

Dark Zone and Twilight Zone Pictographs in U-Bar Cave, Southwestern New Mexico

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A large horizontal cave was used as a ritual site late within the Casas Grandes occupation of the northern Chihuahuan Desert. One painted figure (possible abstract bird or human), a painted human hand, and numerous torch smears or stoke marks were found during recent intensive inspection of the cave interior. At the time of occupation the stylized bird was painted in an area minimally benefitting from entrance glow; wall markings in three other areas were in total darkness. The cave has been altered by recent guano mining activity, and petroglyphs reportedly at the entrance have been destroyed. Although the markings could date as early as A.D. 500, the occurrence of rock art is consistent with other similar ceremonial shrine sites in New Mexico dating about A.D. 1300-1450.

Pictographs in New Mexico Caves

Underground caves in North America containing rock art observable only with the use of artificial light are concentrated in southern Mexico and the Caribbean (Figure 1; Greer and Greer 1998, 1997). There is a notable concentration of caverns with interior rock art in the mid-southern United States, and a few other known sites are scattered across the country.

Only four sites of this class have been reported in New Mexico (although a few others are known). Paintings in caves in the Guadalupe Mountains in the southeastern part of the state seem to be associated mostly with water either

as a drinking source or as holy water, or both (Greer and Greer 1995). The best known example is Slaughter Canyon Cave in Carlsbad Caverns National Park, reported by the Bilbos (Bilbo, Bilbo, and Bodnar 1991; M. Bilbo and B. Bilbo 1991, 1993, 1996; M. Bilbo 1992, 1996; B. Bilbo 1996). It appears that paintings in these sites probably date from about the last 5000 years, or from about middle Archaic through late Pueblo periods (Greer and Greer 1995).

Three other caves with dark zone pictographs are known in New Mexico. This paper deals with U-Bar Cave (LA5689) in the southwestern corner of the state (Lambert and Ambler 1961, Harris 1985, Greer and Greer 1996). We previously reported on Surratt Cave (LA9045), a deep vertically oriented cave in the central part of the state with numerous paintings, hand prints, and wall markings down to the bottom of the cave through 130 vertical feet of passageways and climbs (Caperton 1981:9-10, Schaafsma 1992:136, Greer and Greer 1997). Another similar site, though mostly horizontal, is Feather Cave (LA37551) just west of Roswell (Ellis and Hammack 1968; Schaafsma 1992:77, 136; Greer and Greer 1998) with rock art in a remote area of difficult access—a very narrow crawlway leading to a small interior room. All three sites were found to contain paintings and ritual materials associated with late Pueblo period ceremonies probably dating around A.D. 1300-1450. None of the artifacts from these sites has been dated directly.

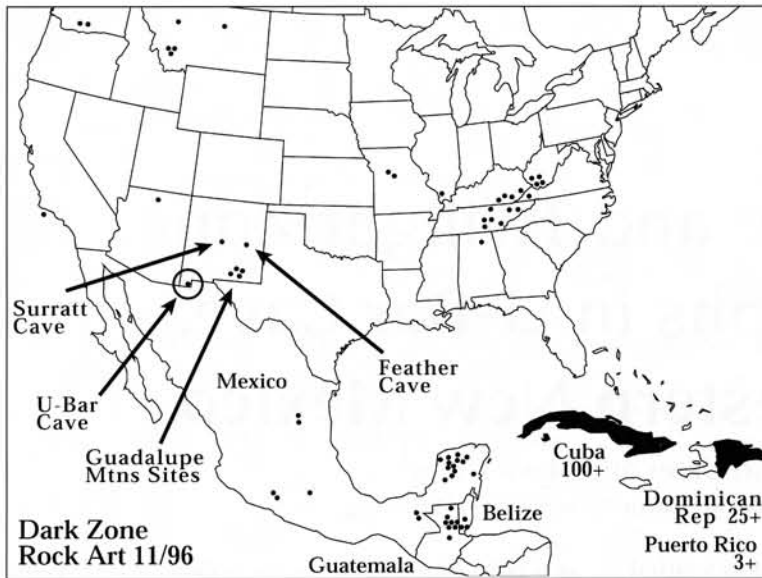


Figure 1. Sites with dark zone rock art in North America, detailing sites in New Mexico.

Location and Description

U-Bar Cave is located in the boot-heel of southwest New Mexico in a basin-and-range setting typical of the northern Chihuahuan Desert. The cave is on the outer escarpment of the limestone foothills of the Alamo Hueco Mountains (Figure 2) and overlooks the wide, mostly featureless, dry Playas Valley flats to the east. Vegetation is the typical upland regime of sotol, lechuguilla, yucca, prickly pear, ocotillo, and catclaw acacia, while lowland flats are more densely covered with creosote, mesquite,



Figure 2. Distant view of cave entrance (and backdirt talus) high on hillside of limestone foothills.

catclaw, sage, a multitude of thorny plants, and javelinas. There is no water source around the site, although there is some minor drip water within the cave. The nearest reliable water is at Alamo Hueco Springs, about two miles to the south and the location of a large Animas Phase (Casas Grandes) site and the modern ranch headquarters.

The cave is about 360 feet long and 70 feet wide, with the rear area curving around behind a large breakdown pile and into total darkness. Until about 25-30 years ago the cave was entered through a small mouth 4 feet high and 8 feet wide, and probably most of the cave was in total

darkness during prehistoric use. The entrance area now has been widened by blasting for guano mining operations (Figure 3), and about 15 vertical feet of deposits have been removed from portions of the cave (Figures 4-5). There are still a few cultural deposits just inside the mouth and more near the rear of the cave. Deposits are dry and full of perishable artifacts and other materials.

History of the Site and Previous Work

Paleontologist Arthur Harris has done most of the recent work at the cave (Harris, 1985, 1987, 1989, 1993; Harris and Carraway 1993; Russell and Harris 1986) and provides the following details on the cave's history (personal communication 1996). This has always been a long, wide horizontal tube (Figure 5), and for the last 40,000 years or so, deposits have accumulated primarily from bat guano and secondarily from limestone dust, isolated areas of roof fall, and some incoming debris from the outside through three (and possibly four) entrances. From about 35,000 years ago to 13,000 B.P. the cave was used by various animals, and the thick deposits contain an abundance of Pleistocene fauna—including megafauna—apparently without human association.

The oldest presumed entrance has no associated fossils and probably was not navigated by



Figure 3. Mining machinery with persons on spoils dirt platform and in front of enlarged mouth of cave.



Figure 4. Interior view of main room from entrance, looking toward rear of cave. About 12-15 feet of deposits have been excavated from this area. Area 1 (pictograph) is about halfway back on the right.

terrestrial animals. A vertical crevice entrance from the hilltop into the rear of the cave appears to have been open from about 37,500 to 18,700 B.P. and was used by large mammals. This is likely the source of the “red guano” and large faunal remains throughout most of the cave. The current horizontal entrance appears to have been open for most of the period from around 40,000 to possibly as late as 13,000 B.P., as suggested by deposits just inside this entrance dating just prior to 20,000 B.P.

Entrances apparently became plugged and closed, and the cave fell into disuse for several thousand years until entry by humans. Dry dusty archaeological deposits in the rear of the cave rest directly on the 18,700 B.P. surface, implying a long period of inactivity in that area. The latest pre-archaeological sediment from the front of the cave dates around 13,000 B.P., suggesting that the front entrance was effectively blocked (or filled) from that time until within the Holocene. A few undated sediments and non-archaeologically associated faunal remains in this entrance area may be mid-Holocene, and thus it is possible that the present horizon-

tal entrance has been open since sometime during the Archaic period.

The only archaeological age on human use is from a sample of culturally burned wood dated to A.D. 720-980 calibrated (sample collected by A. Harris, Arizona lab no. A-4441, ¹⁴C 1180±50 B.P.; A. Harris, personal communication 1996). From this it is assumed that people began to use the cave possibly by around A.D. 500. Ritual activities (with associated arrow shrines and other caches of materials) may have begun at this early date or may be from a few hundred years later, as suggested by Lambert

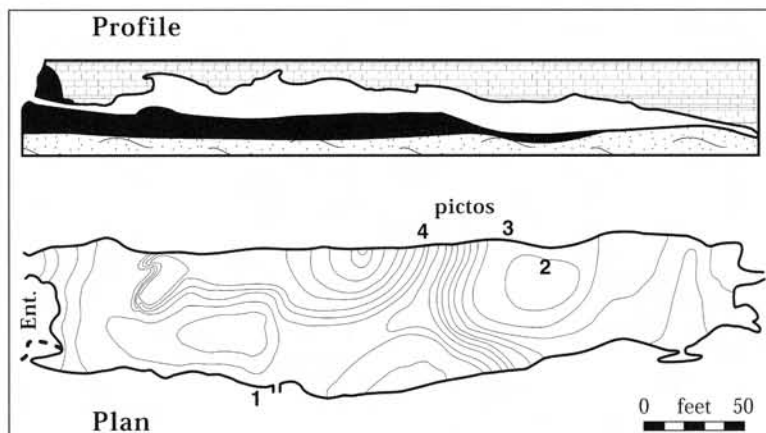


Figure 5. Profile and plan of U-Bar Cave (after Lambert and Ambler 1961, Harris 1985, and our 1996 field observations), showing numbered locations of wall markings. Solid black areas on profile indicate original areas (entrance rock and deposits) now removed. Dotted line on plan shows extent of present blasted entrance.

and Ambler (1961). At least by the end of the period of prehistoric use—presumably around A.D. 1400—the cave entrance was small and low, interior light was dim and localized, and probably two feet or more of cultural deposit—mixed with natural debris—had accumulated in the entrance area and other parts of the cave.

The cave apparently was unused by humans from around A.D. 1450 to about 1935, when local people again found the entrance, or at least recognized the cave as a prehistoric ceremonial site. Shrine materials were removed at that time, particularly clusters of arrows, prayer sticks, and painted tablitas. Periodic random digging for artifacts ensued for another 25 years (Lambert and Ambler 1961).

In 1960 excavations were carried out by Lambert and Ambler for the School of American Research in Santa Fe (Lambert and Ambler 1961). Although excavations were described as gridded and somewhat stratigraphic, vertical and horizontal controls seem mostly to have been poor. Excavated deposits were screened within the enclosed cave—a large elongated room with a very small entrance and no interior light—thus filling the cave with thick guano dust and insuring no visibility. Excavation is described as beginning mostly with shoveling and minimal use of a trowel, in approximately six-inch levels; but since there was no visibility, most deposits were simply shoveled in grosser vertical “levels.” Cultural materials were found only in the upper light gray fine dust and guano, and these findings were later substantiated by subsequent work by Schaafsma and Harris (see below). No mention was made of wall markings, and this work undoubtedly resulted in coating the walls with a thick layer of dust.

Several years later, the entrance was blasted out for guano mining operations. A spall area of removed rock in the blasted entrance now has a name-date inscription from 1965, presumably indicating the date blasting occurred. It is said that two poor-quality photos of the entrance area, taken by the BLM in about 1976, show a Tlaloc mask petroglyph just outside the left side of the original entrance (as facing the cave), with the mask composed of two round circles pecked into the rock. There may also have been other petroglyphs around the mouth (Curtis

Schaafsma, personal communication 1996). That area presumably was subsequently destroyed by additional blasting, and there are no longer any indications of any petroglyphs around the entrance. This major enlargement of the entrance considerably changed the character of this once-dark cave.

Intensive guano mining activities occurred about 1976-1982 without scientific coordination. In December 1983, agencies recognized the archaeological and paleontological impact, especially obvious from materials in the mining spoils pile at the bottom of the hill. In 1984 Harris was permitted limited paleontological excavation in advance of mining in specific areas (Harris 1985). Curtis Schaafsma also spent five days excavating a small area near the rear of the cave in March 1984 and three more days in April 1986 (and possibly again in November 1986, according to A. Harris), during which time he found a small undisturbed area of stored ritual objects.

Harris and his students excavated small areas for purposes of mining clearance from 1984 through 1990. Miners additionally removed cultural materials from deposits, and tossed sticks to the side of the excavated area. Harris reports that deposits subsequently excavated by miners were screened at the bottom of the mountain, and recovered archaeological and paleontological materials were taken to the University of Texas–El Paso (UTEP); cultural materials were subsequently taken to the Museum of New Mexico. Other site visits, and some minor testing, apparently have been done by the BLM, State of New Mexico, and University of New Mexico.

Thus, the cave has been known during historic times since 1935 and has received various degrees of scientific attention since 1960. Early work was in darkness under the worst conditions of intensive dust. Later work apparently concentrated on buried deposits rather than a search for rock art. Thus, no rock art or wall markings had been observed before our intensive search in 1996.

Field Investigations

We visited the site in May 1996 to check the possibility of dark zone paintings within this

ritual cave, as part of a general regional pattern, and within our overall consideration of prehistoric dark zone rock art throughout North America. We found the entrance blasted out, as expected, thus removing any possibility for entrance area petroglyphs, and the front part of the cave interior now is fairly well lit. Mining has ceased, and some cultural deposits still exist. We observed several artifacts throughout the cave, including cut and burned sotol and lechuguilla stalk fragments, other sticks, and several bones and fragments. We closely inspected all walls and low ceiling areas and—using various kinds of lights (including high-powered video lights)—searched for any kind of prehistoric markings.

Mining activity and paleontological excavation appear to have terminated suddenly, with the intention of returning the next day. Hand tools, measuring devices, screens, forceps, *etc.* were left in place. Matrix samples are boxed, and archaeological materials (sticks, *etc.*) have been tossed to the side of guano excavation areas, ready for collection. Wheelbarrows full of excavated guano at the mouth of the cave are ready for transport down the cable system to the bottom of the mountain. Also noted at this time—eroding from intact deposits just inside the mouth of the cave—were (1) a small hardwood arrow foreshaft, pointed and painted red; and (2) a small corner-notched obsidian arrowpoint (opaque black) with prominent barbs, a bulbous expanding stem, and a rounded base. No collections were made.

Findings

We found only six small areas suitable for wall markings; markings occur on four of those surfaces and on no other areas of the cave wall. They are all relatively smooth, delineated areas of light-colored wall, while most other areas are a darker gray and generally rougher in texture. All markings are believed to be prehistoric.

Area 1 contains a painted fingerline figure in black paint. In the upper part of Area 3 is a painted hand. All other wall markings are from burned sticks, probably burned sotol or lechuguilla stalks (which are common in the deposits in the rear of the cave), simply smeared across light-colored portions of wall. All are

within easy reach of the original floor, and all are believed to be torch marks.

Area 1 (Figure 6). A fingerline figure painted in liquid black paint is on the right wall of the main room about halfway back and about 6 ft above the original floor. There are two other small areas (about 60 cm across) of light-colored wall at this location, but those contain no markings. The figure is very simple and is composed of a group (about 30 cm across) of short, straight fingerline smears in black paint, pre-

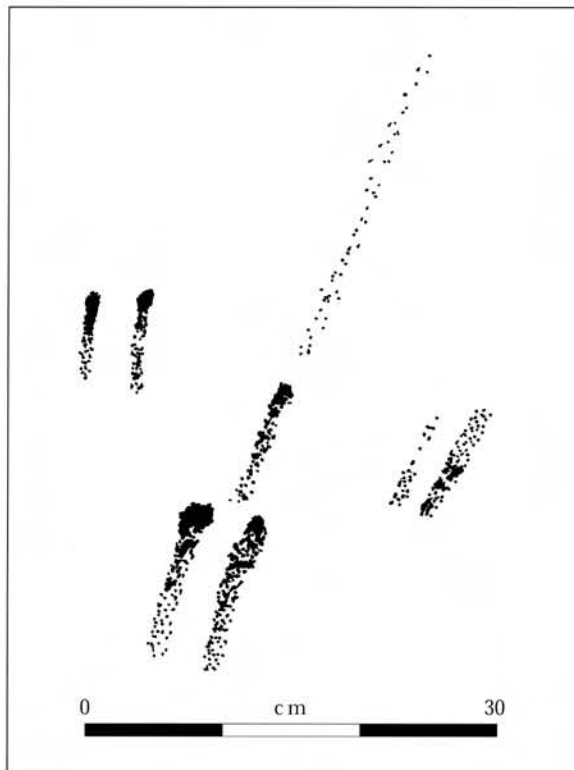


Figure 6. Painted fingerline figure in Area 1.

sumably manganese or charcoal. The paintings have the appearance of being old and may portray a stylized bird or anthropomorph. When the figure was painted on the wall, the entrance light, or at least entry glow, would have been visible from this location, although an additional source of light probably would have been necessary to view the figure.

Areas 2-4 are further back in the cave, on the left side near the rear, in areas which even today are in total darkness. These are areas of smooth wall with black markings. These wall spaces essentially surround the location of a prehistoric hearth, originally located against the

cave wall and now indicated by a localized darkened discoloration of the limestone just above the undisturbed deposits.

Area 2 (Figure 7). A light-colored area of ceiling has a few torch marks (or stoke marks) of black charcoal. This is within easy reach of the floor, and the marks were probably caused by striking a torch against the ceiling. There are no figures. Here also is a cluster of fine scratches concentrated in an area about 20 cm across. These are mostly vertical but run in various directions and are similar to tool scratches found on boulders and shelter walls in desert sites throughout this region. Their age and function are unknown.

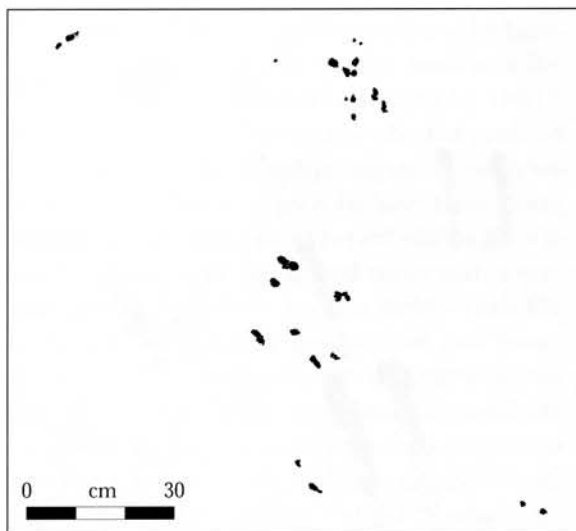


Figure 7. Main charcoal marks on ceiling of Area 2.

Area 3 (Figures 8-9) is a large whitish area just to the right, or rear, of the prehistoric hearth. No mining has been done next to the wall here. Black charcoal marks are low on the wall—about 1–4 ft above the natural floor—as if they were caused by kids playing with partially burned sticks or even burning sticks or torches. The marks are scattered across about 10 ft of wall space and constitute no discernible form.

Area 4 (Figures 10-12). About 25 ft to the left (toward the cave mouth) of Area 2 and 10 ft left of the hearth is a fairly large, smooth, circular portion of wall which is a vertically eroded face of tilted travertine or a travertine plug—showing all the lines and textures associated with cave formations. This was used as a canvas



Figure 8. Charcoal marks, left (SW) end of Area 3.

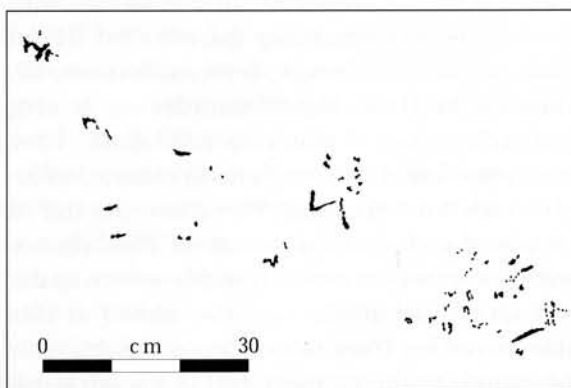


Figure 9. Charcoal marks on left (SW) end of lower wall in Area 3.

for black torch smears and non-figurative lines. On the upper-left edge of this section is a hand print painted in liquid paint of reddish-orange soil or orangish clay. The hand is on the corner of the rock and is mostly covered with recent thick dust from mining activity. The orangish material appears to be a natural clay, possibly not native to the cave.

Summary

Careful inspection, after years of activity, produced areas of prehistoric concentrated wall markings, a stylized bird figure painted in black, and a hand painted in a mixture of orange clay. Smooth areas were selected for markings, and most areas of this kind were used. No markings were found on the darker non-smooth surfaces. The reason for the nonfigurative markings is

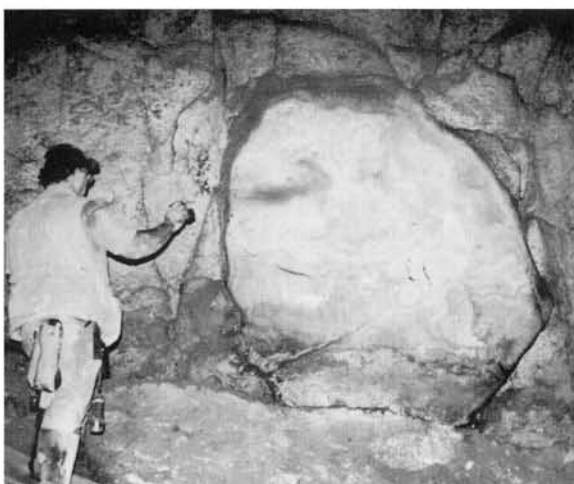


Figure 10. Overall view of marks on travertine plug in Area 4.



Figure 11. Marks on lower-left portion of Area 4.

not clear, but they attest to activity in dark areas of the cave, and specific selection of those areas for use. No evidence of the petroglyph Tlaloc mask still exists at the entrance.

While the purpose of the markings is not known, their presence is consistent with rock art associated with ritual activity at Feather Cave and Surratt Cave in the eastern and central parts of New Mexico. Both of those sites contain hand prints associated with shrines, and at Surratt the petroglyph of the Tlaloc eyes over-

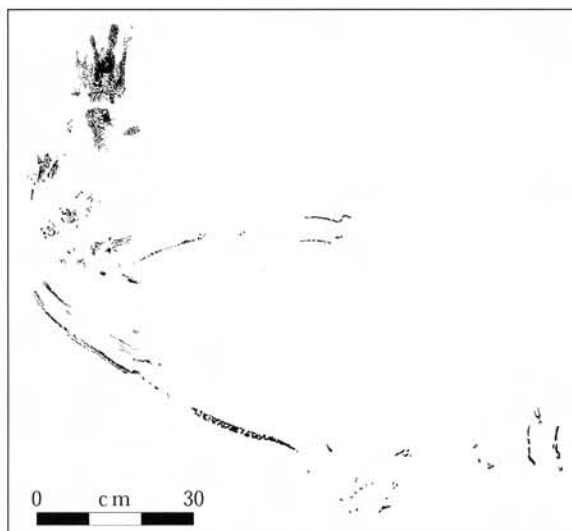


Figure 12. Area 4, showing charcoal marks over most of wall and a hand print painted in orange clay at upper left.

looks the cave entrance, as did the same kind of mask here at U-Bar.

Age of the markings is not definite, and direct dating is recommended. Even so, it appears from previous work at U-Bar that the cave was used around A.D. 1300-1450 by people of the Animas Phase of the Casas Grandes culture, perhaps residents of the large Alamo Hueco village (LA 54053) just to the south. Ceremonial use resulted in various kinds of shrines, notably accumulations of arrows and other portable objects. It is likely that the wall markings were associated with this use, or alternatively a previous use dating as early as A.D. 500 (or, without recognized associated materials, theoretically back into the Archaic).

Although the results are less than dramatic, they do indicate that directed reinspection of caves can produce new information, regardless of the amount of previous archaeological attention and the lack of mention of rock art in published reports and field notes. The pattern of wall markings associated with dark zone shrine caves in New Mexico remains consistent with the addition of this work.

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