

**TSS Data Report**  
**Compiled From the TSS Database**

9/9/2006

Name: **Austin Caverns**

TRA029

Other name: W47A, Austin Cave (mostly destroyed, 1930's)

County Travis

Area: Central Austin

Owner: City of Austin?

Classification: cave

Type of Rock: limestone

**Significant Aspects:**

USGS Quadrangle Austin West

UTM: 14 Z 617460 E 3352380 N Latitude: 30.299106 Longitude: -97.7785285

Coordinate source:

Uncertainty

Datum: NAD27

Location: City Street near Lake Austin

Units: m	Explored Length:	213.36	Explored Depth:	13.72	# of Entrances:	1
	Surveyed Length:	213.36	Surveyed Depth:	13.72	Elevation(m):	560

**Synopsis: Historic excommercial cave in city ent now filled.**

Proprietary No Proprietary Contact:

Reported Date:

Destroyed Date 1930

Map Yes/No  Surveyed

Map = W47A

The entrance to Austin Caverns was discovered sometime prior to 1932 while quarrying limestone along the Colorado River north of what was then the city of Austin. In 1932, Frank Chote of Houston leased the land surrounding the quarry and started developing the cave as a commercial venture. A shaft was blasted down to the beginning of the larger portion of the cave, a staircase was built and electric lights were installed. However, after several months, the project failed financially, and the cave was abandoned.

Shortly thereafter, the city declared the cave a hazard and ordered it closed. The entrances to the two tunnels at the bottom of the shaft were blasted, and rocks and concrete were dumped into the shaft. Several years later (after a little girl was hurt when she fell into the hole), what was left of the old shaft was boarded over and surrounded by a wire enclosure. By 1948, the entrance had reopened and the cave could again be visited, though it was much altered by blasting. The largest room was about 50 by 30 by 6 feet high. NSS Bulletin 10 (1948) reported that stalagmites throughout the room had been curiously sheared off in such a way to show clearly they were once taller than the height of the room. Although the formations were weathered, there were interesting displays of fresh white calcite crystals.

In 1952, the newly organized University of Texas Grotto organized a "full scale exploration" to solve the mystery of Austin Caverns. The results of the exploration were published in four articles in the Austin American Statesman of Feb. 5, 6, 7, and 8 of 1952. Among the University of Texas Cavers who explored the cave were Mackie Brown, Bob Hudson, David Stauffer, Carroll Slemaker, and Roy Pietsch. The entrance at that time was a boarded-over hole enclosed by barbed wire. Beneath the boards, the hole dropped 30 feet; at the bottom, a large crack led off to the south and a small squeeze dropped down to the north. The crack led to a small passage, which connected to the original quarry entrance about 150 feet south of the shaft. But the squeezeway took one into a different world. A 20-foot slope over debris leads down into a low room "filled with cascading flows and peculiar pillars frozen in translucent rock." Just past this was an apparent end of the cave. But by kneeling down, you noticed a small corridor leading back under a ledge. Here, you laid down and wiggled through the passage. Finally, the ceiling rose, and the walls receded to disclose another large room. Immediately to the right in a small circular chamber was the largest formation in the cave, a stalagmite whose bulk almost filled the entire room in which it was located. At the opposite side of the room, two small openings permitted access to still another room at a higher level. At one end, this room narrowed to an extremely small size and led off

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unexplored. Back in the second large room, a trail wandered further into the cave. After following the trail several minutes, you entered the last of the accessible portions of the cave, a large room in which huge sheets of rock have fallen or been jarred loose from the ceiling, blocking a possible extension of the cave beyond this point. Austin Caverns was mapped in 1941 by C. Clayton.

During the late 50's, the shaft entrance was refilled, and the only way into the cave was through the quarry entrance, but debris from the filled shaft blocked the cave below the shaft entrance, and only the short section between the quarry and the shaft was accessible. Then developers filled the quarry, blocking the last entrance. However as development contained, it was discovered that the area north of the quarry had no natural drainage. Rather than dig an expensive trench to a nearby small creek to provide for storm drainage, the developers contacted Egbert Smith, a Balcones Grotto member, who relocated the old shaft entrance. This entrance was excavated in 1963 so that a storm drain could be constructed leading into the cave. Unfortunately the developer dug on the wrong side of the entrance sink and encountered the short section of the cave between the quarry and the old shaft, so that most of the cave was still not accessible. This section was mapped by Bill Russell, Terry Raines and A. Richard Smith. A photo of the entrance to the cave was featured in the Urban Karst Issue of the Texas Caver.

The entrance to the quarry section of the cave was a manhole in front of the apartments at 3607 Meredith Street. Below this manhole, a 25-foot vertical section of five-foot in diameter concrete pipe dropped down almost to the cave level. This pipe receives storm runoff from the surrounding pavement, and the cave can flood quickly during even a small rain. The shaft dug for the storm drain was on the south edge of the old entrance and intersected only the short section of cave leading south to the now covered quarry entrance. Much of this section of the cave has been filled with masses of rotting leaves garnished with children's toys and other washed in detritus. Since about 1980, the passage to the south has been completely blocked a few feet south of the vertical pipe. After the blockage to the south, much of the water was forced back under the entrance pipe and down into the main cave to the north. This flow eroded the fill beneath the concrete pad that supported the vertical pipes, and the entire stack of pipes was in danger of collapse. By 1997 enough sinkhole fill had been carried into the main cave that a room about six feet high and ten feet in diameter had formed beneath the concrete pad that supported the vertical stack of pipes. According to the 1941 cave map there was only three or four feet of vertical distance between the bottom of the washout and the main cave passage. Considerable material had been washed down into the cave. There was an attempt to dig out the remaining rocks, but digging conditions were gross and the dig was not completed.

By 1998 the fill above the washout begin to settle. Part of the street collapsed and had to be covered with steel plates. Eventually the city repaired the street by digging out the old sink and filling back under the pipe, and in the process sealing off any potential access to the historic main part of the cave. Some small amount of water still appears to be flowing around the pipe and reaching the old cave, but for the most part there is no place for the floodwater entering the pipe to go. The cave to the south toward the old quarry entrance is blocked tightly with leaves and debris and the openings to the main cave are now filled. Since the repairs the apartments by the cave have frequently flood, and complaints have reached the city. There is talk of installing a conventional storm drain leading to the south. The city of Austin attempted to do a die trace from the cave to determine where water entering the cave emerged, but was unsuccessful. In 2005 the City of Austin hired Chris Tibodeaux to dig out the access to both sections of the cave, but allowed him only a few days to dig, and he was unable to reach open cave in the time allotted.

Measurements from the Clayton map give the length of the old historical section at a conservative 570 feet, and the distance south to the old quarry entrance is 130 feet, giving a total mapped length of the cave of 700 feet. The entrance sink is 32 feet deep, but is reported not to be a natural shaft and so is not counted as part of the length. The frequently cited 550 feet is an estimate from the Clayton map

As might be expected of an ex-commercial cave located in a populated area, legends and stories about Austin Caverns abound. The cave is commonly reported to extend under the entire city and connect with the State Capitol and the Old Music Building on the UT campus. One explorer was reported to have made a map of the cave using a streetcar timetable. As he explored the cave he would record the exact

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time he heard a streetcar pass overhead. Then from streetcar route map and the timetable, he could determine exactly where he must have been. Other tales tell of a fraternity pledge who was left in the cave overnight and returned with tales of wandering hours through an endless maze of tunnels, encountering waterfalls and deep lakes. Three people are reported to have died far back in the cave, and their bodies have never been recovered. Somewhere in the cave, there is supposed to be a wall built of bricks. There are also reports of the cave being used by bandits -- unlikely, as the cave apparently did not have a natural entrance, and doubtless resulting from confusion with Bandit Cave. NSS Bulletin 10 also confuses this cave with Bandit Cave, and reports its discovery in 1840, "upon a hill about three miles distance from the city in a westerly direction and across the Colorado." Last visit to main cave about 1955, and to the quarry section about 1980.

Russell 2006-01

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Austin Caverns

7 June 1963. James Reddell, Bill Russell.

18 July 1964. Bill Russell.

3 Oct. 1964. Bill Russell.

Fauna List

Snails: *Rumina decollata* (Linnaeus).

Isopods: \**Trichoniscinae* genus and species.

Spiders: *Astrosoga rex* Chamberlin.

*Eidmannella pallida* (Emerton).

Millipedes: *Oxidus gracilis* (Koch).

Slender springtails: *Pseudosinella violenta* (Folsom).

Cave crickets: *Ceuthophilus* sp.

Roaches: *Blattaria* undetermined.

Slimy salamander: *Plethodon glutinosus albagula* Grobman.

Cliff frog: *Syrhophus marnocki* Cope

1 troglobite

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**Austin Caverns**  
**Major Cave**  
**W47A TV Austin W**

**3352350N/617460E**  
**City Street near Lake Austin**  
**EL550/ L550/ D45/ V**

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frozen in translucent rock." Just past this was an apparent end of the cave. But by kneeling down, you noticed a small corridor leading back under a ledge. Here, you laid down and wiggled through the passage. Finally, the ceiling rose, and the walls receded to disclose another large room. Immediately to the right in a small circular chamber was the largest formation in the cave, a stalagmite whose bulk almost filled the entire room in which it was located. At the opposite side of the room, two small openings permitted access to still another room at a higher level. At one end, this room narrowed to an extremely small size and led off unexplored. Back in the second large room, a trail wandered further into the cave. After following the trail several minutes, you entered the last of the accessible portions of the cave, a large room in which huge sheets of rock have fallen or been jarred loose from the ceiling, blocking a possible extension of the cave beyond this point. The cave was mapped in 1941 by C. Clayton.

During the late 50's, the shaft entrance was bulldozed over, and the only way into the cave was through the quarry entrance, but debris from the bulldozing blocked the cave below the old shaft, and only a short section was accessible. Then developers filled the quarry, blocking the last entrance. However as development contained, it was discovered that the area north of the quarry had no natural drainage. Rather than dig an expensive trench to Lake Austin to provide for storm drainage, the developers contacted Egbert Smith, a Balcones Grotto member, who relocated the old shaft entrance. This entrance was excavated in 1963 so that a storm drain could be constructed leading into the cave. This section was mapped by Bill Russell, Terry Raines, and A. Richard Smith. A photo of the entrance to the cave was featured in the Urban Karst Issue of the Texas Caver.

The present entrance to the cave is a manhole in front of the apartments at 3607 Meredith Street. Below this manhole, a 25-foot vertical section of five-foot in diameter concrete pipe leads to the cave. This pipe receives storm runoff from the surrounding pavement, and the cave can flood quickly during even a small rain. The shaft dug for the storm drain was on the south edge of the old entrance and intersected only the short section of cave leading south to the now covered quarry entrance. Much of this section of the cave has been filled with masses of rotting leaves garnished with children's toys and other washed in detritus. Since about 1980, the passage to the south has been completely blocked a few feet south of the vertical pipe. Much of the water now flows back under the entrance pipe to enter the main cave to the north. This flow is removing the fill beneath the concrete pad that supports the vertical pipe, and if the vertical pipe does not collapse, it should soon again be possible to visit the main cave. Cavers should work with the city to stabilize the entrance before the pipe collapses.

As might be expected of an ex-commercial cave, legends and stories about Austin Caverns abound. The cave is commonly reported to extend under the entire city and connect with the State Capitol and the Old Music Building on the UT campus. One explorer was reported to have made a map of the cave using a street car timetable. As he explored the cave he would record the exact time he heard a streetcar pass overhead. Then from street car route map and the timetable, he could determine exactly where he must have been. Other tales tell of a fraternity pledge who was left in the cave overnight and returned with tales of wandering hours through an endless maze of tunnels, encountering waterfalls and deep lakes. Three people are reported to have died far back in the cave, and their bodies have never been recovered. Somewhere in the cave, there is supposed to be a wall built of bricks. There are also reports of the cave being used by bandits -- unlikely, as the cave apparently did not have a natural entrance, and doubtless resulting from confusion with Bandit Cave. NSS Bulletin 10 also confuses this cave with Bandit Cave, and reports its discovery in 1840, "upon a hill about three miles distance from the city in a westerly direction and across the Colorado." Since the main part of the cave is again, as of 1997, reopening, it is hoped that cavers will soon be able to visit this unique cave.

TSS REPORT NO.

Cave

AUSTIN CAVERNS (AUSTIN CAVE) ✓

Travis County

Owner: City of Austin

Quadrangle: Austin West 7.5'

Description: The present entrance to the cave is a 7.7 meter drop down a concrete pipe covered by a manhole cover. At the bottom a short section of concrete pipe leads horizontally into a crawlway. After about 1 m a small 1.6 m deep pit must be crossed. Beyond this the low crawl continues for about 4 m where a 1.3 m drop leads through a second pit and back up into the main level. This continues for about 7 m where it widens to about 2 m wide, with a ceiling height of 0.8 m. This large area continues for 4 m before constricting to less than 1 m and the ceiling lowering to 0.5 m. This low crawl continues for about 8 m before opening into a passage more than 1 m wide and up to 3 m high with much breakdown on the floor. This extends about 4 m where a hole in the floor leads down into a 2 m high passage containing much small breakdown and extending 10 m to end in a wall which blocks an entrance into a nearby quarry. The floor of the entrance crawlway is generally of silt and organically rich mud. The cave receives the runoff from the gutter on the street outside and contains a vast amount of trash. For a description of the cave as it was when explored in 1952 and for a few years after see TSS 1(1):26-28.

History, Bibliography: See TSS 1(1):26-28.

History (cont.): The cave was reopened in the 1960's by Tom Warden. It was mapped on 9 September 1972 by William Russell, Carol Russell, Craig Bittinger, Ronnie Fieseler, and John Steele. It was visited in Dec. 1970 by Mike Warton.

Location: The entrance is a manhole just off the street immediately east of the 1900 block of Rockmore Street on Merideth Street.

Ref: TSS files

TRAVIS COUNTY, TEXAS

Revised Nov. 1954  
by Hudson

Reported NSS Bul. 10  
1947

Austin Caverns

30-16K 97-46H

Over a period of three years, members of the UT Grotto have visited Austin Caverns for photos and to map. During this time, enormous changes were evident even for so short a time. For instance, one night, the cave was mapped. Exactly one week later, the map was useless due to recent breakdown. Several new tunnels opened and one or two of the others were closed. The cave as I first saw it in 1951 changed until it seemed like a new cave in 1953. Due to the children in the neighborhood playing around the shaft, and often climbing down the slippery sides into the cave, some of the people tried to blast the cave shut. This caused a partial collapse of the roof and general shifting of the rock. In fact, the whole roof was weakened and shifted quite frequently in the form of breakdown. Several slabs of rock were always in evidence hanging just barely supported and ready to fall on the slightest provocation. The cave was officially listed as being dangerous several times and steps were taken to seal it up. Concrete and tar were poured into the entrance many times, but the cave was reopened by erosion each time. I understand that wholesale blasting, pouring of debris and cementing were done sometime in 1953 or the early part of 1954 and the cave is now completely inaccessible. The cave had one thing of interest to mark it from the usual run of caves in this area. On the floor were to be found rounded stones of quartz, completely round, and showing considerable weathering as though they had been washed through a very swiftly moving stream for a considerable distance. There is nothing to be found on the surface within several miles of the cave to indicate a source of the stones. There is and was quite a number of them. Quartz is quite hard, and takes quite a bit of rolling and washing to round as completely as these stones were. Too, there would have had to been quite a deposit of quartz somewhere to furnish material for the stones. Some of the stones were five inches in diameter and weighed close to a pound. As I said before, most of them were completely round, and it was only by fracturing them with a hammer that one could ascertain that they were quartz. That this may indicate a torrent of subterranean water had a hand in the fashioning of the cave, I have no doubt. But due to the enormous amount of breakdown and the recent filling of the cave, there will and can be little studying to prove this theory.

Bob Hudson





## 50 Years of Texas Caving — 1951–1955

members of one group behaved. This is the group that went into Devil's Sinkhole—there were 7 of us. At that time there was a platform which protruded over the edge at the top which had a pulley attached. We used a rope attached to an (upholstered) bosun type seat my wife and I created to lower people and also had a harness attached to an airline tow cable for safety. Both lines were attached to my car which was used to raise and lower people. We went down in two groups of 4 and 3. The only mishap came when we raised the first person. He began spinning until the two lines were wrapped so tightly it was not possible to continue to lift him. We lowered him again and realized that the chair had been left above the breakdown level and with the weight of the person removed had wound up. The solution was to have him sit in the chair suspended until he stopped spinning and then attach the tow cable. There were other interesting experiences associated with the preparation for this awesome trip.

We searched for the famed Austin cave and think we probably found it, but were never able to get past a blockage that might have been caused by an explosion. And there would have been other caves whose names I can't recall right now.

We found some 4 strand rope and made a rope ladder to get into a cave somewhere in Texas not more than 2 hours from Austin. The only entrance we knew of was a deep drop perhaps 50 feet. I don't recall for sure but I think this cave is one that we later had trouble getting in because of bad experiences the owner had with a group of cavers associated with UT. We made many visits to this cave and in our later visits we were disgusted to find some nice formations and lots of soda straws broken off and just left. I still have some of them that I picked up off the cave floor. I think it was an interesting cave.

They apparently had a close brush with destiny at Mayfield Cave. Bill says:

...we do recall a cave in Texas where as best I recall we got to a substantial vertical drop. On the right as one stands facing the drop was an extremely narrow ledge. On the other side of the drop the cave appeared to continue. I recall stepping, I think with only one foot onto the ledge looking for a place to hang on. And giving up rather quickly. We vowed to learn to use pitons and return but we graduated instead. This sounds a lot like the Mayfield described in your article. I do recall reading later that someone or some group had made it across the ledge and into a substantial section of the cave.

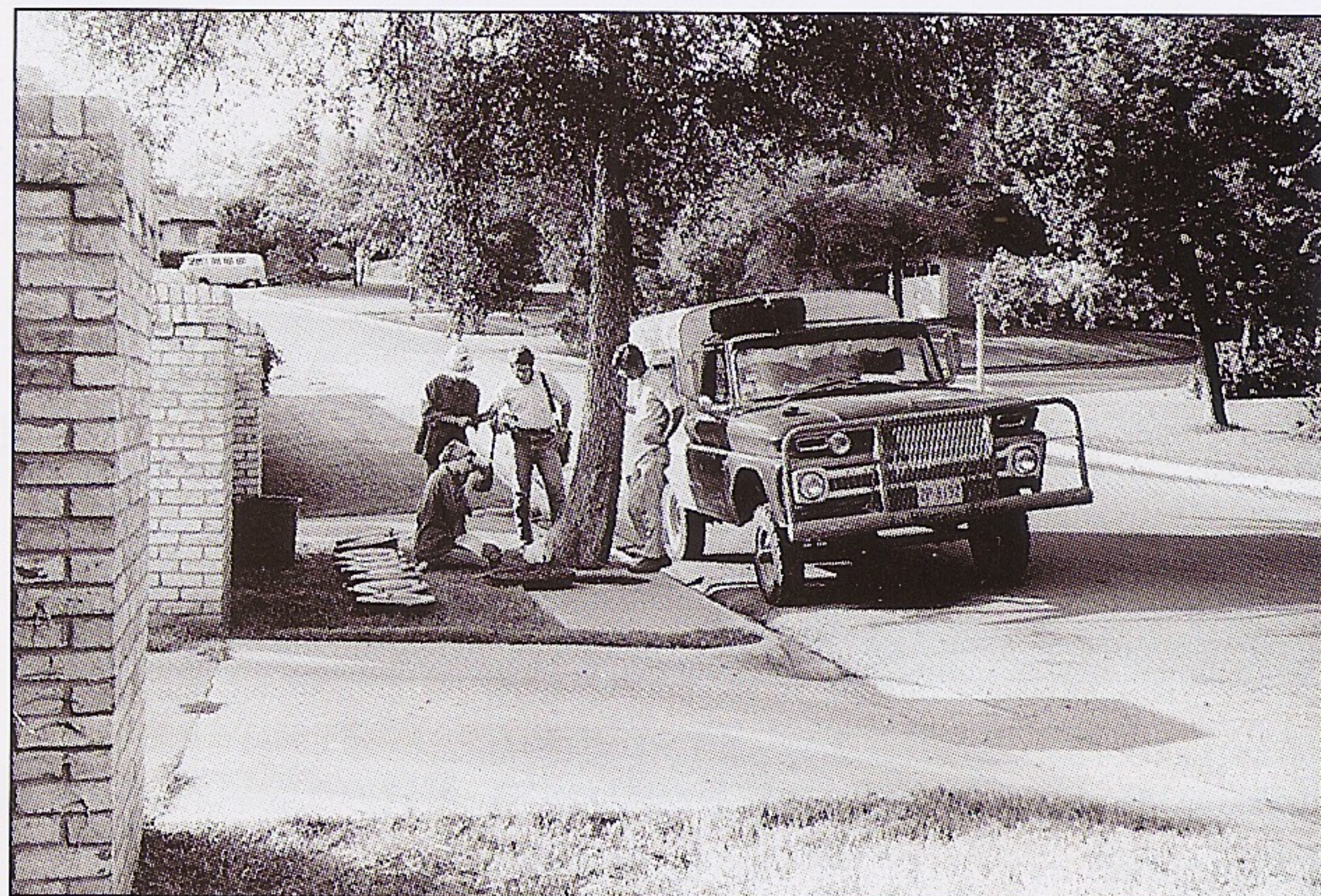
In the early 1950s, about the same time as the UT, Balcones, and Mahavier groups were becoming active in Austin, another small group appeared under the direction of Joe Hoffman. Initially, they referred to themselves as the Austin Cavers. Joe and several of his friends visited a few of the local caves but there is no record that they sought out the other Austin area cavers. In fact, there is some indication that they intentionally isolated themselves. Within a short time the group disbursed to various places with Joe and a few others landing in the Wichita Falls area. They are mentioned here because of their nebulous ties to early Texas caving in the Austin area. Their story is told in more detail in the Grotto Histories section under North Texas Speleological Society.

Jimmy Walker (NSS #3764) is another important figure in early Texas caving. Jimmy was an adventurer whose many interests included caves. Beyond the thrill of exploration, Jimmy was also making money by writing short illustrated articles for the men's adventure magazines that were quite popular at the time. The nature of the medium required a dramatic literary style to which some cavers took issue. Here is a sample of



**LEFT: Early 1950s UT cavers at the entrance to Austin Caverns. J.D. McClung in the wing-tip caving footwear; others unidentified. Note the pile of widely differing ropes. Roy Pietsch collection.**

**BELOW: UT cavers from the '70s at the same entrance; now in suburbia. Ronnie Fieseler.**



July 20, 1968  
James Reddell &  
Richard Smith



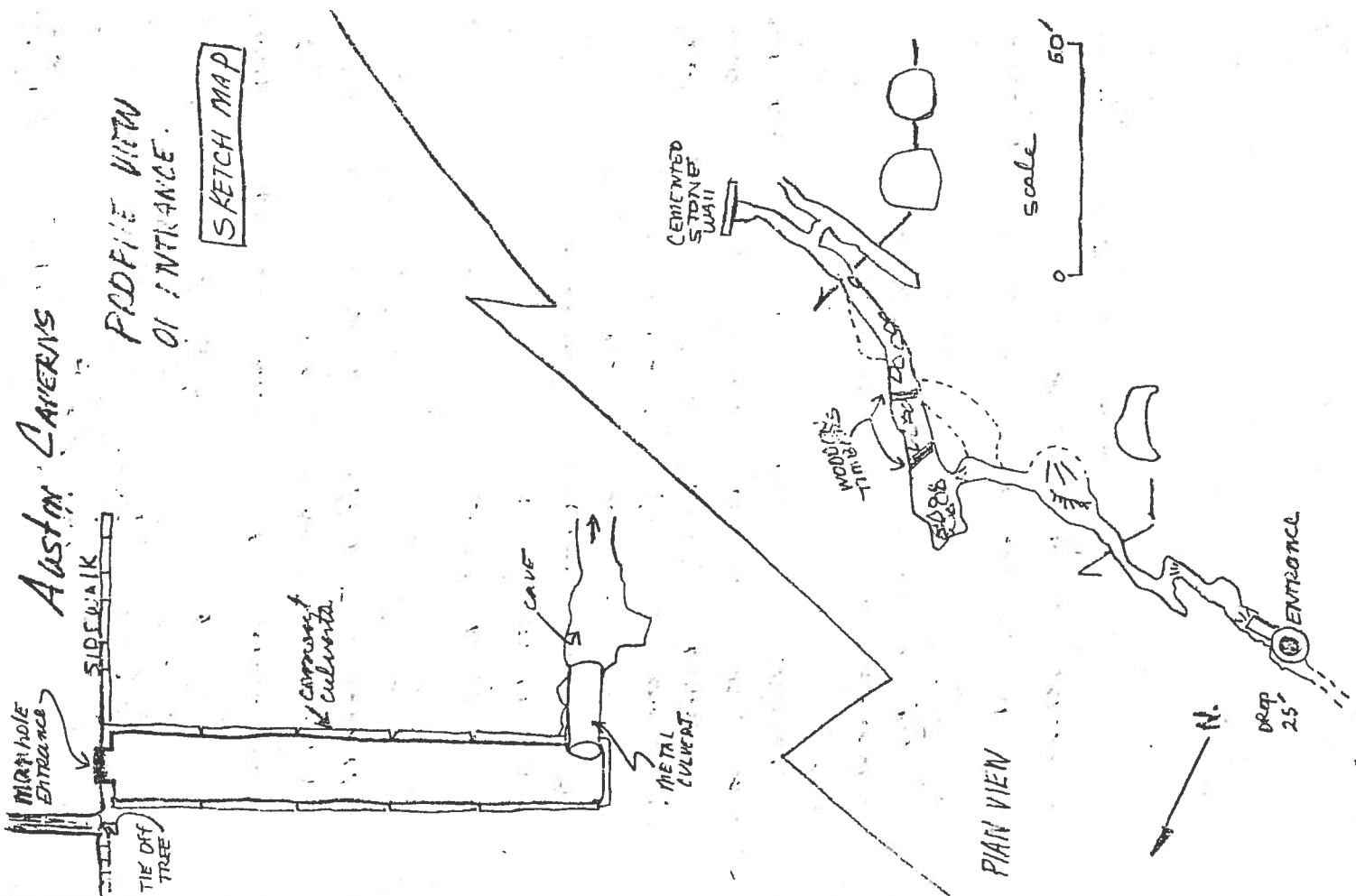
AUSTIN CAVERNS

Austin Caverns is located in West Austin on Merimeth St. Austin Caverns existed as a commercial cave during the late 1920's to early 1930's. During the later 30's & early 40's this cave changed ownership and the majority of the cave was destroyed by the excavation of a large limestone quarry. A small portion of the cave however has been saved. During its commercial period the cave was known to be both large & extensive. The cave entrance is located at the bottom of a steep grade along meridith st. A man hole cover marks the entrance, a vertical drop of 15' through cement culverts admits one into the cave. Water draining into the cave has carried great amounts of debris into the remaining passages constricting the passages in places. app. 800 ft. of passage can be negotiated before arriving at a cemented stone wall (the end of the cave) This point marks out where the cave was cut into and excavated by the old quarry. The cave contains few formations but abundant in variations of common cave insects and animals. This cave is a good collecting place for flatworms & arthropods. A rope is required to NEGOTIATE THE ENTRANCE DROP

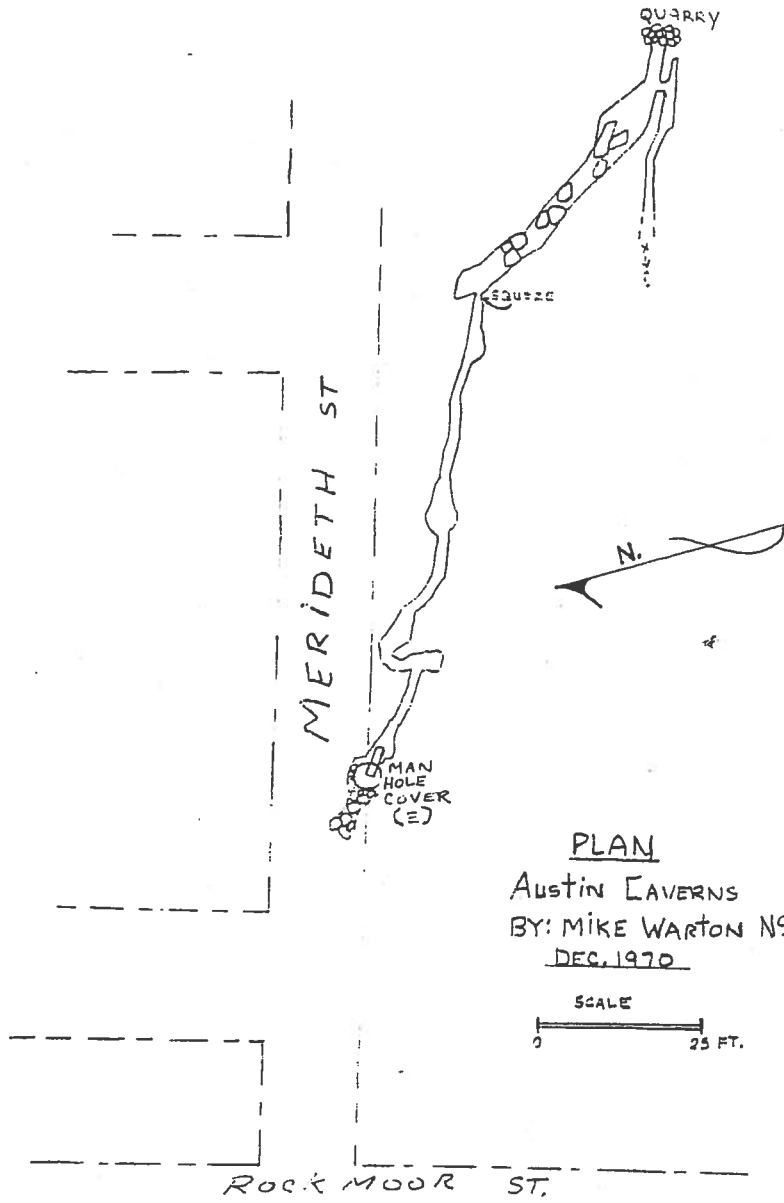
AUSTIN CAVERNS

PODDIE VIEW OF ENTRANCE

SKETCH MAP



# AUSTIN CAVERNS



## PLAN

AUSTIN CAVERNS  
BY: MIKE WARTON NSS. (12611)  
DEC. 1970

SCALE  
0 25 FT.

## BALCONES GROTTO

The new BALCONES GROTTO is growing very satisfactorily. We organized on May 7, 1963 and already have ten members. During our short life we have had over 40 visitors who are still looking over our set-up.

The Balcones Grotto was the first caving group in Austin, but was allowed to wither away when the UT Grotto was formed since most of its members were UT students. Dr. Roy Pietsch, presently out at the Balcones Research Center, and former charter president of the old Balcones Grotto, hopes that we will continue to report our activities each month, because the first Balcones Grotto originally published the TEXAS CAVER!

The American-Statesman newspaper sent a photographer to take pictures of the re-opening of Austin Caverns and Bill Hamilton at the city desk wrote an article about the cave. They published this, mentioning that a new grotto was being established. The large turn-out at our July meeting justified the effort.

We have not had extensive cave trips or a training session yet, but individual members have made a few short trips.

-- Tom Warden  
Chairman  
BALCONES GROTTO

Address: 902 W. Bee Cave Road  
Austin, Texas 78746

### AUSTIN CAVERNS REOPENED

by Tom Warden

Austin Caverns, thought to be lost forever to all exploration, is now open again and may in the future give up some of its mysteries.

The city of Austin filled the shaft entrance in 1959 when a child was hurt while playing there. Later, a real estate development company filled the nearby quarry, covering that entrance, then proceeded to build houses on top of the fill at the south end of the quarry. This year, they decided to complete their project and build more houses on the remaining space at the north end. It was then that they discovered a drainage problem. The new houses would be flooded by

rain water unless they laid a storm drain under their first built houses or blasted through the side of a hill along the street. The city engineers had one possible solution: Drain into Austin Caverns.

At first, no one knew where to dig to find the entrance. Then they found that the surveyor they had hired to lay out the house locations, Eg Smith, (E. V. Smith, L.S.L.S.), a longtime spelunker & member of the Balcones Grotto, knew exactly where it was. He showed them where to place their backhoe to begin excavation. They dug a vertical hole in the old shaft, 32 feet deep and hit exactly into the cave. They then placed a 36-in. diameter concrete pipe in the shaft to the surface. At the bottom, a 24-inch iron pipe leads horizontally south into the cave.

On June 21, Terry Raines, UTG and BG, led a group into the cave, crawling 150 feet to a block placed there years ago by the city. The next day, Tom Warden and Eg Smith entered to evaluate the cave for possible future exploration. There was not too much to see, for the methods used by the city to close the cave have destroyed many of the passages. From the end of the iron pipe, they entered a crawlway that immediately dropped downward in a southerly direction along a crevice to widen out to the only present room of the cave. This room is about 10 feet wide and 15 feet long. The floor consists of natural and man-made breakdown, rocks, caliche, a 55-gallon drum, old shoring posts, cans and bottles. The cave passage may be under this debris. Two crawlways led off near the ceiling. Terry Raines explored the one to the south. Another, unexplored as yet, leads off to the west. Old maps show that the cave proper is mostly to the north, while the quarry entrance was to the south.

Smith and Warden are in agreement that a large amount of water will be needed to clean out the cave before much more exploration can be attempted. With the present use of the cave, this should develop in about a year.

(L.S.L.S. - Licensed State Land Surveyor.)

(Remember this: Tune: "Over the Rainbow")

Somewhere, over the guano,

Bats do fly.

Bats fly over the guano.

Why, Oh Why can't I?

but it has a lot of crawlway. It was a very impressive cave. After fifteen footweary and sore knee hours later, we returned to the surface. After a quick meal we sacked out. The next day was Sunday, so we headed back to Dallas. More trips are being planned in the future for this area. That's it for this month.

Grotto address: 13677 Littlecrest, Dallas, Texas 34  
Secretary, Norman Robinson

UNIVERSITY OF TEXAS, N.S.S. "Ye Ole Month That Was" mainly wasn't, but a few braved the heat and crawled into those cool dark holes.

Bill Russell, David McKenzie, Susan Baker, Faye Chapman, and Tommy McGarrigle found no gold in Adam's Gold Mine after looking all day. Another trip with Bill Russell, Roger, Cynthia, and Bobby Sorrells, another couple, Susan Baker, and Tommy McGarriglewent to Gorman Falls and Lemmon Caves.

To help cool off, a watermelon **EAT WAS HOSTED** by "Ma" Powers and Merydith Turner. It was well attended by old cavers who talked about the good old cays and by Bartell Morgan, who appeared frmm somewhere.

Bill Russell and Susan Baker report that Austin Caverns is getting smaller.

Terry Raines returned from a three week trip into Mexico with some Eastern cavers left over from the NSS Convention. Ed Tapp, Earl Geil, and Mason Sprout with Terry visited about ten caves, the deepest being 502 feet with a 376-foot free rappel. Then Terry turned around and with Jimmy Peters and Glenn Boydston, went to Mexico again. In the Sótano de Thamaya in a few drops the greatest being 277 feet, reached a surveyed depth of 841.5 feet (yes, eight hundred), being stopped for the lack of a 100-foot rope to do yet another pit.

The first of August saw Bill Russell, Susan Baker, Barbara Madden, Keith Garrett, Helen and Carol doing a bat rappel into Valdina Farms Sinkhole and collecting the bugs grawling over everything.

Toni Roe, EEugene Blum, and Merydith Turner lead Rooney, Houston, Wayne, Wallace, and Jennifer for a nice swim in Indian Creek Cave.

Bill and Phil Russell, Bud Stewart, Tommy McGarrigle, and friend left for Porvenir, Northern Mexico.

Grotto address: P. O. Box 7672, U.T. Station, Austin, Texas 78712  
Secretary, Merydith Turner.

HUACO CAVER SOCIETY. Huaco Cavers have for the most part been inactive this month. However, one trip was made. On July 16, Frank Jasek and Bob Wood took a trip to Salado to explore the Hill Cave. We got there only to find that the cave was permanently closed due to unauthorized entrance by some local boys and a reported den of rattlesnakes. -- Bob Wood

Club address: 2632 Skyline Dr., Waco, Texas 76707

*Remember the B.O.G. meeting - at the project - be there!*

PASSWORD FOR THE SEPTEMBER CAVER IS: "PHORT STANNITUNKEYVE NUMECKSEAKOE"

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*MENARD WELCOMES YOU LABOR DAY - SEPT. 5-6-7*

DATE: September 9, 1972  
DESTINATION: Austin Caverns  
PERSONNEL: Ronnie Fieseler, William and Carol Russell, Craig  
Bittinger, John Steele  
REPORTED BY: Craig Bittinger

After a short drive through a residential district we located the entrance to the cave. We rigged a cable ladder and entered the cave via a man hole. Two hours later we finished mapping the cave and headed for home.

DATE: September 16, 1972  
DESTINATION: Gorman Falls  
PERSONNEL: 40 UT cavers plus several A & I cavers  
REPORTED BY: Craig Bittinger

The purpose of the trip was to give beginning cavers a chance to get in a cave and practice vertical work. Following a long afternoon of caving everyone took a dip in the river and headed home.

DATE: September 23, 1972  
DESTINATION: Padre Island Ear Bust and Body Roast  
PERSONNEL: Scott Lillie, Craig Bittinger, Barbara Vinson, Frank Binney,  
Peter Strickland, Logan McNatt, Ron Ralph, Jacques Chabert, Jean  
Pierre Gairon, N. H. Dunson and 40 more  
REPORTED BY: Craig Bittinger

Most Texas cavers took off a weekend from their caving to congregate on the beach for a relaxing weekend. Highlights of the weekend included rafting through the waves, a big push in Sand Cave, a king of the sand dune contest and an acetelyne explosion that sent Scott Lillie, Gill Ediger and Paul Duncan to the hospital with broken ear drums. A fine weekend of fellowship was enjoyed by all.

DATE: October 13-14, 1972  
DESTINATION: Koch Cave, Medina County, Texas  
PERSONNEL: Roy Jameson, Barbara Vinson, Craig Bittinger, and 30  
A&I cavers.  
REPORTED BY: Craig Bittinger

The group had been invited to come and explore the cave by the ranch owner. Friday night was spent in the original exploration of the cave. Saturday was spent digging out the mud plug at the end of the cave. More digging is required but it looks very promising.

Be sure to attend the TSA convention at San Marcos this year.



The  
**TEXAS CAVER**

Dec. '84

**Urbanization & Caves**



# The TEXAS CAVER

Vol. 29 , Issue 6, December 1984

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The *Texas Caver* openly invites all cavers to submit articles, news events, cartoons, cave maps, photography (any size black & white or color print), caving techniques, and any other cave-related material for publication. Unless meant for a specific editor, please use the U.T. box above.


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**DEADLINES:** Articles, announcements, and material for publication must be submitted to the editor by the 12th of the month precede each issue.

**EXCHANGES:** *The Texas Caver* will exchange newsletters with other grottos at the Editors' discretion. Contact one of the co-editors.

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## Editorial

By: John Spence

I haven't been caving for all that long, but in the past few years, I've seen new discoveries, rich in nature's beauty, transformed into well worn paths. I've seen entire caves opened and sealed, in the way of progress. It doesn't take long to establish a pattern. There are costs to be paid underground. We've shed our blood, sweat, and tears, to be sure, but it's the caves themselves that have paid most dearly. Few things can be created by taking away, but caves are such things. Nature's process is such a wonder, forming delicate helictites from "rotting" stone. Few places on earth provide such a varied display as the underground.

Catch 22! In order to experience the cave, the cave must "experience" us. The most well-intentioned caver has left his/her mark behind, be it broken formations, muddy prints, or simply lost gear. The more a cave is visited, the farther it gets from its virgin state. Some weather better than others, but all deserve special care. Few cavers would intentionally damage a cave, but we all know simple curiosity can drive us beyond reasonable points of penetration. This is but one issue that we face, but what better place is there to start in cave conservation than with ourselves? Only after we realize that we are part of the problem can we attempt to face the larger problem: urbanization and caves.

This issue has been put together with the hopes that we might recognize the plight before us, and through better understanding, meet it head on. Caves have provided most of us with many satisfying hours. It is only fair that we give something in return.

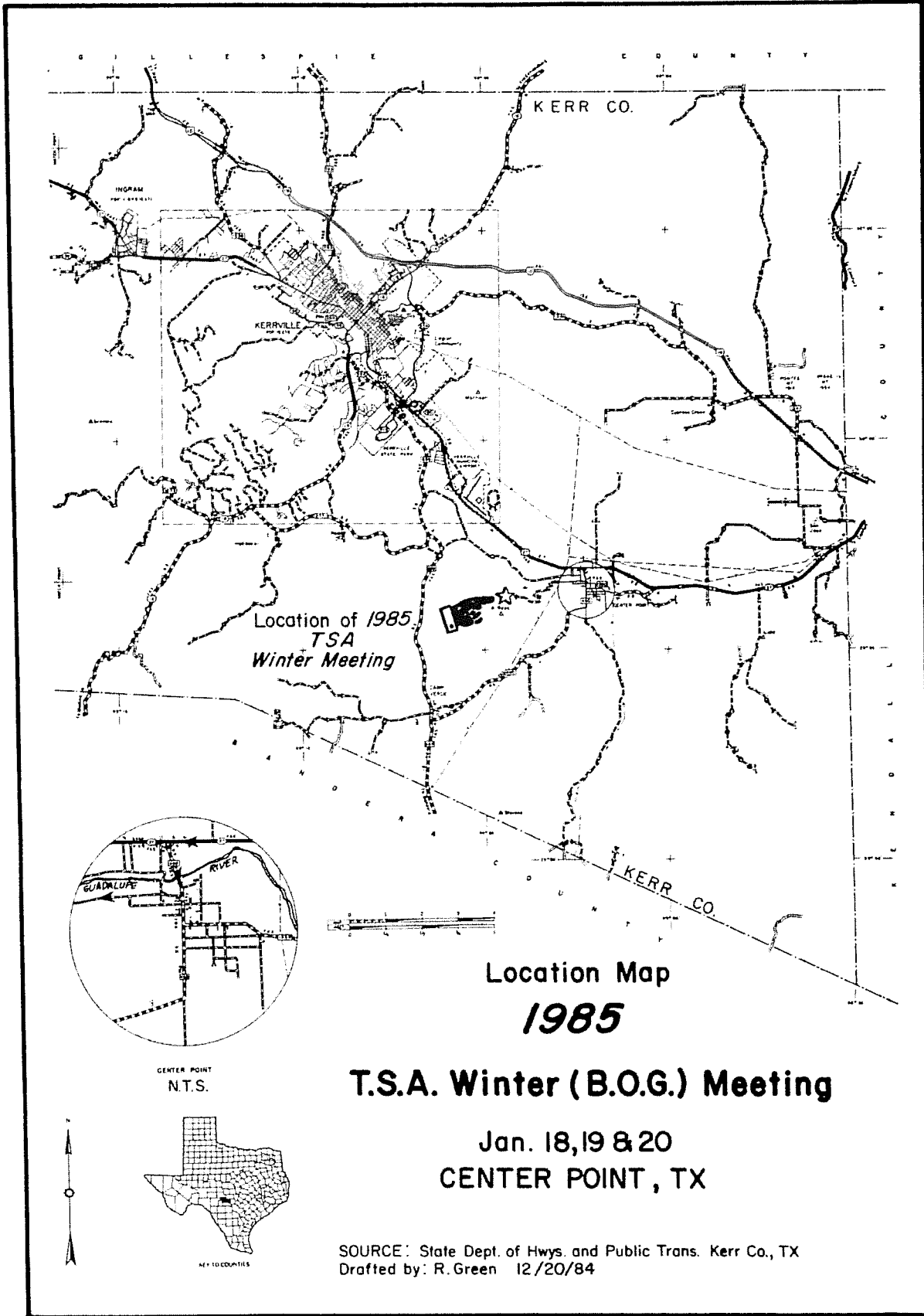
George Veni shares with us his knowledge of hydrology and brings to print Texas' own cave law. William Russell reports on urbanization's effect on Travis County caves. Robert Green sheds more detailed light on Shady Hollow Sink, while I've covered Barton Skyway Cave (map included). Map lovers will love this issue, as you will see.

While most of these reports focus on the central Texas experience, we all have something to learn from them. It is important that we, as cavers, use our knowledge and energies to protect the underground, because if we don't, nobody else will! I hope you enjoy reading this as much as I did putting it together.

In our next issue, Jay will be taking us north to the caves of the Arbuckle Mountains, just across our border. So don't miss renewing your 1985 TSA/Texas Caver dues.

**Front Cover:** Erika Heinen entering Austin Caverns. Once a commercial cave, now a runoff receptacle. See page 6 for more details. Photo by John Spence.

**Back Cover:** Austin Caverns. Erika Heinen and friends. Photo by William Russell.



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# FEATURE ARTICLES

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## Hydrogeology and Urbanized Karst-

HYDROGEOLOGIC ASPECTS OF URBANIZING KARST TERRAINS  
AND A LOOK AT THE TEXAS CAVERN PROTECTION ACT  
by: George Veni

### Introduction to Hydrologic Problems in Karst Areas

Karst is a term describing a particular topography characterized by primary subsurface drainage. Most commonly the rock involved is limestone and its larger drainage conduits are caves. Aquifers are regions within a rock unit where all pore spaces, fractures, caves and other voids are filled with capable of yielding water. Due to the prevalence of conduit flow in karst areas, their aquifers have certain unique characteristics which include:

- 1) Groundwater flowpaths which can be difficult to predict, often bearing no relationship to surface water drainage.
- 2) Very fast groundwater flow (as compared to non-karst aquifers).
- 3) Caves, sinkholes and sinking streams which often act as rapid, direct and nonfiltering hydrologic links between surface water and the aquifer.

Numerous studies have shown that urbanization produces two main impacts on hydrologic systems; first, infiltration of surface water into an aquifer is decreased (which consequently results in increased flooding of downstream areas), and secondly, the level, variety and toxicity of contaminants in storm water runoff sharply increases - and with it the potential for ground and surface water pollution. Aquifers in karst areas have consistently been shown as highly susceptible to contamination because of the three characteristics stated above. Below are two very different aquifers, which I have studied, and how they are affected by urban developments.

### CASE STUDIES

#### Lost River Groundwater Basin, Bowling Green, Kentucky

Bowling Green, Kentucky, is the largest city in the U.S. built upon a sinkhole plain. Most of the city is underlain by the Lost River Aquifer, one of several highly cavernous aquifers of that karst region - including those aquifers which drain through Mammoth Cave (40 km to the northwest). The main trunk passage of the Lost River Cave System winds its way under Bowling Green for about 12km before resurging. Many extensive side passages feed into the main trunk.

Skipping many hydrologic details for the sake of brevity, I'll just say that Lost River Cave is not a cave you'd be anxious to visit. Dye dumped into some toilets (with newly built septic systems)

has appeared in Lost River within 10 hours. Common usage of sinkholes and injection wells for waste disposal, leakage of underground storage tanks and general insurging of urban stormwater runoff has made the Lost River untreatable for human use. Other problems involve toxic and explosive fumes collecting in the cave (carbine cavers stay out!) and leaking up into homes. Sections of the city are monitored for these fumes and sometimes evacuated for fear they will blow up!

#### Edwards (Balcones Fault Zone) Aquifer South-Central Texas

While the environmental karst problems of Texas are not as dramatic as those in Bowling Green, the potential is here and it could be much more devastating. The Edwards Aquifer is the sole water supply of over one million people. Unlike the wetter state of Kentucky, we in Texas can't afford to waste water.

Development of the Edwards Aquifer's Recharge Zone (where the Edwards Limestone is exposed to the surface allowing water to enter and replenish the aquifer) has raised some concern about maintaining the aquifer's water quality and quantity. It is an unfortunate thing, but many consulting hydrologists and engineers are ignorant of the special problems in karst areas. Yet business interests of developers are pushing for recharge zone expansion and these planners are caught by the complex question of "How to build without decreasing recharge or increasing the risk of contamination?" The simple answer is, "You can't". This is quietly recognized and construction has proceeded slowly and cautiously, with each development preparing an environmental impact statement to show that their contribution to the aquifer's degradation would be negligible.

The truth is, however, that no one really knows what is "negligible" and what the sum effects of these inputs will be. Pollution is noticed in Bowling Green because of the rapid travel time between insurgence and resurgence, and because the total water volume doesn't overwhelmingly dilute the pollutants. Quite the opposite with the Edwards. No one knows its true water capacity, other than that it's huge and rapidly dilutes most contaminants to insignificance, and travel time is exceedingly slow (for a karstic aquifer) sometimes taking over 20 years to appear - and that's what's scary. By the time contamination is bad enough to merit concern and action, it will stay in the aquifer for many years before being discharged and the aquifer itself may take many generations to thoroughly cleanse itself (assuming all contaminating inputs suddenly disappear to allow the groundwater system to recover). Furthermore, the total volume of the aquifer is decreasing due to increasing municipal pumping. More water is taken out of the aquifer than is naturally replaced. Although computer modeled projections say there will still be available water well into the 21st century, no one has of yet even looked at

how the decreased water volume may concentrate the pollutants - possibly up to hazardous levels.

#### Cave & Karst Protection: What Can be Done

The problems of the above two aquifers are very complex and area specific, but the general concepts can be applied to most karst areas and individual caves. So what can we as cavers do to protect our caves and "karst-lands"? Very little unfortunately. Excuse my pessimism, but money talks and if developers want to build on karst terrains, seal caves and threaten local aquifers, then there is little which will stop them. But dammit, we can at least try. Individually or in groups we can approach developers, regional water boards and local legislative bodies, stressing a certain area's or a cave's hydrogeologic importance and sensitivity to contamination. If you approach them only as cavers you will not get far. However, if you present yourself as a topicly informed citizen and your primary concern is for the community good - protecting the water supply and not just preserving your recreation - then your chances of success are much better. The most important factors to use in your favor are persistence (expect lots of discouragements and dead ends) and an early head start. In one case where I had advance notice I wrote a report which was read at a San Antonio City Council meeting. The result was that a zoning change never occurred, a change which would have put a gas station where a sinking stream is. Yet, on 26 September 1984, without even a full day's notice, I couldn't prevent the sealing of a long-time Bexar Co. favorite, Bear Cave.

On a broader scale we of the TSA can act together to better protect the Texas underground wilderness. In 1977 the "Texas Caverns Protection Act" was passed. Many cavers I've spoken to have either been surprised to hear that we had one or had heard of it but never seen it. It is an important piece of legislation to everyone who caves in Texas and here is its long overdue Texas Caver debut.

## Texas Cavern Protection Act

"Art. 5415j. Caverns Protection Act

#### Policy

Section 1. It is hereby declared to be the public policy and in the public interest of the State of Texas to protect and preserve all caves on or under any of the lands in the State of Texas, including tidelands, submerged lands, and the bed of the sea within the jurisdiction of the State of Texas.

#### Definitions

Sec. 2. In this Act:

(a) "Cave" means any naturally occurring subterranean cavity. The word "cave" includes or is

synonymous with cavern, pit, pothole, well, sinkhole, and grotto.

(b) "Gate" means any structure, lock, door, or device located to limit or prohibit access or entry to any cave.

(c) "Person or person" means any individual, partnership, firm, association, trust, or corporation.

(d) "Speleothem" means a natural mineral formation or deposit occurring in a cave. This includes or is synonymous with stalagmites, stalactites, helictites, anthodites, gypsum flowers, needles, angel's hair, soda straws, draperies, bacon, cave pearls, popcorn (coral), rimstone dams, columns, palettes, flowstone, or other similar crystalline mineral formations commonly composed of calcite, epsomite, gypsum, aragonite, celestite, and other similar minerals and formations.

(e) "Owner" means a person who owns title to land where a cave is located, including a person who owns title to a leasehold estate in such land.

#### Vandalism; penalties

Sec. 3. (1) It shall be unlawful for any person, without express, prior, written permission of the owner, to willfully or knowingly:

(1) break, break off, crack, carve upon, write, burn, or otherwise mark upon, remove, or in any manner destroy, disturb, deface, mar, or harm, the surfaces of any cave or any natural materials therein, including speleothems;

(2) disturb or alter in any manner the natural condition of any cave;

(3) break, force, tamper with, or otherwise disturb a lock, gate, door, or other obstruction designed to control or prevent access to any cave, even though entrance thereto may not be gained.

(b) Any person violating a provision of this section shall be guilty of a Class A misdemeanor, unless he has previously been convicted of violating this section, in which case he shall be guilty of a felony of the third degree.

#### Sale of speleothems unlawful; penalties

Sec. 4. (a) It shall be unlawful to sell or offer for sale any speleothems in this state, or to export them for sale outside the state, without written permission from the owner of the cave from which the speleothems were removed.

(b) A person who shall violate any provisions of this section shall be guilty of a Class B misdemeanor.

#### Pollution unlawful; penalties

Sec. 5. (a) It shall be unlawful without prior permission of the owner to store, dump, dispose of, or otherwise place in caves any chemicals, dead animals, sewage, trash, garbage, or other refuse.

(b) A person who shall violate any provision of this section shall be guilty of a Class C misdemeanor. A person who shall violate any provision of this section shall, for a second offense, be guilty of a Class A misdemeanor. A person who shall violate any provision of this section shall,

for a third or any subsequent offense, be guilty of a felony of the third degree.

Permits for excavations; how obtained;  
prohibitions; penalties

Sec. 6. (a) No person shall excavate, remove, destroy, injure, alter in any significant manner, or deface any part of a cave owned by the State of Texas, unless he first obtains a permit described in Subsection (b) of this section.

(b) The General Land Office of the State of Texas may issue a permit under this subsection if the person furnishes the following information:

(1) a detailed statement giving the reasons and objectives for the excavations, removal, or alteration and the benefits expected to be obtained from the contemplated work;

(2) data and results of any completed excavation;

(3) the prior written permission from the state agency which manages the site of such proposed excavation;

(4) a sworn statement that he will carry the permit while exercising the privileges granted; and

(5) any other reasonable information which the General Land Office may prescribe.

(c) The General Land Office may for good cause revoke any permit issued under Subsection (b) of this section.

(d) A person who shall violate any provision of Subsection (a) of this section shall be guilty of a Class B misdemeanor. A person who violates any of the provisions of Subsection (b) of this section shall be guilty of a Class C misdemeanor and the permit herein authorized shall be revoked."

(Acts 1977, 65th Leg., p. 565, ch. 200, eff. May 20, 1977.)

#### AMENDING THE CAVERNS PROTECTION ACT

Overall this is a good legal piece, comparable to some of the best cave protection acts in the U.S., yet sorely in need of amending to make it more effective and to increase its scope. Currently I'm working on those amendments and their tentative wordings are presented below.

First, I suggest deleting all comments which allow vandalism, destruction, pollution, etc. "with the permission of the owner". Owning something does not justify its mistreatment (animal protection laws for example), but I do need to check the legality of such an amendment within the Texas legal system.

The second and, in my mind, most vital change is to amend Sec. 5 (a) to read:

"It shall be unlawful to store, dump, dispose of, or otherwise place in caves any chemicals, dead animals, sewage, trash, garbage, or other refuse which may be detrimental or hazardous to caves, to the mineral deposits therein, to the cave life, to the waters of the State of Texas, or to the persons using such phenomenon for any purposes."

This amended Subsection would affirm a connection between geologic, ecologic and hydrologic systems

to wastes or hazardous materials introduced into caves. The implications of this towards aquifer protection (in karst regions) are tremendous, if properly pursued. Also Subsection (c) is changed (below) because as it stands now it's less of a crime to pollute a city's water supply than it is to break a stalactite:

"A person who shall violate any provisions of this section shall be guilty of a Class A misdemeanor, unless he has previously been convicted of violating this section, in which case he shall be guilty of a felony of the third degree."

A Subsection (f) is suggested for addition to Sec. 2:

"Cave Life" means any life form which is indigenous to any cave or cave ecosystem."

This definition will be used within a new section which will protect cave critters and ensure that any cave gating will provide for their continued survival:

"Cave life

Sec. 7. (a) It is unlawful to remove, kill, harm, or otherwise disturb any naturally occurring organism within any cave, except for safety or health reasons. The provisions of this subsection do not prohibit minimal disturbance or removal of organisms for scientific inquiry.

(b) Gates employed at the entrance or any point within any cave shall be of open construction to allow free and unimpeded passage of air, insects, bats and aquatic fauna.

(c) A person who shall violate any provision of Subsection (a) of this section shall be guilty of a Class A misdemeanor, unless he has previously been convicted of violating this Subsection, in which case he shall be guilty of a felony of the third degree. A person who violates any provision of Subsection (b) of this section shall be guilty of a Class C misdemeanor and shall be required to rectify the violating feature or features of the gate."

To better protect archeologic remains, Sec. 6 (a) would be amended to:

"It shall be unlawful for any person to excavate, remove, destroy, injure, deface any part of any cave or to in any manner disturb any burial grounds, historic or prehistoric ruins, archeological or paleontological sites or any part thereof, including relics, inscriptions, fossils, bones, remains of historical human activity, or any other such features which may be found within any cave, unless he first obtains a permit described in Subsection (b) of this section."

Some research will be needed to determine if the General Land Office should still be the permit providing agency under the amended Subsection. If not, then Subsection (b) would need appropriate amending.

The following new Sec. 8 would be of great value in gaining access to caves closed because of landowner liability fears. Also it would benefit our commercial caves and I hope they will help push for its passing:

"Liability of owners and agents

Sec. 8. (a) Neither the owner of a cave nor his authorized agents acting within the scope of their authority are liable for injuries sustained by any person using such features for recreational

or scientific purposes if the prior consent of the owner has been obtained and if no charge has been made for the use of such features.

(b) An owner of a commercial cave is not liable for an injury sustained by a spectator who has paid to view the cave, unless such injury is sustained by a result of such owner's negligence in connection with the providing and maintaining of trails, stairs, electrical wires, or other modifications, and such negligence is the proximate cause of the injury."

The wording for most of these proposed amendments is taken from cave protection acts already in effect in other states. The above amendments might change, before being submitted to the State, pending the input of new information. Improvements and ideas are encouraged.

The following questions need to be answered before submitted the amendments:

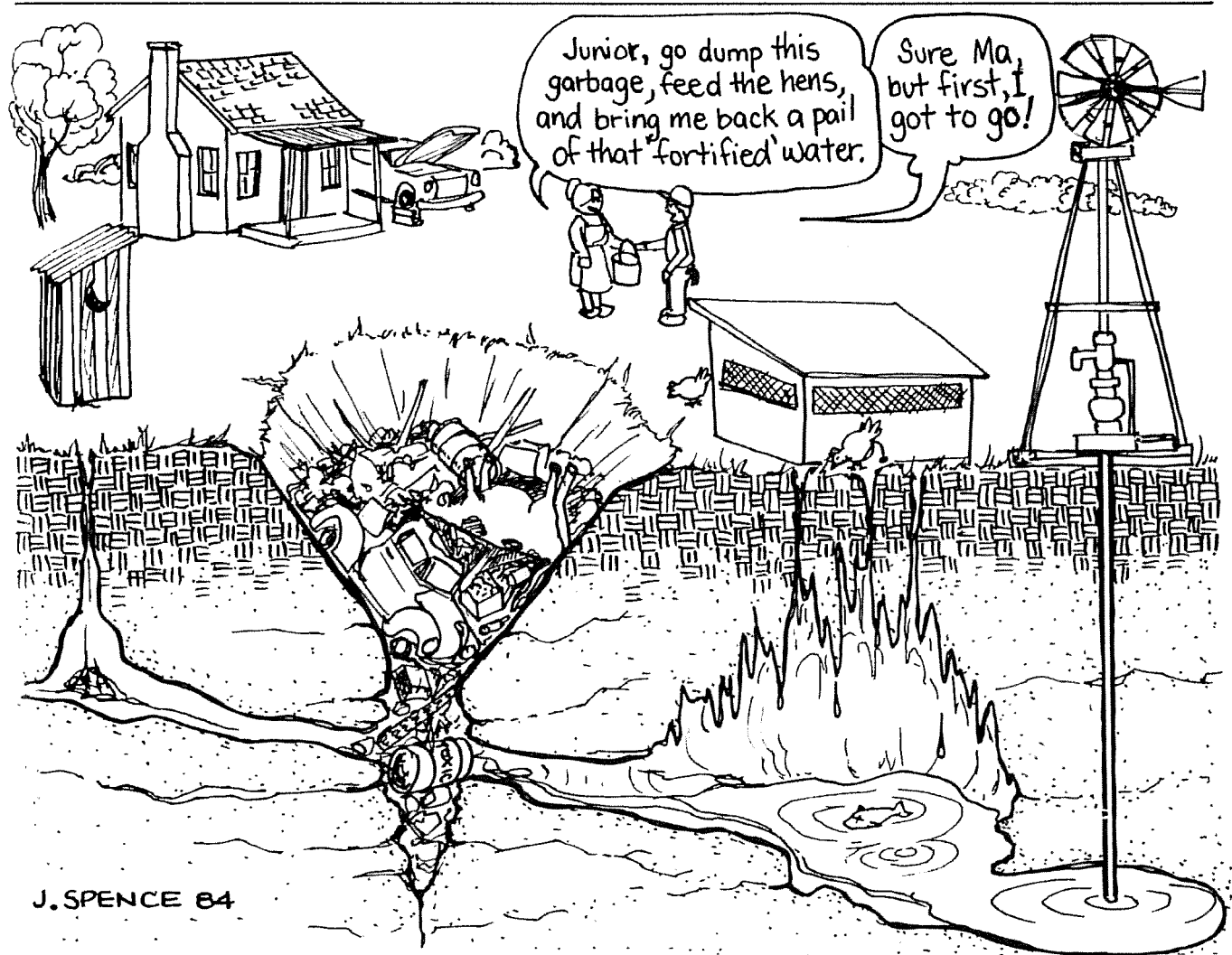
- Does anyone know if some Antiquities Act already provides protection to archeologic and/or paleontologic remains, even in caves?

- What about trespassing laws - what would constitute a "reasonable deterrent" by an owner to

keep someone from entering his cave? This would be especially helpful in further developing the liability amendment to include open-access/unfenced lands - such as subdivisions - where permission is seldom obtained.

- Groundwater laws? Anything known on groundwater pollution or the prevention of recharge into an aquifer?

Should anyone be interested in helping push this legislation through, have information or suggestions to contribute, then please contact me at 4019 Ramsgate, San Antonio, TX 78230, 512-699-1388. I'm especially looking for help because I may soon leave the state again for an indefinite period of time and I won't be able to get this passed without some instate assistance. When the amendments are finally ready to be presented to the state legislature, all cavers in Texas will be called upon (through the Texas Caver) to send lots of letters of support to their congressmen. This is one of our best chances to make a real contribution towards the protection and preservation of the Texan underworld. I hope you will all help.



# Caves, Karst and City

by

William Russell

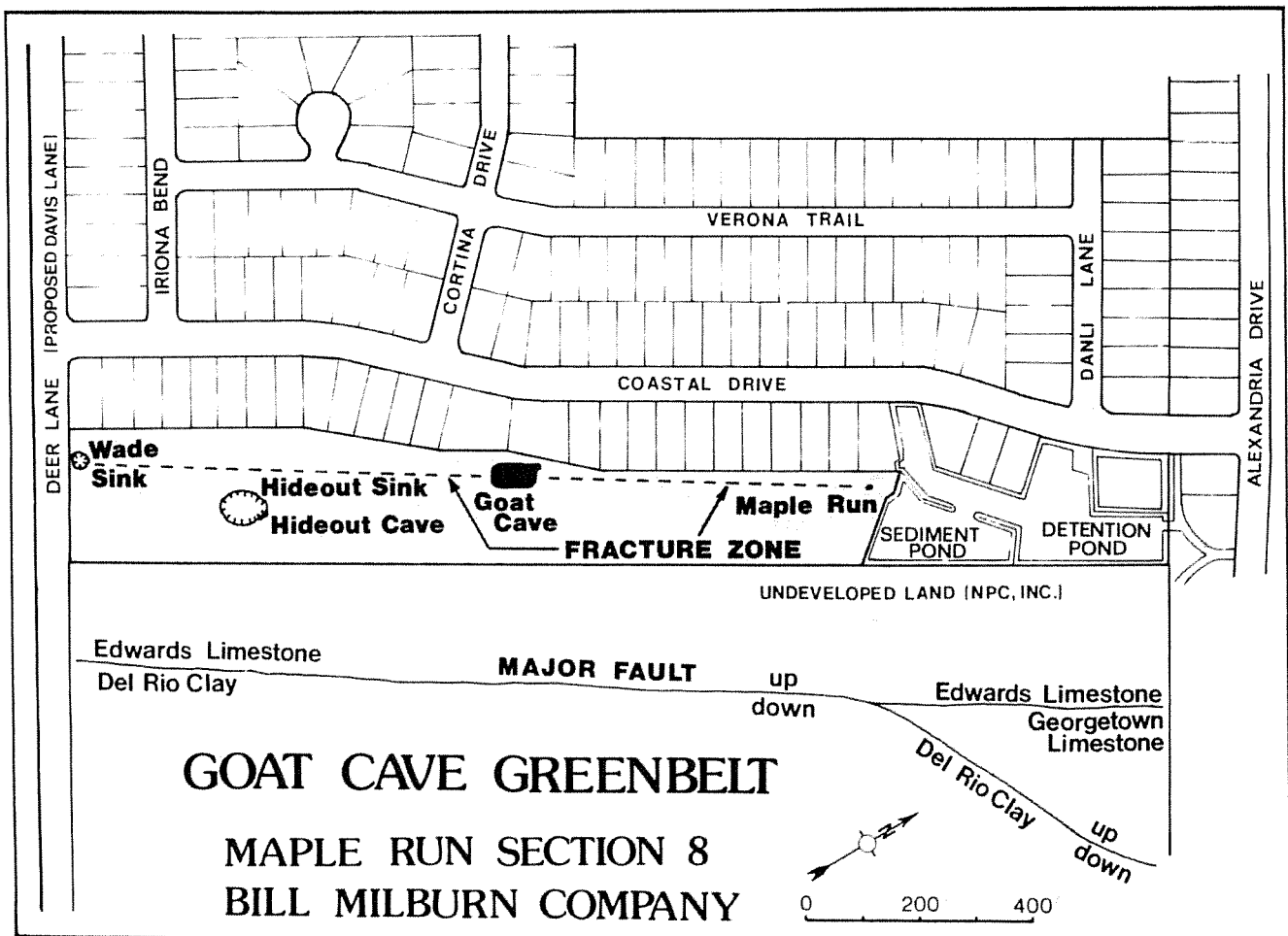
Austin was chosen as the capital of Texas in large part because of its pleasant terrain and abundance of water where the Colorado River crossed the Balcones Fault. Springs along the Colorado have long been valued for water power and recreation. The early growth of the city was mostly on the level terraces of the Colorado River, east of the Fault Zone, but during the 1970's, Austin became one of the fastest-growing cities in the United States, and streets, houses, and shopping centers spread west and south across the Edwards outcrop.

When this growth reached these limestone uplands, developers were faced with a new and unfamiliar terrain, and with a problem: karst.

The first encounter with the Karst in the city was a large sinkhole around the entrance to Austin Caverns. The developer decided to use the cave as a storm drain, without even providing access to the cave.

Cavers were better organized for the next encounter, the construction of MOPAC Expressway across Dead Dog Cave. Cavers provided accurate data on the cave, and the Highway Department agreed to preserve the entrance to it. Despite unfavorable publicity about three teenagers trapped in the cave, the Highway Department honored its agreement, and the cave was saved, with access through a manhole in the sidewalk. Alas, even before any first trip through the new manhole entrance, Luby's built a new cafeteria on the site, with the driveway going over the manhole, and the cave was lost after all. Cavers learned that it was not only necessary to get involved early in the development process, it was necessary to stay involved.

As the 80's began, large areas of the Edwards Limestone outcrop southwest of Austin were being eyed for development. This area was, however, part of an important aquifer that supplied water for Barton Springs, almost a symbol of the Austin lifestyle. There was considerable publicity and conflict regarding this development. The City Council passed ordinances, newspapers printed extensive articles, and neighborhood groups took strong stands. The effect of all this publicity was not



to stop development, but rather to subject every proposal to close scrutiny, and to force developers to take at least minimal steps to protect the environment. These developers were anxiously looking for acceptable compromises between development and protection. The very expensive land combined with high interest rates made it financially disastrous to argue at length over what could be built. This need to do something quickly gave cavers considerable leverage, since "saving" a cave is relatively inexpensive, and since both cavers and geologists testify effectively that caves tend to localize areas of high recharge -- the areas which are the most environmentally sensitive.

Then an incident gave warning that development on the karst is not without its unique hazards. Shady Hollow Subdivision, one of the first on the aquifer in South Austin, included a sinkhole that drained one block of the subdivision. Stormwater drains were laid into the sinkhole from a street and a nearby cul-de-sac. These drains led to a large concrete box at the bottom of the sink which was filled with six-inch cobbles. These cobbles were apparently intended to filter the water being recharged to the aquifer.

By Memorial Day, 1981, the streets of the subdivision had been paved, and the houses built. A very intense rain fell on Austin, washing cars off low-water bridges, flooding buildings, and drowning thirteen people. More water entered the Shady Hollow Sinkhole than could be recharged due to the newly-increased runoff from the streets and houses, as well as to a possible clogging of the cobble filter. As the sinkhole filled with water, several houses were flooded, and the owners subsequently sued the developer. Although the suit was settled out of court, the hazards of development on the karst were becoming evident.

By the time the Maple Run Utility District was being organized for City Council approval in early 1983, environmental requirements had been broadened to include an environmental statement "signed by a geologist". This environmental assessment gave cavers an opportunity to involve themselves early in the development process. Through the cooperation of the Bill Milburn Company (the developer), and Espey Houston and Associates (the Environmental Consulting Company doing the field work), cavers were able to evaluate all identified karst features for speleological significance. This information was compiled before any planning or development was actually initiated, giving all parties maximum flexibility without financial pressures.

The strategy used in this case was the identification of those caves which were significant on a county-wide basis, and then providing data to show that the selected caves were indeed worth consideration. This would convince the developer that the features to be protected were important, and concentrate cavers' limited management resources on a few significant caves. Six caves are located on this 594-acre district, three of them previously unknown. Two of the caves, Goat Cave and Maple Run Cave, were significant on a countywide basis. Additionally, Wade Sink received considerable local runoff. An unexpected finding was a significant geological feature which linked these

three: the Goat Cave Fracture Zone. This zone of crumpling follows a major fault, and is a very favorable area for solution and recharge. The report submitted by cavers proposed setting aside eleven acres, including four caves and the entire fracture zone.

Several conferences followed, both with Bill Milburn Company personnel and with the neighborhood groups coordinated by Sereatha Henery of APAD South. The Bill Milburn engineers questioned leaving the entire area over the fracture zone undeveloped, and suggested that houses be built off cul-de-sacs, with no streets crossing the fracture zone. Cavers reluctantly agreed that, if streets and drainage ditches could be located away from the fracture zone, the northern part could be developed. This would have meant an undeveloped area of a little over four acres south of Goat Cave, and about half an acre around Maple Run Cave. Following this tentative agreement, there was a period of confusion. The Bill Milburn Company did not release a final plat, and the neighborhood groups were saying, "You can't trust a developer -- they will develop the whole area."

Finally a plat was released -- the efforts of cavers and neighborhood groups had paid off. None of the fracture zone was developed. Approximately eight acres, including Maple Run and Goat Caves, as well as Hideout Cave and Wade Sink, were left undeveloped. Moreover, the Bill Milburn Company wanted an agreement with the Austin Natural Science Center to manage Goat Cave as a geologic exhibit. Cavers would manage Maple Run Cave, though the actual owner of both caves would be the Maple Run Municipal Utility District, which would make the final decisions.

Management problems arose early in the protection process. Much welcome publicity was arranged for Goat Cave -- City Council members were even interviewed on television from the cave --, but the publicity generated traffic, and the cave began to suffer. Cavers had located a large grate which they had planned to use as a gate for Goat Cave, but the owner moved the grate, and another cannot be found. Today, six months after the gate was promised, the cave still remains un gated and the desired agreement with the Austin Natural Science Center still seems far away.

Within a few years, the entire Edwards outcrop in Travis County will be covered by development, and undiscovered caves will essentially be lost. To be sure, a few caves will be encountered in development excavations, but most will be small, and it will seldom be possible to preserve access. Caves lost now are lost permanently, and represent a loss for this and for all following generations of cavers. Geological indications for Travis County are that extensive, as yet undiscovered caves exist, and the loss will be considerable if such caves are permanently paved over.

The public and developers are both aware of the importance of environmental protection. Groups ranging from the City Council to neighborhood associations have created a favorable climate for environmental action. But the history of cave protection sketched here indicates that it is up to the cavers themselves to translate this concern into realistic proposals.



# CAVE PROFILES

## Shady Hollow Sink Demise

REPORT ON SHADY HOLLOW SINK

By: Robert Green

Shady Hollow sinkhole in southwestern Travis County is a textbook example of the type of mis-treatment many urban caves have undergone recently.

Underlying a .30m diameter sinkhole, the cave has become a catchbasin or detention pond for suburban drainage. There are several man-made contributing factors which produced this effect.

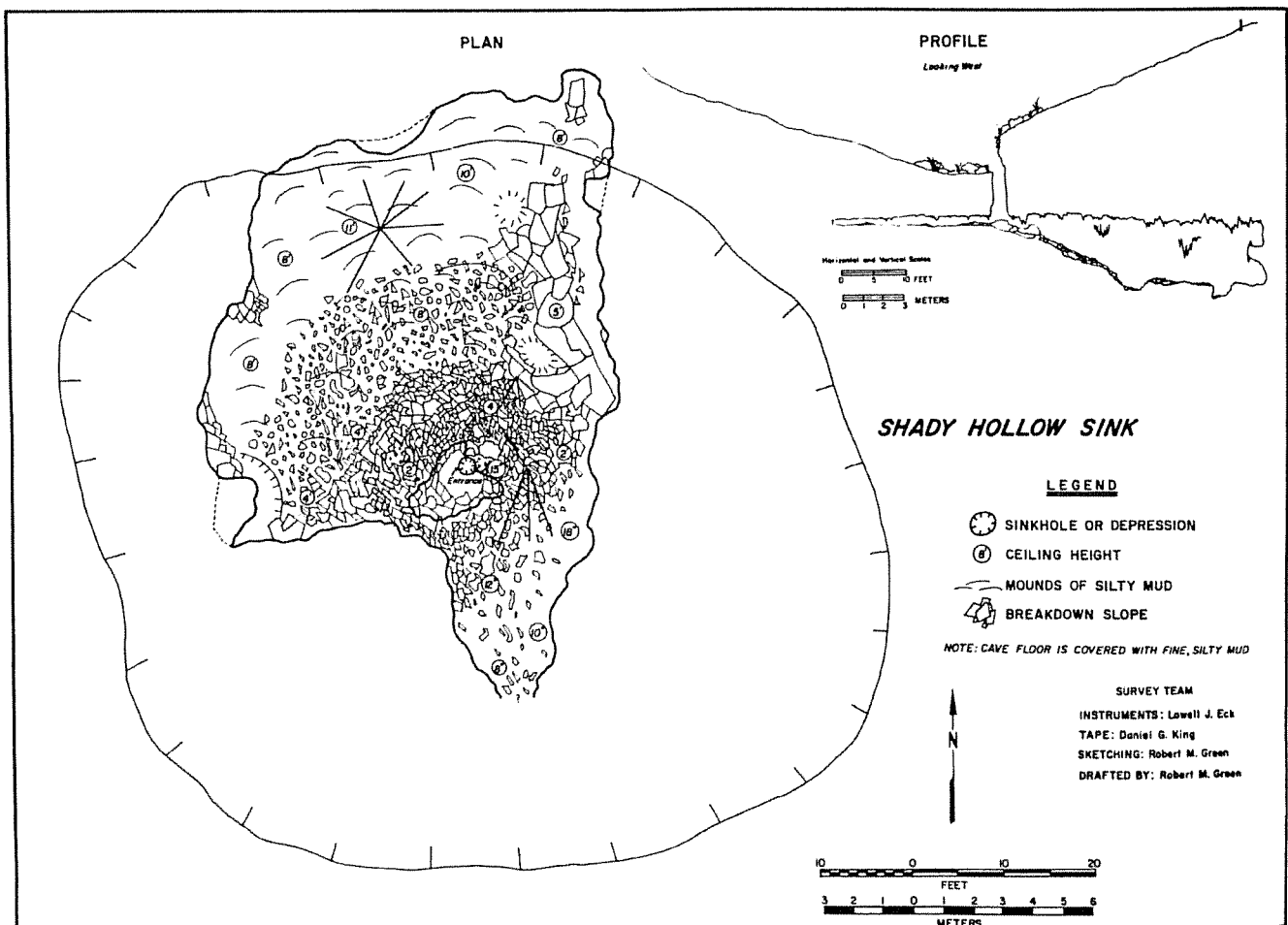
Formerly, the cave was a drainage basin for the surrounding natural topography. The sink grew to a size fitting to the amount of surface runoff it collected after every rain.

After extensive development of the area, impermeable cover runoff increased the flow of water and material into the sink. The result is unusual

amounts of detritus and silt flowing into the cave. Naturally this decreases the amount of water and recharge into the underlying water table. Thick silty mud and trash now plug the drainage areas on the floor of the cave that once allowed cleaner water to leach. As a result of that, the cave and sink flood after almost every substantial rain, backing up into the luxury homes of the area. This flooding has left angry citizens in its wake and legal battles have arisen.

The problem could have been alleviated in the first place by using much better planning and engineering procedures. There is never a good way of diverting drainage into a cave, but maybe a water quality buffer zone should have been established, pushing back houses from the edge. Maybe a better place to divert the runoff could have been chosen to help the problem.

The future of caves like this one are getting a little more scrutiny from land owners and developers. However, the poor planning and intense development all over Travis County could be showing us more caves turning into sewers.



# BARTON SKYWAY CAVES

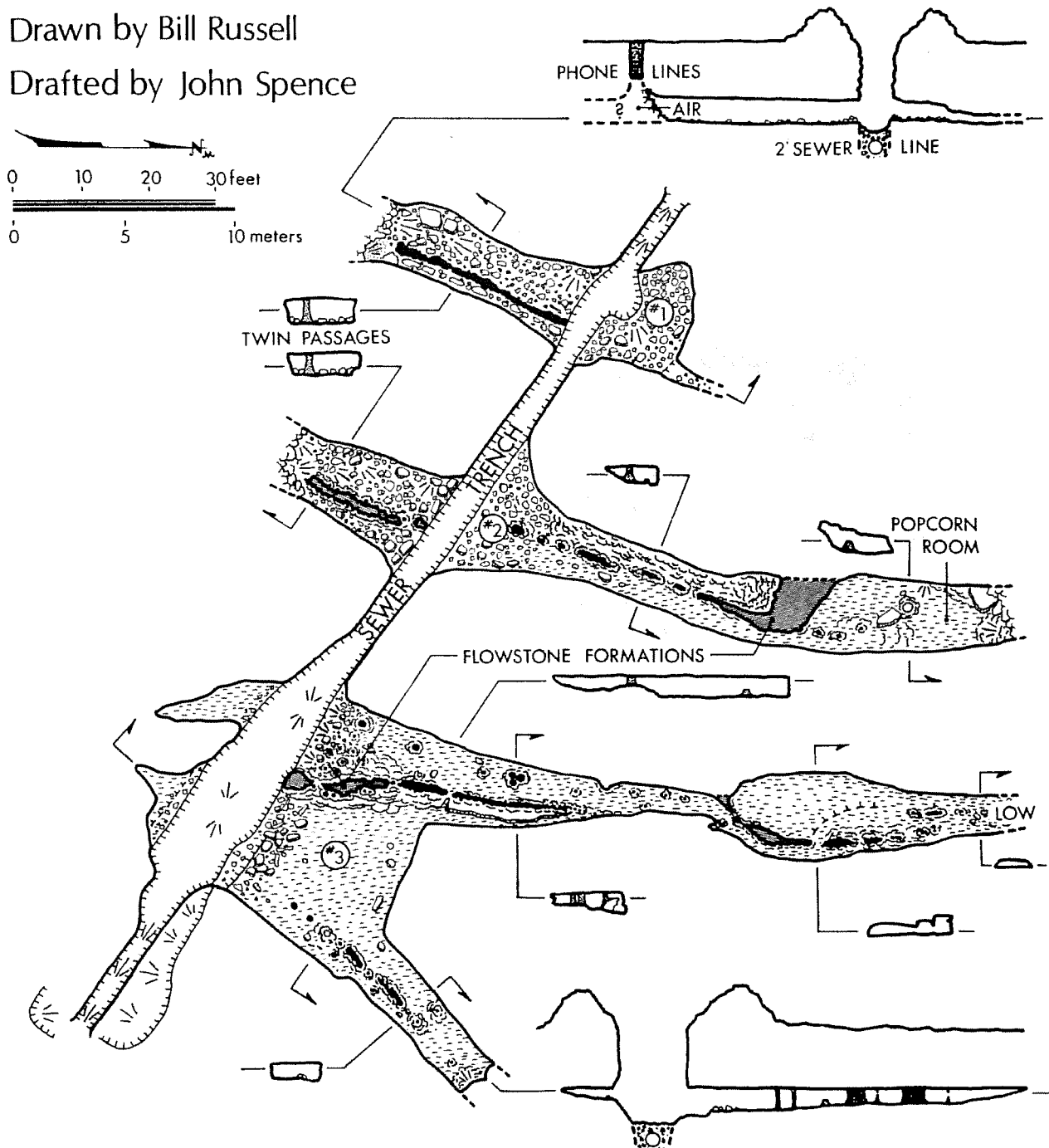
TRAVIS COUNTY, TEXAS

TEXAS SPELEOLOGICAL SURVEY

JAN., 1984 - B. Russell, J. Spence

Drawn by Bill Russell

Drafted by John Spence



# Barton Skyway Caves Come and Go

By: John Spence

I had gone to the Grotto meeting hoping to find some caving activity around town. Maybe something within the city limits, highly decorated and unexplored. Fat chance, but it never hurts to hope!

Robert Green had just the lead. While working for Espey Houston and Associates in Austin he was told about a trenching crew that had just broke into a number of caves. Aside from the trenching crew working on a waste water line, no one had checked it out. Robert gave me directions and I told Bill Russell. We all went to check it out. It sounded promising.

Just west off MOPAC (a major traffic artery) is a new road making way for new development near the Barton Creek area. Barton Skyway may someday live up to it's name but for now it's responsible for opening a subterranean passage. The closest cave is Airmen's to the east.

The trench was easy to locate and the open cavities in its walls were too. Robert had heard

that the caves may have to be collapsed to carry the weight of the road, just 10 ft. above it, void. It may be filled or blasted any time, so we came prepared to survey. The following map illustrates just what we found.

Most of the cave near the trench was covered with a fine dust and blast rubble. Many of the formations had been removed from easily accessible areas and the work crew had found it a good place to leave their beer bottles.

Under normal circumstances I would have attempted to clean up this mess, but this place was doomed and we knew it. Crawling back into the tighter areas it was apparent we were the first but a bit strange to think we'd also be the last. Wanting to take it all in, we took our time. Knowing this would likely be our only chance to explore its passages, we pushed each squeeze to its limit. A few opened to pleasing surprises, terminating in nice sized rooms.

It's strange now to think of this cave as gone with its popcorn and delicate formations but such is the fate of nature when it gets in the way of "progress".

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## CAVER PROFILE

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### JOHN GILLILAND

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By:

Bill Russell



John Marshall Gilliland is a 26-year old part-time programmer and mathematics major at the University of Texas. He arrived in Austin in the fall of 1981 to look over the University of Texas, and noticed signs about a caver meeting. At the meeting, two trips were announced - one to Airmen's Cave right in Austin for those who didn't have time for an all day trip, and a longer trip to Gorman Falls. John Marshall Gilliland went on both. His first cave was Airmen's Cave. As the group of about a dozen cavers started into the cave, John was in the lead. The cave became smaller and smaller, and John thought this must be some sort of joke. But the cave finally got a little bigger, and John's enthusiasm carried him to the end of Karen Crawl - not bad for a first-ever cave trip. On the way out his newly purchased Academy Surplus pack disintegrated, making the trip back even more challenging.

Following Airmen's Cave were trips to West Texas

and the traditional Bustamante Grotto trip. He became involved in several Texas projects - working in the Langtry area and, nearer home, getting wet in both Honey Creek Cave and Spring Creek Cave. With Davis Finley, he began to push leads. His most pleasurable caving memories are the long swims in Honey Creek and the crawlways in Airmen's.

John Marshall Gilliland thinks that caving has something to offer besides excitement. Cavers can contribute to knowledge by pushing into the unknown. Like an 18th century expedition, they make maps of areas and find animals no one has ever seen. This intense exploration produces an awareness of nature not found in other sports. In John's case, it has led him to concentrate his scarce caving time on the more serious projects. He has helped to look for features that might help save Preserve Cave and shepherded at the Devil's Sinkhole Dive.

John rates Austin cavers as about the ideal mix of the University science and technology crowd, with people of all sorts. The loose, informal UT Grotto style makes it easy even for a new caver to participate in meetings. He has attended both the Texas Oldtimers and the TSA conventions, and reads the Texas Caver. The local coverage of the Texas Caver is important. A new passage in Airmen's Cave means more to him than a big linkup in Kentucky. The cartoons aren't worth it; he likes information. His much worn map of Airmen's Cave was xeroxed from the Texas Caver. And as a new caver, he appreciates the tradition-builders like Peter Strickland and Bill Mixon and can't imagine a TSA without them.

For his caving future, he is looking forward to Mexico and vertical caving. He realized the necessity of a good ropewalking system after a Texas Prussik ascent from Madonna Cave. His advice to new cavers is to remember that conservation begins with oneself, and to carry plenty of water!

## — The Airmen's Cave Revival —

by: Rich Rohwer

In late 1982 or early 1983 or some other time, Bill Russell reported to cavers that the USGS had drilled a well near the Target store at Ben White and South Lamar in Austin, and intersected about 20 feet of airspace. The USGS was interested in monitoring the water table, which they found another 20 feet below. This location is only a few hundred feet from known passage in Airmen's cave, but is off the main trend of the cave.

In the fall of 1983, or some other time, John Gilliland noticed a promising lead on Russell's giant map of Airmen's. It was near the back of Sherwood Forest, and marked with the word "air". John and a friend went in to investigate. They found a horrible chert-floored crawl, but pushed on undaunted, and eventually broke into a roomy dirt-floored passage they called the "Mattress Room". There were several leads from there; all grim. They pushed a lead near the entrance to the Mattress Room under some breakdown and then into a narrow vertical fault passage. They turned around at a place they called the "Trident", where the passage split vertically in three directions, all too small to enter without a hammer, which they didn't have.

This news, and Russell's vision of a classy camp beneath the Target well, complete with electricity, running water, and miles of Edwards aquifer to explore, rekindled my long-dormant interest in Airmen's Cave. But I was unable to muster the motivation to go until Sunday morning at Oldtimer's 1984. That day I was faced with two grim alternatives: attending speleo-political meetings or caving in Airmen's (or working on my dissertation, which was out of the question). There was no choice. I was joined by Kevin Green, Craig Dial, and Dave Doolin, who caught up with us near the one-legged-man passage.

When we got to the chert crawl we were stunned at the thought that Gilliland had gone through it without a rock hammer. I handed Dave my virgin rock hammer, which had been peacefully sleeping on the shelves at Handy Dan's just a few hours earlier, and he pounded energetically for an hour or two while the rest of us moved the fragments. Dave suggested we call this section, Gilly Land. With a small, but no-longer grim, passage behind us we emerged into the Mattress Room. We investigated the leads in this area and determined that, although many were promising, none were going to be easy. Kevin and Craig had time constraints in the real world and headed out.

I decided to have one last bash at the Trident before following. It panned out. Soon I was looking up into walking passage. Dave quickly answered to the call of "BOOTY!" and we ran on into a large room with leads everywhere. This place did not belong in Airmen's. The biggest lead took off from the bottom of a breakdown slope that formed most of the floor. We followed this lead until it became uncomfortable and then headed out. This

passage contains some large (and delicate) chert boxwork curly-ques.

A few weeks later, a large group including John Gilliland, John Spence, Mark Minton, Nancy Weaver, Bill Russell, Keven Green, Mike Caudillo, Steve Pitts, Joe Sumbera, and myself, returned to Sherwood Forest. This may be the largest group ever to go this far into Airmen's Cave. We split into two survey teams and two bash teams. (I can't remember who did what.) One team surveyed from the entrance to Sherwood Forest to the Mattress Room; another surveyed the Mattress Room area; another worked on further enlargement of Gilly Land; and another pushed leads in the Mattress Room area. We then moved on to the large room beyond the Trident, now called "Grand Central Station", bashing as we went. Bill Russell bashed the trident beyond recognition, making the lower two routes better than the original upper one. I was very confused when I emerged from the lower route into the bottom of Grand Central Station, instead of the point where I had entered before. Another comfortable passage branches from this lower route. I turned around where breakdown entering from the side makes it impassible, but this is a reasonable bashing lead. I don't think it's been surveyed yet. The passage with the chert boxwork was surveyed and a cursory survey of Grand Central Station was made. Mark and Nancy explored a passage taking off from a point near the junction of the boxwork passage and Grand Central Station. This passage led to a complex area amid breakdown. They turned around in a low wet muddy crawl at a point where bashing would be required. They left many other dry leads in this area.

Dave Doolin, Kevin Green, and Craig Dial returned to Grand Central Station several weeks later. They surveyed much of the area that Mark and Nancy explored. Kevin and Craig explored further on a recent photo trip. Another larger trip is planned for the near future. The Target well is just around the corner!

**JOIN AIRMEN'S**

**AIRFORCE**



**"FOLLOW THE AIR"**

## Robber Baron Hide Out

THE FIRST ANNUAL ROBBER BARON CAVE HIDE-OUT!

by: George Veni

One of the problems with pet cave projects is that you never want them to end. You always try and find new and exciting things to do and discover about them. First come exploration, then mapping, gating, clean-ups, bug studies, geologizing, hydrologizing, massive digs into breakdown, and whatever else the imagination can conjure up. It was in the latter frame of mind that I thought about starting a new fad in caving -- playing "Hide 'n Go Seek". And the maze of Robber Baron Cave would be an excellent place to do it.

The date was set for Sunday, 30 September 1984. All-in-all, 32 people showed up from Houston, San Marcos and San Antonio for the event. There were Andrew and Armando Aldrete, Ray Brown, Jenni Bucha, Kelly Burgess, Duane Canny, Allan Cobb, Bob and Jessica Cowell, David Dannemiller, Robert Davila, Russell Dobson, Frank and Lowell Goodman, Andy Grubbs, Al Holzgraff, Joe Ivy, Jim Kirkwood, Kurt Menking, Peter Monahan, Alan Montemayor, David Murdoch, David Nash, Brett Nidey, Mark Pakeltis, Linda Palit, Charlie Perego, Bev and Eric Short, Blair Stone, George Veni and Randy M. Waters. Unfortunately, seven of the above could not stay, but came by to clean up the land for the owner and to give the others a warm send-off.

When everyone was inside the cave the rules of the game were explained as follows:

- 1) There will be two groups of people, hidiers and seekers.
- 2) The hidiers are given ten minutes to hide. Once a hiding spot is selected, the hider cannot later change location.
- 3) Seekers are given 20 minutes to find as many hidiers as they can. Definitive visual contact is all that is needed.
- 4) Seekers receive one point for each hider they find and hidiers receive one point if they are not discovered.
- 5) After the 20 minute seeking period, everyone regroups near the entrance and a new group of seekers is randomly selected. When everyone has had one turn as a seeker then the points are tallied and whoever has the most points is the winner (and gets treated to the burger or pizza of his or her choice by the losers).

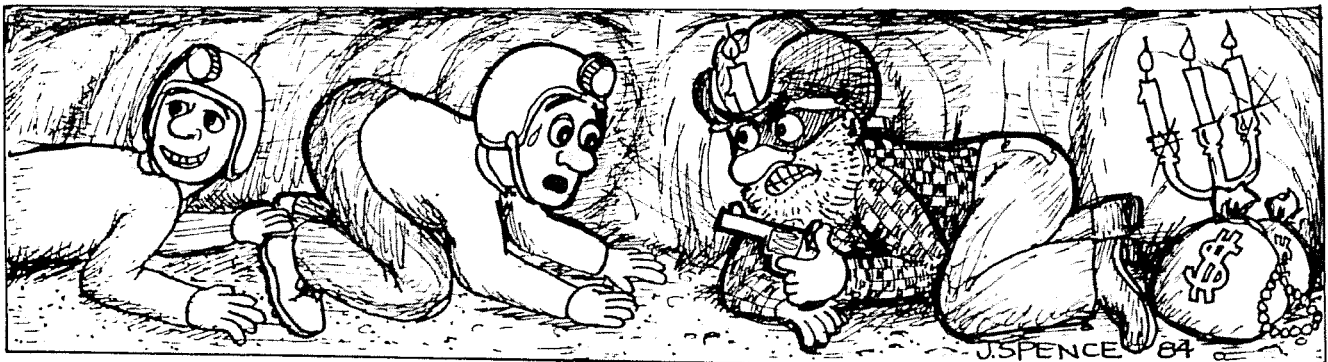
- 6) Dependent on the number of people at the "Hideout" and their familiarity with the maze cave, a point handicap would be given to some whose prior experiences in Robber Baron gives him or her distinct advantages over other participants.

It was strongly suggested that everyone carry a watch so it would be known when time had run out for hiding and when to regroup at the entrance.

The ensuing game was quite a sight to behold! It was a chaotic cacophony of cavers dizzily disappearing down crawlways and corridors, squeezing and contorting into amazingly small places, dangling high up in domes, holding-up in deadend passages and then erecting a camouflaging wall of rocks between them and the frantic seekers. And what about the seekers?! They were described as runners of the obstacle course in the Speleolympics: dashing through the passageways, poking up into domes, flashing their lights down crawls and through the artificial walls -- unable to take the precious time to thoroughly check each one yet hollering as they went, "I see you", in hopes that someone will believe them and materialize.

The seeking process was rather exhausting and the hiding process required patience, quiet and calm. Sometimes hidiers would hide in groups of as many as six, and usually seekers would only find each other. After three rounds, however, most everyone was sufficiently tired and the game was called one round short of completion. The group who had not yet sought conceded the victory to Duane Canny (who adjourned the game to his favorite burger joint).

Overall, everyone seemed to enjoy themselves, which was the main purpose of the whole thing, and there was general agreement that the Bexar Grotto should continue to sponsor the Robber Baron Hideout as an annual event. It was suggested that next year there should be not more than three rounds and a change to 30 minutes seeking time. The cave itself is ideal. Robber Baron is a safe cave to run around in, it lacks delicate or sensitive areas, and it offers a fine variety of walking, chimneying and crawling for cavers both new and old. Perhaps the true measure of the Hideout's success can be determined by observing the first-time cavers, who (after surviving the combined onslaught of cave, cavers, contest and Fuddrucker's Hamburgers) were anxiously asking "when and where" about the next trips going caving.



## — Accident Report-Madonna —



The Cave of the Madonna  
Guadalupe Mountains  
Eddy County, New Mexico

by: Winston Whitt NSS 12932

Personnel: Horace Whitt,  
Winston Whitt, David Feemster,  
Stacy Evans, and Jay Wortham

Date: November 4-5, 1984

On Sunday November 4, a group of five cavers, Horace Whitt (31), a Dentist, Winston Whitt (29), an R.N., David Feemster (28), Speech Pathologist, Stacy Evans (26), a teacher, and Jay Wortham (31), a Dentist, began to descend the first of two major vertical drops in the cave. All are members of the Abilene Area Grotto, Texas. The pit measured approximately 280 feet, the final 200 feet being free rappel. All are experienced vertical cavers.

At 3:00 p.m. Horace, the group leader, descended. Approximately 60 feet down he called back that the rope had become tangled and that he had moved to a ledge to straighten it. After several minutes Winston descended to assist him. Both were off rack but were on rope by speleoshunt. Horace warned his brother of a loose formation on the lip of the ledge. After untangling the rope Horace continued his descent. He reached the bottom and began to look for an area clear of the drop. Winston soon called down that he was on rope and began to descend. At that point, a duffle bag containing rope and food he was dangle-carrying knocked off the loose formation noticed earlier. He yelled "Rock, big rock," as the football sized formation crashed down the chimney and into the darkness.

Below, Horace heard the warning and the loud crashing of the falling rock. He reported later that as he heard the warning he immediately recalled the loose formation and realized that it was now tumbling down towards him. He followed his first impulse to jump away from the rope that was hanging some 15 feet away. Unfortunately, this move sent him over the side of the large breakdown boulder upon which he had been standing. He fell some 15 feet, striking his extended right arm. He then rolled down a 25 foot incline before coming to a stop. His lined, fiberglass helmet with four point strap remained in place preventing head injury.

Winston called down asking his brother if he had been hurt. Horace answered immediately that he had broken his arm. Winston informed the group above. It was decided that Winston should continue down, and that Stacy follow halfway to relay messages.

Arriving at the bottom, Winston found his brother lying some 50 feet from the drop area. He was fully conscious. It appeared that his right wrist was broken, his left shoulder subluxed, and his right middle fingernail torn off and bleeding. They moved to a place of safety. Horace, in sever pain, discussed the situation with his brother. It was decided that Horace could not climb out of the cave.

Stacy, having descended halfway, relayed to David and Jay the decision made below to call the local cave rescue group. The first aid kit and sleeping bags were requested. David left the cave for help. Jay lowered the needed items on a second rope to Stacy. Stacy continued his descent and joined the two brothers on the bottom.

Horace's arm was immobilized using triangular bandages from the kit. Chemical ice bags were used to prevent swelling. Splinting was attempted but pain prevent complete success. The three waited on the bottom. Horace received little relief from the Ibuprofen analgesic in the kit. They avoided hypothermia by using the sleeping bags. Efforts were made to see that Horace was well nourished and hydrated in preparation for the expected rescue.

Meanwhile, David was on his way over the rugged Guadalupe country to the nearest ranch some eight miles away. About a third of the way his two-wheel drive truck bogged down on a steep hill. He was forced to walk 4-5 miles before being picked up by a family in a firewood laden truck. They delivered him to the McCollum Ranch where Kenneth McCollum called the Sheriff's department and set the rescue operation in motion.

Nine hours after the fall at 1:00 a.m. Monday, the three cavers on the bottom saw the ropes being pulled up. It was hoped this meant help had arrived. Shortly thereafter new ropes reappeared. Dave Belski of the Southeastern New Mexico and Eddy County Search and Rescue Squad descended into the country. He was followed soon after by Jerry Trout. Radio communications failed. A third rescuer descended halfway to relay information to Ron Kerbo, the group leader.

The rescuers assessed the situation and decided that Horace would have to be hoisted out of the pit. A Z-system (4:1) mechanical assist lift device was readied. Belski attached Horace to the hoist rope at his chest Jumar and to a belay rope tied around his waist. As Horace was pulled up, Jerry Trout ascended alongside.

At the top Horace was treated by paramedic members of the rescue squad. He was then assisted through the maze passage, exited the cave, and climbed to the top of the ridge. An Army helicopter called in by Kerbo picked Horace up and carried him to Carlsbad, New Mexico. He was admitted to the Guadalupe Medical Center where x-rays showed him to have a comminuted fracture of the Radius and Ulna.

The remaining four cavers left the cave without difficulty, thankful to the expertise demonstrated by the Southeast New Mexico and Eddy County Search and Rescue Squad.

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**Analysis:** The five cavers agreed that Horace should have been given more time to clear the drop area before Winston descended. Horace felt, in retrospect, that he should have dislodged the loose formation. He had considered doing so, but due to his cave conservationist nature, decided against it.

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# GROTTO REPORTS

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## BEXAR

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by: Linda Palit

October's big Bexar Grotto trip was to Midnight Cave in Carta Valley. The trip was arranged thanks to Ken Byrd, who has recently done work in the Carta Valley area, and to Duane Canny who set the trip up with Ken. Midnight was an impressive cave living up to all the stories of beautiful formations in the large passages and rooms. The challenge of the Corkscrew and the fun of the entrance drop just added to the trip. Participating cavers included Jenni Bucha, Ken Byrd, Duane Canny, Alan Cobb, John Cradit, Andy Grubbs, Liz Hamilton-Byrd, Frank Herzig, Maryanne Herzig, Joe Ivy, James Jasek, Claire Lindblom, Hal Lloyd, Terry McDanel, Linda Palit, Lisa Urbanczky, Randy Waters and Quinn Woods.

Two weekends following the trip to Midnight, Duane, Joe and Quinn returned with Blair Stone to go cave hunting in that general area. A few leads were turned up plus welcomes from landowners to hurry back and further explore the Carta Valley underground.

More new passage was discovered in Haby Salamander Cave during a November 1984 trip by Jenni Bucha, Joe Ivy, Blair Stone and Randy Waters. An earlier trip by Joe Ivy and Scott Harden had inspired Joe to return after he found the beginnings of a new passage. Joe and Blair explored the lead for a few hundred feet finding no end in sight but air flow encourages yet another return.

A fall season without a trip to Gruta de Palmito would be unthinkable, so we made our trip about the beginning of November. The usual series of minor disasters and major thrills, especially for new cavers, made the trip worthwhile. Visiting the cave for the first time were Armando Aldrete, Jim and Lydia Coffman, Steve Hale, Joe Ivy, Kurt Menking, Blair Stone and Trevor Brill from New Zealand.

Windmill Cave in Medina County was paid a November visit by Joe Ivy and Scott Harden, who were searching for troglotic aquatic fauna.

After reports that the cave had been closed by the owner, Jenni Bucha and Randy Waters visited Bexar Cave in November and found it shut tight with huge boulders and tons of dirt. Nearby Cub Cave, however, is left untouched, perhaps because of its small entrance.

The Thanksgiving trip for the Bexar Grotto was planned for Golondrinas. After a couple of minor delays, the cavers reached the town of Aquismon about eight hours later than they expected. After spending a rainy night on a local basketball court, one of the locals observing us reload into three vehicles shrugged his shoulders and said, "Look! And they say we Mexicans load a lot of people in a pick-up truck!" That day was spent at Hoya de Guaguas with many of the people entering a pit this deep for the first time. We rappelled off the 670 ft. side and climbed out the 480 ft. side. This

took the entire day, so Golondrinas was postponed until another trip, now planned for the 26th of December. On the trip home it seemed that many Texas cavers whom we knew had also been in Mexico for the holidays. Passing each other on the highways we exchanged traditional greetings. Participants in this trip included Fred Edmiston, Duane Canny, Alan Cobb, John Cradit, David Dannemiller, Del Holman, Joe Ivy, Claire Lindblom, Alan Montemayor, David Nash, Linda Palit, Darrell Reese, Blair Stone, Lisa Urbanczky, George Veni, Quinn Woods and Julie Yarsa.

On Sunday, the eighth of December, Valdina Farm's Sinkhole was visited by Bexar and SWTC cavers accompanied by the owner and three of his friends. Noted notables of the trip include Scott Harden collecting troglotic amphipods (previously unknown to the cave), and the pushing of the previously unexplored 10m pit at the end of the upstream right-hand fork. Duane Canny, Russell Dobbs, Joe Ivy and Hal Lloyd pushed through one of the worst mud passages in the state to reach the pit. Hal descended but found only a mud plug. A lead still goes from high in the wall on the pit's far side, but it will require a lot of muddy work to get to it.

The Bexar Grotto is now printing a monthly information sheet announcing trips, programs for the meetings and other news pertinent to the grotto. Anyone interested in receiving The Bexar Facts may do so for the cost of postage by writing to Linda Palit, 4019 Ramsgate, San Antonio, Texas 78230.

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## U.T.G.

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by: William R. Elliott

On the weekend of November 2-4, 1984, 18 cavers met at Langtry to continue the resurvey of Big Tree Cave (Langtry Lead) and Emerald Sink. Langtry Quarry Cave was resurveyed earlier. From Austin came Bill Elliott, Nancy Benjamin, James Reddell, Marcelino Reyes, Bill Mixon, Kent Sanders, Dave Doolin, Ed Sevcik, Erika Heinen, Kevin Green, Gina Richards, Rich Rohwer, Lisa Wilk, Mark Minton, and Nancy Weaver. From A&M came John Ragsdale, Freddy Platte, and David Locklera. Two surveys were carried in Big Tree: from the top of a dome to a passage, where Rich worked on a dig that went a short ways, and at another dig that doesn't go yet. About 100 m were surveyed in the Backreef Crawl of Emerald Sink by Elliott, Benjamin, Mixon, and Doolin. A nasty crawl off the entrance area thru guano to a pit was left for small, gung-ho types. The weather was fine and they enjoyed a fine campfire that night.

Andy Grubbs went to Bustamante, Nuevo León, with 24 people. There were 7 flats, 3 holes in the gas tank, and a lost muffler on one ill-fated car, which also required a jump start. One of the tires exploded as they rolled into customs on the way back. There were no problems between the border and San Marcos!

Mark Minton and Bill Russell attempted a bolt climb in one South Austin cave in November, but we have no news of what happened. Bill has been digging in Grapevine Cave and other caves.

There were several Thanksgiving trips. Wayne Bockelman, his sister, and Nancy Benjamin went to the bottom of Gruta del Palmito. They were thrilled by the phosphorescing of calcite curtains after illuminating them with an electronic flash. They met a bunch from San Antonio and Corpus while there. Paul Duncan led them to a large ranch east of Bustamante, where they camped out and then went on a long hike thru the mountains to a mined-out cave. The cave was mazy and they had a good time getting themselves turned around in it for a couple of hours.

Duwain Whitis, baby Sara, Barbara Vinson, Mary Standifer (who recently returned from California), Jim Goodbar, and an out-of-state caver went to the Sierra de Guatemala, Tamaulipas. Their goal was to explore a fissure cave found four years ago near Rancho del Cielo. The roads in that area have deteriorated because there is little lumbering in the area anymore. They wound up checking a little cave near Julilo, right by the road, and collected bugs there for James Reddell. They visited Cueva de la Mina on the way to the fissure cave, after several wrong turns and bad roads that would require winches to continue. The fissure cave was at about 2000 m elevation near "Barbara's Patch". They got to about 100 m depth where there was a small stream entering a tight hole. Further exploration will require wetsuits, but this is presently the best lead in the higher elevations of this region. A planned side trip to San Jose was thwarted by insufficient gasoline, so they descended the range to camp at the Río Frío. They headed to Cueva de Guadalupe on the east face of the range, but the roads used several years ago were overgrown. A rancher on horseback led their four-wheel-drives thru the brush, but they had to chop part of their way with machetes. They visited Cueva de las Peñitas, a large walking cave with multi-entrances. A quick walk-thru was done with BIC lighters. The trip to nearby Cueva de Guadalupe was abandoned when hordes of pinolillos (seed ticks) attacked them. They had Thanksgiving dinner at the Río Frío the next day, then returned via Cd. Victoria and Monterrey thru lots of fog.

Peter Sprouse said that 14 Texas and Colorado cavers went to the Purificación and Cueva de Tecolote area at Thanksgiving. They surveyed several hundred meters of cave and checked the top of a dome, which didn't go. They mapped over 1 km at the end with several teams, several hundred meters off the Salon del Puente, and about 1 km in other areas. Cueva de la Tinaja, near Los San Pedro, was visited and Paul Fambro photographed it. This cave was 100-150 m long and was visited by Charles Fromén several years ago. Cueva de la Llorona, near Cueva de Calenturas, was mapped to 1 km long and 273 m deep in 2 days and is still going. It is headed toward Calenturas, which is kilometers away. They climbed a windy ridge to a firetower for some good pictures.

Mark Minton says that the Ben Meadows Co. in Atlanta sells reconditioned Suunto compasses and clinometers for \$30 each. Write to Jim Smith (see NSS member list) for info.

Gorman Falls, Burnet County, on the Colorado River, is being sold to the State Parks and Wildlife Department. Someone saw this in the Burnet newspaper, The Highlander. No one knows how Gorman Falls Cave, with its water hazards and bad air, will be managed by the state.

Gill Ediger brought 4 Dutchmen, who were on their way to Chiapas to go caving, to a grotto meeting. Frans Onderwater, Laurent Smets, Jan Hoogmoed, and Frans Meurs all spoke excellent English and said they were prepared for their second trip to Chiapas. Two years ago they came down with histoplasmosis and were hospitalized for weeks in Mexico City. This time they had dust masks and oral antibiotics to protect them.

A correction by Bill Russell to the last UTG NEWS (October): Coyote Cave is in Hays County and is not the same as the old well that goes down 40 ft to a room in Oak Hill, Travis County.

At the mid-December meeting Logan McNatt showed up after spending 15 months in Belize, working for the Peace Corps and the Department of Archaeology in Belize. Much of the job involves caving and protection of Mayan ceremonial caves. He will be here until January 8, then return to Belize for nearly a year.

Andy Grubbs and 5 other SWT cavers, 4 San Antonio cavers, and the owner and three of his friends went to Valdina Farms Sinkhole recently. The cave is being sold, along with thousands of acres of ranchland, on January 1. The cave hasn't taken any water since the recharge dam was built, but it remains the muddiest cave in Texas.

Erika Heinen reported that on December 15 she went with several others to Austin Caverns. Then she said they got stuck going to Whirlpool Cave on Thursday night. Then she said they were set upon by Australian children at Austin Caverns, who dropped a ball down the entrance. Then she said they heard gunshots and bullets whizzing by at Whirlpool. Then she said the kids were hiding in trash can holes dug in the ground at Austin Caverns. Then she said Bill Russell was seduced by an old woman in a nearby house and they took Tim caving for the first time. I want to know if the old woman is near Whirlpool or Austin Caverns.

Craig Dial and Kevin Green went to Airman's Cave recently, where they found considerable airflow in one area.

We saw slides of John Cradit's Thanksgiving trip to Xilitla, including the famous "bird house" (thanks for coming John) and Duwain's trip to the Sierra de Guatemala.

The next meetings will be on the third and fifth Wednesdays of January. A typo in the October issue said that we meet on Tuesdays. Actually, we usually meet on the first and third Wednesdays. Anyway, Barb MacLeod will show photos of Mayan caves at the first January meeting, and on the first Wednesday of February we may have a film on the caving expedition to New Guinea. Everyone is welcome, except Australian children and old women with guns.



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## P.B.S.S.

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### WEST TEXAS UPDATE

by: Bill Bentley  
Founder and Past President of  
the Permian Basin Speleological  
Society, Midland, Texas

Judging from past history, the survival rate for grotto's in West Texas has not been too good with several fine clubs now deceased and fallen to the wayside. The Permian Basin Speleological Society (P.B.S.S.) is now one year old and interest is now waning, but with a renewed spirit and participation perhaps this club will live on.

Chartered as the 300th grotto of the National Speleological Society the P.B.S.S. sets atop of some of the best potential for new cave discovery. Located in the heart of a non-cave area geographically, Midland, Texas, a base for P.B.S.S. operations, is in the center of several good karst regions from Guadalupe/Carlsbad area to the west and Central Texas area to the east, and not to forget the Stockton Plateau to the south.

Looking back over the past year the P.B.S.S. had trips to Cottonwood, Hidden, Black and Hellsbelow Caves in the Guadalupe district of the Lincoln National Forest. Also trips to Spider, Chimney, Ogle, Wen, Helens, Lake, Christmas Tree, and Corkscrew Caves in the National parks area, along with dozens of trips into other caves in West Texas.

In May 1984, the P.B.S.S. joined the Southwest Region of the N.S.S. The P.B.S.S. has a very strong conservation policy and has had one successful cleanup of Bat Cave "Blackstone Cave" in Terrell County. The members of the P.B.S.S. range from every walk of life, with the majority of people being interconnected with oil field related jobs. Safety and vertical rope work practice are also a regular part of the P.B.S.S. with grotto sponsored training sessions. All in all the West Texas caving scene, even though it has some low time, is still alive and active and it is my hope that the P.B.S.S. can contribute to the advancement of Speleology.

The "Splyunk" is the regular monthly publication of the P.B.S.S. and helps keep members informed of current cave trips and the like.

## TRIP REPORTS

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### Deep Cave

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by: Bill Bentley

Destination: Deep Cave,  
Carlsbad Caverns National  
Park, Eddy County, New Mexico

Personnel: Bill Bentley,  
Tony Grieco, Patrick Murphy,  
Bill Greenlee

Date: September 28, 1984



It was to be my fourth time to search for Deep Cave and hopefully it wouldn't be in vain. Tony and I left Midland, Texas around 5:30 on Friday and arrived at the Belski's house around 8:30 real time, 7:30 New Mexico time. There we transferred Pat's equipment to Tony's four-wheel drive Bronco and received directions and instructions on how to rig the cave. We left and made it to the 3 mile hill campground area where we met with Bill Greenlee at about 12:30 A.M. The weather for this trip was anything but hospitable and a light mist had soaked everything. We awoke the next morning, ate a cold breakfast and started out. After about 4 miles of four-wheel driving we stopped and got gear together for the hike to the cave. It took about an hour to find the cave. Ron Kirbo's directions were very helpful.

Once we made it to the entrance we decided to rig the entrance drop/slope with an extra 200' length of rope we had brought, because of the wet conditions, it was decided this was needed to ensure safety. To get from the outside to the rigging point for the long drop is very dangerous and must

be done with a great deal of caution, because of the ledge ranging from 1 foot wide to only big enough to cling to. A fatal slip would send a person sliding down a large funnel to a 100'+ free drop. Everyone made it safely to the tie off point for the big drop and 300 feet of Bluewater 2 was rigged. Bill Greenlee descended first only to find the rope hopelessly tangled in a early 1900 "Jim White" type of ladder. He spent several minutes untangling the mess and proceeded to rappel the rest of the drop. We had been in the cave almost an hour now and when Bill reached the end of the rope he discovered that it needed 8' more to reach bottom. He then ascended the entire pit and we rerigged using the tail of the 200' length of Bluewater. I then descended for what seemed an eternity. Tony came next and then Bill and Pat. At the bottom of the drop it seemed much warmer than it was at the top, but the temp was the same. The room at the bottom of Deep Cave is one of those that is comparable in size to the Big Room of Carlsbad Caverns and 4 wheat lamps did not penetrate its darkness. Only a dim light from the entrance gave the cave an eerie glow of a moonlit night. The back portion of the cave had so many formations that it's hard to describe. There were hundreds of totem poles only inches in diameter and fried egg formations. Some took on the resemblance of scoops of ice cream in a bowl. (Homemade of course!) There were soda straws many feet long, not to mention the stalagmites and stalactites packed in every possible place. I took a few photographs and will definitely go back for more. We exited the cave 6½ hours later with no problems and it was a trip worth remembering.

Editor's note: Bill, we'd like to see those photos!

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## Gruta Del Palmito

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by: Wayne Bockelman

Personnel: Nancy Benjamin  
Tammy Durst, Roger Durst,  
and Wayne Bockelman

Date: Thanksgiving Day,  
1984



Four of us from Austin had our Thanksgiving dinner in Gruta del Palmito near Bustamante in Mexico. Our group, Nancy Benjamin, Tammy Durst, from San Antonio, Roger Durst, and Wayne Bockelman, packed our gear and ourselves into a Datson whose muffler usually cleared the center of the roads on which we found ourselves.

Three of us had been in the cave once before. Perhaps it would have been better if one of us had been in the cave three times before. Our first obstacle was encountered at the district office of Cuervo Leon. Unfortunately, the combined linguistic skills of our group was limited to the phrase, "Uno cerveza, por favor". We gesticulated generously and smiled lots and were able to pay our fifty pesos each and get the key to the iron gate blocking the cave entrance.

Inside the cave we made our share of wrong turns and round-about routes till we came to the broken curtain which we knew led to the New Room. Only one of us had ever been there before, and most of our attempt at finding it was through passageways

that even he had never previously encountered. On one occasion we turned back at a place we later referred to as the "death slide". It may have been possible to traverse across the top edge of the mud slope if the only rope we had for a belay had not been left as a hand line some distance back. As it was, the penalty for failure would have been severe. We marveled at the number of skid marks heading as far as we could see down the thirty or so foot drop to ragged rocks below.

By the way, the large diameter hemp rope rigged by the locals leads down a passage which eventually leads to a mud hole. It does not lead to the New Room. The former, however, is highly recommended for those who think Gruta del Palmito is too dry.

We eventually found the New Room. In addition to the fantastic formations there, we made a discovery. Nearly all the formations in the room glow. If we closed our eyes and opened them immediately after a camera flash, whole walls and curtains glowed a pale green for several seconds. It was like being surrounded by moon-glow Frisbees.

In climbing up the boulder slope to leave the cave, we took a circuitous route, parts of which have been traveled by many, all of which has most certainly never been traveled by anyone else.

Crossing back into Texas at Laredo we met a friendly border guard. He had once been a guano gatherer in Mexico so we had stories to exchange. Looking at our tequilla bottle he joked that perhaps we should only have to pay half duty on it. At that point Nancy grabbed a lime out of the confiscated pile of fruit, smiled sweetly and asked "Can we take this back?" He let us. We sang old Beatles songs all the way back to Austin.

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*The "Texas Caver" Staff Wishes You  
a Very Merry Exit and  
Happy New Year.*



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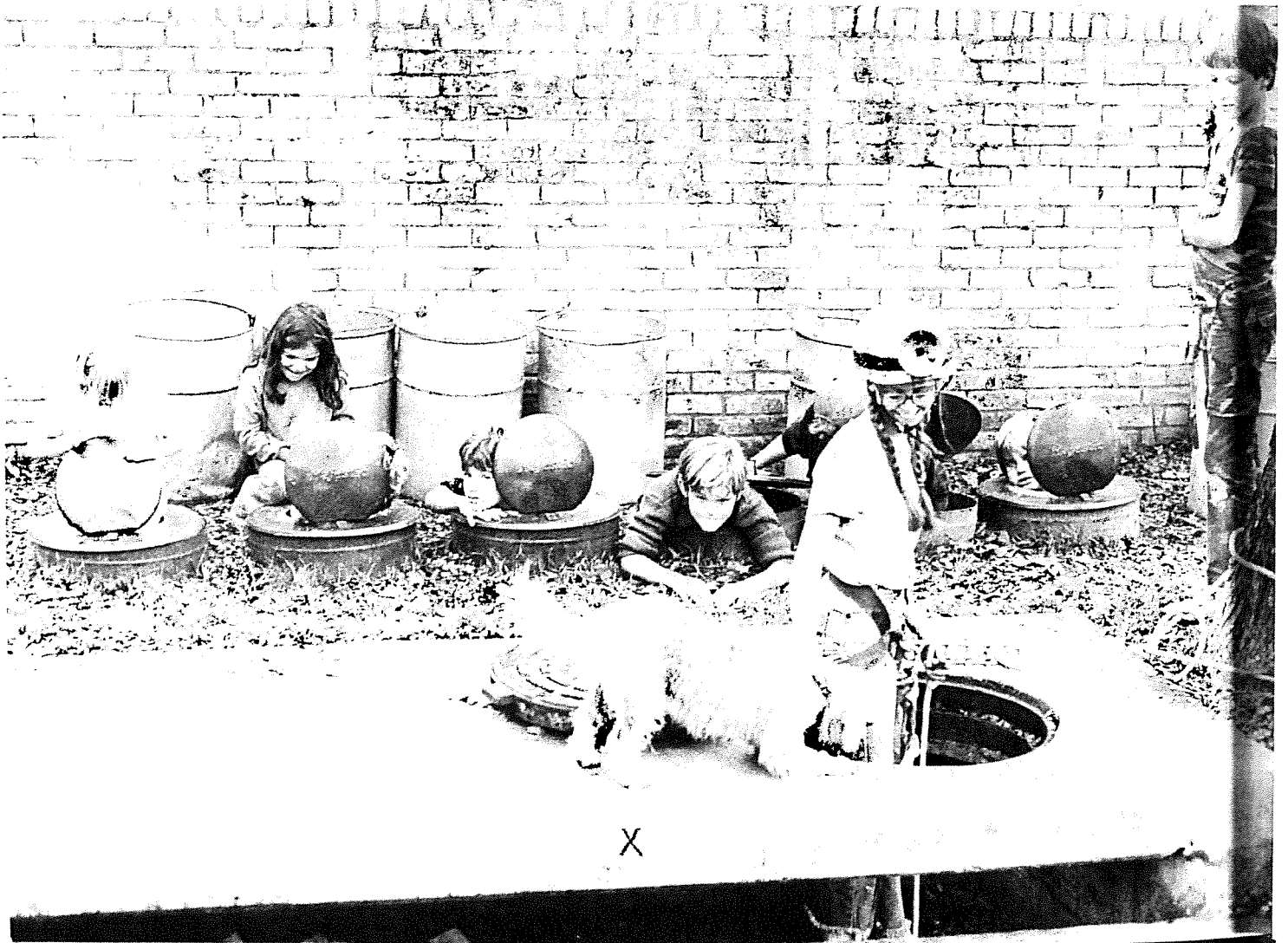
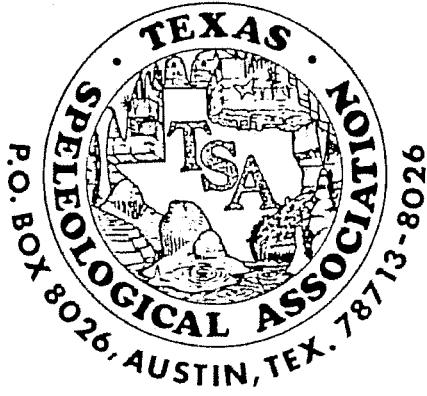
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## **AUSTIN CAVERNS, TRAVIS COUNTY, TEXAS**

**James R. Reddell**

**Austin Caverns, presumably once one of Austin's environmental gems, serves as a classic example of the destruction of a valuable natural resource through neglect and irresponsible urbanization.**

**The earliest history of the cave is unknown. An 1840 reference in the Telegraph and Texas Register has been ascribed to the cave. This certainly is in error and the cave described there probably refers to Bandit Cave in Rollingwood.**

**It is unknown if Austin Caverns ever had a humanly accessible natural entrance. The first recorded entrance was in the wall of a quarry. Early references indicate that the cave was known prior to the quarrying operation but no reliable information has been found. In 1932, Frank Chote of Houston opened (or enlarged) an entrance in a large depression about 180 ft. north of the quarry entrance. A stairway and electric lights were installed and the cave was operated commercially. This venture failed after a few months, as did several other commercial caves in Texas during these difficult times. The cave was considered a hazard and at some point the sinkhole entrance was sealed. This entrance, however, re-opened a few years later.**

**The cave was mapped in 1941 by Carl Clayton. This map shows about 500 ft. of passage, including several rooms, the largest more than 50 ft. in diameter. The cave reportedly contained numerous attractive speleothems. In 1948 when the first description was published most of the speleothems were broken.**

**Two passages extended from the bottom of the 25 ft. deep entrance. One to the south extended about 180 ft. to an opening in the quarry wall. The other passage led north into a series of passages and chambers. The first systematic exploration of the cave for which there is reliable information was in 1952 by the University of Texas Speleological Society. At that time they found a large part of the cave blocked by collapse. Additional collapse occurred in 1953 and in 1954 the sinkhole entrance was again sealed. About 200 ft. of passage was still accessible from the quarry entrance until about 1959 when the quarry was filled and houses built on it.**

**The contemporary history of the cave began in 1963 when plans for development indicated the need for a storm sewer drain to prevent flooding of the depression in which the sinkhole entrance had been located. The old sealed entrance was re-opened and storm waters channeled into it by a drain. Unfortunately only a portion of the fill was removed and only the small southern section was available for direct entry by water. The first exploration by cave explorers of the cave revealed only about 30 ft. of passage. Flood waters entering the cave opened up the passage to the south to the sealed quarry entrance.**

**In recent years trash, leaves, and silt have blocked entry into the southern passage. As a result water is undermining the sinkhole fill to the north on which the street is built. Early in 1995 settling of the fill damaged the street. Rather than deal with the problem correctly the city simply placed metal sheets over the street. The only long-term solution to the problem will be to remove more of the fill to allow water to enter the main part of the**

cave. Failure to do this will result either in serious collapse of the street or complete sealing of the cave with resultant flooding of houses built in the depression in which the cave is located (William H. Russell, personal communication).

In addition to the obvious undesirability of channeling road and yard runoff with its load of pollutants into the aquifer, any endemic cavernicole fauna has been extirpated from the system. It is remotely possible that cave-adapted species still exist in the northern part of the cave. This is unlikely because of the intense urbanization above the cave. The high degree of impervious cover will have reduced water entering the system. In addition, what water does find its way underground will carry a heavy load of pesticides, herbicides, fertilizers, and other pollutants. This isolated limestone region doubtless contained an entire community of cavernicoles, many of which were probably limited to this small area and are almost certainly now extinct. Explorations prior to the most recent blockage of the cave found an incredibly repulsive passage containing every conceivable kind of trash and pollutants. The cave teemed with life, but the only species found were forms adapted for urban life (cockroaches, hot house millipedes, earthworms, pillbugs, etc.).

In summary, a large attractive cave potentially of great biological and geological interest has been converted into a source of direct pollution of the aquifer. Furthermore a failure to consider the consequences has already led to damage to the street and the potential for more serious problems is great.