

TEXAS SPELEOLOGICAL SURVEY

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THE CAVES OF KINNEY COUNTY

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TEXAS SPELEOLOGICAL SURVEY

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THE CAVES OF KINNEY COUNTY

GEOLOGY

Kinney County, located in south central Texas, is bounded on the east by Uvalde County, on the west by Val Verde County, and on the north by Edwards County. The county is divided into two physiographic regions; the northern third lies on the Edwards Plateau while the remainder is a part of the Gulf Coastal Plain. The Edwards Plateau section is characterized by moderately high local relief, particularly along the West Nueces River, the main drainage of that part. Away from the river wide, rolling uplands are common. The Gulf Coastal Plain section has low relief with gently rolling hills except in the Anacacho Mountains which, in the southeastern part, rise about 300' above the surrounding plain. A few isolated prominent hills such as Las Moras Mountain and Elm Mountain mark some of the common igneous bodies.

Brackettville, the county seat of Kinney County, lies in the northern part of the Gulf Coastal Plain. It is the largest town with a population of about 1900. The principal industries are goat and sheep ranching in the north and cattle ranching in the south. Rock asphalt is quarried southeast of Brackettville.

Rainfall, often in torrential storms, averages 22 inches per year. The average temperature is about 70°F with consequently high evaporation losses. Most of the rainfall in the northern part of the county moves underground after only a short distance of surface travel. Once underground the water in the eastern half of the county moves south and eastward, but that in the western half moves west, toward Del Rio. Bennett and Sayre (1962) have computed that water leaving the county each year carries about 300,000 acre feet of limestone, or 210 cubic feet per square mile.

All cave bearing rocks, or speleifers, in Kinney County are Cretaceous in age. The oldest rocks exposed are the upper part of the Glen Rose Formation which crops out in the valleys of the West Nueces River and Liveoak Creek; no caves are known from it. Above the Glen Rose is a unit which has been called by Bennett and Sayre (1962) the Georgetown-Edwards. Recent work by Lozo and Smith (1964) splits this unit into three formations. The lowest is the West Nueces Formation, averaging about 150 feet thick. It consists of a lower unit of nodular limestone and an upper massive limestone unit. Above the West Nueces Formation is the McKnight Formation, which is primarily tan-to-black thin-bedded limestone, probably less than 100 feet thick in the outcrop area. The McKnight also contains two collapse zones representing removal of evaporite beds by ground water. The upper formation of Lozo and Smith is the Salmon Peak Formation, which can be divided into two units. The lower unit is 305 feet of thick bedded white limestone with abundant chert; the upper unit is a calcite sandstone about 75 feet thick in the subsurface but very thin or missing on the outcrop. The West Nueces and McKnight Formations only crop out in the West Nueces and Liveoak Creek valleys in northeast Kinney County; the Salmon Peak is widespread, covering most of the rest of the northern third of the county. Both the West Nueces and Salmon Peak are speleifers, but the limited outcrop of the formations has resulted in few caves being known from them.

Immediately overlying the Salmon Peak is the Del Rio Clay; it is not thought to contain caves because of its clayey character. However, the Buda Limestone above it contains at least one small cave (Pratt's Sink) and several large collapse sinks located in areas of concentrated faulting northeast of Brackettville. In that area the Buda is about 110 feet thick and consists of light gray, massive, hard limestone. Above the Buda is the Eagle Ford Shale, with no known caves.

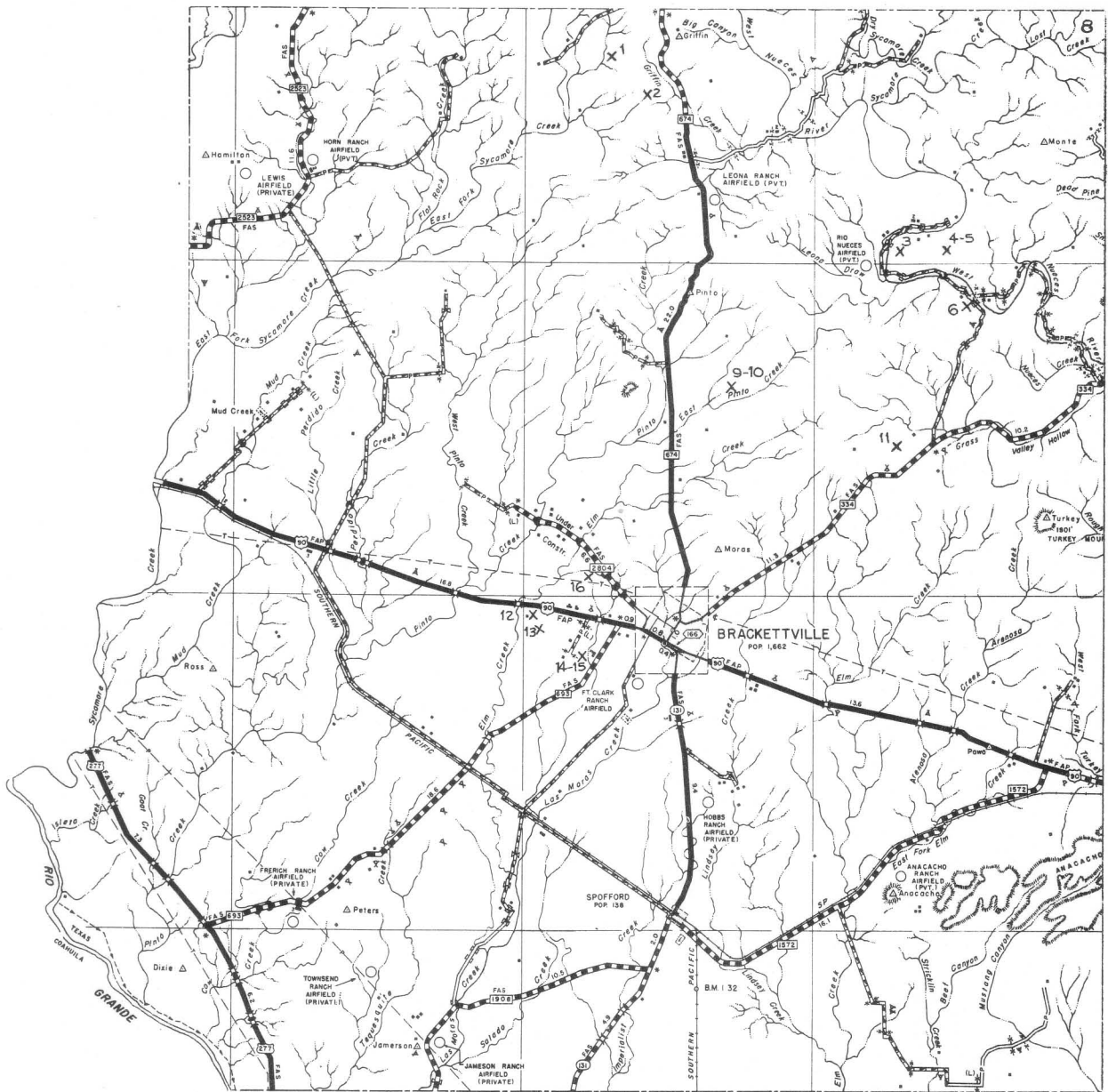
In an east-west belt lying along and south of U.S. 90 is the outcrop of the Austin Chalk. The basal Austin, that exposed farthest north, is composed of massive beds of hard, light gray limestone which apparently contains a number of caves. Farther south the Austin is chalky, soft, and marly. Above the Austin, in the Anacacho Mountains, is the Anacacho Limestone. It is mainly massive hard limestone with some interbedded clay beds. Caves have been reported from the Anacacho, but unfortunately no detailed reports are available. Above the Anacacho is a series of sandstones and clays, none of which are known to contain caves.

The average dip of the strata in Kinney County is about one degree to the south or southeast. Most of the strata also thickens to the southeast (see geologic section, page 4). The Balcones Fault Zone, much more prominent to the east, is represented in Kinney County by a number of small normal faults with displacements up to 75 feet. Most trend between N45E and N80E. The principal faulting is along a line parallel to US 90 and about six miles north of it. A few of the faults are actually the result of collapse into caves.

As may be seen from this report Kinney County is one of the neglected caving areas of Texas. Although all of the northern part of the county is covered by good limestone, as well as much of the southwestern part only 16 caves are known from the county. This is especially startling when it is remembered that this county includes caves visited since the early 1950's. This report is issued at this time, therefore, in an attempt to stir interest in one of the most promising cave areas of the state. Although there are reports of caves in the Anacacho Mountains no positive information has ever been gathered about this large area. The excellent report of Bennett and Sayre and the follow-up work of Lozo and Smith have laid an excellent foundation for cave hunting in the county. Many small caves and additional large ones certainly remain to be found.

References: Bennett, R.R., and A.N. Sayre. 1962. Geology and ground-water resources of Kinney County, Texas. Texas Water Commission Bulletin 6216.
Lozo, F.L., and C.I. Smith. 1964. Revision of Comanche Cretaceous stratigraphic nomenclature, southern Edwards Plateau, southwest Texas. Gulf-Coast Association of Geological Societies Transactions, 14:285-307.

ACKNOWLEDGEMENTS: Acknowledgement is made to the following biologists for their identification of material included in this report: carabid and pselaphid beetles - Dr. Thomas C. Barr, Jr., University of Kentucky; millipeds - Dr. Nell Causey, Louisiana State University; collembola - Dr. Kenneth Christiansen, Grinnell College; spiders - Dr. Willis J. Gertsch, American Museum of Natural History; phalangids - Dr. Clarence J. Goodnight, Western Michigan University; roaches - Dr. Ashley Gurney, United States National Museum; staphylinid beetles - Mr. Lee Herman, Catholic University of America; cave crickets - Dr. Theodore H. Hubbell, University of Michigan; snails - Dr. Leslie Hubricht, Meridian, Mississippi; ticks - Dr. Glen M. Kohls, Rocky Mountain Laboratory, Hamilton, Montana; tenebrionid beetles - Dr. T. J. Spilman, United States National Museum; trichoniscid isopods - Dr. A. Vandel, Faculte des Sciences, Alles Saint-Michel, Toulouse, France; thysanura - Dr. Pedro Wygodzinsky, American Museum of Natural History.



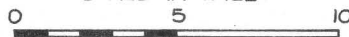
KINNEY COUNTY

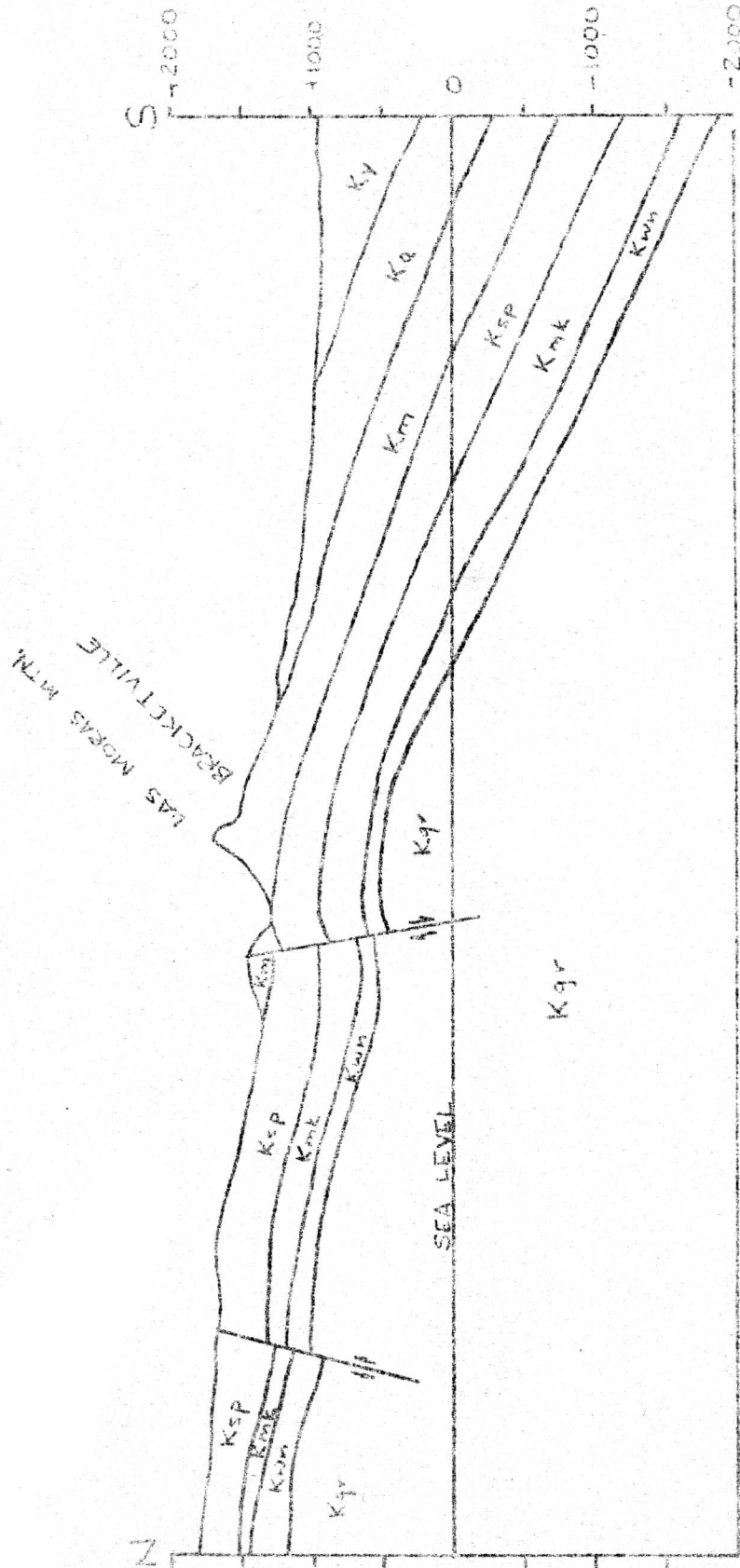


KEY TO COUNTIES

x⁴ CAVE LOCATION
KEYED TO INDEX

SCALE IN MILES





- Ky ROCKS YOUNGER THAN AUSTIN
- Ka AUSTIN GROUP
- Km ROCKS BETWEEN SALMON PEAK & AUSTIN
- Ksp SALMON PEAK FORMATION
- Kwn MCKNIGHT FORMATION
- Kqr WEST NUECES FORMATION
- GLEN ROSE FORMATION



GEOLOGIC CROSS-SECTION OF
KINNEY COUNTY

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9.	Alamo Village Cave	Brackettville	250'	66'	6
10.	Webb Cave	Brackettville	3000'	110'	28
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ALTERNATE NAMES:

Bader Cave - Rattlesnake Cave
 Bat Cave - Green Cave
 Column Cave - Kickapoo Cave
 Hillcoat Cave - Kickapoo Cave
 J. Wells Ranch Cave - Palace Cave
 Seargeant Ranch Cave -- Green Cave; Kickapoo Cave
 Shahan Ranch Cave - Webb Cave

ALAMO VILLAGE CAVE

Kinney County (#9)

Brackettville 15' Quadrangle

Owner: Happy Shahan

Description: The cave is entered by two holes, the largest of which is 3' x 5'. Both drop about 9' into a passage 4' high and 6' wide. Some flood water enters the cave. This passage extends 30' before dropping 25' down two small holes. This drops into a room about 10' long, 8' wide, and 12' high. Two passages extend from this room. The one to the right doubles back underneath the upper level, extending for about 50' as a 8'-9' high, 2' wide passage. After about 20' a narrow passage extends to the left but ends after a few feet. About 50' from the junction a cross-joint occurs and a pit drops 35' to a pool of water from which no passages extend. The passage continues for about 25' beyond the drop before ending in a low crawl. Just before the end it is a 20' high fissure. The other passage from the junction room is entered by a 10' drop. This passage extends about 15' to a junction. The left-hand passage slopes down into a 20' high passage which after about 30' reaches a pool of water and ends. Beyond this side passage the main passage continues for about 70' as a narrowing fissure-type passage, eventually sloping up to an end. A small hole on the left side almost at the end contained a non-poisonous snake. The cave is named after the nearby movie set, built for the John Wayne movie, The Alamo, which was shot on the Shahan Ranch. The cave is formed in the Salmon Peak Formation. One of the joint controlled passages parallels the ENE trends of nearby normal faults of the Balcones fault zone. The cave was explored and mapped on Jan. 28, 1963, by Terry Raines, Bill Russell, Bill Bell, and T.R. Evans of the University of Texas Grotto. (See map, page 7)

Bibliography: Anonymous. 1963. News: University of Texas, N.S.S. Texas Caver, 8(2):17.

Ref: TSS files

AMMONITE CAVE

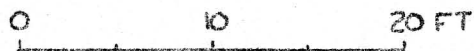
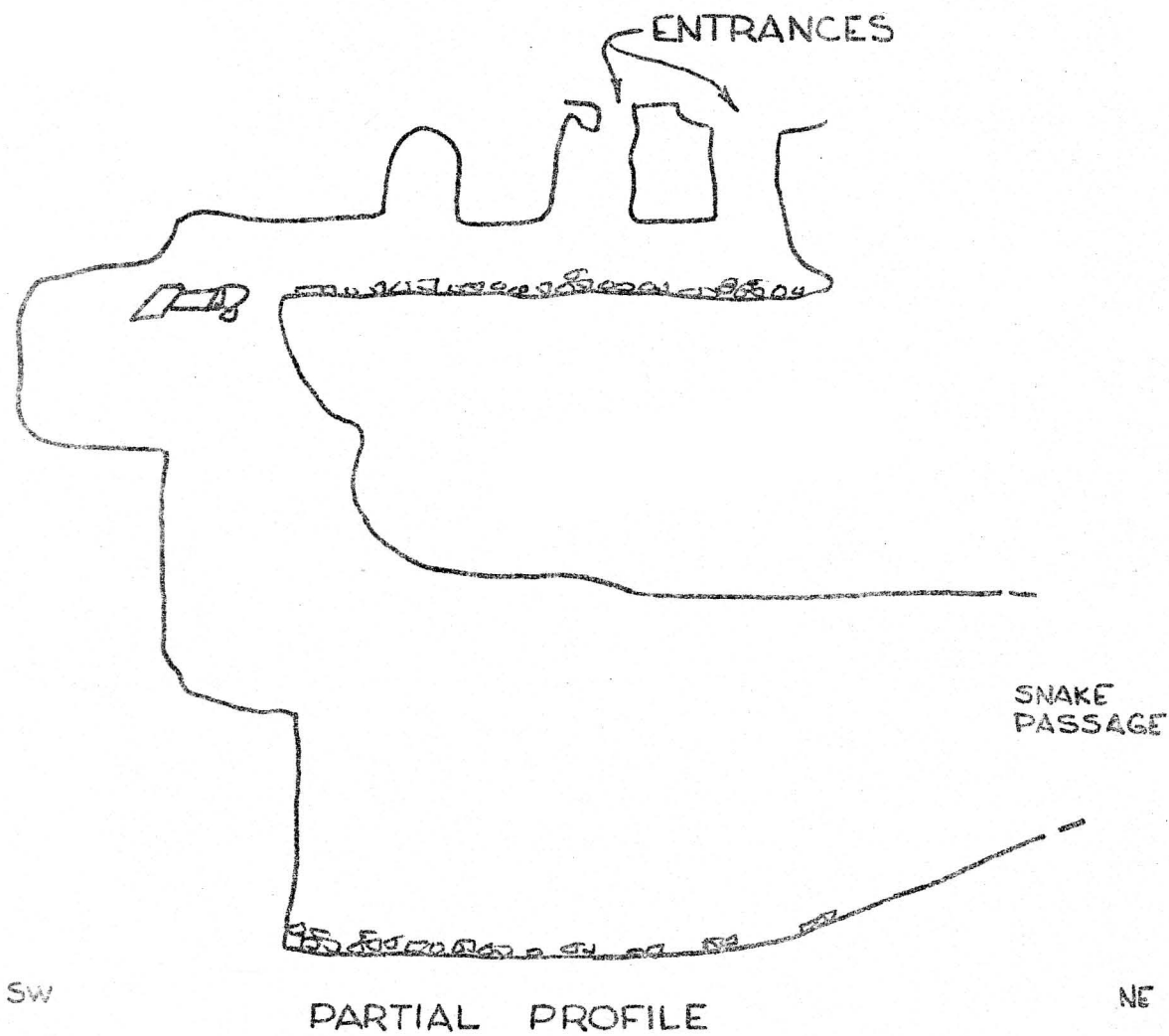
Kinney County (#6)

Turkey Mountain 15' Quadrangle

Owner: Buster Schwandner

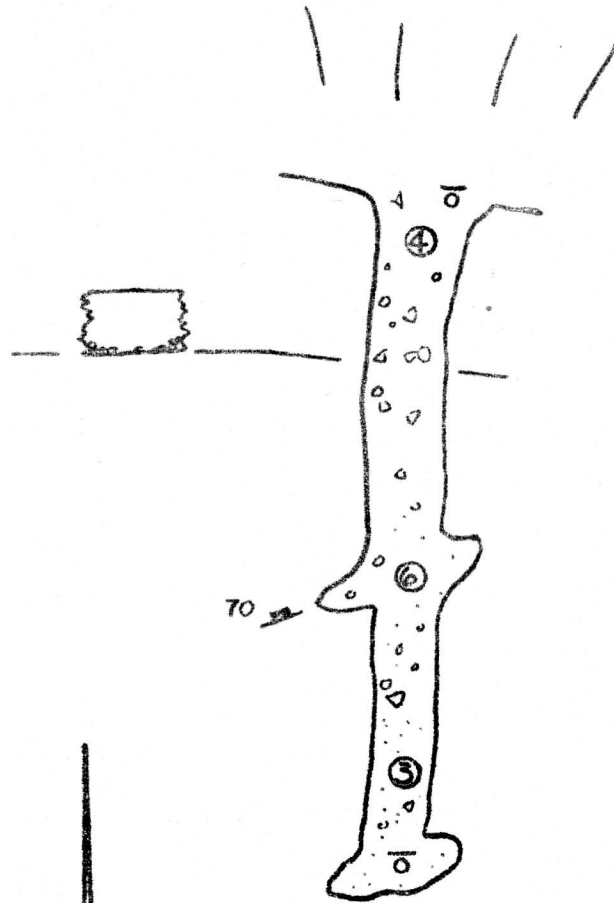
Description: Ammonite Cave is a 36' long crawl, 3'-4' high extending southward into a bluff along the West Nueces Valley. Two cross joints provide the only wide spots in its otherwise smooth passage. The name comes from large ammonites seen on the talus slope below the cave. The cave is in the McKnight Formation, which consists here of thin- to medium-bedded limestone with abundant ammonites. It was first reported by Mrs. Lily Schwandner in Sept. 1961, and was explored and sketch mapped on Jan. 6, 1962, by A. Richard Smith and James Reddell. (See map, page 8)

Ref: TSS files



ALAMO VILLAGE CAVE
KINNEY CO., TEXAS

NUECES RIVER VALLEY



AMMONITE CAVE
KINNEY CO., TEXAS
SKETCH BY UTSS

0 10 20 FT.

BRACKETTVILLE SINK

Kinney County (#13)

Brackettville 15' Quadrangle

Owner: Charles Zinsmeister

Description: The 46' shaft entrance of this cave is situated in the floor of a shallow draw and takes considerable flood drainage. The low relief and sparse vegetation of the surrounding terrain characterizes the erosional surface of the lower Austin Chalk which contains the cave. The 8' long, 3'-5' wide fissure-like entrance intersects a low, 10' wide passage that is continuous in opposite directions. Most of the drainage is directed NNE, through a 2'-5' high crawlway floored with silt and gravel. It extends approximately 275' to an enlargement where a sink in the dirt floor contains a small stagnant pool. Beneath its surface, a small water-filled channel continues horizontally. The passage ends in silt fill about 40' beyond the pool. The passage extending SSW of the entrance leads 45' to a 13' high dome that is formed on a cross-joint. Beyond here, it continues as a very low, torturous crawl that finally fills with dirt and organic debris at 155' from the entrance. The 55' total depth of the cave apparently responds to the local water table. The cave was first reported by Bennett and Sayre (1962); it is supposed to have been explored back to the drop to water prior to the visit by Raines and McKenzie. The cave was mapped on Nov. 8, 1964, by Terry Raines and David McKenzie of the University of Texas Grotto. (See map, page 10)

Biology: A collection of invertebrates was made by Raines and McKenzie on the above date. A faunal list follows:

Snails

Hawaiia minuscula (Binney) -- accidental

Millipeds

Cambala speobia (Chamberlin) -- troglobite

Cave crickets

Ceuthophilus (Ceuthophilus) sp. -- troglaxene

Ceuthophilus (Ceuthophilus) sp., cf. apache Hubbell -- troglaxene

Ceuthophilus (Geotettix) cunicularis Hubbell -- troglaxene

Beetles

Bembidion sp. -- troglaxene

Tachys (Tachys) proximus Say -- troglophile

Stilicolina condei Jarrige -- troglophile

Eleodes hispilabris (Say) -- troglaxene

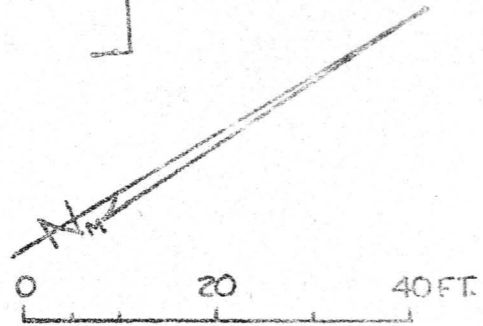
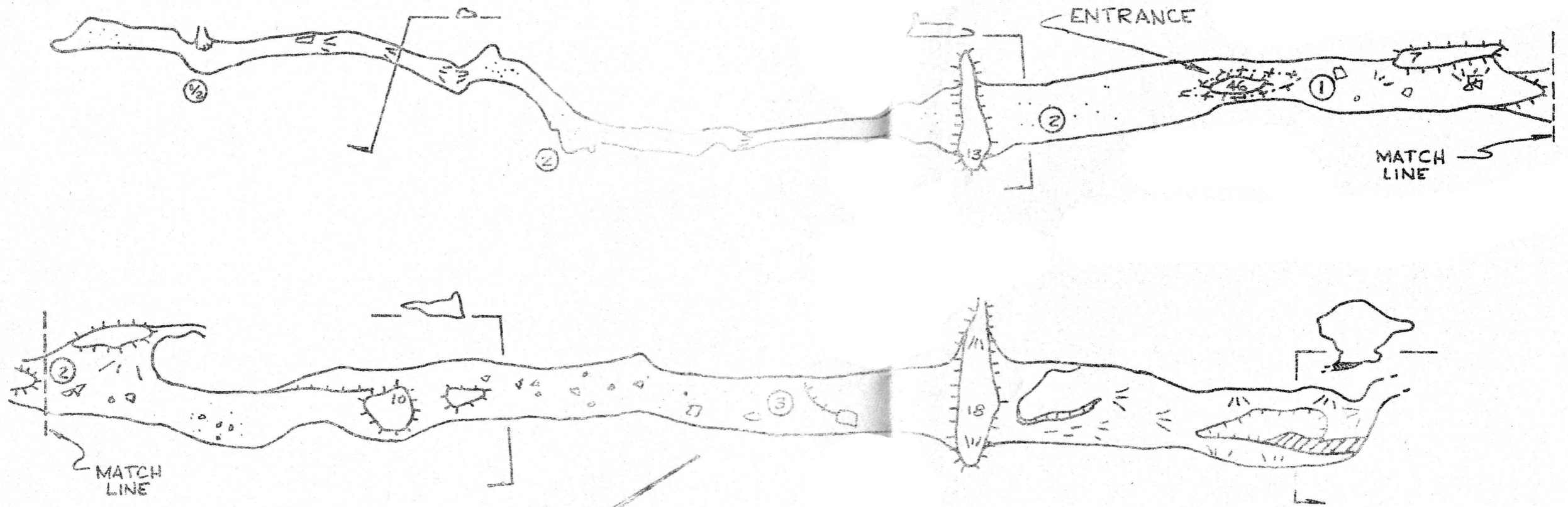
Eleodes ventricosa ventricosa LeConte -- troglaxene

Bibliography: Bennett, R.R., and A.N. Sayre. 1962. Geology and ground-water resources of Kinney County, Texas, pp. 44-45. Texas Water Commission Bulletin 6216.

Reddell, J.R. 1965. A checklist of the cave fauna of Texas. I. The Invertebrata (exclusive of Insecta). Texas Journal of Science, 17(2):143-87

Reddell, J.R. 1966. A checklist of the cave fauna of Texas. II. Insecta. Texas Journal of Science. (In press)

Ref: TSS files



BRACKETTVILLE SINK
 KINNEY CO., TEXAS
 BRUNTON & TAPE SURVEY BY UTSS

DAIRY CAVE

Kinney County (#14)

Brackettville 15' Quadrangle

Owner: L. B. Langston

Description: Dairy Cave is located in the yard of the Langston Ranch between the house and the dairy barn. The entrance is a small vertical hole at the base of a small clump of brush. The entrance drops about 8' to a small room about 25' long, 10' wide, and 10' high. There are no leads from the room except for a small alcove at the south end. The cave is developed in the Austin Chalk. The local children used to play in the cave but it is now used only as a repository for an occasional oil can. It was explored and a sketch map made in April, 1963, by William Russell and other members of the University of Texas Grotto. (See map, page 12)

Ref: TSS files

GREEN CAVE (BAT CAVE) (SEARGEANT RANCH CAVE)

Kinney County (#1)

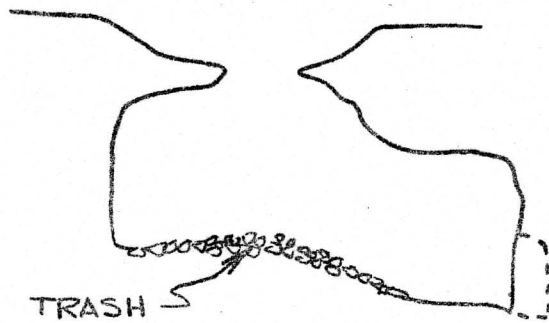
Indian Mountain 15' Quadrangle

Owner: Tommy Seargeant

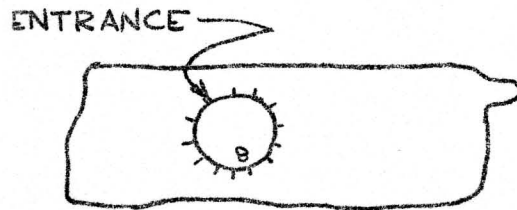
Description: No member of the Texas Speleological Survey staff has visited Green Cave and, in recent years, few trips by anyone have been made. There is no good description available. The following brief description will serve to give an idea of the general nature of the cave and its formations. Green Cave "is a large, arched tunnel about 30' to 40' high and 50 or 60 wide. There are many big stalagmites and columns. One outstanding characteristic of the cave is the result of resubmergence after the deposition of the secondary formations. There are excellent displays of botryoidal stalactites, and where the calcite deposit is heavier, everything is covered with a 4" thick layer of lemon-yellow, 'cumulus' surfaced calcite." (Slemaker, 1953) Carl Clayton reports that formations are abundant with many large stalagmites and stalactites to be found about midway back in the cave. Toward the rear of the cave the formations are smaller but alive. Several newly formed stalagmites have cemented Ballen rock separated by several inches, so that the whole mass may be easily picked up from the floor without breaking any rock. The cave has a generally arched cross section. The total length is about 1700'. It is developed in the Salmon Peak Formation. (See map, page 13)

Biology: The cave is reported to have had a large bat colony at one time, but the owner reports that the bats left the cave several years ago and have not returned. About 50 nests of the cave swallow, Petrochelidon fulva pallida, were observed in the cave on Jan. 30, 1957, by James K. Baker.

History: The cave has been known since the 19th century, but the nearby beautiful and spectacular Kickapoo Cave has overshadowed it. It was mined for guano many years ago and, in 1957, was reported to be still being mined on a small scale, but that this operation was generally unprofitable because of the low nitrogen content of the guano. The cave was visited on Nov. 30, 1949, by Carl Clayton. It was explored Christmas, 1952, by J.D. McClung, Bennie Pearson, Jerry Chastain, and Carroll Slemaker of the University of Texas Grotto. It has been frequently visited by members of most of the caving groups in Texas. It was mapped on Nov. 24, 1956, by Arthur Carroll,



PROFILE



PLAN

0 10FT.
NO NORTH ARROW

DAIRY CAVE
KINNEY CO., TEXAS
SKETCHED BY UTSS, 4-63

Bill Helmer, Dave Kyser, and Fred Berner of the University of Texas Grotto. Because of severe vandalism to Kickapoo Cave the owner in 1958 refused permission for anyone to return to the cave. Recently a few trips have been allowed. These include one on March 16, 1963, by George and Jacque Gray, Jim and Holly Medlin, Jim Estes, Ed deBary, and Tom Meador. The cave, however, is not open to all comers and arrangements to visit it should be made through the Abilene or Alamo Grottos.

- Bibliography: Anonymous. 1962. Don't make an unnecessary trip --- these caves are closed. *Texas Caver*, 7(6):80.
- Anonymous. 1963. News: Abilene Grotto, N.S.S. *Ibid*, 8(4):42.
- Anonymous. 1963a. News: Abilene, N.S.S. *Ibid*, 8(3):31-32.
- Estes, J.H. 1961. Noteworthy caverns of Texas. *Texas Almanac* 1961-1962, p. 63.
- Maxwell, R.A. 1962. Mineral resources of South Texas. Bureau of Economic Geology Report of Investigations No. 43, pp 99.
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- Slemaker, C. 1953. Texas group adds four caves to state list. *NSS News*, 11(3):4-5.
- Widener, D.L., ed. n.d. Edwards Co. Texas Cave Survey, 1(4):24-25.
Reprinted in: *Speleo Digest* 1958, p. 1-298. Pittsburgh Grotto Press, 1959.
Ref: TSS files

JONES CAVE

Kinney County (#16)

Brackettville 15' Quadrangle

Owner: Ben Jones, Jr.

Description: A shallow sink near the top of a low hill opens on the south into a 3' high, L-shaped room averaging about 8' wide. At its west end it fills with breakdown and silt. In the apex of the "L" is a small, 5½' pit to the ten-foot level which extends about 5' northeast to an 8' deep pit which splits into two about halfway down. At the bottom is a one-foot high room about 10' square with an impassible crawl leading out to the northeast, paralleling the 10' level. The lowest level has a silt and fine gravel floor. Very little flood water enters the cave. It is developed in the lower Austin Chalk. The joint-controlled 10-foot level parallels the major fault directions of the Balcones fault zone. The upper and lowest levels are bedding plane enlargements. The cave was explored and a sketch map made by A. Richard Smith and James Reddell on Dec. 30, 1962. (See map, page 15)
Ref: TSS files

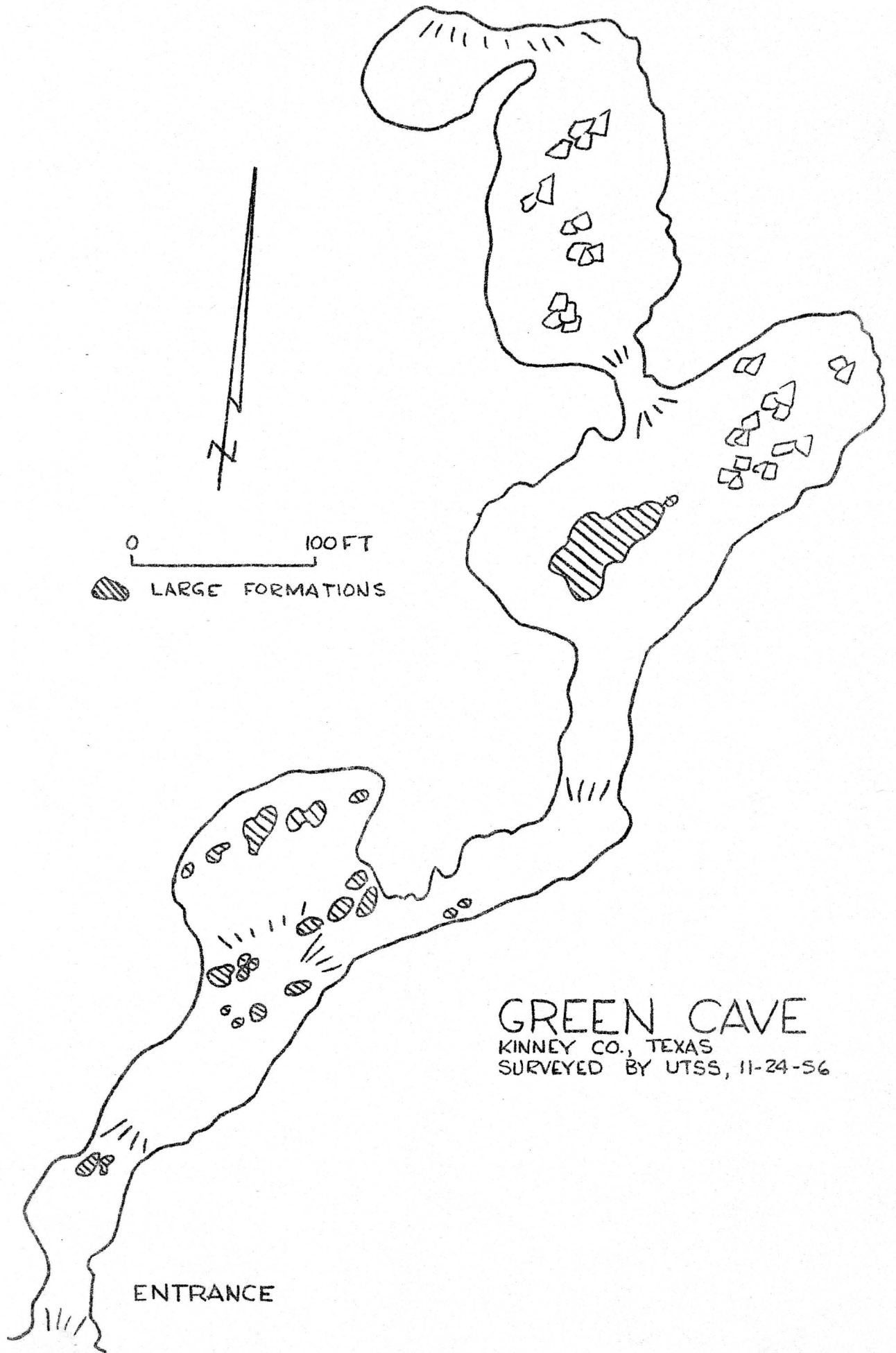
KICKAPOO CAVE (HILLCOAT CAVE) (COLUMN CAVE) (SEARGEANT RANCH CAVE)

Kinney County (#2)

Indian Mountain 15' Quadrangle

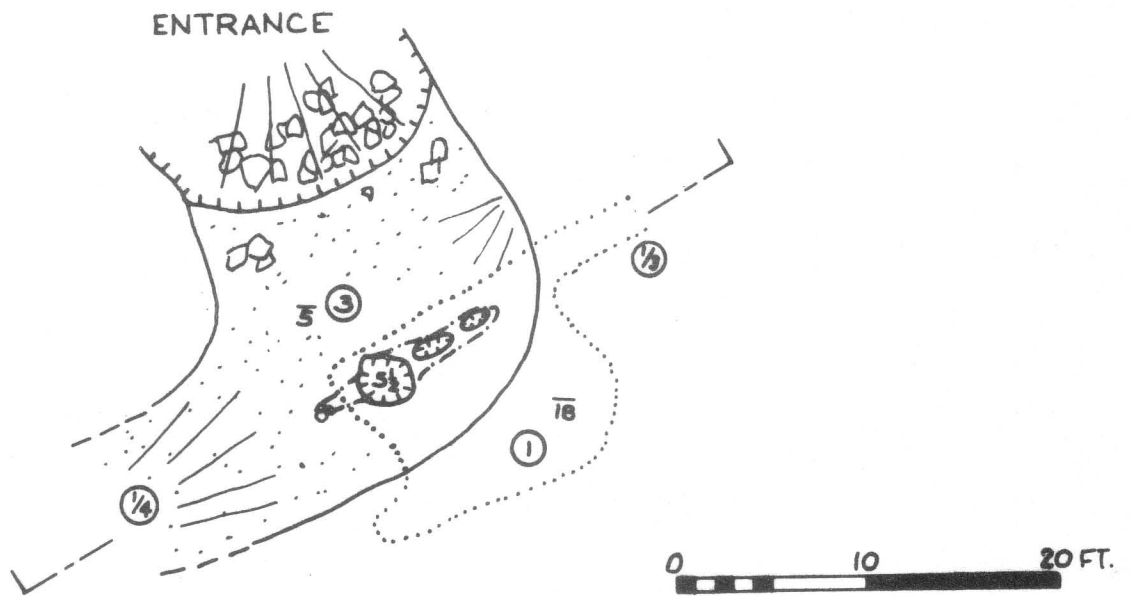
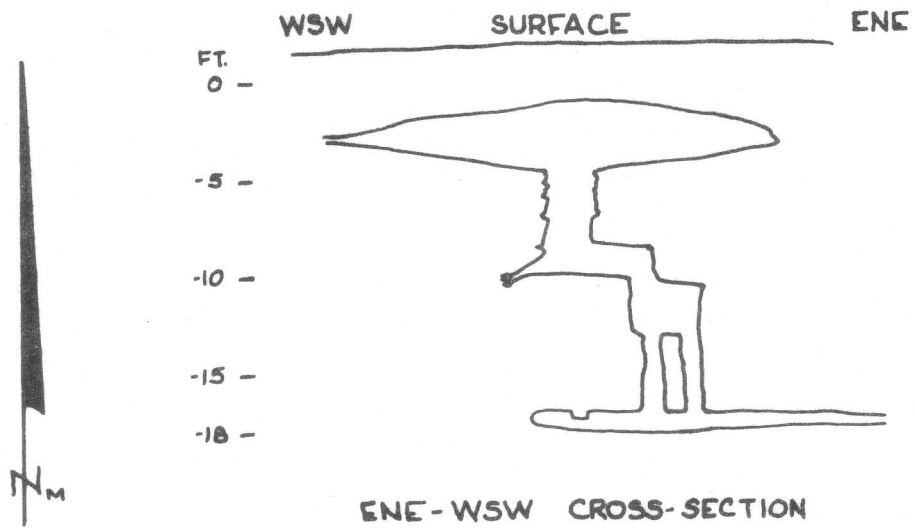
Owner: Tommy Sargeant

Description: Kickapoo Cave, often reported incorrectly as being in Edwards County, is one of the largest and most beautiful caves in the state. This



GREEN CAVE

KINNEY CO., TEXAS
SURVEYED BY UTSS, 11-24-56



JONES CAVE
 KINNEY CO., TEXAS
 BRUNTON-TAPE SURVEY
 DEC. 30, 1962
 UTSS

cave is quite famous locally and has been pictured in several books and articles on this area. Because of the rareness of early reports on Texas caves the following 1897 account is given here. "The entrance is near the summit of an oval, conical butte. The recesses, apparently undermining the whole of the hill, are elongated chambers having cross sections shaped like Norman arches. The total depth from the entrance to the bottom, as far as explored by the writers, is over 140 feet. The many chambers are lined with stalactites and stalagmites of great beauty and variety of form, and they are nearly dry, only a little water being found at the lowest depth." (Hill and Vaughan, 1897) These same authors in this and in a later (1898) report publish some very fine photographs of the cave. The entrance to the cave a slope down into an area of bare limestone. From here a pile of breakdown must be climbed over to reach the main passage. This is 1200' long, 120' wide, and 100' high. Midway, as if supporting the roof, six gigantic columns occur, each of which is 50'-60' in diameter. Four of these are joined to form one large horseshoe-shaped column. The walls and ceilings are covered with stalactites, helictites, and gypsum flowers. The floor is generally covered with large slabs of breakdown up to a depth of 40'. Beyond the large columns the floor level drops about 35'. A side passage at this point extends for a few hundred feet to the left before ending. The main passage continues to an apparent end in a fourth massive column which, since it blocks all but a few feet of the tunnel, appears as a wall. Beyond this column two smaller tunnels extend, both of which average about 10' in diameter. The right-hand tunnel ends after about 100'. The left is somewhat longer and is very beautiful, having been covered with helictites. Unfortunately these are heavily stained with what appears to be soot from torches used in early exploration. James Estes reports that small soda straw formations have grown on some of these soot marks. The cave is generally dry. It was formed in the Salmon Peak Formation. (See map, page 18)

History: This is one of the most famous caves in the state. It is not known when it was first discovered, but it was well known by the end of the 19th century. The two geologists, R.T. Hill and T.W. Vaughan, describe and picture the cave in reports published in 1897 and 1898. It was frequently visited by local people from that time until the 1950's. It was visited by Frank Nicholson, the noted cave explorer, supposedly at the request of the National Geographic Society. He is reported to have made the statement that it was more interesting and probably larger than Carlsbad Caverns. Carl Clayton visited the cave on Nov. 5 and Nov. 30, 1949. Later trips include one at Christmas, 1952, by J.D. McClung, Bennie Pearson, Jerry Chastain, and Carroll Slemaker of the University of Texas Grotto. The cave was visited many times by most of the caving groups in the state during the late 1950's. A joint photographic and mapping trip was made by the Corpus Christi Grotto and the University of Texas Grotto in 1956. The map was made on Nov. 24, 1956, by Bill Helmer, Dave Kyser, Arthur Carroll, and Fred Berner. The cave was visited on Jan. 30, 1957, by Ken Baker. It was closed in 1958 because of severe vandalism of formations in the cave. In recent months a few limited trips have been made to the cave. These have included one on March 16, 1963, by George and Jacque Gray, Jim and Holly Medlin, Jim Estes, Ed deBary, and Tom Meador of the Abilene Grotto, and one on Sept. 3, 1964, by members of the Alamo Grotto. Permission to enter the cave should be arranged through one of these groups.

Biology: The cave is inhabited by the cave swallow, Petrochelidon fulva pallida, a colony of which was observed in the cave by Dave Kyser in November, 1956.

Ken Baker observed about 50 nests on Jan. 30, 1957, all of which were in the twilight zone about 100' from the entrance. The only other fauna that has been observed are cave crickets.

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Ref: TSS files

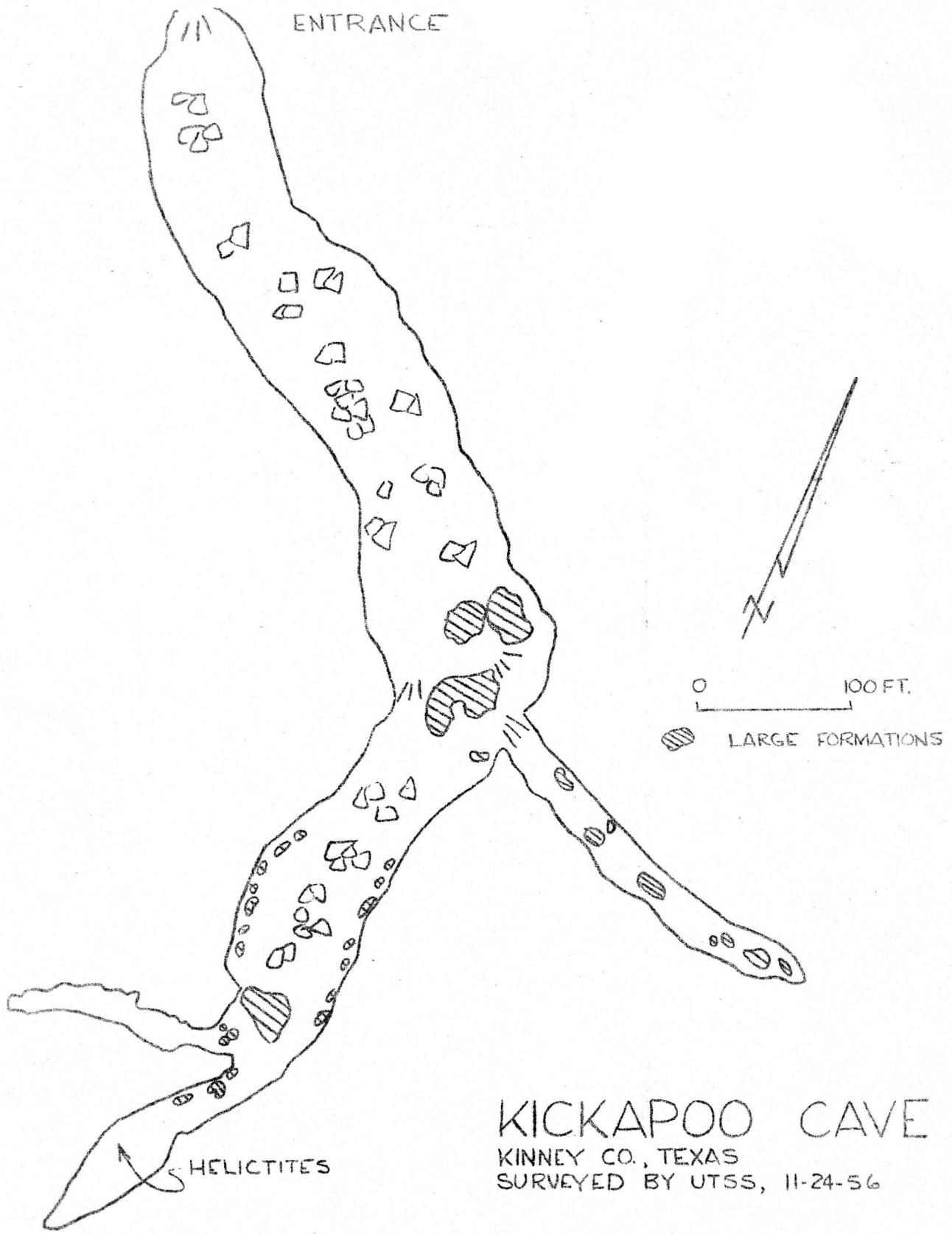
LANDSLIDE CAVE

Kinney County (#15)

Brackettville 15' Quadrangle

Owner: L.B. Langston

Description: Landslide Cave, located a short distance to the north of Dairy Cave, is entered through an unstable sink. The narrow part of the entrance sink was covered with logs and then covered with about three feet of dirt to level it with the surrounding land. This was done several years ago to



ENTRANCE

0 100 FT.

LARGE FORMATIONS

HELICTITES

KICKAPOO CAVE
KINNEY CO., TEXAS
SURVEYED BY UTSS, 11-24-56

keep cattle from falling into the entrance sink. With the passage of time the logs decayed and the weight of the overlying dirt caused a partial collapse. To enter the cave at present it is necessary to climb over and through these rotten logs, many of which still support large amounts of dirt. At the bottom of the sink a large accumulation of debris has blocked the reported continuation of the cave. The owner reported that he had visited the cave before it was covered with logs and that there was a small offset at the bottom of the sink and then the cave continued downward. At present the cave is a sink about 8' wide and 20' long, narrowing downward. About 20' below the surface the sink is blocked by debris. To the north of this sink about 200 yards is a small depression in the bottom of a creek bed that was reported by the rancher to take water during the infrequent floods. When visited the sink was a shallow silt-filled depression about 1' deep and 5' wide. The cave is formed in the Austin Chalk. It was visited and a sketch map made in April, 1963, by Bill Russell and other members of the University of Texas Grotto. (See map, page 20)

PALACE CAVE (J. WELLS RANCH CAVE)

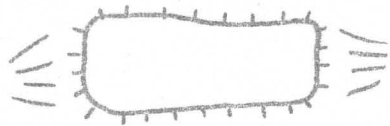
Kinney County (#8)

Barksdale 15' Quadrangle

Owner: unknown; manager: C. Carson

Description: No adequate description of the cave is available, but Bart Crisman has briefly described it. "A single long tunnel filled with formations comprises the cave. Total length is estimated at around 1600 feet. Near the end of the cave a spring gushes forth into a small stream which deepens to about three feet and disappears under a ledge. Local reports are that this stream may be traversed for some distance. No attempt was made to explore the stream. At a point near the entrance the stream may again be heard through a tiny crack in the breakdown." (Crisman, 1956) The cave runs east-west. Among formations found in the cave twin totem poles and a large cone stalagmite should be mentioned. The cave is formed in the Salmon Peak Formation. (See map, page 22)

History: Allan A. Stovall describes the discovery of Palace Cave, "Bill [William Wells] was hunting out on Montell Creek and in the course of the day's run had traveled out on the Divide between the head of Montell Creek and the Lost Creek country. As he was riding along through the cedar, his attention was attracted to a large hole in the ground. His curiosity aroused, he sauntered up to the opening and found that the hole broadened out into a cavern of considerable proportions. Further explorations revealed a huge cavern of great beauty, with many rooms, bedecked with enormous stalagmites and stalactites. So Bill found himself to be the discoverer of one of the most beautiful caverns in the whole Nueces Canyon country. The cavern is now known as Palace Cave, and is a scenic spot and a point of attraction for tourists and sight-seers from over a wide area." (Stovall, 1959) Other early reports of the cave include mention of it by O.F. Langford (1942) and Patrick White's report of the "J.Wells Ranch Cave." The cave was first visited by spelunkers in December, 1954, when it was located by Bob and Bart Crisman of the Abilene Grotto. They returned to the cave on the Labor Day weekend of 1955. Although there have been doubtless many caves to the cave since that time, none are recorded. The cave is now under the management of a San Antonio bank and no one is allowed on the property.



ENTRANCE PLAN



PROFILE

0 10 FT.
NO NORTH ARROW

LANDSLIDE CAVE
KINNEY CO., TEXAS
SKETCHED BY UTSS, 4-63

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Ref: TSS files

PRATT'S SINK

Kinney County (#11)

Brackettville 15' Quadrangle

Owner: Pratt Ranch

Description: Pratt's Sink is a shallow elongate sink developed in the upper Buda Limestone. The sink is about 200' long and 75' wide and is elongated NE-SW. The west and north sides of the sink is a sheer-to-overhung cliff about 12' high. At the north end of the sink, fissures and pits lead downward through breakdown and trash for about 20'. From the bottom of these pits a low room extends for about 70' to the northeast following the trend of the sink. Water running into the sink flows through breakdown and across the low room and leaves the room through breakdown and small pits at the NE end of the room. This room is generally from 4'-5' high, although in the central part the room is over 8' high. The room is bounded on the east by large breakdown, but no way could be found to continue in this direction. Pratt's Sink is the only cave known to be developed in the Buda Limestone in the Kinney County area. It is not known what special conditions exist in this area that would favor cavern growth, but there are several minor faults in this area trending parallel to the long axis of the sink. It is likely that a fracture zone related to the faulting was enlarged by solution with subsequent collapse causing Pratt's Sink. The cave was explored and mapped on Jan. 28, 1963, by Bill Russell, Terry Raines, and other members of the University of Texas Grotto. (See map, page 23)

Ref: TSS files

RATTLESNAKE CAVE (BADER CAVE)

Kinney County (#12)

Brackettville 15' Quadrangle

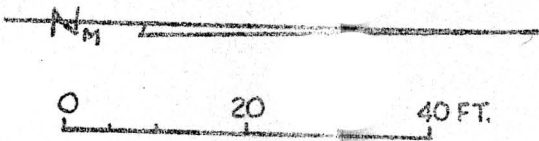
Owner: Jim Bader

Description: The entrance is a 7' in diameter hole formed by collapse of the cave roof. A hand line or ladder aids descent of the 10' drop. Extending west is an elongated chamber 10'-15' wide and 8' high. The ceiling abruptly

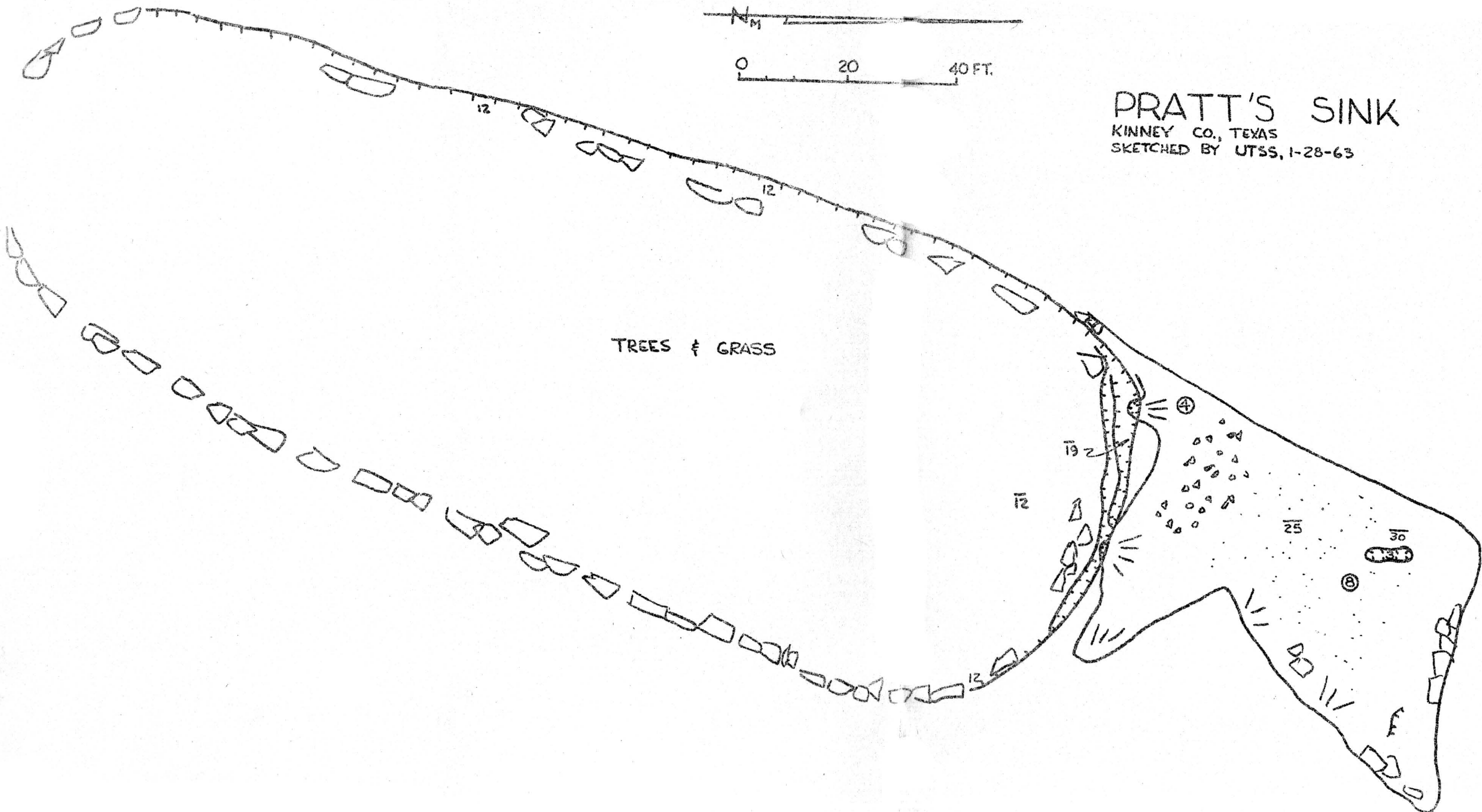


NO SCALE - LENGTH ABOUT 1600'

PALACE CAVE
KINNEY CO., TEXAS
SKETCH MAP



PRATT'S SINK
KINNEY CO., TEXAS
SKETCHED BY UTSS, 1-28-63



lowers to a broad silt floor after about 40'. East of the entrance the passage narrows and descends over small breakdown and trash to a small room from which a crawlway extends. This passage is semi-circular in cross section and is generally 6' wide and 2'-3' high. It tends to meander SE for 150'-200' before becoming too low. The floor is of red-colored dirt which is dry and loosely packed.

History: The cave was first visited by Holmes Semkin in 1959, at which time he removed sediment from the cave for a study of the bones that it contained. The only other trips that have been made to the cave were on May 3, 1964, when it was visited and biological collections made by James Reddell and David McKenzie; and on Nov. 8, 1964, when vertebrates were collected by Terry Raines and David McKenzie.

Biology: The cave is unusually rich in fauna and contains several species which are very rarely encountered in caves. Of particular note should be mentioned the presence of a population of gekkos in the entrance area. Also of note in the cave were members of the rare pselaphid beetle genus, Hamotus. This genus occurs in several Texas caves, but is otherwise represented by two species, one in California and the other in Florida. A complete faunal list follows:

Snails

Helicina orbiculata tropica (Pfeiffer) -- troglaxene

Hawaiiia minuscula (Binney) -- accidental

Isopods -- epigeal -- troglaxene

Millipeds

Cambala speobia (Chamberlin) -- troglobite

Pseudoscorpions

Spiders

Cicurina varians Gertsch and Mulaik -- troglophile

Collembola

Pseudosinella petterseni Borner -- troglophile

Roaches

Arenivaga tonkawa Heb. -- troglaxene

Cave crickets

Ceuthophilus (Ceuthophilus) sp. -- troglaxene

Ceuthophilus (Geotettix) cunicularis Hubbell -- troglaxene

Beetles

Tachys (Tachyura) ferrugineus -- troglophile

Hamotus sp. -- troglophile

Mites

Gekko

Coleonyx variegatus brevis (Stejneger) -- troglaxene

Lizard

Sceloporus olivaceus Smith -- accidental

Frogs

Gastrophryne olivacea (Hallowell) -- accidental

Bufo debilis Girard -- troglaxene

Also found in soil removed from the cave were shells of snails of the following species: Bulimulus dealbatus ragsdalei (Pils.), Helicodiscus singleyanus (Pils.), Pupoides albilabris (C.B. Adams), and Succinea sp. It is not known if any or all of these species inhabited the cave or were carried in by animals or flood water.

Paleontology: The material from this cave was studied by Holmes Semken in 1959.

"All species represented in the fauna of Rattlesnake Cave are extant, though some are currently out of range. Semken arbitrarily divided the conformable stratigraphic sequence into four zones. He is currently engaged in a statistical study of the vertical variation of species." (Frank, 1964) The following is a list of material collected by Semken and arranged according to the zones he found them in:

	ZONES			
	1	2	3	4
Class Reptilia				
Order Squamata				
<u>Crotalus</u> sp. -- rattlesnake	X			
Class Mammalia				
Order Marsupialia				
<u>Didelphis marsupialis</u> -- opossum	X			
Order Insectivora				
<u>Cryptotis parva</u> -- least shrew	X			
<u>Cryptotis</u> sp. -- shrew		X	X	X
<u>Notiosorex crawfordi</u> -- Crawford's desert shrew	X			
<u>Notiosorex</u> sp. -- desert shrew		X	X	X
Order Chiroptera				
<u>Myotis</u> sp. -- mouse-eared bat				X
Order Lagomorpha				
<u>Sylvilagus auduboni</u> -- desert cottontail rabbit	X			
<u>Sylvilagus floridanus</u> -- eastern cottontail rabbit	X			
<u>Sylvilagus</u> sp. -- rabbit	X			
Order Rodentia				
<u>Citellus mexicanus</u> -- Mexican ground squirrel	X			
<u>Citellus</u> sp. -- ground squirrel				X
<u>Geomys personatus</u> -- Texas pocket gopher	X			
<u>Geomys</u> sp. -- pocket gopher		X	X	X
<u>Perognathus hispidus</u> -- hispid pocket mouse	X	X	X	
<u>Perognathus merriami</u> -- Merriam's pocket mouse	X	X	X	X
<u>Perognathus</u> sp. -- pocket mouse				X
<u>Reithrodontomys montanus</u> -- plains harvest mouse	X	X	X	
<u>Reithrodontomys</u> sp. -- harvest mouse				X
<u>Peromyscus</u> sp. -- field mouse	X	X	X	X
<u>Baiomys taylori</u> -- northern pigmy mouse	X		X	
<u>Baiomys</u> sp. -- pigmy mouse		X		X
<u>Onychomys leucogaster</u> -- northern grasshopper mouse	X	X	X	
<u>Onychomys</u> sp. -- grasshopper mouse	X	X		X
<u>Sigmodon hispidus</u> -- hispid cotton rat	X			
<u>Sigmodon</u> sp. -- cotton rat	X	X	X	X
<u>Neotoma micropus</u> -- southern plains wood rat	X		X	
<u>Neotoma</u> sp. -- wood rat	X	X	X	X
<u>Pitymys</u> sp. -- vole		X	X	
<u>Mus musculus</u> -- house mouse	X	X		
Order Carnivora				
<u>Mephitis mephitis</u> -- striped skunk	X			

Order Artiodactyla
Capra sp. -- goat

X

Also unidentified birds

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Ref: TSS files

SCHWANDNER CAVE NO. 1

Kinney County (#4)

Indian Mountain 15' Quadrangle

Owner: Buster Schwandner

Description: The entrance to the cave is a tight squeeze leading out of the bottom of a 3' in diameter, 2' deep sink. A crawlway leads into a passage striking 125°. This passage is 4'-6' high and about 10' wide, sloping up over breakdown along the right wall. A slope along the left wall about 30' from the entrance leads down into a small alcove about 10' high. On the right a 2' high opocorn-floored crawlway leads to a drop down into a room striking 115°. This room is about 20' wide, 150' long, and ranges in height from 2'-20'. From the entrance into the room the room extends to the left for about 30'. The floor is of massive breakdown through which it is possible to crawl to a "true" floor about 20' down. The breakdown is covered with coral, which in places is quite attractive. To the left the room slopes up until it is only 2' high. Floored with silt it eventually ends in several low dirt-floored crawls too small to negotiate. The total length of the cave is about 300' and the deepest point reached is 40'. Generally dry there is some some drip water in a few places. The cave is very warm and there appears to be no active air circulation. The cave is developed in the Salmon Peak Formation.

History: The cave was reported by Mrs. Lily Schwandner. It was visited by her and others several years previously and apparently has been visited on many occasions by local people. It was explored on Jan. 6, 1962, by Mrs. Lily Schwandner, Dick Smith, and James Reddell.

Ref: TSS files

SCHWANDNER CAVE NO. 2

Kinney County (#5)

Indian Mountain 15' Quadrangle

Owner: Buster Schwandner

Description: The entrance to the cave is a small sink dropping 7' to a sloping ledge. From this ledge an 8" wide crack leads down into an 18' deep pit formed along a joint striking 25°. The floor is of silt and no

passages extend from the bottom. The cave is formed in the Salmon Peak Formation. It was explored on Jan. 6, 1962, by Mrs. Lily Schwandner, Dick Smith, and James Reddell.

Ref: TSS files

SCHWANDNER PIT

Kinney County (#3)

Indian Mountain 15' Quadrangle

Owner: Buster Schwandner

Description: The cave is located in the bed of a shallow draw. A 10' in diameter sink in solid rock drops about 15' to a saddle. From here it drops as a 5' wide, 15' long fissure for an additional 15'. Here a short passage leads back under a second saddle to a small hole dropping through an unclimbable fissure for 60' to the floor of the cave. On the opposite side of this saddle a steep slope allows a chimney and climb down an additional 30' to a saddle. One side drops into a 7' wide fissure which cannot be climbed without equipment. The other side may be chimneyed but with difficulty. This drops into a 20' long, 8' wide, 15' high fissure. A small hole at the far end of the fissure drops 6' to a shelf and then an additional 5' to a crawl which extends for about 80' to a breakdown-filled dome which stops progress. The total depth of the cave is about 90' and the total length is about 150'. The joint at the entrance strikes 65°. The cave appears to have been more extensive at one time but the lower levels are filled with gravel and silt from the entrance. There is at least 6' of fill at the bottom of the fissure part of the drop. The only formations in the cave are some dull brown flowstone and a few stalactites, except for a few flows of very white flowstone on the left wall of the cave. It was explored by Mrs. Lily Schwandner, Dick Smith, and James Reddell on Jan. 6, 1962. It is formed in the West Nueces Formation.

Ref: TSS files

SILVERLAKE RANCH SINKHOLE

Kinney County (#7)

Indian Mountain 15' Quadrangle

Owner: W.L. Moody, III

Description: This cave was published in the TSS report on Uvalde County, but the cave is actually in Kinney County. Since this report is out of print the description of this cave is reprinted here. "The cave consists of a 75' sinkhole, the bottom of which is filled with a very spongy layer of leaf mold and twigs. The cave fills with water every time the creek rises. The walls of the sink are covered with stalactites, and indications are that the hole was once much deeper and perhaps led into a rather large cave which is now completely filled with debris... It was explored by Carl Clayton." (Reddell, 1961)

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Ref: TSS files

WEBB CAVE (SHAHAN RANCH CAVE)

Kinney County (#10)

Brackettville 15' Quadrangle

Owner: Happy Shahan

Description: The main entrance to Webb Cave is a large vertical-walled sinkhole about 75' in diameter and 50' deep. In the fall of 1960 the walls and floor of this sink was covered with morning glory vines, making it quite beautiful. A much smaller hole which may be climbed opens off to one side of the main sink and leads after a few feet into it. Opposite this hole a large passage, about 40' wide and 20' high, lead for about 250' before ending. A small hole extends for a short distance before becoming too small. A passage to the west of the main entrance is reported to go for some distance but it was not entered when the cave was surveyed in 1960. A passage to the east leads after about 25' to a junction room formed by the meeting of two sets of parallel passages. The first to the left extends for about 50' before ending, while the second to the left slopes up to a small dome room floored with silt and guano and ends. The first passage to the right extends for about 150'. Beginning as a 15' high passage the floor slopes up until it is only about 4' high, then ends abruptly. The second passage to the right runs under a 60' entrance shaft about 15' long and 10' wide. Beyond this entrance the passage continues as a 10'-15' high tunnel for about 75', turns abruptly to the left, and then intersects a large passage. To the left this passage extends for about 75' at 20' high and 30' wide. At this point an abrupt ceiling drop occurs with the passage lowering to 4'. This low passage extends for about 150' where the ceiling rises to 10' in a small bat-inhabited area. After about 15' the passage ends. To the left the main passage extends as a 50' wide, 20' high passage floored with small breakdown and gravel. A small wet weather stream channel runs along the middle of this passage. After about 150' an entrance shaft is found along the left side of the passage. Two small short passages extend to the right and the left at this point about 10' up on the wall. A boom and other equipment is to be found above this entrance, the equipment to be used for the removal of guano. Beyond this entrance the passage narrows to about 10' and drops to 8'-10' in height. After another 250' it becomes a 4' in diameter crawlway. After 25' a 15' high dome is encountered and a right-angle turn to the right leads through a 3' in diameter tube for about 15' into a large room about 200' long, 40' wide, and 25'-40' high. Along the walls there are great mounds of silt and guano and a small dry stream bed runs along the floor. Midway in the room this stream channel drops 5' and near the room's end turns abruptly to the left and runs into a small hole in the wall too small to follow. At the end of the room a steep slope leads up to a right turn to the left, into a passage about 10' wide and 4' high. When the cave was visited in September, 1960, the air in this passage was too poor to allow a carbide light to burn; when it was visited in 1963 the air was fairly good. About 30' from the turn a chimney leads upward to a room. About 50' long, 30' high, and 20' wide it is situated directly above the main cave passage. The floor of this room slopes steeply toward the chimney. The only lead from this room is a short passage extending from the north end of the room for about 30' to several domes. Beyond the chimney leading to the upper room the passage lowers to about 2' in height. About 60' past the chimney there is a 10' drop into a small room. A passage from 3'-5' high leads from this room for about 600' to the terminal room of the cave. This room is about 30' long, 15' wide, and 20' high at the highest point near the middle of the room.

The floor of this room slopes steeply toward the center, where a 12' pit leads to water. The room contains mud and guano and the entire passage leading to this room shows the effects of violent flooding. Just before the terminal room a fissure extends a short distance to the right. The cave is formed in the Salmon Peak Formation. (See map, page 31)

Biology: A small collection was made in the cave in the summer of 1940 by Glen M. Kohls and William L. Jellison. At that time they collected bats (Myotis velifer incautus), fleas (Myodopsylla collinsi), streblid flies (Trichobius major), beetles (Dermestes carnivorus, Embaphion nr muricatum, and Embaphion nr contractum), and cave crickets (Ceuthophilus cunicularis). The cave is inhabited by the cave swallow, Petrochelidon fulva pallida. Selander and Baker make the following observations on this population, "Kyser counted 150 nests in the cave on December 30, 1956. Water dripping from a hole in the ceiling near the entrance forms mud on the floor of the chamber, but several nests examined by Kyser were composed of mud which he judged to have been obtained outside the cave." A small colony of the old man bat, Mormoops megalophylla, was present in the cave in December, 1956, and March, 1957. The cave is frequented by rattlesnakes, Crotalus atrox, and when it was visited in September, 1960, seven (including three young ones), were found at the bottom of the 60' shaft entrance, and several others were observed or heard in and about the main entrance. A small collection of invertebrates was made by Bill Russell on January 27, 1963, and another on April 5, 1963. This material is included in the following faunal list:

Isopods

Protrichoniscus cavernarum (Ulrich) -- troglobite

Millipeds

Cambala speobia (Chamberlin) -- troglobite

Centipedes

Pseudoscorpions

Spiders

Cicurina varians Gertsch and Mulaik -- troglophile

Meioneta sp. -- troglophile

Nesticus pallidus Emerton -- troglophile

Phalangids

Hoplobunus n.sp. -- troglobite

Ticks

Antricola coprophila (McIntosh) -- troglophile

Ornithodoros concanensis Cooley and Kohls -- troglophile

Mites

Thysanura

Nicoletia texensis Ulrich -- troglobite

Cave crickets

Ceuthophilus (Geotettix) cunicularis Hubbell -- troglaxene

Fleas

Myodopsylla collinsi Kohls -- troglaxene

Flies

Trichobius major Coq. -- troglophile

Beetles

Rhadine howdeni (Barr and Lawrence) -- troglophile

Dermestes carnivorus F. -- troglophile

Embaphion sp., nr contractum Blair -- troglaxene

Embaphion sp., nr muricatum Say -- troglaxene

Rattlesnakes

Crotalus atrox -- troglaxene

Bats

Myotis velifer incautus -- troglaxeneMormoops megalophylla senicula -- troglaxene

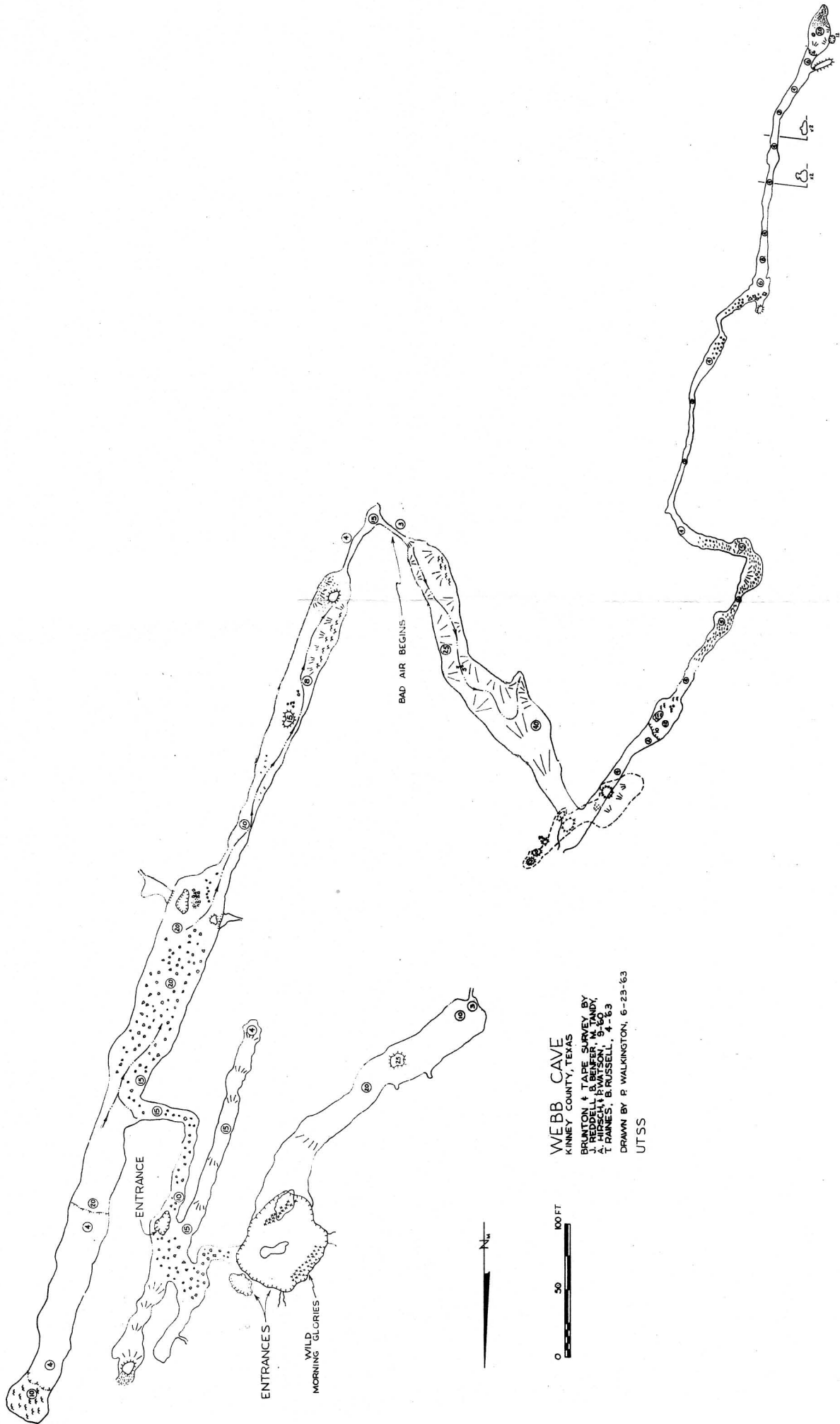
Cave swallows

Petrochelidon fulva pallida -- troglaxene

History: The cave is apparently the same as the one in the following account:

"To the east of this mountain [Pinto Mountain], there is a large cave opening from the surface of the ground. Tradition has it that General Mackensie explored this cave for a long distance. I explored part of it in company with a Mexican but all I saw were two white owls, however at the entrance was a breast work of rocks piled in a half circle facing away from the cave, and a little distance away was a similar breast work facing this one, and tradition has it that a skeleton was found in the cave with a hole in the skull." (From a letter from J.M. Stotsenburg to J.E. Pearce, dated April 10, 1919.) The author of this letter lived on a ranch in northern Kinney County until 1893, at which time he moved away to become a doctor. If this is, indeed, the same cave as Webb Cave it places the discovery of the cave as early as the middle of the 19th century. The great German naturalist, Alexander von Humboldt, is known to have visited Pinto and Las Moras Mountains prior to this, and it is possible that he also visited the cave. The only other pre-spelunker reports of the cave are those of Kohls and Jellison's visit in 1940 and a mention of the cave in NSS Bulletin 10 in 1948. The first mention of its exploration by spelunkers is of a mapping trip made to the cave by seven members of the St. Mary's Speleological Society on the first weekend of January, 1957. Later trips include many by members of the Alamo and University of Texas Grottos. The cave was mapped back to the bad air section in September, 1960, by James Reddell, Bob Benfer, Mills Tandy, Alice Hirsch, and Patsy Watson. The remainder of the cave was surveyed on January 27, 1963, by Bill Russell and other members of the University of Texas Grotto. Although sporadically mined for guano, no large scale operations have ever been carried out in the cave and it is believed that no mining is going on at the present time.

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WEBB CAVE
 KINNEY COUNTY, TEXAS
 BRUNTON & TAPE SURVEY BY
 J. REDDELL, B. BENDER, M. TANDY,
 T. RANKIN, B. RUSSELL, 4-63
 DRAWN BY P. WALKINGTON, 6-23-63
 UTSS

Selander, R.K., and J.K. Baker. 1957. The cave swallow in Texas. Condor, 59(6):345-363.

White, P.J. 1948. Caves of Central Texas. National Speleological Society Bulletin, 10:46-64.

Ref: TSS files

SHELTERS

ROSE ROCK SHELTER

Kinney County

? Quadrangle

Owner: David Rose

Description: This is reported to be a small dry shelter which was excavated in 1929 by Dr. Ronald L. Olson of the American Museum of Natural History. Later in 1929 it was visited by J. Alden Mason of the University Museum, Philadelphia, who writes, "No artifacts were found by me, and no unequivocal proof of human habitation below the surface, but in one stratum at some depth considerable charcoal was found." (Mason, 1936)

Bibliography: Mason, J. Alden. 1936. Notes on the archeology of southwestern Texas. Bulletin of the Texas Archeological and Paleontological Society, 8:192-195.

Ref: TSS files

SILVER LAKE RANCH SHELTER (SITE NO. 119)

Kinney County

Indian Mountain 15' Quadrangle

Owner: W. L. Moody, III

Description: "On about 60 feet of wall space, in a 100-foot shelter, are pictographs that have been damaged by floods in the adjacent creek. Spalling of the stone also has damaged the pictures. The designs consist of scrolls, sun-ray discs, cloud and rain symbols, etc." (Jackson, 1938)

Bibliography: Jackson, A.T. 1938. Picture-writing of Texas Indians, pp. 242-245. University of Texas Publication No. 3809.

Ref: TSS files

SILVER LAKE RANCH SHELTERS

Kinney County

? Quadrangle

Owner: W. L. Moody, III

Description: Many shelters are found on this ranch. Although some have been briefly examined, none have been excavated. They are reported to contain skeletal material and artifacts.

Ref: TSS files

DOUBTFUL CAVES

SCHWANDNER SPRING

Kinney County

Barksdale 15' Quadrangle

Owner: Henry Schwandner

Description: This spring is reported to issue from a single opening in the West Nueces Formation. A picture in Bennett and Sayre (1962) shows that it may be possible to enter the spring.

Bibliography: Bennett, R.R., and A.N. Sayre. 1962. Geology and ground-water resources of Kinney County, Texas. Texas Water Commission Bulletin 6216. Ref: TSS files

WELL V-14

Kinney County

Brackettville 15' Quadrangle

Owner: Charles Zinsmeister

Description: This well is reported by Bennett and Sayre (1962) to be a hand dug well 48" in diameter and originally 47' deep. Several caverns were found in the well.

Bibliography: Bennett, R.R., and A.N. Sayre. 1962. Geology and ground-water resources of Kinney County, Texas, p. 115. Texas Water Commission Bulletin 6216.

Ref: TSS files

UNNAMED SOLUTION HOLE

Kinney County

Brackettville 15' Quadrangle

Owner: W.C. Belcher

Description: A picture of this hole is to be found in Bennett and Sayre (1962). They report, "A dry hole in the Buda limestone on the W.C. Belcher ranch, 5-1/2 miles northwest of Brackettville, appears to have been a spring at one time."

Bibliography: Bennett, R.R., and A.N. Sayre. 1962. Geology and ground-water resources of Kinney County, Texas, pp. 29, plate 11. Texas Water Commission Bulletin 6216.

Ref: TSS files

UNNAMED CAVE NEAR GAGING STATION

Kinney County

Turkey Mountain 15' Quadrangle

Owner: unknown

Description: Bennett and Sayre (1962) show a picture of a bluff of the McKnight Formation containing a large concave shelter with a possible cave opening at the back. It is located 0.3 miles south of the gaging station.

Bibliography: Bennett, R.R., and A.N. Sayre. 1962. Geology and ground-water resources of Kinney County, Texas, plate 6. Texas Water Commission Bulletin 6216.

Ref: TSS files

UNNAMED CAVE

Kinney County

? Quadrangle

Owner: unknown

Description: Hill and Vaughan (1897) report a cave containing a running stream 1 mile west of the old Hitchcock Ranch in Grass Valley 10-13 miles northwest of Brackettville. It was reported to them by M.C. Ott, a well driller.

Bibliography: Hill, R.T., and T.W. Vaughan. 1897. Geology of the Edwards Plateau and Rio Grande Plain adjacent to Austin and San Antonio, Texas. U.S.G.S. 18th Annual Report, pt. 2, p. 266.

Ref: TSS files