Dark Zone Rock Art in North America

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Much has been written on the cavern rock art of Europe, China, Australia, and other areas, but there has been no synthesis of similar sites in the New World. The purpose of this paper is to provide a general overview of what presently is known of this kind of site and its contents—rock art in dark zone caves, or associated with the zone of total darkness in underground caverns—in North America and the Caribbean (Figure 1). There is no attempt to provide complete coverage of all known sites. We have visited many of the sites; some are recorded, others not. Some sites have published references; others have been described to us by archaeologists and other informants.

Rock Art Outside the Dark Zone

Cave-associated rock art occurs in various kinds of natural light settings, but paintings and engravings also are found in totally dark areas of caves, long distances from visible light, direct or indirect. Likewise, figures may occur in total darkness but within the direct line of sight of a distant entrance or of indirect, indistinct entrance glow. Nearer the entrance, art may occur in the twilight—the zone of indirect light—but in areas too dark to see without artificial light. Entrance rock art may also be associated with a dark zone cave but occur in fully lit entry areas in some manner or context which indicates or strongly suggests that the art is so placed in respect to the dark nature of the cave interior, not just positioned in a protected overhang area as it would be in an open rockshelter. Thus, consideration can be given to all rock art associated with dark zone caves, regardless of the in-cave context, since rock art in some caves, without actually being the dark area itself, appears to pertain to the darkness or to activities in those areas (Greer 1974, 1977). In some sites, for instance, painted figures border the mouths of dark passages used as burial chambers.

Entry into the dark zone may be marked by figures such as stylized or stick humans or rayed circles placed at the cave mouth or above openings to interior passageways leading into the depths of the cavern. Núñez (1995) has suggested that in many caves the first figure either marking the entrance or encountered inside the entrance is unique, different from all others in the cave, and it perhaps designates or identifies that particular site. In Cueva Pluma, in Cuba, for instance, we observed that a red painted sun symbol above the entrance seems to mark the passage where there is, 200 yards distant, a panel of figures also in liquid red fingerpaint. At Oxtotitlán Cave, in southern Mexico, a tunnel containing Olmec pictographs is marked at its entrance by a polychrome mask (Grove 1970, Stone 1995:20). Similarly, in a remote area of northern Mexico, a large stylized Postclassic mask in red paint marks the mouth of a small crawlway leading back into the cave (Greer 1990).

Rock art under or near interior *skylights*—natural eroded openings in the ceiling—may be seen in natural light but can be reached only through dark passages with the use of torches. This is especially the case with geologically old caves in Yucatan (Stone 1995) and the Caribbean (Núñez 1975, 1985). Núñez has suggested that some in-cave skylight locations in Cuba may be celestial observation points, and that associated rock art may pertain to nighttime viewing of star constellations and the moon.

In other caves pictographs in normally dark areas may be selectively lit at certain

Ken Hedges, ed., *Rock Art Papers, Volume 13*. San Diego Museum Papers 35, 1998.
Paper presented at Rock Art '95, November 4, 1995.

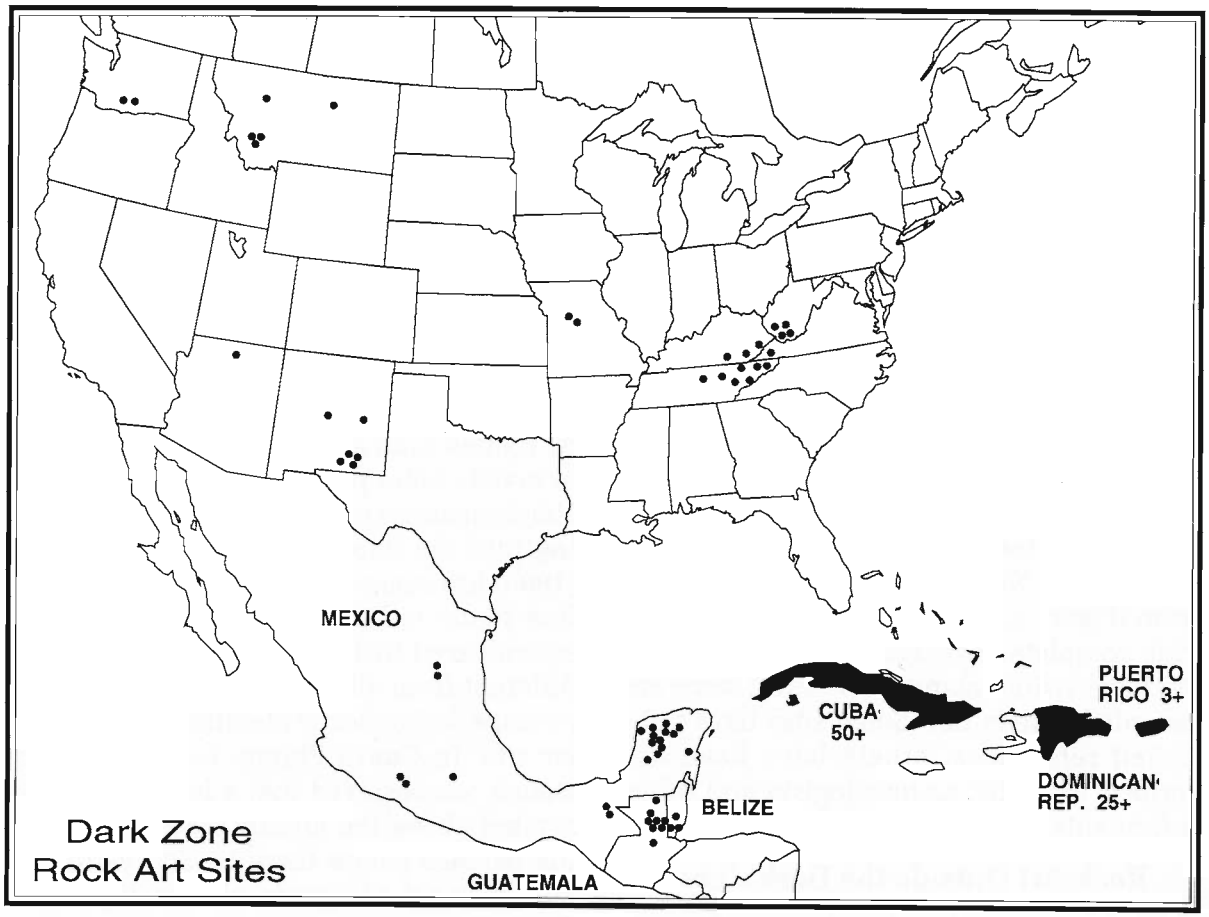

Figure 1. Locations of confirmed caves with dark zone rock art. More sites are known to exist in several areas.

times of the year. On the Isle of Pines off the southwest coast of Cuba, sunlight shines through a cave entrance and onto the principal figures, in otherwise dark areas, only at the time of summer or winter solstice, depending on the figure (Núñez 1985).

Localized light may selectively illuminate certain interior areas, while the rest of a room or passageway remains in darkness. In a small room in Montana, a thin ray of light, entering through a narrow crack, falls on a bison and other small animals which seem to interact with the shadows. Other painted figures in the room remain undetectable in the darkness and cannot be seen without the aid of artificial light.

In many caves, painted, engraved, and sculptured figures occur in the twilight zone, away from the entrance and only in the ephemeral indirect glow of the entrance light. One example of this is Fern Cave, in northern California, a large dark lava tube with hundreds of complex paintings in the twilight zone (Lee, Hyder, and Benson 1988). Another similar site is Whistling Cave in southern New Mexico, where paintings are in a twilight area separated from the entrance by cave formations (Bilbo and Bilbo 1991). Several of the sculptured stalagmites in eastern Cuba and the Dominican Republic are in settings such as this. It is likely that these paintings and engravings are the result of ritual activity which took place at night, when the setting would be the same as a deep cavern, with total darkness and trance-like echoes. This, of course, stretches the definition of the dark zone, but it should be kept in mind that paintings in these areas likely were associated with ritual activity or ceremonies, and ceremonies most often take place at night. Such twilight zone locations—in the daytime only dimly lit from

indirect light—at night are nearly identical to areas down long interior passageways and could have been used similarly.

Rock Art in the Dark Zone

Our primary focus is not just rock art associated with dark zone caves, but rock art actually back in dark areas, where it can be viewed only with the aid of artificial light, especially deep cavern recesses of total darkness. Of interest are the kinds of places selected for drawing within caves, and the degree to which people traveled underground, at times with considerable difficulty and sometimes danger, to perform this activity. Rock art noted so far in this context includes pictographs, petroglyphs, sculpture, mud glyphs, and to a lesser extent paint spatters, smudges, paint and charcoal smears, patterned gouged-out areas, and alteration of formations in a representational sense.

Geographic Distribution and Regional Characteristics

Sites with dark zone art are plotted in Figure 1, with counts given by area in Table 1. Information is taken from a number of sources, including personal visits, professional archaeologists, local informants, and published accounts. This list indicates that at least 64 dark zone rock art sites are known from mainland areas in North America and Central America, and that dark zone sites are even more numerous in the Caribbean islands.

Dark zone sites are known across the United States, and there is a potential for such sites in almost any area, particularly in areas of limestone karst or lava tube caves. No sites have been reported yet in Canada, and a possible site in Alaska has not been checked. Dark zone sites increase considerably to the south through the eroded karst areas of Mexico, with more in southern Mexico, Guatemala, and Belize. There is an even higher density of sites in Cuba and other parts of the Caribbean. It appears that most rock art in Cuba, for instance, is associated with caves, and dark zone areas often were specifically selected for special use.

United States		31
Arizona	1	
Kentucky	3	
Missouri	2	
Montana	5	
New Mexico	6	
Tennessee	7	
Virginia	4	
Washington	2	
West Virginia	1	
Mexico		22
Campeche	1	
Chiapas	2	
Guerrero	2	
Oaxaca	1	
Quintana Roo	1	
San Luís Potosí	2	
Yucatan	13	
Guatemala		8
Belize		3
Puerto Rico		3
Dominican Republic		~25+
Cuba		~100+
Barbados		1+

Table 1. Numbers of known dark zone rock art sites by area. Leads to more sites have been reported, but not checked, in almost all areas.

Figure 1 shows the general areas of dark zone rock art that are now known, and the situation is changing daily. More sites have been tentatively reported—or are believed to exist—in all areas shown on the map, such as other parts of New Mexico (Ellis and Hammack 1968), Arizona (at least two), Missouri, Tennessee, Kentucky, Virginia, and West Virginia, as well as several intervening areas such as Oregon, Utah (at least one), Arkansas, and Texas. Cave-associated rock art in Alaska and California so far is reported only in fairly dark areas of the twilight zone, although unreported dark zone sites are probably known in both states. Reports of other sites in Missouri must be confirmed by field checks. Counts for the Caribbean are probably extremely under-represented; possible sites also have been reported for other islands. Stone (1995) discusses several more sites throughout Mexico, but it is not cer-

tain whether those are dark zone sites or open rockshelters. Greer (1990:154) also mentions unrecorded sites in the state of Querétaro, Mexico. Guatemala, Belize, and Mexico certainly have the highest potential for more sites.

As an example of sites still to be recorded, pictographs have been reported in a dark cave high on the east face of the Rocky Mountain Front in central Montana. The cave was visited 30 years ago by local people who have given us detailed descriptions of their observations, but so far we have been unable to relocate the cave. It is entered through a very small opening (now possibly under recent rockfall) at the base of a prominent cliff, and from there one descends a very steep muddy slope to a fairly flat floor of an elongated room in darkness. Pictographs on the ceiling can be viewed only with the aid of artificial light.

In New Mexico, several dark caves containing painted shrines were used during annual ceremonies by Pueblo villages, dating back at least to early Pueblo IV period (or after A.D. 1300). Examples of Pueblo shrines include Feather Cave (Arrow Grotto; Figure 2) in the east (Ellis and Hammack 1968) and Surratt Cave in the central part of the state (Caperton 1981), and several others listed by Ellis and Hammack (1968). Other caves were apparently used as water sources in desert areas, and interior paintings may refer to beliefs or activities associated with the water. Examples of such association are in Slaughter Canyon Cave (Bilbo and Bilbo 1993a), Whistling Cave, and Midnight Cave in the Carlsbad area, and perhaps Cottonwood Cave just to the west.

Pictographs in Slaughter Canyon Cave, for instance, are about 500 feet from the entrance, and then back up a lateral alcove off the main huge room-like passage. Figures are associated with a small pool, presumably used as a source of drinking water and perhaps viewed as sacred water (Figure 3). As one comes back out about 100 feet from the paintings and into the huge entry passage, it is possible to see the speck of light from the tiny entrance in the distance, which would help people orient themselves in the darkness of this part of the complex cavern. The art, while not elaborate, follows the general local trend of mostly abstract designs. Figure styles and superpositioning suggest a long history of use from middle Archaic (probably dating back more than 3500 years) through Mogollon or Pueblo periods and on to early historic nomadic hunters, such as the Mescalero Apache or Jumano. One of the more distinctive motifs is the *skirt, rake,* or *rain* motif, which is present in both the earliest and latest art in the cave and is common in other sites in the region.

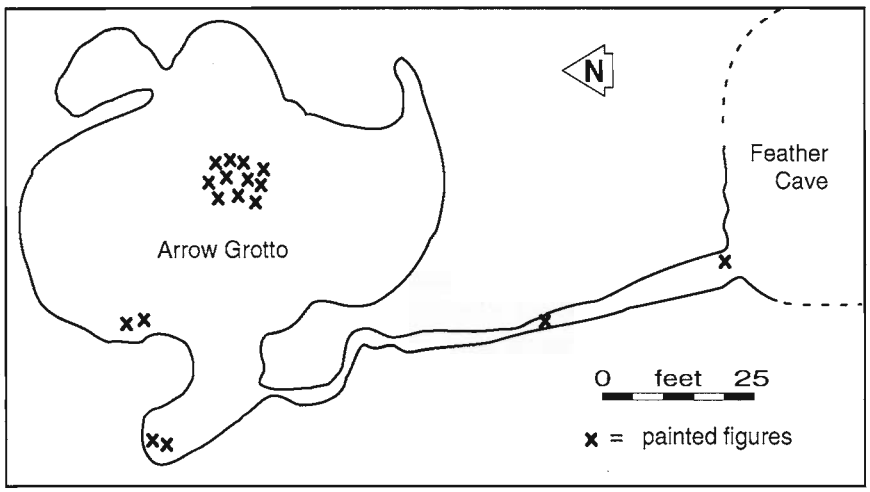

Figure 2. Map of Feather Cave, southeastern New Mexico (after Ellis and Hammack 1968). The front cave, entered through a small opening from the outside, is a large room measuring 248 x 61 feet. The interior cave (known as Arrow Grotto) is entered through a very narrow tunnel from the back of the first main cave room. Both rooms were used during Pueblo IV times as a semi-annual ritual site by local Pueblo villages. Several other deep interior caves in central New Mexico and eastern Arizona were similarly used.

In Missouri we have found several new rock art sites through inspection of known caves. This shows that intensive search will continue to yield more dark

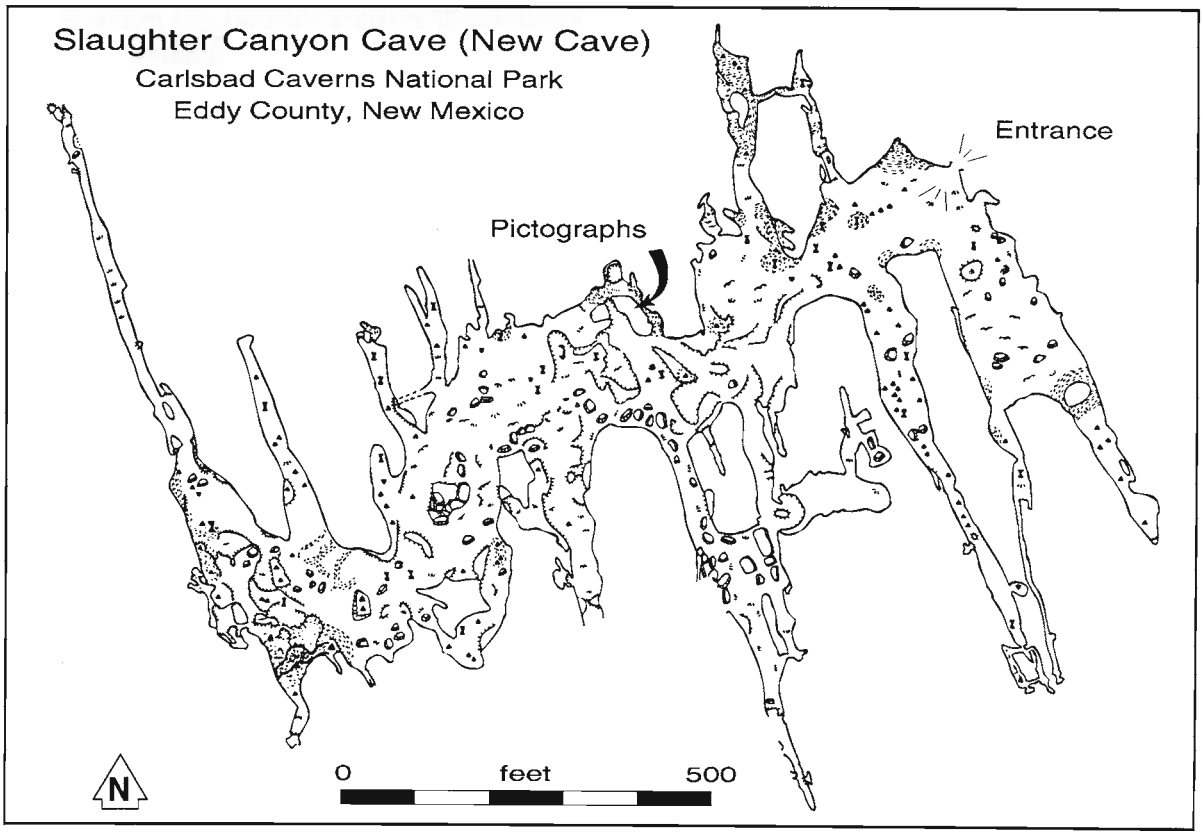

Figure 3. Map of Slaughter Canyon Cave, previously known as New Cave, southeastern New Mexico (after Cave Research Foundation 1976). Pictographs are in a side passageway, about 500 feet from the small entrance, and next to a former pool of water (now dry). Other Pueblo III-IV artifacts have been found in the huge first room.

zone art. For instance, Cole Camp Cave in the central part of the state has a small panel perhaps dating to the Woodland period (Figure 4). The panel is in a small part of the cave, rather than a public ceremonial center, and probably represents a private secular event, perhaps a biographic reference. Of equal interest is the complex modern rock art in Craft Cave which was done during the 1960s by art students as part of a "back to the old ways" extended camping trip. Other caves in Missouri and Montana have fairly sophisticated modern drawings which follow some of the same themes as earlier prehistoric art—such as masks, crude portraits, biographic events, sexual portrayals (prejudiciously interpreted for prehistoric context as fertility symbols and in modern context as deviant behavior), group identification (or individual identification with a social group), and other representational and geometric drawings. Consideration for modern rock art in dark zone context has been discussed by Bilbo and Bilbo (1993b) and others.

New discoveries continue in the Southeast (now referred to as the Mid South; Patty Jo Watson, personal communication 1996), comprised of Tennessee, Kentucky, Virginia, and West Virginia, where several caves are now known with dark zone art. The most publicized sites are those containing mud glyphs deep within caves and down long narrow passageways (Faulkner, Dean, and Earnest 1984; Faulkner 1986, 1988, 1994, 1995a, 1995b). Several researchers are working throughout this area, and at least 11 sites are known with mud glyphs and pictographs in dark zone locations in this region. Pictographs and petroglyphs occur around entrances of several other sites with dark zone usage, such as prehistoric mining, exploration, and human burial.

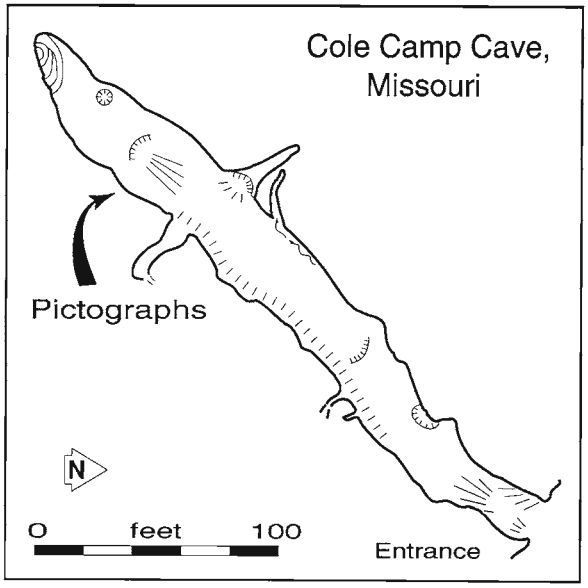

Figure 4. Map of Cole Camp Cave, central Missouri (after map by Hawksley and Taylor, 1958, in State cave files). Pictographs are in darkness although the light from the small entrance can be seen in the distance from the location.

Several caves throughout Mexico contain dark zone art. Cueva Pinta, for instance, in northeastern Mexico, contains stencils of deformed hands placed on the smooth wall above an area of natural water flow in travertine pools, presumably related to curing ceremonies or requests for supernatural assistance (Figure 5). In the other of the two large rooms which comprise this cave is a large panel with several red pictographs possibly related to ritual activity.

Juxtlahuaca cave, in Guerrero, is well known for its Olmec paintings dating probably 2000 to 2500 years old (Gay 1967; Grove 1967, 1969; Stone 1995). It is mostly a long passageway (Figure 6) with evidence of ceremonial activity throughout much of the cave. About 3900 feet (over a half mile) from the entrance are several paintings in a moderately narrow room with a flat floor and white walls. At this location, bichrome and polychrome depictions, such as an elaborate plumed serpent, a jaguar, a jaguar-shaman-warrior transformation, and other figures appear to mark the location of ceremonies held deep underground.

Andrea Stone (1995) has summarized dark zone cave paintings in the Yucatan area of Mexico, Guatemala, and southern Belize and has sacred and secular cave art in those areas. The cave with perhaps the most spectacular paintings is Naj Tunich, in eastern Guatemala. Classic Maya performed both public and private rituals at several locations throughout the extensive cavern. Many of these ritual activity stations have associated paintings, most of which appear to have been done by professional painters and formal scribes. Paintings include ritual scenes (such as blood-letting), persons in various kinds of attire and positions, portraits, glyph texts, and signatures (presumably of the scribes).

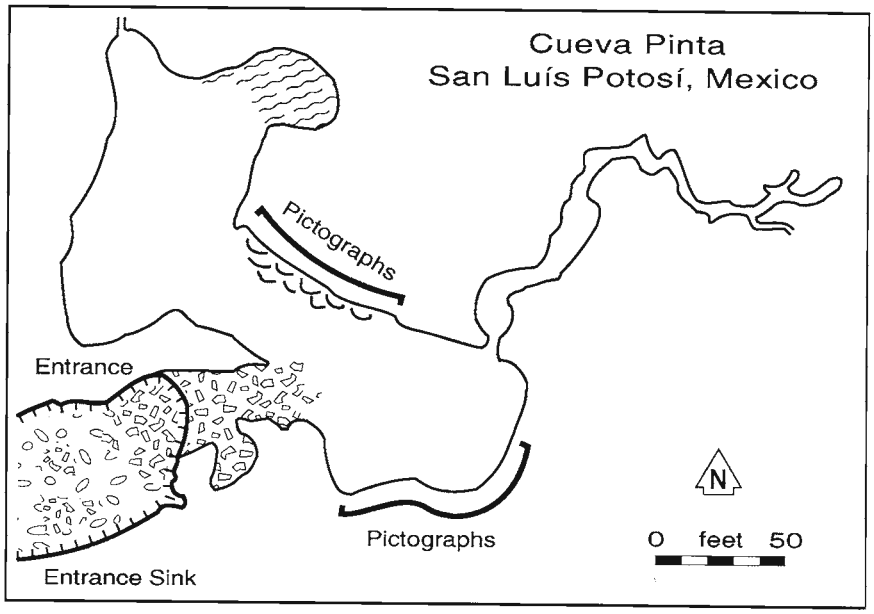

Figure 5. Map of Cueva Pinta, San Luís Potosí, northeastern Mexico (after map drafted by Don Broussard, in Fish 1977, and field-checked by Greer). Panels of red pictographs are in the southern room, while black spatter negative prints of deformed hands associated with flowstone pools dominate parts of the northern room. Associated activities obviously include curing ceremonies and requests for supernatural intervention.

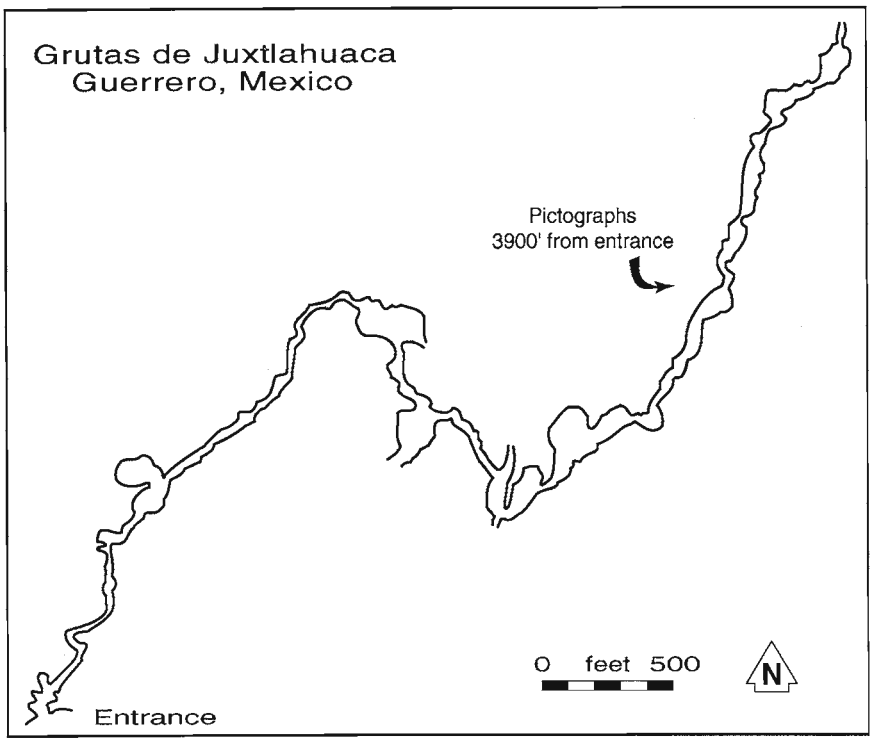

Figure 6. Map of the main passageway of Juxtlahuaca Cave, Guerrero, southwestern Mexico (after Gay 1967). Pictographs occupy the walls of a prominent, narrow chamber over a half mile back in the cave. Olmec burials and ceremonial objects occur throughout much of the cave.

Cuba, the Dominican Republic, and to some extent Puerto Rico and other parts of the Caribbean, are notably endowed with dark zone art. Over a hundred caves with associated rock art are known in Cuba, and perhaps nearly as many in the Dominican Republic (Antonio Núñez, personal communication 1995). In Table 1, we have taken a conservative view until completion of a 1995-96 survey of Dominican cave art, in progress at the time of this writing.

Rock art in Cuba is generally associated with caves, and dark zones often were specifically selected (Núñez 1975, 1985). There appears to be a long tradition of cave painting, probably covering the entire occupational history of the island, or several thousand years. Differences in content, style, setting, subject matter, and probably function—especially across the island from east to west—reflect this long history of use.

Previous work in Cuba has been mostly descriptive, which provides a basis for future studies. There has been some comparison between sites, but little discussion of time depth, chronology, or geographic differences. Only recently have researchers begun to define descriptive styles, the first step to other cultural considerations. It appears that rock art may have functioned differently throughout its history in Cuba, both through time and across space. From our limited experience at the sites, and from the abundant literature from local researchers, it appears that rock art in caves may have been more associated with ritual activity during the earliest periods, then turned more toward a combination of ritual and the placement on the wall of symbols associated with beliefs (but possibly not specifically as part of a formal ceremony). The latest art may have functioned more as a historic recording of events and people, though seemingly portrayed with religious overtones.

In at least one cave in north-central Cuba, Cueva Pluma (Matanzas Province), our observations of general style of the art, manner of execution, and height of the paintings above the floor suggest that some of the art likely is the result of child's play, or at least activity by young juveniles drawing with burned sticks and charcoal. Some of this charcoal paint appears to have been applied in liquid form.

Setting

Paintings are the most common form of rock art in dark zone settings, and they occur on clean rock faces in all regions. Petroglyphs are less common and are usually (though not always) associated with

poorer quality rock surfaces near the mouths of caves. Interior cave formations rarely are modeled into three-dimensional faces or anthropomorphs, and these are found mostly in Yucatan and the Caribbean, particularly eastern Cuba and the Dominican Republic.

Mud glyphs, or figures inscribed in mud deposits, occur in several caves in the southeastern United States, often accompanied by pictographs. Most are believed to be the result of ritual activity and represent what are generally considered to be belief-associated motifs of birds, masks, humans, geometric figures, and curvilinear meanders and patterns.

Petroglyphs most often occur somewhat near an entrance, or in areas of fairly easy access, while paintings and mud glyphs may be found as much as a mile or more deep through rambling passageways and complex mazes. Juxtlahuaca in Guerrero and Crumps Cave in Kentucky are good examples of such sites with art great distances from the entrance, and Saythe r (1995) has described clay paintings throughout 24 km of maze-like passage in Kaua Cave in Yucatan (also Stone 1995).

Although most art can be reached easily, some is located in areas of difficult access. Distance and passage complexity can affect human orientation. Narrow traverses around huge rooms and above deep vertical pits could be dangerous for people carrying torches. Passages in some areas are fairly narrow and steep, and some interior crawlways are so tight that only a small person can enter the chamber at all. Arrow Grotto (a side room in Feather Cave) in New Mexico, for example, is accessed through a very narrow squeeze-crawl which restricts most people from entering the back room where painted figures are associated with a late Pueblo IV period arrow shrine (Figure 2; Ellis and Hammack 1968). Another similar site is Surratt Cave in central New Mexico, which is entered through a very small restrictive notch originally no larger than 15 x 8 in (38 x 20 cm). This leads to a series of crawls and climbdowns to a series of painted panels and eventually to a deep kiva-like room with pictographs on the walls and ceiling.

Age

Thus far, most dark zone rock art seems to date mostly from the last 1500 years or so, based on comparisons with surface art. However, glyphs in the Southeast now have been dated back to about 3600 years (Faulkner 1995a, 1995b), and pictographs in southeastern New Mexico and other areas may be at least that old. The antiquity of rock art in underground settings in the New World has not begun to be analyzed in any detail.

Summary

Our work with caves and association with other specialists has shown that dark zone art is difficult to find and must be looked for specifically. Rock art will be found in this setting only when people believe in its existence and take the effort to search for it, often with special lighting and techniques. It occurs throughout most of North America and usually seems to be associated with various kinds and levels of ritual activity, including yearly renewal ceremonies, fertility ceremonies, bloodletting, sanctification of lineages and related events, curing, requests for supernatural intervention, and various actions related to water as a source for drinking, fertility, or curing. The recording of historic events is common, and doodling and child's play seem to be represented.

In general, dark zone cave art usually reflects surface art, and most often consists of the same kinds of figures and motifs as occur in other kinds of nearby rock art sites. The exception is highly specialized sites, such as curation shrines like Cueva Pinta in northern Mexico. In most cases, offertory shrines such as Surratt and Feather caves in New Mexico and a cave in Washington seem to have the same kind of art or figures as other kinds of sites with apparently similar functions. Mud glyphs in Southeastern caves are unique in their application, but their form is duplicated in other kinds of outdoor rock art as well as other media, such as decorated pottery, incised stones, and engraved

bone and shell. Thus, in most cases, rock art style or appearance is regionally or culturally uniform. Uniqueness appears mostly to be associated with rock art directly portraying activity which took place only within the cave setting, such as curing ceremonies which could only occur at the location of sacred water in underground caverns.

As mentioned above, the tradition of cave painting continues today in many areas. Most common, of course, are modern names and dates, which are represented in prehistoric context by Mayan scribes in such caves as Naj Tunich in Guatemala. Handprints in many sites on the northern Plains may be similar signatures. Prehistoric and modern contexts share many of the same classes of figures, such as masks, portraits, figurative art, realistic portrayals of activities (like hunting, fishing, and sexual activity), geometric symbols, abstracts, and religious and drug-influenced symbolism. A fruitful line of research might be a comparison of prehistoric rock art with modern rock art, before modern examples are erased from existence in the name of a conservation ethic which exclusively protects prehistoric (and sometimes early historic) remains.

Future consideration of dark zone art should include technical research on the use of special lighting for figure identification and paint recognition, and photography in dark zone cavern settings. The environment certainly is not the most comfortable or ideal for recording, but every day brings more indication of the complexity of dark zone art and dark zone sites, and regional patterns in their occurrence. This brief review serves to indicate some ideas currently considered during this continuing study.

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