

The Dead Dog Caves Report

4CAVES Institute P.B.C.

Compiled by Justin Leigh Shaw

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Front Cover: Tommy Phillips at the original natural entrance to Dead Dog Cave #1. Photo by Terry Rains.



Danny Evans (left) and William Russell (on rope) at the bottom of the fissure in Dead Dog Cave No. 2. Photo taken about 1955, probably by T. R. Evans.

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Introduction

This report seeks to compile a thorough account of high quality information on the Dead Dog Caves.

The Dead Dog Caves are a cluster of 6 known caves formed in Edwards Limestone and are part of the vadose zone of the Edwards Aquifer. Two of the caves are known to be comparatively extensive for the area, one of them has a perennially flowing waterfall and cave pool, and both are known to contain cave invertebrates. (Russell 2018, Reddell & Russell 1961, Fieseler 1972, Dean 2016, Reddell 1969)

Historically, all 6 cave entrances have been filled in. Several attempts were made at sealing Dead Dog Cave No. 2; by blasting, and filling it with rock, dirt, and debris, but it has a history of reopening itself. Dead Dog Cave most recently began reopening sometime prior to 2015, and today the first room of the cave is once again accessible. (Russell 2018, Reddell & Russell 1961, Fiesler 1976)

The caves are primarily located under, or near to, a property located at 8176 N Mo-Pac Expressway, Austin, TX 78759, having the legal description LOT 1 WALDEN J V ADDN. The Travis County Central Appraisal District property ID is 442705. (<http://propaccess.traviscad.org> 2021) Since Circa 1981 the property has had a Luby's Cafeteria on the site. The property is currently zoned LR, which allows for Bed & Breakfast, Administrative and Business Offices, Art Gallery, Art Workshop, Consumer Convenience Services, Consumer Repair Services, Financial Services, Food Sales, and General Retail Sales (Convince), also conditional in the district, but under some circumstances may be permitted are Alternative Financial Services, and General Retail Sales (General). (https://www.austintexas.gov/sites/default/files/files/Planning/Zoning/permitted_use_chart.pdf 2021)



Tommy Phillips at the entrance of Dead Dog Cave No. 2 in June of 1964 with the manhole cover gate. Photo by Terry Rains.

Cave Descriptions

Dead Dog Cave No. 1

Length 80 feet, Depth 15.

Also known as Trap Door Spider Cave, the entrance was a one and one-half foot in diameter hole in a solid limestone ledge. The entrance dropped 15 feet to an eight-foot wide, four-foot high, passage. Part way down the entrance drop enlarges into a ten foot in diameter, four-foot high room. To the north of the entrance, the cave becomes too low to follow after 20 feet, but the cave continues to the south as two low parallel passages. East from below the entrance a low passage connects after a few feet with the parallel north-south passage. To the south of the entrance the passage narrows, then enlarges to eight feet wide, but only three feet high. Fifty feet south of the entrance is a breakdown floored room four feet high and ten feet in diameter, with a cross passage that connects to the somewhat smaller east passage. South of this room, both passages become too low to follow. The cave was mapped by David McKenzie and Terry Raines on 8 March 1963. The entrance was near a large rock, just east of the back property line of the Luby's Cafeteria at Mo-Pac and Steck. Following the construction of the cafeteria, there was no indication of the exact the location of Dead Dog Cave No. 1. (Russell 2018)

Dead Dog Cave No. 2

Length 175 feet, Depth 91 feet.

Also known as Steck Cave, this is a cave of mythic influence on citizens of Austin past and present. It has been explored by many, though relatively few braved the narrow crack to reach the Big Room. The cave was first brought to the attention of cavers about 1958 by Dr. Wupperman, a local veterinarian. A friend of his was climbing into the sink entrance, and, as he crossed a ledge, it gave way, and both the climber and a several-hundred-pound rock fell to the bottom of the sink. Unfortunately, the rock landed on the climber's leg, resulting in several compound fractures.

Still interested in the sink, Dr. Wupperman contacted T.R. Evans and Bill Russell. They visited the sink and found it to be an opening along a north-south fracture, about 15 feet long and 8 feet wide, climbable with care to where it appeared to end in a dirt funnel. However, they were not discouraged: they dug through dirt, loose rocks, and dog bones until they were able to squeeze through into a wide room about three feet high. A low crawl past a rusty army helmet soon ended. The only other lead was a narrow crack in the floor that was blocked by breakdown after a few feet. On several return trips, frequently joined by Tom White and Ronnie Baker, they were able to remove the breakdown and squeeze ahead into an even narrower crack. This crack constricted to eight inches wide -- the size of printer paper the **narrow** way.

Beyond this point, it is not possible to follow the bottom of the crack, since it narrows with depth. To enter the crack, the body is turned sideways with one arm down. Additional problems are created, as the widest part of the crack is not always at the same level. Forward movement is difficult, since one's body tends to slide down between the smooth walls until it is wedged. Slow progress is possible by turning a foot sideways until it sticks in the crack, and then pushing forward while at the same time pushing up with the downside arm to position the body in the widest part of the crack. Each push gains a few inches, until the leg is fully extended. Then it is usually possible to free the foot, flex the leg, and begin the cycle again.

The crack continues to deepen until, after 30 feet, it is 25 feet high. Here, the bottom of the crack abruptly enlarges, and it is necessary to squeeze down, emerging from a narrow slot in the ceiling of a walking-size passage. The drop to the floor can be climbed, but it is helpful to have a rope or ladder, especially to aid the squeeze back into the crack on the way out. The Walking Passage extends 15 feet to a six-foot drop into the Big Room. This drop is undercut and unclimbable. On the first trip to this point, there was a temptation to jump down and explore, since one was standing on the edge of a room 60 feet long, 30 feet wide, and 30 feet high -- an especially exciting sight for the space-starved Travis County caver. Later, a scaling pole used to reach upper level passages was left at the drop as a permanent ladder.

The Big Room has developed along an extension of the entrance crack, which continues across the ceiling as a high slot. There is a cross fissure to the north, and then also one to the south, which is the source of a small stream that falls to the floor of the room, creating an area of flowstone. The water flows to a small limestone-lined drain at the lowest point in the cave, 91 feet below the surface. Both these cross fractures look passable, but there is no easy way to climb to them, and they have not been explored. The most obvious continuation of the cave was along the crack to the east, above where the room ended in breakdown. A short scaling ladder made of sections of pipe was carried in to reach this extension. A crawlway at ceiling level ended after 20 feet in a small breakdown room very close to the Mt. Bonnell Fault.

The cave is developed along fracturing adjacent to the Mt. Bonnell Fault. These fractures provided a path for groundwater circulation normally blocked by impervious beds. Dead Dog Cave #2 was formed by water flowing east along fractures at right angles to the Bonnell Fault. This water then flows along the Mt. Bonnell Fault to reappear in springs on the north bank of the Colorado, near Hugh's Slough in Lake Austin.

Following the construction of the Luby's Cafeteria, there was no indication of the exact location of Dead Dog Cave No. 2 until August of 2015.

In August of 2015 cave specialists Justin Shaw and Fernando Hernandez visited the site of the Luby's Cafeteria driveway, as Justin had done every 5 years or so for the prior 25 years. On this occasion they observed that erosion of the embankment had revealed an area of unfinished concrete roughly 4 feet long by 1.5 feet wide. There was an opening in this concrete that was about 2 feet long by 2 to 4 inches wide, which was blowing a noticeable breeze that contained elevated levels of CO₂. This airflow is indicative of a significant cave volume, and the elevated CO₂ was similar to levels seen seasonally in other significant local caves. You could shine a light down the opening in the concrete and see into a sizeable cave chamber. Justin communicated directly with William Russell about this observation and William was of the opinion that this was most likely the entrance of Dead Dog Cave No. 2.

(Russell 2018)

Dead Dog Cave No. 3

This feature was first described in 1961 as a breakdown filled sink with noted air blowing out, which is usually an indicator of connecting to a large volume of cave. In later descriptions the feature is described as "a small crack", indicating perhaps that the breakdown had been removed. The feature was reportedly located in the vicinity of Dead Dog No. 1. There is no good location data on it. It is reported "destroyed 1971." (Russell 2018, Reddell & Russell 1961)

Dead Dog Cave No 4

Length 30 feet, Depth 7 feet.

The entrance was located at the bottom of a small sink about 400 feet WNW of Dead Dog Cave No. 1. The body-size entrance dropped vertically two and one-half feet to a trash and breakdown slope. Four feet below the entrance, a passage extended north for about 20 feet. Five feet from the entrance, a small crack dropped to a lower level, and can be followed back under the entrance to where the crack is partially blocked by breakdown. The cave was destroyed during widening of Steck Avenue about 1971. (Russell 2018)

Dead Dog Cave No. 5

Length unknown, Depth 35 feet.

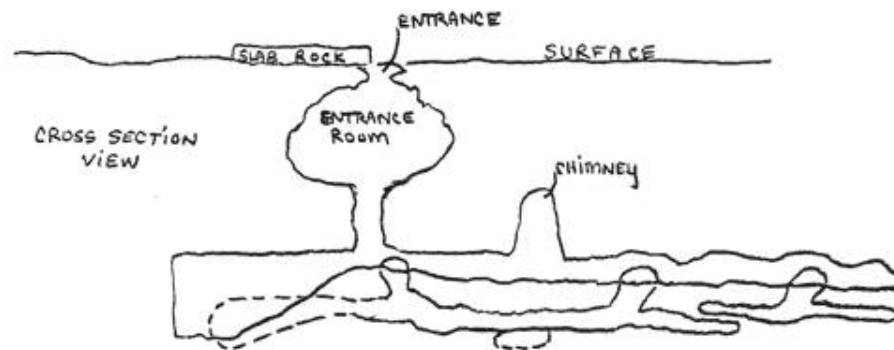
Also known as Bell Cave, the entrance to this cave was in a shallow sink, dropped 12 feet to an eight-foot long crawlway leading to a room 15 by 15 feet by four feet high. In the center of the room, a two by two-foot pit dropped 26 feet to a rubble floor. The pit enlarged to 10 by 15 feet at the bottom, and on one wall there was a large flowstone formation resembling a bell. Bill Russell and Dr. Bassett Maguire discovered the cave in December 1960. The cave was sketched by Mike Warton in December of 1970, and it was covered by construction in 1971. It is now located directly under a fireplug on Forest Mesa Drive. (Russell 2018, Reddell & Russell 1961)

Dead Dog Cave No. 6

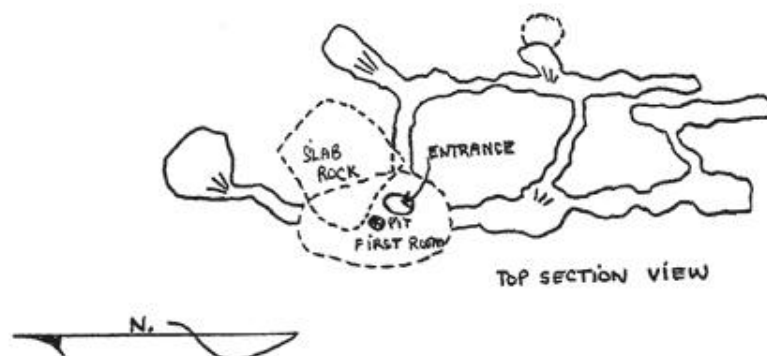
This cave is described as a small feature northwest of Dead Dog No. 2. There is no good description or location other than "near Dead Dog Cave" (Russell 2018)

Maps

Dead Dog I TRAP DOOR SPIDER CAVE

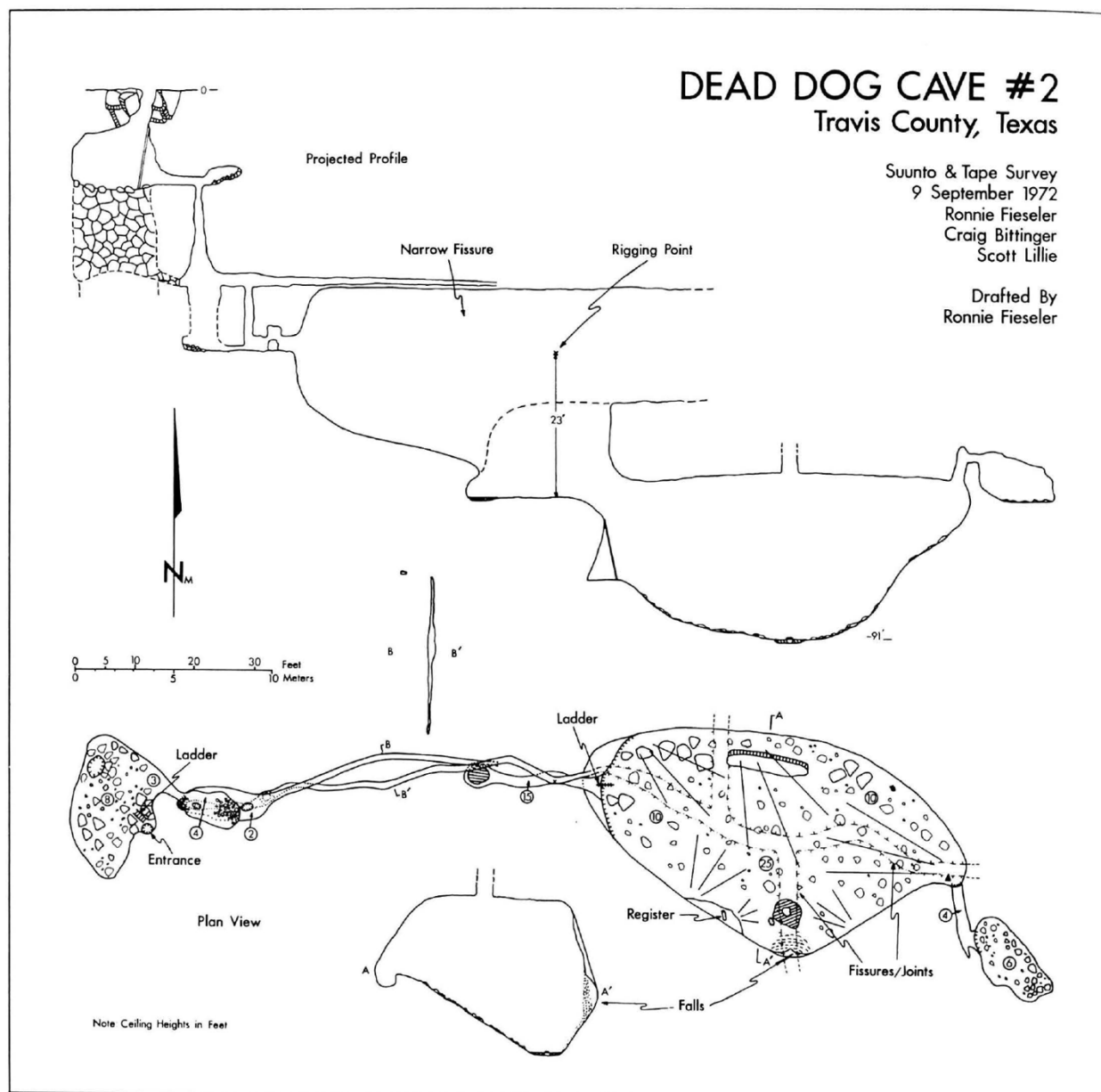


PLAN
TRAP DOOR SPIDER
CAVE BY MIKE
WARTON (NSS 12611)
DEC. 1970



Dead Dog Cave No 1

Map by Mike Warton provided by Peter Sprouse.



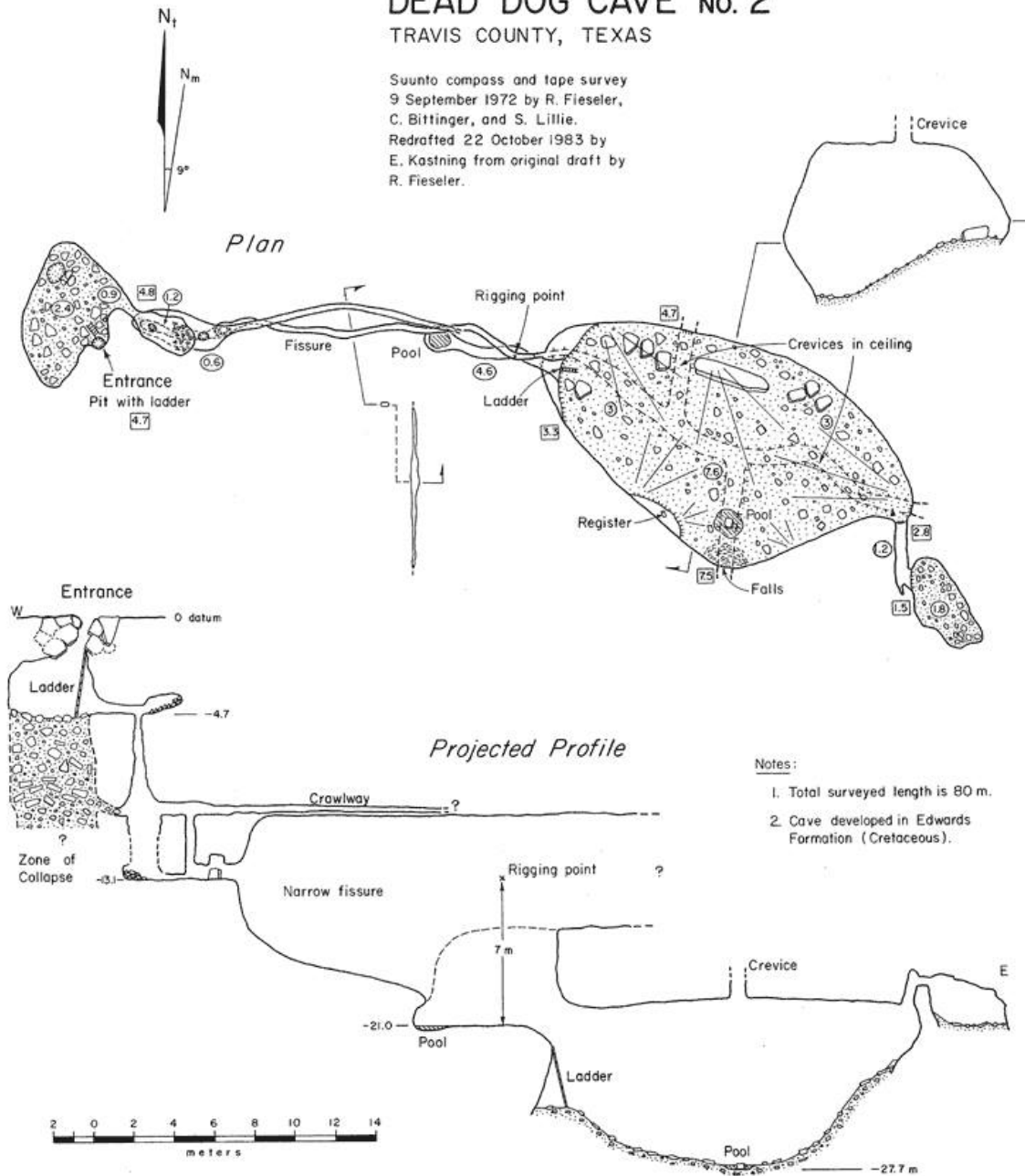
Dead Dog Cave No 2.

Map by Ronnie Feaseler Published in The Texas Caver September 1974, Volume 19, No. 9.

DEAD DOG CAVE No. 2

TRAVIS COUNTY, TEXAS

Suunto compass and tape survey
9 September 1972 by R. Fieseler,
C. Bittinger, and S. Lillie.
Redrafted 22 October 1983 by
E. Kastning from original draft by
R. Fieseler.



Dead Dog Cave No 2

Map by E. Kastning from original draft by Ronnie Fieseler, provided by Peter Sprouse.

Chronology

1958: Local veterinarian Dr. Wupperman informed cavers T.R. Evans and Bill Russell of a sinkhole with an opening along a north-south fracture, about 15 feet long and 8 feet wide. The sinkhole at first appeared to end in a dirt funnel, however they dug through dirt, loose rocks, and dog bones to reveal the cave, which contained an old army helmet, indicating the fill they had removed was recently deposited. (Russell 2018)

Circa 1961: Several years after the cave was discovered, a new landowner wanted the sink filled. The bulldozer operator was reluctant to drive near the sink, so he pushed the largest rocks he could find over the entrance. This did not fill the sink, and it was still possible to squeeze between the blocks, but enough smaller rocks had fallen in to completely plug the lower funnel. Fortunately, there was a small hole in the side of the sink that connected to a dome in the ceiling of the entrance room. This hole was now at floor level, and it was enlarged to provide access to the cave. (Russell 2018)

1961: A study titled *Regressive evolution in cave animals and it's mechanism* by Maguire, Bassett, Jr. is published. The study, in part, used a copepod from Dead Dog Cave No. 2 to illustrate the development of eye structure and amount of eye pigment as examples of regressive evolution in progress.

1963: Dead Dog Cave No. 2 is gated with a lockable manhole to protect important biological specimens (Goodbar 1963, Goodbar 1965)

1966: Don Broussard, on behalf of the Texas Speleological Association Conservation Committee, placed a cave register in the Big Room of Dead Dog Cave No. 2 (Russell 1966, Russell 2018)

1969: A small child was caught in Dead Dog Cave No. 2. Upon approval of the lawyer of the owner, the U.T. Grotto provided the money for the Texas Speleological Association Conservation Committee to build a new gate over the cave; to replace the previous one which had been removed when Austin Fire Department busted it out while attempting a cave rescue. The would-be cave rescue was in fact unnecessary, as no one was inside the cave, and it was speculated to have been a ruse by the neighborhood kids to regain access to the cave. (Wiley 1969, Fieseler 1976, Russell 2018)

1971: Dead Dog Cave No. 3 “destroyed” (Russell 2018)

Circa 1971: Dead Dog Cave No. 4 “destroyed” during widening of Steck Avenue.

1972: Cavers Ronnie Fieseler, Craig Bittinger, and Scott Lillie survey Dead Dog Cave No. 2 on September 9th and produce an accurate map. (Russell 2018)

1973: Three visiting French biospeleologists, Prof. Claude Delamare, Dr. Cristian Juberthie, and Madame Juberthie, from the Laboratoire Souterrain de Moulis, C. N. R. S. collected several terrestrial specimens from within Dead Dog Cave No. 2. (Fieseler 1973)

1974: On March 15 William Russell and Ronni Fieseler had a conference with the Texas Highway Department concerning Dead Dog Cave No. 2. They reported prospects were good for the cave being saved and protected. (Russell 1974)

1975: In February William Russell reports that a management agreement for Dead Dog Cave No. 2 has been reached with Texas Department of Transportation wherein the cave will be owned by TxDot and controlled by the Texas Speleological Association with the key to the cave held locally by the Grotto. (Vinson 1975)

1975: In August Alicia Wisener reports that Dead Dog Cave No. 2 is not yet gated. (Vinson 1975)

Circa 1976: U.T. Grotto Cavers gave TxDot a copy of the survey of Dead Dog Cave No. 2 by Ronnie Fieseler, Craig Bittinger, and Scott Lillie (made on 9 September 1972). The map indicated the cave was sufficiently far below the expressway to pose no construction problem. Nonetheless, to make sure they wouldn't lose a bulldozer while digging the Steck Avenue underpass, they brought out a drilling rig to check the accuracy of the map. The rig operator was skeptical about the existence of a cave but became a believer when the drill dropped into space with a great shudder. The cave was exactly where it was reported. Several more holes were drilled to confirm the map, and construction began.

There was an amusing incident just after the coreholes were drilled into the cave. The highway department asked the cavers to go into the cave and locate on the cave map where the drill holes came through into the cave. The highway engineer was on the surface with a portable generator, a long cord, and a light bulb, and after giving cavers time to reach the big room; he lowered the bulb down the core hole. At the crack, the cavers met a group from the Austin Natural Science Center, which delayed progress. Arriving at the Big Room, we were met by a flabbergasted high school student, trying to persuade his friends that yes, he had seen a light come out of the ceiling, bob up and down, and then go back into the ceiling. His friends were not convinced. (Russell 2018) [year established by cross referencing Fiesler 1976)

1976: Ronald Fiesler reports Dead Dog Cave No. 2 is well known and well visited. "Hardly a weekend goes by that the cave is not visited. Most of the people that enter this cave are local kids, in fact, Dead Dog Cave #2 (and probably the other Dead Dog Caves) has been a virtual "playground" for many years." (Fieseler 1976)

1977: The section of Mo-Pac passing over Dead Dog Cave begins construction in September of 1977, completing in June of 1981. (Wikipedia 2021)

1978: Sometime in the spring of 1978 TxDot installed a sewer line through an upper section of Dead Dog Cave No. 2. The sewer trench was cut into the rock with a large toothed wheel, and the bottom of the trench intersected the top of the dome that provided access to the lower cave. This construction left a large pile of rubble, mostly consisting of rock chips. (Russell 2018, Strickland 1978)

1978: On July 5th, a 14 year old boy, Jorg Schwitzgebel, was trapped when loose rubble, deposited from trenching for a utility line, avalanched and pinned him as he was exiting the cave. This simultaneously trapped two companions who were behind him. Fortunately, there was another member of the group at the entrance who brought help from the Austin Fire Department. Their efforts failed and he was extricated with a heroic effort by expert caver Pete Strickland who was assisted by William Russell and several other members of the U.T. Grotto. The rescue got lots of coverage in the Austin newspapers and on TV. Most accounts had a fireman rescuing the kids with maybe some mention of help from "local spelunkers" or the "University Spelunker Society". One newspaper ran a sketch purporting to be what the cave looked like, but it did not resemble the actual cave. Cavers at the time considered it par for the course. (Kunath 2007, Russell 2018, Strickland 1978)

Circa 1981: The expressway was finished, and another manhole cover was installed in the sidewalk of the MoPac access road to provide an entrance to the cave. (Russell 2018)

Circa 1981: A Luby's Cafeteria is constructed, and the entrances of Dead Dog Cave No. 1 and Dead Dog Cave No. 2 are covered over. The driveway connecting the Luby's to Mo-Pac is believed

to pass over the entrance to Dead Dog Cave No. 2, however the width of the driveway was about the same size as the width of the original sinkhole, so optimism remained that entrance was either just north, or just south of the driveway. Regardless of optimism, the entire area had been heavily graded and in a world before GPS the exact location was lost. (Russell personal communication, Russell 2018)

Under current City of Austin regulations, the development would not be allowed to destroy the cave entrance. (http://austintexas.gov/sites/default/files/files/Watershed/watershed_ordinance/wpo_CEF_buuffer_maintenance_rule.pdf retrieved 2021)

2001: Sometime around April a company installing fiber optic along MoPac began drilling a horizontal 20-inch hole beneath the sidewalk along the west side of MoPac, unaware that they would have to drill through the entrance sink to Dead Dog Cave. Drilling southward from just north of Steck Avenue, they lost their drilling implements about 100 feet north of the driveway thought to be above the Dead Dog Cave entrance sink. Drilling from the south encountered several voids, and they lost circulation, but the construction workers continued to drill their twenty-inch hole and let the drill water wash the cuttings into the voids. If such tailings were to have entered the Dead Dog Cave stream, this could have adversely affected cave life. Unfortunately, there is little environmental review of utility construction, and what can be done to prevent similar problems in the future is unclear. (Russell 2018)

2015: Justin Shaw and Fernando Hernandez observe that the entrance of Dead Dog Cave No. 2 is beginning to open itself up. An area of unfinished concrete roughly 5 feet long by 1.5 feet had eroded itself visible. There was an opening in this concrete 2 feet long by 2 to 4 inches wide, which was blowing a noticeable breeze that contained elevated levels of CO₂. This airflow is indicative of a significant cave volume, and the elevated CO₂ was similar to levels seen seasonally in other significant local caves. The opening appeared to be the result of wood that had rotted away. You could shine a light down the opening in the concrete and see into a sizeable cave chamber. Justin Shaw communicated directly with William Russell about this observation and William was of the opinion that this was the entrance of Dead Dog Cave No. 2.

2018: Justin Shaw visits the entrance of Dead Dog Cave No. 2 and it appears unchanged from how it looked in 2015.

2021: A manhole is discovered about 18 inches below grade, immediately adjacent to the previously exposed rough concrete with the opening blowing air. The cover on the manhole appears identical to the one seen in the photograph by Terry Rains of Tommy Phillips at the entrance of Dead Dog Cave No. 2 in June of 1964.

Biology

Dead Dog Cave No. 1

Cicurina varians (Gertsch & Mulaik, 1940) - Cave Spider (Dean 2016)

Cryptachaea porter (Banks, 1896) - Cave Spider (Dean 2016)

Dead Dog Cave No. 2

Paracyclops fimbriatus (S. Fischer) - Copepod (Reddell 1969)

Stygobromus russelli (J. Holsinger, 1967) - Amphipod (Reddell 1969)
[aka *Stygonectes russelli* (J. Holsinger, 1967)]



On the left is the entrance to Dead Dog Cave No. 2 as it appeared in August of 2015 and October of 2018.



On the Right is the entrance to Dead Dog Cave No. 2 as it appears in August of 2021.

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