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THE CAVES OF COMAL COUNTY

Edited by James R. Reddell

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GEOLOGY

Comal County is in south-central Texas. The average annual precipitation is about 31 inches and the mean annual temperature is 68°. Most of the county is on the dissected edge of the Edwards Plateau but a narrow strip a few miles wide along the southeast border lies on the Gulf Coastal Plain. Maximum relief is a little over 900 feet but seldom exceeds 250 feet locally. The Guadalupe River, which follows a meandering path from northwest to southeast across the northern half, drains most of the county. Cibolo Creek, on the Comal-Bexar County line, drains the southwestern part. The county is cut by a series of northeast-southwest trending faults which are part of the Balcones Fault System. Almost all of these faults are normal and downthrown to the southeast. Maximum displacement is about 600 feet but averages only 200 feet.

Regional dip is to the southeast and is generally less than one degree. As a result of the faulting, however, the dip varies locally but never exceeds a few degrees.

Except for one small intrusive outcrop in the extreme west corner of the county and the Pleistocene alluvium along the rivers, all of the outcropping rocks in Comal County are of Cretaceous age.

Cow Creek Formation.- This rock unit, together with the overlying Hensel sand, outcrops in a number of irregular patches in the extreme northwest part of the county. The Cow Creek is a massive, fossiliferous limestone about 75 feet thick. No caves are known to occur in it but at least one spring issues from it which at its peak flows up to 2000 gallons per minute.

Glen Rose Formation.- Hydrologists have arbitrarily divided the Glen Rose into two units. The boundary is a well-known fossil horizon just below the middle of the formation. The division is a lithologic one, however, as reflected by the extreme hydrologic differences between the two units. Thickness of the entire formation ranges from 650 feet in the northern part of the county to about 1200 feet in the southern part.

The lower unit is more massive and contains thicker beds of limestone and fewer marly beds than the upper. It outcrops mostly in the northwestern third of the county. Numerous large and small springs issue from this lower unit and it also contains many sinks and caves. An example of a spring-cave combination is Honey Creek Spring which comes out of Honey Creek Water Cave seven miles northwest of Bulverde in western Comal County. This spring flows up to 1500 gallons per minute from the 1000 foot long cave.

The upper unit of the Glen Rose outcrops in a highly irregular northeast-southwest trending band across the central part of the county. A few very small springs issue from this upper unit and some groundwater is recovered from wells but it is not a main water-bearing unit. It is surprising, then, that it should contain the two largest caves in the county, Natural Bridge Caverns and Bracken Bat Cave. Both caves are formed entirely in the upper Glen Rose except for their entrances. The extremely flat roof of Bracken is at the contact of the Glen Rose with the overlying formation.

The roof of Natural Bridge Caverns reaches down into the Glen Rose and may extend up into the overlying formation in the dome at the Hall of the Mountain Kings. For a discussion of the stratigraphic relation of the overlying formation see the description of Natural Bridge Caverns. An interesting problem presents itself in the interpretation of the development of these two caves. Why has solution favored the marly Glen Rose and apparently avoided the overlying crystalline unit?

Walnut Formation.- North of Comal County the Walnut Formation consists of two members, a lower thick-bedded limestone and an upper clay unit. The clay member has been observed in the extreme northeastern part of the county where it is only a few feet thick. It is not known if the lower member extends into Comal County or if its stratigraphic position is filled by the upper Glen Rose, as it is farther to the southwest.

Edwards Formation.- The Edwards ranges from 350 to 500 feet thick and thins to the north. Its outcrop area is mostly in the southeastern part of the county. It is a hard, massive limestone and is known throughout Central Texas for its numerous caves and springs. The Edwards is the primary aquifer for a large area in south central Texas and all of its contained groundwater occurs in caves. Comal Springs in the town of New Braunfels issues from the Edwards and is the largest spring in the Southwest, flowing 210 million gallons a day. Some prominent caves in the Edwards in Comal County are Brehmmer Cave, R.R. Corith Cave, and Little Gem Cave.

Formations above the Edwards are, in ascending order, Georgetown, Del Rio, Buda, Eagle Ford, Austin, and Anacacho or Taylor. The Georgetown, Buda, and Austin are limestones and caves are known to occur in them in other areas. Their outcrop area in Comal County is small, however, and they are not known to contain any caves.

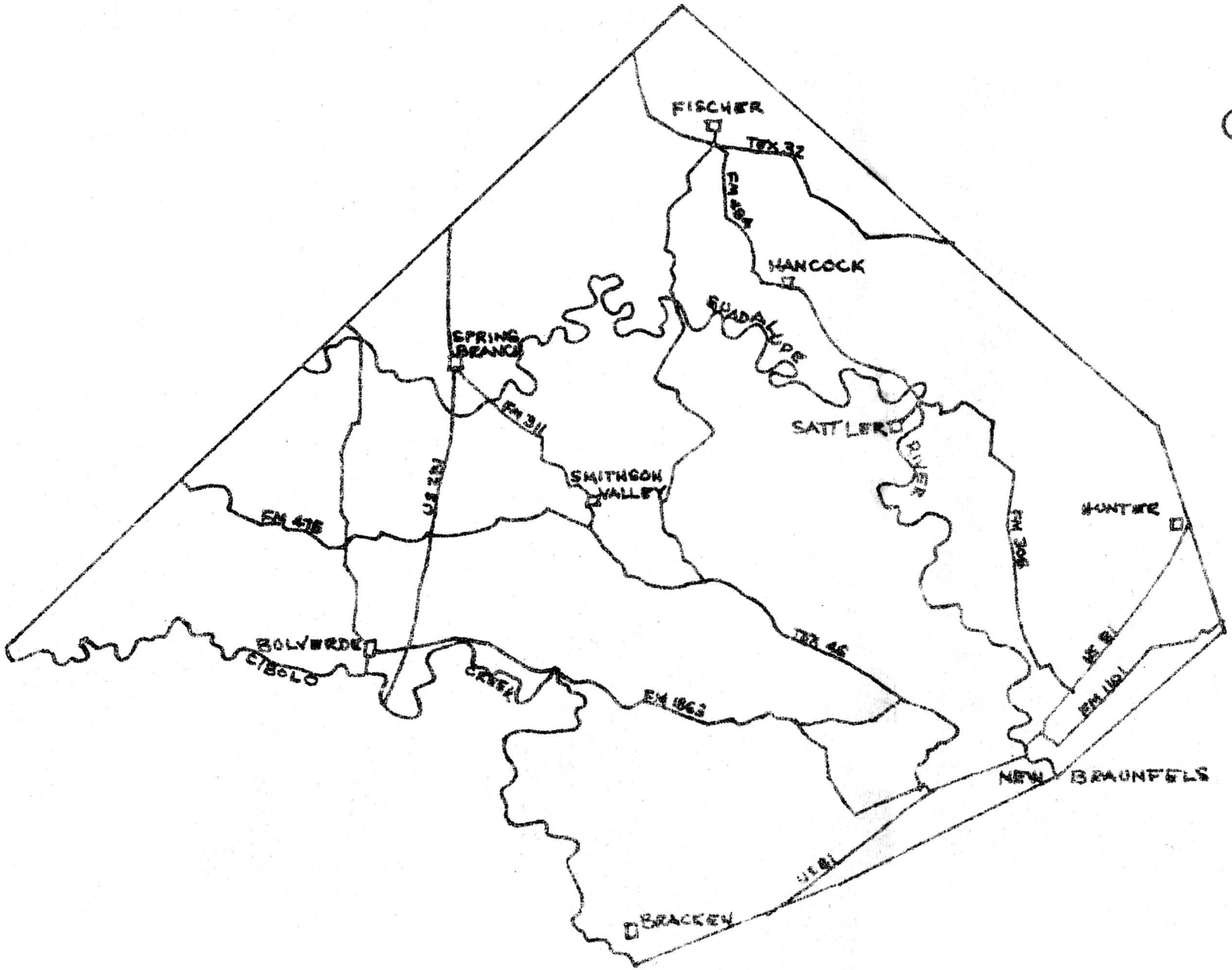
Although the caves of Comal County have been fairly well covered distributionally and descriptively, many interesting problems still await solution, among which is the relation between the hydrologic system and the development of the caves. In this region where the groundwater intake area for the aquifers in Comal County extends over a considerable distance beyond the county and where numerous and extensive faults complicate the issue, the study of caves can be of great importance. Also awaiting study is the biology of the caves of the area. The only study thus far made of the caves has been rather concentrated on a few well-known caves. Because of the position of the county along the fault zone and because it lies between the distinct faunal zones of Hays County and Bexar-Medina Counties, comprehensive collections in many caves is badly needed. In general, perhaps more than in most areas, the work in this county has been that of the location and description of the caves; the scientific study has only begun.

Acknowledgements: Acknowledgements are here given to the following biologists for their identification of invertebrate fauna for the Texas Speleological Survey: millipeds - Dr. Nell B. Causey, Louisiana State University; spiders - Dr. W.J. Gertsch, American Museum of Natural History; carabid and catopid beetles - Dr. Thomas C. Barr, Jr., University of Kentucky; other beetles - Dr. Horace R. Burke, Texas A & M University; cave crickets - Dr. Theodore H. Hubbell, University of Michigan; snails- Dr. Leslie Hubricht, Meridian, Mississippi; thysanura - Dr. Pedro Wygodzinsky; American Museum of Natural History; phalangids - Dr. Clarence Goodnight, Purdue University; earthworms - Dr. G.E. Gates, Bangor, Maine; and crayfish - Dr. Horton H. Hobbs, United States National Museum. I also wish to express my appreciation to Miss Dorothy Burr, University of Texas, for obtaining information on archeology of caves in the county; and to members of the Alamo Grotto for their cooperation in supply information on caves not visited by members of the Survey.

COMAL COUNTY

CAVE LOCATION MAP

INDICATES SINGLE CAVE
INDICATES GROUP OF CAVES
NOS. KEYED TO INDEX



CRETACEOUS FORMATIONS ABOVE EDWARDS

EDWARDS FORMATION

UPPER GLEN ROSE FORMAT

LOWER GLENROSE FORMAT

COW CREEK & HENSEL FORM

FAULT, U=UPTHROWN

GEOLOGIC MAP OF COMAL COUNTY

(AFTER W.O. GEORGE, USGS WATE SUPPLY PAPER NO. 1138, 1952)

INDEX TO THE CAVES OF COMAL COUNTY

52. Cedar Sink	10'	20'	18
53. Rinky Dink Sink	8'	15'	51
54. Heidemann Ranch Cave	100'+	20'	30
55. Natural Bridge Caverns	7500'+	250'	39
56. Bracken Bat Cave	1000'	100'	10
57. Grandaddy Cave	25'	30'	23
58. Trash Hole	?	15'	53
59. Vogel's Sink	40'	63'	54
60. Little Gem Cave No. 1	150'	60'	37
61. Little Gem Cave No. 2	50'	10'	38
62. Heidrich Cave	70'	50'	30
63. Brehmmer Cave	380'	30'	14
64. Little Brehmmer-Heidrich Cave	150'	20'	35
65. Bindseil's Wind Tunnel	30'	6'	9
Borchers Cave	40'	15'	9
Core Hole	?	?	20
R.R. Corith Caves	300' (?)	95'	50

DOUBTFUL CAVES AND SHELTERS

1a. S.S. Sink	8'	5'	59
2a. The Oblate Site	-	-	60
3a. Dierk Cave No. 2	?	10'	58
4a. Dierk Cave No. 3	?	8'	58
5a. Dierk Shelter Caves	-	-	60
6a. Klar's Sink	?	10'	59
7a. Fair Oaks Ranch Sinks	-	-	58
8a. Kappelman Uncave	5'	6'	58
9a. Zuercher Cave No. 2	?	10'	59
10a. Zuercher Cave No. 3	?	10'	59

ALTERNATE NAMES

Bat Cave - Bracken Bat Cave
Brehmmer-Heidrich Cave - Brehmmer Cave, Little Brehmmer-Heidrich Cave
Cibolo Cave - Bracken Bat Cave
Cibolo Creek Cave - Bracken Bat Cave
Corith Cavern - R.R. Corith Caves
Dead Horse Sink - Tonne Sink
Dierk Cave No. 1? - Goat Cave
Grosser's Mud Hole - Grosser's Sink
Heidrich Cave - Brehmmer Cave
Spring Branch Cave No. 1 - Plumly Cave
Spring Branch Cave No. 2 - Spring Branch Cave
Wilson Cave - Dinosaur Cave

NOTE: BOYETT'S CAVE is frequently placed in Comal County. It lies, however, just north of the county line in Hays County.
CIBOLO CREEK CAVE is located on the Bexar-Comal County line. It has been treated in The Caves of Bexar County.

BAD WEATHER PIT — Comal County (#19)

Boerne 15' Quadrangle

Owner: Bruno Klar

Description: The entrance is 4' in diameter and is located at the bottom and to one side of a 15' deep sheer-sided depression. From the entrance it drops 30' to a rock-covered floor. To one side a small, 7' pit ends in breakdown.

Ref: Terry Raines

BEAL RANCH CAVE — Comal County (#42)

Hunter 15' Quadrangle

Owner: Beal Ranch

Description: This cave is a 200'-300' long, very rough crawl. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

BEAR CREEK CAVE — Comal County (#41)

Hunter 15' Quadrangle

Owner: Beal Ranch (?)

Description: The entrance to this cave is located near a large spring emptying into Bear Creek. A 40' wide, 10' high opening near the level of the creek leads into a silt-floored passage about 140' long which gradually fills with silt. It appears to have been at one time the outlet for the spring which now issues from nearby crevices. Local reports indicate that the cave is quite extensive and was entered years ago. Excavation of the fill might be of considerable interest. About 60' from the mouth of the cave a crawl to right extends for about 100' before ending in a flowstone block. What appears to be a stream passage may be seen beyond the block, but dynamite would be required to progress further. (See map, page 8)

Biology: A small collection of invertebrates was made in the cave on Feb. 24, 1963, by Bill Russell. These have been identified as a troglophilic spider, Cicurina varians Gertsch & Mulaik, and a milliped, Aniulus sp.

History: Bob Benfer, Mike Pfeiffer, and Philip Russell attempted to dig through the fill at the end, but were unsuccessful. In the process of their excavation many bones were uncovered, including the femur of a bear. The cave was mapped by Harry Miles, Philip Russell, Bob Benfer, and Alice Hirsch Benfer of the University of Texas Grotto.

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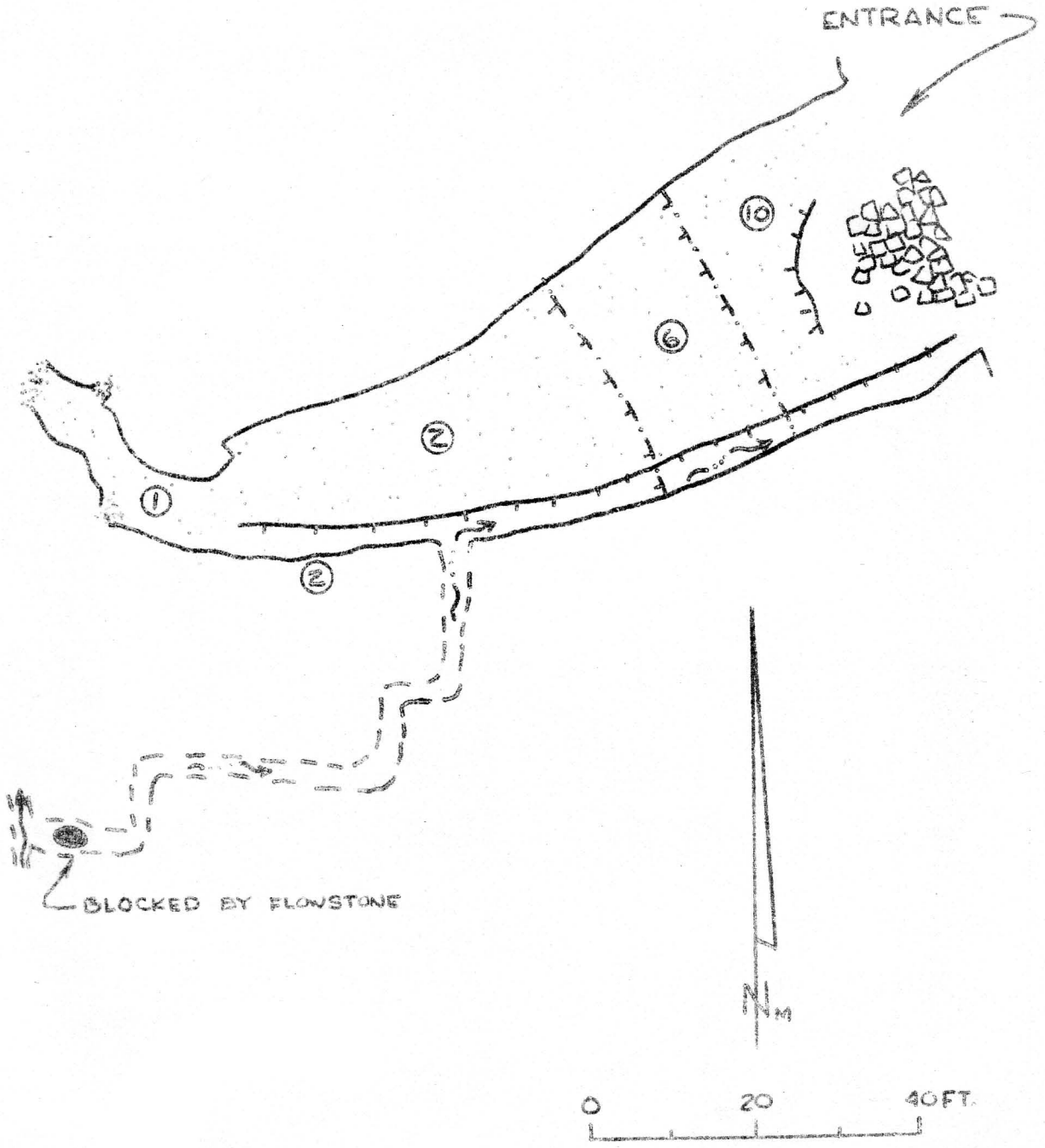
Ref: TSS files



BEAR CREEK CAVE

COMAL CO., TEXAS
BRUNTON & TAPE SURVEY
BY UTSS

BEAR CREEK SHELTER CAVE — Comal County (#39)

Hunter 15' Quadrangle

Owner: Beal Ranch (?)

Description: A 20' x 20' shelter-type entrance leads to a crawlway which extends 40' before ending. There is a 12' long upper level crawl.

Ref: TSS files

BENDER'S CAVE — Comal County (#4)

Smithson Valley 15'

Owner: Arno Bartels

Description: The cave consists of a 20' wide walking passage with 2' of head room above the water level. About 600' from the entrance the passage splits into three crawlways which have never been explored to their end. The estimated length of the cave so far as it has been explored is 1/2 mile. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

BINDSEIL'S WIND TUNNEL — Comal County (#65)

Bat Cave 7.5' Quadrangle

Owner: Albert Bindseil

Description: The entrance is a 5' in diameter shaft which was originally dug to a depth of 60', but is now filled to within 6' of the surface. A natural cave was encountered at about 6' and may still be entered. A 5' wide, 8" high passage extends for about 30' before becoming blocked by a small natural bridge. Several small formations had to be broken before this distance could be reached. The cave shows promise since a very strong current of cold air issues from the cave. It was explored in January, 1963, by Bill Russell and Terry Raines of the University of Texas Grotto.

Bibliography: Anonymous. "News: University of Texas, N.S.S." The Texas Caver Vol. VIII, No. 2, p. 17. February, 1963.

Ref: Terry Raines

BORCHERS CAVE — Comal County

Quadrangle:

Owner: Iris Borchers

Description: A man-size hole on a hill drops 10' into a 30' in diameter room. A second level drops 5' to a 10' in diameter room. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

BRACKEN BAT CAVE (BRACKEN CAVE, BAT CAVE, CIBOLO CAVE, CIBOLO CREEK CAVE) Comal County (#56)

Bat Cave 7.5' Quadrangle

Owner: E.W. Marbach; mgr. Arnold G. Reeh

Description: A shallow 100' in diameter collapse sink slopes steeply downward to the south-southeast for several hundred feet to a depth of 96'. A tripod sits at the entrance, to which is attached a cable which runs into the cave for use in removing guano. From the floor of the entrance slope a 75' wide, 30' high passage extends for about 300', at which point a large breakdown slope rises to within a few feet of the ceiling. This forms a hill about 30' high and 100' in diameter, dropping off steeply on all sides. On the right side, at the base of the hill a small side crawl extends for about 50' into the wall before becoming too small. Beyond the "hill" a slope leads down into a 100' in diameter dome room. A shaft to expedite the removal of guano from the cave has been sunk into the center of the dome. A second, smaller dome about 70' high on one side of the room leads to what appears to be a passage, but actually goes nowhere. Rotten wooden ladders placed at this dome many years ago still remain in place. (See map, page 15)

Biology: The cave contains one of the largest colonies of the Mexican Free-Tailed Bat, Tadarida brasiliensis mexicana (Saussure), in the world. For this reason the cave has received considerable attention and has been known since at least the middle of the 19th century. It is not possible to include all of the information which has been published on the cave, because of the limitations of space, but an attempt is made to summarize the more important facts relating to the biology of the cave. The colony of bats in the cave was estimated to contain 20 million individuals by Eads, Wiseman, and Menzies (1957). A study of the Mexican Free-Tailed Bat was made by R.B. Eads, J.S. Wiseman, and G.C. Menzies of the Bureau of Laboratories of the Texas State Department of Health. Their observations on this bat in Bracken Bat Cave are as follows: "Our observations of Bracken Cave over a 3 year period supplemented by numerous visits to the other free-tailed bat retreats indicated a fairly regular movement pattern. There have been no discernable bats present during the latter part of November, December, January and most of February. Toward the end of February the first few thousand arrivals are noted and the numbers increase steadily during March and April. During May and the greater part of June the numbers appear to remain more or less constant. The main body of the colony begins its exodus in September with the old individuals usually leaving first. Colony size fluctuation is great during October possibly due to migrants from more northerly areas stopping over." (Eads, Wiseman and Menzies, 1957). For information relating to the banding and capture of bats in this cave see the papers by Glass (1958, 1959) and Eads, et al (1955, 1957). Although the majority of the population of bats in the cave are Mexican-Free-Tailed Bats, the Little Brown or Cave Bat, Myotis velifer incautus (Allen) is also found. Bats from the cave have been used in studies relating to the incidence of rabies among wildlife in Texas. The results of these studies have been published in papers by Irons (1955), Irons, et al (1957), and Burns, et al (1958). As anyone who has visited the cave during the summer is aware, the cave's invertebrate population is large. Almost all of the invertebrates found in the cave are either bat ectoparasites or guano-associated arthropods. No troglobites are reported from the cave; it is postulated that the extreme changes in temperature associated with the presence and absence of the bats and the decaying of the guano has prevented the establishment of a population of troglobites in the cave. A number of collections of invertebrates have been made in the cave.

The first recorded collections from the cave were made in the late summer of 1940 when Glen M. Kohls and William L. Jellison made a field trip to Texa for the purpose of collecting ticks and other arthropods. At that time the following specimens were collected and identified (Kohls and Jellison, 1948)

Bats
Tadarida brasiliensis mexicana (Saussure)
Myotis velifer incautus (Allen)
Ticks
Ornithodoros stageri Cooley and Kohls (on guano, parasitic on bats)
Mites
Liponyssinae (on bats)
Beetles
Alphitobius diaperinus (Panz.) (on guano)
Trox suberosus F. (on guano)
Dermestes carnivorus F. (very numerous on guano. Large numbers clustered around and feeding on dead bats.)
Streblids
Trichobius major Coquillett (on bats)
Fleas
Sternopsylla texana (Fox) (on bats)
Myodopsylla collinsi Kohls

In 1954 and 1956 R.B. Eads made collections of invertebrates in the cave. In 1954 a chigger mite, Speleocola tadarida Lipovsky, was taken from a Mexican Free-Tailed Bat; while on April 17, 1956, the common harvestman, Leibonum townsendi Weeds, was collected. Other collections include additional beetles, probably of the same species as above, and the running spider, Herpyllus blackwalli Thorell. A pseudoscorpion of the family Chernetidae was collected by Hugh L. Keegan on December 10, 1942, in the cave and was described as a new species by Turk (1949) as Dinocheirus stercoreus. J.S. Wiseman on July 30, 1954, and R.B. Eads on April 17, 1956, collected topotypic material and sent it to C. Clayton Hoff for identification. After examination he determined that the material is representative of a new genu and he redescribed it as Tejachernes stercoreus. Small collections of invertebrates were made in January, 1963; David McKenzie on Jan. 19, 1963; and James Reddell on January 20, 1963. These have been identified as 2 species of pseudoscorpion, spiders (Cicurina varians Gertsch & Mulaik and Drassyllus sp.), and beetles (Dermestes carnivorus F., Alphitobius diaperinus (Panz.) and an unidentified species of the family Histeridae).

Meteorology: Robert Henshaw (1960) has made a study of the effects of temperature on Mexican Free-Tailed Bats in Bracken Bat Cave. Only the temperature and other pertinent data is given here. It is sufficient to state that as the temperature of the cave increased the bats became more and more sprea out until some were at the edge of the entrance, and that by the end of the season a noticable percentage of bats were always flying, apparently in an attempt to keep cool. The following chart is given ldirectly from Henshaw:

Month	Temperature °F.		Precipitation, in.		Relative	Cave temperature and Dates Taken	
	Avg.	Dep.	Avg.	Dep.	Humidity %		
May ——	75	-0.9	2	-1.9	68	95	24 May
June ——	83	+0.8	3.4	+0.2	67	97	14 June
						98	28 June
July ——	84.5	+0.3	7.4	+5.5	66	99	12 July

History: Bracken Bat Cave has one of the oldest recorded histories of any cave in the state and it is unfortunate that more time could not have been spent in tracing the cave's history for this report. One of the earliest reports in our files on the cave is from Campbell's book, Bats, Mosquitoes and Dolla from which the following quotation is taken: "There is a cave only 27 miles northwest from San Antonio that has been worked since the year 1856. The ow who owns also another cave, sometime ago wrote the author a letter in which he saws: 'I work two bat caves, one 19 miles from Sabinal, the other seven miles from here (Bracken). They are known as the Cibolo cave and the Frio cave. The Frio cave is a very large one, and yields about 80 tons of guano annually, but I lose about 20 tons on account of its enormous size and some colossal boulders, which prevent gathering all of the deposit. The Cibolo cave yields on an average of 75 tons annually; it is much smaller than the Frio cave, the bats are not so scattered, and I have a smaller area to work. I have, however, the same trouble in this cave that I do in the other, viz., large rocks which prevent me from gathering the entire deposit. However, in a wet year, when all water holes are full, and there is plenty of water, I count on a heavy car load more from each cave. You know the reason why. I make large shipments to Crystal Spring, Jackson, and Hazelhurst, Miss., thou sometimes I have shipped the entire crop of my Cibolo cave to Laredo, Texas, on account of an extensive onion industry developed there." (Campbell, p. 163) The cave has been sporadically mined for guano from the time of the Civil War to the present. During World War II Dr. Lytle Adams of the famed Bat-Bomb Project examined the cave and captured bats for eventual use in the war. The account of this project has been published in Mohr (1948). In recent years the cave has been visited countless times by tourists, biologists, and spelunkers. Its impressiveness, its huge bat colony, and the bat flight each summer evening have attracted thousands to the cave. It was mapped on January 19-20, 1963, by Bill Russell, Terry Raines, David McKenzie, and James Reddell of the University of Texas Grotto.

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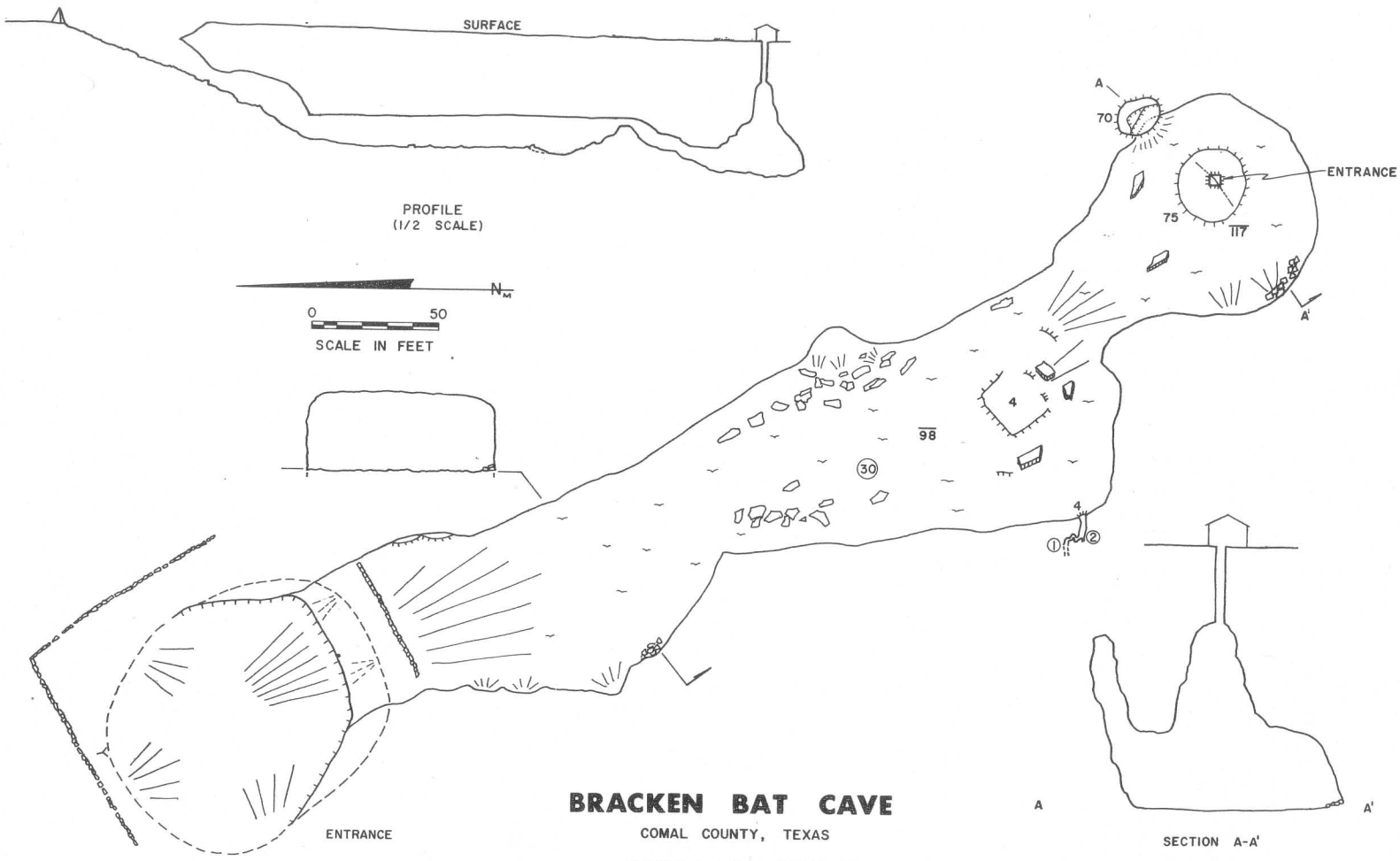
Widener, Donald L., ed. Texas Cave Survey, Vol. II, No. 1, pp. 59 and 61.
Ref: TSS files

BREHMMER CAVE (BREHMMER-HELDRICH CAVE, HEIDRICH CAVE) Comal County (#63)

New Braunfels 7.5' Quadrangle

Owner: Henry Stahl

Description: The entrance to the cave is about 10' wide and 4' high and is located among several large boulders. About 40' from the entrance a short drop admits one into the main room of the cave. This is actually an enlarged portion of the passage and is about 150' long, 40' wide, and 10'-15' high. An artificial shaft has been blasted into this room to facilitate the removal of guano. Several holes on the right side of the room lead down into a passage paralleling the main passage on a slightly lower level. It appears to be where breakdown on the floor of the main passage has sealed off the sides of the room to form a parallel passage and several small rooms. About 200' from the entrance a small drop leads into another room about 30' wide and 100' long. To the left it goes down a cascade, through some formations, and ends in a small room, while to the right it extends up and into a room about 20' x 30'. A small crawlway at the end of the room goes about 50' before ending. Although Pat White reported that the formations in the cave were still quite beautiful in 1948, there appears to have been much additional vandalism so that any beauty the cave may once have had is largely gone now. There is much guano on the floor and the presence of many bats, fleas, ticks, and rattlesnakes somewhat offset the interest of the cave. It is possible that the cave was once much larger, but that subsequent collapse has resulted in the fill of a large portion of the cave.



BRACKEN BAT CAVE

COMAL COUNTY, TEXAS

BRUNTON & TAPE SURVEY BY
THE UNIVERSITY OF TEXAS GROTTO

1963

Biology: Because of its proximity to New Braunfels, its large bat colony, and the cave's size it has received more biological attention than any cave in the county, with the exception of Bracken Bat Cave. A spider described from "Heidrich Cave" and collected on June 20, 1938, is almost certainly from this cave. It was described as Leptoneta coeca by Chamberlin and Ivie (1948). Glen M. Kohls and William L. Jellison visited the cave in the late summer of 1940 and made a collection in the cave. A list of their material follows (Kohls and Jellison, 1948):

Bats
Myotis velifer incautus
Ticks
Ornithodoros yumatensis Cooley and Kohls (on guano and in crevices)
Mites
Spinturnix grossus (Banks)
Liponyssinae sp. (on bats)
Fleas
Myodopsylla collinsi Kohls (on bats)
Streblids
Trichobius major Coquillett (on bats)
Spiders
Gaucelmus augustinus Keyserling
Cicurina sp.
Cave crickets
Ceuthophilus conicaudus Hubbell
Ceuthophilus cunicularis Hubbell

It should be noted here that the identification of the mite, Spinturnix grossus, above is in error. This has been correctly identified by Rudnick (1960) as Spinturnix carloshoffmanni Hoffmann. Other biological work done in the cave includes the collection of Ornithodoros yumatensis by R.B. Eads on March 14, 1955, and of a black scorpion, Vejovis mexicanus Koch, on May 5, 1955. Craneflies have been observed to rest on the walls of the cave and rattlesnakes are common in the entrance area. A small collection of invertebrates was made by David McKenzie on January 19, 1963. This included two spiders, Gaucelmus augustinus Keyserling and Cicurina varians Gertsch & Mulaik; troglobitic phalangids; both epigean and troglobitic isopods (Trichoniscidae); cave crickets, Ceuthophilus cunicularis Hubbell; a troglophilic catopid beetle, Ptomaphagus (Adelops) sp.; and staphylinid beetles. Further collection might prove of interest, especially in the areas away from the bat colony.

History: The cave is one of the best-known in the state and the shaft is purported to have been excavated during the Civil War for the purpose of removi guano for the making of nitrates to use in gunpowder. The cave has been visited by local people innumerable times and has been frequented by members of the University of Texas Grotto since 1950, and more recently by members of the Alamo Grotto and the St. Mary's Speleological Society. A rough, incomplete map of the cave was made by members of the University of Texas Grott in January, 1963, but is not available for this report.

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Widener, Donald L., ed. Texas Cave Survey, Vol. II, No. 1, p. 59.

Ref: TSS files

CALMBACH CAVE — Comal County (#15)

Boerne 15' Quadrangle

Owner: Alvin Calmbach

Description: A 50' pit-type entrance leads into a passage 18' high and 20' wide which extends for 200'. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

CAMP BULLIS CAVE NO. 1 — Comal County (#29)

Otis Ridge 7.5' Quadrangle

Owner: U.S. Government

Description: A small hole located in a large, shallow sink had to be enlarged to allow entrance. This drops about 12' to a narrow passage which after a

few feet enlarged to form a high fissure 4'-6' wide. The cave ends, after several small drops, in a high room about 20' in diameter. It was explored in 1960 by Bill Russell of the University of Texas Grotto.

Ref: TSS files

CAMP BULLIS CAVE NO. 2 — Comal County (#28)

Otis Ridge 7.5' Quadrangle

Owner: U.S. Government

Description: The cave is entered by two large collapse sinks, each about 15'-2 in diameter and 20' deep, but which can be climbed. A crawlway conne cts th two, which lie about 50' apart. From the northwestern of the two sinks a crawling passage leads into a walking-crawling passage about 150' long. The main passage ends, but a very low crawl to the left is encountered. At time this crawl is blocked with gravel and requires digging to negotiate. After about 25' the ceiling rises into a passage-like room about 20' wide, 30' hi and 60' long with large breakdown slabs in the center. No passages were fo leading from this room and when it was explored in 1960 by Dick Smith, Pats Watson Baker, James Reddell, and other members of the University of Texas Grotto it was found to have slightly bad air.

Ref: TSS files

CAMP BULLIS CAVE NO. 3 — Comal County (#30)

Otis Ridge 7.5' Quadrangle

Owner: U.S. Government

Description: The entrance to the cave is a 5' in diameter hole located in a sh sink into which a small draw runs. A 19' drop leads into a low room about 20' in diameter. At the far left side of the room a 3' wide crack drops 8'. At the bottom of this the crack extends for 20' to a small room. In the cen of this room a pit drops 43' to a point where it is filled with water. A spider, Tetragnatha sp., was collected by Bill Russell in March, 1963. At t time also the cave was explored and a sketch map drawn by Bill Russell and Terry Raines. (See map, page 19)

Ref: TSS files

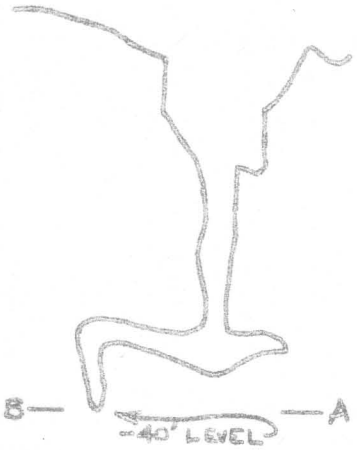
CEDAR SINK — Comal County (52)

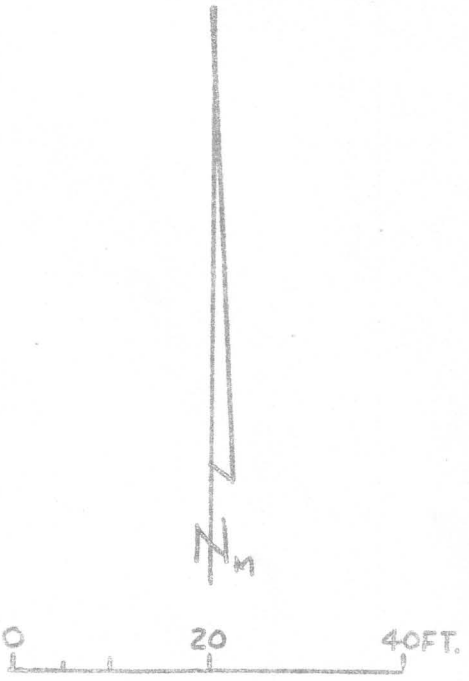
Bat Cave 7.5' Quadrangle

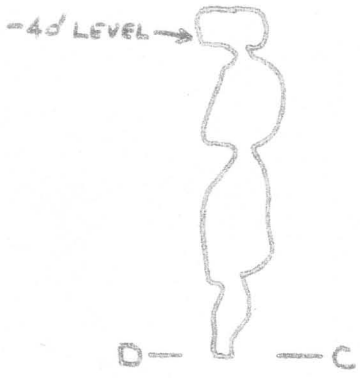
Owner: Mrs. Harry Heidemann

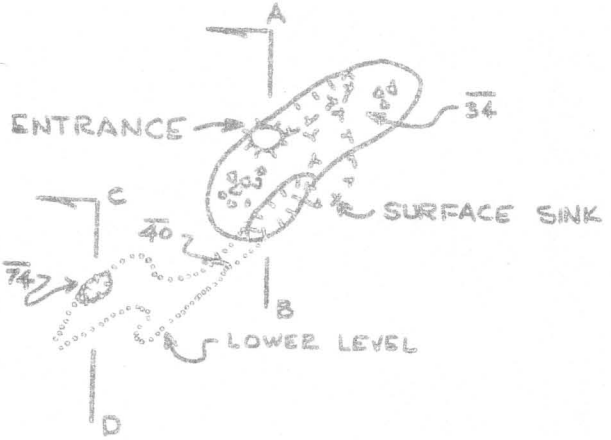
Description: A $2\frac{1}{2}$' in diameter entrance drops 18' into a 3' x 8', dirt-floored room. No passages lead from the room. It was explored by Orion Knox, Jr.

Ref: Orion Knox, Jr.









CAMP BULLIS CAVE #3

COMAL CO., TEXAS

SKETCHED BY TSS, 3-63

CORE HOLE — Comal County

Quadrangle:

Owner:

Description: The cave was hit while coring test holes at the site of the Canyo Reservoir. When visited by Orion Knox, Al Brandt, Leonard Clark, Jimmie Hey Preston Knodell, and Niel Wielding on March 4, 1961, there was 2½' of water at the bottom of the hole. The floor of the bottom slants downward. An air pocket could be reached a few feet away by ducking under a short siphon. It was not possible to find another air pocket, but the floor continued to slop downward and away on all sides. So far as it is known no further visits to the cave have been made.

Ref: Orion Knox, Jr.

DIERK CAVE NO. 4 — Comal County (#11)

Boerne 15' Quadrangle

Owner: Dierk Ranch

Description: This is an 80' deep sinkhole which bells out to 10' in diameter and required ropework. Although placed by Widener in Kendall County, it is probably located in Comal County.

Bibliography: Widener, Donald L., ed. Texas Cave Survey, Vol. I, No. 5, p. 40.
Ref: TSS files

DIERK CAVE NO. 5 — Comal County (#12)

Boerne 15' Quadrangle

Owner: Dierk Ranch

Description: This is a 30' deep sinkhole, 4' in diameter. Ropework is necessary. Widener places this cave in Kendall County, but this is probably in error.

Bibliography: Widener, Donald L., ed. Texas Cave Survey, Vol. I, No. 5, p. 4
Ref: TSS files

DINOSAUR CAVE (WILSON CAVE) — Comal County (#38)

Smithson Valley 15' Quadrangle

Owner: Marion Wilson; mgr. Henry Decker

Description: The entrance is a 10' in diameter hole in a creekbed. The hole d 7' to a low crawlway. After about 40' a drop admits one into a 20'-40' wide, 10'-15' high passage floored with large breakdown slabs. About 350' from the entrance a 40' long side passage to the right is encountered. Except for another short side passage, also to the right, near the end of the cave there are no passages other than the main one. The cave continues about 400

beyond the first side passage before coming to an end in flowstone. There is a lower level crawl reached by an 8' deep pit which extends for about 200' before the end. It is also possible to work through breakdown and reach several lower-level solution holes too small to enter. Water running into the cave apparently drains through these holes. Although muddy, there are some nice formations near the end of the cave. (See map, page 22)

History: The name of the cave is derived from a report that dinosaur tracks are in the cave or near its entrance. It was explored in 1959 by Paul Donne and Fred Mok of the University of Texas Grotto. The cave was mapped by Terr Raines, Terry Plemmons, Bill Bell, Lynn Roe Bell, and Toni Roe on February 1 1963. Recent trips to the cave include a trip on February 17, 1964, by memb of the Alamo Grotto for photographic purposes; and a trip on March 1, 1964, for exploratory purposes. The cave may also be the "W" Cave reported as having been explored by members of the Alamo Grotto in August, 1962, but thi is only a guess.

Bibliography: Anonymous. "Late News: San Antonio (Aug. 13)." The Texas Caver Vol. VII, No. 7, pp. 92-93. July, 1962.
Anonymous. "News: Alamo, N.S.S." The Texas Caver, Vol. IX, No. 3, pp. 47-4 March, 1964.

Ref: TSS files

EBERT CAVE — Comal County (#37)

Bat Cave 7.5' Quadrangle

Owner: August Ebert

Description: Several 10'-15' in diameter drops extend to a point 60' below the surface. At the bottom crawlways in water extend in two directions for a total of 200'-300'. Some water runs into the cave, which has been explore by members of the Alamo Grotto.

Ref: Alamo Grotto

FAIR OAKS FILLED CAVE — Comal County (#21)

Boerne 15' Quadrangle

Owner: Fair Oaks Ranch

Description: The foreman of the Fair Oaks Ranch reported that this was a larg cave into which a bulldozer broke. It remained open for several months, bu was eventually filled. It was never, so far as is known, entered by spelun

Ref: TSS files

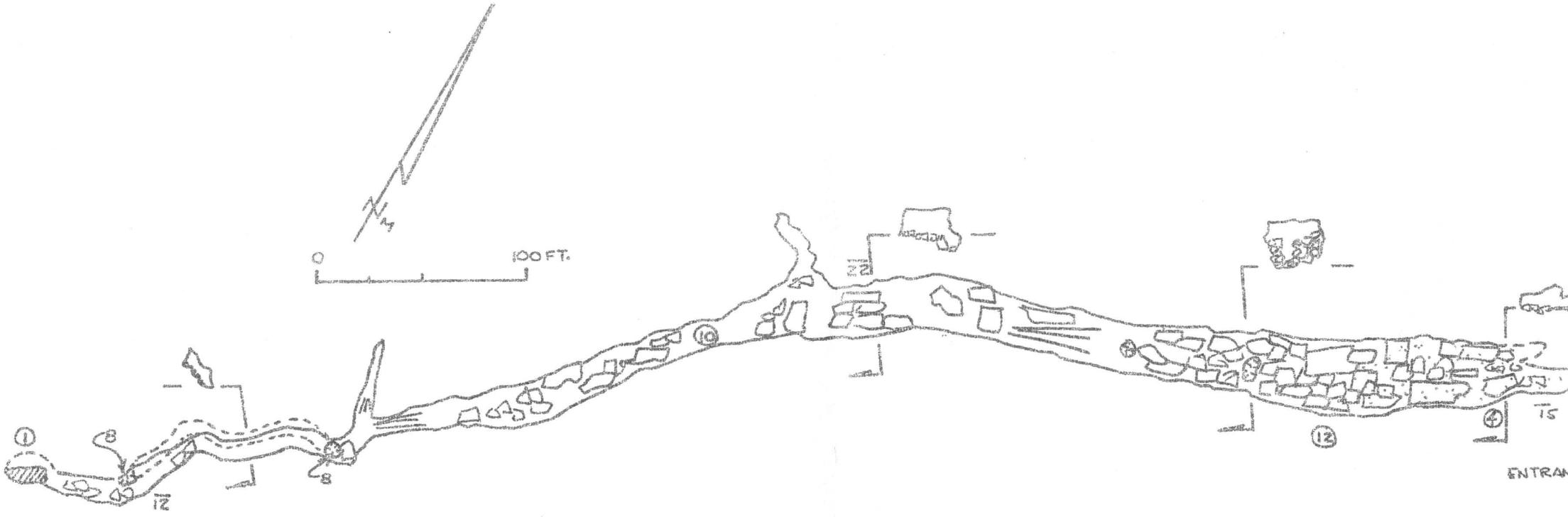
FAULT FALLS CAVE — Comal County (#40)

Hunter 15' Quadrangle

Owner: Beal Ranch (?)

Description: After a walk-in entrance the cave narrows to a crawl in a short distance and, about 60' from the entrance, ends. The floor is of dry dirt. It was explored by members of the University of Texas Grotto.

Ref: Terry Raines



DINOSAUR CAVE

COMAL CO., TEXAS

BRUNTON & TAPE SURVEY
BY UTSS, 2-17-63

FISCHER CAVE Comal County (#1)

Quadrangle:

Owner: Clifford Calhoun

Description: All that is known of this cave is that it is a 125' pit near Fischer. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

GAY NINETIES CAVE Comal County (#48)

New Braunfels West 7.5' Quadrangle

Owner: Gay Nineties Ranch

Description: The cave consists of an 18' deep sink dropping into a 30' in diameter room. Although damp there is no water in the cave and the report of a large flesh-colored salamander in the cave has not been verified. It was explored in March, 1960, by Bob Benfer of the University of Texas Grotto.

Ref: Bob Benfer

GOAT CAVE (DIERK CAVE NO. 1?) Comal County (#13)

Boerne 15' Quadrangle

Owner: Dierk Ranch

Description: Dierk Cave No. 1 is placed by Widener as being in Kendall County. From the descriptions of this and Goat Cave (Comal County) the two caves appear to be so similar as to be probably the same. The location almost certainly places it in Comal County. The cave has a low horizontal entrance with about 6" of water about 6' from the entrance. (Goat Cave is reported to only have mud). There are numerous formations. The passage branches and the right branch comes to a dead-end after about 12'. (Goat Cave is not mentioned as branching.) The left branch had a stream of water flowing through a small crack about 30' from the entrance. Tadpoles were seen and one pipistrelle was found near the entrance. (Goat Cave is reported to be about 150' long ending in a small low room and with a partially decayed goat about 50' from the entrance.) The cave was explored by members of the St. Mary's Speleological Society.

Bibliography: Widener, Donald L., ed. Texas Cave Survey, Vol. 1, No. 5, p. 40

Ref: TSS files

GRANDADDY CAVE Comal County (#57)

Bat Cave 7.5' Quadrangle

Owner: Arnold G. Reeh

Description: The entrance to the cave is about 5' in diameter and drops 13' to a 3' high, 5' wide, 15' long crawlway. A small hole in the middle of

this crawl drops 13' to a 10' long, 2' high passage which leads to a pit several feet in diameter, but which is blocked by small rocks after 2'. Some blasting has been done in the cave by the owner in order to reach this depth. The cave was mapped on June23, 1963, by Terry Raines and Danny Evans. (See map, page 25)

Ref: Terry Raines

GREEN VALLEY RANCH CAVE NO. 1 — Comal County (#45)

Bat Cave 7.5' Quadrangle (?)

Owner: Ellis Green

Description: A tortuous vertical squeeze leads to the top of a 45' dome-pit which drops to a mud floor. There is a 15' in diameter room next to the entrance pit and a couple of mud-choked leads, but no open passages extend from the room. There are no formations and the cave is wet. It was explore by Orion Knox, William Gray, Porter Montgomery, Merrill Doyle, and other members of the Alamo Grotto on March 18, 1962.

Bibliography: Anonymous. "News: Alamo." The Texas Caver, Vol. VII, No. 5, pp. 71-72. May, 1962.

Ref: Orion Knox, Jr.

GREEN VALLEY RANCH CAVE NO. 2 — Comal County (#46)

Bat Cave 7.5' Quadrangle (?)

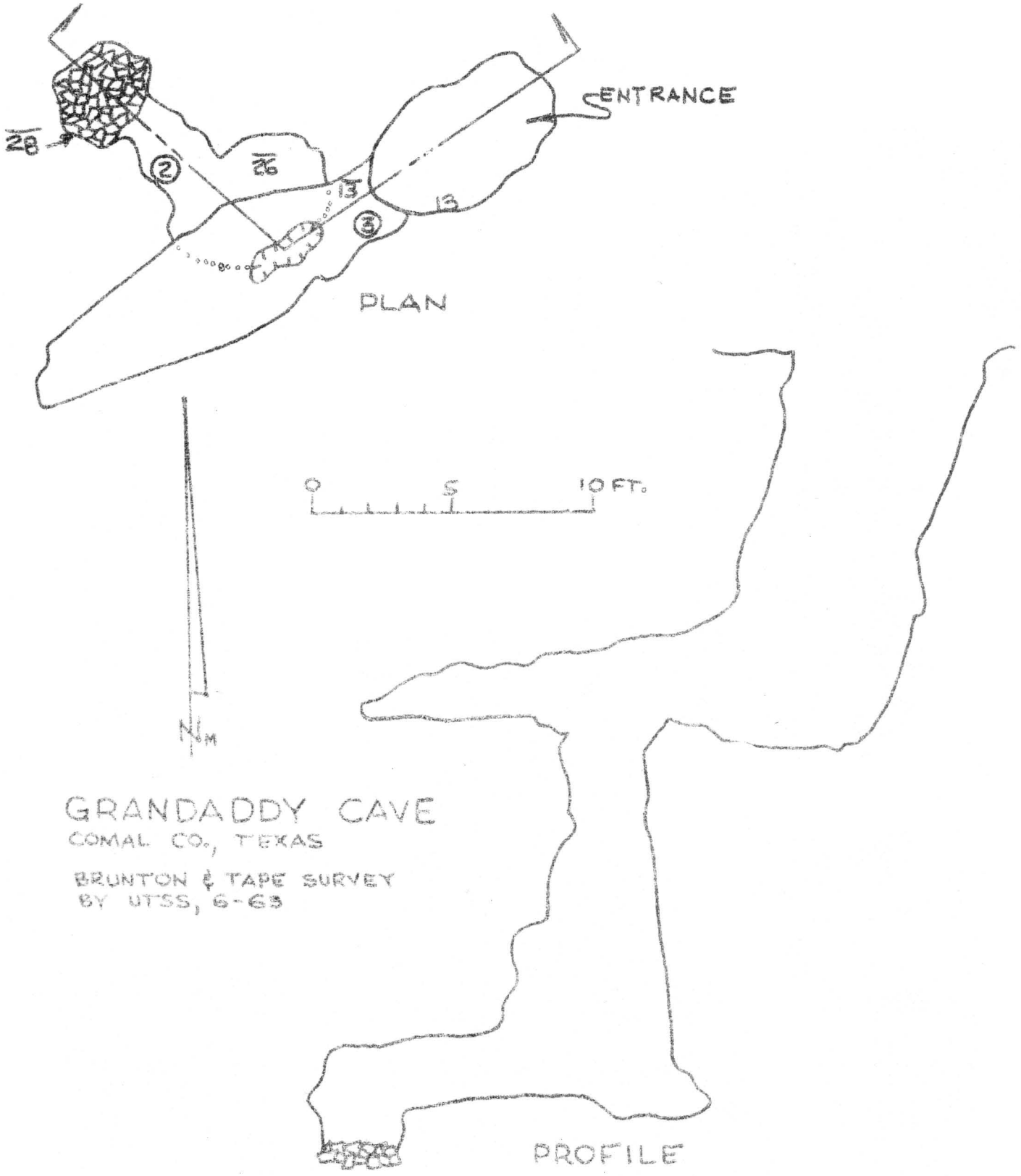
Owner: Ellis Green

Description: The entrance to the cave is a sink which drops as a slope for about 9'. This leads into a 60' x 90' room with numerous dead and broken formations. The ceiling height is about 7'. The cave has three other entrances: one is a 1½' x 1½' hole dropping into the left side of the room; another is a 1' x 1½' hole on the right side of the room; while the third is a 2' x 2' slope-in entrance at the opposite end of the room from the main entrance. A cedar post fence runs through the center of the room, which was used as stock pens.

Archeology: In March, 1962, it was reported to the Alamo Grotto that arrowheads had been taken from the cave at times in the past. Led by William Gray and Porter Montgomery the Alamo Grotto organized an archeological expedition to excavate the cave. Since the first trip on March 18, 1962, more than 80 points and numerous tools have been found. Remains of campfires were found near the center of the room, while along the perimeters buffalo, deer, and turkey bones were found. To date, the artifacts have come from the top five inches, although the cave has been cored to a depth of nine feet. The material has been dated as Neo-American

Bibliography: Anonymous. "News: Alamo." The Texas Caver, Vol. VII, No. 5, pp. 71-72. May, 1962.

Ref: Orion Knox, Jr.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GRANDADDY CAVE
COMAL CO., TEXAS
BRUNTON & TAPE SURVEY
BY UTSS, 6-63
PROFILE

GREEN VALLEY RANCH CAVE NO. 3 Comal County (#47)

Bat Cave 7.5' Quadrangle (?)

Owner: Ellis Green

Description: There are three entrances to the cave: one is a 10' drop while the other two are about 15' drops. They drop into a 110' x 40' room, with a ceiling height of from 10'-15' at the lower end. There are a few dead formations in the left-hand end of the room. In the right end of the room a lower jaw of a member of the canine family, possibly a wolf, was found under about four inches of clay. The room slopes from the main entrance down about 15' to the right and about 5' to the left. It was explored on March 18, 1962, by William Gray, Porter Montgomery, Orion Knox, Jr., and other members of the Alamo Grotto.

Bibliography: Anonymous. "News: Alamo." The Texas Caver, Vol. VII, No. 5, pp. 71-72. May, 1962.

Ref: Orion Knox, Jr.

GROSSER'S SINK (GROSSER'S MUD HOLE) Comal County (#26)

Otis Ridge 7.5' Quadrangle

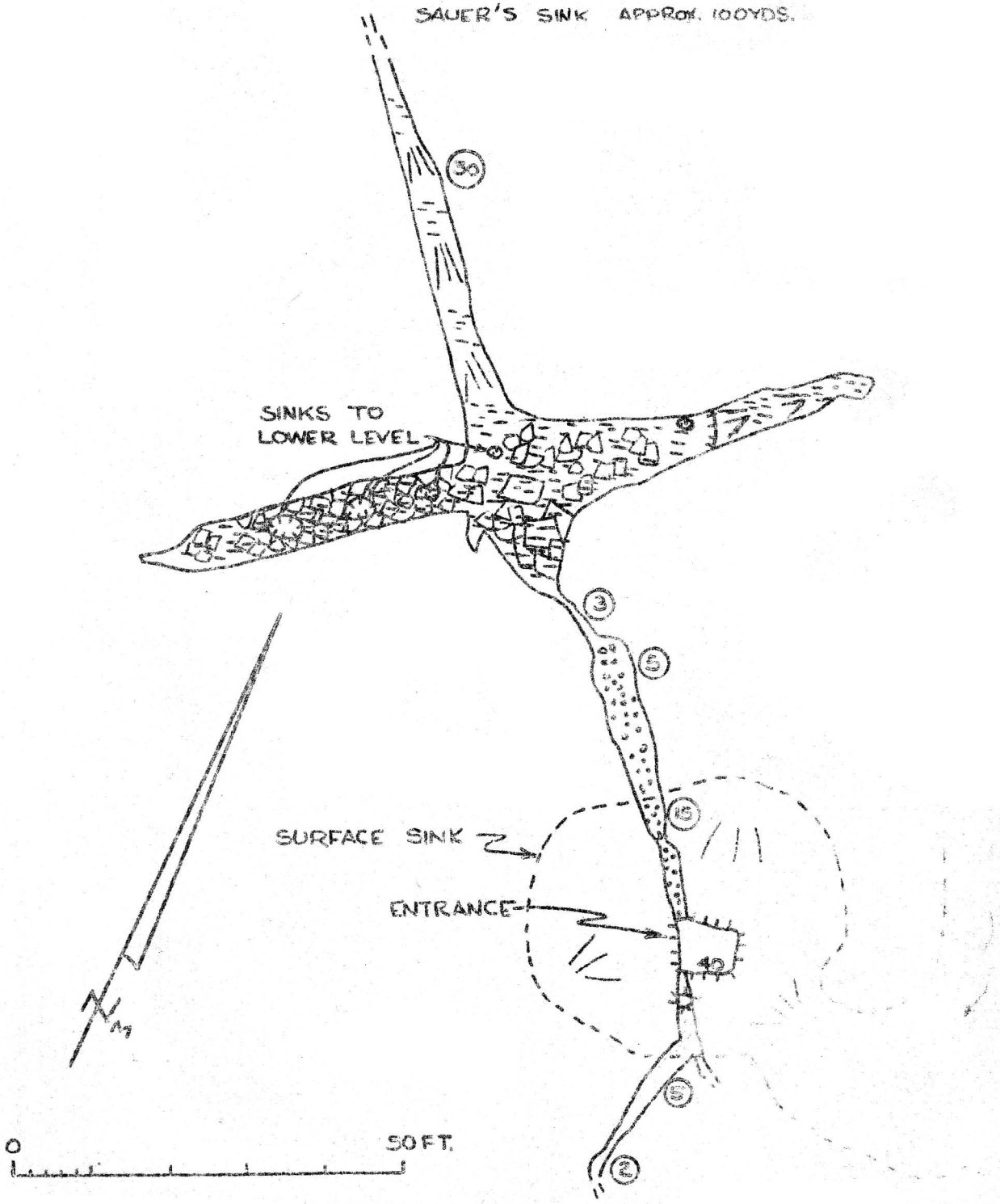
Owner: Harry Grosser

Description: The entrance is a 15' in diameter hole located in a large sink into which a small draw runs. A 45' drop from the surface leads into a passage running northwest-southeast. To the southeast a passage leads to a crawl which has been only partially explored. To the northwest the passage continues as a stoopway for 15', drops 12', and then continues for 40' more. From here a small 10' squeezeway opens into a room formed by the intersection at right-angles of a passage. The floor of the room is covered with large slabs of mud-covered breakdown. To the right the passage extend about 50' to an end, while to the left it extends about 40' before it also ends. Straight across the room a passage about 30' high and 5' wide rises steeply up. It is possible to crawl down through breakdown slabs and reach a hole too small to negotiate but into which much flood water runs. The cave has been visited several times by members of the University of Texas Grotto. It was mapped by Bill Russell and other grotto members in March, 1963. Recent explorations include a trip by Dick White, Tommy Bordelon, and other members of the Alamo Grotto which saw the discovery of previously unexplored passage. (See map, pages 27-28)

Biology: A small collection of invertebrates was made in the cave by Bill Russell on March 16, 1963. These have been identified as two species of cave cricket, Ceuthophilus cunicularis Hubbell and Ceuthophilus secretus Scudder, and a milliped, Aniulus adelphus Chamberlin.

Bibliography: Anonymous. "News: Alamo, N.S.S." The Texas Caver, Vol. IX, No. 4, p. 59. April, 1964.

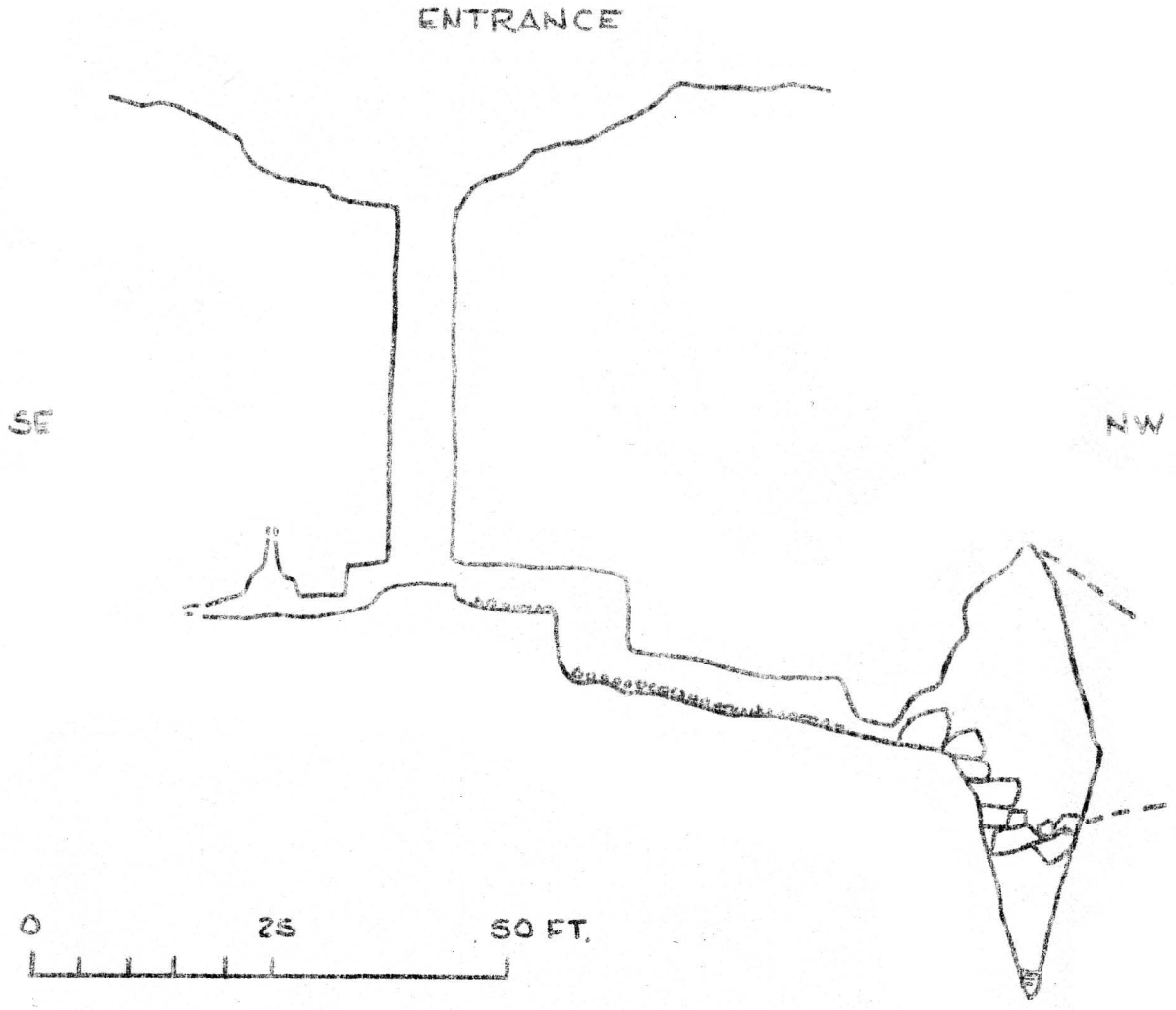
Ref: TSS files



GROSSER'S SINK

COMAL CO., TEXAS

BRUNTON & TAPE SURVEY
BY UTSS, 3-63



PROFILE OF

GROSSER'S SINK

GROSSER'S DEEP SINK — Comal County (#25)

Otis Ridge 7.5' Quadrangle

Owner: Harry Grosser

Description: The entrance is located in a grassy flat and is a 5' in diameter hole dropping 20' into a small room. It is possible to climb to this point. At one side of the room, which is floored with large rocks, a fissure 3' x 10' drops 53' and requires equipment. At the bottom one can traverse along the fissure for 10' to a 20' unclimbable drop. This leads into the termina room which is 25' x 10'. The floor is covered with mud and several large rocks. A very small stream runs from one end of the room to the other, finally disappearing into the mud. At times this room is largely filled with water.

Ref: Terry Raines

GROSSER'S SHALLOW SINK — Comal County (#27)

Otis Ridge 7.5' Quadrangle

Owner: Harry Grosser

Description: A wide sink into which a small draw runs leads to a small hole into which it is barely possible to squeeze. At the bottom a low squeeze leads past a hole too small to enter and for an additional few feet before being blocked by fill and a projecting rock. Although the cave at this point is only 10' deep and about 20' long, it is possible to see at least 10' beyond the point where additional work is necessary.

Ref: TSS files

HARRY GROSSER CAVE — Comal County (#23)

Boerne 15' Quadrangle

Owner: Harry Grosser

Description: "The cave consists of two passageways, one 20' long ending in a dead-end with a muddy pool and the other going down at a 20 degree angle for 10' ending in a small room. Twenty feet of ropework is required to enter the cave. No previous exploration. Numerous salamanders and cave crickets were found in the cave and some fossilized bones were found at the bottom of the sinkhole. Info submitted by St. Mary's Spel. Soc." (UTG files) This cave is reported by Widener to be in Kendall County, but this is almost certainly in error. The cave might conceivably be identical with Grosser's Sink, but it is believed that they are distinct.

Bibliography: Widener, Donald L., ed. Texas Cave Survey, Vol. I, No. 5, p. 42.

Ref: TSS files

HEIDEMANN RANCH CAVE — Comal County (#54)

Bat Cave 7.5' Quadrangle

Owner: Mrs. Harry Heidemann

Description: The cave is entered by a 20' drop in the middle of a creekbed. The entrance is about 2' x 18", dropping into a room about 40' x 10', with a 6' ceiling. The passage extends for about 60', becoming a crawl which has not been explored. Many bones were seen and small trees grow in the entrance. The fauna includes cave crickets and one frog. Water running into the cave appears to sink into the floor of the room. It has been explored by Orion Knox, Jr.

Ref: Orion Knox, Jr.

HEIDRICH CAVE — Comal County (#62)

New Braunfels West 7.5' Quadrangle

Owner: Henry Stahl (?); old E.J. Heidrich Ranch

Description: "A hole 4 feet in diameter penetrates the 5-foot-thick rock ceiling 15 feet above the floor of the principal chamber of this small cave. This chamber is about 40 feet in diameter and contains the vestiges of a great many stalactites most of which have been vandalized. A rapidly narrowing fissure leads downward along the western edge of the main chamber and a small crawlway strikes west from the north end of the chamber. Both terminate within 30 feet in fissures too narrow to permit the passage of a human body. No fauna was observed." (White, 1948)

Bibliography: White, Patrick J. "Caves of Central Texas." The Caves of Texas, p. 51. Bulletin Ten of the National Speleological Society. April, 1948.
Widener, Donald L., ed. Texas Cave Survey, Vol. II, No. 1, p. 60.

Ref: TSS files

HEIMER'S CAVE — Comal County (#6)

Smithson Valley 15' Quadrangle

Owner: Harry Heimer

Description: A 1.5' in diameter hole slopes and drops for 34' to a fissure too narrow to negotiate in either direction.

Ref: Terry Raines

HONEY CREEK DRY CAVE — Comal County (#10)

Smithson Valley 15' Quadrangle

Owner: Otto Weidner (?)

Description: Several sinks were encountered when following the trend of Honey Creek Water Cave beyond the end of exploration in that cave. Two,

Pot Hole and Pot Hole Pit, were quite small, but a third somewhat larger. A small sink leading down for 15'-20' enters a breakdown-floored room. This room is about 20' in diameter and no obvious passages led from it. Attempts to work through the breakdown to the main cave level were abandoned due to lack of time. It might be possible to reach the main stream passage in Honey Creek Water Cave by means of this or some of the other sinks. It was investigated by Bill Russell, Terry Raines, and other members of the University of Texas Grotto in 1963.

Ref: TSS files

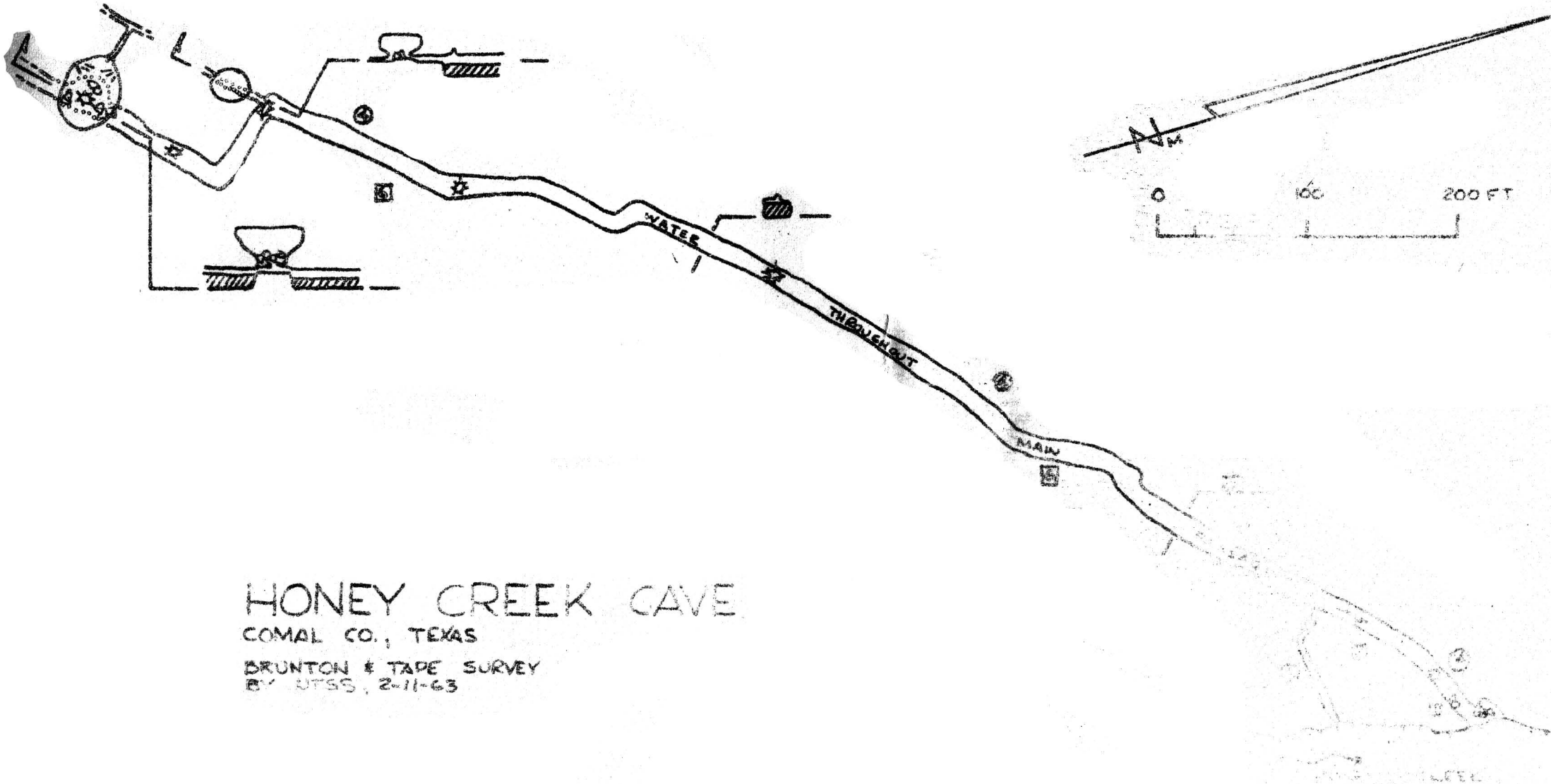
HONEY CREEK WATER CAVE — Comal County (#7)

Smithson Valley 15' Quadrangle

Owner: Willy Kunce

Description: Honey Creek Water Cave has developed in the massive fossiliferous limestones of the lower Glen Rose Formation, and is one of the larger water caves that feed the Guadalupe River. The cave is entered through two entrances at the base of a small cliff along Honey Creek. Water flows from the downstream entrance and provides the base flow for Honey Creek. The estimated flow of the stream is 1,000 to 1,500 gpm. The temperature of the water was measured at 69°F on July 20, 1944. The creek is normally dry above the cave. The downstream entrance is about 10' wide and 4' high and leads over breakdown to a rectangular passage about 10' x 10' that is filled to within a few feet of the ceiling with water. About 100' from the downstream entrance a 6'-12' high passage leads back to the upstream entrance. The floor of this passage is mostly covered with shallow water and it is in this shallow water near the upstream entrance where food is available that many specimens of crayfish and of an undescribed species of troglobitic salamander were found. From the junction of the two passages the cave continues as a 10' x 10' passage filled with water to within a few feet of the ceiling. In a few places formations have formed partial blocks and there are only a few inches of clearance. About 700' from the entrance the passage makes a turn and a small crawlway leads straight ahead to the bottom of a 20' in diameter funnel-shaped room. About 100' past the crawlway there is a large mass of breakdown through which the water flows. The main passage can be reached by working through the breakdown but here there are only a few inches of air and the water is over 10' deep as the water level has been raised about three feet by the travertine and breakdown. Above the breakdown there is a funnel-shaped room about 50' in diameter and 30' high. Near the ceiling of this room a crawlway leads about 30' to a cross passage too small to follow. The main water passage doubtless continues for a long distance beyond the breakdown but exploration is hazardous with such a small clearance above deep water. There are several small sinks on the surface that might connect with the cave beyond the breakdown and these should be investigated. The cave was mapped on Feb. 11, 1963, by Bill Russell, Blake Travis, David McKenzie, and Terry Raines. (See map, page 32)

Biology: An undescribed species of salamander, probably of the genus Eurycea, was collected by Bill Russell, Royce Ballinger, and others in the summer of 1959. It is now under study and it is hoped that it will be described in the near future. A collection of crayfish, Procambarus clarkii (Girard), was made on Feb. 11, 1963, by Bill Russell.



HONEY CREEK CAVE

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Bibliography: Anonymous. "New Salamander Discovered." The Texas Caver, Vol. IV, No. 5, p. 5. September-October, 1959.
Anonymous. "News: Alamo Grotto, N.S.S." The Texas Caver, Vol. VIII, No. 12, p. 129. December, 1963.
Anonymous. "News: St. Mary's University." The Texas Caver, Vol. VIII, No. 12, pp. 130-131. December, 1963.
George, William O. "Geology and Ground-Water Resources of Comal County, Texas." Geological Survey Water-Supply Paper 1138, pp. 18, 42, and 94-95. 1952.

Ref: TSS files

KAPPELMAN CAVE — Comal County (# 33)

Smithson Valley 15' Quadrangle

Owner: Arno Kappelman

Description: The entrance to the cave is a vertical crevice about 4' wide, 10' long, and 6' deep at the bottom of a shallow surface sink about 20' in diameter. Several large breakdown blocks surround and partially fill the crevice. At the bottom a sloping passage floored with breakdown leads into a room about 30' in diameter and 15' high. To the left it is possible to climb down among large breakdown blocks for about 20' and it might be possible to climb down into a passage leading from among the blocks, but when visited on March 16, 1963, no passage was found. A crawlway was entered on the wall of the back of the room and found to extend about 60', past a 15' high dome near the end, before becoming too filled with silt to negotiate.

Biology: A small collection of animals was made on March 16, 1963, by James Reddell and Bill Russell. Cave crickets, millipeds, and a frog were collected. The milliped was identified as Desmonus conjunctus Loomis, the spiders as Cicurina varians Gertsch and Mulaik and a blind species of Nesticus, and the frog as the Texas Barking Frog, Eleutherodactylus latrans.

Bibliography: Anonymous. "News: University of Texas, N.S.S." The Texas Caver, Vol. IX, No. 4, p. 60. April, 1964.
Adams, H.E. "About Rattlesnakes." The Texas Caver, Vol. VIII, No. 1, p. 4. January, 1963.

Ref: TSS files

KAPPELMAN SALAMANDER CAVE — Comal County (#37)

Smithson Valley 15' Quadrangle

Owner: Arno Kappelman

Description: A shallow sink about 5' in diameter and 3' deep leads into a horizontal crawlway about 10' long. About mid-way along the crawl a 3' in diameter hole drops vertically for about 15'. At the bottom of this pit a small room is located to one side. This room is about 6' high, 15' wide, and 20' long and floored with sticks, silt, and small rocks. To the back and left side of the room a short crawl leads to the Funnel Room.

Here a funnel-shaped room about 10' in diameter and 3'-6' high has formed above a vertical crevice about 15' deep. At the bottom a narrow fissure-like passage extends out, dropping several feet before reaching another pit about 15' deep. At the bottom of this pit, which is about 10' in diameter, a low crawl almost completely filled with water is found. This crawl may be too small to negotiate but has not been adequately investigated.

Biology: This small cave is one of the most productive biological caves thus far investigated in the county. It contains an unusually wide and interesting variety of cave forms. The upper level crawl at the entrance contains collembola, two species of centipede, and a milliped, Aniulus adelphus Chamberlin. The room at the bottom of the first pit is inhabited by the common cave snail, Helicodiscus eigenmanni Pilsbry, mites, ticks, cave crickets, spiders, and pselaphid beetles. The Funnel Room and the Salamander Pit contain blind carabid beetles, Agonum (Rhadine) sp., the cave thysanuran, Nicoletia texensis Ulrich, trichoniscid isopods, and spiders. An earthworm, Bimastos parvus, was collected from soil at the edge of the pool. The spiders have been identified as an undescribed species of blind Cicurina and two troglophilic species, Cicurina varians Gertsch and Mulaik and Meioneta sp. The pool is inhabited by an unidentified neotenic salamander, probably of the genus Eurycea. The collection was made by James Reddell and Bill Russell on March 15, 1964.

Bibliography: Anonymous. "News: University of Texas, N.S.S." The Texas Caver, Vol. IX, No. 4, p. 60. April, 1964.
Adams, H.E. "About Rattlesnakes." The Texas Caver, Vol. VIII, No. 1, p. 4. January, 1963.

Ref: TSS files

KAPPELMAN TRASH CAVE — Comal County (#34)

Smithson Valley 15' Quadrangle

Owner: Arno Kappelman

Description: Two holes about 3' in diameter are located about 15' apart and are connected by a low crawl largely filled with trash. Each is now about 5' deep. From these crawls the cave continues for 15'-20' through trash. It slopes down at a gentle slope, but trash fill prevents complete exploration. The cave is surrounded by a fence.

Bibliography: Anonymous. "News: University of Texas, N.S.S." The Texas Caver, Vol. IX, No. 4, p. 60. April, 1964.
Adams, H.E. "About Rattlesnakes." The Texas Caver, Vol. VIII, No. 1, p. 4. January, 1963.

Ref: TSS files

KLAR'S CAVE Comal County (#17)

Boerne 15' Quadrangle

Owner: Bruno Klar

Description: The entrance is a 3' in diameter hole. This drops 10' into a walking and stooping passage which extends about 200'. At this point a small hole drops 15' to a 150' "sewer pipe" that is 2' in diameter. At the end of this a very tight squeezeway extends for 20' before becoming slightly larger. After an additional 30' Schizie Pit is encountered. This is a 75' deep pit and leads to a mud-floored room. At the far end of this room there is a steeply inclined mud and boulder floored passage. This drops an additional 50' before ending in breakdown. The total depth of the cave is estimated to be about 150'. It was explored on March 9, 1963, by Bill Russell, Terry Raines, Tommy Phillips, and other members of the University of Texas Grotto. (See map, page 36)

Biology: A small collection of invertebrates was made by Bill Russell on March 9, 1963. This collection included centipedes, collembola, spiders, and beetles. Only the spiders and beetles have been studied. The spiders have been identified as a blind species of Nesticus and two troglophiles, Cicurina varians Gertsch and Mulaik and Meioneta sp. The beetles include a troglobite, Agonum (Rhadine) specum Barr, and a trogloxene, Trichotichnus sp.

Ref: Terry Raines

KLAR'S NORTH CAVE Comal County (#18)

Boerne 15' Quadrangle

Owner: Bruno Klar

Description: A 15' climbable sink at the bottom of a small depression leads to an unexplored crawlway.

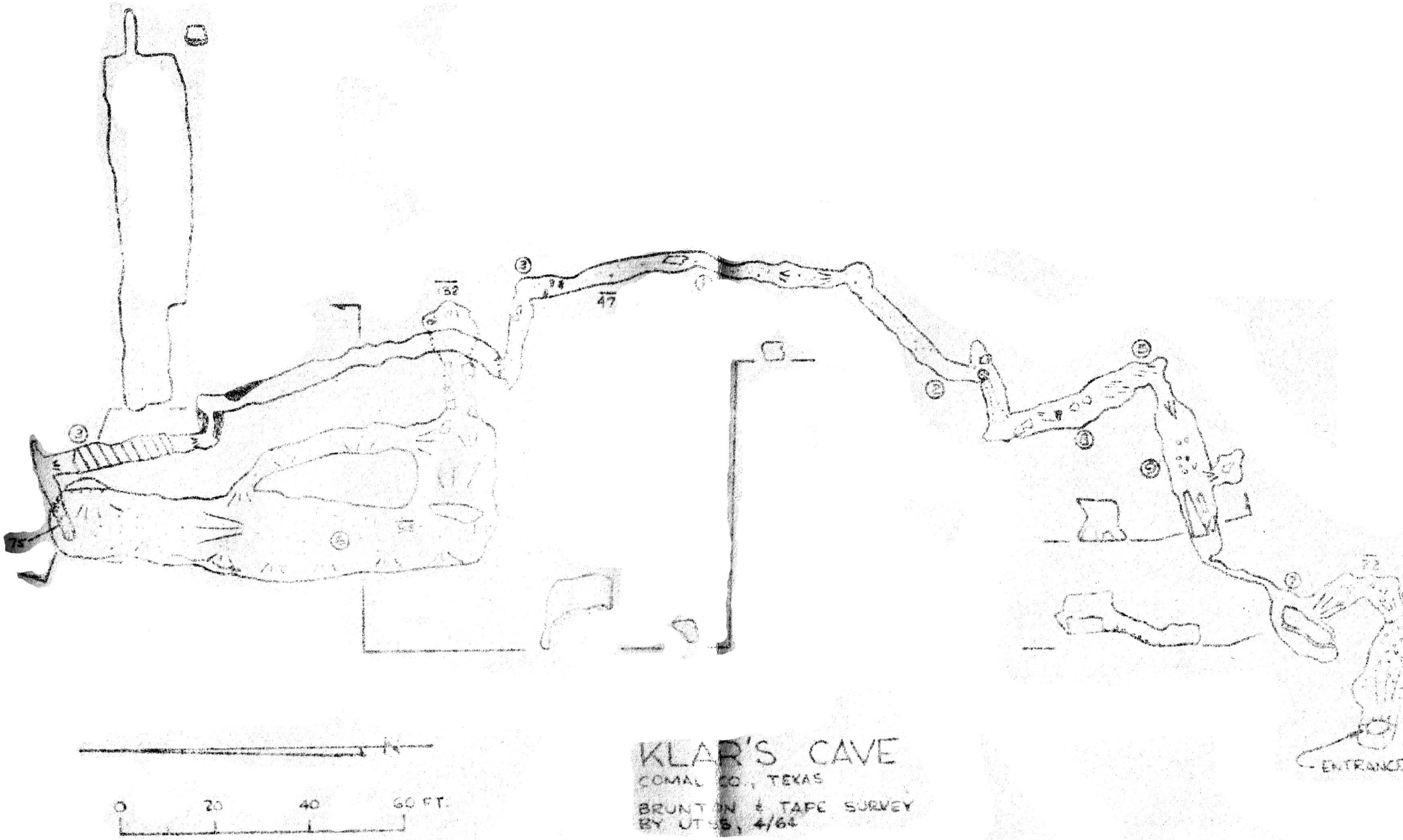
Ref: TSS files

LITTLE BREHMMER-HEIDRICH CAVE (BREHMMER-HEIDRICH CAVE) Comal County (#64)

New Braunfels West 7.5' Quadrangle

Owner: Henry Stahl

Description: "The entrance is a small passage between limestone rocks. From it, one emerges immediately into an alley between bronze colored stalagmites. The overall height in the alley is about 4 feet. A rugged forest of stalagmites covers the floor to the left as it drops downward. Go among them and down to another chamber; then forward and circle to the left through three other chambers and back to the entrance. Apparently this cave which is 150 feet long by 30 feet wide and about 10 feet below the surface was originally one large room extending about 60 feet, dropping to a lower level--though keeping the same ceiling--and continuing another 90 feet. It is now subdivided into at least five chambers by delicately tinted, translucent stalactite curtains. Holes have been opened in these



KLAR'S CAVE

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curtains permitting access to the various rooms. As in Brehmmer Cave, this cave is full of handsome formations including flowstone, white calcite and draperies; the ceiling is richly encrusted in tiny, white stalactites very much alive. No bats frequent this cave, but cave crickets were seen in large numbers. Due to warmth, about 65 degrees, and the fact that much of the entrance room is in the twilight zone, raccoons, skunks, and rattlesnakes frequent it. The owner issues a particular warning regarding the rattlers. And the writer was even more startled than the surprised skunk which confronted him when he went over to a ring of stalagmites to see why it was called 'Skunk Hotel.' The animal calmly retreated into a crevice. Incidentally, no odor of skunks was present. There are several unexplored squeezeways in the cave, which is silting up rapidly because of soil carried in by rainwater." (White, 1948) This is a frequently visited cave, more because of its proximity to the commonly visited Brehmmer Cave than to inherent merits. The beauty and variety of formations indicated by White has been much destroyed by vandalism.

Biology: Besides the notes by White on the vertebrates of the cave, biological work done in this cave includes a collection of invertebrates made by Glen M. Kohls and William L. Jellison in the late summer of 1940. Their faunal list is as follows:

Ticks
  Ornithodoros yumatensis Cooley and Kohls
  Ixodes conepati Cooley and Kohls
Spiders
  Latrodectus mactans F.
Scorpions
  Vejovis crassimanus Pocock
Cave crickets
  Ceuthophilus secretus Scudder
  Ceuthophilus conicaudus Hubbell

Bibliography: Kohls, Glen M. and William L. Jellison. "Ectoparasites and Other Arthropods Occurring in Texas Bat Caves." The Caves of Texas, p. 117. Bulletin Ten of the National Speleological Society. April, 1948.
Reddell, James, ed. A Guide to the Caves of Texas. NSS Convention Guidebook. 1964. In press.
White, Patrick J. "Caves of Central Texas." The Caves of Texas, p. 51. Bulletin Ten of the National Speleological Society. April, 1948.
White, Patrick J. "Texas Caverns." Texas Almanac and State Industrial Guide, pp. 322-323. 1947-1948.
Widener, Donald L., ed. Texas Cave Survey, Vol. II, No. 1, p. 59.
Ref: TSS files

LITTLE GEM CAVE NO. 1 — Comal County (#60)

New Braunfels West 7.5' Quadrangle

Owner: R.A. Mittman

Description: The entrance to this cave was detected by a current of air issuing from a small blocked hole. Mr. H.E. Adams and other members of the Alamo Grotto excavated the entrance to reveal the presence of a small but attractive cave. A narrow 3' high passage slopes steeply down for a

few feet before opening into a larger passage. The main part of the cave consists of a sloping passage about 40' wide and from 3'-6' high. This passage, however, has been broken into numerous small rooms and alcoves by breakdown and formations. There are numerous soda straws, some up to 2½' long, as well as other delicate and attractive formations. The floor, when not of flowstone, is covered with silt or rocks. The cave ends in massive breakdown about 60' below the entrance. Attempts at blasting in this area in an attempt to disocver additional passage have been futile to date.

Biology: A small collection of invertebrates was made in the cave on October 19, 1963, by James Reddell and John Porter. This collection included two troglobites and three troglophiles, but further collection will probably yield additional material of interest. A faunal list includes cave crickets, trichoniscid isopods, staphylinid beetles, a carabid beetle, Agonum (Rhadine) sp., a snail, Helicodiscus eigenmanni Pilsbry, a spider, Cicurina varians Gertsch and Mulaik, and a milliped, Abacion sp.

Bibliography: Anonymous. "News: Alamo, N.S.S." The Texas Caver, Vol. VIII, No. 8, p. 94. September, 1963.
Adams, H.E. "New Cave Discovered." New Braunfels News. Sept. 25, 1963.
Forney, Jerry. "Caves in the News: The 1964 Convention in the News." NSS News, Vol. 22, No. 4, p. 45. April, 1964. Abstract of article by H.E. Adams (above.).
Reddell, James, ed. A Guide to the Caves of Texas. NSS Convention Guidebook. 1964. In press.

Ref: TSS files

LITTLE GEM CAVE NO. 2 — Comal County (#61)

New Braunfels West 7.5' Quadrangle

Owner: R.A. Mittman

Description: This cave was opened by members of the Alamo Grotto and is reported to be a low silt-floored crawl for 40'-60' before filling with silt. The entrance is about 2' in diameter and slopes downward from the surface for a few feet. It appears to be the opposite of the breakdown mound now filling the original entrance to Little Gem Cave No. 1.

Ref: Alamo Grotto

MOELLER CAVE — Comal County (#50)

Bat Cave 7.5' Quadrangle

Owner: Marvin Moeller

Description: A 5' in diameter hole drops about 12' to where a tight, sloping squeeze allows one into a slightly larger passage which extends 6' horizontally to a tight vertical hole. This drops 6' and is barely large enough to admit one's body. Some digging has been necessary to reach this point, but further digging at the bottom where only low, barely enlarged bedding planes lead off will probably be useless.

Ref: TSS files

NATURAL BRIDGE CAVERNS Comal County (#55)

Bat Cave 7.5' Quadrangle

Owner: Mr. and Mrs. Harry Heidemann and Reggie Wuest

Description: The entrance to the cave is an impressive sink about 200' long, 30' deep, and 40' wide. A natural bridge spans the sink and has been directly responsible for the cave's remaining accessible. A small crawlway originally extended from under the bridge, where the rock fall which sealed the remainder of the cave's passage had not occurred. This long, difficult crawl was later circumvented by digging directly into the first room of the cave. On this level are the Coon Rooms, named for the frequency with which they are visited by raccoons. A short crawl leads into a passage or succession of rooms about 300' long and averaging 15' high and 15' wide. Although most of the formations are dead, parts of the passage are quite attractive and in an area near the end there are numerous small helictites. The passage finally becomes too small. From the First Room a low crawl led to the top of the Ladder Pit. This crawl was avoided by digging a shaft directly into the passage immediately before the pit. Known as the Bear Pit because of the discovery of bear bones in it, it was about 20' deep and required a ladder to descend. At the bottom of this pit a low squeeze led one direction into St. Mary's Halls, while the main passage led to the Ladder Pit. After about 10' the passage opened into a passage about 10' wide and 15' high, decorated with numerous formations. The passage was named from the exploration by members of the St. Mary's Speleological Society. About 300' from the entrance into this passage a 30' deep pit, the Fairy Pit, must be crossed by means of a narrow ledge on the right. This pit drops into the South Fault. Across the Fairy Pit the passage extends into Boxwork Canyon. This part of the cave contains the finest boxwork in Texas. Shortly past Boxwork Canyon the passage abruptly ends. From the bottom of the Bear Pit a passage extends to the top of the Ladder Pit, a 25' deep pit. Three crawls lead from the bottom of this pit. One extends about 30' to a small room and ends, another leads to the North Caverns, and the other forms the South Fault. The South Fault is a strongly joint-controlled crawlway-walkway, sometimes on two levels, which extends several hundred feet to the Fairy Pit and for several hundred feet beyond. One side passage before the Fairy Pit is known to be about 200' long. The total length of the South Fault is probably well over 1,000', most of which remains unsurveyed and only poorly explored. From the bottom of the Ladder Pit a crawl led about 50' into the North Caverns. At least part of this passage had to be excavated before the North Caverns could be entered. Since commercialization the first part of the cave has been so drastically altered as to be only barely recognizable. Two passages lead from the first room of the North Caverns. One, Fool's Hall, ends about 200' from its entrance; the other leaves Pluto's Anteroom, as this room is known, as a steeply descending passage which leads to a group of 25' high, 8" in diameter totem poles, known as Sherwood Forest. The passage continues to descend while the ceiling remains flat. Just beyond a group of 15' high stalagmites known as the Fairy Castles the floor descends steeply into a canyon known as Purgatory Creek. A bridge now spans this canyon. The floor of the entire North Caverns is covered with mud and in Purgatory Creek where constant dripping dilutes the mud it is a veritable soup. From the bottom of

Purgatory Creek a long ascent leads up to the Castle of the White Giants. Here several huge formations are found, including the spectacular Watch Tower, a 40' high, 15' in diameter stalagmite. Beyond the Castle of the White Giants a steep descent leads into Grendel's Canyon, the deepest surveyed point in the cave. The commercial trail leads up a series of stairs and into an upper level passage which extends over Grendel's Canyon and into the Hall of the Mountain Kings. The bottom of Grendel's Canyon lies about 280' below the surface. The passage out of Grendel's Canyon is a steep slope which rises 140' vertically into the Hall of the Mountain Kings. This room is 350' long, 100' wide, and 20'-60' high. Some of the strangest formations in the cave occur here, some on the top of flat, stubby stalagmites resemble fried eggs while others are curiously formed stalagmites vaguely resembling helictites and apparently formed by the settling of the breakdown on which they formed with the result that water falling from above found a slightly different landing place. From this room one descends into the Valley of the Fallen Lords, named for the huge breakdown blocks on the floor. Beyond this the floor rises and the cave changes character. A small, undecorated passage 12' wide and 10' high continues, with one tight crawl mid-way, for about 600' to Belayman's Bluff, a 50' drop into the ceiling of the Inferno Room. Beyond Belayman's Bluff the passage continues into a fantastic complex of pits and passages on many levels. Some of these extend back into the Inferno Room, others lead to holes which drop into the Lake Passage at various points, and two lead into the Dungeon. Three routes may be taken to reach the Dungeon, an interesting room about 45' high, 200' long, and 50' wide. One is by means of a hole high on the wall of the Inferno Room, reached by tension climbing and which in turn appears on the wall of the Dungeon; the second is by a 45' deep pit in the ceiling of the room and which is reached by a 20' pit out of the passage immediately beyond Belayman's Bluff; and the third is by means of a tortuous crawlway-pit complex several hundred feet long, but which requires no equipment. A short crawl out of the Dungeon leads to a 30' drop into the Gopher Pit, a room about 50' high, 100' long, and 40' wide. A 30' pit leads from the bottom of this room but dead-ends. An upper-level crawl reached by tension climbing also dead-ends. The Inferno Room is about 100' in diameter and 60' high with a large mound of breakdown in the center. Two large passages and several small ones extend from this room. Limbo Passage is about 700' long with an average ceiling height of 30' and a width of 35'. It extends back beneath the small passage leading to Belayman's Bluff and apparently represents a main continuation of the main cave passage. There are some attractive formations and several unusually beautiful lakes. One, Octagon Lake, is encircled by an octagon-shaped travertine dam. Directly across the Inferno Room from Limbo Passage is the Lake Passage. This is over 900' long and averages 25' wide and with a ceiling height varying from 8' at one point to about 100' in the Dome Pit. The passage contains few formations except at the First Lake where many small stalactites are found. The First Lake is about 30' long, 15' wide, and on one side over 6' deep. The Second Lake is a circular pool about 20' in diameter and very deep. At the end of the Lake Passage and at the bottom of the Dome Pit pits are found. These lead into extremely muddy crawls containing small streams (or possibly the same stream) flowing at about 20 gpm. The most impressive sight in the cave is to be found at the top of the Dome Pit where a crawl from Belayman's Bluff intersects it. Here it is possible to look into a hole 80' long, 40' wide, and about 100' deep. Although the cave is fairly well explored, chimneys

in the Lake Passage beyond the Dome Pit merit attention with tension climbing equipment in the hope that they connect with an upper level passage which may be seen across the Dome Pit. There are about 6,000' of passage surveyed, but much remains to be mapped and the total length of the cave will probably exceed two miles. (See map, page 48.)

Biology: Collections of invertebrates were made in the cave by James Reddell on Sept. 15, 1962, July 13, 1963, and in May, 1964, and by James Reddell and David McKenzie on July 13, 1963. Although not so abundant as other caves in Comal County the fauna is varied and of interest. The only portion of the cave containing any appreciable life is the Coon Rooms, although some animals have been found in both St. Mary's Halls and the South Fault. The main portion of the cave is sterile. Originally the area around the First Room was fairly well-populated but commercialization has so modified it that no animals have been found there recently. Seven troglobites and three troglophiles have been found, not including unstudied material, the status of which is not definitely known. The troglobites include a beetle, Agonum (Rhadine) sp.; a phalangid, Texella mulaiki Goodnight and Goodnight; a thysanuran, Nicoletia texensis Ulrich; a milliped, Cambala speobia (Chamberlin); two spiders, Cicurina sp. and Leptoneta sp.; and a trichoniscid isopod. Two spiders, Cicurina varians Gertsch and Mulaik and Achaearanea porteri Banks, and a staphylinid beetle are troglophiles. Cave crickets, Ceuthophilus secretus Scudder, collembola, mites, and a fly (Sciaridae) make up the remainder of the fauna which has been collected. The cave is frequented by raccoons, especially in the Coon Rooms, a few bats inhabit the entrance area of the cave, and the bones and tracks of bobcats indicate that these, at least in the past, were occasional visitors.

Geology and Palenntology: A careful study of the origin and development of this cave would be of considerable interest. No detailed geologic work has been done in the area but samples taken throughout the cave indicate that the majority of the cave is in the upper part of the Glen Rose Formation. The Glen Rose is about 1200 feet thick in this area and contains numerous beds of marl and some dolomite. The top 40 feet, including the sink down to the roof of the entrance room, could be assigned to the Edwards Formation or to the Bull Creek member of the Walnut Formation. Farther to the southwest the Bull Creek no longer exists and its stratigraphic level is occupied by the upper part of the Glen Rose. It is not known whether or not the Bull Creek is present in the area of the cave. Cretaceous fossils recovered from washing of the subrecent fill in the entrance room are very similar to those found in the Walnut Formation farther to the north. This gives strength to the assumption that this controversial top 40 feet is correlative with the Walnut and therefore probably not an Edwards equivalent. William Akerston of the University of Texas Geology Department has recovered the following vertebrate remains from subrecent fill in the entrance room. Stratigraphic work in this fill was virtually impossible since the fill is mixed with and evidently contemporaneus with at least part of the collapse of the entrance.

Insectivora	
Cryptotis parva	Least shrew
Chiroptera	
Myotis velifer	Little brown bat
Tadarida brasiliensis	Mexican free-tailed bat

Lagomorpha	
Lepus californicus	Jack rabbit
Sylvilagus sp.	Cotton-tail rabbit
Rodentia	
Peromyscus sp.	White-footed mouse
Perognathus merriami	Merriam's pocket mouse
Perognathus hispidus	Hispid pocket mouse
Neotoma sp.	Wood rat
Sigmodon hispidus	Hispid cotton rat
Geomys bursarius	Gopher (Genus is out of range.)
Pitymys pinetorum	Pine vole (Genus is out of range.)
?Reithrodontomys sp.	Harvest mouse
?Baiomys taylori	Northern pigmy mouse
Carnivora	
Canis latrans	Coyote
Felis rufus	Bobcat
Ursus americanus	Black bear
Procyon lotor	Raccoon
Artiodactyla	
Odocoileus virginianus	White-tailed deer
?Bison bison	Bison
Primate	
Homo sapiens	American Indian

Also unidentified birds, snakes, lizards, frogs, toads, salamanders, and turtles.

The presence of several feet of very old guano and numerous bat bones in the Hall of the Mountain Kings indicates that prior to the collapse of the entrance a large bat colony inhabited the cave. This may also account for the presence of the bones of bobcats and other vertebrates far back in the cave. In particular the bones of a bobcat were recovered from a flowstone deposit in the Dungeon. These animals may have entered the cave as predators of bats, become lost, and never found their way from the cave. Carbon-14 dating of the guano would be of great interest as it would aid in determining the date of the collapse of the entrance.

History: The entrance to the cave served as a shelter for the American Indian possibly as long as 4,000 years ago. Artifacts and bones found in association with animals now no longer present in the area indicate very early habitation of the cave. Much remains, however, to be done with the archeology of the cave and the area. The natural bridge has been known for a considerable period of time and the exploration of the cave itself extends for at least 30 years. The cave was first visited by spelunkers when members of the University of Texas Grotto explored the entrance area in the early 1950's on several trips. No exploration of either the Coon Rooms or the North Caverns was made prior to 1960 when it was discovered by members of the St. Mary's Speleological Society. Since a detailed log of all trips to the cave from 1960 until the beginning of its commercialization was kept by Orion Knox, Jr., the first person to enter the North Caverns, this is the only large cave in the state whose history is well-documented. Space will not allow a complete duplication of this account, but a summary of all trips to the cave is given below. A copy of the log is on file with the Texas Speleological Survey. In the following summary

the date is given, followed by the members of the party, and a brief summary of what was done on the trip is stated.

Jan. 3, 1960. Al Brandt, Preston Knodell, John Tally, Bro. Palma, Orion Knox, Jr. Exploration of the crawls and small rooms near the entrance and part of the South Fault mapped. A few photographs taken.

Jan. 10, 1960. Al Brandt, Preston Knodell, Leonard Clark, "Marchovsk's Brothers," Orion Knox, Jr., and three others. First exploration of the Coon Rooms and further exploration of the South Fault. Exploration of St. Mary's Halls.

Feb. 7, 1960. Al Brandt, Preston Knodell, Max Collings, John Tally, Bro. Palma, "Preston Knodell's brother", and Orion Knox, Jr. Mapping and photography in the Coon Rooms and further exploration of St. Mary's Halls.

Mar. 27, 1960. Al Brandt, Joe Cantu, Preston Knodell, Leonard Clark, John Tally, and two others. Clark, Tally, and the two others photographed in the Coon Rooms and St. Mary's Halls, while the others ehecked a crawl from the bottom of the Ladder Pit. This led, after some digging, into the North Caverns. The main passage explored beyond Belayman's Bluff.

Apr. 3, 1960. Preston Knodell, Max Collings, and Orion Knox, Jr. Equipment was carried to the Hall of the Mountain Kings and several side crawls checked which went nowhere.

Apr. 4, 1960. A second crew went into the cave to check the pit at Belayman's Bluff, but did not get back that far.

Apr. 10, 1960. Max Collings, Preston Knodell, Orion Knox, Jr., and one other. The passage over Grendel's Canyon was explored and the pit at Belayman's Bluff entered and a reconnaisance made of the Inferno Room and the passages out of it.

Apr. 14, 1960. Bro. Palma, Preston Knodell, Al Brandt, Leonard Clark, Orion Knox, Jr., and three others. Limbo Passage and the Lake Passage were explored to their ends.

May 31, 1960. Preston Knodell, Jimmy Heye, Leonard Clark, Al Brandt, John Tally, Orion Knox, Jr., and one other. Equipment at Belayman's Bluff was recovered and the North Caverns photographed.

June 18, 1960. Preston Knodell, Edmund Vargus, and Orion Knox, Jr. Photographs were taken in the North Caverns as far back as the Hall of the Mountain Kings.

July 17, 1960. Al Brandt, Max Collings, Walter Vashinder, and Orion Knox, Jr. The Palace of the Little Swans was discovered and the crawls in this area were partially explored.

Aug. 7, 1960. Al Brandt, Max Collings, Leonard Clark, Martin Benevides, and Orion Knox, Jr. The first exploration of the Dungeon was made.

Mar. 11, 1961. Bill Gray, Dennis Gray, David Gray, and Orion Knox, Jr. Equipment was recovered from Belayman's Bluff.

Mar. 25, 1961. Al Brandt, Preston Knodell, Leonard Clark, Bill Gray, Porter Montgomery, David Gray, Dennis Gray, Jimmy Heye, and Orion Knox, Jr. The South Fault was connected with the passage at the bottom of the Fairy Pit.

Aug. 6, 1961. Martin Benevides, Leonard Clark, Barbara Madden, and Orion Knox, Jr. Photographs were taken in the North Caverns.

Aug. 27, 1961. Preston Knodell, Martin Benivedes, John Tally, Al Brandt, Max Collings, Charles Kriminck, Barbara Madden, James Reddell, "Betty", and Orion Knox, Jr. Several passages out of the Inferno Room were checked and photographs taken in the Lake Passage and Limbo Passage.

Sept. 9, 1961. Preston Knodell, Bill Gray, David Gray, and Orion Knox, Jr. The cave was mapped into the North Caverns.

Sept. 17, 1961. Leonard Clark, James Wulfshaw, and Orion Knox, Jr. Excavation was begun in digging an easy route to the North Caverns.

Sept. 23, 1961. Bill Gray, David Gray, Preston Knodell, Al Brandt, Leonard Clark, Mr. Allison, Harvey Kohnitz, and one other. A pit was dug into the first room.

Sept. 30, 1961. Bill Gray, David Gray, Preston Knodell, Barbara Madden, and Orion Knox, Jr. The Bear Pit was begun and the first bones recovered.

Oct. 7, 1961. Preston Knodell, Bill Gray, David Gray, Barbara Madden, Mr. and Mrs. Heidemann, Al Brandt, "Lea", Gabby Clark, "Preston's girl", Harvey Kohnitz, Mr. Allison, "three W.A.F.'s", and Orion Knox, Jr. Pictures were taken and additional digging done. The depth of the Bear Pit is about 8 or 9 feet.

Oct. 14, 1961. Bill Gray, David Gray, Preston Knodell, Barbara Madden, "Sylvia (Barbara's roommate)", Harvey Kohnitz, Mr. Allison, and Orion Knox, Jr. A little more digging was done in the Bear Pit and artifacts removed.

Oct. 21, 1961. Bill Gray, David Gray, Preston Knodell, Mr. Allison, Harvey Kohnitz, Leonard Clark, and Orion Knox, Jr. Depth of 16 feet reached in the Bear Pit, the map extended into St. Mary's Halls, and a few photographs taken.

Oct. 28, 1961. Bill Gray, David Gray, Harvey Kohnitz, Barbara Madden, Preston Knodell, "Preston's girl", Al Brandt, his wife, Allison and his wife, Leonard Clark, and Orion Knox, Jr. Further excavation in the Bear Pit was done and a hole opened into the Chimney Pit.

Nov. 4, 1961. Bill Gray, David Gray, Preston Knodell, Harvey Kohnitz, Mr. Allison, "three W.A.F.'s", Barbara Madden, "Susan", Orion Knox, Jr., and one other. The hole into the Chimney Pit was enlarged, photographs were taken in the North Caverns, and the map of the North Caverns begun.

Jan. 6, 1962. Bill Gray, David Gray, Harvey Kohnitz, "Tag", Al Brandt, Mr. Allison, and Orion Knox, Jr. Ladders were placed in the pits and a little more digging done.

Jan. 13, 1962. Bill Gray and David Gray. The North Caverns was mapped as far as the Hall of the Mountain Kings

Jan. 14, 1962. Harvey Kohnitz, Mr. Allison, Bill Gray, David Gray, "Tag", "his friend", and Orion Knox, Jr. Photographs were taken and digging for bones done.

Jan. 21, 1962. Bill Gray, David Gray, Harvey Kohnitz, Dr. Ernest Lundelius, "a guy from the Texas Memorial Museum", "the assistant director of the Witte Museum", and Orion Knox, Jr. Bones and dirt were recovered and a survey station checked.

Jan. 29, 1962. Orion Knox, Jr., discusses commercialization with the owners.

Feb. 10, 1962. Bill Gray, David Gray, Porter Montgomery, and Orion Knox, Jr. From the Hall of the Mountain Kings to the crawl before Belayman's Bluff was mapped and photographs taken.

Feb. 17, 1962. Bob Rogers, Al Brandt, Bartel Morgan, Mike Bonine, and Orion Knox, Jr. The pit at the end of the Lake Passage and the water passage at the bottom are explored.

Mar. 4, 1962. James Reddell, Sharon Woolsey Wiggins, Bud Frank, Barbara Madden, John Bardgett, and Orion Knox, Jr. Several side crawls were checked and the passage back to the top of the Dome Pit discovered.

Mar. 10, 1962. Mills Tandy, Mike Collins, Merydith Turner, and Orion Knox, Jr. Photographs were taken in the North Caverns and part of the pit complex in the Dome Pit passage explored, including the passage leading into the Lake Passage.

Mar. 17, 1962. Further plans made for the commercialization of the cave.

Mar. 24, 1962. T.R. Evans, Mike Collins, and Orion Knox, Jr. The pit-crawlway complex beyond Belayman's Bluff is explored further and the top of the Dome Pit is seen for the first time; the crawl on the left side of the pit is entered and explored.

Mar. 31, 1962. T.R. Evans, Mike Collins, Bob Rogers, Mike Bonine, and Orion Knox, Jr. Further exploration of the Satan's Pit Passage is made with no significant discoveries.

Apr. 4, 1962. Sharon Woolsey Wiggens, James Reddell, Leonard Hall, and Orion Knox, Jr. The passage from the crawl to Belayman's Bluff, down into the Inferno Room and to the end of Limbo Passage is mapped.

Apr. 7, 1962. Norman Herkenham and Paul Wykert of the National Parks Service, James Thomas to the Texas State Parks Board, T.R. Evans, Mills Tandy, Al Brandt, Reggie Wuest, and Orion Knox, Jr. The members of the parks boards are shown the cave from the entrance to the end of Limbo.

Apr. or May, 1962. Mike Collins, T.R. Evans, and Orion Knox, Jr. Further exploration is made in the Satan's Pit Passage area.

May 25, 1962. Reggy Wuest, Tom Purdom of the New Braunfels Chamber of Commerce, and Orion Knox, Jr. Mr. Purdom is shown the cave as far back as the Hall of the Mountain Kings.

June 2, 1962. Mike Collins, Ed Collings, and Orion Knox, Jr. The passage on the wall of the Inferno Room is reached by tension climbing and it explored to the Dungeon. The crawl to the Gopher Pit is discovered.

June 17, 1962. James Reddell, Phil Russell, and Orion Knox, Jr. The Lake Passage is mapped and the pit at the bottom of the Lake Passage is explored to the stream and this checked to its end.

July 8, 1962. Tom Purdom, Reggie Wuest, Ed Collings, and Orion Knox, Jr. Photographs are taken and a crawl is checked off of the main passage.

July 25, 1962. Blair Pittman, Jim FitzPatrick, and Orion Knox, Jr. Pictures were taken, a dead-end chimney checked, and Helictite Crawl entered.

July 29, 1962. James Reddell, Terry Raines, Tommy Phillips, and Orion Knox, Jr. The entrance area is resurveyed and the Coon Rooms mapped.

Aug. 8, 1962. Jack Burch and Luther Walker of Sonora Caverns, Reggie Wuest, and Orion Knox, Jr. Commercialization is discussed the Limbo Passage and the Lake Passage are visited.

Sept. 4, 1962. Reggie Wuest and Orion Knox, Jr. Pictures were taken as far back as the Hall of the Mountain Kings.

Sept. 15-16, 1962. Terry Raines, James Reddell, and Orion Knox, Jr. The Gopher Pit is explored, a map of St. Mary's Halls is made and insects collected.

Sept. 23, 1962. Orion Knox, Jr. Ladder recovered from the Fairy Pit and photographs made.

Oct. 3, 1962. Bartel Morgan, Terry Raines, Mike Bonine, David McKenzie, and Orion Knox, Jr. The passage on the wall of Gopher Pit is explored by means of tension climbing.

Dec. 29, 1962. Jim Estes, George Gray, and Orion Knox, Jr. Photographs are taken as far back as the Dome Pit.

Feb. 23, 1963. James Reddell, David McKenzie, Blake Travis, Bud Frank, and Orion Knox, Jr. McKenzie, Travis, and Frank go to the Dungeon and recover bobcat bones, while Reddell and Knox begin map of the South Fault and explore the side crawl off of it.

Mar. 2, 1963. Jim Estes, George Gray, "Ed," and Orion Knox, Jr. Pictures were taken and the Limbo Passage and Lake Passage entered.

Mar. 7, 1963. Begginning of commercialization.

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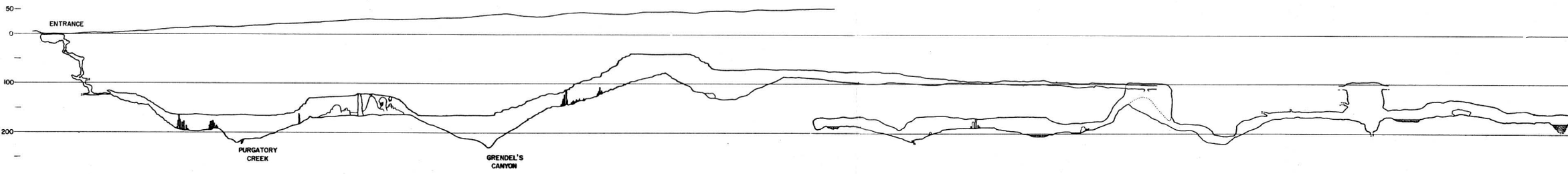

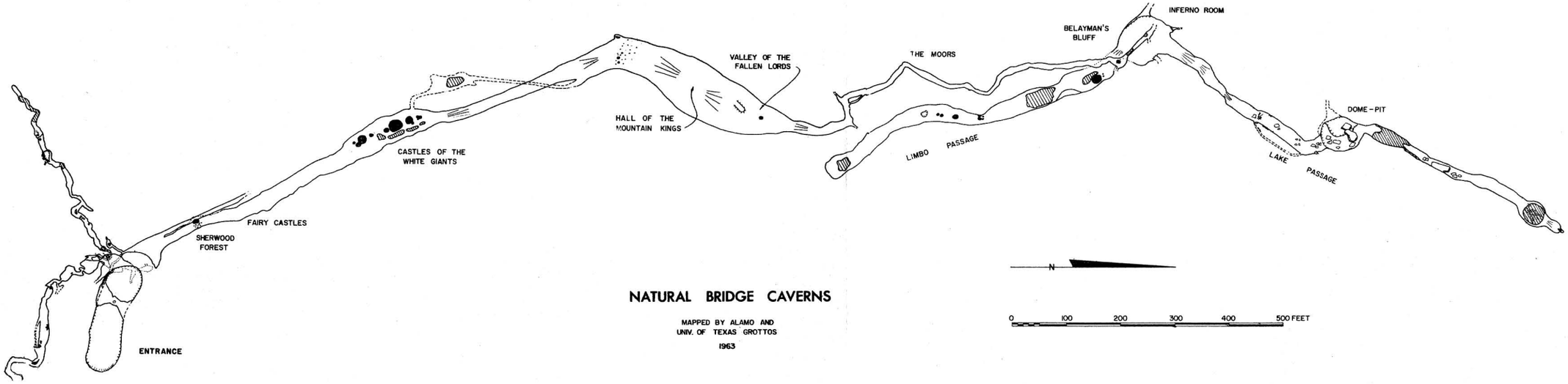

NATURAL BRIDGE CAVERNS

MAPPED BY ALAMO AND
UNIV. OF TEXAS GROTTOS
1963

N

0 100 200 300 400 500 FEET

PAPE'S PIT — Comal County (#44)

Hunter 15' Quadrangle

Owner: Pape Ranch

Description: The cave is entered by a 40' drop into a room about 30' long and 15' wide. The cave fills with water to a depth of about 15' after rains. It was explored on July 18, 1959, by Bill Russell and other members of the University of Texas Grotto. Equipment is need to enter the cave. A slimy salamander (Plethodon glutinosus) was observed in the cave on the above date.

Ref: TSS files

PLUMLY CAVE (SPRING BRANCH CAVE NO. 1) — Comal County (#3)

Smithson Valley 15' Quadrangle

Owner: H.C. Plumly

Description: The cave is 350' long land is reported to be an "erosion tube" containing a stream. It is entered by a walk-in passage and since the owner obtains his drinking water from the cave he does not want spelunkers in it. Ken Baker in March, 1957, visited the cave and collected a salamander of the genus Eurycea from it. It is tentatively identified as Eurycea neotenes, but since the Texas cave salamanders are in the process of revision the exact identity of this specimen is not known. Widener (Vol. 1, No. 5) places this cave in Kendall County, but this is in error.

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Ref: TSS files

POT HOLE — Comal County (#8)

Smithson Valley 15' Quadrangle

Owner: Otto Weidner (?)

Description: Two 3' in diameter holes are connected 5' below the surface. They continue to drop for an additional 10' before ending. The cave was investigated by Bill Russell and other members of the University of Texas Grotto.

Ref: TSS files

POT HOLE PIT — Comal County (#9)

Smithson Valley 15' Quadrangle

Owner: Otto Weidner (?)

Description: This cave consists of a 15' deep sink entered by a 3' in diameter hole. No passages lead from the bottom of the sink, which was explored by Bill Russell and other members of the University of Texas Grotto.

Ref: TSS files

PYTHON PIT — Comal County (#16)

Boerne 15' Quadrangle

Owner: Bruno Klar

Description: A 2' x 8' in diameter hole enlarges after a few feet to a pit 8' in diameter which drops 98' to an end in a flat dirt floor. No passages lead from the bottom of the pit, which was explored by Terry Raines and other members of the University of Texas Grotto.

Ref: TSS files

R. R. CORITH CAVES (CORITH CAVERN) — Comal County

New Braunfels West 7.5' Quadrangle

Owner: R.R. Corith; lessee: Jack Ohlrich

Description: "One of the state's most interesting undeveloped caves, the R.R. Corith Cavern probably represents a geologic history quite similar to that of the Devil's Sinkhole--in a much smaller way, of course, and with the final surface breakthrough not yet attained by the Corith Cavern. Apparently a succession of cave-ins filled and partially filled a large solution chamber with its floor about 95 feet below the surface. The result is a cavern with a large chamber, about 100 feet by 50 feet by 15 feet high, with its floor about 20 feet below the surface. To the north, a large corridor swings in a half circle around the room gradually diminishing in size from about 8 feet wide and 10 feet high to a small crawlway. To the south, a small passage amid the rubbel leads steeply downward to the 90 foot level where a small semi-circular room has escaped being plugged up by the falling debris. The floor drops another 5 feet to a pool of water which extends along the outer perimeter of this lower chamber. The cave is wet and muddy on the lower level but no formations were seen. Vast mounds of soggy guano could not be plumbed with a 13-foot pole, but only a few bats continue to make their residence there." (White, 1948) No recent explorations of this cave are cited in the files of the TSS, but it has doubtless been visited many times since 1948.

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Widener, Donald L., ed. Texas Cave Survey, Vol. II, No. 1, p. 59.

Ref: TSS files

RINKY DINK SINK — Comal County (#53)

Bat Cave 7.5' Quadrangle

Owner: Mr. and Mrs. Harry Heidemann

Description: A 3' x 4' hole drops about 15' to a 4' x 8' room with a dirt floor. The cave is formed along a joint, but it is not possible to follow it in any direction from the room. It was explored by Orion Knox, Jr.

Ref: Orion Knox, Jr.

ROMPEL CAVE — Comal County (#43)

Smithson Valley 15' Quadrangle

Owner: Henry Rompel

Description: A walk-in entrance leads into a passage about 150' long. The total depth reached in the cave is about 30'. Although the cave is dry there are five large and many small formations, all of which are dead. It was originally discovered and explored by Lige Balceszak and Jacques Elbel in 1951. Since that time the only known visits to the cave have been made by members of the Alamo Grotto. In May, 1963, a trip to the cave saw a trench 20' long dug at the floor drainage point. This then permitted 70' of tight squeezing before the cave again became too filled with dirt to progress further.

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Widener, Donald L., ed. Texas Cave Survey, Vol. II, No. 1, p. 60.

Ref: TSS files

SAUER'S SINK — Comal County (#24)

Otis Ridge 7.5' Quadrangle

Owner: Henry Sauer

Description: A 50' drop at the base of a shallow sink leads to a small crawlway that leads south towards Grosser's Sink about 200 feet away. At the bottom of the drop there is a small room, in which a rattlesnake was found on one trip. It has been entered several times by members of the University of Texas Grotto.

Ref: TSS files

SAUER'S SMALL SINK — Comal County (#22)

Otis Ridge 7.5' Quadrangle

Owner: Henry Sauer

Description: A small sink drops about 15'-20' to a dirt floor. No passages lead from this pit.

Ref: TSS files

SCHAEFER CAVE Comal County (#32)

Boerne 15' Quadrangle

Owner: Harvey Schaefer

Description: This cave is located about 100 yards from Schaefer Pit. It consists of a 300' long walking and crawling passage extending in two directionf from the bottom of a 25' deep entrance sink. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

SCHAEFER PIT Comal County (#31)

Boerne 15' Quadrangle

Owner: Harvey Schaefer

Description: The entrance to the cave is a 10' in diameter hole in the middle of a creekbed. The first five feet of the cave is in gravel and conglomerate, but beyond this point it is stable. The cave drops for about 40' to a large ledge from which it drops an additional 30' to a floor of breakdown and logs. The pit is about 20' in diameter with solution-fluted walls and some flowstone. It is formed along a joint which becomes too narrow and/or plugged with breakdown and trash to follow. At the bottom of the room it is possible to drop an additional 10' to water about 3' deep. The cave was originally explored by members of the Alamo Grotto; it was again entered on October 17, 1963, by James Reddell and John Porter. A small collection of cave crickets was made at that time. The cave is reported to have opened with the last few years.

Ref: TSS files

SPRING BRANCH CAVE (SPRING BRANCH CAVE NO. 2) Comal County (#2)

Smithson Valley 15' Quadrangle

Owner: H.C. Plumly (?)

Description: "The cave is a narrow crack having water at a depth of 45'. The water is seen as a small pool, but is in reality a large one covered by overlapping edges. The temperature is 20.5° Centigrade and animals of various sorts are said to live in the pool." (Widener) Widener, following White (1948), places this cave in Kendall County. This is, apparently,in error and the cave is probably in Comal County. Frogs are reported to inhabit the cave.

Bibliography: White, Patrick J. "Caves of Central Texas." The Caves of Texas, p. 55. Bulletin Ten of the National Speleological Society. April, 1948.
Widener, Donald L., ed. Texas Cave Survey, Vol. I, No. 5, p. 45.

Ref: TSS files

TONNE SINK (DEAD HORSE SINK) Comal County (#51)

Bat Cave 7.5' Quadrangle

Owner: Paul Tonne

Description: A 40' drop at the base of a funnel-shaped sink leads to a 50' drop, which in turn leads into a room about 50' long and 30' wide. At one end of this room a steep mud slope leads up for about 60' but no passages lead off. The water entering the cave sinks into a small dirt-filled depression at one side of the room. At times this holds water. The cave was explored in July, 1959, by Bill Russell and has been entered several times by members of the Alamo Grotto. On February 4, 1963, the temperature of the cave was 14°C.

Biology: When entered by Russell in July, 1959, several frogs and a small water snake were found. A small collection of invertebrates was made in the cave on February 4, 1963, by Mills Tandy, Royce Ballinger, and T.R. Evans. Cave crickets, Ceuthophilus cunicularis Hubbell, a water beetle of the family Hydrophilidae, Tropisternus lateralis nimbatus (Say), a scarab beetle, Ateuchus sp. prob. lecontei Harold, and two species of carabid beetle of the genus Bembidion were collected at that time. Also observed were gnats. Mushrooms grew over much of the floor and tended to grow towards what little light there was in the room.

Ref: TSS files

TRASH HOLE Comal County (#58)

Bulverde 7.5' Quadrangle

Owner: John P. Classen

Description: The cave entrance is located on the bank of the Cibolo Creek and starts in gravel, becoming a solution channel in limestone after a few feet. There are two entrances, one of which is open but the other is blocked by trash. The possibility exists that it could extend for some distance, but at this time it can only be entered for about 25'. It was explored by Bill Gray and other members of the Alamo Grotto.

Ref: Alamo Grotto

UNFAIR HOLE Comal County (#20)

Boerne 15' Quadrangle

Owner: Bruno Klar

Description: The cave consists of an 18' deep vertical squeezeway. Nothing leads off from the bottom.

Ref: Terry Raines

VOGEL'S SINK — Comal County (#59)

Bat Cave 7.5' Quadrangle

Owner: Herman Vogel

Description: The entrance to the cave is a hole on the southeast side of a 15' in diameter, shallow sink. From this hole the cave drops for 45' to a floor of rocks and silt. Just inside the entrance the cave enlarges to form a pit-like room 30' x 40' x 40' high. From the bottom of the entrance drop a gentle slope leads down to a point 63' below the entrance. It was mapped in January, 1963, by Bill Russell, James Reddell, and Terry Raines. (See map, page 55)

Bibliography: Anonymous. "News: University of Texas, N.S.S." The Texas Caver, Vol. VIII, No. 2, p. 17. February, 1963.

Ref: TSS files

WOLIE CAVE — Comal County (#5)

Smithson Valley 15' Quadrangle

Owner: Ben F. Wolle

Description: The cave is located about 50' from and 5' above the Guadalupe River. Although the entrance is about 50' wide and 12' high it rapidly narrows so that about 20' from the overhang it is only 3'-4' high and 4' wide with a stream issuing from it. At the point where the cave passage becomes small a series of small travertine dams have formed causing a small waterfall. The flow of the stream at this point is estimated to be in excess of 200 gpm. Beyond the waterfall the passage averages 3' in diameter with water at times within inches of the ceiling. The passage was mapped for about 200' and explored for an additional 500' without any sign of an end or any change in size. It will be flooded by the Canyon Reservoir. It was explored and mapped in March, 1963, by Bill Russell, Terry Raines, and other members of the University of Texas Grotto. (See map, page 56)

Bibliography: Widener, Donald L., ed. Texas Cave Survey, Vol. II, No. 1, p. 61.

Ref: Terry Raines

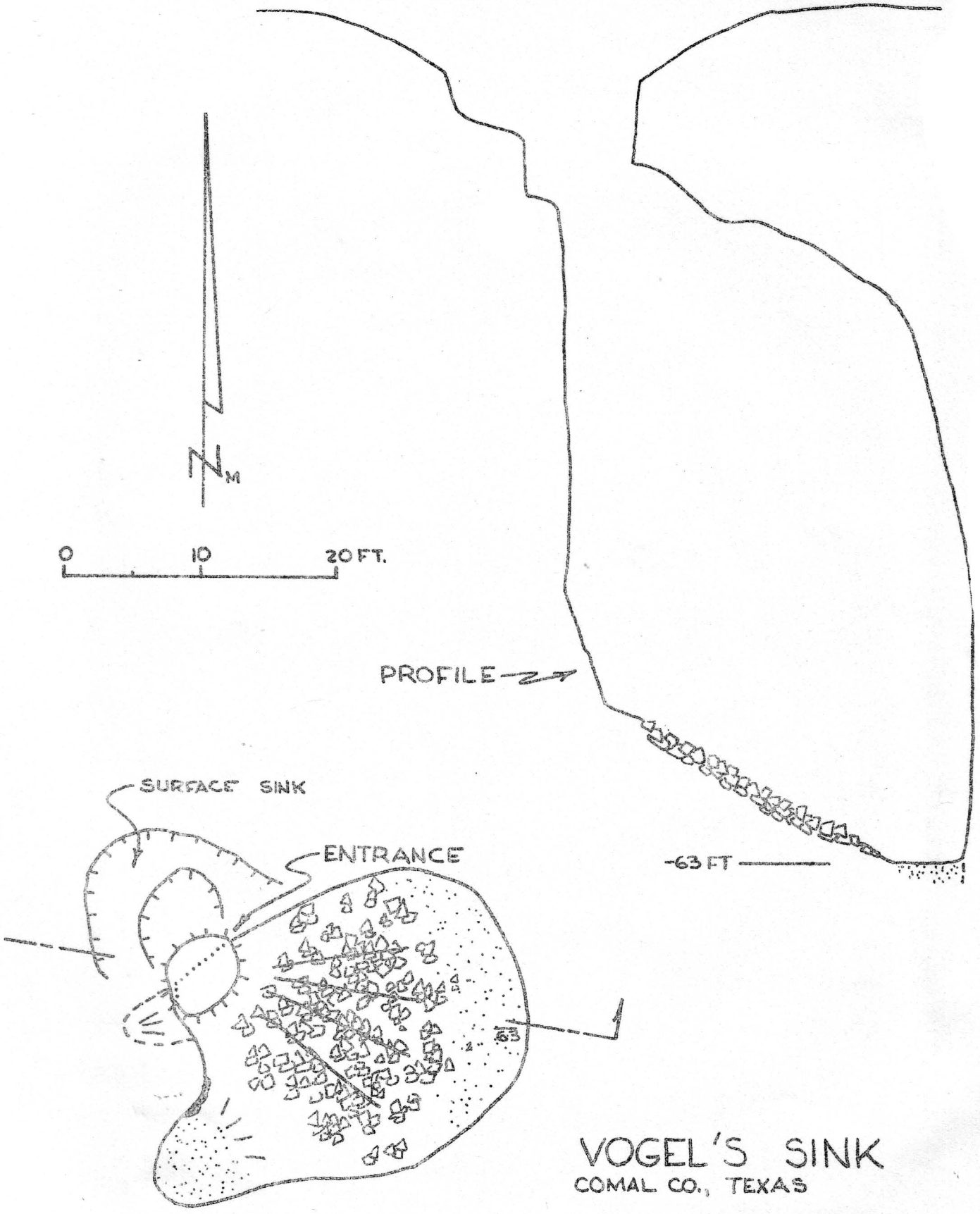
WORTHIEM CAVE — Comal County (#14)

Boerne 15' Quadrangle

Owner: Worthiem (?)

Description: The cave is a chimneyable 30' pit. It has been explored by members of the Alamo Grotto.

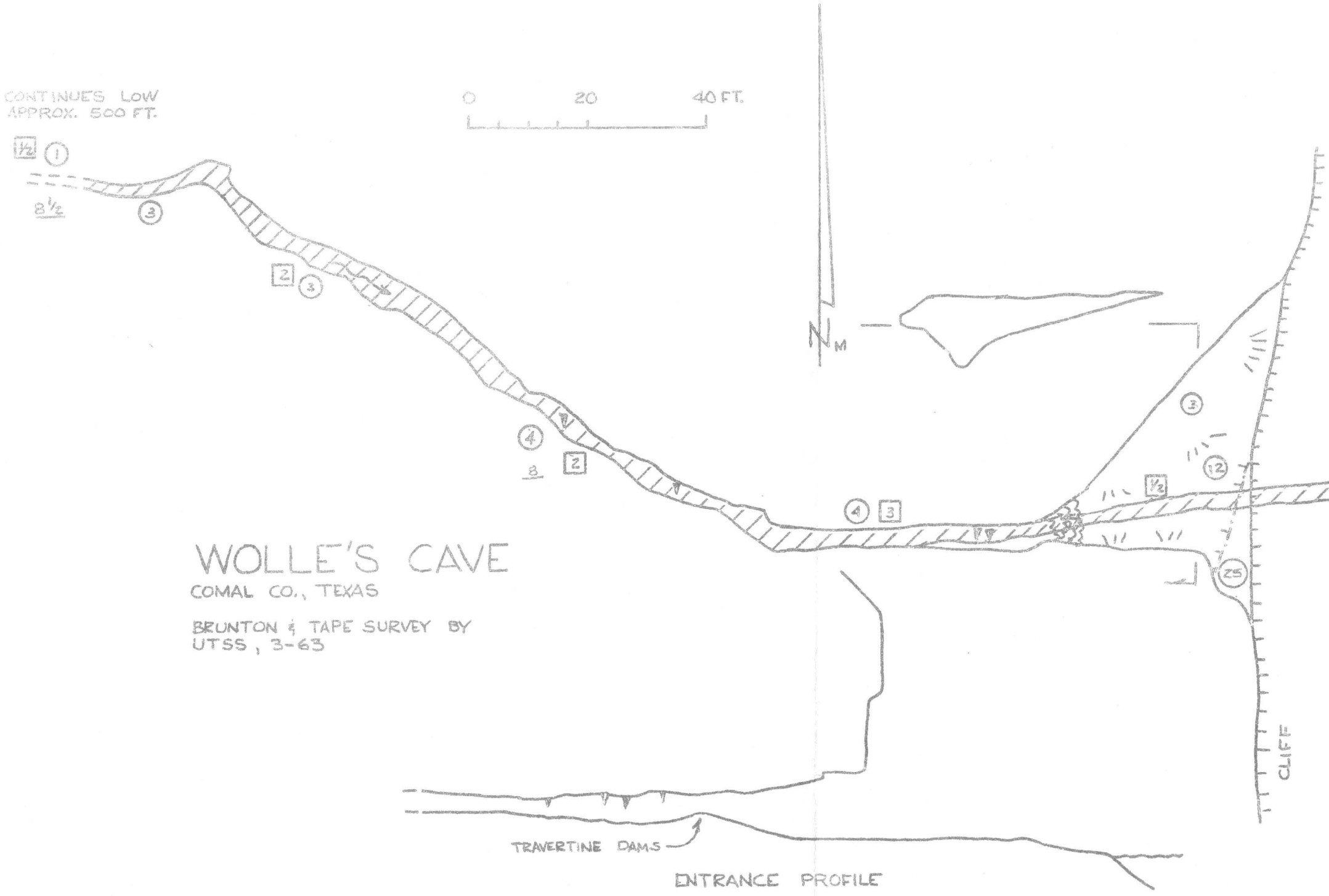
Ref: Alamo Grotto.



VOGEL'S SINK

COMAL CO., TEXAS

BRUNTON & TAPE SURVEY, 1-'63
UTSS



WOLLE'S CAVE

COMAL CO., TEXAS

BRUNTON & TAPE SURVEY BY
UTSS, 3-63

ZUERCHER CAVE NO. 1 — Comal County (#49)

Bat Cave 7.5' Quadrangle

Owner: Hugo Zuercher

Description: The cave consists of a 240' long crawlway, with some formations. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

UNNAMED CAVE — Comal County (#35)

Smithson Valley 15' Quadrangle

Owner:

Description: The entrance to the cave is a 3' in diameter hole located near Kappelman Cave. From the entrance it drops an estimated 30' into what appears to be a small room. It is not known if it goes beyond this room, as lack of equipment prevented its exploration.

Ref: TSS files

UNIDENTIFIED CAVE — Comal County

Legend: For lack of a better place the following story involving an unidentified Comal County cave is included here. It is taken directly from an interesting and rare book by Charles Merritt Barnes. "Cypriano Hernandez, a young Mexican shepherd, some time before had eloped with and wedded a very pretty young senorita of the neighborhood. Shortly after the nuptial rites uniting them had been performed the groom disappeared as if the earth had opened up and swallowed him. It had. His young bride for a few days was inconsolable. But only for a few days. A former lover, whose suit had been favored by her parents, disappeared with her in her second elopement. Not many days afterward a sudden storm coming up, some shepherds drove their flock into a cave. Soon after entering it they were surprised at their collie dogs acting very strange and especially one that had belonged to Hernandez. The dogs kept coming to the goat herds and then running back into the recesses of the cave until the latter followed Hernandez's dog which guided them to his corpse. It was in an advanced state of decomposition but easily identified by the clothing and other objects. The same functionary who had united Hernandez in wedlock to his bride held the inquest over his corpse. Van Raub was his name. The faithless bride and her levanting lover have ever since been southt in vain by the law. Probably they disappeared into Mexico."

Bibliography: Barnes, Charles Merritt. Combats and Conquests of Immortal Heroes, pp. 102-193. Guessaz & Ferlet Co., San Antonio. 1910.

Ref: TSS files

DOUBTFUL CAVES

DIERK CAVE NO. 2 — Comal County (#3a)

Boerne 15' Quadrangle

Owner: Dierk Ranch

Description: This is a 10' deep vertical hole, with much silt at the bottom. Widener places this in Kendall County, but this is probably in error.

Widener, Donald L., ed. Texas Cave Survey, Vol. I, No. 5, p. 40.
Ref: TSS files

DIERK CAVE NO. 3 — Comal County (#4a)

Boerne 15' Quadrangle

Owner: Dierk Ranch

Description: This is an 8' deep vertical hole with much silt at the bottom. It has been placed by Widener in Kendall County, but this is probably in error.

Bibliography: Widener, Donald L., ed. Texas Cave Survey, Vol. I, No. 5, p. 40.

Ref: TSS files

FAIR OAKS RANCH SINKS — Comal County (#7a)

Boerne 15' Quadrangle

Owner: Fair Oaks Ranch

Description: Several shallow sinks, some up to 10' deep, are to be found along the east boundary of the Fair Oaks Ranch. Digging might open up at least one or two of them.

Ref: TSS files

KAPPELMAN UNCAVE — Comal County (#8a)

Smithson Valley 15' Quadrangle

Owner: Arno Kappelman

Description: A 3' in diameter hole covered with logs drops about 6' to a plug of rocks. Excavation might open up a cave. A milliped, Aniulus adelphus Chamberlin, was collected inside the entrance by James Reddell and Bill Russell on March 15, 1964.

Ref: TSS files

KLAR'S SINK — Comal County (#6a)

Boerne 15' Quadrangle

Owner: Bruno Klar

Description: This is a 10' deep crevice located at the bottom of a shallow depression.

Ref: TSS files

S.S. SINK — Comal County (#1a)

Blanco 30' Quadrangle

Owner: Edward Badouh

Description: The entrance is a 2'-3' in diameter hole in solid rock. Although originally filled to within a foot or so of the surface it has been excavated to a depth of about 5'. A slight enlargement occurs at this point and a narrow crevice leads off to one side, but is too small to follow. Scorpions were observed and a salamander (Plethodon glutinosus) was collected by Tom Dillon.

Ref: Tom Dillon

ZUERCHER CAVE NO. 2 — Comal County (#9a)

Bat Cave 7.5' Quadrangle

Owner: Hugo Zuercher

Description: All that is known of this cave is that it is less than 15' deep. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

ZUERCHER CAVE NO. 3 — Comal County (#10a)

Bat Cave 7.5' Quadrangle

Owner: Hugo Zuercher

Description: All that is known of this cave is that it is less than 15' deep. It has been explored by members of the Alamo Grotto.

Ref: Alamo Grotto

SHELTERS

DIERK SHELTER CAVES — Comal County (#5a)

Boerne 15' Quadrangle

Owner: Dierk Ranch

Description: This is a group of shelters, several of which have dead-end crawlways. Some may be actual caves. Several bats were noted when they were investigated. These are reported, probably erroneously, to be in Kendall County.

Ref: TSS files

THE OBLATE SITE — Comal County (#2a)

Smithson Valley 15' Quadrangle

Owner: San Enrique Ranch; property of Oblate Fathers

Description: The site consists of stratified deposits located inside and at the base of a rockshelter. The shelter is formed by a ledge of Cretaceous limestone approximately 150' in length and from 2'-12' in depth. The site was surveyed by Robert L. Stephenson in 1949. Excavations were directed by Curtis Tunnell for the Texas Archeological Salvage Project and the Texas Memorial Museum for two sessions: 1959 and 1960. During the summer of 1963 the Texas Archeological Society and the Texas Christian Archeological Society conducted a joint training session at the site. A report on the Tunnell excavations is published in Johnson, Suhm, and Tunnell (1962). The site contained 1) artifacts of the Austin and Toyah foci of the Central Texas Aspect, Neo-American Stage, and in the deeper levels 2) materials of the Edwards Plateau Aspect of the Archaic Stage.

Bibliography: Johnson, Leroy, Jr., Dee Ann Suhm, and Curtis D. Tunnell. "Salvage Archeology of Canyon Reservoir: the Wunderlich, Footbridge and Oblate Sites." Texas Memorial Museum Bulletin, No. 5. 1962.

Ref: Dorothy Burr