

Description of Picture Rocks Petroglyph Site, AZ AA:12:62(ASM)  
Allen Dart  
February 15, 2009

In August 2006 Ms. Susan Melanson, who at that time was an employee of the Picture Rocks Redemptorist Renewal Center (on whose property the Picture Rocks site is located) arranged permission for me to visit all portions of the Picture Rocks petroglyphs site that is on the Redemptorist property, including areas on the upper rocks and top of the hill that are normally restricted to public visitation, so that I could assess how much rock art is present and how much time it might take for me to do a complete recording project of the petroglyphs site. I conducted an initial reconnaissance that included the upper portions of the hill on the morning of August 31, 2006, and later that day I emailed Ms. Melanson the portion of the General Site Description information given below that refers to my visit of that date..

### General Site Description

In a ca. 1.5 hours reconnaissance of the entire bedrock hill that comprises the Picture Rocks petroglyphs site on August 31, 2006, I identified at least 76 petroglyph panels on the top, south, and east sides of the hill, and at least another 70 panels on the west face of the hill, i.e., at least 146 total panels (and probably more). I use the term “panel” here to mean an individual rock face that contains rock art designs and/or graffiti, and that some of the rock art panels contain more than one design.

Most of the site's rock art is on the west face of the hill and on the hilltop. Very few petroglyph panels are present on the south side of the hill, and no rock art and no other archaeological features were seen on the north face of the hill except for one nearly hidden rock art panel that faces inward (toward the top of the hill) on the hill's northwest slope; one north-facing panel depicting what appears to be a bighorn sheep pretty high up on the north face of the hill, close to the main west-facing group of rock art panels; and some north-facing rock art panels at the very top of the hill.

Some of the most prominent rock art panels on the western hill face include two panels with groups of animals and human-like figures that may represent prehistoric hunters, one panel that contains a very well-worn spiral petroglyph above a design depicting a row of hand-holding human-like figures who appear to be dancing in a line; and another panel with another row of hand-holding human-like figures who appear to be dancing, farther south and higher than the row of hand-holding figures that is on the panel with the big spiral design.

There are also at least three bedrock mortars (cup-shaped, intentionally worn or pecked-in depressions) and at least 6 shallower, mortar-like cupules in the bedrock on the hilltop.

During this brief visit I observed only two prehistoric artifacts higher up on the hill (both were informal stone flake artifacts) but saw prehistoric Hohokam pottery sherds and flaked stone artifacts on the southeast, east, and northwestern slopes of the hill. There are also some historical pieces of amethyst-colored glass and some tin cans that may be more than 50 years old, mostly on the east side of the hill.

During my August 31, 2006, visit I also walked over the flatter ground that had been cleared of vegetation and bladed recently, southwest of the hill (north and northeast of a modern, rock-lined labyrinth geoglyph that is due north of the hill), and observed no evidence of prehistoric artifacts or archaeological features in that disturbed area.

On March 16, 2008, the following observations were made about the orientation of animal-design petroglyphs that depict animals in profile view (as opposed to plan view), on the western-exposure petroglyph panels at the Picture Rocks site: The animals that are to the left (north), above, and below the big spiral petroglyph all are oriented with their heads to the south. The profiled animals that are slightly south (to the right of) of the big spiral but that are on the same rock panel as the spiral, and the profiled animals that are on petroglyph panels that do not extend any farther south than the panel on which the spiral is located, also are oriented with their heads to the south. However, all profiled-animal petroglyphs that are south (right) of the panel on which the spiral petroglyph is located all are oriented with their heads to the north (left). This could be interpreted to indicate that the profiled animals are oriented to focus on the center of the hill's west face, or perhaps even to focus on the spiral petroglyph itself.

## Solstice and Equinox Observations

The Picture Rocks Redemptorist Renewal Center's quarterly newsletter, "The Petroglyph," published a summary of the August 2006 reconnaissance information that I had provided to Ms. Melanson in the newsletter's May-July 2007 issue (Vol. 7, No. 2), along with a note that I had proposed to conduct a complete archaeological survey and recording project at the site. The newsletter's published summary did not mention the prominent spiral petroglyph panel on the west side of the petroglyph hill, but on June 20, 2007, one of the newsletter readers, Margaret McNealy of Tucson, called me and informed me that the big Picture Rocks spiral petroglyph exhibits an unusual sunlight phenomenon on the day of the summer solstice. Ms. McNealy referred me to the book *The Green*

*Desert: A Silent Retreat* by Rita Winters (2004, Crossroad Publishing, New York), in which Ms. Winters provided some observations about the Picture Rocks petroglyphs during a visit made on Saturday June 21, “several years” prior to the 2004 publication of her book, with a woman named Kate from California. Ms. Winters indicates on page 195-197 of her book that her visit described here was prior to February 2000, and the only time June 21 fell on a Saturday in the decade prior to 2000 was in 1997 suggesting her visit was on June 21, 1997. The following are excerpts from *The Green Desert*:

Kate asks me whether I can see the big clock-like circle painted [sic] on one of the higher rocks. I can. At its center is the startpoint of a spiral that winds out to the edges of the circle. She says she was here when it illuminated on the summer solstice a few years back. [Kate said:] “On June 21, the first day of summer, starting at about eleven in the morning, you see a spot of bright light appear where the six would be on a clock. As time draws closer to noon, the light follows the hours up the clock until at noon, bright light illuminates the twelve mark and forms a dazzling pyramid of light right below it on the clock’s center line. As time moves past twelve, the triangle grows fainter and then all points of light disappear . . . .” [Winters 2004:53-54]

Farther on in the book Ms. Winters wrote about her own visit to the petroglyphs site to view the solstice light phenomenon on June 21:

At 11:25 I arrive at the Rocks. . . . At precisely 11:30 Kate and the first dot of light at the center point arrive. In excited but respectful silence we watch the dot of light expand into a triangle that grows ever larger between where nine and twelve would be on the clockface were the face enumerated. At exactly noon the dot on twelve lights up so brightly it looks phosphorescent. [Winters 2004:120-121]

After Ms. McNealy called me on June 20, 2007, my son Calvin Dart and I visited the Picture Rocks petroglyph site to observe and photograph any light phenomenon that might occur on the big spiral petroglyph, accompanied by Old Pueblo Archaeology Center employees David Davis, Courtney Rose, Darla Pettit, and Barbara C. “Cris” Wagner. My own observation of the spiral petroglyph panel around noon on June 21, 2007, convinced me that it is a summer solstice marker:

We arrived around 10:30 a.m. and began observing the petroglyphs and taking photos. As the morning latened, most of the shaded areas on the west face of the petroglyph hill began to be illuminated by the morning sun. However, the big spiral petroglyph and the other glyphs on its same rock panel were the last of the petroglyphs to still be in the shade because there are two large, tilted bedrock

blocks immediately above the spiral-glyph panel that protrude slightly farther west than the vertical face of that petroglyph panel, shielding that panel from the sun. A prominent crack between the two upper bedrock blocks caused the sunlight to focus on the big spiral petroglyph as the morning progressed, as described below.

The shadow still overlying the big spiral petroglyph became smaller and smaller, so that by 11:30 a.m. about the central half of the surface area of the rock panel that includes the spiral was within shadow that extended downward from the larger shadow underneath the two tilted bedrock blocks; and the outer edges of the panel were sunlit. The area of the panel still shaded gradually became smaller but was still lying directly over the spiral petroglyph as the sun continued its journey westward over the top of the hill.

Beginning at 11:40 a.m. (Mountain Standard Time), while the west-facing spiral glyph was still in the morning shadow, a triangular patch of sunlight appeared along the outermost coil of the big spiral, in about the 7:30 o'clock position, as the sunlight started to break over the west face of the hill. This triangle of bright light subsequently grew larger and began to elongate upward so that the light triangle's lower left corner remained approximately on the spiral glyph's outermost coil and the top of the triangle moved upward and slightly to the right, so that the triangular patch of light appeared to be moving counter-clockwise along the outermost coil of the spiral petroglyph.

By 11:48 a.m. the top of the light triangle was along the top of the spiral glyph's outermost coil and the bottom two corners of the triangle had expanded downward and outward so they were slightly below the bottom-most coil of the spiral. Also by this time, the shaded portion of the spiral glyph's rock panel had become a semicircle of shadow that still extended downward from the larger shaded area that was directly beneath the two tilted bedrock blocks above the spiral.

By 11:50 a.m. the shadow forming the bottom of the light triangle disappeared so that the triangle had merged with the rest of the sunlit area illuminating the lower part of the rock face, while the top of the spiral glyph was still in the semicircular but ever-smaller shadow. The resulting dagger-like area of light that remained after the triangle merged with the sunlit face then moved to the right and only slightly higher, so that by 11:50 a.m. the right side of the light dagger was still directly vertical and lay across the inner coil of the spiral that is immediately left of the spiral's center.

By 11:52 the straight right side of the light dagger was becoming wavy, but this right side continued moving to the right until by 11:54 a.m. the central, outermost meander of the light triangle's right side was directly over the innermost coil of the petroglyph spiral.

By 11:56 a.m. the remaining semicircle of shadow that still remained over the upper half of the spiral petroglyph began drawing upward more quickly, and

the light dagger over the spiral became wider, shorter, and truncated at its top as the shadow withdrew. By 12:00 noon, the entire spiral glyph was completely illuminated by the sun except that the two bottom-most points of the withdrawing rock-overhang shadow still touched on the topmost coil of the spiral. After that the overhanging shadow faded completely.

In *The Green Desert*, Rita Winters also noted that she revisited the Picture Rocks petroglyphs site the day after her summer solstice visit, but the light phenomenon that she had observed on June 21 did not occur on June 21.

I was not able to visit the site on the day of the autumn equinox in 2007, and on the 2007 winter solstice day the sky was overcast so I didn't bother. In a visit to the site on March 20, 2008, the day of the spring equinox, I arrived in the wash along the west side of the petroglyph hill around 11:30 a.m. By that time, most of the big spiral was already in full sunlight. However, as would be expected from the position of the sun in the mid-southern sky at this time of the year, the remaining shadow that was cast by the two big, leaning rocks above the spiral by this time of day did not project directly down from the overhanging rocks onto the spiral, but instead extended at an angle across the north-central surface of the bedrock panel. I did not arrive early enough to see if there were any point, triangle, or dagger-like projection of bright sunlight within the shadow of the overhang.

In September 2008, after learning from me that the big spiral petroglyph exhibits a unique sunlight phenomenon on the summer solstice, southwestern rock art researcher Dr. John Fountain observed and photographed the spiral glyph on the date of the autumn equinox and confirmed that an unusual sunlight phenomenon occurred on that petroglyph around noon that day. Similar to the dagger of sunlight that shone on the spiral during my 2007 summer solstice observation, Dr. Fountain's video shows that a similar dagger-like point of light appeared on the spiral glyph around noontime on the day of the fall equinox.

On December 22, 2008, John fountain sent me an email in which he noted that Chris Tanz took a sequence of photographs of the big spiral-petroglyph panel for Fountain on the winter cross-quarter day November 6, 2008, but on that date tree limbs interfered with the sunlight to such a degree that it was unclear whether there was a significant solar interaction with the big spiral petroglyph. In that same December 22 email, Fountain copied to me a one-minute movie (computer file) composed of images he took of the big spiral-petroglyph panel between 10:14 and 11:18 a.m. on December 21, 2008, the day of the winter solstice. In his email he commented about his winter solstice observation, "It appears to me, in spite of interference by tree limbs, that there is a significant interaction." His video shows that the sunlight became focused on the spiral glyph during that 64-minute period, but in my opinion this winter solstice sunlight interaction with the big spiral petroglyph is not as clear-cut as the solar interaction documented on the 2007 summer solstice.

The summer solstice and fall equinox light phenomena associated with the spiral petroglyph suggest that it is no mere coincidence that nearly all of the rock art on the Picture Rocks hill is on the same side of the hill as the spiral. Furthermore, nearly all of the many animal-like glyphs on the west face of the hill face the central part of the hill where the spiral is located. This could be interpreted to indicate that the profiled animals are oriented to focus on the center of the hill's west face, perhaps even on the spiral petroglyph itself.

## Disturbances to the Site

Some disturbances to the rock art have been reported and noted. On January 29, 2008, Coronado National Forest archaeologist William Gillespie provided me with a copy of a 1928 Arizona Daily Star article about Tucson chamber of commerce historical committee member George Kitt placing U.S. Dept. of the Interior warning signs at the Picture Rocks site. The article only describes "Picture Rocks" as being "northwest of the city," so it is not certain whether it actually refers to AZ AA:12:62(ASM), which is now commonly called the "Picture Rocks" site, or whether it might refer to the Signal Hill archaeological site that is in Saguaro National Park-West. In followup conversations and research Gillespie determined that the property containing the AZ AA:12:62(ASM), Picture Rocks petroglyphs site was patented into private ownership by Henry Hubbard in 1934, part of his 640-acre claim filed under the 1916 Stock-raising Homestead Act. This suggests that the site was on federal land prior to Hubbard's homestead filing, and so the U.S. Department of the Interior in fact would have had authority to place federal warning signs on the property in 1928.

Interestingly, there are no small, petroglyph-bearing boulders at the now-named Picture Rocks site along Picture Rocks Road today, whereas there are many such rocks at the Signal Hill site, suggesting that small petroglyph boulders may once have been present at the Picture Rocks site but have been removed as suggested by the 1928 article. It was not until my visit of February 19, 2008, that I observed a couple of places near the bottom of the petroglyph hill on its west side, at about shoulder-level when standing in the wash bottom, where some of the hill's bedrock surfaces are much lighter than the surrounding desert-varnished rock, and in these lighter areas there are indentations or scars in the bedrock. This suggests that some chunks of the black-desert-varnished rock were removed at some time in the past. I didn't find any evidence that such removal, if it occurred, took place recently (i.e., it probably didn't occur in the past 10 years), but it may indicate that some petroglyph blocks or surfaces were chiseled off of the bedrock face by collectors. If so, this would be consistent with the 1928 Arizona Daily Star article

about government signs being posted because people had been removing some of the petroglyphs.

There are several instances of graffiti inscribed on the hill including incised initials and at least two Historic period dates. All of the ones that I observed and noted on February 15, 2009, include:

“1-31-32” date & “J L” incised initials

“IPCL” or “[unreadable character]PCL” incised initials partly overlying an older (more repatinated) petroglyph

“OROI” or similar characters

“1915” date and graffiti (possibly “M. King”), partly obliterated

Incised initials “HILL” or “H.LL”

Incised initials, possibly “HCP” or “MCP”

Incised initials “MML”: two instances, one of which is within 1 m of an incised dot-in-circle glyph

One of the two “MML” glyphs and the dot-in-circle glyph within 1 m below and to the right of it are both on the south hill face, on the same bedrock panel as a more ancient (presumably Hohokam) anthropomorph petroglyph that is near the crown of the hill. All of the other graffiti recorded on February 15, 2009, are on the west face of the hill. The “1-31-32” date and “J L” incised initials are in the same recess in the west hill face where upper hand-holding anthropomorphs glyph set is located.

On the west face of the hill where most of the petroglyphs are located there also are some places where pieces of rock panels have been spalled off, possibly by human action; and several spots that look like bullet-impact pits in some of the vertical rock faces.

In early 2007, after I had done the initial August 2006 reconnaissance survey, I observed a new design on the west face of the hill, among some petroglyphs but apparently not overlapping any of them. The new art looked rather like an elongated owl’s face with two big, open circles that resembled the eyes. This art addition may have been rendered partly in chalk or another kind of applied white pigment because it was nearly white when I first observed it but after a few months most of the design had faded away. By the time I visited on February 19, 2008, only the two eye-like circles and a blob that looked somewhat like a mouth were still prominent. When I first had a chance to observe this glyph close-up on

February 15, 2009, I could see that the eye-like and mouth-like elements were still present and had been ground into the rock face, probably with another stone, but I saw no chalk residues.

Allen Dart, RPA, Executive Director  
Old Pueblo Archaeology Center  
PO Box 40577  
Tucson AZ 85717-0577 USA  
520-798-1201 office, 520-798-1966 fax  
Email: [adart@oldpueblo.org](mailto:adart@oldpueblo.org)  
URL: [www.oldpueblo.org](http://www.oldpueblo.org)