

## DARK ZONE PICTOGRAPHS AT SURRATT CAVE, CENTRAL NEW MEXICO

### INTRODUCTION

Rock art in dark zone settings of underground caves, where observation is possible only with artificial light, occurs in many parts of North America. Rock art in such settings is well publicized for other parts of the world, but little synthesis has been done for this rather prolific occurrence throughout the New World (Greer and Greer 1995a, 1998).

Several sites with dark zone pictographs are known in New Mexico (Figure 1). Ethnographic accounts mention use of underground caves for seasonal ceremonies by Pueblo Indians in the central part of the state (Ellis and Hammack 1968). We have been told of continued ceremonial use of a small vertical cave in the western part of the state, just west of Zuni. Three other caves, in widely separated areas, were used during late Pueblo times, probably after A.D.1350, as shrine locations where ceremonies were conducted and ritual items were left. U-Bar Cave in the southwestern corner of the state contains a few figures in the main ceremonial chamber, with associated objects initially estimated to date about A.D.1300-1450 (Lambert and Ambler 1961; Harris 1985; Greer and Greer 1996a,

1999). Recent C14 dates of A.D.720-980 on perishable artifacts, however, may relate to this ritual activity (including arrow shrines and rock art), or they may pertain to earlier use. 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, 1996b, 1997, 2000). Arrow Grotto of Feather Cave is nearby, to the east, and apparently the use of its nearly inaccessible back room was very similar to activities and art at Surratt (Ellis and Hammack 1968; Schaafsma 1992:77, 136; Greer and Greer 1997, 1998). Dark zone rock art in the Guadalupe Mountains of southeastern New Mexico, not far south from Surratt, seems mostly to be associated with water or water-related ritual. The best known example is Slaughter Canyon Cave, with paintings associated with a water source far from the tiny entrance (Bilbo and Bilbo 1993, 1996; M. Bilbo 1992). Ages for the Guadalupe dark zone paintings, at Slaughter Canyon and other caves,

seem to date from about the last 5000 years, or from about Middle Archaic through late Pueblo periods (Bilbo and Bilbo 1991; Greer and Greer 1994, 1995b).

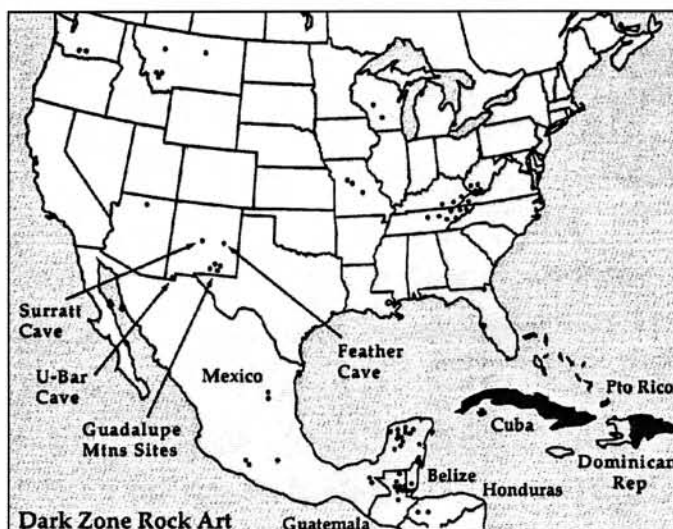


Figure 1  
Location of rock art  
caves in New Mexico.



## SURRATT CAVE

Surratt Cave (LA9045) is located in central New Mexico, and is situated in limestone and gypsum hills overlooking a wide grassy basin. The collapsed sink (Figure 2) cuts about 12-15 meters into the crest and side of a low hill and mostly is rimmed with vertical walls about 5-6 meters high. The bottom of the sink is filled with large breakdown blocks with some enclosed cavities below the rocks.

Two petroglyph panels on upper sandstone walls on the north side of the sink are distinctly different from the underground paintings. These figures are estimated to be about 500 years old and probably are not associated with the underground use of the cave. These open-air petroglyphs consist of human footprints, animal tracks, a human figure, a large mask, and geometric figures. The main figure appears to be a very large face with open cir-

cular eyes and may portray the Mesoamerican rain god Tlaloc (Schaafsma 1980:208, 1992:64). The face is also associated with the entrance area of other dark zone sites in New Mexico, and at this site the face overlooks and essentially dominates the entire sink area.

The cave entrance is in the center of the boulder breakdown area and is a small opening about a meter across. The entrance passage drops almost vertically about 5 meters, then turns slightly and descends through a narrow constriction or notch measuring about 20x40 cm. Throughout this area there are no petroglyphs, paintings, or other modifications to mark entrance into the underworld, as there are at other similar sites. Passage through a very small notch or restriction is typical of many dark zone ritual caves containing rock art, not only in North America but also in other parts of the world. It seems that some degree of difficulty of access and a physical constriction to separate the outer world from inner ritual areas were considered necessary natural components for this kind of site.

The cave descends through a series of small rooms and passages into a large breakdown room (Figure 3). Paintings begin at the lower edge of this room and continue down vertical walls in small alcoves, enclosed rooms, vertical cracks, and linear passages into the lowest accessible parts of the cave, to a depth of about 42 meters below the surface. Paintings occur in several fairly well defined areas of somewhat enclosed space, but with adequate area in front of the panels to enable viewing. Each of the areas with painted figures was numbered for this study. Other clean walls suitable for painting, and other ideal enclosed rooms and passages, were not utilized. It is assumed that each of these spaces was intended and used for specific ceremonial activity.

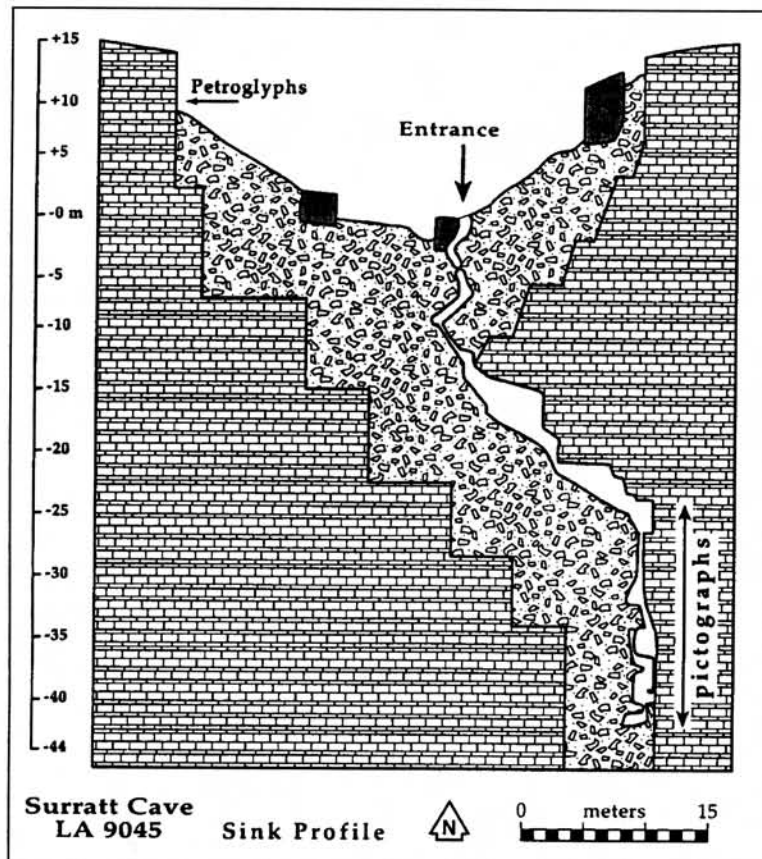


Figure 2  
Profile of the cave system.

The two lowest rooms in the cave (Rooms 5 and 9) are completely enclosed, with very small entrances. These served a special function and included a greater variety of figures, unique figures, and many more paintings than any other area. The most noteworthy figure in each room is a large serpent (one is clearly a rattlesnake) about 3.5 meters long that runs diagonally from the top of the room to the bottom (Figures 4-5). The Room 5 snake (Figure 5, serpents, lower) emerges from an upper crack at the ceiling and descends into another crack at floor level (or off the lower edge of the rock face), as if descending from the upper world into the underworld. These wide, curved-zigzag lines could represent lightning rather than an actual snake and are produced by blowing on multiple layers of liquid black spatter paint.

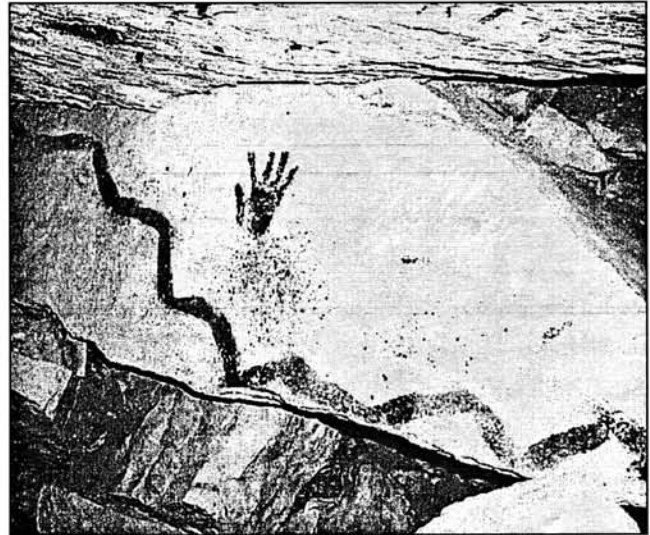


Figure 4

Room 9, large serpent and hand print on the wall and other marks on the ceiling.

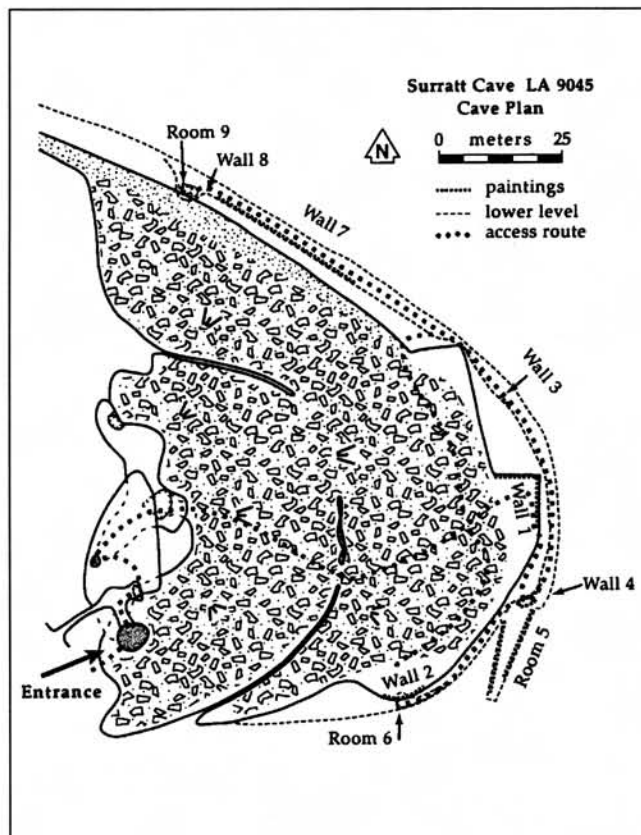


Figure 3

Plan of the main cave.

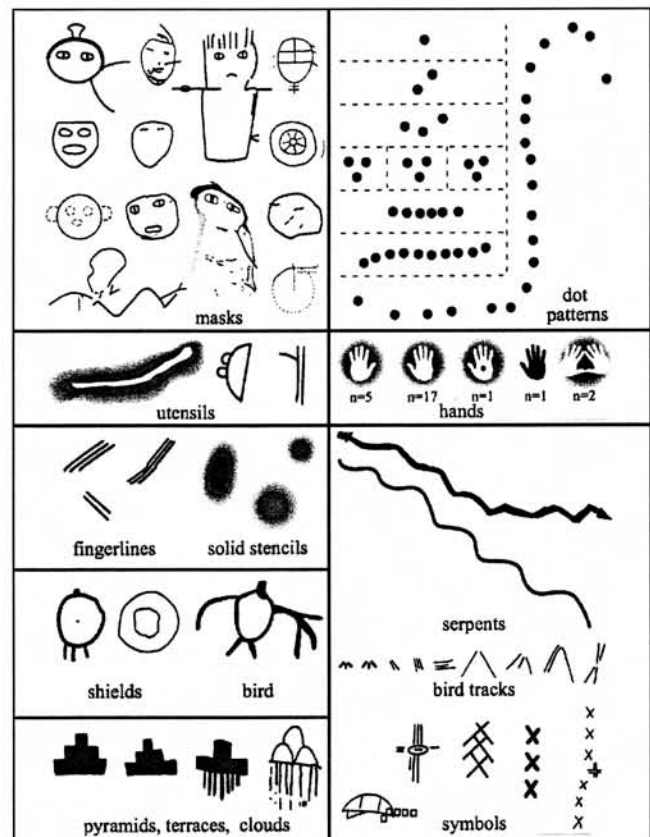


Figure 5

Sample of figures in lower parts of the cave system.





In some areas of restricted space containing painted figures, such as the two lowest rooms (Rooms 5 and 9) with intensive painting and in the exterior area of the petroglyphs, walls have been intensively battered. This battering undoubtedly is the result of using the walls as drums to produce a strong, penetrating resonance within a restricted area that would reverberate intensely and stimulate a kind of auditory trance. This kind of activity has been reported around the world for dark zone sites (Greer and Greer 1997).

## PANELS

Within the cave there are nine main areas with paintings and indications of concentrated activity. In the following discussion these are designated "wall" when they are located in a larger room or passageway with other unpainted areas. An area is designated "room" if paintings cover the entire enclosed room. These are numbered from higher to lowest elevations in the cave. A sample of painted elements is presented in Figure 5.

**Wall 1** (with "right" and "left" parts) is encountered at the lower edge of the large upper room and consists of two intersecting walls forming an open alcove. The walls are mostly covered with numerous torch marks, black charcoal crayon markings and figures, and various forms of thin spatter. Most conspicuous are numerous negative hand stencils, both right and left hand, and apparently mostly from older juvenile to adult males. One hand stencil and at least two other figures are specifically placed on a crack in the wall. One stencil appears to be an adult foot. Solid dots about 6 cm in diameter have been blown onto the wall as controlled spatter and occur in groups of three. This triangular motif (Figure 5, dots) is also present at Feather Cave and, along with other similarities, seems to indicate a strong relationship between the two caves. Dry charcoal crayon (or torch stick) figures include a miniature hooked prayer stick and a miniature bow (Figure 5, utensils), items commonly deposited in ritual caves.

There is at least one crude human mask, and some presently unidentifiable crayon figures may be parts of other masks or large human figures. Bird tracks include at least one roadrunner track (Figure 5, bird tracks), a motif that Pueblo Indians may also use on a house wall as a kind of blessing, as they would a handprint (Ellis and Hammack 1968:35-36). There is a small crayon sun symbol composed of two concentric circles and rays extending out in four directions (Figure 5, symbols), a fairly common motif both in central New Mexico and western Texas.

**Wall 2**, also at the lower side of the big room, is a small, enclosed alcove next to the cave wall. All markings are dry charcoal and include numerous charcoal torch marks. A crude mask in the southern Jornada style has a flattened head, rounded sides, and elongated chin (Figure 5, masks). Two small hooked prayer sticks (Figure 5, utensils) are objects that may have been used in cave rituals.

**Wall 3** is a vertical face descending from the ceiling in a narrow passageway. The single figure is a row of 10 blown dots (Figure 6).

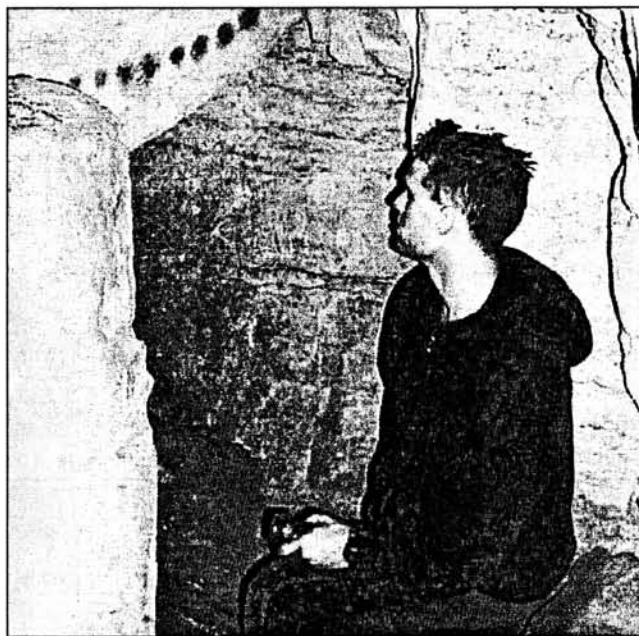


Figure 6

*Wall 3, blown dots on ceiling ledge.*

**Wall 4** consists of a prominent vertical crack (a climb-down) and larger open passageways at the top and bottom. Figures consist of hand stencils, rows of blown dots, and humanoid masks (with a flattened head with rounded sides) made with dry charcoal crayon. Vertical eye pupil slits (Figure 5, masks) presumably are rattlesnake or feline features that pertain to a particular spiritual entity.

**Room 5** is a very narrow, fully enclosed room with intensive painting on all surfaces of both walls, the ceiling, and surfaces of descending ledges. Most common are numerous spatter elements that include hand stencils and a club stencil (Figure 7). Solid spatter areas include circular, oval, and irregular shapes, well defined and intentionally applied, but without identifiable form or associated stencil object. Spatter in other areas is mostly fairly light and sparsely applied. As on several panels, some spatter appears almost randomly applied. A large serpent, or perhaps a lightning bolt, is done in blown liquid paint (like stencil) and runs from a ceiling crack down into the floor crack (Figure 5, serpents, lower). A large terrace figure of blown liquid paint, besides its

similarity to the usual cloud terrace motif, is similar to the portrayal of pyramids and platforms throughout most of Mexico, the areas of strongest influence in Jornada style rock art (Figure 5, pyramids, left). Fingerlines, mostly in groups of three, are done in thick liquid paint, likely a mineral paint. Dry charcoal figures and torch-stick marks are common. Smears, fingerlines, and small figures also occur in a thick liquid orange paint, as well as dry crayon lines.

**Room 6** is a small, fully enclosed room with high vertical walls and a narrow crack entrance. Markings include numerous torch marks and one dry crayon human mask with slit eyes.

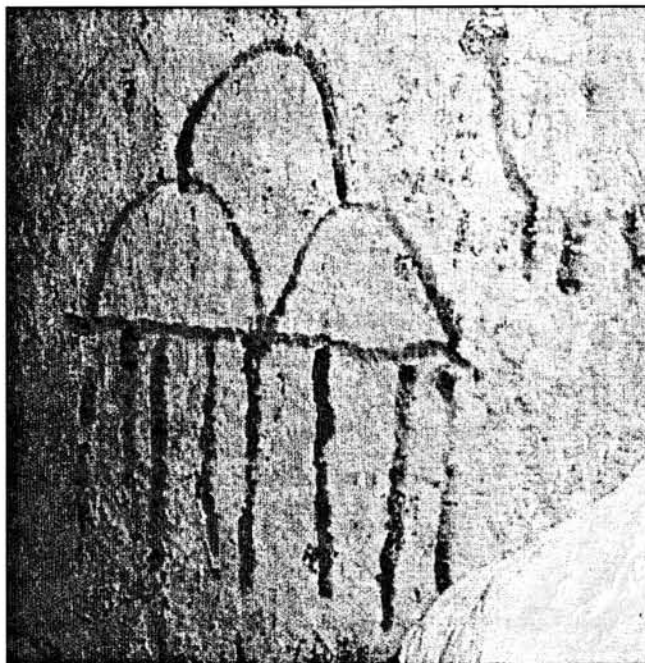
**Wall 7** is a long narrow passageway opening between the cave wall and the breakdown. Numerous painted elements include large blown dot patterns, hand stencils, and terraces. More recent markings include rain clouds, shield figures (Figure 8), animals, and a bird. Modern initials and symbols are also present.

**Wall 8** is an enlargement of the distant end of the passage past Wall 7. A concentration of



**Figure 7**

*Room 5, handprints and club stencils.*



**Figure 8**

*Wall 8, cloud and shield figures.*

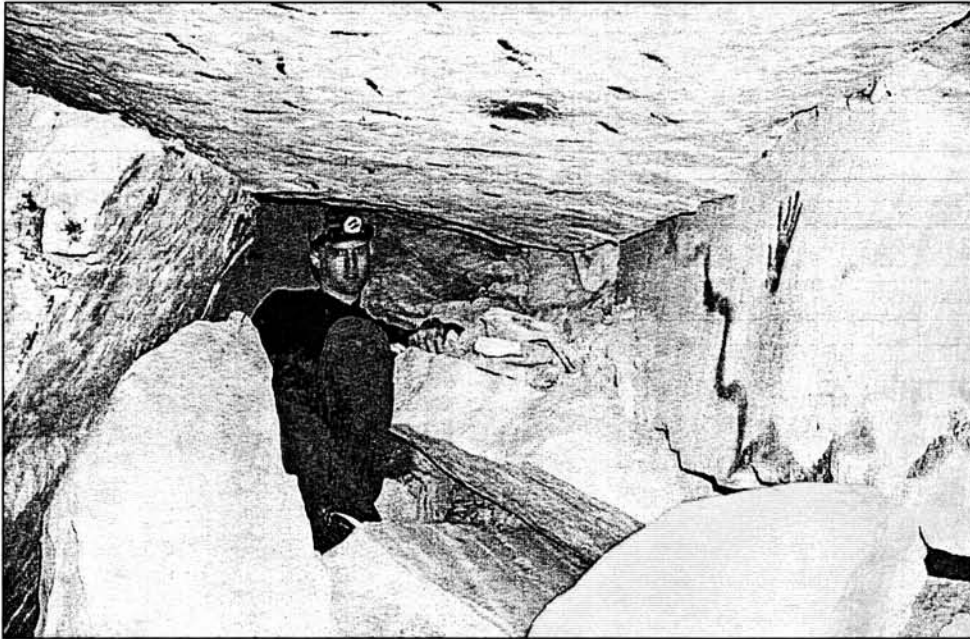


Figure 9

*Room 9, general character of room and paintings.*

figures here is similar to the main Wall 7 and obviously is an extension of that activity.

**Room 9** is a fully enclosed room entered by climbing down from Room 8 into another wide lower-level room, and then down through a small hole into Room 9 (Figure 9). This room is very similar to Room 5 and, likewise, contains a large snake, a positive handprint, and solid spatter areas of blown paint (Figures 6-7). Fingerlines in the characteristic very thick, black liquid paint again occur on the ceiling, but here they occur as a dense clustering of individual, curved and trailing lines in dynamic form. Torch marks and crayon figures are also present.

## TECHNOLOGY

Aspects of technological detail generally change through time for any kind of materials, including rock art. Variation also occurs relative to kind of activities being conducted and the people conducting those activities. Some aspects of technol-

ogy, including paint selection, production, and application methods, as well as manner of application, 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.

At Surratt kinds of paint include both liquid paint

and solid dry pigment applied in various ways. Dry charcoal crayon includes use of torches, burned sticks, and possibly pieces of charcoal. Torch stoke marks, usually short and irregular, indicate an attempt to keep the torch burning. Burned sticks (and perhaps burning torches) were also used to produce small linear figures and medium to large masks. A dense liquid black paint, likely of mineral origin, was used mainly for fingerlines on the ceilings in Rooms 5 and 9. A thinner liquid paint, in most cases presumed to be of charcoal origin, but equally likely a thin liquid mineral paint, was used throughout the cave and was most commonly applied blown, in most instances as if through a bone or cane tube. Stencil paint is generally fairly thin and was used around hands, at least one foot, and a club or shaped stick. Alignments of small blown dots occur in several areas, as do solid spatter areas. Areas of thinner spatter are mostly more irregular in their shape and manner of application. Specific figures of blown paint include cloud or terrace figures and the two large serpents about 3.5 meters long. Orange paint, though rare, occurs as liquid fingerlines and as small lines of dry crayon.



## CHRONOLOGY AND DATING

Use of the cave and production of painted figures appear to pertain to more than one period and likely were made and used over a period of time. The earliest figures appear to include most of those in the two lowermost ritual areas of Rooms 5 and 9. Figures include blown snakes, blown terraces, most of the stencil hands (and the club), probably all of the blown solid spatter (or "solid stencils"), short fingerlines and fingerline groupings of thick paint of presumably mineral origin, and the use of dark orange liquid paint and dry crayon. Other related figures of this period probably include all of the small blown dot alignments. Some torch marks and some figures drawn with burned sticks also appear to pertain to this period.

The relative age of use of outline masks in charcoal crayon is uncertain. The lack of interaction of masks in Room 5 with other figures, and their general separation from the most utilized areas of the wall, suggest they are not directly related, whether functionally, temporally, or both. They may be later additions, or unrelated or peripheral to the main activities occurring in this room. The same kind of "independence" also seems to pertain to hand stencils and dot alignments. Still, it appears that dry crayon masks may have begun slightly after initial cave use.

Comparison of Surratt masks and other motifs with other sites suggest that initial painting here probably began around A.D. 1200–1400, with mask use probably dating after A.D. 1300 (Schaafsma 1992:125; Cole 1984 Young 1989; Ellis and Hammack 1968:42). These estimates agree with those for Feather and U-Bar caves.

The latest Indian use of the cave is perhaps modern Pueblo. Drawings consist of dry crayon figures of animals, some other crude figures, and miscellaneous lines. Dimmer, lighter gray fingerline figures may have been drawn with a carbide lamp and include rain clouds, a shield warrior, a concentric-circle shield, and other elements. Dark blue crayon lines are presently of unknown age and could

pertain to this period. Modern names, initials, and other graffiti are also present.

## MOTIFS

Motifs are figures or elements that recur, both within a site and between sites. This multiple recurrence indicates that the element was a culturally recognized form with an accepted, understood referent or meaning. Such elements are useful for intersite comparison. Several motifs occur in various parts of the cave (Figure 5), and some of the same elements also occur in Feather Cave and other sites. For instance, bird tracks are common, and groups of three fingerlines occur mostly in the lowest part of the cave.

Most numerous are negative hand stencils outlined with blown-on black or grayish paint. None at Surratt is done in white paint, like those at Abo, Feather Cave, or a rockshelter beside Feather Cave. Only one handprint at Surratt has a modified interior, such as one in Feather Cave.

There are several alignments or groups of blown solid dots. These occur in various numbers, kinds of alignments, and configurations. Each dot, however, was produced with consistent technology and form, and the multiple dot patterns obviously had a recognized meaning or function.

Several masks, all done in black crayon, have features typical of Jornada style and late Pueblo masks. General characteristics include an elongated face with curved sides, a somewhat pointed chin, and a flattened top. Eyes are drawn near the top of the head, and vertical slit eyes presumably were intended to portray feline or poisonous snake (or both) features. Portrayal of a human with an arrow sticking in its neck (Figure 5, masks), either horizontally or at an angle, is fairly common in New Mexico and western Texas. Large open eyes, like the main petroglyph in the sink, are typical of the Tlaloc Rain God.



## SUMMARY

Surratt Cave and Feather Cave both appear to have been used by local Pueblo Indian groups beginning sometime around A.D. 1350-1450. At Surratt there was continued use probably into the 1500s, and with the latest figures obviously fairly recent. Images are related to local Pueblo art with strong influence from the southern Jornada style typical of southern New Mexico and northern Chihuahua. Dark zone use at both sites, with associated paintings and drawings, appears to be the same. Ellis suggests that rituals at Feather Cave were associated with winter or summer solstice, especially as activities relate to renewed fertility of crops, requests for rain to support those crops, and Pueblo life in general (Ellis and Hammack 1968). Pictographs at Surratt, by comparison, likely were associated with yearly or semi-yearly ceremonial activity relating to renewal and formal requests for rain to help sustain agricultural crops. Variation in the paintings, however, indicate changes through time in ceremonies conducted here. With its abundance of painted figures and different periods, Surratt Cave is one of the best examples of underground rock art recorded in the Southwest.

## ACKNOWLEDGMENTS

Special thanks are extended to Don Surratt (deceased), Rick Surratt, and George Cook for access to the site and permission to continue our work. This paper was invited by editor Regge Wiseman to honor the influence of Teddy and Francis Stickney. Francis was a major force (at least on John) since at least 1962 (Mavis did not begin to work with him until the late 1970s). Francis was helpful in archaeological matters, research materials, sites, and contacts, and his stress on good work, details, honesty, and integrity was basic to his life. Of equal importance was his stress on ethnographic fieldwork, of which few people seem to be aware. During John's early work on ring middens, Francis made available his details on modern sotol gathering and processing in Coahuila, with production resulting in ring middens indistinguishable from those around Carlsbad. His detailed notes and fantastic photos were welcome additions to the research. And throughout later decades of contact, he continued to stimulate our work in western Texas, southeastern New Mexico, and rock art in general. His life in the oil-and-gas business undoubtedly influenced our professional directions, and our lives. It is indeed an honor to participate in a volume dedicated to his work, with an article on an area that he loved and a subject important to him until the end.



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