Recording and Caring for Rock Art

Information compiled by

The Office of Archaeology and Historic Preservation

April 2014

Compiled by the Office of Archaeology and Historic Preservation, with permission from the Arizona Archaeological and Historical Society and the editor of **The Kiva**.

Tips on Recording Rock Art, excerpted and updated from:

Stuart, David R.
1978 Recording Southwestern Rock Art Sites. **The Kiva** 43(3 & 4):183–199.

This information should be used in conjunction with:

Swartz, B. K., Jr.
1992 Standards for the Recording of Petroglyphs and Pictographs. **International Newsletter on Rock Art** 1:18–20. [attached herein]

Information shown in brackets is from sources other than Stuart's (1978) article.

1. Record the archaeological site (e.g., other cultural features, artifacts, environmental setting) as well as the panels. "Rock art panels should be treated as features of an archaeological site." They should not be assigned separate numbers unless there is positive evidence that the rock art and other features/artifacts are not associated.

2. Record the location of each panel or face in a rock art site, including:

    a. the direction each panel faces
    b. the angle of each panel: e.g., horizontal overhang (0°), vertical (90°), horizontal shelf (180°).

3. The relationship of the present ground surface to the rock art should be recorded. Sometimes relative dating of rock art can be achieved if the panels are partially buried or are high above the present ground surface. The relationship is especially important if the panel is covered by a cultural deposit.

4. The incorporation of natural rock features into rock art elements or compositions should be described.

5. Color photographs should not be relied on to record colors. A Munsell chart or a system matching rock art colors with commercial pastels or similar mediums should be used. In addition, although there is a recognized need for recording the colors of pictographs, such recordation also can facilitate the study of petroglyph patination.

6. Differential patination (desert varnish) can be used to relatively date elements and styles. Field notes describing differential patination of elements can provide data that are not revealed pictorially.

7. Pictorially, imitative vandals' drawings cannot always be differentiated from aboriginal rock art. Detailed field notes should be taken on the amount and nature of vandalism.

8. Superposition of elements should be carefully studied and noted. Such observations can be important in chronological and behavioral studies, as rock art was sometimes purposefully obliterated.

9. Lichen growing over the elements in a rock art panel should be noted. The growth rate of certain [high altitude] lichen species has been determined through lichenometry, and the age of the panel might be discerned by this method.

10. Photographing rock art is usually the most efficient method of pictorial recordation. However, there are drawbacks to using only photographs for recordation. Because photos are two dimensional images, they do not always record three dimensional reality. Panels with a great deal of depth variability cannot be faithfully recorded by photographs. In photos, painted elements are sometimes difficult to distinguish from natural rock discoloration or deterioration. Petroglyphs can be difficult to photograph when the color of the natural rock surface is not dramatically different from the petroglyph. Photographs should be supplemented by drawings.

11. Although large-negative and press cameras are preferred by some archaeologists (large-negative cameras prevent distortion of the field of view), the following tips are for the more universally popular 35 mm SLR [and DSLR] cameras:

    a. Take photographs straight-on rather than at an angle to the rock art panel to minimize distortion.

    b. [If practical, a portable string grid can be placed against the rock art panel to provide consistent scale.]

    c. Slight wide-angle lenses [focal lengths of 28–35 mm] will facilitate recording in confining situations, and capture the interrelationships between rock art elements more easily than "photo-mosaics" made with longer lenses. However, do not use very wide-angle or

"fisheye" lenses with focal lengths shorter than 24 mm as these produce linear distortion, especially around the margins of the frame.]

d. Many times a strobe (flash) is necessary to provide enough light in caves and rockshelters. Petroglyphs that are patinated or done on rock with no patina can be accentuated with a strobe. [Use of a strobe also can eliminate shadows from crevices and other irregularities on a rock face.]

e. Lighting is a crucial variable in rock art photography. Diffused straight-on light is best for pictographs. Shallowly carved petroglyphs often are most easily photographed with direct 90° light, while more deeply carved/pecked panels are successfully photographed with 45° side or top lighting.

f. [Filters may be tried to enhance contrast and visibility of rock art elements otherwise difficult to photograph. Use a polarizer filter on patinated panels to reduce glare. Try a red #25 (A) or yellow #6 (K), #8, or #9 filter with black-and-white (B/w) film for patinated panels, but use fast films (ISO 320+) as filters reduce light transmitted through the lens. Use a blue #47 filter on pictographs (especially red painted) with fast B/w film. Use a #81A color correction filter when using color daylight film with an electronic flash.]

g. [The sharpest and most-stable prints from digital photos are achieved by starting with an uncompressed file (e.g., *.tif or RAW formats) taken at a high resolution setting (300+ ppi), then printing on high-quality paper (e.g., Fuji Crystal Archive) using a pigment-based ink (e.g., Epson's Archival Ink). In general, pigment-based inks are superior to dye-based inks, regardless of brand, but prints should be left to dry for 12+ hours before storage in archival sleeves. Also, the longevity of stored prints may be enhanced by matching brands of paper and ink, such as printing on HP Premium Plus paper with HP Vivera Pigment ink.]

12. Infrared films should be considered for badly faded paintings and unpatinated petroglyphs. [Infrared film is apparently only useful in recording superimposed figures when: a) the obscured pictographs are made with a carbon-based paint, and b) when the figures have been obliterated by a thin layer of paint or desert varnish. A pictograph obscured by mud or clay cannot be revealed by infrared film. Always use a red #25 or #87 filter with infrared film, and adjust focus according to the instructions provided with the film.]

13. Tracings are made by placing clear plastic sheets over the rock art and drawing the rock art elements and natural rock features with felt-tipped pens or non-wax colored pencils. [Such tracings are potentially damaging to the panel and should not be done without the permission and supervision of a rock art conservator or other expert. Rubbings and latex molds are inappropriate methods under any circumstances.]

14. Photogrammetry, the technology of photographing images (usually two paired exposures) to produce three dimensional data, offers the promise of greater recording possibilities. The technique requires specialized equipment but creates a record that is accurate and easy to store. [Laser scanning technology likewise offers a non-destructive option for recording panel details to an extremely high degree of accuracy.]

15. [Digital image editing programs may be used to enhance the visibility of faded or low-contrast panels. The goal is to bring out the details in rock art that were once more visible, not to distort or alter a panel in ways that present misleading information. One such program that has been successfully applied to faded pictographs is DStretch (www.dstretch.com), a plugin to the Image J processing program.]

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http://www.historycolorado.org/sites/default/files/files/OAHP/Programs/PAAC_biblio_RockArtBG.pdf

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THE FOLLOWING IS FROM:

International Newsletter on Rock Art No. 1 (1992), Pp. 18–20, By B. K. Swartz, Jr.

STANDARDS FOR THE RECORDING OF PETROGLYPHS AND PIGTOGRAPHS

The American Committee to Advance the Study of Petroglyphs and Pictographs, formed in 1979 and numbering some 80 scholars, has proposed a set of minimum standards for the recording of petroglyphs and pictographs. Its statement, as follows, may serve as a useful basis to discuss the requirements for the recording of rock art.

It is impossible to prepare a universal, objective set of standards for recording petroglyphs and pictographs. Data collected often relate to specific problems being investigated. Many of the data are not objective, but observational and contextual. Also, strictness of standards should vary with site fragility and accessibility. A deteriorating petroglyph 100 miles from permanent settlement encountered by a solitary archaeologist doing survey work in rugged wilderness is to be treated differently from one scheduled to be destroyed by imminent highway construction or one that is thoroughly stabilized on a bluff across from a national park headquarters. The following standards are minimal and intended to apply to a single transitory visit to a friable surface locality. Ideal conditions for recording , such as the relation of the season and time of day with face light exposure for photographic enhancement, may not always obtain. Broad regional archaeological observations should be made in concert with specific recording.

In deciding which techniques are to be applied in any particular case, the goal should be optimal data recording and minimal resource destruction. Methods requiring surface pressure, application, or insertion, such as painting (aluminum powder, tempera, etc.), tracing, rubbing, molding, or grid anchoring, cannot be universally condoned and should not be attempted on friable surface markings. These approaches break down the basic rock structure, and some also contaminate or alter surfaces in such a way as to distort potential trace-element studies.

Direct transfer records demand storage space that may not be available. Chalking should never be done, and water spraying, especially of pictographs, should not be done except when there is no doubt that destruction is imminent. Varied photographic techniques are stressed, since they document and do not require physical contact. Careful photographic work and draftsmanship are probably sufficient for basic recording, but metric data are included because they are easy to gather and may provide useful comparative information.

The following types of records should be made:

Face recording, metric data (objective):

1. Site and face (or panel) designation
2. Face datum
3. Face dimensions (straight)
4. Face dimensions (surface)
5. Direction of face (in degrees, compass ; check for magnetic distortion, iron in rock, etc.)
6. Inclination of face (in degrees, plumb bob and protractor)
7. Height of base of face from ground
8. Height of top of face from ground (check overhangs, boulder tops, etc.)
9. Discrete design-element designation and dimensions
10. Distances between design elements
11. Distances of design-element data from face datum
12. Range of line width (for each discrete design element and each style
13. Range of line depth (for each discrete design element and each style [petroglyphs])
14. Cross-section of lines (for each discrete design element and each style [petroglyphs])
15. Colors, including rock surfaces (Munsell color charts [pictographs])
16. Hardness of rock (Mohs scale)

Face recording, observational data (descriptive):

1. Vandalism
2. Natural defacement (e.g., erosion of surface, water lines, lichen, patina, smoke blackening, etc.)
3. Old ground surfaces
4. Superpositions
5. Type of rock
6. Conformation of rock (cracks, holes, incorporation, etc.)
7. Wear surfaces (e.g., carved, cut, engraved, pecked, ground, or abraded, rubbed, drilled, with secondary smoothing, etc. [petroglyphs]; brushed, daubed, blown, stenciled, etc. [pictographs])

Photographs: Take many (especially when site is difficult of access), both fine-grained black-and-white and, especially for pictographs, externally coupled color film with a Macbeth Color-Checker. (Avoid using internally coupled film, even for truer color.) Vary exposures and angles, take close-ups and panoramas from site and of site, use slide-lighting, and experiment with filters. Photograph everything; attempt to use constant distances and systematic coverage, and record procedure. Keep records of photographs with site and face designations; omit scales, which may clutter

photographs, where face dimensions are recorded. Have black-and-white negatives fully processed chemically, not machine-processed; send developed color film to a professional laboratory for processing. Store prints in acid-free envelopes.

Drawings (not a substitute for photographs): Make drawings to a consistent scale. Work with pencils to allow for revision. Use a different color for each technique of rendering or style or (in pictographs) pigment on face to note, by "drawing over," superpositions. Learn important design-element conventions; note offsetting in designs. Do not assume the markings are art, and avoid interpretive preconceptions. Record all markings, including "graffiti." If at all possible, have two or more persons make drawings, independently. Include scale, directional indicator, and site and face designations on each drawing.

Map (if multiple sites or site with multiple faces): Show relationship of faces within sites and of sites to each other, unmarked boulders, trails, other significant landforms, data points to map, site, and face, directional indicator, and complete field numbering of sites and faces.

General description (subjective): Describe geomorphology of area: landforms (e.g., routes, passes, washes, etc.), site situations (e.g., river-valley cliff, cave, mountain-top, etc.), distribution of plant cover, location of other archaeological sites in the area, and cultural associations (portable and non-portable), especially diagnostic and decorated remains such as points and pottery or tools or materials that may have been used to produce the markings. Note unique features of the surroundings. Offer conservation recommendations based on site uniqueness, condition, and location: ignore (initiate no policy-keep from public), protect (barriers, fences, grilling, security system), restore, stabilize (impregnation, coating), salvage (record more intensively).

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PRESERVATION AND CONSERVATION ISSUES

Rock art—pictographs and petroglyphs—are a form of wall painting or mural art. They are not portable objects and should remain in situ whenever possible. They should be preserved rather than restored since restoration, if done improperly, can destroy rock art. Unfortunately, damage to rock art panels, both natural from weathering and intentional vandalism, is an on-going problem. However, rock surfaces are more fragile than they may appear, and special expertise is required to attempt to remove graffiti, repair other kinds of vandalism, retard erosion, stabilize cracked and spalled panels, etc. The list on the following page includes professional conservators with special training and experience on rock art. Additional information as well as workshops on rock art conservation are available from:

Getty Conservation Institute
1200 Getty Center Dr., Suite 700
Los Angeles, CA 90049-1684
310-440-7325
www.getty.edu

ROCK ART CONSERVATORS

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