

Dark Zone Rock Art in Surratt Cave, a Deep Cavern in Central New Mexico

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Rock art in dark zone settings of underground caves, where observation is possible only with artificial light, occurs in many parts of North America (Figure 1). Rock art in such settings is well publicized for Europe and other parts of the world, but little synthesis has been done for the New World (Greer and Greer 1995a, 1997; Faulkner 1996).

Several sites with dark zone pictographs are known in New Mexico. Rock art in caves in the Guadalupe Mountains of southeastern New Mexico seems to be associated mostly with water; the best known example is Slaughter Canyon Cave in Carlsbad Caverns National Park (Bilbo, Bilbo, and Bodnar 1991; M. Bilbo and B. Bilbo 1991, 1993, 1996; M. Bilbo 1992, 1996; B. Bilbo 1996). Ages for the Guadalupe dark zone paintings seem to range over the last 5000 years or so, or from about the Middle Archaic through late Pueblo periods (Greer and Greer 1994, 1995b).

Three other caves with dark zone pictographs are known in New Mexico. The subject of this report is Surratt Cave in the central part of the state (Caperton 1981:9-10; Schaafsma 1992:136; Greer and Greer 1995c, 1996a, 1996c). For comparative purposes, Arrow Grotto of Feather Cave to the east (Roosa 1952; Ellis and Hammack 1968; Schaafsma 1992:77, 136) and U-Bar Cave to the southwest (Lambert and Ambler 1961; Harris 1985; Greer and Greer 1996b) are also briefly discussed. All three sites were used during late Pueblo times as shrine locations where ceremonies were conducted and ritual paraphernalia and byproducts were left.

Feather Cave

Feather Cave (LA37551) is located in the southeastern part of the state, in a hilly region west of Roswell. The main cave, or outer chamber, is a large room about 250 feet long, entered through a small opening. This large entrance room was used for ceremonies. Pictographs near the rear consist of three white negative handprints, and other paintings could be obscured

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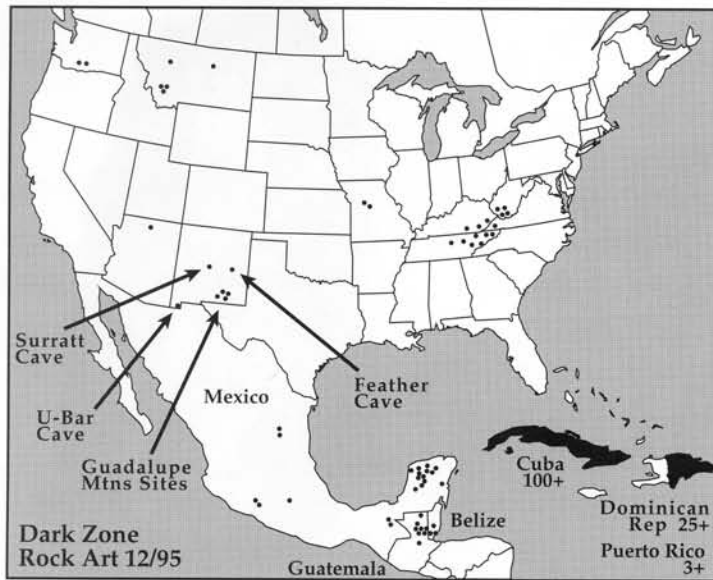


Figure 1. Confirmed sites with dark zone rock art in North America, detailing sites in New Mexico.

by heavy soot accumulation on the ceiling and walls (Michael Bilbo, personal communication, June 1996).

The large outer chamber of Feather Cave is connected to a smaller interior room, known as Arrow Grotto, by a narrow crawlway about 2 feet wide and 1 foot high (Figure 2), the details of which have been reported and discussed by Ellis and Hammack (1968). The isolated small room was used prehistorically around A.D. 1350 for ritual activity which included deposition in caches of arrows, prayer sticks, miniature bows, painted mask fragments, feathers, and other items. Pictographs occur in the tight crawlway, specifically two groups of four parallel vertical lines which today are a kind of Pueblo “no trespassing” sign or designation of the entry from one world into another, or in this case to separate the public ceremonial area of the outer cave from the private ritual zone in the back room of Arrow Grotto (Ellis and Hammack 1968:36). Pictographs associated with individual shrine locations are painted on the walls and ceiling of this back room. Paintings (in white paint) consisted of two concentric circles, nine negative hand-prints (one with the forearm, additionally decorated with concentric circles and other lines), a ladder motif (possibly representing a rainbow, according to Ellis and Hammack 1968:35), checkerboard designs, a mask (with oval eyes and oval mouth with teeth), concentric circles (one with two rings, one with three), an E-shaped figure, a cross with two small circles, and a triangular figure of three small ovals. Ellis and Hammack suggest that rituals here were associated

with winter or summer solstices, especially as they relate to renewed fertility of crops, requests for rain to support those crops, and Pueblo life in general. They state that the set of three concentric circles represents the Sun in Pueblo iconography.

U-Bar Cave

U-Bar Cave (LA5689) is a horizontal cavity located high in a limestone ridge in the northern Chihuahuan desert province of southwestern New Mexico. The cave consists of a single large room about 350 ft long and 60 ft wide, with a high ceiling (Figure 3). The original small entrance was 8 ft wide and 4 ft high and precluded much light from entering the cave. The room interior was originally dark. Entrance enlargement during recent guano mining activity now allows some light to reach far into the cave, but artificial light still is necessary in rear areas.

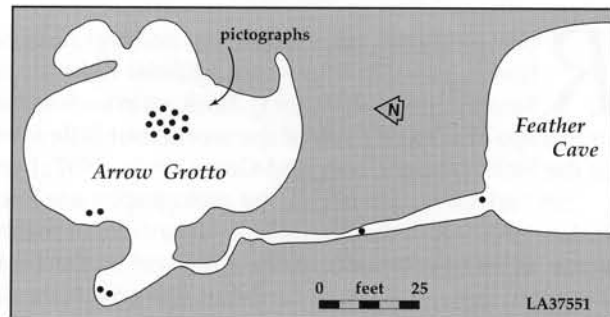


Figure 2. Plan of the interior of Feather Cave (after Ellis and Hammack 1968).

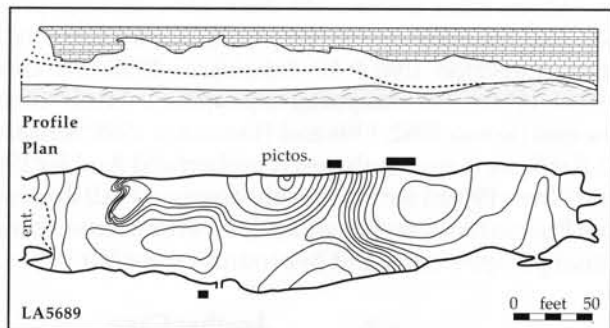


Figure 3. U-Bar Cave plan and profile. Solid entrance and floor surface are present locations; dotted lines are original entrance and floor fill. Black boxes indicate rock art locations (1996). (After Lambert and Ambler 1961; revised after Harris 1985, and Greer and Greer 1996b).

Details on the history of the site have been discussed by Harris (1985) and Greer and Greer (1996b).

Aside from breakdown areas of angular boulders, cave deposits are deep and are mostly composed of very fine guano fill. The upper foot or so of fill is exceptionally fine and loose and contains relatively sparse cultural materials, as originally reported by Lambert and Ambler (1961) and later investigated mainly by Arthur Harris (1985) and Curtis Schaafsma (personal communication 1996). Below the thin layer of cultural deposits are several feet of somewhat consolidated Pleistocene fill fairly rich in faunal remains and containing a wide variety of extinct species (Harris 1985) dating from about 40,000 to 12,000 years ago. The entrances then probably closed, and the cave was abandoned until human occupation around A.D. 1-500. Harris estimates that at least 13 feet of fill has been removed in parts of the cave during recent guano mining activities.

Buried cultural materials occur throughout most of the cave, although most common in the mouth and dimly lit front part of the main room. Farther back in the cave, to the end, the loose deposits contain mostly burned and cut yucca stalks, some sticks, and rarely plant fiber.

Ritual materials have been found localized in clusters in several parts of the cave. Arrow shrines (as in Arrow Grotto) were found on the surface during initial discovery and in buried context during subsequent excavations. Ceremonial materials in these clusters include arrows, prayer sticks, pahos, wooden figurine fragments, shell necklace fragments, dyed cotton, and other objects. Other occupational debris—especially obsidian arrowpoints, utilitarian perishables, and potsherds—are most common in the entrance area.

Previous work suggests that ritual use of the cave pertains to the Casas Grandes Animas Phase, about A.D. 1300-1450 (Lambert and Ambler 1961; Schaafsma, personal communication 1996). Harris (personal communication 1996), however, reports earlier radiocarbon dates on culturally burned wood of A.D. 720-980, which may relate to ritual activity (e.g., arrow shrines), the rock art, or perhaps other early use. Harris' dates are clearly pre-Casas Grandes (Schaafsma 1995).

Burned areas on the walls, torch smears, and a few pictographs are further evidence of activity in the dark rear areas of the cave (Greer and Greer 1996b). The only identifiable pictographs include a positive handprint and an arrangement of black fingerlines. Associated black torch marks, charcoal

crayon lines, and charcoal fingerlines do not form patterns identifiable as real-world objects or recognizable geometric or stylized elements. A possible mask petroglyph, composed of two pecked open circles, is said to have been just outside the mouth of the cave (like the one in the sink at Surratt Cave), but it was destroyed by entrance expansion during guano mining (Curtis Schaafsma, personal communication 1996).

Surratt Cave

Surratt Cave (LA9045), in the central part of the state, is somewhat similar to Arrow Grotto of Feather Cave. It lies in a foothills region just east of the Gallinas Mountains and on the northeast side of a broad, open grassy basin bordered on the southwest by Chupadera Mesa. The collapsed sink cuts into the crest of a low sandstone hill, which caps the ecotonal foothills and borders and overlooks the huge basin of rolling plains toward Grand Quivira (Salinas National Monument) to the west. The sink mostly is rimmed with vertical walls about 15-20 feet high.

Petroglyphs

A few petroglyphs are on the north side of the sink. Panel A (Figure 4) is a smooth rock surface with



Figure 4. Petroglyph Panel A, circle eyes.

two small open circles about three feet apart horizontally and 7.3 feet above the ground. These seem to form the eyes of a large mask that looks out over the sink and toward the cave entrance in the bottom of the sink. A dim circle above the other two (and possibly another to the upper left) is very light and apparently was half-heartedly begun and then abandoned. Below the eyes, generally in what would be the mouth area, is a substantial number of random peck marks almost certainly caused by striking the rock as a drum. In this case, the sound would emanate from the mouth area and would reverberate across and around the sink and into the cave opening, as well as out toward the open country and setting sun to the west. Natural walls within an enclosed area such as this would function well as a drum, and the heavily impacted walls in the Panel 5 room at the bottom of the cave attest to the same activity there also.

Peck marks of this kind are fairly common in a number of sites, although such random peck marks or even clusters usually are not discussed in the literature. Pilles (1996) has observed this kind of feature in rock art sites in north-central Arizona and says that such random peck marks are probably the result of striking the rock to produce sparks in the darkness or sounds. A cave in southern Washington

with dark zone rock art contains a thin basaltic fin which has been battered along the edge, apparently during its use as a drum within a restricted passageway (James Keyser, personal communication 1995; Paul Bahn, personal communication 1995). Local guides at Juxtlahuaca cave in Guerrero, Mexico, and other similar caverns, proclaim that thin flowstone draperies (travertine calcite formations) were used as drums, as evidenced by battered areas, with different parts of the formations producing different tones. It is reasonable that areas for both rock art and related "drumming"—both within enclosed deep caverns and outside in open-air settings—would be chosen for their acoustic values, particularly related to reflected or amplified sound (cf. Waller 1993).

Panel B, on the central part of the wall (Figure 5), is a small panel about 75 cm wide x 120 cm tall. Most of the small diverse figures are technologically similar (all are finely pecked and lightly smoothed) and may have been made at the same time. Two dim horizontal zigzag lines may represent snakes without discernible heads or tails. A deer or elk track is lightly ground into the wall—the pointed ends are typical of a female track while the expanded width is more a male trait. Two sets of concentric circles—each with two rings and a central dot—are dim and quite small compared with similar motifs at other sites. A few other small figures are mostly unidentifiable, but all appear to represent various forms of

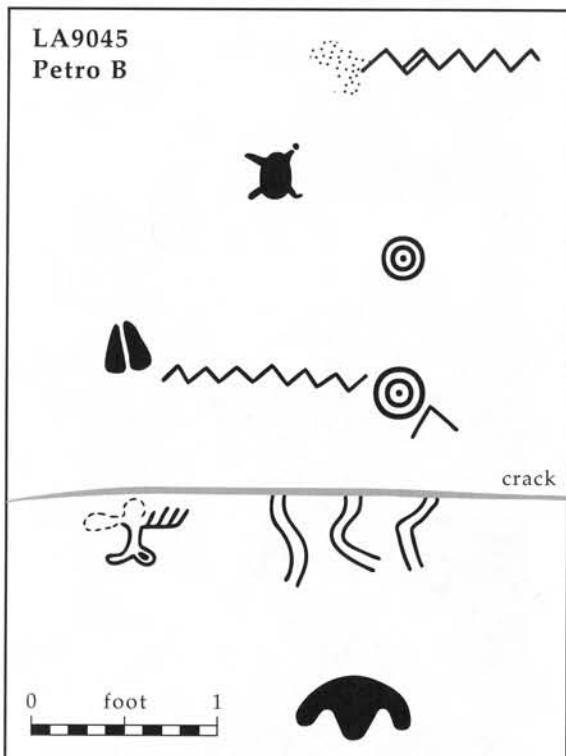


Figure 5. Petroglyph Panel B.



Figure 6. Petroglyph Panel C.

zoomorphs—possibly a turtle, possibly a bird with upturned wings, and a small solid figure which may be a stylized bird with drooping wings. A series of doubled (parallel) vertical wavy lines descend from a natural horizontal crack and may represent lightning or rain. All items are ground into the fine, yellowish sandstone.

Panel C, in the corner of the sink, is a rock with numerous deeply pecked footprints representing both bare feet and moccasins (Figure 6). Collectors have tried unsuccessfully to remove one of the footprints. There is no obvious similarity between Panel C figures and paintings down in the cave.

The large face on Panel A, with its open eyes, is thought to portray the Rain God Tlaloc and indicates northern Mesoamerican influence from Jornada style rock art to the south (Curtis Schaafsma, personal communication 1996; cf. Schaafsma 1980:208, 1992:64). This face and the vertical lightning symbols of Panel B are the only indicators of a possible relationship between the petroglyphs in the sink and pictographs in the cave. Most of the petroglyphs seem typical of Rio Grande area rock art to the west and northwest. Figures typical of the Jornada style—such as the horned or plumed serpent, cloud terrace, outlined cross, geometric elements, animal figures, and the usual plethora of human masks—are notably absent in the petroglyphs. Some of these motifs, however, are represented inside the cave. In general, it appears that the petroglyphs outside the cave were made by people different from those who painted inside the cave, and it seems that the petroglyphs may be more recent.

General Character of the Cave

The tree-lined sink, on the edge of a prominent hillcrest, was formed when an underlying huge erosional cavity collapsed, mostly filling the void with breakdown. Subsequent erosion has smoothed, and in some places undercut the upper sandstone overlying the coarse-grained gypsum limestone layers below. Only two openings into or through the breakdown are presently known: the main entrance into the cave reported here, and a small opening which passes under a boulder and down about 30 feet into another series of small breakdown rooms on the north side of the bottom of the sink. The prominent upper sandstone walls border the rocky and grassy slopes that descend steeply to a large boulder breakdown area surrounding the small, fairly gentle grassy depression in the center of the sink (Figure 7).

The cave entrance is in the center of this boulder breakdown area. Here one enters a small opening about three feet across (Figure 8) and crawls down through the breakdown boulders, descending initially about 15 feet before turning slightly and then dropping down through a narrow constriction or notch. The entrance is beside a particularly large



Figure 7. Person standing beside the entrance in the boulder breakdown area in the bottom of the sink. The main entrance is just behind the large boulder. A small space in front of the boulder passes beneath the rock and joins the main entrance passage just at the back.



Figure 8. The main entrance.

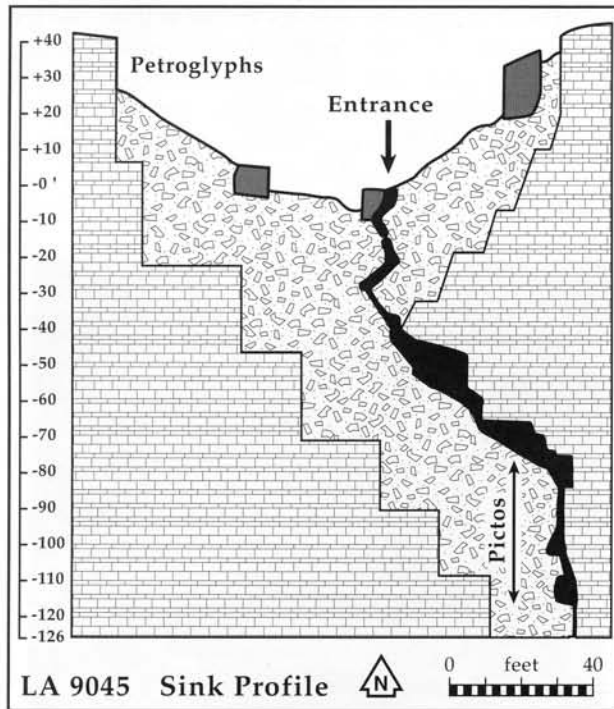


Figure 9. Schematic profile of sink, looking generally north.

boulder, but no rocks around the entrance, or anywhere within the central breakdown area, show any signs of cultural modification, such as petroglyphs, grinding facets, tool sharpening grooves, or abrasions. The lowest part of the sink about 20 feet in front of the entrance, is grassy, relatively flat, and contains abundant blackish soil. The location is the most reasonable place for any small group to camp while utilizing the sink or conducting activities down in the cave. No excavation has been done in this area, and no artifacts are known to have been found there. The potential for buried cultural deposits in the grassy area is high.

Looking at the overall configuration (Figure 9), the sink is about 40-50 feet deep, with vertical walls. The cave proceeds down through a series of restricted passageways and small rooms to the pictograph ritual area in the lower part of the cave. Paintings are at the lower edge of a large room and continue down to a kiva-like room at the bottom of the cave (Figure 10).

Just inside the cave entrance is a narrow notch which now measures 15 x 10 inches and previously was smaller. This kind of constriction, usually not far inside the entrance, is a feature typical of many (if not most) dark zone ritual caves containing rock art,

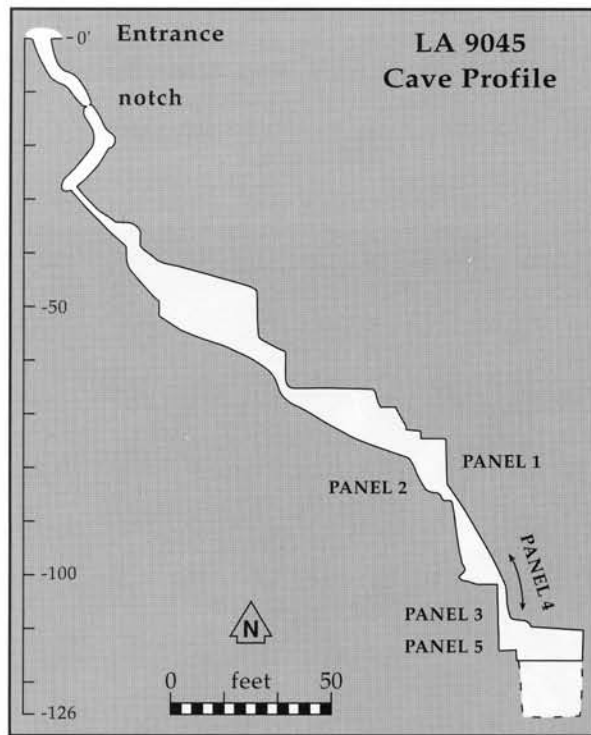


Figure 10. Schematic profile of cave, looking generally north to northeast.

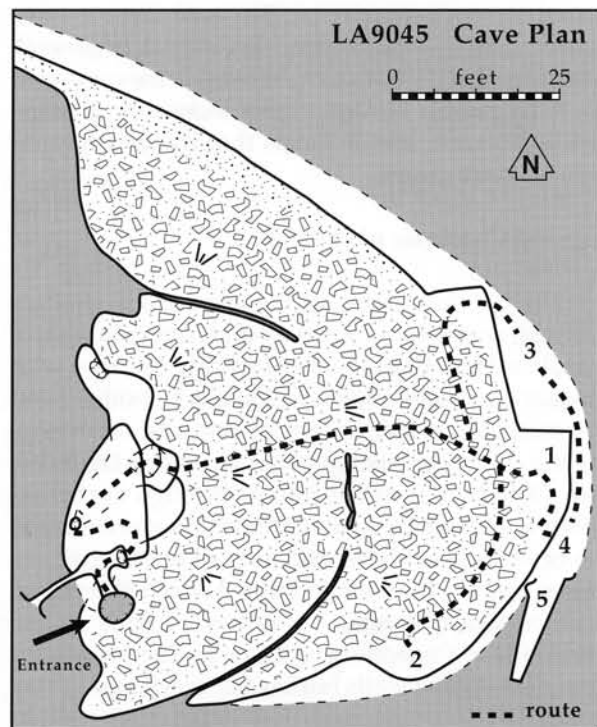


Figure 11. Cave plan.



Figure 12. The Panel 1 alcove at the lower side of the big room. Note the intersecting left and right walls.

not only throughout North America but in Europe as well. It seems that some degree of difficulty of access and a physical constriction to separate the outer world from the inner ritual chamber were considered necessary natural components of this kind of site.

The plan view of the cave (Figure 11) again shows that from the entrance there is a series of climb-downs through small rooms and passageways, and into a large room divided by breakdown. This rocky slope descends to the rock art in Panels 1 and 2 at the lower edge of the room. There are climb-downs to Panels 3 and 4, and then an additional descent to the lower room of Panel 5 at the bottom of the cave.

Panel 1

Panel 1 is in a small recessed area (Figure 12) at the lower end of the main room, at the end of the main breakdown slope of loose rocks and fine dusty soil. Paintings are in a somewhat enclosed area, which also serves as entry to the lower parts of the cave, and occur on two intersecting smooth vertical walls about 8 ft high. The left wall, about 6 ft wide, is completely covered with figures and torch smears. The right wall has paintings over at least 6 ft of wall space, and torch marks continue farther to the right, as they do over walls and boulders in other parts of the cave.

Panel 1 contains negative handprints, other stencil areas, blown-on dots, several figures mostly in black crayon, and numerous unidentifiable crayon lines (Figures 13-14). Handprints are both right and left hand, and most appear to be older juvenile to adult male. One hand stencil is specifically placed on a crack, and a couple of other figures are also placed on the crack. Other images include a miniature hooked prayer stick and a miniature bow—items commonly deposited in ritual caves such as this.

Solid dots have been blown onto the wall as controlled spatter and occur in groups of three. This triangular motif is also present at Feather Cave and, along with other similarities, seems to indicate a strong relationship between the two caves.

Several bird tracks are present, mostly represented as the usual triangular arrangement of three converging lines. One possible roadrunner track is represented (essentially a narrow "X" with bent

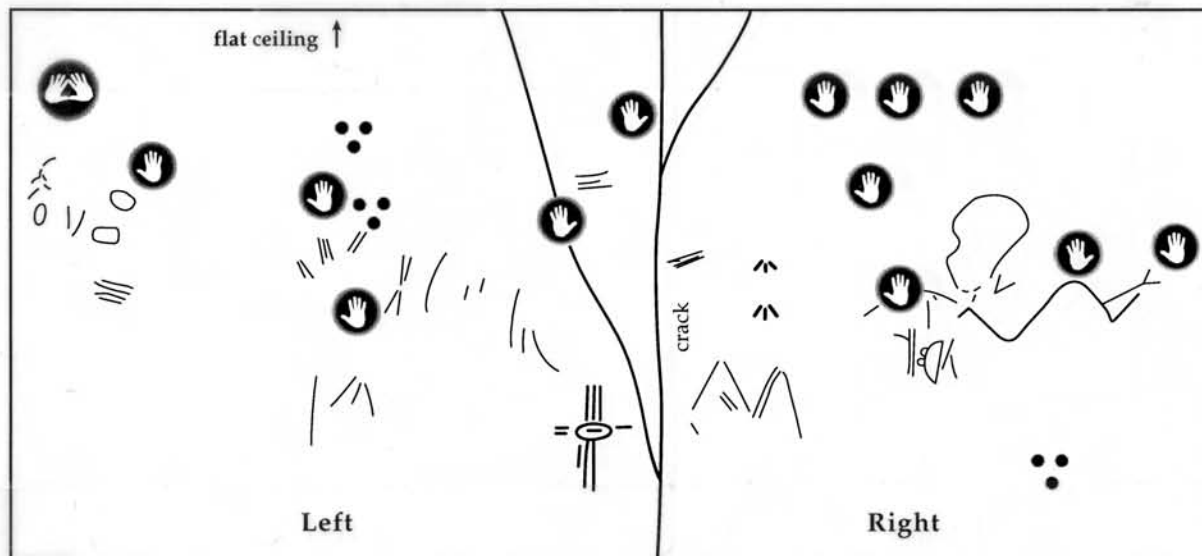


Figure 13. Panel 1.

Triangular dot pattern (blown)	
Negative handprints, right	
Negative handprints, left	
Negative handprints, combined	
Bird tracks?	
Roadrunner track?	
Miniature bow	
Miniature hooked prayer stick	
"Sun Symbol"	
Anthropomorph?	

Figure 14. Tabulation of Panel 1 motifs.

ends), a common element in Jornada style rock art, a bi-directional track which represents ambiguity or confusion (Schaafsma 1992:76). Pueblo Indians may also use the roadrunner track motif on a house wall as a kind of blessing, as they would a handprint (Ellis and Hammack 1968:35-36).

A small crayon sun symbol is composed of two concentric circles with four parallel lines radiating in each of the four directions. It is low on the wall and is poorly drawn.

Some presently unidentifiable crayon figures may be parts of masks or large human figures, such as one near two negative handprints on the right side of the panel. Other figures, such as small enclosures, are also next to negative handprints.

An unusual hand stencil consists of two adjacent hands placed together within a spatter area, with the forefingers and thumbs touching (and with most of the spatter within that opening). This motif is present in Mayan art as well as the art of Eastern religions in other parts of the world. This figure in Surratt Cave may be an example of the ideological link between Jornada style rock art and cultures in southern Mexico.



Figure 15. Panel 2 alcove.



Figure 16. Panel 2 mask.

Panel 2

Panel 2 is to the right of Panel 1, at the lower end of the large room and in another small recessed room-like area in the breakdown, down next to the back wall (Figure 15).

A small group of black charcoal crayon figures and torch marks is on the rear wall. A single mask in Jornada style has a flattened head and elongated chin (Figure 16). Feathers come off the top of the head, and eyes are horizontal slits. Near the mask are representations of two small hooked prayer sticks, objects which may have been used in the cave during ritual.

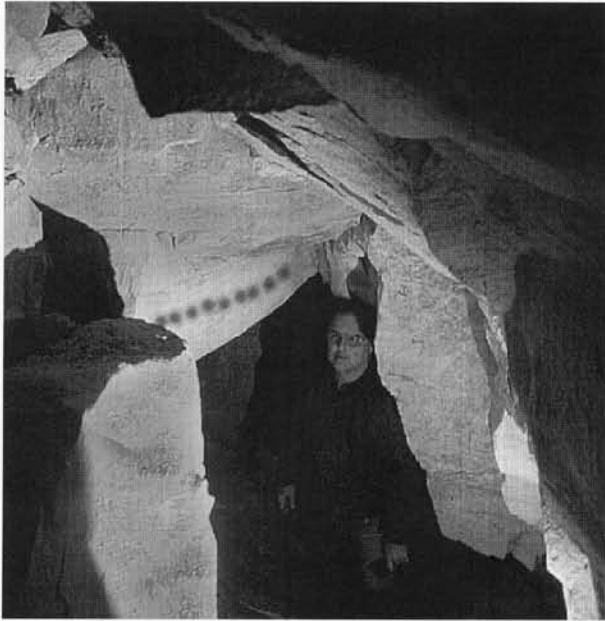


Figure 17. Panel 3 passageway.

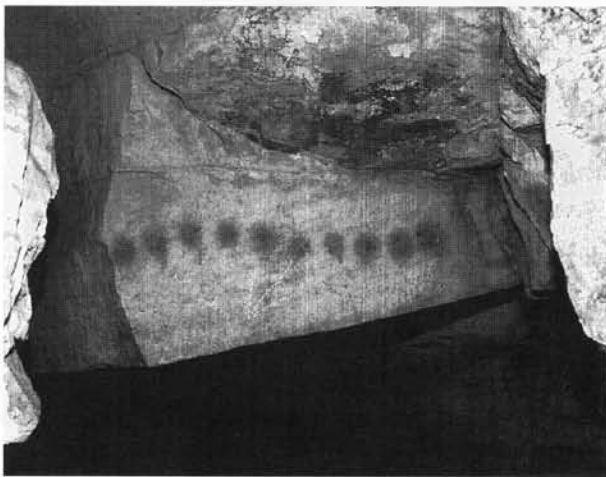


Figure 18. Panel 3 dots of runny paint.

Panel 3

To the left of Panel 1 is a climb-down through the breakdown and against the back wall to Panel 3, which is at about the same lower level as Panel 4. On the face of a ceiling ledge just above the passageway is a row of 10 dots (Figures 17-18). These are positive solid dots, about 3 inches in diameter, blown on the wall.

Panel 4

Panel 4 is reached by climbing down about 15 feet through the breakdown and against the back wall from Panel 1, or similarly coming across through the ample opening between the massive angular breakdown blocks and the rear wall from Panel 3. Charcoal crayon drawings occur in an upper open, narrow room-like area of the passage (Figure 19), and from there down a fairly narrow slit along the back wall.

Several masks are on the upper part of the main panel, on two opposite walls in the open area (Figure 20-21). As an example, one mask (Figure 22) on the southeast wall has a flattened head with rounded sides. Vertical pupils presumably are rattlesnake or feline features that pertain to a particular spiritual entity. The toothed mouth is a characteristic of many Jornada style masks (cf. Schaafsma 1980, 1992; see Ellis and Hammack 1968 for a similar mask in Arrow Grotto). No stenciled handprints on Panel 4 are located on rock surfaces adjacent to masks. However, climbing down the fairly narrow slit along the back



Figure 19. Upper main passage of Panel 4.

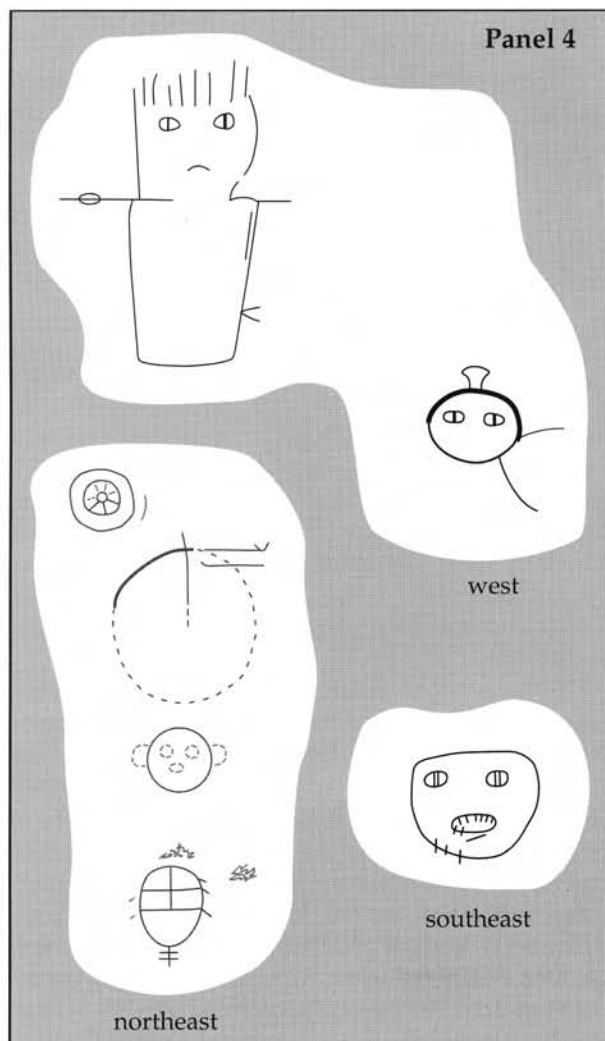


Figure 20. Recognizable masks on Panel 4.

wall, one passes a series of negative handprints (Figure 23) and another row of dots. This narrow climb-down is directly above the entry into the room of Panel 5.

Panel 5

Panel 5, or Room 5, is the lowest reachable part of the cave. The most obvious descending routes in the cave, down through the breakdown and against the back wall, end up here. The somewhat trapezoidal-shaped room (Figures 24-25) is formed between the back wall of the cave and a massive breakdown block forming the right wall. The narrow, elongated room is about 13 ft long and initially about 4 ft wide, but narrows at the far end to barely over a foot wide. Its ceiling is 7-8 ft high, and the floor slopes inward to a narrow crack 6-9 inches wide and 9 ft deep (it is

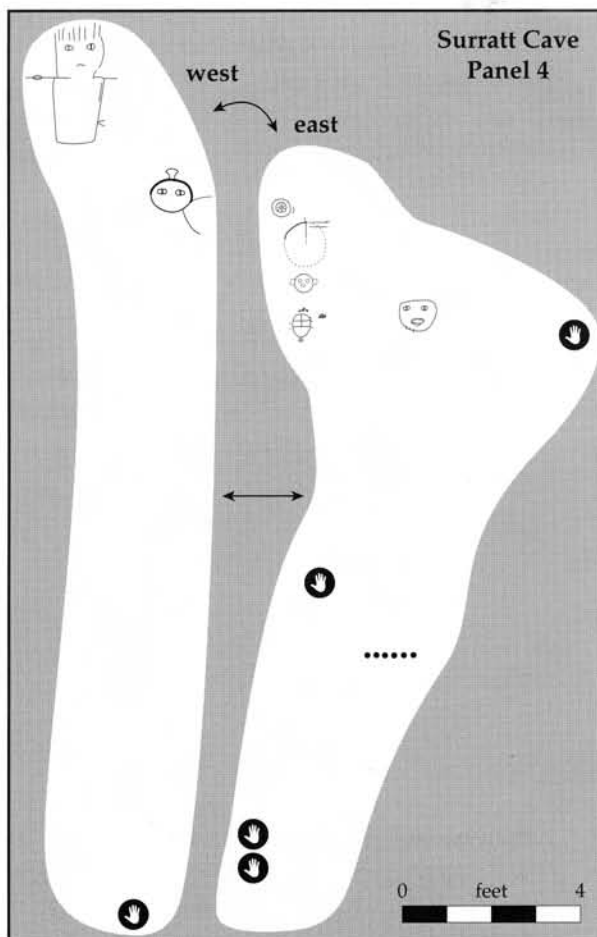


Figure 21. Panel 4, distribution of figures on opposite walls.



Figure 22. Panel 4 mask.

possible to reach this lower level by climbing down through the breakdown near the entrance of the room, but there is not enough room to pass further). All surfaces are flat and have paintings: the high left wall (Figures 26-27), the slightly shorter right wall (Figures 25 and 28), the main ceiling of the room



Figure 23. Negative handprints on lower part of Panel 4.



Figure 25. Back half of Room 5.

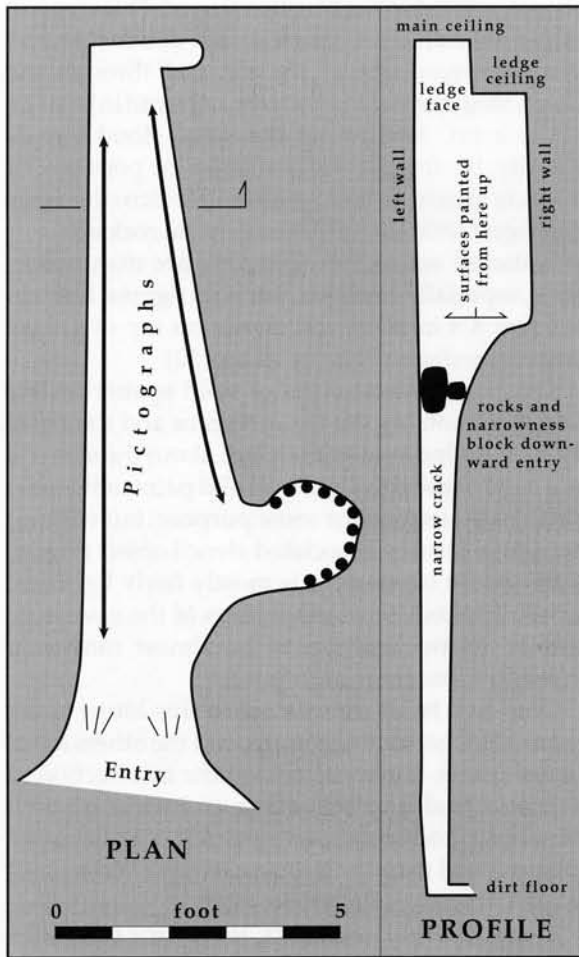


Figure 24. Room 5, showing areas painted in upper part of room, and narrow crevice descending to inaccessible floor level.



Figure 26. Room 5, left wall.

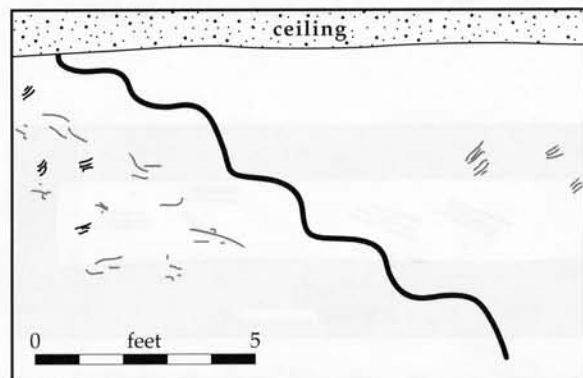


Figure 27. Room 5, left wall.

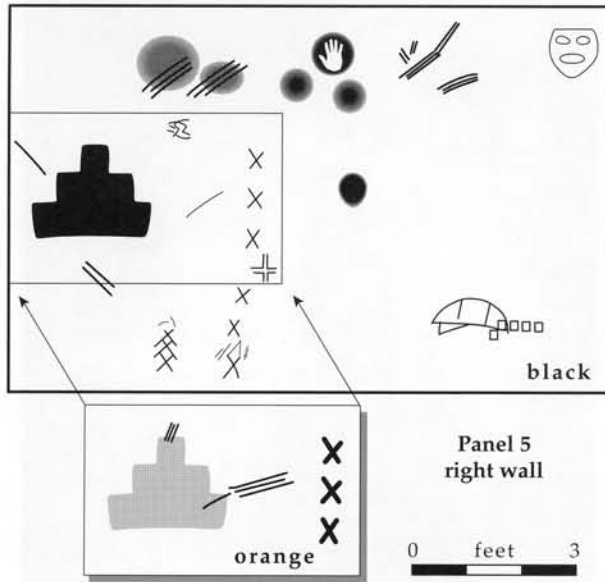


Figure 28. Room 5, right wall. Inset shows position of orange fingerlines on top of black cloud terrace (shaded for reference) and beneath black X's.

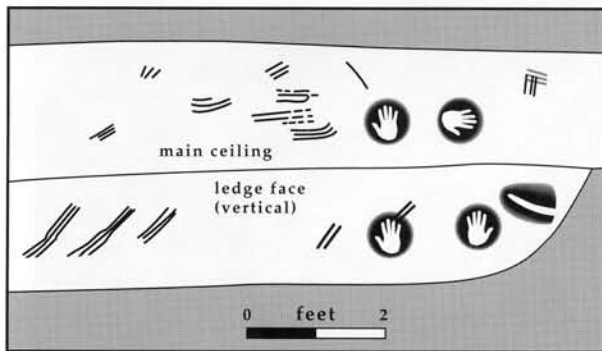


Figure 29. Fingerlines and stencils on the main ceiling and face of ledge in Room 5. All fingerlines are black except a set of orange lines (grayed on sketch) on upper right of main ceiling. Note stencil of possible bow or club on right end of ledge face.

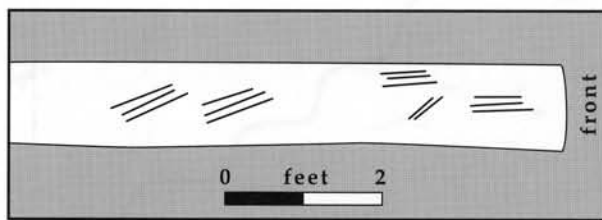


Figure 30. Black fingerlines on ceiling of ledge in Room 5.

(Figure 29), the face of a high ledge protruding from the right wall (Figure 29), and the ceiling under this ledge (Figure 30).

On the left wall is a wavy line—possibly a lightning bolt—which runs completely down the wall (Figures 25–27). It comes out of the ceiling, zigzags down across the wall and extends about as far as a person can comfortably reach into a narrow space about 9 inches wide in the floor. Alternatively, and less likely, this design could portray a snake (such as a plumed serpent) coming out of the narrow exit from the underworld and going upward into the ceiling, or toward the outer world—or there may be no difference between these two explanations of descending lightning and an ascending serpent. The paint is blown on in multiple layers of black spatter.

On the distant south end of the right wall, in the narrow part of the room, is a solid black cloud terrace (Figures 25 and 31), again carefully blown onto the wall (not painted with a brush or finger). This stepped motif is present over much of the southwest and probably spread out of Mexico and through the Jornada Mogollon where it is a typical motif in Jornada style rock art. Aside from the usual cloud terrace similarity, the form is also similar to the portrayal of pyramids in central and southern Mexico, the areas of strongest influence in Jornada style rock art.

Scattered across the right wall are many other figures, especially small black crayon figures. In some cases fine X's in black crayon are on top of greasy orange fingerlines (Figures 28 and 32).

There are several areas of solid spatter in this room, most notably the cloud terrace and the lightning-snake. One oval spatter area about the size of a small hand stencil is very thick solid paint, obviously intentionally applied for some purpose, but without identifiable form or associated stencil object (Figure 32). Spatter in other areas is mostly fairly light and sparsely applied. As in other parts of the cave (e.g., Panel 1), spatter appears to be almost randomly applied in some areas of Room 5.

Only five hand stencils are in this lower room (Figure 33). One is a single print, and the others are in right-left pairs. All occur next to the intersection of the vertical wall and the ceiling and occur on both vertical and horizontal surfaces. All are associated with groups of three fingerlines, in thick black paint that appears to be mineral based.

In addition to handprints, the stencil technique was used for what appears to be the end of a bow—or perhaps a large prayer stick, staff, or wooden club (Figure 33). While object stencils are common in

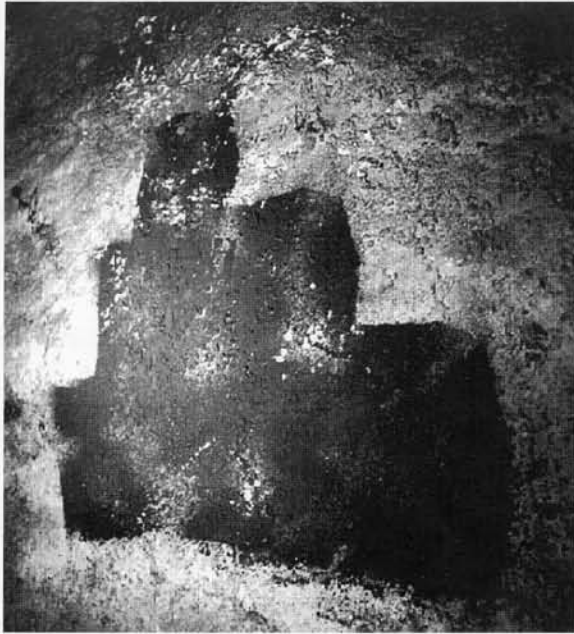


Figure 31. Cloud terrace on right wall. Note white battered areas where the wall has been used as a drum.



Figure 32. Solid spatter area, orange Xs, and other figures on right wall. Cloud terrace is to left.

other parts of the world (such as Australia, where different kinds of objects were stenciled), the technique was used in the Southwest almost exclusively for hands, and rarely feet (with or without moccasins). This image at Surratt, therefore, is unusual.

Groupings of parallel fingerlines again may represent the Pueblo idea of marking the division between the above-ground real world and the underground supernatural world (Ellis and Hammack 1968:36). These three-line patterns appear as straight lines, hooks, and other shapes.



Figure 33. Stencils on main ceiling (left) and ledge face (right). Stencil in upper left may be bow, club, or prayer stick.

A single small mask (Figure 28) and possibly part of at least one other are on the right wall, apart from the other figures. The paucity of masks on this wall, their lack of interaction with other figures, and their general separation from the most utilized areas of the wall suggest that masks may be later additions to this panel, or unrelated or peripheral to the main activities occurring in this room.

As on the mask petroglyph in the sink area outside the cave, both of the main walls in Room 5 are fairly heavily impacted by repeated blows from a hard hammer (hardwood, bone, or stone). Impact marks, or small white pits, are particularly common around the cloud terrace on the right wall (Figure 31) and all over the left wall around the lightning-snake figure. This battering undoubtedly is the result of using the walls as drums to produce a strong, penetrating resonance in this deep underground chamber.

Recurring Motifs

Several motifs reoccur in various parts of the cave, indicating they had special significance. Some of these are also found in Arrow Grotto of Feather Cave (Ellis and Hammack 1968) and at other sites. Such motifs should be useful in comparisons between sites.

Most numerous are handprints (Figure 34). All are negative stencils, all are outlined in blown-on

	Right	Left	Combined
Panel 1			
Panel 4			
Panel 5			
Totals	17 Right	5 Left	1 Both

Figure 34. Distribution of hand stencils in Surratt Cave.

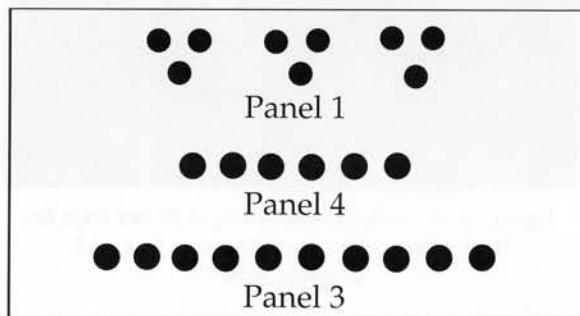


Figure 35. Alignments of solid spatter dots in Surratt Cave.

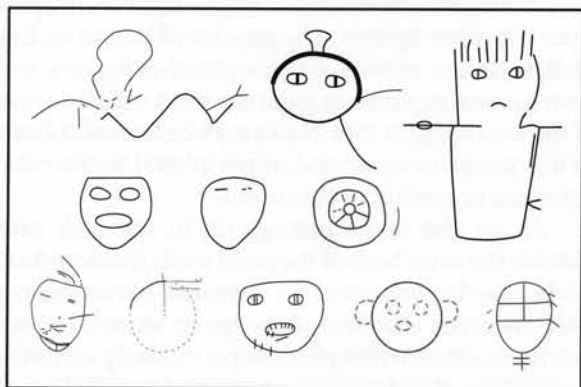


Figure 36. Masks in Surratt Cave.

black or grayish paint (there is no white paint at Surratt), and none of the handprints has a modified interior (like one in Arrow Grotto).

There are several groups of solid, blown dots (Figure 35). The largest is the row of 10 dots in Panel 3. There is also a row of six dots in Panel 4, and at least three triangular groupings of three dots each in Panel 1.

Several masks have been noted in various parts of the cave (Figure 36), and various features are typical of Jornada style masks, as well as late Pueblo style masks in this area. The general characteristics of an elongated face with curved sides, a somewhat pointed chin, and a flattened top are fairly typical of

Jornada style masks. The same is true of eyes drawn near the top of the head and the toothed mouth. Vertical slit eyes on some figures presumably were intended to portray feline or poisonous snake (or both) features. Large open eyes are typical of Tlaloc Rain God figures (Schaafsma 1992). Also present is the fairly common portrayal of a human with an arrow sticking in its neck, either horizontally or coming in at an angle. Masks are all done in black crayon.

Bird tracks are common here, as elsewhere, although all appear in Panel 1 (Figures 20-21). Common in Jornada style rock art is the roadrunner track, which is represented by one possible example in Panel 1.

Groups of three fingerlines, possibly related to the four-line motif discussed by Ellis and Hammack (1968:36), occur most notably in the lowest part of the cave in Room 5 in liquid paint, both shiny black and dull orange. They are applied in varying manners, and their association with other figures is not obvious (although they are often near handprints).

Application Methods

In considering how various figures were formed, or how different kinds of paint were used, some applications may be idiosyncratic and apply only to the impromptu or unconstrained actions of an individual painter, or a small group of people cooperating and sharing in the painting. Other applications, however, may be more controlled by the village or cultural group and therefore may be culturally, geographically, or temporally sensitive.

In general, liquid paint—both black and orange—was applied directly as fingerlines—almost exclusively in groups of three in Room 5. Liquid spatter paint was blown-on, most commonly around hands, possibly feet, and around at least one unidentifiable object (perhaps a bow or club). Thin spatter was also applied in solid, non-stencil form as patterns of dots, the lightning-snake, the cloud terrace, other large generally oval areas, and in some cases apparently as unpatterned spray.

Use of dry crayon is almost totally restricted to black, which seems to be charcoal. These black figures are generally small and not particularly well executed. They include masks, X's, a miniature bow, miniature prayer sticks, small open circles and irregular enclosures, and numerous irregular lines—curves, straight lines, and smears (some irregular lines may be portions of figures not presently identified).

During fieldwork, a blue crayon line in Panel 1 was assumed to be modern. Review of color slides, however, suggests that the line is a color common to prehistoric Pueblo art and may be old. Fine lines in dry orange crayon (like the blue line) also occur on Panel 1 but were not noticed during field inspection. The crayon material appears to be the same kind of orange paint as in Room 5.

Estimated Age

The presence of masks, the cloud terrace, and the winding lightning-snake indicates a relation similarity to Jornada style rock art of the Mogollon to the south. Sutherland (1995) assigns outline masks from Hueco Tanks—similar to the Surratt masks—simply to the Jornada Branch of the Mogollon (A.D. 450-1400); results of direct dating have not yet been released. In discussing general Jornada style masks and northern stylistic influence, Schaafsma (1992:125) points out that late Mogollon phases of southern New Mexico correspond in both age and rock art content with the Casas Grandes Medio Period, around A.D. 1200-1400.

Masks occur at several sites in the Tompiro or general Quivira area just west of Surratt. At the Abó Painted Rocks (Cole 1984; Schaafsma 1992; Young 1989) solid masks and associated figures are overlaid with white spatter negative handprints and white fingerline outlined masks with some of the same outline features as seen at Surratt. Figure superposition at Abó indicates that this outline style with its distinctive facial shapes is locally quite late, again suggesting a date possibly after A.D. 1300.

The site most similar to Surratt in general characteristics, artifact content, rock art style, a truly difficult-to-enter dark zone setting, and general site use clearly is Feather Cave to the east. Ellis and Hammack (1968:42) suggest that the ritual use of Feather Cave and Arrow Grotto dates somewhere during Mogollon IV-V or Anasazi Pueblo II-III, somewhere around A.D. 1000-1400. No direct dating has been done in Arrow Grotto although numerous perishable ceremonial materials (prayer sticks, bows, arrows, feathers, etc.) were found.

U-Bar Cave, again with contents generally similar to Feather Cave and Surratt, is known to have been occupied from around A.D. 700 (Harris, personal communication 1996) to probably A.D. 1450. The ceremonial activity presumably dates around A.D. 1300-1450 (Lambert and Ambler 1961).

The same kinds of masks and objects portrayed in Surratt are also present in sites all along the middle

and upper Rio Grande and probably are even more widespread. Therefore, while it is impossible to say that pictographs in Surratt Cave are definitely Tompiro, it seems clear that they are late within the general local rock art sequence. An estimated age of A.D. 1350-1450 seems quite reasonable.

Summary

Dark zone paintings in Surratt Cave are believed to be associated with yearly or semi-yearly ceremonial activity relating to renewal and formal requests for rain to help sustain agricultural crops (Ellis and Hammack 1968). All drawings within the cave appear to date to the Pueblo IV period, or about A.D. 1350-1450, but some may extend into the 1500s. These images are clearly Jornada style rock art typical of southern New Mexico, west Texas, and northern Mexico and influential in Pueblo rock art development throughout the central part of the state and beyond. With its abundance of painted figures, Surratt Cave now is one of the best examples of underground ritual rock art recorded in the Southwest.

Acknowledgments. Special thanks are extended to Don Surratt, Rick Surratt, and Waddy and Karen Hobbs for their many courtesies in allowing this fieldwork. Other special thanks go to Michael and Barbara Bilbo, Jim Duffield, Curtis Schaafsma, Dennis Slifer, and Tim Seaman and the ARMS staff in Santa Fe. Photographs in this paper were computer enhanced in Adobe Photoshop to accentuate details.

References Cited

- Bilbo, Barbara
1996 Slaughter Canyon Cave Pictograph Site. Paper presented at the 23rd Annual Meeting of the American Rock Art Research Association, El Paso, Texas.
- Bilbo, Michael
1992 Pictograph Sites. *NSS News* 50(1):24-25. National Speleological Society.
1996 Carlsbad Caverns Natural Entrance Pictograph Site. Paper presented at the 23rd Annual Meeting of the American Rock Art Research Association, El Paso.
- Bilbo, Michael, and Barbara Bilbo
1991 Preliminary Report: Rock Art Survey of the Guadalupe Mountains. In *Transactions of the 26th Regional Archaeological Symposium for Southeastern New Mexico and Western Texas*, edited by Carol Hedrick, pp. 41-77. El Paso Archaeological Society, El Paso.
1993 Pictographs of Slaughter Canyon Cave, Carlsbad Caverns National Park, New Mexico. *The Artifact* 31(1):59-70. El Paso Archaeological Society, El Paso.

- Bilbo, Michael, and Barbara Bilbo (continued)
1993 Pictographs of Slaughter Canyon Cave, Carlsbad Caverns National Park, New Mexico. *The Artifact* 31(1):59-70. El Paso Archaeological Society, El Paso.
1996 Slaughter Canyon Pictograph Site, Carlsbad Caverns National Park. *NSS News* 54(5):114-120. National Speleological Society.
- Bilbo, Michael, Barbara Bilbo, and Russ Bodnar
1991 Research Progress at the New Cave Pictograph Site, Carlsbad Caverns National Park, New Mexico. Manuscript on file at Carlsbad Caverns National Park.
- Caperton, Thomas J.
1981 An Archeological Reconnaissance. In *Contributions to Gran Quivira Archeology*, edited by Alden C. Hayes, pp. 4-11. Publications in Archeology 17, National Park Service, U.S. Department of the Interior, Washington D.C.
- Cole, Sally J.
1984 *The Abo Painted Rocks, Documentation and Analysis*. Privately printed by the author, Grand Junction, Colorado.
- Ellis, Florence Hawley, and Laurens Hammack
1968 The Inner Sanctum of Feather Cave, A Mogollon Sun and Earth Shrine Linking Mexico and the Southwest. *American Antiquity* 33(1):25-43.
- Faulkner, Charles H.
1996 Mud Glyphs of the Eastern Woodlands: A Synchronic and Diachronic Perspective. Abstracts of the Fifty-Third Annual Meeting, November 6-9, 1996. Southeastern Archaeological Conference, *Bulletin* 39. Birmingham.
- Greer, John, and Mavis Greer
1994 Letter report, dated April 29, 1994, to Keith Kelley, Chief of Resources, describing 1993 field work and evaluation. On file at Carlsbad Caverns National Park.
1995a Introduction to the Dark Zone Rock Art Study. Paper presented at the Rock Art '95 Symposium at the San Diego Museum of Man, San Diego.
1995b Pictographs in Carlsbad Caverns National Park, Southeastern New Mexico. Paper presented at the 53rd Annual Meeting of the Plains Anthropological Conference, Laramie.
1995c *Preliminary Observations on Dark Zone Pictographs at Surratt Cave (LA 9045), Lincoln County, New Mexico*. Report prepared for Rick Surratt, San Antonio, Texas, by John & Mavis Greer, Archeological Consultants, Columbia, Missouri.
1996a Dark Zone Rock Art in Surratt Cave, A Ceremonial Site in Central New Mexico. Paper presented at the 23rd Annual Meeting of the American Rock Art Research Association, El Paso.
1996b *Rock Art Inspection of U-Bar Cave (LA5689), Hidalgo County, New Mexico*. Report on file with the Archeological Records Management Section, Museum of New Mexico, Santa Fe.
- Greer, John, and Mavis Greer (continued)
1996c *Dark Zone Rock Art in Surratt Cave, A Ceremonial Site in Central New Mexico*. Report on file with the Archeological Records Management Section, Museum of New Mexico, Santa Fe.
1997 Dark Zone Rock Art in North America. In *Rock Art Papers*, Vol. 14, edited by K. Hedges, pp. 107-119. San Diego Museum Papers 35. San Diego Museum of Man, San Diego. In press.
- Harris, Arthur H.
1985 Preliminary Report on the Vertebrate Fauna of U-Bar Cave, Hidalgo County, New Mexico. *New Mexico Geology* 7:74-77, 84.
- Lambert, Marjorie F., and J. Richard Ambler
1961 *A Survey and Excavation of Caves in Hidalgo County, New Mexico*. The School of American Research, Monograph 25. Santa Fe.
- Pilles Jr., Peter J.
1996 By the Banks of Beaver Creek: The V-V Ranch Petroglyph Site. Paper presented at the 23rd Annual Conference of the American Rock Art Research Association, El Paso.
- Roosa, William B.
1952 Sandals of Feather Cave. *Bulletin of the Texas Archeological and Paleontological Society* 23:133-146.
- Schaafsma, Curtis F.
1995 The Casas Grandes Interaction Sphere: Origins, Nature, Contacts and Legacy. Paper presented at The Durango Conference on Southwest Archaeology, Durango, Colorado. (Typescript courtesy of the author).
- Schaafsma, Polly
1980 *Indian Rock Art of the Southwest*. School of American Research, Santa Fe. University of New Mexico Press, Albuquerque.
1992 *Rock Art in New Mexico*. Fully revised edition. Museum of New Mexico Press, Santa Fe.
- Sutherland, Kay
1995 *Rock Paintings at Hueco Tanks State Historical Park*. Texas Parks and Wildlife Department, Austin.
- Waller, Steven J.
1993 Sound Reflections as an Explanation for the Content and Context of Rock Art. *Rock Art Research* 10(2):91-95. Archaeological Publications, Melbourne.
- Young, M. Jane
1989 The Southwest Connection: Similarities between Western Puebloan and Mesoamerican Cosmology. In *World Archaeoastronomy*, edited by Anthony F. Aveni, pp. 167-179. Cambridge University Press, Cambridge.