opening is a large oval about 170 by 90 feet. On the fourth side I was able to climb down for 40 feet to where there was a large tree. To this I tied my only rope, 100 feet of nylon, and rappelled 80 feet. At the bottom of the rope was a jungle of ferns which sloped down for 50 feet more to where I could look down a final 60 foot drop. At the bottom of this drop, which will require a rope, there appeared to be a talus slope descending for possibly another 50 feet, making a total depth of over 250 feet. Except for the lack of a large arroyo entering the sotano, this cave is quite similar to the large sotanos north of Valles in the Sierra del Abra range. Although from my vantage point it was difficult to see the bottom of the talus slope, the wall of the pit cut back under as if there should be a passage leading from the bottom.

The next morning my guide and I left Mr. Taylor's ranch, where I had spent the night, and rode our horses for about three hours to the south over a very rough trail to Cuevas Chiso. The total distance from Chamal was about 16 kms., of which only

the first five or six could be traveled by truck or jeep. We crossed several ridges on the way which exhibited extensive solution of the surface limestone. We finally arrived at two small caves and several shelters which were developed about 150 feet above the floor of a small valley. Cueva Pariso No. 1, which was further to the north, had an entrance facing northeast which was an oval, 30 feet high and 15 feet wide. Total length of the cave was only about 200 feet. Cueva Pariso No. 2 was a couple of hundred feet south of No. 1 and had a 15 feet in diameter entrance. Another entrance in No. 2 opened higher on the hill in breakdown. The cave contained two rooms 30 to 40 feet in diameter with a number of dead formations. Below these caves we visited two shelters in which the local Mexicans had found several pieces of bone which looked possibly like human long bones. However, since the terminations were all lacking, positive identification would be difficult. During the two days I spent near Chamal, the members of the American colony proved very helpful in locating caves and suggesting possible rumored caves. The best known of the caves that they mentioned is Cueva de Canon, which is somewhere west of Chamal. This cave is often visited by the local residents and is reportedly fairly large with many formations. There has been very little caving done in the Ocampo-Chamal area, and a large potential still remains.

Leaving Chamal I traveled south to Xilitla, San Luis Potosi, arriving there on Sunday evening. Upon inquiring about caves in the cafe where I ate supper I was introduced to a man who claimed he knew of six caves and four sotanos near the town. He offered to lead me to several of those the next day. On Monday morning we first headed for Cueva del Salitre, about one kilometer east of Xilitla. Two entrances open in a very large sink, one at the bottom and the other higher up on the side. The upper entrance led down talus slopes to two large rooms, each about 200 feet deep. My guide and I explored the room to the left which had no leads at the bottom. We didn't enter the other room since he claimed it too ended at the bottom. The lower entrance is one large shelter room at the bottom of the sink. It is entirely lit by daylight, however, there appeared to be a possible crawl leading off about 20 feet up the back wall.

Next we walked back through Xilitla to La Cueva de la Arroyo, two kilometers southeast of the town, in the valley of the next arroyo west of Salitre. The cave opens at the base of a long bluff just to the west of the arroyo. It is reached by a long trail which follows the base of the bluff. The entrance is 40 feet wide and 30 feet high with breakdown covering the floor. From the entrance it runs in general to the southeast for about 1500 to 2000 feet. The passage varies from 10 to 50 feet wide and 20 to 50 feet high. There are many formations throughout the cave, especially travertine dams filled with water. The cave ends by sloping upward rapidly to a final dome which is at least 100 feet high. No side passages were noticed. Another cave can be seen from near the entrance to Cueva de la Arroyo. It is across the valley and above the new road to Xilitla. My guide called it Cerro de la Ventana, since it is said to have a

120 foot high skylight inside. The entrance to this cave seems to be developed under a fold in the rock strata. We also found several shelters along the base of the bluff on the way back to town.

After lunch we went to Cueva del Tapatio which is a shelter on the hill just above the town. Since it was quite small we continued hiking up the road past Xilitla for about two kilometers to Sotano de San Antonio. It is about 30 feet above the road in a clump of underbrush. Not knowing what we had found, I hung over the 15 feet in diameter hole and dropped a large rock. Over five seconds later we heard the hollow thud as it hit the bottom. I carefully stepped back from the hole and decided not to attempt entering it with my 100 feet of rope. Sotano de San Antonio had previously been entered by members of the AMCS and was found to be a vertical shaft which [illegible] at a depth of 385 feet. On the way back to town we saw another clump of trees and underbrush above the road and immediately went to investigate. After cautiously throwing rocks in from a distance I found that the entrance was vertical for only fifteen feet, so we climbed down and explored the cave for a distance of 300 feet to where it ended. The passage ran northeast at a 30 degree slope for its entire length. One side passage was noticed just inside the entrance on the right which was not checked since it was a small crawl leading toward the side of the hill. The cave is one kilometer from Xilitla and doesn't seem to have a name.

I left the Xilitla area on Tuesday morning and headed back to Valles. I had planned to catch a train to Cerritos to check on rumored sotanos, but upon arriving in Valles I learned that the train did not leave until 11:30 p.m. I caught the bus instead to El Salto, where the Rio Naranjo cascades over a beautiful waterfall. Although this could be a potentially good caving area, the construction workers at the new hydro-electric station there could only tell me that the river flows from a nacimiento about six kilometers above the falls. After a refreshing swim I left El Salto and returned to Austin by way of San Luis Potosi, arriving home at 6:30 p.m. on Thursday, June 3.

THE EXPLORATION OF SOTANO DE LA JOYA DE SALAS

by John Fish
Austin

After making final preparations on the evening of May 26, 1965, David McKenzie, Orion [illegible]cox, and John Fish left Austin for Mexico. The sole purpose of the trip was to explore and map the very promising Sotano de la Joya de Salas. We crossed the border Wednesday night with little delay, and continued on to Sabinas Hidalgo where we slept by the road just south of town.

Thursday morning we awoke to a beautiful sunrise scene with mountains and a small ranch immediately to the west. After a quick breakfast we drove to Cd. Victoria where the road leading southwest to Jumave was taken. The winding mountain road furnished many spectacular views en route. Several small caves by the road were checked.

On arriving at Jumave our intention of hiking the thirty-five kilometers across the mountains to La Joya was explained to the natives who were astonished at the proposal. A man named Raoul proved invaluable in making arrangements for renting burros for our equipment and hiring a guide. We were fortunate to have Orion along because he speaks Spanish fluently. Plans were made to leave early Friday morning, the 28th, on a seven day trip to La Joya.

The next morning we were up at four-thirty and ready to leave at six. The cool morning made the five mile hike across the desert pass with ease. We began joking that the trip might not be as hard as had been expected. We were to soon change our minds as we climbed the mountain and followed a ridge up several thousand feet. The side of the Sierra Madre Oriental is very dry and hot. The fauna is also much different from the eastern side of the range. A karst area was found on the way up the mountain. Also several Indian middens were crossed by the trail. Along the highest part of the ridge a Spanish moss forest was encountered. Orion was becoming sick from the heat, altitude, and drinking too much water. Finally after hiking all day at the awkward pace of the burros, we arrived about seven o'clock at the village of La Joya de Salas. The beautiful enclosed valley has been described in a previous newsletter. It was now a lush green and the fields were being worked. After briefly inspecting the sotano, everyone quickly went to bed, each with his own idea of what the cave would be.

Saturday morning we were awakened about seven by a light sprinkle which fortunately did not develop into a rain. It was time for the rainy season to begin, however, and the hundred villagers were in desperate need of rain since the lake was nearly dry. As soon as the shower ended it was decided to immediately prepare to enter the sotano. We had spent the night by the schoolyard only a hundred yards from the sotano. While Orion was driving a bolt at the entrance, David, John, our guide, and a friendly villager carried our equipment to the edge of the cave. We were greatly impressed by the dimensions of the entrance and the sound of rocks striking the bottom. A 295 foot rope was unbraided, secured to a hanger, and the equipment lowered to a ledge 87 feet below. The mapping equipment was then taken out and the entrance surveyed, Orion sketched, David manned the brunton, and John the steel tape. The entrance is a rectangular slot with a short fissure extension at each end. The entrance dimensions are 115 feet by 25 feet. A natural bridge separates the entrance into two parts, one part 70 feet long and dropping sheer for 255 feet, the other dropping to the ledge previously mentioned where the rope was retied for the next descent. Finally at 11:30 we entered

the cave to stay. Lunch was eaten on the ledge before continuing onward. All of our activities until the time we disappeared from view at the bottom were closely observed by more than thirty villagers. Two natives even went down to the ledge hand over hand on one of our ropes (they did not trust the bolt) and were pulled out by several men.

After lunch Orion rappelled first to the bottom of the entrance to take photographs and receive equipment. John lowered the equipment from a belay position and then he and David followed Orion down. The floor was strewn with rocks and dead birds and animals. Two short solution cavities contain fill, an unpromising fissure at one end remains unchecked, and two passages roughly twenty feet in diameter join on the other side of a partition. This was obviously the path water took. Intensive fauna collecting was done at the entrance which resulted in the second recorded finding of the beetle tribe, Sphodrini, in the New World. This species is at present being described by Dr. Tom Barr. A complete faunal list will be included in a future bulletin.

The passage leading to the next drop was found to be an even 100 feet. About halfway down the passage a pool of water was encountered across which the gear was relayed. Here also the passage began to take the shape of a fissure about 25 feet high. The passage entered the side of an estimated 200 foot fluted domepit which had red flowstone walls. A 200 foot rope was tied off around a large boulder 20 feet from the drop and Orion began rappelling. Orion reached a ledge about 40 feet down and thinking he saw the bottom continued his rappel. However, what he saw was only another ledge, and, furthermore, a white handkerchief tied to the rope's end swung freely in space. We then decided to drive a bolt at the edge of the drop to gain additional rope. The equipment was lowered to the ledge and finally to the bottom of the drop which totaled 170 feet. The room was a fissure about fifteen feet wide at the bottom that widened at the passage level and continued up out of sight.

After 40 feet the fissure narrowed and dropped 8 feet to two pools of water and a short passage to the next drop. The ledge was difficult to negotiate because it was undercut and the rope frequently slipped into a narrow slot. Measurement showed the drop to be 57 feet to what was christened the Cathedral Room because the walls of the fissure resembled a Gothic arch where the rope was hung. This, the only dry room in the cave, became our base camp. An evening meal was prepared and then we sacked out, eager for more exploration the next day.

Since we were very tired, we slept much later than had been planned. The temperature throughout the cave varied between 69° to 61° so that we were quite comfortable. Out of the far end of the 70 foot high Cathedral Room was an eleven foot chimney to a 50 foot drop into a beautiful red flowstone covered fissure room about 130 feet high. Two small unimportant passages about 3 feet in diameter lead out of this

cycle-shaped room. David, being the first down quickly eliminated these passages, and found a slightly larger passage across the length of the room. It was observed that in some placed the walls were chipped and beaten as if the cave had been flooded violently at times.

The chosen tubular passage extended nearly a hundred feet but ended in a dirt fill. Two slots in the floor led to the only formation room in the cave. It was decided that Orion should go first on the basis that he had better luck than David. The rope hung over a flowstone formation and fell free for 54 feet to a flowstone bank 25 feet above a deep lake. At first appearance the lake offered the only route. Orion waded and swam through the water only to have David find an upper route through the formations. A roughly elliptical shaped room was encountered with a crevice and numerous holes in the floor. However, straight ahead David found a domepit in which rocks seemed to fall forever.

Following the initial excitement, John returned to camp for a 350 foot length of rope. After several minutes consideration David dubiously decided to explore the pit as Orion and John heckled him about the rope being too short. David rappelled to a ledge 60 feet below where the rope lay in a huge pile. He then talked Orion into coming down to help. Loose rocks were cleared, the rope entangeled, a bolt driven to aid in clearing the ledge, and David was on his way again. In the excitement of the moment, David described the pitch as the "most fantastic thing" he had ever seen. As usual the room was a tremendous fissure that widened nearly out of sight at the top. When David reached bottom, he reported that the room looked like a blind pit. There seemed to be no promising passage out of the room. We then returned to camp, our hopes greatly dimmed, but determined to check every possible lead the next day.

We spent some time the next morning taking pictures and surveying, but we quickly got on to the business of checking all possible passages. Nothing was found at the top, but two passages were explored at the bottom. One small water passage led to a connecting dome which had a passage up on the wall that drained into the dome. The other passage was at the lower end of the room and contained a tiny stream which ran toward the room. Exploration upstream yielded nothing good. The only possible lead left was an elliptical 2 by 3 foot hole in the floor near the big room into which the water ran. John rappelled 15 feet through a small waterfall to a mud and gravel floor. John followed the fill slope around a formation to the deepest point in the cave, 892 feet below the surface. The depth makes the sotano the second deepest in Mexico and the fourth deepest known in the Western Hemisphere. Somewhat disappointed that we could not go deeper, we returned to camp to eat and sleep.

The next day, our fourth in the cave, we returned to the surface. The only major difficulty encountered was lifting the rope and other equipment up the pitches. With the aid of

the Mexicans who pulled our gear out the entrance, we were able to leave the cave 76 hours after entry. When the ropes were measured, the last big drop was found to be 231 feet making the domepit about 280 feet. After obtaining refrescos from the store and eating a good meal, we sacked out for some much needed rest. It was exhilirating to breath good mountain air again.

We awoke the next day stiff and sore, but we decided to hike around the valley for awhile. A large karst area was found and two caves checked. We also had an interesting conversation with the school teacher about his students and how the school was operated.

The next morning we were on our way back to Jaumave by six-thirty. We reached halfway mark and the top of the mountain with no difficulty. After lunch it was decided to walk on ahead because of the burros slow pace. The long slope down the mountain seemed never ending and the desert had to be crossed at 2 o'clock in the afternoon. It was with the last of our energy that we reached Jaumave and collapsed in the Rio Guayalejo. After a quart of water and four cokes apiece, we began to feel better. When the burros arrived two hours later we packed our things in Orion's car and left for Austin.

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ANNOUNCEMENT

The editorial staff of the AMCS NEWSLETTER has decided that since interest in the AMCS has become so widespread that it will endeavor to print a bulletin. This bulletin will contain articles pertaining to the speleology of specific caves and cave areas and include maps, scientific, and bibliographic information. It will be published as often as enough information is available to warrant it. One and possibly two issues of the BULLETIN are scheduled for publication this year (1965). The NEWSLETTER will be mimeographed monthly and serve primarily to keep AMCS members abreast of current activities in Mexican cave exploration.

The AMCS Newsletter is published monthly by the Association for Mexican Cave Studies, P.O. Box 7672, University Station, Austin, Texas 78712. Membership in the AMCS is $5.00 for the calendar year, with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications of that year.

Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copying onto a standard or legal size Ditto master. Longer articles with more detailed maps are invited for publication as a bulletin. Trip reports are requested from all trips.

Editor.....Terry Raines

Staff.....John Fish
T.R. Evans
James Reddell

THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

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HUAUTLA

Location: Huautla (14Qi 12) and Tierra Blanca (14Qi 11) 1;100,000 Quadrangles. State of Oxaca, Municipo de Teotitlan and Tuxtepec (east part of area near Miguel Aleman Reservoir). 175 miles southwest of Mexico City, 50 miles south of Cordoba, and just to the east of the town of Huautla. The center of the area is about lat. 18°05' N. and long. 96°40' W.

Description: The area consists of a roughly triangular plateau at an elevation of more than 2000m. (6560ft.), and several lower valleys to the north, west, and northeast. This plateau, with an area of about 40 sq. k. (16 sq. mi.), drops abruptly to the south and southeast into the Rio Santa Domingo that flows at an elevation of less than 350m. (1,148ft.). To the north and west of the plateau are the valleys of the Rio Coyomeapan, and its tributary, the Rio del Camaron. These streams sink at the end of their valley, at an elevation of 850m. (2,788ft.). 10k. (6.2mi.) northeast of the plateau is the Miguel Aleman Reservoir at an elevation of less the 100m. (328ft.). The plateau itself has moderate relief, its high point being Cerro Suchitunaco, at an elevation of 2450m. (8200ft.). Rainfall varies from about 2000mm.(50in.) on the east edge of the plateau, to about 1500mm. on the west edge. The steep east facing slope of the plateau receives over 2500mm.(63in.). The whole area from the Rio Santa Domingo north to the Rio Coyomeapan, about 400sq.k.(160sq.mi.), has mainly internal drainage. No trips have yet been made to this area, all information being obtained from topographic maps with a contour interval of 50m.(164ft.). This area will very likely contain caves deeper than any now know, as it contains a considerable area of internal drainage over 6000ft. above the surrounding lowlands. In some places slopes are very steep, dropping from a plateau at elevations of more than 2000m.(6500ft.), to elevations of less than 200m.(650ft.) in less than 1.5k.(1mi.). Names are those from topographic maps and some are not in use locally.

Access: A rough but passable road leads to Huautla (pop. 6400) and the area can be reached by trail from this town. The center of the plateau lies about 20k.(12mi.) east of the town and can be reached on foot in about 10 hours. It might also be possible to reach the area from the end of the road at San Felipe de Diaz 10k.(6.2mi.) to the east of the plateau. However this town is in the jungle at an elevation of 100m.(328ft.), and it would be difficult to approach the area from this direction. At present a road is under construction from Huautla to San Felipe Jalapa de Diaz. When this road is completed, it will traverse the south edge of the plateau above the Rio Santa Domingo and will greatly facilitate work in the area. The road is now completed to a point about 4 miles east of Huautla.

Caves and Sinks: As no trips have been made to this area only the larger sinks that are evident on the topographic map are listed.

Sink 5k. east (across divide) from Huautla, el. 1500m. Drains 6sq.k
Sink 7k. east of Huautla at head of Rio del Camaron. El, 1400m.
Large Sink 10k. ESE Huautla, El.1550m.
Sinks 8k. NE Huautla near head of Rio del Coyomeapan.
Sinks 2-5k. north of Cerro Suchitunaco, El. 2050m.

Sinks 5k. NW Cerro Suchitunaco, El.2050m.; k.NE C. S. El. 1850m.; 10k. NE C. S. El. 1400m.; 12k. NE C. S. El.1250m.; 15k. NE C. S. El.1200m.
Sink of Rio Coyomeapan, 15k. ENEHuautla El. 850m.
Sink 12k. SE Huautla by Rancheria El Camaron. Small stream enters, El. 1300m.

AMCS TRIP REPORTS

Persons: John Kreidler, Tommy McGarrigle, and Bill Russell.
Date: July 1, 1965
Destination: Huautla, state of Oxaca
Reported by: Bill Russell

John Kreidler, Tommy McGarrigle, and Bill Russell left Camp Alzafar for a reconnaissance trip to the Huautla area, getting to just south of the Linares cut off the first day. The next day we drove through Mexico City and camped just north of Tehuacan. From here we drove to Tehuacan, and then followed the road south to Teotitlan. Here the pavement ends and the steep narrow gravel road to Huautla starts. From the edge of Teotitlan the road climbs into the mountains. The road is steep and narrow, but in most places the surface is fairly smooth, and the trip can be made in most passenger cars if the driver is careful. We arrived in Huautla about three o'clock after a five hour drive through the impressive mountains from Teotitlan.

Arriving in town we found we weren't the first Americans to reach Huautla, but that the town was the place the really far-out people came to eat the magic mushroom. The Magic Mushroom is a small local mushroom that grows on cow droppings during the wet season, and when eaten this mushroom produces vivid halucinations. The local people were happy to learn we weren't interested in the magic mushrooms as they did not appreciate the mushroom people. The mushroom people did not cause any real trouble, though one of them was thrown in jail a few years ago when he tried to eat a live turkey in the town square, but mostly they just annoyed the locals. They would steal the penny rolls from the street vendor while he was immoblized by a barrage of unintelligible questions. The one mushroom woman went barefoot and carried a cane covered with strange carvings, and some of the locals feared she was a witch. Mushroom men would haggle for hours in the market, only to decide after a price was agreed upon that they didn't want any after all. But the local people retaliated. The mushroom eaters would enter a store, point and ask for some of that, but the store owner would answer with we don't have any. It took us half an hour to convince the owner of the gas station that we really weren't mushroom eaters, and they might not really be out of gasoline. (The gas is kept inside in barrels and they bring it out to you in a gallon can, so one can't really tell if they do have any.) Though the mushroom eaters were all from the United States, their language was almost unintelligible to the uninitiated.

The first afternoon in town we walked down to the Puente de Fierro about four miles NE of town, where we were told of many caves and shown several entrances. We returned to Huautla late that night, and next morning started to look over the approaches to the big cave country. We found that the road that will eventually cross the southern part of the cave country had been completed for about four miles east of the town, but that the large stones used in the city streets prevented our low slung Corvair from driving through town. Just to the east of town lay several large sinkholes a mile or two across and perhaps a thousand feet deep. Beyond this lay the cave plateau. The local people reported many large pits, and also informed us that it took ten hours to cover the ten air line miles into the cave area, as the trails are steep and twisting. We had hoped to be able to cave from the car but it was evident that the country was much to rough to do more than reach the edge of the cave area in a half days walk. If we could have driven out the road which now ends in an apparent sink area, we might have been able to accomplish something. So it was decided to drive to the Puente Fierro and check the caves in this area.

We established camp at a good location just above the bridge, and near several caves. Upstream and then up a branch for about 100 yds, is Cueva de Agua Limpia. The local people reported several kilometers of dry passage could be reached by wading through a shallow pool. However, when we crossed the pool the cave was found to be blocked by sticks and dirt. The locals said this occasionaly happens but that a little digging would break through. Next we visited the cave downstream from the bridge and across the river from the road. This cave is mainly a large passage about 300ft. long that slopes steeply upward from the river level to the bottom of a shallow sink higher on the mountain. There were also several smaller passages. Just downstream from this cave , and almost under a small bridge, is Cueva de la Regadera. The ten feet high, almost hidden entrance leads over a pool to a sandbar. Beyond this, the entrance passage syphons, but a narrow passage to the left leads over a crevice dropping 6ft. to water, then past a sharp right turn and into a ten by ten foot stream passage. The water quickly deepens, but by swimming one can reach a room with a small waterfall. Here the cave ends in a syphon. About 500yds. down the road, past the waterfall entering the main river, and past the old coffee plantation, and across the river from the road is the river level entrance to an unvisited cave. About 200 yds. further downstream the river flows underground into a cave. This cave appeared to syphon after about fifty feet, but was not carefully checked due to swift water. The water reappears about one half mile further downstream. About 100 yds. beyond the sink of the river and up a steep slope is the Cave of the Millipeds. This cave contains bats, millipeds, two fair sized rooms and is about 300 ft. long. About two miles further down the valley one can look across the river, now about 800 ft. below the road, and see far above on the opposite mountain the Grutta de San Antonio. From the road it is a hard three hour hike up to the cave. The cave can also be reached by a half hour walk from the jeep road leading to San Antonio. From the 100 foot wide 50 foot high entrance to this cave a passage leads to a large breakdown room. Here there is a passage left to another

entrance and one right to a small stoopway that soon opens up into a walking passage that connects with a large room. To the right of this room is a small room with several large broken clay jars. From this room the main passage leads to several large formation rooms, and finally to a steep flowstone slope that time prevented us from checking. This is a large and very nice cave, and conservation signs placed at the entrance have greatly reduced vandalism. There might be a large water cave nearby in the bottom of the deep narrow gorge below the trail between the cave and San Antonio. On the return to Austin we stopped by several gypsum caves just off the highway south of Matehuala. Several other sinks were seen. A rhadine beetle collected in gypsum caves by kilometer post 555 was tentatively identified as a new species.

Persons: Ron Ralph, Ken Laidlaw, T. R. Evans, John Fish, Terry Raines
Date: July 7-14
Destination: Tlamaya S. L. P.
Reported by: T. R. Evans, John Fish

On Wednesday, July 7, three Texas and two California members of the AMCS left for Mexico to continue mapping and collecting in Sotano de Tlamaya. Also on the agenda were looking for new pits in the Tlamaya dolina and climbing Miramar to find pits higher on the mountain. We spent the first night at the Nacimiento del Rio Mante, and continued on to Rancho de Huitzmolotitla the next morning. That afternoon we visited the entrance to Sotano de Huitzmolotitla which is an oval about 100 feet by 150 feet and plunging free for 344 feet. Returning to camp, we began to prepare our ropes and equipment for Tlamaya.

We entered the sotano early in the morning and proceeded with little difficulty to the Big Room, about 950 feet below ground. It was noticed that the waterfalls carried more water than during the winter trips. Frequent stops were made to collect fauna and to take pictures. After a brief rest and a snack in the Big Room, we began the long process of chimneying over pools and going down the short drops to reach the end of the last survey at the 1354 foot level. Here we again rested before going on to survey the unexplored.

The end of the previous survey was a deep plunge pool about 25 feet in diameter. We chimneyed past the pool to a passage 8 feet high and 15 feet wide, with a sandbar on the floor. Soon, however, the familiar fissure passage resumed. Typically the passage was 8 feet wide with the fissure winding out of sight above. After about 150 feet, we came to a 20 foot chimney, which was the largest single drop encountered in the new passage. Here Ken decided to return to the sandbar to rest more for the trip out. About 800 feet of new passage was surveyed altogether and a total depth of 1418 feet was reached. It should be noted that the walls were becoming covered with mud and there were long sand and gravel bars on the floor. If a siphon is not soon encountered, it is likely that the cave will descend very slowly for perhaps 200 feet over a distance that may run into miles. The present survey ended

looking over the edge of a 7 foot drop into a deep pool of water which must be swum in order to continue the exploration.

The return trip to the surface was again relatively uneventful except for the unending chimneying and the difficulty of raising equipment up the pitches. After 33 hours in the cave, we arrived at the surface, happy after having pushed Tlamaya past the 1400 foot mark, and exhausted.

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Several new pits in the Tlamaya-Iuitzmolotitla area were located and checked on this trip. Four of these pits are found near a trail on the side of the hill directly across from Sotano de Iuitzmolotitla. The first sotano is across a fence about 20 feet to the left of the trail. A rocky, mud slope descends 34 feet to the bottom of the figure-eight shaped pit which is about 40 feet long. In one corner is a small hole which descends 42 feet into a fissure passage. The floor descends another 8 feet ending in earth fill. The walls of the last part of the fissure are covered with flowstone.

The second pit is located further on down the same trail off to the left in the middle of a corn field. The opening is 15 feet wide, 25 feet long, and 54 feet deep. A fissure passage leads off one side of the pit and rapidly becomes a crawlway too small to allow exploration. Larger passage could be seen through the crawlway.

On the right of the main trail about 100 yards further is the third pit. The entrance is oval-shaped, measuring about 15 feet by 25 feet and falling free for 95 feet, belling out slightly. From the bottom of the drop, the floor slopes down another 10 feet to a small hole through mud-gravel fill. One can see 6-8 feet down this hole. Perhaps digging might be worthwhile.

The fourth and last pit found in this area is a couple of hundred yards further down the trail and just to the right of it. As with the others, this pit lies in an arroyo. There are two entrances some 20 feet apart to this 260 foot shaft, thus forming a natural bridge. The smaller entrance was entered because it offered a nearly straight rappel to the floor. A small ledge is found at 164 feet. From here the shaft continues downward for a total depth of 260 feet to a large fissure-like room. The curving fissure is about 20 feet wide, 75 feet long, and stretches upward for 200 feet to the natural bridge. The floor is essentially level and covered with small rocks. Three salamanders were collected.

Three other pits were checked in a field off to the right of the road which slopes down into the town of Tlamaya from Rancho de Iuitzmolotitla. One is near the top of the field. The other two are near each other by the fence at the bottom of the field.

The pit at the top of the field is 50 feet deep and blind, with much fill. There is a barbed wire fence around the entrance as

well as mala mujer (or also known as ortega). One of the sotanos at the bottom of the field is formed in a fissure that runs some 25 feet along the surface. The deep end of the fissure was rigged and the drop was found to be 61 feet. From here the floor ascended towards the other end of the curving fissure until the floor was only about 20 feet from the surface. Passage width was 6-8 feet maximum. No leads existed at the bottom.

The third pit found in this field is only a couple of hundred feet towards the road from the last pit described. Much ortega (from first hand encounter) surrounds this entrance also. The entrance is approximately 10 feet wide and 15 feet long, but it quickly narrows to about 5 feet in diameter, and drops to a ledge 50 feet down. From here one can drop into a large room (total depth 155 feet). The floor and parts of the walls are very muddy. A flowstone covered fissure passage leads from ome end of this pit, apparently in the direction of the fissure pit mentioned above. This fissure was followed for 30 feet where the bottom of the fissure dropped about 40 feet. It remaines unchecked.

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While in the area, we decided it would be worthwhile to hike in the mountains that encompass the Tlamaya dolina to look for pits higher up that might lead to some really deep caves. We climbed Miramar (ocean view) which has several thousand feet of sharp relief. There are dolinas and pits even near the top. A report will be given when the area can be checked out more thoroughly. There are at least two sotanos rumored to "100 meters" deep.

While returning from Miramar, two more pits were found just up on the left side of the Tlamaya dolina (as one walks towards Ejido de los Joyas) in a cornfield about a quarter-of-a-mile past Tlamaya They are reachd before Sotano de Porra and are not as high on the dolina wall. One is about 30 feet in diameter and appears to fall for 200 feet. The other pit is 50 feet lower and has a small entrance which opens up into a room and appears to be about 100 feet deep. It is not known if passages exist, as the sotanos have not been checked. We returned to Austin the next day.

Persons: James Reddell, Terry Raines, and John Fish
Date: July 18-28, 1965
Destination: North Central Mexico
Reported by: John Fish

On July 18, James, Terry, and I set out for the north-central parts of Mexico at 5:00 AM. Our purpose was to investigate the speleological potential and to make intensive surface and cave collections in this essentially untouched area.

On arrival at Piedras Negras, we learned that because it was Sunday and because Terry did not have written permission from his parents, we would not be allowed into Mexico. After much discussion and a "fee" of $1.50 apiece, we were allowed to continue on our way.

Our first stop was the socavon (tunnel) near Músquiz where a large volume of water comes from a mine. Some strange fish, which were white in front and black in back, were observed at the mouth of the large spring. Next we proceeded westward to find a rumored cave at the nacimiento (origin) of the Rio Sabinas. Unfortunately the river rose from a gravel bed, so our first days efforts were of no avail.

The next morning we traveled south along the Saltillo highway to Ejido de Hermanas. Here we were told of many caves. After much inquiry and cross-country driving, we were guided to a bat cave, Cueva de la Herradura (horseshoe), located at the base of an 80 foot rock mound 9 miles east of Hermanas. The 10 foot wide by 6 foot high entrance led to two rooms connected by a short passage and a hundred feet of passage at the end. Another entrance led to about fifty more feet of cave. In all there was about 400 feet of passage. Beetles and spiders were found in aboundance but only one cave cricket was found. After leaving the cave we set out for Cuatro Ciénegas de Carranza. In the Puerto del Carmen west of Monclova we found a small cave about 100 feet long which was of little interest. Further along the pass we saw two large openings near the rim of the canyon. We spent the night by the Rio Salado about 10 miles east of Cuatro Ciénegas.

After a good nights sleep we decided the next morning to try to locate Cueva de San Vicente. Asking directions along the highway, we were told to go to the Rancho de San Vicente through the two adjacent towns of San Juan and Boquillas about 10 kilometers east of Cuatro Ciénegas. From the ranch we found a side canyon where mining operations were conducted and the cave was located. Hiking along the canyon and climbing about a thousand feet (comparable to Gruta del Palmito near Bustamante) we arrived at the base of a sheer cliff of vertically bedded limestone. Here we were told that the mine and the cave 250 feet above were connected and that it was best to use the mine entrance. The mine tunnel (6 feet by 6 feet) led back 300 feet to a series of ladders going above and below. We climbed the 17 wedged-in ladders for about 250 feet to reach the cave. A bat reference describes the cave as a single room 120 meters long and 20 meters wide. The cave was very dry and dusty but we did find a spider beetle and a few terrestrial isopods. Guano is mined from the cave while phosphates are mined in the lower level.

From Cueva de San Vicente, we headed southwest toward San Pedro on a road which many people said was impassible - and they were nearly correct. The desert road was deeply rutted by the passage of dual-wheeled trucks. The dust was often 6 inches thick and the differential frequently drug off more than 2 inches of dirt from the center ridge. James and Terry rode with their heads out the window and I was on top of the truck to avoid the strangling dust. About sunset we hit a deep ditch which nearly tossed the camper top and me off the truck, so we decided it was time to stop until daylight. The crystal clear desert night, 60 miles from the nearest town, was extremely beautiful. An intensive surface collection turned up of all things, two camel crickets.

The next day we finished our overland crossing without too much difficulty. However Terry acquired his first Mexican speeding ticket in San Pedro, which nearly got us into a lot of red tape. Fortunately we escaped with only a 10 peso fine and headed for Mapimí, north of Torreón. At Mapimí we visited Cueva de Cucaracha and Cueva de los Riscos. Cucaracha was a small nothing cave which we found on the way up to Riscos. Riscos was a large, mostly dry cavern where we hoped to obtain some crickets and ricinuleids of which a few specimens had been reported here before. Once again however, the abundance of cave life left something to be desired. As we prepared to leave the cave we noticed that the sun was now low in the west which created a beautiful orange glow all around the entrance room.

On Thursday, the next day, we drove north to Hidalgo de Parral and then east to Salaices. James and I did a lot of surface collecting on the road to Parral because Terry had to clean the dirt out of the carburetor bowl which had gotten into the gas while crossing the desert. At Salaices we were led to two Texas-like sinkholes. Cueva de los Muchachos was a sharply sloping four foot in diameter sink dropping about 70 feet to a horizontal fissure extending 200 feet. We were overjoyed to find hundreds of cave crickets in little domes of the sink. Cueva del Diablo was the most interesting cave of the whole trip. It is located a few miles west of Salaices and a couple hundred yards north of the highway. It was visited briefly by members of the David Rockefeller Mexican Expedition. The entrance sink is about 75 feet in diameter and slopes down to a small hole 50 feet down which leads to the cave. The Passage continues downward over breakdown for another 100 feet to a beautiful maze. The passage is typically a white walled fissure 25 feet high and 8 feet wide. Apparently the lower levels contain pools of water at times for there were small low crawlways with crystals all over the walls and a waterline was apparent. To our great frustration we found the dead bodies of several cirolinid isopods in one small pool, but live specimens could not be found anywhere in the cave. Altogether the cave is about 200 feet deep and contains several thousand feet of passage. On Friday James and I returned to Diablo once more to investigate more maze and to search (unsuccessfully) for live isopods. In the afternoon we went to Parral to obtain a hotel room since Terry was coming down with the "common Mexican malady" and the specimens needed to be seperated.

The next two days were spent in areas south and east of Parral. At the town of Los Cuevas we were led to a shelter cave, Cueva del Salitre, which is formed in an ignimbrite. The entrance is 40 feet high, 30 feet wide, and the floor slopes up for 100 feet to meet the ceiling. Swallows and fauna peculiar to swallow caves were found at the entrance. In the area around Carmargo there are apparently caves in the limestone hills but none were visited.

Our next destination was a cave lead near Empalme, about 50 miles east of Torreon. Here six small, dry, but curious caves were visited. Most of the caves were apparently formed by the solution of gypsum out of the surrounding limestone. Collections consisted mainly of spiders and crickets.

The next day we drove south of Saltillo to locate what Pemex calls Grutas de Arteaga but is known locally as Grutas de Cuevacillas. The large entrance is 1500 feet above and visible from the road. It is roughly circular and about 60 feet in diameter. A 15 foot high, 40 foot wide passage slopes steeply downward a length of about 150 feet to where the passage is nearly blocked by formations. On the other side of the formations, a room with similar dimensions is found. Several columns and other formations are present. A small pool of water was encountered but it contained no life. When climbing down the steep mountain, we all slipped at one time or another and fell into the waiting cactus.

After returning to the truck we drove on south of Saltillo towards San Luis Potosi and then took the road to Linares. In many places there is good, thick- bedded limestone showing along this spectacular highway. At times the highway seemed almost overhung by the mountains. In a field on the right side of the road, we spotted a sink which contained two small gypsum caves of little importance. There are many unchecked caves along this highway. We slept a few miles west of Linares.

On our final day we made an unsuccessful attempt to collect in Garcia Caverns west of Monterrey, and then returned to Austin. We felt our trip was well worthwhile but the number and variety of biological specimens was not what we had hoped for.

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Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copying onto a standard or legal size memeograph master or for printing. Longer articles with detailed maps are invited for publication in a bulletin. Trip reports are requested from all trips.

Editors..... Bill Bell
John Fish

Staff..... Bill Russell
James Reddell
A. Richard Smith

THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume 1 Number 8 August 1965

AMCS Area Report – Xilitla

by Bill Russell

Location: Valles–14Q e(2), and Tamazunchale–14Q e(5) 1:100,000 Quadrangles. States of San Luis Potosí and Queretaro, Municipios of Xilitla and Aquismón, S.L.P.; and Landa de Matamoros, Queretaro. About 175 miles to the north of Mexico City and just to the north of the town of Xilitla.

Description: The area can be divided into two geomorphic regions, an inner karst core characterized by a total lack of integrated surface drainage, and a larger outer area where sinks are generally confined to the uplands between the valleys. The central karst core is a triangular area extending form the north rim of Arroyo Seco almost to Rio Tamuin. The southern boundary of the karst area parallels Arroyo Seco and extends westward about 4 kms. into the state of Queretaro. From this point the boundary extends northward across the Rio Santa Maria. From this northernmost point the karst boundary is the steep front of the limestone ranges trending southeast and then south. This steep eastern boundary is visible west of the Pan American Highway near Huichihuayan. The total area of this karst core is about 375 sq. kms. (144 sq. mi.), and there is no surface drainage to the outside.

The southern boundary of this karst area is the start of the steep slope into the Arroyo Seco valley. This valley runs in an east–west direction to the south of the Y Griega–Xilitla road. The valley extends well past Xilitla to the west, being just south of the Jalpan–Xilitla road. The present Y Griega–Xilitla road crosses the extreme southern end of the karst area from the time it enters the mountains to a point a few miles east of Xilitla where it descends into the Arroyo Seco valley. The road from Xilitla to Jalpan lies just to the south of the karst area, the southern boundary of the karst being the top of the ridge north of the road. Most of the work in the Xilitla area has been done along the Xilitla–Y Griega road and along the secondary road northward from the Xilitla road to the town of Tlamaya. The karst in this area averages about 1500 feet above the resurgences and contains the well–known sótanos of Huitzmolotitla and Tlamaya, as well as a large number of other caves and pits. To the west and northwest of Tlamaya the karst area rises and WNW of Xilitla there is an extensive area of sinks at an elevation of over 2000 meters. These sinks probably connect with the resurgences near Huichihuayan about 15 kms. to the NW at an elevation of about 150 mts. The highest portion of the area along the S.L.P.–Qtro. line is at an elevation of over 3000 meters. To the north there is a gentle slope downward to a valley opening to the SE. North of this valley are two narrow ranges that form the northern boundary of the karst area. Elevations in this area are about 750 meters. The Rio Santa Maria has cut a narrow gorge through the north end of the karst plateau. The rim of the canyon is about 750 meters elevation; the bottom is below 250 meters. Slopes into the canyon are very steep, in places greater than 45 degrees. The plain above the canyon is covered with sinkholes and is the only area in Mexico marked "karst" on Raiz' landform map of Mexico. Surrounding the karst area composed of large well–developed sinks is an area where sinks are present only on the

comparatively flat areas along the divides. This area extends to the south and west. Some of these intervalley sinks are visible along Highway 85 southwest from Tamazunchale along the narrow divide between the Rio Moctezuma and the Rio Amajuac. This locally developed karst extends westward with decreasing intensity to near Jalpan, while northward it grades into an area of large valley sinks that extend north past Ciudad del Maiz. North of the Rio Tamuin is an area of low limestone ranges that doubtless contain caves, but large scale karst is not well developed.

Access: The southeastern end of the karst can easily be reached from the Y Griega–Xilitla road, and the branching road northeast to Tlamaya. The Xilitla road is in good condition and is no problem for any car, while the Tlamaya road is somewhat rougher and the newer cars scrape, but it can be traversed. The high karst northwest of Xilitilla (1250 meters) to Llano Chiquita(2015 meters), but local names are frequently misplaced on the topographic map.

The northern most part of the karst area, the plain above the Rio Santa Maria, can be reached by trail either northwest from Tecomon or northwest from Aquismón. Tecomon (500 meters) is at the only break in the steep east front of the karst area, the east end of a northwest trending valley. The trail northwest from Aquismon leads along the base of the mountains to the Tampemoche–La Caldera area where one is just to the east of the plateau. The map indicates a better trail along the valley route. Trips to Xilitla are best made during the dry season from December to May, as some of the area receives over 100 inches of rain per year. A new road is being constructed to Xilitla following Arroyo Seco, and should be open soon. The road to Jalpan is also being greatly improved.

Editor's note: The following trip report from the early files, is included to show more specifically what is to be found high in the mountains around Xilitla and Tlamaya. Most of this very large and promising pit area remains almost completely untouched other than brief reconnaissance. Sótano de Huitzmolotitla has been mapped and found to be about two miles long and 789 feet deep. The pit mentioned on December 26, 1962, about two miles outside of Xilitla, has since been revisited and is called Sótano de San Antonio (386 feet deep).

Trip Reports

Persons: Terry Plemons, Terry Raines, and T.R. Evans
Date: Dec. 22, 1962 to Jan. 1, 1963
Destination: Sótano de Huitzmolotitla and Xilitla area
Reported by: T.R. Evans

22 Dec. We left Austin for Nuevo Laredo and arrived there around 3 PM. Because of large Christmas crowds we were unable to get through customs for an hour and a half, and couldn't get a bus out of Nuevo Laredo until 10:30 PM that evening.

23 Dec. Arrived in Monterrey around 2:30 AM and had to wait a full 12 hours before getting a bus to Valles. Arriving in Valles around midnight, we sacked out at the Vencedor bus

station, which has busses to Xilitla.

24 Dec. At 4:30 AM, we boarded the bus for Xilitla and arrived there at 6:30 AM and rented a hotel room for $10 pesos a day. Here, we stashed our excess baggage and repacked for our mountain hiking. A visit to the Presidencia Municipal got us a letter of introduction to the village of Mirimar. The clouds were very thick and visibility was around 200' when we struck out for our destination of Canejo (Rabbit Ears) to look for pits. Guided only by our compasses, we reached the base of Mirimar around 3:30 that afternoon and proceded to start the long journey upward. We spent the night around 2/3 of the way up after finding a 250'-300' deep pit.

25 Dec. We got up, enjoyed the view of the cloud-filled valley below, and continued upward. After a couple of hours, we came across a pit area near the top of Mirimar. About five pits were located, two 200' deep or so and the others around 100' to 50'. We ate lunch on the top of Mirimar from where a really spectacular view of the valleys and surrounding mountains is to be had. After lunch, we started down the other side of Mirimar to return to Xilitla. We found it impractible to continue to La Sillete from here as several large valleys intervened. The side we had come up on had no trails towards the top, but the underbrush was not very dense. Going down, we ran into the thickest undergrowth I have seen: vines, vines, and more vines and very karstish rock, expecially near the top (on both sides). We found one cave with a fairly large entrance and a big entrance room on the way down. The cave also has a 100' pit which we left unchecked. The first room is 50' by 100' and 50' high or so. Two entrances lead into the room, both walk-ins. After a couple of hours of crashing through the vines, we arrived at the Ejido Las Jollas and inquired about caves and sotanos here. The people are very friendly and assured us that there are various caves and sotanos in the immediate area and that two of the pits are very, very deep. We fired on into Xilitla from here, a distance of 8-10 miles.

26 Dec. After sleeping the night in our hotel room, we got up and started walking up to Ahuacatlan and El Rancho de Potrerillos. The day was miserable-foggy and misty. We saw very little of the valleys and mountains on the way up and could get only a little inkling of the pit possibilities on the way. About 1 1/2 to 2 miles outside of Xilitla on the right side of the road we found a 300' deep pit. It is easy to see as it is in a grassy meadow and is surrounded by large vine-covered tropical trees. At Ahuacatlan, we ate some beans and tortillas in a local cafe and proceded to the Rancho. We arrived in the area at night and a Mexican who had been walking near us took us to the center of the ranch and announced our presence. Sr. Resendez and his family had us come into their cottage and sack out on the floor. The next morning, he showed us two pits and a cave before we left and assured us that there were many more in the area. He gave us much more information regarding caves and pits in the area and on the road to Jalpan. We paid him $10 pesos for showing us the two pits - both 100' to 150' deep, one very high in the surrounding mountains. We also visited, briefly, a cave in the same valley as the ranch called "La Cueva del Muerto". This is in one side of a very large dolina. Two entrances lead into the cave, both large

walk-ins. The horizontal distance of the top level is not over 500 feet. We left two 30 foot pits unchecked and these may very well lead into quite a cave. One bat was seen as well as many millipeds. Around noon, we left the area for Xilitla. We arrived at dark and decided to look for Sr. Gómez the next day in order to ride out to his ranch and start the mapping of Huitzmolotitla.

28 Dec. Sr. Gómez showed up around 11 AM and we found that he was returning to his ranch at 2 PM and that he would be glad to give us a ride. We finally got to his ranch after his usual but practically innumerable stops for beer. We checked the rope and got all of our equipment together so we could get a good start in the morning. We had a look at the pit, came back and cooked some soup and ate tortillas and later had coffee with Sr. Gómez.

29 Dec. We entered the sótano at 9 AM and started mapping. I used my large "Dinosaur Ring", Terry Raines used "break-bars", and Terry Plemons used a "Safety D Ring" and we had no trouble with any of the methods. I forgot my gloves and rappelled without any and found no difficulty whatsoever. After mapping to the point to which Terry Raines and I quit exploring on the previous trip (5231'), we explored another 500' before starting our journey out. The cave got much more difficult to explore fast. We encountered two 10' water-falls with much water and managed to traverse around them and were soon stopped by wall-to-wall 10' plus deep water. Rubber rafts and sleeping bags would be very useful on any future trips. Two carbide lamps bit the dust on the 161' drop and mine remained the only functional one among us. It was decided to wait until morning before going up the big drop so there would be light. We spent the next 5 hours huddled under our ponchos which we had brought to the bottom of the large drop. I had my carbide light going and the two Terrys played with candles trying to keep warm—all to no avail. We got out around 9:30 AM and informed Gómez that we were back and returned for the rope which is hell to haul out. We spent the rest of the day resting and waiting for Sr. Gómez to return from Xilitla and go in to Valles—he never did. We had a most enjoyable supper with Sr. Gómez, his nephew who speaks English, and his two sons. Sr. Gomez also has 6 daughters and 27 grandchildren. An interesting and lively discussion was provoked when I asked the English-speaking nephew what the difference between "Cuando regresa?" and "Cuando se regresa?" was. The discussion of Spanish semantics mushroomed from this point and lasted at least 30 minutes.

31 Dec. One of Sr. Gómez' sons and his nephew drove us into Xilitla in the famed pick-up so we could catch the bus for Valles. We left Xilitla at 10:30 AM and got to Valles around 2 PM. From 2 until 8:25 PM we waited for our bus and wandered around Valles and sat in the square watching the beer companies truck in beer for the New Year's Party. We changed in Victoria and again in Monterrey.

1 Jan. We spent the New Year on the bus sacked out and barely cognizant of it except for the bus driver's loud radio which was broadcasting from a large party somewhere in Mexico. We arrived in Nuevo Laredo around 10 AM and went to a restaurant and ate some cabrito and then returned to Austin, arriving here around 5 in the afternoon.

Persons: Bill Bell, John Fish, James Reddell
Date: August 18–26
Destination: States of Hidalgo, Veracruz, Guerrero
Reported by: John Fish, James Reddell

To be different I could say that this trip even began ahead of schedule, but alas we left at 1 AM on August 18, a whole day late. We were starting out on the second of James' collecting trips to Mexico, this one oriented to areas primarily north and east of Mexico City. The first day was spent in driving from Austin to Tamazunchale along the old Pan–American highway. It was apparent that the rainy season was still in full force as we neared the mountains south of Valles.

After a good night's rest, we drove south of Tamazunchale, climbing higher and higher into the mountains until we reached Chapulhuacan. There had been waterfalls by the road and virtually sheer cliffs plunging two and three thousand feet to the valleys below. James had a lead on a cave, Cueva de El Tenango, on the Rancho del Tenango, about 3 miles on foot from Chapulhuacan. No sooner had we obtained a guide and started on our way, when we found a sotano only 100 yards from the road. Inquiry revealed the presence of many other sotanos on the surrounding hills and in the town. Armindo Angeles (our guide) showed four to us on our way to the cave, the deepest estimated to be 200 feet. This area receives much rain and has a lot of local relief, indicating that there may be some extensive cave development.

Armindo took us about a mile beyond the ranch buildings to where the cave entrance was found high on the mountain overlooking the Rio Charrusas. The cave is entered by a 15' high, 5' wide hole from which a large stream issues. A single stream passage with a gravel and rock floor leads back for about 1200' to a fork, both branches of which siphon quickly. The cave is decorated with occasional flowstone banks, and the collecting of cave life was so good that we knew that we would have a succesful trip. We arrived back at Chapuhuacan after dark, ate supper, and spent the night with the local Inglish–chemistry teacher.

The next morning we drove south on the spectacular road to Tamaulipas, with many dolinas by the road and breathtaking views of the river valleys far below. Since we were

taking Armindo to Zimapan, we had a good translator. At Puerto Obscuro we found a man who showed us several "obscure" holes, one of which led into a small cave. Again the collecting was excellent. The local people assured us that there were many caves in the area including a "very dangerous"sótano at the bottom of a dolina. They said that a lot of water runs into many sotanos in the area.

The next point of interest was Grutas de Xoxafí, located on the first round-topped hill 3 miles north of Lagunilla, which is a small town between Ixmiquilpan and Pachuca. There are two entrances to the cave—one is a 40 foot in diameter hole with a natural bridge across a small offset; the other is a small fissure entering the ceiling of one of the rooms. The cave itself is large and fascinating. In six hours we only poorly explored it. Essentially it is three or more pit systems spiraling downward (climbably) to a depth of nearly three hundred feet, one of which still drops. Time prevented full exploration, but an interesting collection of insects and cave deposits were taken.

Continuing south of Lagunilla toward Mexico City, we noted how dense and active the native population is around Mexico City on the plateau. Although it appears to be certain death, the traffic seems to move along with never an incident. We by-passed Mexico City and took the toll road east to Puebla, where we checked the Great Pyramid of Cholula for cave crickets. A few spiders and beetles were found, but we were quickly run out since we were sin guía (without guide) and were not supposed to be out of the lighted area without a permit. This was probably fortunate, however, since this fascinating place purports to have 9 km. of excavated passage, and we had almost gotten lost in the first lateral tunnel to the left. We then drove from Cholula to Cordoba, with the famous mountains Ixtacihuatl, Popocatepetl, and Orizaba dominating the countryside.

The next morning, August 22, we drove west and north of Cordoba to the village of Atoyac, stopping only long enough to kick the muffler of the car out of the road. From the town of Atoyac we walked along the railroad tracks about one km. to a trail which descended into a tremendous canyon cut by the Rio Atoyac which here forms a beautiful series of rapids and waterfalls in the narrow gorge. The cave itself is about 200' below the railroad tracks and several hundred feet above the river. It is a succession of formation lined rooms and passages floored with water and sticky mud. The passages generally are about 20 feet wide and narrow to fissures about 30 feet up. The walls are covered with a thin layer of mud, and, in total, the cave was much less appealing than its fame.After about 1500 feet it turns into a succession of crawlways which we left largely unentered since they reportedly end soon. A fine collection of topotypes was had from this "Bonet" cave, including a first Mexican record for a sub-class of millipeds.

On the way back from Atoyac we decided to check a lead on Ojo de Agua Grande, but instead we were directed to Cueva de El Nacimiento Grande about 10 km. north of Potrero Viejo. It became apparent to us after talking to many people that there are dozens of nacimiento caves near Orizaba. Although at the wrong cave, we could not have been more delighted or awed. This cave proved remarkable for possessing the first underground river we had ever seen. We entered the cave through a small crawlway above the resurgence, and continued for about 200 feet until we were overlooking a series of rapids with very fast water. A stream 10 feet wide and 2 feet deep was flowing so violently that communication was virtually impossible. To fall into the river would be fatal. Further exploration is impossible, at least during the rainy season. A fine collection (excluding a blind crayfish which could not be caught) of terrestrial and aquatic animals was followed by a trip back towards Orizaba.

Early in the morning we were awakened by men starting to work in the quarry where we were sleeping. We then took the road south of Orizaba to San Andrés Tenejapa, but found that the road to Tequila was still Impassible in most cars. Near San Andrés there are also many water caves, and high in the mountains there are many dolinas with many pits over 300 feet deep. At the edge of San Andrés was a sheer 1500 foot limestone cliff with dolinas higher on the mountain.

Since we could not go to Tequila by car, we elected to return to Tehuacan and then drive north to Las Vigas, near Jalapa, to check a lava cave lead. As we turned off the highway onto a trail over a lava field, a bump was followed first by the loss of our tail pipe and second by a lumber truck barrelling down on us. While John frantically struggled to get the hot pipe connected again, Bill halted the truck and James set out to find the cave. A small boy directed us to the cave, but as we returned to the car to change clothes, a torrential downpour caught us. We sat shivering in the car (el. 10,000 feet) until the rain ceased. The sink is about 600 feet long, 100 feet wide, and 50 feet deep. It appears to represent the collapse of an upper level tube into a lower level. Near one end of the sink is a large natural bridge, and at the end there is a slope down to a 50 foot in diameter cavity in the lava. About 30 feet up on the opposite wall the upper level lava tube (15 feet in diameter) enters the cavity, but is unreachable. Much to our disappointment, we did not get to explore a lava cave, but there apparently are several lava tubes in the surrounding country.

We left Las Vigas at night and headed for Grutas de Cacahuamilpa, which is about 80 miles southwest of Mexico City. As we came over the mountain just east of Mexico City, we saw a truly unforgettable sight. The valley of Mexico City was a veritable sea of lights in all directions. While still on the outskirts of the city, the car died, so we spent the night there. Early the next morning we awakened

to the sound of a band and under interested surveillance. After tightening a screw in the distributor, we miraculously survived the morning traffic and arrived at Cacahuamilpa by noon.

We paid our two pesos apiece, and, armed with carbide lights and collecting gear, entered the fantastic passage of Grutas de Cacahuamilpa. The passage is about 100 feet wide and 100 feet high, and has approximately uniform cross section throughout its length of 1 1/2 km. There are many huge formations and the floor is generally level and covered with a thin layer of mud. Despite legend or rumors to the contrary, we are fairly certain that the cave does not continue beyond the large chamber. Leaving the commercial trail near the end of the cave, we climbed up a flowstone bank to a few small rooms in the formations. Here we found most of the fauna of the cave to be concentrated, including 16 specimens of the extremely rare arthropods, ricinuleids (sp. Crytocellus boneti), which had been originally described by Bolívar on only two specimens.

From the entrance of Cacahuamilpa, we descended to Dos Bocas, where two rivers emerge from separate passages and join. The upper passage has an entrance about 150 feet in diameter, which gradually narrows to about 100 feet in diameter. On the surface, it is supposed to be 8 kms. from an upper entrance to where the river emerges at Dos Bocas. The lower of the two rivers emerges from a slightly smaller passage, and reportedly measures 5 km. from entrance to entrance on the surface. A Mexican exploring club has taken boat trips through both river passages.

Now that we had visited our last planned objective, we decided to head back to Austin, watching closely for caves as we went. Near Mogote on the road from Cacahuamilpa to Toluca, we found a huge sink not 50 feet from the road. The car screeched to a halt and James and John raced to the edge of the sink. It is about 400 feet in diameter and 100 feet deep with 50 feet cliffs in many places. Also three arroyos ran into the sink. At the bottom, along one side is a hole which drops about 20 feet to a gravel floor and is connected via natural bridge to a second entrance 50 feet away and 30 feet higher. A crawlway leads to La Salón de las Arenas and a sign designates the cave's name Grutas de Mogote. A short crawlway leads into a large formation-decorated passage which extends perhaps one-half mile before turning into a water crawl. No equipment was necessary as we reached a depth of about 200 feet by short climbable drops. Of principal interest is the fact that the cave has apparently been filled with large gravel and cemented, which now is being removed. Much of the fill is igneous. Also in the same large sink is another cave, though of little interest (sloping room 60'x40'x20'). While wandering around near dusk, James encountered a group of Mexicans who informed him of many caves, including one he was apparently approaching and

which was "muy peligro (very dangerous), con muy víperos, tigres,etc.", called Cueva del Diablo. The next morning we departed for the long trip back to Austin with an interesting collection of fauna and having seen a wide variety of caves.

BEFORE THE SOTANO

by Bill Russell

Mexico is a different land. Its language and customs are not ours. But with a few words of Spanish, a little knowledge of the local ways, and a friendly smile the caver will almost feel at home. The average tourist seldom need worry about Mexican havits, as Americans are expected to act like Americans along the tourist routes. However, cavers who leave the paved road, and of necessity need to cooperate with the Mexicans will find a little knowledge of the Mexicans' procedures helpful. This article gives a brief outline of procedures that affect the caver, and a and a glossary of caving terms is being prepared for a future issue.

First, for U.S. citizens to enter Mexico, some proof of citizenship is necessary. A certified copy of the birth certificate is best, but anything that officially gives one's place of birth usually will do, including a draft registration card. (Not the classification card; it doesn't give one's birth place.) Also, proof of ownership is needed for all cars brought into Mexico. It is also necessary to have a certified small pox vaccination certificate unless you want to get vaccinated (free) when you return to the U.S., and sometimes the Mexicans ask for them. If you get your visa at a Mexican consulate, you will need a vaccination certificate. If through some misfortune you should arrive at the border without the necessary papers, it is usually possible to find a credulous notary who will notarize a statement that you are an American citizen or the owner of the car. All those under 18 should have notarized permission from their parents to enter Mexico. Several miles into Mexico there will be a checkpoint where the visas and car papers will be checked. It is also nice to buy Mexican insurance (about $1.50 per day) so that if you are involved in an accident with another person you will not be required to remain in Mexico until the claims are settled. You can buy insurance at any of the points of entry on either side of the border.

Arriving at the cave area, the first thing to do is to stop at the numicipal headquarters (Palacio Municipal) and ask for permission to explore caves. Municipios are the local Mexican unit of government and are about the size of an American county. And as everything under the surface,

including caves and minerals, belongs to the government, it is necessary to check with the officials first. This also lets them know what the strange group of foreigners are doing as the prowl the countryside. It is also extremely helpful to have a letter from the municipal authorities asking those whom you may meet to be of assistance. This letter from the authorities will assure local cooperation, as without the letter people might wonder what you are doing and not want to get involved as perhaps you are looking for Aztec treasures to carry back to the United States. But with the letter, they are usually very helpful and will spend many hours leading you to obscure caves. In the northern desert parts of Mexico where there are few people, it is not in general necessary to obtain permission from the municipal authorities and the situation is much the same as in the United States. Most of the land in these areas is owned by large landholders, and permission from them is usually sufficient. In the wetter areas, like Xilitla, the countryside is much more densely populated and the land is divided into small plots, many of which are owned by the government. In these areas permission from the municipal authorities is essential. A letter in Spanish asking for permission to explore the caves and sótanos in the municipality follows this article. This letter can be given to the municipal authorities and will inform them of what you are trying to accomplish. When you leave the cave area, it is good relations to give the authorities a brief report on what you have found. It would also be nice to mail them a report after you return to the United States. If it is difficult to prepare a report in Spanish, then English would be satisfactory. When asking permission and writing the report emphasize the scientific value of the work and make sure they realize that you are not being paid for this work, or looking for minerals or treasure. Along the same lines when applying for a visa always list sightseeing as the purpose of the trip. To do geologic work in Mexico it is necessary to have a work permit, and Mexicans are apt to be sensitive about American mineral and treasure hunters as they want to develop their own resources. The numerous Americans who buy and find valuable artifacts and remove them to the U.S. do not help. For caving in archeological zones such as Yucatan, a special permit is needed. Also when sending reports into or out of Mexico it is not a good idea to include maps or photos as then they are usually impounded at the border. As these are frequently necessary for the reports the AMCS will be glad to carry them across the border and remail them.

Before a cave trip, it is usually profitable to consult a topographic map. Unfortunately little topographic mapping with scales useful to cavers has been done in Mexico. The best series for cavers is the 1:100,000 series covering most of central Mexico, and the Sierra Madre Oriental as far north as Victoria, and areas of southern Chiapas. These maps can sometimes be purchased from Mexico City and instructions for obtaining them will be included in

the next Newsletter. They can also be consulted at the map library of the Geography Department of the University of Texas, and a set is also reported to be at the University of Southern California. Copies of individual maps can be Xeroxed with fair success. These maps are in general less useful than they might be as the cultural detail is frequently quite wrong, and with the rapid construction of new roads, sometimes out of date as well. Also they sometimes forget to hachure the depression contours which can cause confusion. It is also well worth while to stop by Austin (611 W. 23rd St.) to consult the files and get the latest road conditions, and hear of new discoveries.

This letter can be given to the president of the municipio in which you plan to cave:

El Presidente de (municipio)
(municipio), (state)
República de México

Muy Estimado Señor:

Somos estudiantes de la Universidad de _____ de los Estados Unidos, y estamos interesados en el estudio de cavernas y los animales que las habitan. Hemos oído hablar de las grutas y los sótanos situados en el municipio de _____, que parecen ser de interés científico. Agradeceríamos su permiso para explorarlos, y una carta de introducción a las personas del municipio que encontaríamos durante nuestras exploraciones.

Agradeciendo su cooperacion en este asunto, nos suscribimos de ustedes atentos y seguros servidores.

Signed by each caver

AMCS stationary is available and can be obtained by writing. If the persons using the letter are not students the first sentence could be changed, but most trips should have at least one student. A rough translation of the letter follows:

Dear Sir:

We are students at the University of _____, and we are interested in studying caves and the animals that live in them. We have heard of caves and pits in the municipio of _____, and we think they are of scientific interest. We would appreciate your permission to explore the caves and a letter of introduction to those persons we might meet in our explorations.

We appreciate your cooperation in this matter, and we remain yours truly,

This is a simple, straight-forward letter and if you are skilled in Spanish it would probably be preferable to write a letter tailored to your trip.

This is a copy and a translation of a typical letter written by the municipal authorities:

DEPENDENCIA: Presidencia Municipal
Xilitla, S.L.P.
OFICIO NUMERO: 1064

EXPEDIENTE: 9/6

ASUNTO: El que se indica.

A LA AUTORIDAD Y PERSONAS A QUIEN FUERE MOSTRADO EL PRESENTE

Los portadores del presente, son estudiantes de los Estados Unidos de Norteamérica que vienen a esta región en plan de estudios, para lo cual han solicitado el permiso correspondiente de esta Autoridad Municipal, por lo que se suplica a quien fuere mostrado este oficio se les preste todas las facilidades que les sean necesarias para el mejor desempeño de su comisión.

Atentamente
SUFRAGIO EFECTIVO. NO REELECCION
Xilitla, SLP. a 30 Novbre, de 1963
EL PRESIDENTE MUNICIPAL CONSTL.

(Signed)
Alberto Rosa González

AGENCY: Municipal Government
of Xilitla
OFFICE NUMBER: 1064

FILE: 9/6

SUBJECT: That which is indicated

To the authorities and persons to whom the following may be shown.++

The bearers of the following are students of the United States of America that have come to this region in the course of their studies, for which they have requested the permission belonging to this municipal authority. We ask that to whom this letter may be shown will lend them all assistance necessary for the accomplishment of their task.

Respectfully,
Effective sufferage. No reelection[π]
Xilitla, SLP. Nov. 30, 1963
The constitutional municipal pres.

Alberto Rosa González

++ Also used are: A las autoridades auxiliares y ejidales del Municipio, To the auxilliary authorities and people of the municipality, and most frequently: A Quien Corresponda — To whom it may concern.

π One of the goals of the revolution. Office holders may be elected to only one term, frequently of six years.

The AMCS Newsletter is published monthly by the Association for Mexican Cave Studies, P.O. Box 7672 U.T. Station, Austin, Texas 78712. Membership in the AMCS is $5.00 for the calendar year, with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications for that year.

Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copying onto a standard or legal size memeograph master or for printing. Longer articles with detailed maps are invited for publication in a bulletin. Trip reports are requested from all trips.

Editors..... Terry Raines
John Fish

Staff..... Ed Alexander
Bob Burnett
A. Richard Smith
Pamela Raines

THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume 1 Number 9 September 1965

Trip Reports

Persons: Jim Duke, Orion Knox, David McKenzie
Date: September 5–11, 1965
Destination: Cerro Peña Nevada area
Reported by: David McKenzie

At Sunday noon the above three with Neal Prescott and Tom Meador left the TSA region project at Carta Valley, hoping to visit caves near Ciudad Acuña. The afternoon was spent on a very rough road that leads to the remote Serranias del Burro, a promising range that had never been checked. A gas shortage forced us to retreat at the Hacienda de San Miguel. Having come approximately half way (38 miles) we were still faced with a 2 1/2 hour trip to reach the foot of the mountains.

The night was spent at the Amistad Dam project area at the entrance of Cueva de Dos Lagos (Sumidero 45). Neal, Jim, and David quickly explored the cave, a 150 foot deep, sloping pit that ends at a siphon.

Monday the group split with Tom and Neal returning to Texas and the rest taking the 10:30 am bus to C. Allende. We suffered most of the day on rough detours clouded with dust. While waiting for the 4:30 relay to Monclova we declined an offer to be shown a bat cave eight miles east of there. While on the bus we were also told of a large decorated cave on a mountainside near Muzquiz. From what we understood of the description, old tires are somehow fixed to aid the steep ascent.

Our destination was the mountainous area surrounding 13,300 foot Cerro Peña Nevada which is about 60 miles east of Matehuala. Having passed through Monclova at 7:30 pm, we arrived in Matehuala at 2:00 am Tuesday. Total fare to here had been $54.50 pesos apiece. We caught the 6:30 bus to Dr. Arroyo ($8.00) from where we intended to approach the high mountains by a 22 km. road to San Antonio de Peña Nevada, a village on the Cerro's southern flank. But upon learning that only two trucks commute from San Antonio once a month we were faced with a full day to kill in this bleak, desert town. We considered visiting some rumored caves SW of Dr. Arroyo, but this required either a 10 km. hike or an expensive truck ride. One cave is said to be a large unexplored room with a narrow ceiling . . entrance. A boy took us to a small mine about 3 km. north of town in the side of a limestone hill. While Jim, Orion, and the boy searched unsuccessfully for a reported nearby sotano, David explored the mine which is a partially excavated solution cave developed on a fault. A succession of small drops totalled about 190 feet. The lower levels featured scalloped walls with a beautiful crust of arragonite or gypsum.

At 7:00 pm Wednesday we left for Escondidas further north on the Dr. Arroyo–Linares road, a 6 1/2 hour trip. From there we took a bus west to Arramborri, a small town on the Rio Blanco. This river flows north from the Peña Nevada area, then loops

east to become the Rio Purificacion. At Aramberri we climbed a high ridge and visited several shelter caves in conglomerate. At 9:00 PM we caught a bus to Zaragoza, a similar sized town 16 km south of there and about 4 km from the river's resurgence. Buses didn't go beyond here but we were told of caves in the area – especially near Encantada, a village 8 km farther and higher. A room in the town's small hotel (with a single and a double bed) cost 10 pesos.

The following day was spent primarily in the vicinity of a hill called Cuesta Blanca about 4 km back along the road. A chain of hillocks and ridges along the valley between Aramberri and Zaragoza are the exposure of a massive gypsum formation of Jurassic age. Our caves were to be limited to this. The thick lower Cretaceous limestones are encountered at elevations above 7000 feet.

Cueva de Cuesta Blanca is a resumidero in the vicinity of several shallow, circular dolinas. A passage 6 feet by 10 feet high takes off from the end of a steep-walled gulley and proceeds 200 feet to an unentered domepit of about 30 feet. The local relief is great and gives the cave a potential depth of some hundreds of feet. Sótano de Cuesta Blanca is an 80 feet deep sinkhole only 250 feet from the road. It is a collapsed dome room filled with large breakdown. The crest of a nearby hill is riddled with dissolved-out fissures and irregular, interconnected passages which are impossible to explore because of their razor-sharp projections. A few other small caves were found and some invertabrates collected before we hiked to Zaragoza by separate roundabout ways.

Friday we climbed a 9000 feet peak just east of Zaragoza and enjoyed spectacular scenery. The most impressive mountain around is Cerro Viejo (10,000 feet plus) which has a huge cloud-covered limestone face remindful of the European Eiger. With Zaragoza at its southwestern foot, it is quite dominant when viewed from Escondidas.

Early the next morning we began our way back home which was through Linares and Reynosa and not subject to the delays we were by now accustomed to. We were disappointed that time limited us from hiking to Encantada and beyond where there are certainly limestone caves much higher than any yet visited by the AMCS.

Persons: Ed Alexander (UTSS), John Schelling, Margaret Tew, Jeremy Parker(Potomac Speleological Club), Warren Heller (Swarthmore Grotto), Carl Rovainen (Boston Grotto)
Date: August 29–September 11
Destination: Sótano de Tlamaya and Volcan Poppocatepetl
Reported by: Ed Alexander

Sunday, 29 August We left Austin at about noon and headed

south in two cars, having agreed to meet at customs in Reyonosa. Shortly after dark we were again driving south through Tamaulipas toward the Xilitla area stopping only twice for gas in Cd. Victoria and Valles.

Monday, 30 August After a very long night we arrived at the ferry across the Rio Huichihuayan at 5:00 am only to find that it did not run for an hour yet. We continued on to Xilitla at 6:00 and stopped in the market to buy several articles that had of course been forgotten. We then drove back to the turn off to Rancho de Huitzmolotitla and Sótano de Tlamaya, which was our first objective for the trip. It had been raining in the area for the preceeding five days which resulted in the roads being in a very miserable condition. While we were yet several miles from the ranch, one of our cars slid off the road into a ditch. Almost an hour later several local Mexicans rescued us so that we could continue on to the ranch. There we talked with Sr. Modesto Gómez who took us to the entrance of the sótano where we planned to spend the next four days. Returning to the house, we discussed our hopes for the trip over supper and spent the night on the large patio there.

Tuesday, 31 August through Saturday, 4 September Our group rappelled into Sótano de Tlamaya at about noon Tuesday. Two days later, on Thursday, Warren, Carl, and I passed the end of the last survey and continued on to the end of the system at an estimated depth of 1473. After many hours of sleep at our camp we finally left the cave at about noon Saturday. (For details of cave exploration see page 86.) We all returned to the ranch where the decision was suddenly made to drive directly on toward Mexico City that night. In Tamazunchale the cars parted ways for the next several days, ours going on toward Popocatepetl and the other heading for three days of touristing in Mexico City. Warren, Carl, and I camped that night in a cactus desert just north of Zimapan.

Sunday, 5 September We broke camp late in the morning and continued on through Mexico City to Amecameca at the base of Popocatepetl and Ixtaccíhuatl. After spending some time in the city market, we drove up the mountain to the bunk house for climbers which is maintained by the national park. The elevation of the house is a little over 14,000 feet; the air was already quite thin and cold. All of us went to sleep at an early hour so we would be fresh for the climb to the top early the next day.

Monday, 6 September We ate a quick breakfast and began climbing at 7:30 am. By 9:15 we had hiked to over 16000 feet and had reached the edge of the permanent snow line. From there, the next 1500 feet to the rim of the volcano was a climb straight up the snow field, a slope of about 30°. The high elevation made breathing very difficult for us lowlanders, and the sun, from the sky and snow, was dazzling. Finally we made the rim where we found that the thin air was mixed with sulfur fumes which drifted out of the crater. We circled on around the rim reaching the major peak, 17,893 feet above sea level, at 1:00 pm where a very strong wind made the cold more noticeable than it had been. We only spent a few minutes on

top since the clouds were finally starting to close in on us. For a few minutes we were totally obscured, so we hurried on down as soon as visability returned. The trip down was much easier. From the edge of the rim we glissaded down to the snow line covering in 15 minutes what had taken us two hours to climb. We arrived back at the car by about 2:30 pm having spent only seven hours on the peak. The remainder of the day was spent returning to Mexico City where we checked into a motel for the night.

Tuesday, 7 September Waking up, I found that the strong ultraviolet at 17,000 feet and my failure to wear sunglasses the day before had left me quite snow-blind. We located the other half of our group and agreed to meet again in Valles the next morning. Our car then headed north, stopping for a short while at the Pyramid of the Sun before continuing on through the beautiful mountains on the way to Tamazunchale. However, most of my day was spent under a blanket in the backseat protecting my eyes from every possible ray of light. That night we camped near Aquismón, just south of Valles at km. post 418.

Wednesday, 8 September We broke camp early and, much relieved that I could see again, we drove on to Valles where we found John, Jeremy, and Margaret eating breakfast. Our plans called for visiting Ventana Jabalí and rappelling in the 503 foot skylight entrance, so we rode out to Tamuín and secured a guide to take us to the cave. Many hours later, after he had led us to Nacimiento del Rio Choy and several smaller caves nearby, we decided that he had never heard of Ventana Jabalí, so we took him home and paid him fifteen pesos to get rid of him. Back-tracking to Valles we spent several hours placing a phone call to Austin for a better location on the cave. Finally we returned to the Tamuín railroad station and camped.

Thursday, 9 September Following our new directions in the morning we found the bad road that headed north and followed it in the direction of the cave. The further we went, the worse the road became until both cars became stuck in a veritable ocean of mud. From here we could see the entrance many miles away and very high on the mountain. Between the heat and the mud, we had had it. Severly demotivated, we rescued the cars and beat it for paved road and Nacimiento del Rio Mante. The next stop was Chamal, just north of Mante, where we attempted to find Bee Cave in the middle of a thorn jungle in total darkness. Finally deciding that locating the pit entrance at night and without a guide was pure folly, we climbed back into the cars and drove to the Tropic of Cancer where we spent the remainder of the night.

Friday, 10 September Continuing on north through Monterrey to Sabinas Hidalgo where we turned west toward Bustamante. We arrived at the base of the mountain just at sundown and hiked up the trail to the entrance of Gruta del Palmito. After four hours in the cave we drove on to Laredo customs, arriving at about 2:00 am.

Saturday, 11 September Warren, Carl, and I drove on through the night arriving in Austin at about 8:30 am. John, Jeremy,

and Margaret camped at Laredo and arrived early in the afternoon. At this point I left the group and they went their separate ways all quite impressed with Mexico and her caves.

FURTHER EXPLORATION OF SOTANO DE TLAMAYA

by Ed Alexander

After just one and a half years of exploration, Sótano de Tlamaya has been pushed to its deepest point, approximately 1473 feet below the upper entrance. On November 26, 1964 Sotano de Tlamaya first claimed the North American depth record when explorers from the University of Texas reached the depth of 1281 feet. Since then the cave has slowly yielded its last 200 feet to several persistant groups of spelunkers. On September 2, 1965 we succeeded in reaching a terminal pool of water only a few hundred feet higher than the large resurgences near the Rio Huichihuayan, which is over ten miles to the east. The sotano is still first on the list of deep caves in this continent, a position which may easily be taken in the future by other caves in the Sierra Madre Oriental of Mexico. In any case Tlamaya will long be remembered by those who explored in her depths as a milestone of Mexican caving.

Warren Heller, Jeremy Parker, Carl Rovainen, John Schelling, Margaret Tew, and I, all members of the AMCS, arrived at Rancho de Huitzmolotitla on Monday, August 30, 1965, where we met the owner of the ranch, Sr. Modesto Gómez. After discussing with him our plans to spend several days in the cave in an attempt to reach the bottom, he accompanied us to the entrance where we saw for the first time the black, seemingly bottomless, hole we were to enter the following day. Returning to the ranch, we camped out for the night on the patio, all of us glad to have a dry place to sleep before beginning our assult in the morning.

Since we were visiting the area during the raininy season, most of our apprehensions were due to the water we expected to encounter in the cave. Sr. Gómez informed us that the area had had steady rain for the previous five days, so when we awoke under cloudy, but dry, skies we were quite relieved. Hoping for dry weather during the next four days, we packed our gear from the truck road to the mouth of the cave and began the tedious job of rigging the entrance drop. The 600 foot length of Goldline braid was first uncoiled and fed into the pit. This was tiedoff to a large tree overhanging the entrance. Next after several minutes of discussion it was agreed to also rig the first 300 feet with cable ladder for those who preferred to climb it instead of prusik on the way out. Since the ladder of course required a safety line, we tied two 150 foot nylon ropes together and dropped them in along the ladder. Having constructed a suitable obstacle course between us and the bottom we decided that it was time to descend and Carl went over the edge first on rappel. The time was about 12:00 noon. I followed soon after Carl, taking precautions to avoid the swaying ladder, and quickly jcined him 277 feet below. While Margaret prepared to descend next, Carl and I engaged ourselves by eliminating a coral snake which we found ourselves sharing the ledge with. We then spared another ring-necked snake which we decided might be harmless and while watching it crawl off

under the breakdown we realized that there was a bit of a commotion above us. Looking up we could barely see Margaret who had made it about half way down before becoming hopelessly entangled in the ladder and other rope hanging beside her. It took Carl and I only a few minutes to also become thourghly tied in knots from our efforts to free her. She arrived thirty minutes later quite provoked with cable ladders in general and wishing we had left this particular piece of equipment in the U. S.

John joined us next leaving Warren and Jeramy on top to lower our small mountain of gear. Load after load of packs came down to us, all of which contained what I was told was indespensible equipment. Then, one of the loads became hung on a ledge high above our heads. John prusiked up to free it and while doing so a rock of possibly 15 pounds became dislodged. Disaster hung over us as the rock hurtled down, striking Margaret a glancing blow on her right knee. With visions of the trip ending in a rescue we inspected the knee finding that it was only badly bruised, By the time the rest of the gear was lowered and Warren and Jeremy had also rappelled down, Margaret's leg was sore but in good shape. From here we continued down the next two drops of about 75 feet each lowering the packs and extra rope between us as we went. At Warren's suggestion we also parallel rigged this section with two more 150' ropes to facilitate the handling of the gear and the return trip to the top. This put us at the end of the 600 foot rope and in the first room of the cave, almost 500 feet below the entrance.

Our original plans had called for carrying the gear as far as the Big Room where we were to set up a base camp from which to continue the exploration of the downstream passage. However at 500 feet, only slightly over half the depth of the Big Room, two problems already confronted us which would prevent us from setting up camp as planned. First, we had encountered running water at the bottom of the first drop which had steadily become stronger with each succeeding pit. At the top of Junction Pit, the next drop ahead of us, the flow was much stronger. If it became worse as we continued deeper we feared the entire trip would be threatened. Second, we were beginning to more fully understand the problems associated with all the "indespensible equipment" needed to go caving. Several hours had already been used to bring the gear as far as we had. Much of our energy and all of our patience had also been consumed and the task of continuing down the more difficult drops ahead with the packs seemed close to impossible. Keeping the difficulties in mind, Warren, Margaret, and I continued on down the 100 foot drop into Junction Pit, traversing to the right as we rappelled to avoid the rushing water. From the bottom we quickly walked the short distance to the lip of the next pit. Here the waterfall looked quite bad as it fell to the bottom, 209 feet below. The prospect of prusiking up through such a torrent prompted several minutes of worried discussion among us. It was now obvious that our plans to make a camp in the Big Room, still 300 feet below, were impractical at best. For that matter we had serious doubts about continuing at all past this precipice where we now stood. Returning to the top of Junction Pit we consulted the others and decided to make camp in the room there and see how we felt about the situation in the morning.

We awoke at about 9:00 am Wednesday after twelve hours of sleep. While eating a large breakfast of Margaret's special cave food we decided that Warren, Carl, and I would return to the bottom of Junction Pit to check the unexplored pit there which had been noticed by previous trips. We rappelled down Junction Pit carrying two 120 foot Colombian ropes and a 300 foot Goldline. Leaning the 300 foot rope at the top of the new drop, we rigged a 120 foot rope. About 50 feet down we met the small stream which split off from the main stream in Junction Pit. This continued for 50 feet horizontally to a window opening into the side of the 209 foot drop. We had succeeded in bypassing the waterfall which had discouraged us the day before. Rappelling on down for about 30 feet more we came to a 50 foot climbable section which brought us to the ledge overlooking the last 100 feet of the pit. Here we rigged the other 120 foot rope and quickly rappelled to the bottom. Finally we were down to where the system begins to level out. Ahead of us stretched several hundred feet of passage dropping slowly from plunge pool to plunge pool. Wading through some of these pools and traversing around the rest we soon arrived at the drop overlooking the Big Room. We were at a depth of about 900 Feet. Our spirits were quite high compared to the previous day, so we decided to return to camp, leaving the ropes in place, so we could try for a big push to the end of the cave the next day. The climb back to camp was easy with Warren and myself using Jumar Ascenders and Carl on prusik knots. The return was not uneventful, however, for as Warren prusiked up from Junction Pit, he found that one strand of the 193 foot Goldline rigged there was completely worn through from abrasion on the sharp rocks. I lowered a 150 foot rope to him and he continued his climb on this, arriving in camp at about 5:00 pm. Over a large supper we made plans for the next day and discussed with the other three cavers what we had done that day. John, Jeramy, and Margaret decided that they would start out of the cave in the morning and wait for us at Sr. Gomez's.

Getting up at 9:00 am Carl, Warren, and I prepared to descend while the others started to leave the cave, taking as much of our gear with them as possible. We then rappelled into Junction Pit at about 11:00 am and replaced the two 120 foot ropes rigged the day before with a 300 foot length. Shouldering all the extra ropes we continued to the top of the drop into the Big Room where we had turned back earlier. Here we rigged a 120 foot rope and rappelled into the hole only to find that we had to throw a cable ladder over a projection and climb eight feet up to the floor of the Big Room which was now above us. The end of the 120 foot rope was tied off in the room and the ladder pulled up behind us to use later on in the cave. It was 2:00 pm and we saw now that the Big Room would have made a good campsite, but we also remembered that the mountains of gear could never have been hauled down that far. Continuing on down the passage out of the room we crossed several plunge pools before coming to a short drop of about six feet which we feared would be very difficult scaling when we came out dead tired hours later. Here we rigged one of our two ladders tied off with a piece of the damaged 193 foot rope which we were cutting up to fit separate short drops. Further on we came to a similar drop which claimed another piece of the 193, and then after more wading through and chimneying over plunge pools, a

third short drop received our other ladder. From this point it was just a short while until we came to the last major pit in the cave. Arriving there at about 5:30 we surveyed the problem of avoiding the cascading waters falling out of sight over the lip of the black hole. To the left of the waterfall we found the window opening into the side of the pit and rigged the 150 foot rope we were carrying. To avoid the water it was necessary to rappel about 30 feet down from this window and traverse along the sheer wall to a pinnacle which overlooked the center of the pit. Here we retied the rope and rappelled on down to the bottom 80 feet below. We continued on from there through more of the tiring plunge pools, coming to a short 20 foot drop which we found necessary to rig with our shortest rope, 120 feet. This passed, it was an easy hike to where the markings on a mud wall told us we had reached the turn back point of the last expedition. We were now 1418 feet below the entrance and beyond us reached down virgin passage in the deepest cave in the hemisphere.

Since our Brunton compass had been left in one of the many packs at camp, it was decided that we would continue on and attempt to get an accurate estimate of horizontal and vertical distance on the way out. We excitedly climbed the seven foot drop into virgin cave where we found that the plunge pool which had discouraged the last trip was traversible along its left wall. The character of the cave then began to change. Instead of deep pools they started becoming quite shallow with stretches of graveled stream passage in between. The drops were only two to five feet high as we continued on, but the ceiling still reached far out of sight in many places. Suddenly after climbing down a ten foot drop, the largest we had found in the new section, we were confronted by gravel and the beginning of a long lake. The bottom of the lake was silt and mud with no indication of flowing water. As we followed it the water became deeper until it was necessary to swim short stretches. Here the lake was up to 30 feet wide in places and the ceiling had dropped suddenly to a height of 30 feet. Around another turn and past a bank of silt we were confronted by what appeared to be a solid wall. After investigating closer we found a small water filled passage about two feet wide which ended after about 50 feet in a dry, upward-sloping crawl. This was the end of Tlamaya!

To say the least I was somewhat surprised. Little had I thought that we would be wading through the terminal sump only eight hours after leaving camp. Carefully we paced back to the end of the previous Brunton and tape survey finding that we had added only 55 feet to the depth and about 1200 feet to the length of the cave. The lake itself was 300 feet long. Total depth of the system thus stands at approximately -1473 feet and the horizontal length at over a mile.

Ahead of us we now had the long climb to camp. We soon reached the last pit and climbed out with little difficulty. From there to the Big Room we collected the various short ropes and ladders and upon reaching the large dry-floored area, called a rest stop. The effects of the long trip were beginning to show on us and our wet clothes felt heavy and cold as we faced the 400 feet of ropes ahead. Very slowly we continued up, painfully carrying the increasing weight of climbing ropes which we were now unrigging as we went. Finally at 8:00 am

Friday, having been gone for 21 hours, we pulled the last rope out of Junction Pit and gratefully crawled into our sleeping bags.

We slept for eight hours before awaking and eating most of the food which remained in camp. Then, since none of us really felt like climbing out yet anyway, we decided that we prefered to arrive at the surface during daylight and went back to sleep. This time it was fifteen hours before one of us awoke at 8:00 am Saturday and aroused the others. Feeling much better we broke camp and started up the entrance drops with the equipment. At 12:00 noon I was removing my Jumars from the rope and looking at green jungle and sunlight for the first time in 96 hours. John, Jeremy, and Margaret arrived shortly and while a number of curious Mexicans looked on we lifted several loads of gear out of the sótano. Warren and Carl finally emerged on the cable ladder while I belayed. With the cars repacked we soon said good-bye to Sr. Gómez and the small town of Tlamaya and headed south toward Mexico City.

Cueva de El Nacimiento de El Rio Frio

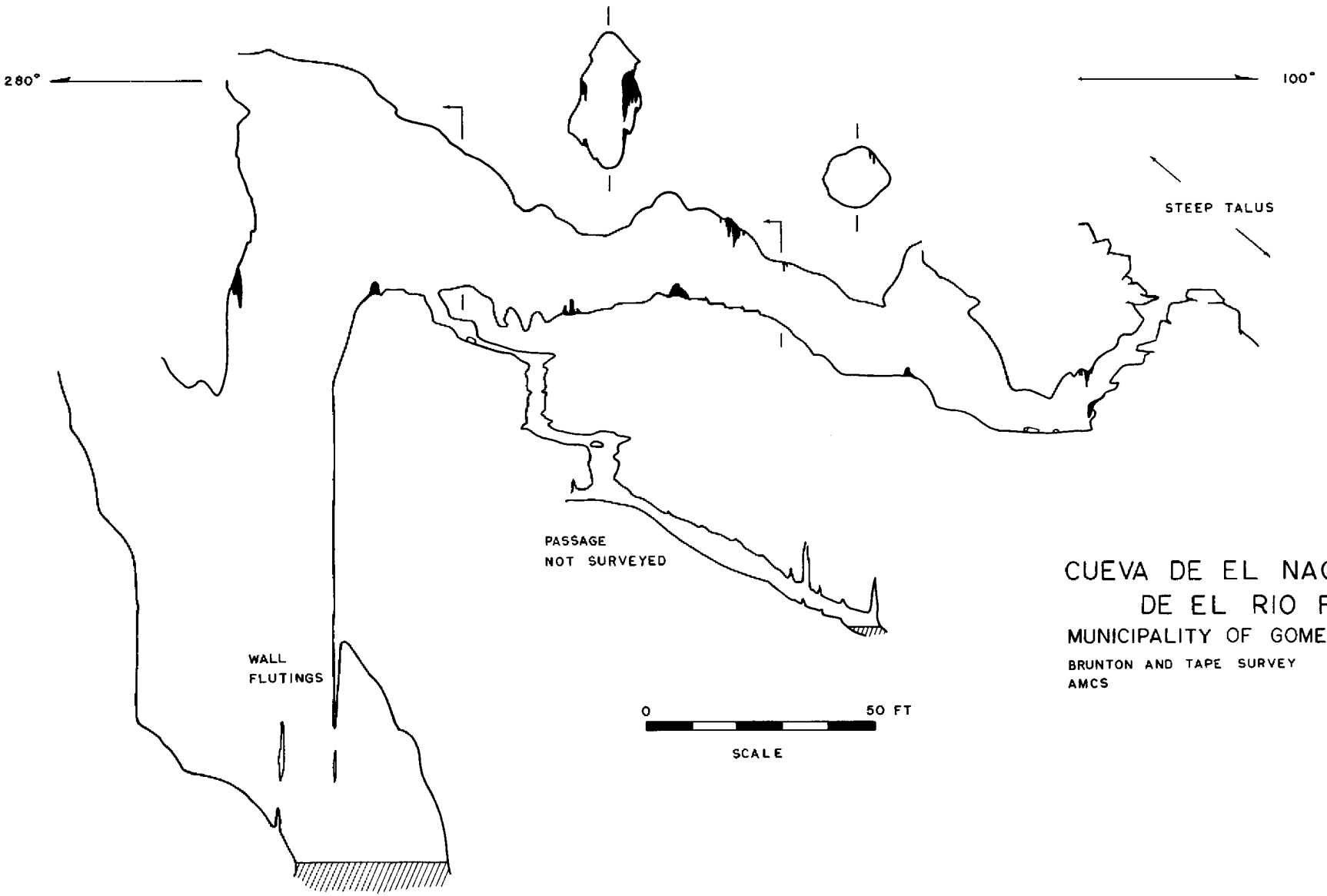
by James Reddell
Austin, Texas

The Rio Frio arises from the base of the Sierra de Guatemala at an elevation of about 100 meters. Unlike the Rio Choy and Rio Mante it does not emerge from a single large cave opening but from two main groups of springs. One of these has been investigated by members of the AMCS and is the site of a large irrigation project. This spring originates from a series of bedding planes and from among massive breakdown near the end of a canyon. The other spring has not been seen but is rumored to have caves near it. To reach the Nacimiento de El Rio Frio turn west off of the Pan American highway shortly after passing the small town of Encino and crossing the Rio Sabinos. This road is a good gravel road and goes to the town of Gomez Farias. This road heads almost due west for about four kilometers, at which point it turns sharply to the north. Here a much less traveled road turns off to the left and, after a drive of about two kilometers, reaches the Rio Frio. The road crosses a canal and ends at the bank of the river. To reach the spring near which is the Cueva de El Nacimiento de El Rio Frio it is necessary to wade the chest-deep river and follow the canal upstream to a dam, immediately upstream of which lie the numerous springs which form the nacimiento. The canal itself is of interest in that it runs under the main channel of the river coming from the other group of springs. David McKenzie estimates the flow from this group of springs at about 200 cubic feet per second. The river must here be waded again for a short distance and followed upstream until a dry channel is reached. To find the cave it is necessary to walk up the dry stream channel until it ends, remembering to keep in the deepest part of the channel, which is to the far left. The cave entrance is located at the end of the channel about halfway up a steep talus slope. The entrance to the cave is a

small hole in a flat ledge. A slope leads down over breakdown for about 30 feet to a dirt floor. From here a slope over flowstone leads through an attractively decorated passage up almost to the level of the entrance. About 150 feet from the entrance a small pit in the floor is found and about 20 feet beyond this a large domepit is encountered. This last pit is about 40 feet in diameter and drops 130 feet to a large lake. The most distinctive thing about this passage is that one wall of the pit is deeply fluted by solution, forming thin knife edge projections sticking from the cave wall for several feet. The lake is very deep and forms a siphon. The smaller pit was partly excavated and drops as a series of slopes and small drops for about 70 feet vertical and about 100 feet horizontal and ends in a small pool. This passage contains very fine, well-sorted sand and is also marked by deep sliver-like flutings in the wall.

Although the cave is fairly well-populated by animals, most of them are small and several are new species of troglobites. Several species of millipeds were found, as well as several spiders. The most remarkable aspect of the fauna was the presence of many large whip-scorpions, some reaching lengths in excess of six inches.

The cave is one of the more attractive in Mexico having been virgin when entered by the mapping group. The formations are untouched, a really remarkable thing for an exxentially horizontal Mexican cave. Anyone who visits the cave is urged not to ask any of the local inhabitants for directions nor to mention the cave at all. One visit by local people will inspire many more and the cave is very susceptible to the type of vandalism that is so disastrous to almost all Mexican caves. This area is an ideal spot to stop and camp while going farther into Mexico, the cave is interesting, the area itself is beautiful, and there is the good possibility that other caves will be found with additional searching in the area above the cave.



CUEVA DE EL NACIMIENTO
DE EL RIO FRIO

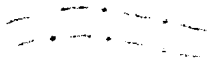
MUNICIPALITY OF GOMEZ FARIAS, TAMPS.

BRUNTON AND TAPE SURVEY APRIL 18, 1965
AMCS

ASSOCIATION FOR MEXICAN CAVE STUDIES

STANDARD LEGEND


Passage outlines


Upper level


Unsurveyed passage


Lower level


Siphon (cross-hatched)


Standing water; lakes or pools

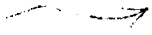

Survey station

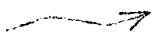

Water depth

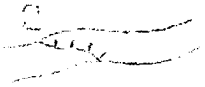

Ceiling height

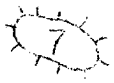

Depth below beginning point, usually entrance

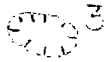

Height above beginning point

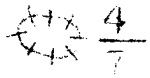

Direction and course of ephemeral stream


Direction and course of water flow in permanent stream (air flow, if so marked)


Sharp drop in floor level in hachured direction (vertical distance in feet)

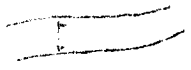

Dome, with height in feet


Pit, with depth in feet; if so indicated, pit entrance


Domepit, with height over depth in feet


Slope, down in splayed direction


Cross-section of cave viewed in the direction shown by half-barbed arrow (cross-section rotated to the horizontal)


Sharp drop in ceiling; hachures point toward high ceiling


Profile trace


Guano

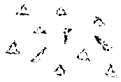

Bones


Bone fragments


Crystalline floor deposits


Clay


Sand, silt, dirt, or mud


Gravel or very small breakdown


Masses of breakdown


Large individual blocks of breakdown

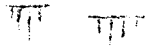

Rimstone dams

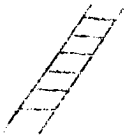

Masses of flowstone on walls, or flowstone partitions


Flowstone column


Stalactites


Stlagmites


Soda straws


Ladder


Steps


Vertical joint

Dipping joint, dips toward side with block, dip in degrees

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Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copying onto a standard or legal size memeograph master or for printing. Longer articles with detailed maps are invited for publication in a bulletin, Trip reports are requested from all trips.

Editors..... Terry Raines
John Fish

Staff..... Ed Alexander
Bob Burnett
James Reddell
Richard M. Smith
Philip Winsborough

THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume 1 Number 10 October 1965

Trip Reports

Persons: Fifty to fifty-five members of the UTSS
Date: October 30 and 31
Destination: Gruta del Palmito
Reported by: Terry Raines

On Friday night and early Saturday morning approximately 50-55 members of the University of Texas Speleological Society left Austin in several groups to visit La Gruta del Palmito located near Bustamante, N.L. All day Saturday was spent in the cave wandering about, taking pictures and viewing the many magnificent formations. The large percentage of cavers who had never seen the cave before were all thoroughly impressed with its vastness and beauty. In an effort to help clean up the first section near the entrance, several large sacks of trash were collected and removed from the cave.

Late that evening all vehicles that could travel the road to Gruta de Carrizal, namely Terry Raines' Chevy pickup and the Landrovers of Bill Bell and Ed Alexander, were loaded to capacity and the journey begun. From the railroad station at Bustamante it is a twenty mile drive on an "under construction" road to the Candela railroad station. At this point it is necessary to follow an even rougher road for another ten miles before reaching the cave, which is located at the base of a mountain called El Carrizal. The three groups arrived as the sun was setting and after eating dinner they spent several hours exploring the cave.

The next morning, Sunday, it was decided to continue northward along the rough dirt road from the Candela railroad station all the way to Nuevo Laredo, a distance of 97 miles. With the Chevy pickup in the lead, followed by Bill Bell driving the new Landrover and Ed driving the older one, the Sunday drive turned into a cross-country race. After a little more than two hours Terry, then Bill, arrived in Nuevo Laredo with no sign of Ed. They continued on to Austin and arrived about dark. Ed's group finally arrived late that night.

Glossary of Mexican Speleology — Espeleología

by A. Richard Smith

This glossary is designed to provide colloquial Mexican speleo—terminology for general caving. Scientific Mexican speleology often uses other terms from the Spanish literature in place of Mexican terms. Terms and usages may vary form place to place in Mexico.

Physiography

carso — karst

caverna — cavern or cave; used like gruta

cenote (tzonot, Mayan) — vertical shaft, usually large, often water filled at the bottom; "sacrificial well"

cueva — cave; frequently used for a cave of small extent

dolina — sink; sinkhole; shallow—to—deep closed depression of moderate size

fuente voclusiano — vauclusian spring

gruta — grotto or cave; used for a large, often—decorated cave

hoya — pit; hole

nacimiento — resurgence of a river

ojo de agua — gravity spring; synonym of nacimiento

pozo — well

resumidero — resurgence of underground stream; also used a synonym for sumidero

sima — vertical shaft; rarely used; synonym for sótano

sótano — cave with a pit—like, vertical, usually unclimbable entrance

sumidero — sink; sink entrance; shallow hole

torca — sink; small closed depression

torcal — area of sinks

uvala — two or more dolinas that have coalesced

valle cerrado — closed valley

Speleogens

boca — mouth or entrance

cámara — room

chiminea — chimney

clara boya — skylight

corte a pico — vertical drop

cúpula – dome
declive – slope
entrada – entrance
fisura – fissure
galería – galery
pared – wall
pasaje – passage
pendiente fuerte – steep slope
piso – floor
sala – room
sumidero – sink or pit in a cave
techo – ceiling

Speleothems

columna – column
estalactita – stalactite
estalactita excéntrica – helictite
estalactita isotubular – soda straw
estalagmita – stalagmite
macizo estalagmitico – large stalagmitic mass
pared incrustada – flowstone on wall

Clastic materials and water

agua – water
agua corriente – running water; stream
arcilla – clay
arena – sand
barro – mud
cascada – waterfall
grava – gravel
lago – lake
piedras – rocks, usually small
rocas – rocks, usually large; breakdown

Geology

caliza – limestone
falla – fault
grieta – joint
plano de estratificación – bedding plane

yeso – gypsum

Fauna

insecto – insect
murciélago – bat
pez – fish
pez ciego – blind fish
vampiro – vampire bat
víbora – snake

Breathing Phenomena of La Gruta del Palmito

by Bill Russell
Austin, Texas

During the weekend of October 30–31 a series of air flow measurments was made at the entrance to La Gruta del Palmito, located near Bustamante, N.L. The cave was found to breathe with a period of approximately 120 seconds. The movement of air was irregular, generally moving outward for twenty to thirty seconds, followed by twenty or so seconds of little movement, then after some preliminary eddies the air would start an irregular movement inward. Periods varied from 60 to about 200 seconds, measuring from one strong outward flow to the next. The maximum velocity was estimated to be one foot per second. The cave does not always oscillate, but the breathing period was estimated on a previous trip to be about 100 seconds.

Knowing the period of oscillation one can make an educated guess as to the size of the cave if the relation between size and frequency is known. It is most likely that the cave is essentially a large jar that forms a Helmholtz resonator. The period of an oscillation of this type is:

$$T = 0.006\sqrt{\frac{VL}{A}}$$

where T is the length of the period in seconds, V is the volume of the cave in cubic feet, L is the length of the cave in feet, and A is the area of the entrance in square feet. Using the surveyed length of the known part of the cave, about 2000 feet, an estimated average width of 200 feet, an height of 50 feet, and an estimated entrance cross section of 100 square feet, we find that:

$$T = 0.006\sqrt{\frac{(50)(200)(2000)(2000)}{(100)}} = 0.006\sqrt{\frac{40,000,000,000}{(100)}} = 120 \text{ sec.}$$

This is essentially in agreement with the measured period.

Thus one can conclude that it is unlikely that there are large, yet-to-be-discovered sections of the cave as these would tend to lower the frequency of oscillation. It is

possible that the cave oscillates by some other method, as for example, Round Rock Breathing Cave with a period of 90 minutes, and Laubach Cave with a period of about 45 minutes. (Both of these caves are located near Austin, Texas.) However, the agreement between the calculated period and the measured period is so good it is likely that the known cave represents essentially the whole cave. This conclusion is strengthened by noting that the cave runs at right angles to a narrow ridge not much over 2000 feet wide. The cave is also not likely to have another entrance at the lower end of the cave as the great difference in elevation between the two entrances would cause strong air flow, which has not been observed.

Vertical Techniques

by Bill Bell
Austin, Texas

It has come to our attention that many people have expressed curiousity at the vertical techniques used by the majority of people doing work in the Mexican sótanos. Some are probably already well acquainted with it and some may even use it as it is probably the least complicated proceedure of all.

The equipment used consists of various lengths of 7/16 inch Goldline and du Pont 707 nylon, two Jumar Ascenders with loops, one seat sling with three "D" rings, two carabiners with brakebars, and one locking carabiner.

The descent is made using the seat sling formed in a swiss seat using a brakebar rappel. For the diameter of climbing ropes usually used, two brakebars are enough. One brakebar would require a great deal of braking with the hand and not allow enough control while three would require much "feeding" of the rope. Spools are not used due to their excessive weight and bulk. Also, when not rappelling the carabiners can be used for other jobs.

For the prusik out we use what is called the seat sling and foot loop method in conjunction with Jumar Ascenders. This method operates as follows: The seat sling is put on exactly the same as for the rappel. It should fit as snug as possible without binding or pinching and not be allowed to ride up above the waist line while prusiking. Instead of attaching the brakebars and carabiners, a Jumar with a loop is hooked to the locking carabiner on the seat sling. When standing flat and pulling fairly hard, the loop should be long enough so that the Jumar is about even with your face. The Jumar on the seat sling is attached to the rope first and goes above the other Jumar which is connected to the foot loop. The foot loop should be long enough for the Jumar to reach the hip. By standing in the foot loop, the seat loop can be raised. Then by taking weight off the foot loop, it in turn can be raised. Don't try sitting back until all

the slack is out of the main climbing rope, especially if it is nylon. After all the slack is out you can begin the regular method. First raise the foot loop as high as is comfortable, then stand in it holding the main climbing rope with the left hand. Next raise the Jumar attached to the seat loop as high as possible with the right hand. After this, sit in the seat sling, taking the weight off of the foot loop. The Jumar attached to the foot loop should be right in front of you now and you are ready to begin the cycle over again. The foot Jumar should be raised as far as is comfortable (it is ultimately blocked by the seat sling Jumar) because the farther you raise it until it hits the other Jumar the larger your step will be. Larger steps may also be taken by adjusting the loops so that the seat sling loop is a little longer and the foot loop a little shorter. This is of course dependent upon the individual. In a situation where a great deal of speed is required, such as one might encounter while prusiking under a waterfall, a slight variation of the above method can be used. To begin from the sitting position, raise the foot Jumar as far as is possible using your left hand. At this point both Jumars should be touching each other. Holding the seat sling Jumar with the right hand, pull yourself up with both Jumars and stand in the foot loop at the same time. As soon as you start to raise, slack will appear in the seat loop which can quickly be taken out by raising the Jumar in your right hand. At this point you will loose your balance and start falling back into the seat sling. As this is happening slack will appear in the foot loop which should be taken out as a sort of "reaction" against falling back. The Jumars will be back together again, ready for another cycle. (Note that with this method your hands never leave the Jumars.) Additional aid for the pull up is gained from the spring back effect of having fallen back against the rope, especially if it is nylon. This enables you to set up a bouncing rythum that aids in quick ascent. A sixty foot free drop with a ledge at the top has been prusiked by several cavers here in just over one minute using this method.

We are not recommending this as the only method. It has been cussed and discussed for a long time, both by us who use this method the most and by those who have tried it. However, we feel that in conjunction with Jumar Ascenders and the deep Mexican sótanos, this method has a lot to offer. It is fairly fast and gives a great deal of mobility on the rope as both hands and feet are free (part of this article was written while I was on the rope). Also, ledges are very easy to get over and it is possible to stop and rest easily. The latter is very important when it is necessary to prusik 1200 feet or so with several of the drops in 200 and 500 foot lengths. Another feature is that the bulk of the equipment is held to a minimum. All the climbing gear fits easily into a small side pack, still leaving plenty of room for food, water, carbide, and other caving essentials.

We suggest that you try it on a fairly difficult drop with an overhanging ledge or two and see how you like it. One of its drawbacks is that this method is rather strenuous,

but if you are not in good enough shape to prusik in this manner, whether you like it or not, you are probably not in good enough shape to go far in a deep Mexican sótano.

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THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume I Number 11 November 1965

Trip Reports

Persons: Bob Mitchell and James Reddell
Date: June 23, 1965
Destination: Múzquiz, Coahuila
Reported by: James Reddell

Bob Mitchell and I left Austin at 5:00 A.M. en route for Múzquiz where we hoped to collect blind fish from artesian wells near there. After arriving in Múzquiz early that afternoon we quickly located Jack Shaw, a miner who knew where the wells were. He took us to the well of El Potrero. The town of Nueva Rosita obtains its water from this natural well by pumping it through large pipes the ten miles or so to the town. A large grate is placed over the well and an upper natural crawlway has been cemented over to prevent animals from going back into the cave and polluting the water. A drop of about ten feet admits one into a tremendous stream of water rising from a four-foot in diameter water-filled passage. The caretaker at the well told us that after rains water boils from the well, bearing with it many blind catfish. Another well about 20 feet deep is located higher on the hillside and also has fish at times. The source of the water in this well is probably the same as in the other well, but this time it arises from a deep dark fissure about ten feet long and two feet wide. An algicide had been placed in the wells to keep them clean and, therefore, the fish were obviously driven out. A night spent in the apartment of Mr. Shaw left us refreshed for a busy day of checking mine shafts and wells for possible fish localities. We were first taken to El Socavon, an old mine tunnel which intersected a huge cave stream, causing the death of several miners. The water now bubbles up out of the sloping mine tunnel and is channelled into the town of Múzquiz, where it serves as the principal water supply for the town. Many other shafts and tunnels are located around the town, but no caves could be found. One tunnel was followed for about 200 feet before it intersected a deep water-filled shaft which would have required swimming to cross. Time being very short we were not able to stay longer in an attempt to locate caves, but the trip was made very interesting by the hydrologic situation. The return trip to Austin was made without incident.

Persons: Orion Knox, Tommy McGarrigle, Bill Russell, and Carol Westmoreland
Date: November 24-28, 1965
Destination: Area around Aramberri, N.L.
Reported by: Bill Russell

During the Thanksgiving holidays four Austin cavers, Orion Knox, Tommy McGarrigle, Bill Russell, and Carol Westmoreland, left Austin for the gypsum cave area around Aramberri located to the north-east of Matehuala, S.L.P. Unfortunately car trouble haulted us in General Teran, and by the time the car could be repaired little time was left. So,

we followed the road leading west from Montemorelos through the canyon of the Rio Pilon. Cueva de Chorros de Agua is located in this canyon and other entrances can be seen high on the mountains. An old logging road leads from just west of the shrine below the entrance to Cueva de Chorros de Agua into a high karst area about 2000 feet above the river. Only a few small caves were found in this area in the small amount of time we had available. Orion reached the top of Cierro de la Boca, a prominent limestone peak.

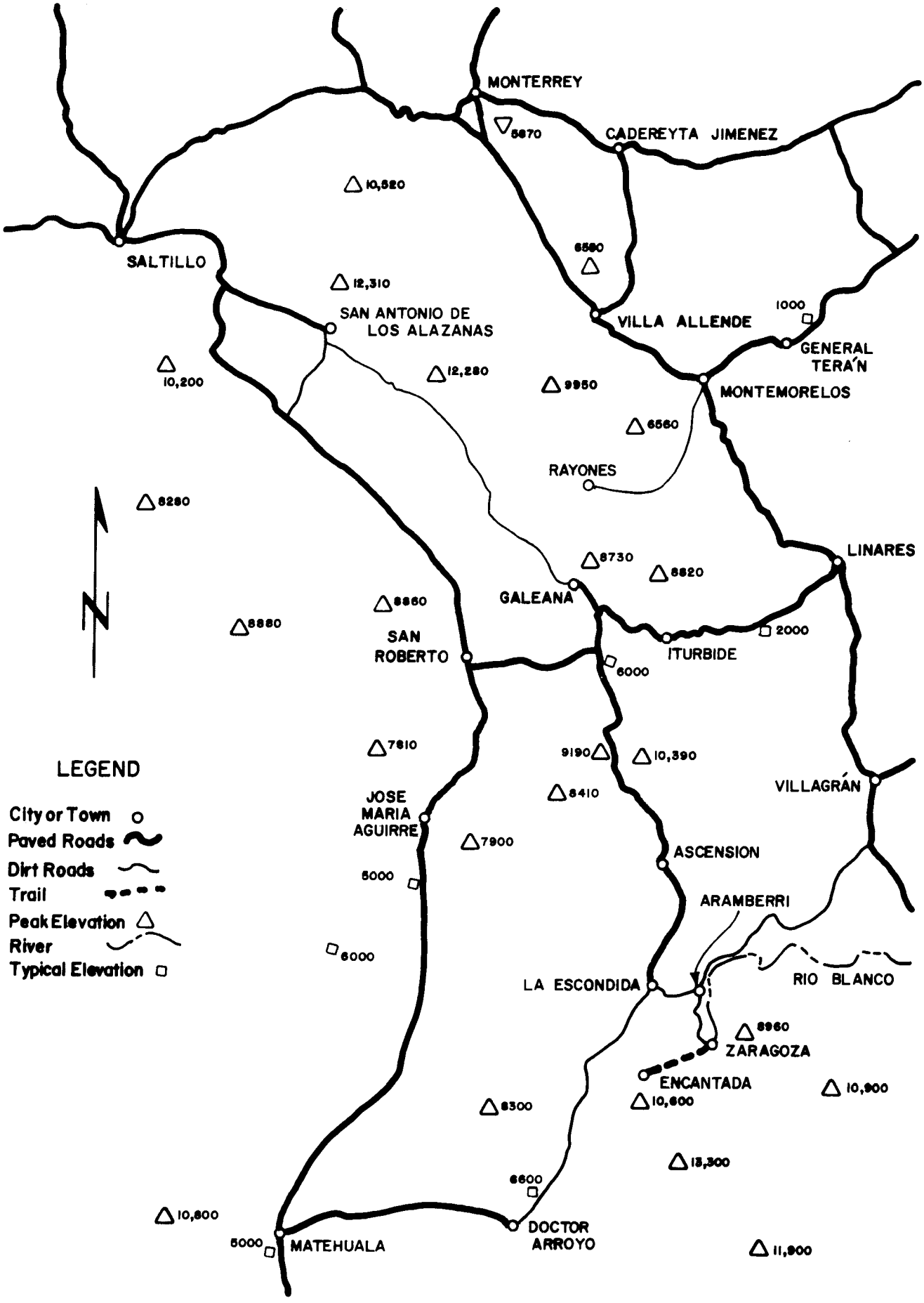
Persons: Jim Duke, Jesse and Dorthy Purefoy, Lanny and Sharon Wiggins, Charles Yale
Date: November 24–28, 1965
Destination: Zaragoza, N.L. (see map)
Reported by: Jim Duke

On November 24 we left Austin at 8 P.M., headed for Zaragoza, N.L. From there we planned to hike to the village of Encantada, on the northern fringe of the Sierra Peña Nevada. This village was supposed to be about 8 km. into the mountains from Zaragoza. (See trip report by D. McKenzie, September, 1965, page 82.)

After stops in McAllen, Reynosa, Linares, and Iturbide, we arrived at La Escondida at 4 P. M. on November 25. The road to this point was paved, but frequent stops were required because of the over-heating of my car, due to the mountainous terrain. From Escondida, it is 24 miles to Zaragoza by dirt road, through Aramberri. This road takes 3 hours to drive.

We arrived at Zaragoza at 7 P.M., promptly rented two rooms at the hotel (Rafael Reyna, prop.) and went to sleep, leaving word to be awakened early. After breakfast and final preparations we were directed to the trail, and began our trek into the mountains. (At various periods during the entire trip, I recorded elevations of particular points of interest. These are listed in the table at the end of the report.) The entire trip to Encantada took seven hours (including one-half hour for lunch break), and we arrived at dusk. I might insert at this point that we were offered burros for the trip at the rate of five pesos per burro. We refused, but this later proved to be a mistake. Anyone traveling in this country should inquire in Zaragoza and rent burros for the trip up. The trip, as we learned the hard way, was more like 16 km., with an elevation change of about 4000 feet. We spent the night in the Encantada school house, after making preparations for renting horses to travel to some of the caves the next day.

On Saturday, the 27th, four of us: Lanny, Sharon, Charles and I left the village on horseback to see the caves. Jesse and Dorthy went back to Zaragoza to prepare for the trip back to Austin (sleep). After checking out one small pit, we arrived at a plateau filled with small sinks, of which three looked promising. The first was a twelve foot


MONTERREY
8870
CADEREYTA JIMENEZ
10,520
SALTILLO
8580
12,310
SAN ANTONIO DE
LOS ALAZANAS
1000
VILLA ALLENDE
GENERAL
TERAN
10,200
12,280
9950
MONTEMORELOS
6560
RAYONES
8260
LINARES
8730
8820
GALEANA
8860
8880
SAN
ROBERTO
2000
ITURBIDE
6000
7810
9190
10,390
VILLAGRÁN
6410
JOSE
MARIA
AGUIRRE
7900
ASCENSION
5000
ARAMBERRI
6000
LA ESCONDIDA
RIO BLANCO
8960
ZARAGOZA
ENCANTADA
10,900
10,600
8300
13,300
6600
10,800
DOCTOR
ARROYO
5000
MATEHUALA
11,900
LEGEND
City or Town
Paved Roads
Dirt Roads
Trail
Peak Elevation
River
Typical Elevation

climbable drop into a horizontal crawl. This was not checked any further. The second was two ten-foot drops, offset about three feet. From here a crevice, with a dip of roughly 75 degrees, led deeper. It required equipment and was rather narrow, therefore was not checked.

The third pit was about 130 feet deep, and consisted of a series of small drops. It ended at a small non-negotiable crawlway, just above a mud plug at the bottom. This cave was named Sumidero del Moscas. This is probably a misnomer, since the insects, which were in all the caves visited, appeared to be more like moths than flies. After exploring this third pit, we returned to the village. We were gone six hours, spending about four hours on horseback going to and from the cave area. This leads us to estimate the area to be about five km. from the village.

We left for Zaragoza at about two that afternoon, carrying our packs, and arrived at 5:30, after a three and one-half hour trip down that was much easier than the trip up. We immediately packed the car, ate a light supper at the hotel, and began our trip back. We stopped in Aramberri to buy gas, then drove on to the base of the mountains outside of Linares where we stopped to sleep. The next morning (Nov. 28) we left the campsite at 8 A.M. and drove to Austin, arriving there at 8 P.M.

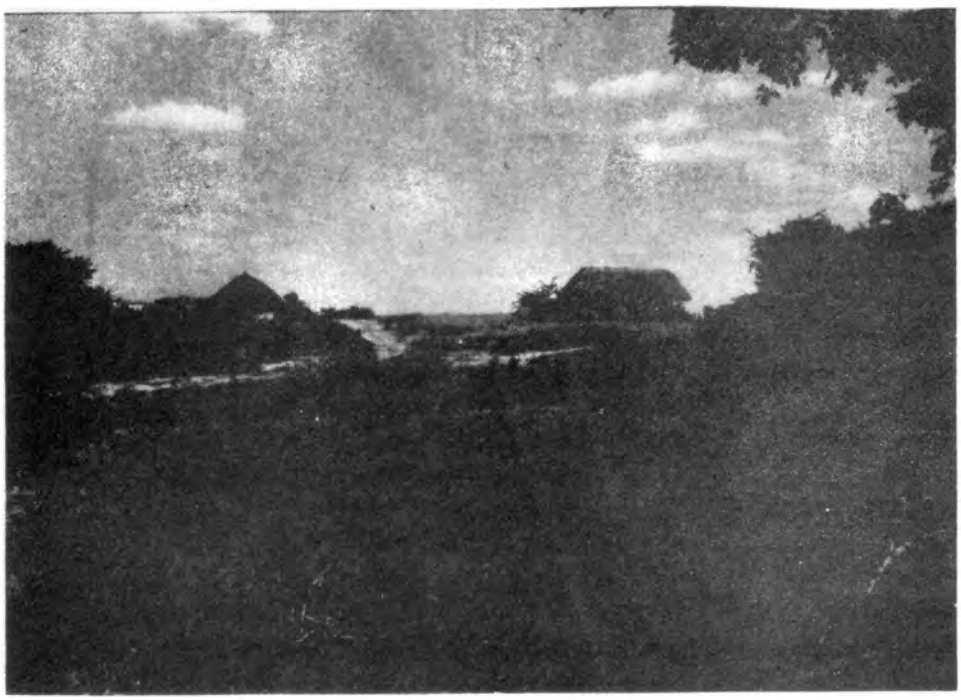
Elevations of Points of Interest

(Note: Elevations are measured in feet and accurate to within 200 feet)

Top of ridge between Iturbide and Galeana	5500
Top of ridge north of Ascension	7500
La Escondida	5500
Aramberri	3500
Zaragoza	4300
Pass (significant) on trail to Encantada	7700
Encantada	8300
Plateau with caves	9300

Persons: Ed Alexander, Don Ericson, David McKenzie, Richard M. Smith, Merydith Turner
Date: November 24-29, 1965
Destination: Sótano de la Tinaja; El Abra Range, Valles S.L.P.
Reported by: Ed Alexander and David McKenzie

With Ed's Land Rover filled to capacity, we left Austin Wednesday afternoon before Thanksgiving, soon to be followed by the Sótano del Arroyo group whom we planned to meet in Valles. Our ambition was to explore and survey the "upstream" passage in Sótano de la Tinaja and to perhaps discover a suspected linkage with the two kilometer distant Sótano del Arroyo. The amassment of essential gear included our large packs, rope and ladders, inner tubes, and a 30 feet telescoping antenna to be used as a scaling pole.



Village of Los Sabinos located just north of Cd. Valles, S.L.P. and near Sótano del Arroyo and Sótano de la Tinaja—photo by Mills Tandy

Valle de Zaragosa, located approximately ten miles east of Encantada—photo by Orion Knox

The initial group of four arrived in Valles at about dawn Thursday after driving most of the night through dense fog. Soon, after a short nap in the Rover, we were joined by John Fish's car from Austin, which was bound for Sótano del Arroyo, and Merydith Turner who had preceded us by a couple of days by bus. After a short breakfast and many cups of café con leche, we obtained permission to work in the Los Sabinos area from the owner of Sótano de la Tinaja, Señor Luis Martínez. Ready now to enter the caves, the two groups drove north to Los Sabinos where the six cavers with Fish prepared to enter Sótano del Arroyo (see location map in AMCS Newsletter Vol. I, No. 3 and following report in this issue). From there the Land Rover continued on to Sótano de la Tinaja, where, with high hopes, the gear was arranged and we entered the cave at about noon. Since the plans called for spending the next two days deep within the system mapping the "sandy-floored passage", we packed our supplies 4000 feet to the upstream section where a camp was established.

Since the trip into the cave had been quite tiring (none of the group had slept the night before), we rested for about an hour while eating supper, before beginning the survey. At about 6 P.M. we backtracked to the cable ladder drop at the end of the 1400' entrance passage and set up the first station. With David sketching, Ed on the Brunton, and Don and Richard running the 100' steel tape, the mapping went swiftly as we progressed back toward the camp. Six hours later the last station of the day was made next to our sleeping bags, bringing the total length of mapped passage for the day to 3300 feet. This distance included the main "sandy-floored" passage from the cable ladder drop to camp; the first section of the downstream passage, as far as the first drop; and the 300 feet of passage leading to the unexplored pit near the cable ladder.

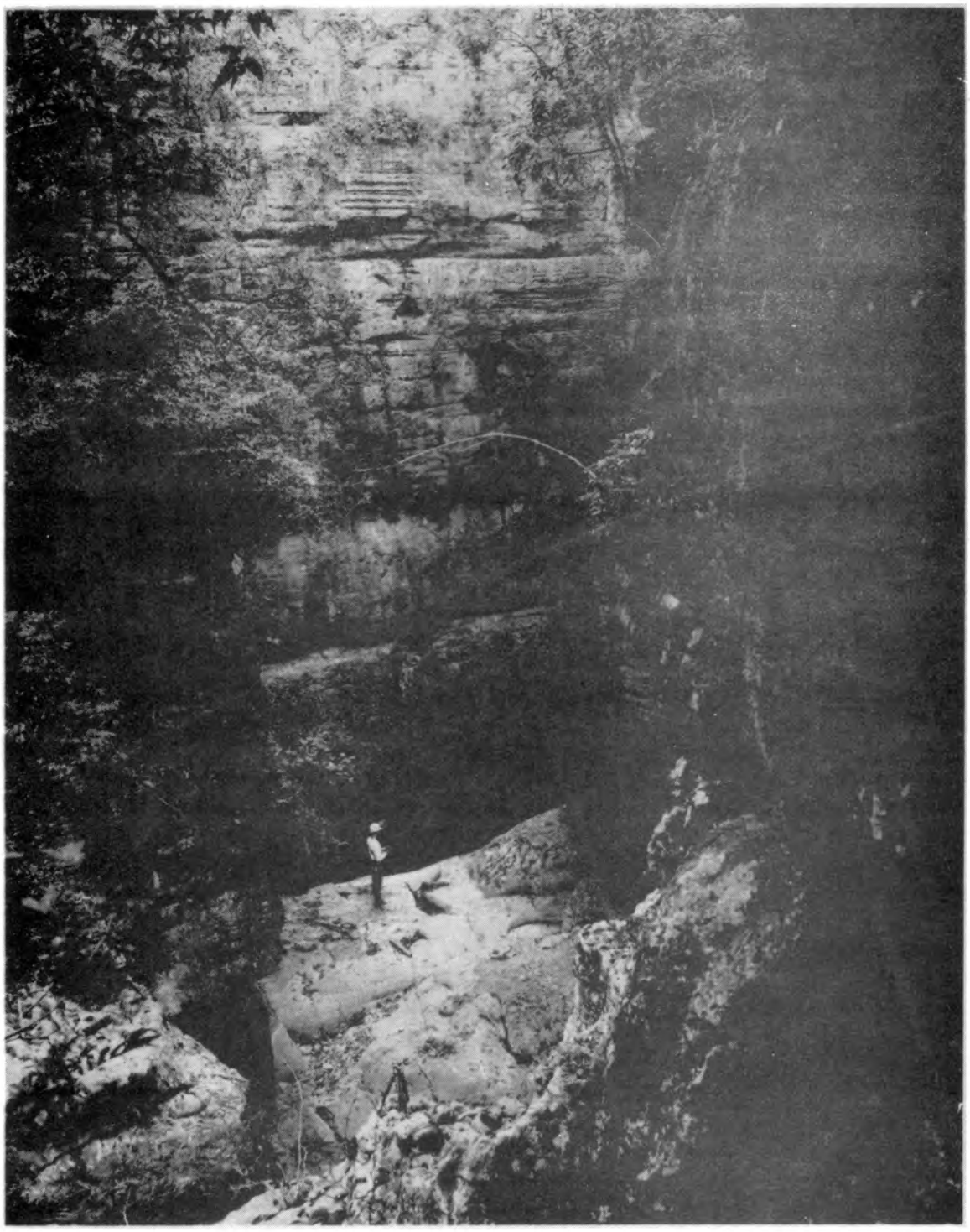
Friday morning after the usual canned breakfast, the mapping was continued in the upstream direction away from camp. We planned to push this passage until it ended or showed signs of connecting with the Sótano del Arroyo system, which, at the time seemed quite possible. The mapping progressed quite well through the day despite the inconvenience of carrying the 30' scaling pole, telescoped into one section ten feet long. Since this passage has already been well described (Vol. I, pp. 29 and 46), suffice it to say that many hours later we arrived at the end of the explored section where 15 feet above our heads was the small passage for which we had brought the unwieldy pole. At first glance the lead didn't look too promising, but nevertheless the pole was erected with a cable ladder tied to the top, and Ed and David ascended. The 5'x5' passage quickly pinched down to what seemed to be an impassible squeeze. After much pain and effort Ed finally managed to emerge on the other side in a small room, which, after 15 feet, again narrowed down to a tight crawl. Fifty feet further, he could see a sizeable room just on the other side of another very tight hole. With visions of the sought

after connection to Sótano del Arroyo, he hurried on and found himself in an 8' high passage which appeared to turn right in about 15 feet and open up. Almost running, he made the corner, only to find a dead end wall thirty feet ahead. For the first time in this remarkable cave system, the end of one of the many major passages had been reached. Backtracking, Ed returned to the group, and they all headed back through the lakes carrying the pole with them. At 1600 feet from the end there is a large opening about 25 feet above the first large lake in the passage. Since entrance into this lead will require climbing up a flowstone wall, the pole was left lying on a ledge nearby so as to be available to the next expedition. Continuing on, the five explorers arrived in camp after a fourteen hour day in which 4000 feet had been surveyed, bringing the two-day total to 7300 feet. Much of this distance had been through passages which ranged from 50 to 100 feet in diameter.

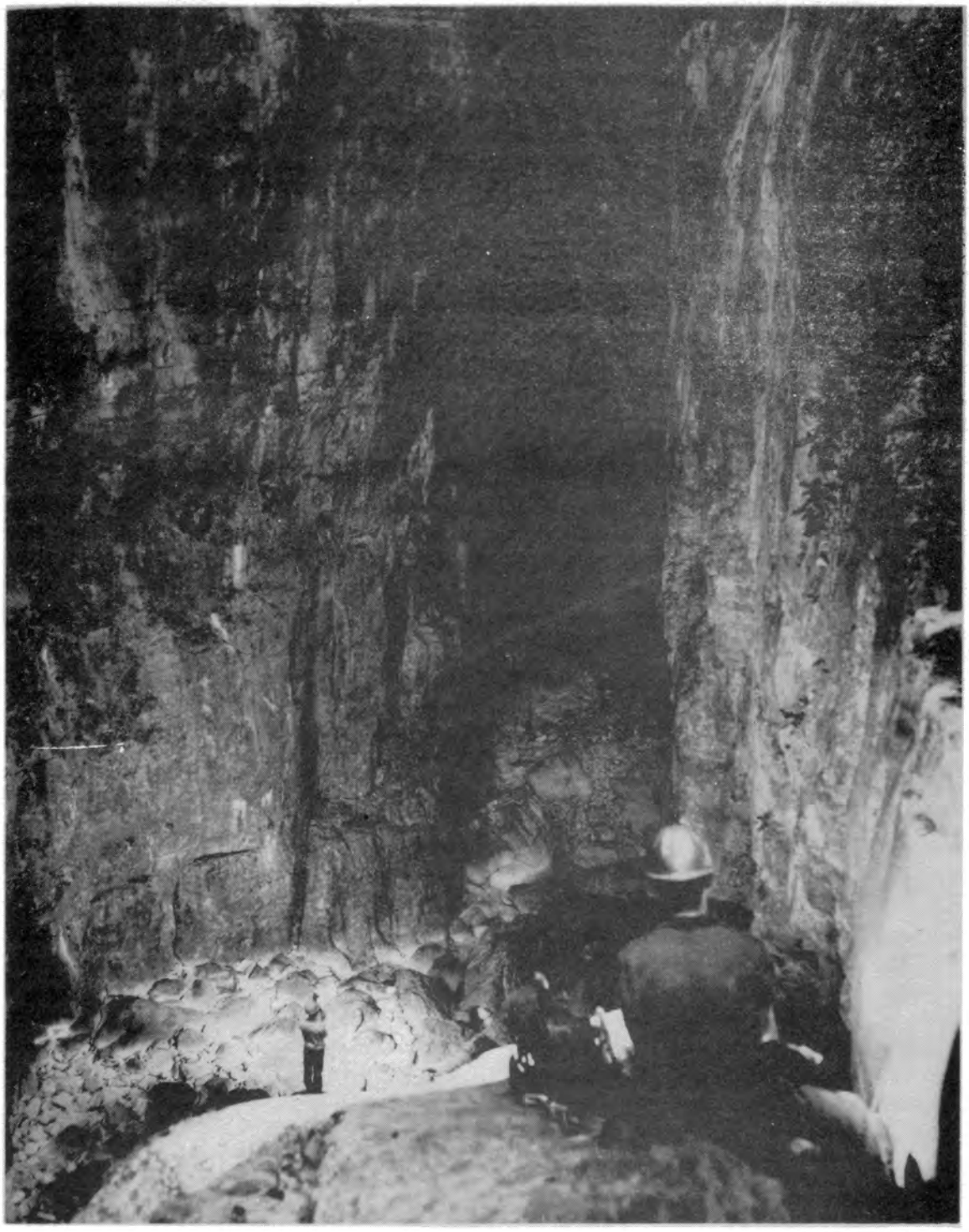
After a large meal that night the group slept about eight hours and awoke with the task of packing out of the cave ahead of them. To lighten the loads in the backpacks as much as possible, they attempted to eat all the remaining food. Although the trip had been well supplied, they finally achieved their goal and began hiking out. At noon, after 48 hours in the cave, they emerged from the arroyo and repacked the patiently waiting Land Rover.

Returning to Valles, the group that had been in Sótano del Arroyo was encountered and notes were compared over a lunch of biftek. That afternoon was spent driving west over the new road which we found had been completed from Valles to San Luis Potosí. This road cuts across some very interesting karst areas where many sinks could be seen on both sides of the highway. One very promising one, located 47 km. west of the Valles train station, was checked, but no opening was found at the bottom. Since our time was running out, we turned around at Nogales and after again meeting the other group in Valles, continued on to the Nacimiento del Rio Mante where camp was made for the night.

Sunday morning was spent checking Cueva de los Fossiles, about one and one-half kms. above and southwest of the Nacimiento. This is the same cave that was mentioned as a rumored cave in AMCS Newsletter, Vol. I, No. 4, p. 39. The first 100 feet of the cave were a large entrance room from which extensive amounts of fill had been removed from the floor. Near the end of this room a passage led to the left for 150 feet, at the end of which could be seen a very high skylight. Of interest here was a long aerial root which extended from the skylight far above to the floor of the cave. Returning to the Nacimiento, we climbed into the Rover and began the long trip back to Austin, arriving finally at 4 A.M. Monday.



The arroyo leading to the entrance of Sótano del Arroyo
photo by Mills Tandy



The entrance of Sótano del Arroyo
photo by Mills Tandy

Persons: Jane Calvert, Susan Emory, John Fish, Susan Loving, James Reddell, A. Richard Smith
Date: November 24–28, 1965
Destination: Sótano del Arroyo and the area around Valles, S.L.P.
Reported by: John Fish

We left for Valles on Wednesday night, with all the people and equipment we could pack into a car. Taking the route through Reynosa, we soon encountered a dense fog on the Mexican side of the border. Early Thursday morning in Valles we met the group going to Sotano de la Tinaja, and after talking to Señor Martínez we headed for Los Sabinos and Sótano del Arroyo. (See AMCS Newsletter Vol. I, No. 3 for descriptions of Arroyo and Tinaja).

The car was taken to within a few hundred feet of the arroyo leading to the cave where we unloaded our gear and hiked about one mile down the arroyo to the entrance of Sotano del Arroyo. At first the arroyo is very shallow with the beds of limestone sloping backwards against the direction of water flow. After about 400 yards, the arroyo begins to cut more deeply and the bedding planes begin to slope with the water flow. The arroyo continues downward and after a few climbable drops one arrives at the huge entrance sink, which is about 200 feet deep on all walls except where the arroyo enters.

After a quick meal, we entered the cave via the 60' drop at the arroyo. Our purpose was to check all possible side passages along the main passage and to investigate the lake at the point of furthest previous exploration. During our explorations we found that none of the side passages were extensive, but there is a good possibility of the main passage continuing beyond the lake. Passing through a channel (about three feet wide) over a flowstone bank, James dropped about 40 feet into the middle of the lake. He found that the walls were almost out of sight and reported that it looked like a passage may continue in the same general direction as the main passage had up to this point. By comparing maps of Arroyo and Tinaja, it appeared that the downstream (main) passage in Arroyo has now been explored to within 2000–3000 feet of the "sandy-floored" passage in Tinaja. If these caves connect, there would be a very large system with multiple entrances and miles of passage.

After a long rest, James, Dick Smith, and John reentered the sótano to explore and map the right hand water passage which was rumored to be 3000 feet long. Using inner tubes, we crossed the long lake and continued mapping to a total of about 700 feet. The passage had been averaging 10–12 feet wide and 20 feet high, but at the end of our survey the passage narrowed to 5–6 feet and about 30 feet high. By traversing muddy ledges on the walls, an additional 500 feet of cave was explored until the passage became a crawlway. The passage last

explored was well decorated in many places. A plot of our survey showed that the right-hand water passage almost passes under the entrance sink.

While Dick Smith located the entrance of Sótano de la Tinaja, with respect to Sótano del Arroyo, the next day, James and John returned briefly to the main passage to retrieve a lost pack. We then headed for Valles to meet the Tinaja mappers and obtain some good food and refreshment. That night we slept just west of Valles near the new highway to San Luis Potosí.

The next day we continued west along the new highway toward S.L.P. in order to look at the mountain karst. This highway crosses the northernmost part of the Xilitla karst area. Many dolinas were seen from the highway, some of which looked very promising for pits. The eastern side of the range here is covered with the same jungle growth as the rest of the range. However, as we climbed higher the undergrowth disappeared, and we entered a pine tree forest and high mountain karst area. In some places there are small sinks by the dozen, some of which surely must lead to caves. One such area is Valle de los Fantasmos, located near the highest part of the range. Shortly after passing through the "Valley of the Phantoms", we crossed a pass at an elevation of 9500 feet from which we could look out over many ridges of high mountain karst. From here we descended to San Luis Potosí and continued home, stopping briefly at Sumidero 552 in the gypsum area near Matehuala.

The AMCS Newsletter is published monthly by the Association for Mexican Cave Studies, P.O. Box 7672 Univ. Station, Austin, Texas 78712. Membership in the AMCS is $5.00 for the calendar year, with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications for that year.

Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copying onto a standard or legal size master or for printing. Longer articles with detailed maps are invited for publication in a bulletin. Trip reports are requested from all trips.

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THE ASSOCIATION FOR MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Volume I Number 12 December 1965

Trip Reports

Persons: Ed Alexander, Stanley Everett
Date: Friday, December 17—Tuesday, December 21, 1965
Destination: Serranías del Burro
Reported by: Ed Alexander

After leaving Austin on Friday, and driving until late in the night, we awoke Saturday morning at a roadside park near Del Rio, Texas under a light misting rain which drifted into the shelter and settled on us. Our objective was to drive into the Serranías del Burro and check several rumors of caves in these mountains which were at that time unvisited by the AMCS. The rumors were at best sketchy, mentioning only large depressions sighted by airplane pilots flying over the area. The various maps which we had brought with us were little better, showing only questionable roads at best.

Saturday, December 18

We were checked through the Mexican Customs at Ciudad Acuña by 10 A.M. and drove on past the railroad station along the new paved road for 20 kms. to the Amistad Dam site. Realizing that we must have missed our turn, we returned to town and found the road to San Miguel just 3 kms. from the railroad. Here we turned left and began what was to be a 300 mile trek through the mountains before we would again find pavement. After two hours, we had covered the 65 kms. to San Miguel, where we talked with Mr. Barksdale who gave us directions to what he called Cueva de Iglesia. Following his instructions, we turned left off the main road and drove for two or three more hours covering another 60 kms. Here we were almost in the center of the mountain range and thinking we had far overshot the simple instructions, we arrived at San Viciente, which was exactly where we wanted to be.

Much to our surprise, we found Mr. Humphries, the owner of several interesting and deep caves near Langtry, Texas, visiting at San Viciente for a weekend of hunting. Since it was late in the day, we accepted his invitation to spend the night there and continue on to the cave the next morning. The evening was passed very profitably, since Mr. Humphries supplied us with much information on the area. Along with several cave leads, he gave us the location of the major ranch headquarters in the range along with some idea of which roads would get us through the mountains. It seems that a large portion of the Sierrinas (about 1.5 million acres) is owned by a Texan, Mr. Myer. The entire area is ranched by Americans, so we found little need of Spanish for several days.

Sunday, December 19

After an early breakfast at the ranch, we drove on up

the road from the house for several miles and turned right into the first prominent canyon. We followed this road past the second stock tank, and keeping to the right, again entered the small canyon on the right wall. After a couple more kilometers, even the Land Rover could go no further, so we walked the remaining kilometer and found the cave developed in a prominence on the left side of the canyon about 200 feet above the arroyo. Cueva de Iglesia has two entrances: one about eight feet high by twelve feet wide, and the other twenty feet high by thirty feet wide. From these entrances led a passage for about 400 feet which varied in dimensions from eight to fifteen feet wide. The end came suddenly as the cave constricted to thirty feet of crawlway. The cave contained many flies, two ring-tailed cats, and large deposits of very dry bat guano. Near the entrance was also found what was probably bear droppings.

From the entrance could be seen another opening across the canyon, so we decided to investigate. Only a small shelter cave was found, but from there could be seen a much larger opening further up the canyon. There, high on the right side of the canyon we found the shelter which measured ten feet high, 25 feet wide, and 20 feet deep. The ceiling was discolored by smoke stains, the floor covered with very old deposits of ash, and the walls liberally displayed many faded Indian paintings. From this vantage point we could see nothing of obvious importance, so we returned to the car and retraced our path toward San Miguel. At the main road, which we had left the day before, we turned left since we had decided to attempt to completely circle the range and arrive in Muzquiz via Santo Domingo, another ranch headquarters only 30 miles southeast of Big Bend National Park. Dark soon overtook us and after 20 kms., we found it quite impossible to tell which of the many tracks across the desert was the one we desired. We camped there feeling very much as if we were the only people in the world. It was many miles and several hours by car to the nearest Mexican village.

Monday, December 20

Early in the morning, we were again driving in the direction of Santo Domingo. One ranch, two trucks, and 70 kilometers later we stopped near the top of the low pass through the range and checked one of the many openings we had been seeing along the base of the rimrock. The cave, which I believe is typical of all that we saw, was developed by weathering of the rock face by surface water draining down cracks just behind the surface. Below the small vertical fissures was a low crawl through the worst combination of powdery dust and cactus thorns which had been left by some inconsiderate animals. We retreated with our punctured bodies and drove 25 more kms. to Rancho de las Norias. There we talked with the mother of the owner, Charles Sellers, who gave us rather incomplete information and no directions to some bat caves somewhere in the area into which rustlers had thrown two ranchers years ago. Since Mr. Sellers was

gone somewhere, we drove on the remaining 50 kms. to Santo Domingo.

There we found Mr. Bridges, the ranch foreman (?), Mr. Myers, the owner who had flown in (we were only an hour from Del Rio by air), and Mr. Morris (?), an overseer of some kind who seemed to know the area very well. However, he knew of no noteable caves, although he ded remember a large depression near El Burro, a prominent peak we had passed earlier in the day. This possibly is the feature which has been sighted by airline pilots. After a pleasant supper with the Bridges, we learned that it would be possible to drive on to Muzquiz in only a few hours, so we decided to continue on our way (we had half-way expected to have to return over the long route we had just completed). Expecting a speedy return to civilization, we started on our way, only to be overtaken in ten miles by a flat tire and nightfall. The next 30 kms. were over the worst road that Humble has ever put on a map. Then, quite abrubtly, we arrived at the main truck road into Muzquiz. Expecting smooth traveling for the rest of the trip, we settled back for the drive only to have the generator die in about ten minutes. The remaining 130 kms. to town and paved road consumed about two hours and one heavy-duty Land Rover battery. We camped at Muzquiz.

Tuesday, December 21

The entire day was spent waiting while a shade-tree Mexican mechanic rewound the generator armature by hand. However, the day was not entirely lost, since it seems the area around Muzquiz has many more caves than the Serranías del Burro. By the time we left town at about 6 P.M., we had acquired several promising leads to nearby caves. We returned to Texas through Piedras Negras and drove on to Austin, arriving at about 3 A.M. the following morning.

Persons: Dan Evans, T. R. Evans, Richard Smith
Date: 20-25 December 1965
Destination: Rancho del Cielo
Reported by: T. R. Evans

Taking a few days leave in December for Christmas and Mexican caving, I arrived in Austin on 19 December. Few people were around who were available for a trip, and I had almost given up in despair when a crew from Alabama arrived: Bill Cuddington, Bill Tozer (who had come from Indiana), Dan Hale, and John Cole. After discussing possible areas to visit, we decided that the Rancho del Cielo area provided some of the best possibilities for deep pits. During June, 1964 James Reddell and David McKenzie had visited the area and were shown several pits near Rancho del Cielo by the owner Mr. Frank Harrison, a Canadian. Richard Smith agreed to go, and Dan provided transportation to the border for the three of us that

went from Texas. The Alabama group left ahead of us and by a different route, having agreed to meet us at El Encino the following day. Dan, Richard, and I left the morning of the 20th and arrived at the border in time to get an 8:30 PM bus south. We arrived at El Encino the next morning at 10, but after checking with a shop owner who speaks English, we found that the Alabama group had not arrived. Thinking they might have had car trouble, we got the first lumber truck heading up into the Sierra de Guatemala. Its destination was Julilo, a sawmill high up in the mountains, 4 1/2 miles from the ranch. The ride on the back of the truck up the jungle-covered mountains over the rock road was as fantastic as all Mexican truck rides have a habit of being. The trip up required over six hours. We got to Julilo around 3:30 PM and after buying a supply of tortillas, hiked the 4 1/2 miles to the ranch. Checking for caves along the way, we found nothing. We arrived at the ranch at dusk and were glad to find Mr. Harrison there, who welcomed us and let us sleep in his cabin. We explained that we were from the University of Texas and were friends of James and David who had been there looking for caves some months before. We told him we expected the others the following day and hoped to visit the pits he had shown the other cavers before.

The next morning, Mr. Harrison insisted on cooking for us (as he did from then on: a botanical expedition had left the day before we arrived and left a supply of meat) and then agreed to show us the pit area, located about a mile from the cabins. We found the pits and checked one — Dan went down and found it to be blind: depth 240 feet. The other was much deeper, more like what we had anticipated, so we returned to the ranch to wait for the others to arrive. When we got back, the other group had arrived and were anxious to get in some pit caving. That afternoon, we looked for caves and pits in a valley located near the ranch. A few small caves were found, nothing spectacular. We then made plans to hit the big pit the following morning. Places were provided for all by Mr. Harrison in the cabins he has on his property.

The next morning after breakfast (which Mr. Harrison cooked), we struck out for the pit. Mr. Harrison had work to do around the ranch and said he would be up a little later. The Alabama group came well prepared with several lengths of rope including a fantastic piece of 1/2 inch braided nylon, 869 feet long, a wonderful chunk of rope. The equipment was divided, and we went along with little difficulty. We succeeded in getting lost on the way and were rescued by Mr. Harrison who guided us the rest of the way. The pit was rigged with no trouble and entered by Bill Cuddington, Bill Tozer, Dan Evans, Dan Hale, and John Cole. Vertical Bill was the first down. Different people used different methods of descent and ascent, all quite successfully. Knots were tied in the rope to mark the depth, and the pit turned out to be 400 feet deep and blind. It was dark by the time we had de-rigged the pit and packed the gear, but we somehow made it back to the ranch without getting hopelessly lost. Mr. Harrison had a most welcome supper waiting.

The following day (Friday, 24 December 1965), we three from Texas left the ranch, while Mr. Harrison showed the other group a pit a mile or so below his house. In order to get back to the Inter-American Highway, we walked down to Gomez Farías from the ranch, a distance of 8 1/2 miles, then got a truck from there to the Highway. Mr. Harrison walked a mile or so with us, showing us several small caves he knew of. We got to Gomez Farías late in the afternoon and were soon being guided to a pit near there. It was most impressive, a 250 foot deep oval pit about 15 feet by 30 feet to a one foot deep pool. I went down and found the pit kept on going as a fissure passage then came on out. We thought the pit was virgin, but Terry Raines later informed us that it had been entered by him and was called "Sótano de El Molino". About 5:30 PM we got a truck to the Highway and succeeded in catching a bus to Victoria, change to Monterrey, change to Nuevo Laredo - arriving at 8 AM Christmas Day. The Alabama group planned to leave the ranch on Saturday and get their car which was left at El Encino (on the Inter-American Highway) and head further south for the Xilitla area.

The area around the Rancho del Cielo is all karst, but from what we saw, there has been a lot of floding and fracturing of the rock, thus not an abundance of pits or caves. Better areas are known to exist in other regions of the Sierra de Guatemala and further investigation will undoubtedly reveal more finds such as Sótano de la Joya de Salas. Barium and flouride mines also exist in the area.

Persons: John Cole, Bill Cuddington, Dan Hale, Bill Tozer
Date: 18-28 December 1965
Destination: Rancho del Cielo and the Xilitla area
Reported by: John Cole

At noon, December 18, John Cole, Dan Hale, Bill Cuddington, and Bill Tozer left Huntsville, Alabama and arrived in Austin, Texas at 2:30 PM December 19. Plans were made in Austin to rendezvous with T. R. and Dan Evans and Richard Smith at Rancho del Cielo where a man by the name of Frank Harrison would show us to some deep pits.

We drove down to El Encino, left the car with Carlos Gonzalez, and caught a lumber truck to Jullilo where we spent the night of the 21st. Three burros carried our equipment to Harrison's place by noon the next day. That afternoon Dan Hale and I went with Harrison to a small cave about 200 yards from his cabin. It had one large room, 40 feet long, 30 feet wide, and 25 feet high filled with intricate speleothems, cave frogs, spiders, and millipedes. Meanwhile, everyone else searched for more pits in the area and found a pit and a cave. T. R. explored the cave and found some pottery, probably 30 to 50 years old. The pit was not explored because it needed equipment and did not look promising.

The next day we went to another deep pit (Dan Evans had explored one the previous day and found it to be 240 feet deep) which turned out to be a single drop of 400 feet against the wall and that ended in a circular, level floor 25 feet in diameter and covered with breakdown.

The following day, the 24th, the Texas crew left for Gomez Farias, while the rest of us went to explore another pit which turned out to be a deadend at 110 feet deep. Dan Hale and I then went to a cave near a Barium mine on a ridge across from Harrison's place. This was a medium size cave with several large rooms each filled with long speleothems including helictites. We spent several hours photographing. The next day we returned to El Encino by way of Gomez Farías. On the way to Gomez Farías the Mexican with the burros showed us two sótanos. The first one was ten feet from the road about 200 yards toward San Jose from where the road from Julilo intersects the road from Gomez Farías to San Jose. The pit was estimated to be 150 feet deep. We did not rig it but went on to another pit just outside Gomez Farías. Bill Cuddington explored it and later we found out that the Texas crew had visited it and its name was Sótano de El Molino. From here we headed on south to the Xilitla area.

We arrived in Xilitla Sunday morning, December 26, and found a student who seemed to know the area pretty well and who could show us some sótanos. The first cave he showed us was Cueva del Salitre. It has a very large entrance easily visible from the road between Xilitla and the Inter-American Highway. Sardino Treho said that it was over 100 meters deep and that he and his friends had climbed to the bottom without the need of a rope. We didn't climb down. Then he showed us the Sótano de San Antonio which we also didn't rig. We drove the station wagon on toward Ahuacatlan and Sardino quizzed the local people along the way about sótanos. We found one about 200 yards up a mountain from a culvert under the road. We rigged the 30 foot by 40 foot entrance and found the pit to be about 75 feet deep and about 50 feet by 70 feet across the 30 degree sloping floor. There were two caves at the bottom; one about 50 feet long and the other about 300 feet long, both draining into the pit. Neither had any formations or signs of life. We drove on to Ahuacatlan and inquired about sótanos. The local people reported two sótanos just the other side of town (Sótano de las Hoyas and Sótano del Pozo), both about 200 meters deep, but informed us that we had passed the biggest and deepest one about five miles back and just up the mountain from El Balcon. It was late so we returned to Xilitla for the night. Since we had only one more day left to do caving we decided to try the big one. The next day we found a local resident of El Balcon who said he knew where the big sotano was and would show it to us. The man from El Balcon said that the sótano was about one and a half or two hours up, but after four hours we were still climbing up the cow trail. At this point I asked one of the local people how far we had to go to get to the big, deep sótano. He informed me that it was still many hours up the mountain and pointed up the arroyo we had been following which we could see disappear into the clouds. Our route to this

looked very promising. Every 300 to 400 yards along the arroyo was a sink, no pit, but it did indicate a fantastic amount of internal drainage. After another ten minutes the man from El Balcon turned away from the arroyo and after another twenty minutes we arrived at a place called Rancho Buena Vista which had two disappointing sótanos. The first one was very narrow with many steep ledges down to 210 feet to a bat guano covered bottom. The other one was about twenty feet across and forty feet deep with a cow skeleton at the bottom. We returned to Xilitla for the night and began the trip to Huntsville the next day.

Persons: Ed Alexander, Dr. and Mrs. K. Alexander
Date: 25–30 December 1965
Destination: Santiago, Galeana, and Chamal
Reported by: Ed Alexander

Since the various caves and other locations of speleological interest visited on this trip were only part of a longer vacation, I will skip from place to place omitting the longer details of how we got there and back. The lack of continuity is intensional.

Gruta de Santiago (Cueva de la Boca)

We arrived at Santiago, just 35 kms. south of Monterrey, on Sunday, 26 December, and following the directions of a hotel clerk in Monterrey, we turned east off the highway onto the road to La Boca which circles the north side of the lake at Santiago. Continuing past the dam for two kilometers the rumored cave suddenly appeared on our right about 350 feet above the road. The entrance is quite impressive, being almost square and 100 feet on a side. From local residents we learned that the cave is presently being mined for phosphates and that we were fortunate in having arrived on a Sunday. The mine is normally in operation 24 hours a day, Monday through Saturday. Since ore is thrown down from the upper levels, the only time when the cave may be entered is Sundays. We were also told that the main passage was about 300 meters long to where upper levels could be entered which led to another entrance 300 meters higher on the mountain. Although we did manage to verify the length, the claimed depth (height ?) is still open to question.

Entering the cave, we found that the internal dimensions were just as impressive as those of the entrance. The ceiling lowered at one point to about 30 feet and then zoomed upward into two domes which may be as high as 200 feet. The second of these contained the access to the upper levels. The miners have constructed a wooden scaffolding which is four feet square and 45 meters high. After inspecting the construction of the tower, I decided that I didn't really have time to explore the upper levels anyway, so I settled on drawing a pace and compass sketch of the lower level on our way out of the cave. This section was found to be about 1200 feet long and 70 to 100 feet wide through much of its length.

Rayones to Galeana: La Puente de Dios

Monday morning, 27 December, found us in the small town of Rayones about 47 kms. west of Montemorelos. Our immediate destination was Galeana, located just off Mexico Highway 60. We were told that from Rayones the road was next to impassable, even with the Land Rover. The first half of the 35 km., four hour, trip was through the bottom of a dry canyon. Upon emerging at the head of the arroyo we soon came upon a Mexican who promised to lead us to a nearby cave. Since the area is rich in barium, it seems that we had not made our intensions clear enough, so after an hour hike we finally arrived at the Palacio mines. Interesting, but hardly worth the trouble.

Driving on, the road now followed another canyon floor for about 6 kms. This one however contained a permanent stream with which we shared the right-of-way. Finally the trail left the stream bed and angled up what was, by that time, the 200 foot high wall of the canyon. A left turn at the top put us directly over the canyon on the largest natural bridge which I have ever encountered. We of course stopped to investigate what the local people called La Puente de Dios (The Bridge of God), and parking the Rover at the top, we followed the trail leading down. The opening under the bridge is at least 130 feet high and 70 to 100 feet wide. Approximately 70 more feet of rock overlies the 200 foot long tunnel. Under the bridge and about 70 feet above the stream we found a shelter about 40 feet deep and across from us was another opening which we did not have time to check. The road from La Puente to Galeana is in fair condition, making this a worth while side trip for anyone in the area. The distance from Galeana is 9 kms.

This entire area has excellent potential as an important caving location. We picked up many reports of large caves and sótanos developed in the gypsum country around Galeana.

Chamal: Bee Cave

On Tuesday, 28 December, we again turned west off Highway 85 just north of Cd. Mante and drove through Chamal and on to Bee Cave which I had visited several months before. (See AMCS Newsletter, Vol. 1, No. 6, p. 52.) Parking the Rover about 100 yards from the large vertical entrance, I was prepared this time to descend to the bottom on a 275 foot length of Goldline. At the end of the rope I found that I was still nearly 50 feet from the sloping, breakdown mountain below me. However, by traversing along a ledge I was able to reach the top of the mountain and thus climb on down to the bottom of the cave. It appears now that the cave is at least 300 feet deep, somewhat over my previous estimate. At the bottom I saw ahead of me a large passage, 50 feet high, leading off into the darkness. With visions of another long cave similar to those near Cd. Valles I rushed ahead only to find the end 400 feet beyond. Returning to the top, we repacked the car and departed.

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NOTICE

Do you want to continue receiving all the latest speleological news from Mexico? Then don't forget to renew your membership in the Association for Mexican Cave Studies. Memberships at $5.00 for the calendar year of 1966 are now being accepted.

AMCS Plans for 1966

With this, the last issue of the AMCS Newsletter for 1965, it again becomes time to plan ahead and decide on a policy for 1966. Up to this time we have published what we believe is a very informative and useful Newsletter that will be an aid to Mexican speleology for many years to come. But, there are problems. If we were to continue on the same schedule of publication, in ten years we would be approximately three years and four months or forty issues behind! Obviously this can not continue, so after much talking, arguing, and what-have-you we have decided to begin publishing a Newsletter once every two months. In this way we can cut the time needed for addressing in half, minimize on postage expenses, provide more consistent news, but most important we can get the Newsletter out on time with the latest news.

The other decision we have made is to publish a bulletin once a year. Tentatively, the 1965 volume will be published during May, before the NSS Convention in California. This first bulletin will be a speleological road log between Nuevo Laredo, Tamaulipas and Tamazunchale, San Luis Potosi, and contain locations and descriptions of all large caves along the Inter-American Highway, maps of as many of these caves as possible, geologic descriptions of the different areas, locations of good camping spots along the Highway, and anything else that might be of interest to the caver as he heads south.

By now you should have noticed some great improvements in the Newsletter. More maps are being published along with better trip reports and a larger amount of useful information. But perhaps the greatest improvement has been the offset lithography which has been made available to the AMCS within the last couple of months at no additional cost. This enables us to put out a very neat-looking, easy to read Newsletter complete with photographs and illustrations. We hope that the AMCS can continue to make this kind of progress during the coming year and thus offer more benefits to its members.

The AMCS Newsletter is published monthly by the Association for Mexican Cave Studies, P.O. Box 7672 Univ. Station, Austin, Texas 78712. Membership in the AMCS is $5.00 for the calendar year, with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications for that year.

Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copying onto a standard or legal size master or for printing. Longer articles with detailed maps are invited for publication in a bulletin. Trip reports are requested from all trips.

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Note: An index for Volume I of the Newsletter is now prepared and will be ready soon. For those of you planning to have your issues bound, wait until you receive this index so you can include it in the volume.

Index

This is the index for the Association for Mexican Cave Studies NEWSLETTER, Volume I, Numbers 1–12. The index is divided into five parts: (1) Caves, Cuevas, Grutas, Nacimientos, Sótanos, Sumideros, etc.; (2) Proper Names – Places (Including cities, towns, ranches, rivers, mountains, etc.); (3) Biological Names; (4) Proper Names – People; and (5) General.

A colon (:) is used to separate issue numbers from page numbers. A comma (,) is used to separate page numbers of the same issue. A semi-colon (;) is used to separate issues. In Part 4 of the index, a plus mark (+) is used to indicate authorship.

PART 1: CAVES, CUEVAS, GRUTAS, NACIMIENTOS, SOTANOS, SUMIDEROS, ETC.

PART 2: Proper Names – Places (Including cities, towns, ranches, rivers, mountains, etc.)

PART 3: BIOLOGICAL NAMES

PART 4: Proper Names – People (A plus mark indicates authorship.)

PART 5: General