

THE TRAVERTINE POINT SUN SHRINE CAVE

It had been almost twenty years since I visited Travertine Point, which is located to the northwest of the Salton Sea in Imperial County just below the Riverside County line. All but the uppermost boulders were covered with several layers of marine deposits or tufa left by ancient Lake Cahuilla, created when the Colorado River flooded and overflowed on several occasions into the Imperial Coachella Valley. I had photographed petroglyphs in the tufa, and pictographs in a rock shelter, back in 1979.

So when I returned to Travertine Point (Figure 1) on the afternoon of New Year's Eve, December 31, 1999, with my oldest daughter and her husband and son, and my youngest daughter and her children, I was appalled by the terrible amount of vandalism and degradation Travertine Point had suffered in the past twenty years. Hardly any surface on the entire boulder complex was untouched by graffiti, and empty spray cans were lying in many places where they had been discarded.



Figure 1. Travertine Point Scene.

Petroglyphs I had photographed twenty years before had been so defaced by vandalism as to be unrecognizable (Figure 2). Fortunately,

though there were the ashes of a fire in front of the pictograph shelter and some spray painting inside, the pictographs had not been disturbed.



Figure 2. Graffiti on the petroglyph panel.

Also, we found an excellent petroglyph panel west of the cave, the major portion of which had not been vandalized (Figure 3).



Figure 3. Petroglyph west of the cave.

After leaving Travertine Point, I drove with the family farther south on the old highway to see the shoreline of Ancient Lake Cahuilla on the mountains. On our way back at about dusk,

hurrying home to Indio for a New Year's Eve Party and Service at the church where I am Interim Pastor, to bring in the Year 2000, we saw a dune buggy up by the pictograph shelter, with someone carrying wood up for a fire in front of the shelter.

About two weeks later I drove down to Desert Shores to call on a parishioner who was facing surgery. On the way back, I decided to drive up to the Travertine Point south flank. Right in front of the pictograph shelter there had been a huge fire, with wine bottles, beer cans and bottles, broken glass and burned out fireworks everywhere (Figure 4). There were the remains of other fires, with bottles and fireworks debris. But I was very concerned about the pictograph shelter, where the charcoal from burned out fireworks could be very destructive to the rock art.



Figure 4. Broken bottles and ashes.

The next Sunday I talked to my youth class, and two of the members who were Boy Scouts volunteered to go with me to clean up the site. One had wanted to go, because his art teacher had just mentioned Ancient Lake Cahuilla that week, with the rock art along the old shoreline. The other boy was a Life Scout, working on his Eagle badge, and wanted to help out as a possible project. So we went on January 29, 2000, to clean up the worst of the debris. We started with the ashes, bottles, broken glass and burned out fireworks in front of the pictograph shelter. Then we cleaned up another major

"party" area. We filled the sacks and box I had brought, and stuffed them into the back end of my Pathfinder. It would take a major work party to clean up the whole Travertine Rocks area, but we felt we had cleaned up some of the more sensitive areas of harmful debris.

When we cleared the inside of the pictograph shelter of trash, I took pictures of the pictographs, and the somewhat faint parallel rows of red dots on an upper surface and the red sunburst on the lower surface were very clear on the developed photos. During my previous visit on December 31, 1999, a beam of light had shown across from an opening so brightly on surfaces facing the entrance to the shelter that the electronic eye on my print camera did not trigger the flash. Overlaying the two photos, I saw that even ten days after winter solstice, the point of the beam of light, extending down to the lower panel, still intersected a part of the sunburst. The upper squared end of the light beam abutted the lower row of red dots. So I was convinced I had the beginnings of a paper on "The Travertine Point Winter Solstice Site," and made plans to return to take time-lapse photos on the next winter solstice, December 21, 2000. But this discovery would never have taken place without our clean-up project.

WINTER SOLSTICE

When I arrived on December 21 at 10:45 a.m., I had expected an afternoon light dagger interaction, with the light beam coming from the west window of the cave, in keeping with my earlier visits. But upon crawling into the cave, I saw a beam of light from a small window on the east side, to the right of the entrance, which pointed down to the floor.

Inside the cave, I could stand, and looking toward the small window, I saw a faint red handprint with five fingers pointing down. Or it could also be a circular sun symbol with five downward rays. This pictograph was very old, and was located below and to the east of the opening. Then, as the sun moved on to be more

even with the cave entrance, the light beam from the small window moved toward the left wall of the cave, as I took slide and print pictures of the movement and made notes for each picture taken, with the crucial photographs and notes as follows:

11:45 a.m. Though part of the light beam is still on the floor of the cave, a portion is starting to reach up the east wall (Figure 5).



Figure 5. Beam coming up the East side.

11:55 a.m. The light dagger is broken, because of the rough cave surface, but the small point of light at the top now touches the tip of the red fingers (Figure 6).



Figure 6. Point of light touches the fingerprints.

12:05 p.m. Now the larger section of the light dagger touches the tip of the faint red fingers of the hand or sun symbol (Figure 7).



Figure 7. Main beam touches the fingers.

In the early afternoon a light dagger comes through the north side of the west window. Taking sequential picture and notes, I found that this dagger and point never intersected any pictographs. But then at approximately 2:30 p.m., another light dagger came in from the south or left side of the west window (Figure 8).

This dagger grew and cast a spot of light on the surface left of the sun symbol.



Figure 8. Dagger from the west window.

2:30 p.m. The first beam from the new light dagger from the west window created a small light spot on a surface about a foot left of the sun symbol to the right side of the Sun Shrine Cave (Figure 9).



Figure 9. Light point from dagger.

2:40 p.m. The light from the sun dagger begins to split, with the lower part of the beam growing larger and moving onto the same surface as the sunburst, while the upper part is on the above surface (Figure 10).



Figure 10 Spot on symbol surface.

2:50 p.m. The lower spot of light moves to the right about two inches closer to the sunburst, while the upper part of the beam grows larger and moves closer to the lower row of red pictograph dots (Figure 11).



Figure 11. Beam closer to the symbol.

3:00 p.m. While the lower light spot moves closer to the sunburst, the upper spot grows still larger and has moved up to the right until it is now about four inches from the lower row of red dots (Figure 12).



Figure 12. Halfway to the sun symbol.

3:10 p.m. Now the lower light spot contacts the lower left quarter of the sunburst circle, while the upper light spot is about three inches from the first dot in the lower row of dots (Figure 13).

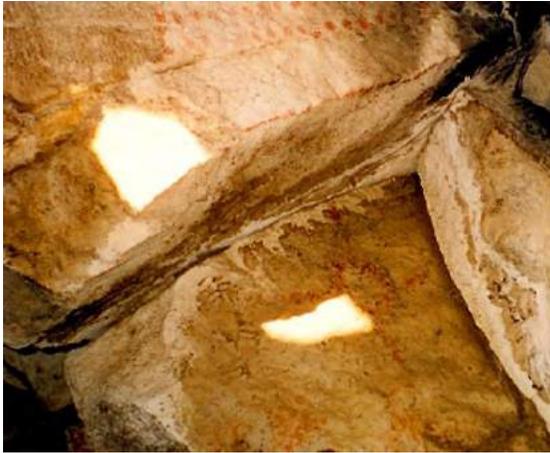


Figure 13. *Light touches the sun symbol.*

3:13 p.m. The lower left quarter of the sunburst is now covered by the beam of light, which is blunt on the right side, but has developed a point on the left side (Figure 14).



Figure 14. *Light quarters the sun symbol.*

3:20 p.m. Now the sun dagger has moved farther to the right along the horizontal sun beam line to halve the sunburst, with the pointed part of the beam touching the left side of the sun circle (Figure 15).



Figure 15. *Point of light on the left side.*

3:23 p.m. The left point of the lower sun dagger is now at the center of the sunburst, while the top of the upper light spot now hits the first dot in the lower row of dots on the surface above (Figure 16).



Figure 16. *Point of light at the center of sun symbol.*

3:25 p.m. The point of the sun dagger below reaches back to touch the right side of the sunburst, following the horizontal red pictograph ray; and the upper light moves along the lower row of red dots (Figure 17).

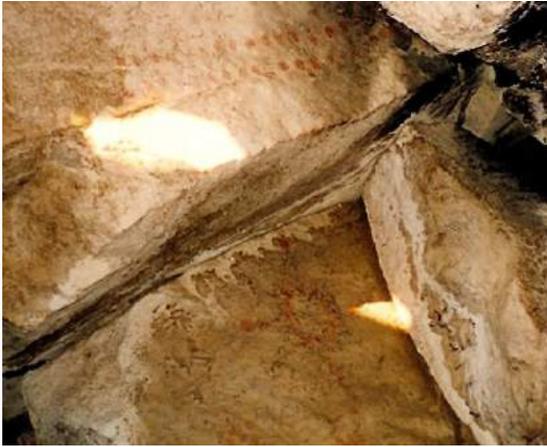


Figure 17. Point of light at the right side.

3:30 p.m. The upper light beam continues to move to the right along the lower row of dots, while the lower light pointer is already on the next rock surface (Figure 18).



Figure 18. Light touches the dots.

3:40 p.m. The upper light beam has moved midway along the bottom row of dots, pointing to the eighth dot, while the lower light spot is almost gone and the whole beam is concentrating on the upper surface (Figure 19).

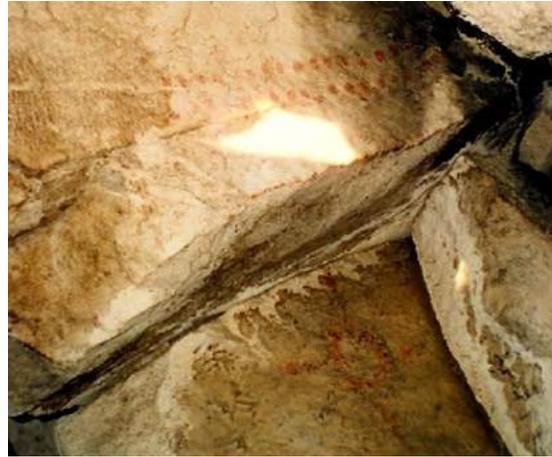


Figure 19. Light moves along the dots.

3:45 p.m. Now, the upper beam of light starts to send a pointer up toward the midway dot above, while touching the halfway dot below (Figure 20).



Figure 20. Point towards the upper dots.

3:55 p.m. Both rows of dots are now illuminated, with the fourteenth dot pointed to above, and the sixteenth dot cupped in the row below (Figure 21).



Figure 21. Both rows are illuminated.

4:00 p.m. The light dagger moves on to the right to the final dots, with the point on the dot above, and the lower dot cupped (Figure 22).



Figure 22. Light moves toward final dots.

At the moment the final dots were touched by the light dagger, I snapped a picture, but at that same moment the dagger disappeared and, looking through the west window, I saw that the sun had gone down below the mountains to the west.

SPRING AND FALL EQUINOX

Because of the dramatic sun dagger interactions on winter solstice, I decided to go back to Travertine Point on the spring equinox, March 20, to see if other pictographs might have equinox alignments. There were no involvements from the east window of the cave.

But an afternoon dagger of light from the west window began moving across the cave floor, and up the side of the east side of the cave, with the following key descriptions and photos:

3:00 p.m. The light dagger has moved up the side wall to within about eight inches of the left red spot of the pair of spots, having the possible resemblance of winged birds, located below and on the same surface as the sun symbol (Figure 23).



Figure 23. Equinox dagger moves upward.

3:10 p.m. The finger of light is broken, because of the uneven surface, but the point now touches the tail of the faint red spot to the left. The left spot is about seven inches away from the other red spot to the right, which is directly under the vertical beam of the sun symbol above (Figure 24).



Figure 24. Point of light touches the red spot.

3:15 p.m. The equinox light dagger begins to broaden, with a finger of light on the right moving about an inch and a half toward the red spot on the right. (Also, the light on the surface above, where the two rows of dots are located has moved down past the upper row, which was outlined by light, and has intersected the lower row of dots (Figure 25).



Figure 25. Equinox dagger broadens

3:25 p.m. Now the light dagger has broadened further to touch, cradle and intersect both of the faint red spots below the sun symbol. (Finally the two red spots will be illuminated by a narrow band of light, and a single red spot on a higher rock surface to the right will also be touched by light as the lower sun dagger and the light above come together on the right surface (Figure 26).



Figure 26. Light beam cradles the spots.

Going back to the cave on the fall equinox, September 22, I found that the interactions were

virtually identical with those of the spring equinox. Then going back the next year on winter solstice, with my daughter Merrie, I found that I could tell her in advance exactly what the light dagger would do next. Because there were such exact solar interactions with pictographs in the cave, I sought to understand how the Cahuilla Indians could arrive at such precise calculations of key junctures of the solar calendar. Chief Francisco Patencio, in his *Stories and Legends of the Palm Springs Indians*, (Patencio 1943) as told to Margaret Boynton, describes how the movement of the sunrise along the horizon was marked by sticks to mark the movement of the through the seasons:

"In this tribe there were some older people who put up signs to gauge how the sun shone. They found that they had to keep moving the stick to the right for a long time, and then to the left, and so by this means they discovered what times the birds had their nests, and what times the animals had their young, also what times the plants grew, and the times the seeds were ripe. This they did year after year as they studied the signs of the sun," (Patencio 1943:113).

Descriptions by Patencio, which could be related to another pictograph in the cave, might show why this Sun Shrine Cave may have had great significance for the Cahuilla.

SUMMER SOLSTICE

The pictographs involved in the winter solstice and the equinox alignments are faint and older than five features of more recent appearance. While no recorded efforts have been made to date the pigments, the apparent differences in age raise questions concerning the duration or time sequences of solar cave usage. Also to be explored is whether or not the more recent features have specific sun dagger interactions with junctures in the solar calendar. The less faded features include a hand print on the back

wall of the cave, and a sun symbol with flames around the inner circle on a slanted slab on the west side of the cave. Then behind the surfaces where the winter solstice and the equinox pictographs are located, there are three more features: the elongated perpendicular end of a rock slab is painted red, and higher up, there is a diamond in red with a black line in the center, and a winged figure with red and black dots radiating in lines up from the head.

Since the Summer solstice was the next major juncture in the solar calendar where I had not visited the cave, I went on June 21, 2001, to see what the light daggers would do. The beam of light which initiated an alignment was not from either the East or West windows, but from a small opening high up in the ceiling of the cave. 12:25 p.m. A narrow beam of light started down the surface above the red hand print on the rock slab at the back of the cave, and moved toward the black dots at the end of each finger (Figure 27).



Figure 27. *Beam of light above the hand print.*

12:35 p.m. The beam of light moves right across the top of the hand print, as though the one who watched the light had first placed a left hand there, and then had covered the palm and fingers with red paint to mark the passage of the light. (There appears to be an added sixth finger, which may have indicated special power.) See Figure 28.



Figure 28. *The beam of light across finger tips.*

12:45 p.m. By holding my own hand over the red hand print, without touching it, I sought to show how the light which fell on the tips of my fingers would also have touched the tips of the fingers of the one who placed the red hand print on the wall; and then made the black spots where the light intersected (Figure 29).



Figure 29. *Light on my finger tips.*

CROSS QUARTER

Four of the painted features still had not been related to a solar interaction. But, a very helpful little volume by Liz and Peter Welsh, *Rock Art of the Southwest*, 2000, noted that cross quarter points, including those on November 6 and February 4, were also "significant points in time for sun watching," (Welsh 2000:71).

So on November 6, 2001, I went back to the cave to see what the sun daggers might do. Then on February 4 I went again, and the resultant interactions were virtually identical. This time the light dagger came from the right side of the West cave window, and the following photos and notes among the many taken are sufficient to illustrate the interactions: 1:05 p.m. The light dagger goes through the red pictograph sun burst and fills the center opening of the sunburst design (Figure 30).



Figure 30. Light dagger fills the sun symbol.

1:20 p.m. Now, while the heel of the light dagger remains in the sun burst, the point starts over the edge of the West stone surface (Figure 31).



Figure 31. Point of light starts over the edge.

1:45 p.m. The sun dagger goes across to the other side of the cave, and starts upward on the East wall toward the vertical painted red end piece (Figure 32).



Figure 32. Point of light goes up the east wall.

2:45 p.m. The red painted vertical rectangular end piece has light all the way across and the light moves upward toward the diamond (Figure 33).



Figure 33. Point of light moves upward.

3:00 p.m. The painted end piece is now all in shadow, while the dagger moves toward the diamond (Figure 34).



Figure 34. *Light dagger moves toward diamond.*

3:45 p.m. The point of the sun dagger, while growing smaller, is only an inch from the point of the diamond (Figure 35).



Figure 35. *Point of light an inch away.*

4:00 p.m. The point is fading, as the sun sets over the mountain to the west, and disappears just as it touches the tip of the diamond (Figure 36).



Figure 36. *Point of light touches at sunset.*

HALF CROSS QUARTER

Now only one pictograph figure in the cave has not been involved in an interaction I had observed, but the painted red and black winged figure, with the red and black dots radiating up

from the head, was located midway between the light daggers which had led up to the cross quarter and to the equinox interactions. Therefore, on February 26 and October 15, of 2002, I went back to the cave, and took pictures and made notes on the sun dagger movements. The dagger touched down just under the sunburst, and moved across the cave floor to the East side. The following selections are adequate to describe the interaction:

2:55 p.m. The light dagger has crossed over to touch the red rectangular end-piece (Figure 37).

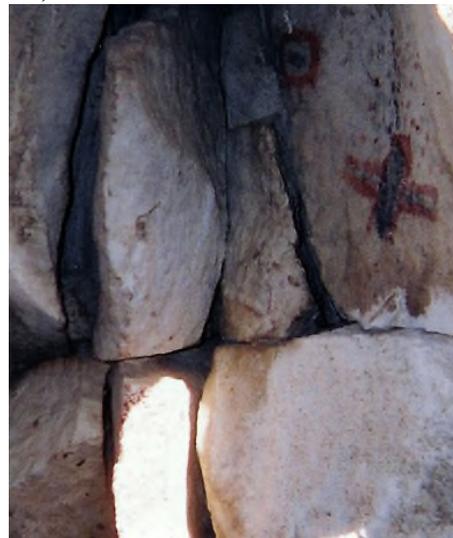


Figure 37. *Light touches the end-piece.*

3:15 p.m. The light moves from the red end-piece toward the winged figure, which is outlined in red with a black body (Figure 38).



Figure 38. *Light dagger moves toward wing tip.*

4:00 p.m. The light dagger is now only two inches from the wing tip of the figure with the

red and black ray spots over the head (Figure 39).



Figure 39. *Dagger is two inches from wing tip.*

4:15 p.m. The light dagger, which has grown smaller, touches the tip of the wing (Figure 40).



Figure 40.

Light touches the wing tip.

4:25 p.m. The point of the sun dagger, growing still smaller, covers the entire tip of the



wing (Figure 41).

Figure 41. *Light covers the wing tip.*

4:30 p.m. The sun dagger point has grown very small, within the very tip of the wing, and disappears a moment later as the sun sets over the mountain (Figure 42).



Figure 42. *Final spot of light on the wing.*

While trying to relate ethnographic data to a specific pictograph design cannot be done with any dependability by anyone except the maker of the design, one of the entries in Chief Francisco Patencio's recollections of *Stories and Legends of the Palm Springs Indians* relates to Travertine Point. Eagle Flower, a Cahuilla culture hero, had three sons:

The youngest son took his mother and settled for a time at a point near where the Salton Sea now is. The people there had come from among his own people, so he stopped there and married among them. Then he went farther south with the people he had settled among, and one night while he was smoking, the pipe told him that his wife would have a child, and for him to go back to the point by the Salton Sea. He told his mother and his wife what had been told him by the pipe.

Then they brought coals of fire and put them into an olla and started back. Before they reached the point his first child, a son, was born. He made a cave in the hill, and he, his wife and his mother lived there. (Patencio1943: 43)

RESEARCH AND RECOMMENDATIONS

One of the earlier printed references to petroglyphs at Travertine Point was published by Julian H. Steward in his *Petroglyphs of California and Adjoining States*, (1929). In it, he seeks to develop a survey of sites. While none of the sites are recorded in detail, he does provide several sketches of some of the more dominant petroglyphs on the northernmost surfaces at Travertine Point. While the panels are far more complex than his drawings indicate (Figures 43 and 44) his work shows an early concern for Native American rock art. Also, the petroglyphs Steward illustrates were overlaid with marine tufa.

One of the early attempts to date the Travertine Point petroglyphs was undertaken by Wilson G. Turner and Robert E. Reynolds (Smith and Turner 1975:25,27). They secured the permission of the owners to dissect a Travertine Point petroglyph, with the hope of obtaining a valid radio-carbon date. Their effort yielded an unreliable date of 9000 years B.P., because the petroglyphs had been carved into very old deposits of tufa. But the dating issue had been dramatized, and Daniel F. McCarthy was able to find pictures taken prior to 1917 showing that a large fracture had developed in the tufa and a section had fallen away. He concluded that “sometime after the fractured surface broke away, the petroglyphs were carved into the newly exposed, older deposits of tufa... the last high stand of Lake Cahuilla was about 500 years ago... Since the rock art predates the last high stand of Lake Cahuilla, it is probably between 500 and 1,000 years old rather than the previously suggested 9,000 years” (McCarthy 1981:107-117). Prior to receiving McCarthy’s paper, I felt that the date of the petroglyphs with a layer of tufa having been deposited on them but not entirely obscuring them would have been at least 800 years ago since the last time Ancient Lake Cahuilla reached its maximum size was during the three hundred years ending in the Fifteenth Century A.D.

Naturally, while there has as yet been no chemical analysis of the pictograph pigments in

the Sun Shrine Cave, the pictographs would have been made over the period of time between the last inundation of Ancient Lake Cahuilla and the present. If dateable vegetable or animal substances were used in preparing or applying the pigments, it might be possible to date the pictographs. Some of the pictographs appear old and faint, while others are obviously more recent. The one certain fact concerning the pictographs is that each of the sun dagger interactions illustrated in this paper will be repeated on a clear day, year after year, on the days and hours observed and reported. The oldest pictographs relate to the winter solstice and equinox interactions, as might be expected. If a scientific analysis and dating of the pigments is possible, the age of the pictographs and the time spans involved in sun dagger observations would contribute to the understanding of the role of the cave in Cahuilla tradition and ceremony.

The importance of Travertine Point in Cahuilla cultural heritage is underscored in a survey of important sites in *The Cahuilla Landscape: The Santa Rosa and San Jacinto Mountains* (Bean, Vane and Young 1991:96). The sojourn of Eagle Flower's son, his wife, baby son and his mother, in a cave at Travertine Point is reported in this source as well. The presence of potshards, another cave with pictographs, and cremation burials, along with the petroglyphs showing a long history of Cahuilla activity and sacred involvement, attest to the importance of Travertine Point as a place of tribal significance. A possible site for observing the sunrise and marking with sticks the movement of the sun along the eastern horizon from winter to summer solstice needs also to be tested (Figures 45 and 46).



Figure 43. Petroglyphs Under Tufa.

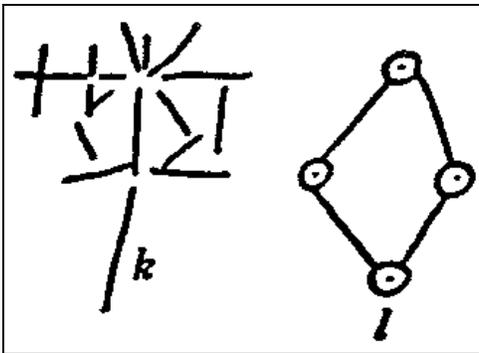


Figure 44. Inset of Steward's Sketch

Because of the cultural importance of Travertine Point, and the petroglyphs and Sun Shrine Cave, I have believed that the neglect of the site has been tragic. It belongs to a land holding company, and the lack of stewardship of the area has led to the terrible vandalism.

I made a presentation to the Native American Land Conservancy concerning purchase and preservation of Travertine Point, but realized in so doing, that the Conservancy had a large agenda of acquisition concerns. My recommended goals for Travertine Point include the following:

Goal I: Encourage the Archaeological Conservancy or Native American Preservation Entity to purchase the Travertine Point complex.

Goal II: Record all surviving petroglyphs and pictographs, and develop a plan for site restoration, preservation and management.

Goal III: Build an interpretive center and kiosk trail system with a dwelling unit for a full-time Native American site manager.

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Point for Sunrise Views



Figure 45. Farthest hill south of Travertine.



Figure 46. Sunrise observations need to be made from the south hill.