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Cover Photograph-

The Río Atrejea winds its way through arid mountains in western San Luis Potosí. Just downtrail from the village of El Limoncito we paused for this view of the river and our destination of the day, Rancho El Barro (upper left). The next day we would climb another mountain and make the first descent of El Sótano (see AMCS Newsletter, Volume III, Number 5). (Photo by Terry Raines)

ARTICLES

ARCHEOLOGICAL RECONNAISSANCE IN A LIMESTONE KARST REGION IN NORTHERN QUERETARO

by John W. Greer

Abstract

Archeological evidence noted during a speleological survey in northern Querétaro consists of sherds in several caves, whole vessels in one pit, and charcoal at the bottom of a deep freefall shaft. Surface evidence includes several stone ruins, old stone walls, a possible tomb, and scattered sherds and obsidian flakes. Observations are made of water sources and other geographical features.

Introduction

During reconnaissance for caves and the exploration of pits and cavern systems, cavers often encounter archeological evidence. This may take the form of a few sherds in horizontal cave entrances, human skeletons exposed during mining activities, small surface camps, or large complexes of open sites. Since cavers generally are more concerned with geology, biological collection, or just caves for caves' sake, archeological evidence usually is overlooked or at least not reported.

This paper describes and partially discusses archeological evidence encountered during one such speleological exploration project in central México, conducted by members of the Association for Mexican Cave Studies (AMCS, Austin, Texas). Although such reports cannot be something on which to base concrete conclusions, notes such as these may help future workers returning to the area. This type of report may also help researchers interested in particular problems, types of areas, or types of sites. It is a gathering and partial salvaging of information.

Reconnaissance

In January 1972 Craig Bittinger and Logan McNatt entered the Rancho El Barro area just north of La Ciénega while on reconnaissance and located Sótano de los Cocos (El Sótano de Rancho Barro). The pit presently is the world's deepest and largest natural shaft, measuring approximately 1300 x 700 ft at the entrance and with an initial drop of 1345 ft. With the deep pit potential clearly established, Craig Bittinger, Clark Lillie, and I returned to El Barro in April 1972 and continued reconnaissance trips from that base camp. One such sojourn was southward to La Ciénega where several deep pits were known to exist.

We returned to Austin with tales of profundity and, in May, AMCS members descended on La Ciénega with the necessary credentials and carried out exploration of several pits and caves. Reconnaissance was continued for new pits, archeological sites, and geological data. Survey members included Frank Binney, Ernie Garza, Walt Rosenthal, William Russell, Barbara Vinson, and myself. The procedure was simple: a guide was acquired whenever possible and local people questioned. Notes were taken and locations recorded on sketch maps. A 1:100,000 topographic field map proved ineffective and somewhat inaccurate. Knowledgeable guides included Maximino Rosas of Santa Aguida and Encarnación Real at Las Tinajitas in the canyon above Sótano de Buque (no. 7 of this list).

The Area

The area is a mountain-foothill area southwest of the small pueblo of La Ciénega de San Juan, Municipio de Pinal de Amoles, Querétaro (Fig. 1). Permission for cave research was obtained from governmental officials in Pinal de Amoles and Ahuacatlán and from the local administrator in La Ciénega. The easiest access is from Highway 120 at Ahuacatlán, northward along burro trails for a difficult 4-7 hr walk. It is also possible to enter from Ayutla, up the river canyon to Los Cocos, then uphill to La Ciénega in a more difficult, perhaps 8 hr walk.

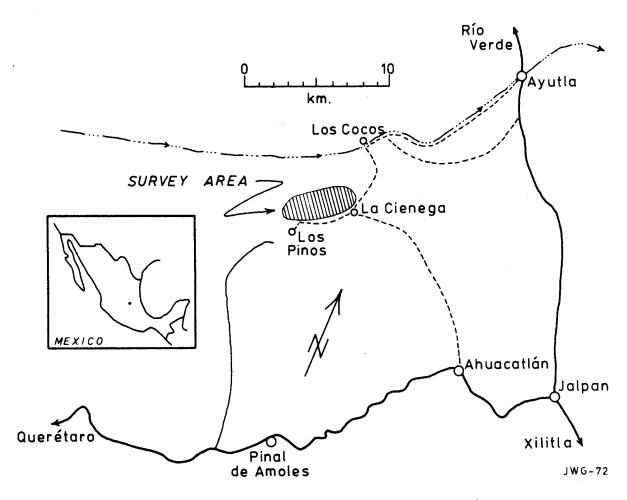


Fig. 1. General location map showing area surveyed in northern Querétaro.

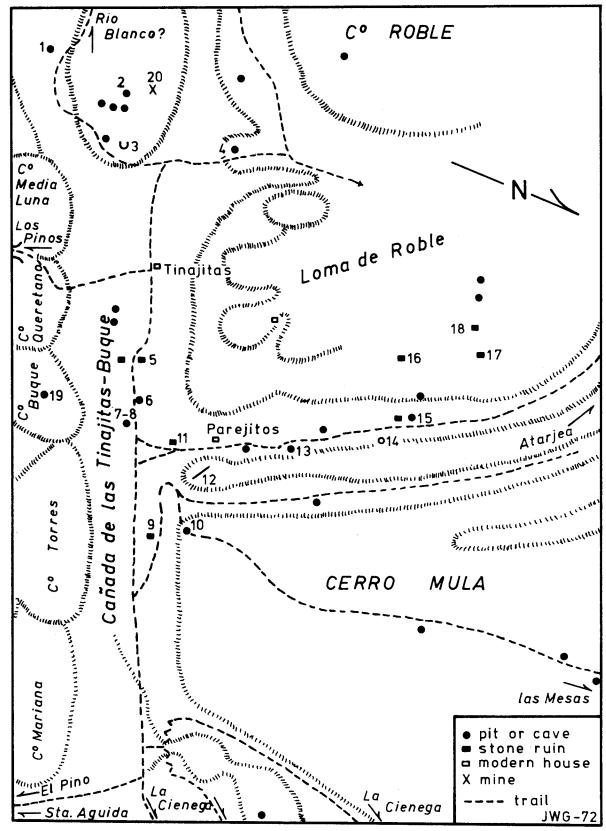


Fig. 2. Sketch of Area A of the speleological survey showing locations of recorded features. Numbered locations are described in this text. Non-numbered locations are speleological features, usually vertical pits, containing no archeological evidence.

The area around La Ciénega is one of very high rounded hills and extreme vertical variation. The town is located at approximately 1450 m elevation, while the river, only about 4 km to the northwest, is at 700 m. The area in which most archeological evidence was encountered is approximately 4 km southwest of La Ciénega and is probably 1700 m elevation in its canyon bottoms. The sierras to the south and west rise immediately to over 2900 m.

Many hills around La Ciénega are capped with Soyatal shales, while some hills and lower areas of exposed limestone and surface dirt sinks and fields are in the upper El Doctor formation. Upper areas on the higher hills are marked with large limestone karst pinnacles (querestones) and variable-sized limestone sinks. Most sinks are used for agriculture and the soil appears to be exceptionally fertile. All larger hills appear to be heavily eroded uplifts of the El Doctor and are especially characterized by numerous deep vertical shafts. Many nearly horizontal caves are steeply sloping and are formed along dipping bedding planes. Valleys are nearly all closed and are composed of chains of shallow sinks.

Archeological Evidence

Archeological evidence was found only in the area around Sótano de Buque (Area A of the survey, Fig. 2). The present economy is based on concentrated milpa agriculture in sink areas and presumably was so in the past. Stone walls abound, and sherds and obsidian flakes occur in many areas. Following is a list of archeological localities, renumbered for this report with original speleological survey numbers in parentheses. Since the recording of archeological evidence was incidental to the primary activities of deep pit exploration, the present list and following discussion serve as a partial guide and not a systematic survey. A report on the entire project is on file at AMCS headquarters in Austin. The symbol †preceeding the number indicates a cave or pit which was entered during the project. Project members entering pits described here include Frank Binney, Don Broussard, Ada Browne, Eileen Cragle, John Greer, Ron Ralph, William Russell, Peter Strickland, and Barbara Vinson. Illustrations accompanying the descriptions are drawn using standard speleological symbols and are from measured sketches by the author in June 1972.

†No. 1(1). No name. Cave (Fig. 3).

Location. Upper part of Cañada de las Tinajitas, 7 ft above canyon bottom, N bank. Description. Fairly narrow passageway 2-10 ft wide, begins in rockshelter and runs N-S (195 degrees) along a joint and downward 45 degrees with dipping limestone beds. Entrance dry, but water enters cave on left side of main passage and continues for entire length of cave, finally continuing downward through small hole at bottom. Small flowstone dams and pools entire length of cave. Total length 250 ft, total depth 177 ft.

Biota. Blue millipedes, white millipedes, white spiders, black "tumblebug" beetles, brown salamanders, small gray moths, brown cave crickets, 1.0 mm long white jumping bugs on top of water.

Archeological evidence. One plainware sherd with gray exterior, pink paste and gray core, covered with flowstone; 50 ft inside entrance.

Evaluation. Cave possibly used as water source, although tinajitas throughout canyon in immediate area. Entrance overhang suitable as temporary shelter.

Remarks. Entered 6-2-72 by J. Greer.

†No. 2 (5). No name. Cave (Fig. 4).

Location. Upper part of main canyon, fairly high on hillside on point between canyon forks.

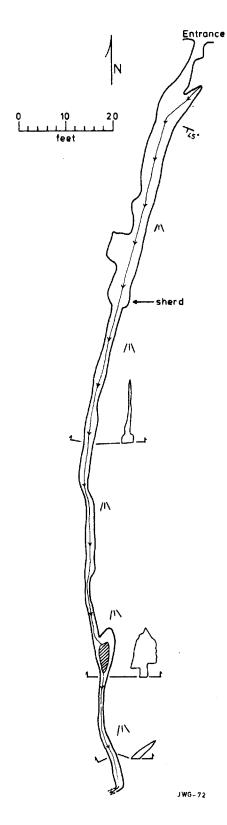


Fig. 3. Plan of Site No. 1, showing sloping flowstone floor passage with water running to end; diagonal shaded area is a pool of water.

About even with old mine; 350 ft above canyon bottom. At head of shallow gully running up hillside.

Description. Small passage 40 ft long, 7 ft wide, runs SW (244 degrees) downward into hill along dipping bedding planes. Dirt floor throughout.

Archeological evidence. Plainware sherds near bottom of cave.

Evaluation. Appears to be no water in cave at any time; possibly cave used as temporary shelter while working in hillside fields. Several vertical pits in immediate area.

Remarks. Entered 6-5-72 by J. Greer, W. Russell.

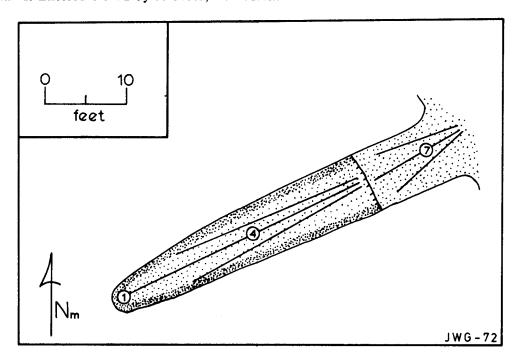


Fig. 4. Plan of Site No. 2, a small horizontal cave with a sloping dirt floor. Numbers indicate ceiling height in feet.

No. 3 (7). No name. Wall or tomb.

Location. On steep hillside 150 yds downhill from cave No. 2. Dim trail used by local Encarnación Real family passes over this wall.

Description. Well made, slightly curved stone wall 10-15 ft long, 6-8 ft high. Appears complete, filled in behind. Slabs 4-6 inches thick, laid horizontally, some chinking. No wall continuation or any type of structural attachment.

Evaluation. Isolated wall, not part of house or wall system, complete in itself. Possibly a tomb, such as a closed small horizontal cave. No attempt made to explore construction, discern what was enclosed, or question local guide of its function.

No. 4 (10). No name. Reported cave.

Location. Somewhere on small rounded hill referred to by Rosas as El Bordo de la Carbonera; said by Real son (who lives adjacent to hill) not to have a name.

Description. Said by Rosas to be extensive horizontal system. Real boy did not know of cave; older Real presumably knows of cave but was not asked.

Archeological evidence. Nothing known of cave, but if follows pattern of other similar caves in area, probably used for shelter and possibly water source.

No. 5 (13). No name. Stone houses.

Location. Bottom of main canyon above Sótano de Buque (No. 7) at point where trail leaves canyon bottom and goes onto N hillside toward Real home. Canyon narrows sharply at this point (going upward).

Description. Medium-sized stone house on S side of arroyo; larger house or possibly two large houses on N side. Rosas reports more stone houses in larger, more complex group just up hill N of this (not checked).

†No. 6 (14). No name. Cave (Fig. 5).

Location. N bank of main canyon, 200 yds upstream from Sótano de Buque (No. 7), 15 ft N of arroyo bottom.

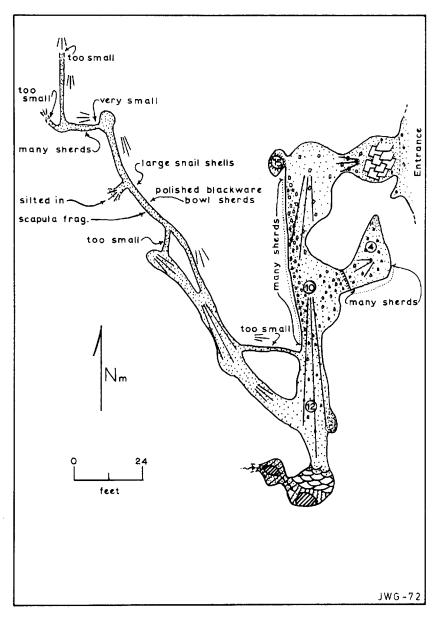


Fig. 5. Plan of Site No. 6, a horizontal cave with sloping dirt floor through most of passageway; flowstone dams and pools of water in the lowest portion.

Description. Entrance room drops westward over several large breakdown blocks into moderately flat-floored area; passage turns S, runs down to moderately large room, then S a few more feet, turns into small room (holds water after rains). During wet season, water flows from small hole in lowermost room. From lower large room another long passage splits off WNW, continues some distance as small crawl. Passage becomes too small toward end of crawls for average size person to continue. Nearly all floors silt; all walls limestone.

Biota. Blue millipedes, spiders, crickets, phalangids, pack rat, snail shells, moths.

Archeological evidence. Sherds exceedingly numerous throughout main passage down to last room (with flowstone dams), mostly under thin layer of recent rock fill, continue downward over a foot in dirt and fine rock fill. Sherds also excessive in moderate-sized room on E side of second room from entrance; obviously intentionally placed here in great numbers. Sherds also common in flowstone dam area of last room and throughout crawlways in back portions of cave. Numerous sherds in all enterable areas; mostly gray to pink plainware jars, a few the type of large brushed jars as at pit No. 13. Also from small thin jars 15-20 cm tall; medium-sized rounded bowls; carinated bowls (well-smoothed orange or pink and polished black). No definitely decorated sherds. One square milling slab of black limestone 40 x 40 x 10 cm in third room of main passage.

Evaluation. Possibly used as water source during wet season. It would seem that cave water preferred, since tinajas abundant in nearby creekbed and thereby more accessible. Cave importance seemingly more than just water: 1) many bowls, especially shouldered blackware bowls; 2) sherds numerous throughout back crawlways where no water, very difficult to carry pottery or sherds.

Remarks. Entered 6-3-71 by J. Greer, R. Ralph; later visits by W. Russell.

†No. 7 (15). Sótano de Buque. Cave-pit.

Location. Bottom of main canyon, about 3 km above mouth. Entrance very large, easy to find, serves as local landmark. Cañada de los Parejitos enters from N just below Buque entrance.

Description. Large entrance 20-30 ft diameter. Large high passage 20-30 ft wide runs S at right angles to canyon through series of climbable drops now with notched log ladders; several tinajas. 40 ft drop into large room 60 ft in diameter circumvented by using ledge around right wall and climbing down steep dirt slope and very short vertical section. Up to this point passage adequately lighted by main entrance, small skylight, and large pit entrance beside large room. Climbdown on E side of large room leads to moderately short passage with rimstone dams and white flowstone. Main cave system continues S from large room, downward through series of unclimbable drops (longest 300 ft); siphons at about 1545 ft. Detailed description and discussion of cave to appear in separate report.

Archeological evidence. Notched log ladders on several entrance drops, including 15 ft drop on E side of big room. A few gray plainware sherds in dirt fill in big room, all that have withstood seasonal flooding. Tinajas still used as water source.

Remarks. AMCS exploration-mapping project under general direction of Terry Raines; participation by many AMCS members, June 1972.

No. 8 (15A). Shelters above Sótano de Buque.

Location. 15-20 vertical ft above Buque entrance under limestone layer running N to edge of main canyon. Reached by climbing steep slope on W side of Buque entrance.

Description. Several shelters and small caves with adequate headspace; 6-20 ft wide, 10-25 ft deep. Dirt floors, possibly with several feet of deposit.

Archeological evidence. Gray plainware sherds on floors and into deposits. Modern use: beans, corn, charcoal, hearths, miscellaneous scratched drawings on walls (mainly churches with crosses).

Remarks. Probably long history of temporary use. Served as AMCS base while mapping Buque.

No. 9 (16). No name. Stone house.

Location. About 300 yds below Sótano de Buque (No. 7), N side and in bottom of main canyon. Base of hill almost directly below Cueva Encantada (No. 10), beside trail to Encantada. Mouth of small side canyon between Cañada de los Parejitos and Encantada.

Description. Stone house partly in ruins, most of four walls still standing, 25 ft square, made of thick (13-18 cm) tabular limestone with chinking, no mortar.

Evaluation. Possibly related in some way to Cueva Encantada. Stone houses or house groups common at such key locations as canyon mouths.

†No. 10 (17). Cueva Encantada. Cave-pit (Fig. 6).

Location. 250-300 vertical ft above bottom of main canyon, N side. On heavily karsted hill-side with large limestone pinnacles. Directly uphill from stone house no. 9; trail begins behind house. Barely visible from canyon bottom; overlooks canyon, trees in mouth of Sótano de Buque (No. 7) visible from here.

Description. Entrance 7 ft wide, 16 ft tall, faces SW. Passage goes back 35-40 ft (drops vertically 16 ft) to small room. Shallow pit on left, 3-5 ft water, reportedly a few feet of mud. Pit on right drops 107 ft (20 ft to first side room and ledge; 40 ft to second ledge) to small, blind room, essentially dirt floor with rocks, big logs thrown in while making or repairing platforms at top of pit; many draperies in SW section of room, little seepage in S corner, rest dead (not re-entered after intensive summer rains began).

Biota. Scarab-like beetles, 3 species of crickets, black beetles, large and small spiders, moths, flat blue millipedes, gray salamanders, some bat guano, rodent bones. Collections taken.

Archeological evidence. A few sherds and pieces of black chert just outside cave entrance. Five footholds carved in flowstone on left side of entrance passage at entrance room; now partially covered with flowstone, very smooth. In main pit: room and ledge at -20 ft and ledge at -40 ft, large numbers of sherds, mainly gray to pink plainware jars, some with pink cylindrical curved handles. Ledge at -40 ft along vein of black chert which appears to have been mined. Bottom room: a few sand-tempered plainware sherds, a few salt-glazed sherds of wheel-turned pottery; end portion of cylindrical mano of a fine-grained grayish-brown, presumably igneous, material.

Evaluation. Attitude of local people regarding cave's importance, along with its name, suggest it has long been important site. Left-hand pit with water reportedly contains coins and other objects from its use as a wishing well; mud at bottom of pit not checked because of social relations which unquestionably would result. Footholds suggest long use as water source. Old log platform to keep visitors from falling into right-hand pit and notched logs used to descend into entrance room possibly very old. Some sherds on two ledges in right-hand pit possibly result from being thrown in, many intentionally placed there (not able to land there from above). Presumably pit entered during preSpanish times, pottery left, and black chert mined.

Surrounding area heavily karsted. Many limestone pinnacles with rockshelters at their bases; could have served as temporary shelters or storage areas (some so used today).

Remarks. Also known as Sótano Encantado. Entered 6-1-72 by F. Binney, J. Greer, R. Ralph, B. Vinson. Reentered 6-2-72 by R. Ralph, E. Craigle.

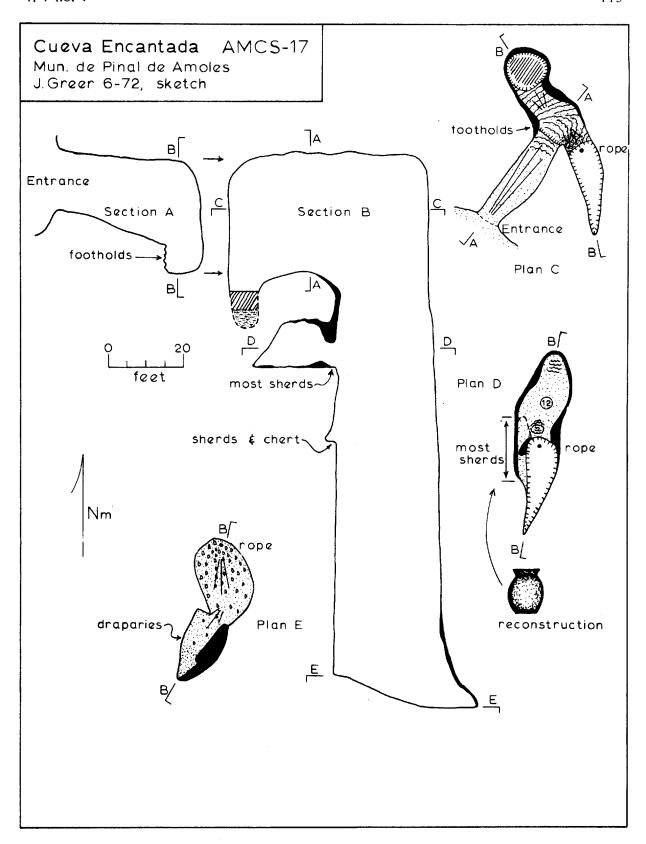


Fig. 6. Plan and cross-section of Site No. 10, Cueva Encantada.

No. 11 (18). No name. Stone ruins (Fig. 7).

Location. Mouth of Cañada de los Parejitos. 500 yds SW of Cueva Encantada (No. 10) on first high terrace above and just N of main canyon. Bordered by milpas.

Description. Large group of stone ruins—several houses, some contiguous rooms. Rooms square or nearly so. Most walls fallen over or covered. Construction of fairly thin stone slabs (thinner than other stone ruin sites on this survey) with stone chinking.

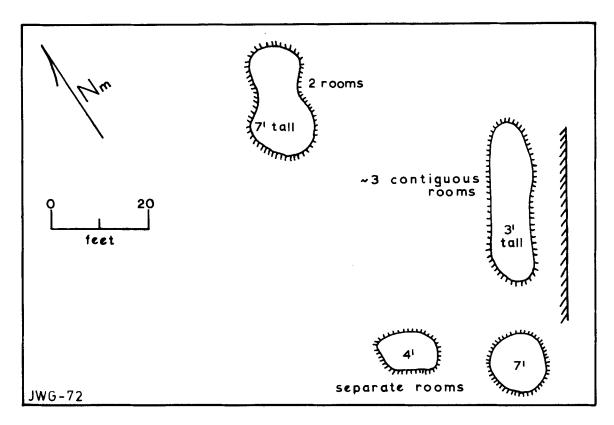


Fig. 7. Plan of Site No. 11, an open site with stone ruins. The diagonal dash line on the right is probably an old wall.

No. 12 (19). No name. Stone walls.

Location. Area between Cueva Encantada (No. 10) and Sótano de Buque (No. 7), around mouth of Cañada de los Parejitos.

Description. Many stone walls or portions thereof apparently very old. One unique wall section in particularly overgrown, nearly inaccessible area high on S side of hill between mouth of Cañada de los Parejitos and next canyon E beside Cueva Encantada. Most of wall now 3-4 ft tall, but composed of large rounded rocks, mostly 2-4 ft across. Only wall section of its type observed.

Wall bases appear older than successive rebuildings, often composed of very large rocks. More recent walls have smaller rocks, usually 1 ft or less diameter throughout wall down to ground level.

Evaluation. Oldest walls probably preSpanish, many composed entirely of very large rocks or had large rocks in base with successively smaller rocks upward. Thus, slightly sloping sides (e.g. section just over and NE of pass from upper end of Cañada de los Parejitos).

†No. 13 (21). No name. Pit (Figs. 8-9).

Location. Up Cañada de los Parejitos 550 yds from mouth. In bushes 20 ft E of trail. Description. Entrance 10 x 18 ft drops nearly vertically (difficult climb with handline) 54 ft to steeply sloping floor of dirt and small breakdown. Passage continues SSW, dropping into nearly flat-floored room containing pottery vessels. At end of this room, small notch leads to small room with pack rat nests, no pottery. Floors mainly soft dirt with some exposed limestone. Walls mainly limestone, little flowstone. No rimstone dams; no evidence of active seepage, even during rainy season (formations in end room might become active after heavy rains).

Biota. Crickets, insect larvae, rodent bones, pack rat, blue millipedes, spiders.

Archeological evidence. Six large empty jars and one medium-sized bowl on the surface or slightly buried in soft brown humus in narrow middle room. Vessels Nos. 1-5 and 7 refer to jars (Fig. 9, b); No. 6 a bowl (Fig. 9, a). All jars approximately same size, varying only about 3 inches in length; rounded bodies, rounded bottoms, evenly curved necks, everted rims, and very slightly rounded to nearly flattened lips. Exteriors smoothed and brushed, mainly diagonally from upper-left to lower-right. Fragmentary indented base (only one present) from another large jar found near Nos. 5-7. Measurements: total height 48-58 cm, body width 43-51 cm, neck diameter 15-23 cm, neck height 6-10 cm, mouth diameter 23-28 cm, wall thickness 1 cm.

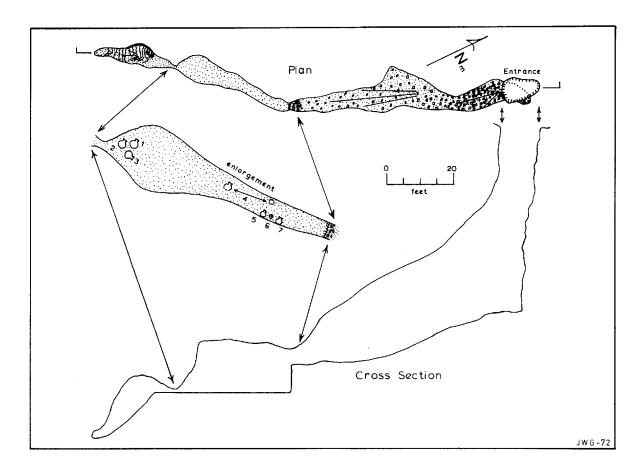


Fig. 8. Plan and cross-section of Site No. 13 with enlargement of room containing pottery. Vessel numbers refer to text descriptions.

Vessel No. 6: shouldered bowl, polished blackware, 25 cm diameter, 10 cm deep, flattened lip, convex base. Neck 3 cm wide, contains three unbroken, longitudinal incised lines parallel to rim around neck.

Evaluation. Vessels brought into cave whole or nearly so and intentionally placed on floor of middle room. At least two jars (Nos. 5, 7) placed upside down. Since their original placement, at least a foot more dirt deposited in room as part of natural drainage toward lowest point in cave. Other vessels likely buried—No. 6 and base of No. 4 totally covered, Nos. 1-3 nearly so. Jars possibly intended to be placed in cave for water collection, though presently cave dry; temporary water available at Tinaja Redonda (No. 14) 100 yds N. Jars possibly stored in cave or used as storage containers there.

Remarks. Entered 6-4-72 by A. Browne, J. Greer, P. Strickland. Reentered later by D. Broussard and others.

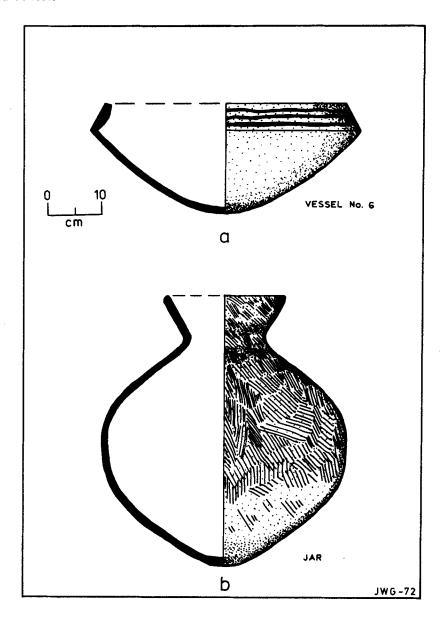


Fig. 9. Vessels from Site No. 13. All jars had the same form.

No. 14 (23). Tinaja Redonda. Tinaja.

Location. Cañada de los Parejitos 650 yds above mouth. On high ground at base of hillside 100 yds E of canyon bottom, 150 ft E of trail.

Description. Tinaja (natural water hole) in exposed limestone bedrock, 1 x 3 m across, 15-30 cm deep. Now fenced off with wooden fence.

Archeological evidence. Small obsidian flakes and sandy-paste sand-tempered pottery all around tinaja. Sherds and obsidian flakes in fields and on trail in surrounding areas; appear to represent activity, not specific sites.

†No. 15 (24). Sótano de Meco. Pit (Figs. 10-11), stone house.

Location. Bottom of Cañada de los Parejitos, 50 ft W of trail in edge of periodically farmed flat area.

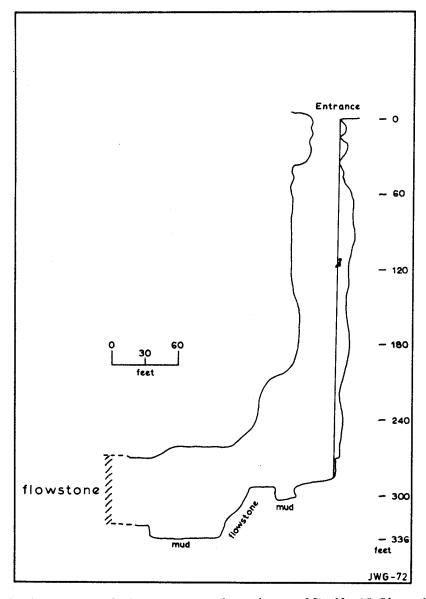


Fig. 10. Generalized cross-section, looking approximately southwest, of Site No. 15, Sótano de Meco, showing rigging point and position within shaft during rappel.

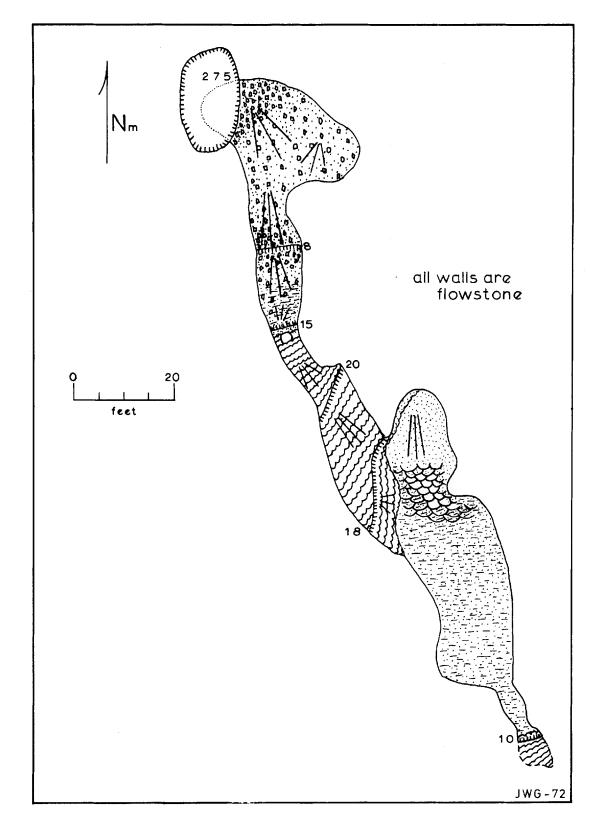


Fig. 11. Plan of lower passage of Site No. 15, Sótano de Meco. Charcoal back to the bottom of the 8 ft drop could have resulted from torches thrown down the shaft.

Description. Pit entrance nearly circular opening 12 x 20 ft (immediately opening to 25 x 30 ft), in limestone bedrock. Initial drop 275 ft, nearly all free; shaft 35-40 ft diameter. Additional drops total 61 ft in lower cave; total depth 336 ft. Room at bottom of entrance drop with dirt and small breakdown floor, slopes downward to unclimbable 8 ft drop to dirt floor, then up difficult 15 ft climb on overhanging dirt wall to large, dry rimstone dam and flowstone shelf. Then 20 ft drop down flowstone wall immediately followed by 18 ft drop down flowstone to mud floor. Portions of dirt here covered with thin flowstone crust—here, at 15 ft dirt bank, and elsewhere, appears that cave periodically has contained dirt for periods long enough to form flowstone crusts, then more sedimentation or erosion; then cycle repeated. At S end of this mud-floored room, short climb into another small room, but passage pinches down from flowstone along joint making further progress apparently impossible. Cave beautifully decorated throughout entrance shaft and lower levels with very large flowstone formations; ground water activity probably excessive during rainy season.

Biota. Black beetles, spiders, brown salamander.

Archeological evidence. a) Burned sticks and small charcoal fragments in lower levels of pit to backmost passageways. b) Ruin apparently of single-room stone house 90 ft down canyon S of pit. No walls standing.

Evaluation. a) Charcoal and burned sticks possibly from torches thrown into shaft; fragments washed to back, lower levels. No bones or ceramics found in shaft or eroding from exposed silt deposits. b) Adjacent stone house possibly related to pit. c) Obsidian flakes and sandy-paste plainware sherds common in nearby fields and trails.

Remarks. Entered 6-4-72 by J. Greer.

No. 16 (26). No name. Stone ruins.

Location. Hillside near top of Cerro Tinaja Verde.

Description. Stone ruin group, apparently several houses. Reported by Rosas; not visited.

No. 17 (27). No name. Stone ruins.

Location. High on hillside, SW end of Ladera de la Mesa, N of Cerro Tinaja Verde, 300 vertical feet above bottom of Cañada de los Parejitos.

Description. Large, seemingly complex stone ruin with walls 6-7 ft high, thick limestone slabs and chinking, no mortar. At least three large houses, retainer wall. Plainware sherds in adjacent milpas.

No. 18 (28). No name. Stone house.

Location. Uphill from ruin group No. 17; milpa area high on hillside on way up to Cerro Roble. Beside fields belonging to Rosas.

Description. Individual stone house in partial ruins, 12-15 ft square, relatively thick limestone slabs with chinking, no mortar.

No. 19 (34). No name. Reported cave.

Location. Somewhere on Cerro Buque. Encarnación Real found the cave and has entered it and may be reluctant to take visitors.

Description. Cave presumably somewhat horizontal; contains pottery and human and animal bones. Reported by Rosas (Real not questioned); future reconnaissance should work through Rosas.

No. 20 (35). Mercury mine.

Location. On point in upper Cañada de las Tinajitas.

Description. Mineral suitable for red pigment. Could have been used during early times as source of red paint if it occurs on surface or in accessible caves.

Additional Remarks

- 1. Small obsidian flakes and sandy-paste plainware sherds relatively common, though not plentiful, in Cañada de los Parejitos and parallel canyon toward Cueva Encantada (No. 10). Flakes or sherds occasionally found in upper hillside milpa areas and up Cañada de las Tinajitas (Cañada de Buque). Entire area milpa agriculture—open hillsides, hillside sinks, and canyon bottoms (mainly interconnected shallow sinks).
- 2. Only obsidian blade observed is small midsection fragment 1 cm wide; beside trail in mouth of Cañada de los Parejitos, 60 yds SE of ruin No. 11.
- 3. Rather crude form of black chert fairly commonly used throughout survey area. No definite tools observed, although use marks seemingly from heavy chopping-pounding activities. At least some black chert apparently mined at Cueva Encantada (No. 10).
- 4. Water reasonably accessible, at least in small tinajas in canyon bottoms. Several bedrock tinajas in entrance passage of Sótano de Buque (No. 7). Rimstone dams and other formations seasonally active and full of water in Buque and other caves; permanently running water in such small caves as No. 1. Higher elevation water sources at such localities as Tinaja Redonda (No. 14), Tinaja Verde W of Sótano de Meco (No. 15), and spring on Cerro El Gordo de Ojo de Agua on NE side of Cerro Roble.

Discussion

Presumably in preSpanish times daily life was very much as it is now. Undoubtedly the old base was milpa agriculture, probably using at least the same fields as are now used. Some present trails and walls (see No. 12) may have their beginnings in preSpanish times.

Today water is available in numerous canyon-bottom tinajas, at least two hillside tinajas (Tinaja Redonda and Tinaja Verde), a spring (El Gordo de Ojo de Agua), caves which contain ground water in rimstone pools during the rainy season (e.g. No. 6), at least one cave with permanently flowing water (No. 1), and another with a permanent tinaja (No. 10). Sótano de Buque (No. 7) could have been used for its water in potholes and in rimstone dams below the big room, but it would have been impossible in previous times to negotiate drops down to permanently running water.

Other natural supplies also exist. Fibrous plants, cacti, and thatching material abound. Thickly wooded areas yield woods of all sizes and shapes. Pine, oak, and other hardwood trees up to over 80 ft tall abound on the upper slopes, and chert is common to fashion large wooden objects. Red mercury ores occur on the surface, at least just outside this survey area at Los Pinos and Río Blanco, and could have been a source of red paint. Deer, armadillos, squirrels, skunks, coatimundi, and other animals abound, especially in the upper wooded areas.

Several rockshelters and small caves occur in such places as beside Sótano de Buque (No. 8), at the limestone pinnacles or *querestones* around Cueva Encantada (No. 10), in the main canyon between below mine No. 20, and in the upper canyon area around cave No. 1. These could have served as temporary shelters and storage areas.

Stone houses or house groups may represent either everyday habitation dwellings, or they may have had more formal functions. Undoubtedly perishable material also was common for

family quarters and field houses. Most modern houses are of log frames with stick walls and thatched roofs, and foods commonly are stored on the walls and above the ceilings. Stone houses, both recent and very old, occur in most nearby villages.

Nearly all pottery found during reconnaissance was plainware. The large jars in pit No. 13 and some of the large olla sherds in cave No. 6 had brushed surfaces, probably the result of a finishing technique and not an intentional decoration. The only intentionally decorated vessel observed was the incised blackware shouldered bowl from pit No. 13. Shouldered bowls from cave No. 6 were well floated to polished plainware. A few additional sherds in cave No. 6 had minor applique, but decorative intentions are uncertain.

Stone work is represently mostly be fairly small flakes of a somewhat translucent obsidian (translucent gray when held up to the light). Only one obsidian blade fragment was found. Black chert is present and may have been used for heavy tools, such as for chopping wood. It appears that black chert was mined in Cueva Encantada (No. 10).

Future work should concentrate most on locating more stone ruins in an attempt to discern their function. Notes should be taken of their relationship with fields and geographic features, details of construction, and accompanying artifacts. Horizontal caves should be checked closely for sherds, other artifacts, and possible specialization (e.g. No. 19; also, no rock art was observed). Vertical pits also should be closely checked for artifacts, since shallow pits could have been entered (e.g. No. 13) and all could have been used as dump areas of various types (e.g. No. 15). Surface artifact concentrations might be used to discern possible settlement patterns if distinctions can be made between assemblages originating in fields, field houses, and primary habitation dwellings. Researchers constantly should be aware of the possibility of tombs and walled horizontal entrances (see No. 3).

Traditionally this area was inhabited by Otomf groups, possibly with some Huastecan entry or influence. Artifactual distinctions between the two groups is uncertain, and it is impossible to accurately place the archeological evidence here into such a scheme. No decorated pottery or artifacts definitely from other areas was encountered.

PRELIMINARY REPORT ON VALLE DE GUADALUPE, QUERETARO

by Walt Rosenthal

Whether one approaches the Xilitla region from Cd. Valles or from Landa de Matamoros, the high skyline of the Sierra Madre Oriental is dominated by the broad summit of Cerro Peña de la Cruz. From its 2750 m summit plateau, the western escarpment of the range plunges 1000 meters into the Valle de Guadalupe, a ten kilometer long, deep closed valley running roughly north-south. I arrived in the valley on April 2, 1973, following reports of a Golondrinas-type pit in the high Sierra to the east.

Being west of the crest, and hence in the rain shadow of Peña de la Cruz, the Valle de Guadalupe is extremely dry. Its western wall is wide open and brush covered, with some sparse scrub cedar growth. The eastern, comprising the summit cliffs of Peña de la Cruz, is also sparsely vegetated but with heavier cedar growth, particularly in the relatively shallow arroyos. During my stay there, the valley was an inferno.

The second thing which strikes a visitor is that the entire floor of the valley, some 15 square kilometers, is cultivated. There is, therefore, no reason for the people to resort to hillside milpas as a means of growing crops, and there are few in the area. For this reason, with one apparent exception, the residents of the valley are not at all familiar with the high country to the east.