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## MANAGEMENT OF PETROGLYPH RUBBING AT TWO PACIFIC NORTHWEST COAST SITES

Robert Mark and Evelyn Newman  
*U.S. Geological Survey*

### ABSTRACT

*In this article, we compare management of petroglyph rubbing at a site on Vancouver Island, British Columbia, with that of one on Wrangell Island, Alaska. The two sites provide a striking contrast in interpretation and protection. We conclude that the important site on Wrangell Island should receive significantly more protection and management.*

Making rubbings from stone surfaces, be they architectural, monumental, or containing rock art, can damage and erode the surfaces (e.g., Strangstad 1988, Wainwright 1990). The intensity of damage caused by rubbing depends on the fragility and friability of the rock, cumulative number of rubbings made, and the technique and care used (Sanger and Meighan 1990). Bits of rock were reported to adhere to the back of rubbings from an Alaskan petroglyph site, Sandy Beach (Greg Bettis, personal communication, 1993). He surmised that the particles, larger than sand-grain size, came directly from the rubbed surface because he could identify the rock, a vesicular basalt, even though he had not been at the site. Others could also have been foreign particles that were ground up in the rubbing process. In both cases, the original surface was somewhat eroded. He also noted that whatever had been used to make the rubbing had gone completely through parts of the porous paper and probably left a residue on the surface of the glyph. By altering the naturally weathered surface, rubbings of petroglyphs may

interfere with subsequent geochemical dating techniques (Loendorf 1989; Loendorf et al. 1992). The practice of making rubbings of gravestones has been prohibited in the city of Boston since 1973 and has been regulated at other sites (Strangstad 1988). Although restricted at some rock art sites, the making of rubbings is still being encouraged, directly or indirectly, at many other rock art sites.

Petroglyphs of the Pacific Northwest style are particularly attractive to rubbing enthusiasts because they offer the opportunity both to capture an ancient and esthetically pleasing design and to create an art object with personal technique and material. How-to books have been written (e.g., Hill 1980, fourth printing 1989); commercial rubbings are for sale in the region and by mail-order catalog. At several localities, such as Nanaimo in British Columbia, petroglyph replicas are made available for rubbing. The city of Wrangell in southeastern Alaska is perhaps unique in its efforts to foster petroglyph rubbing of real glyphs as a major tourist attraction (Barabas 1986, Sunset

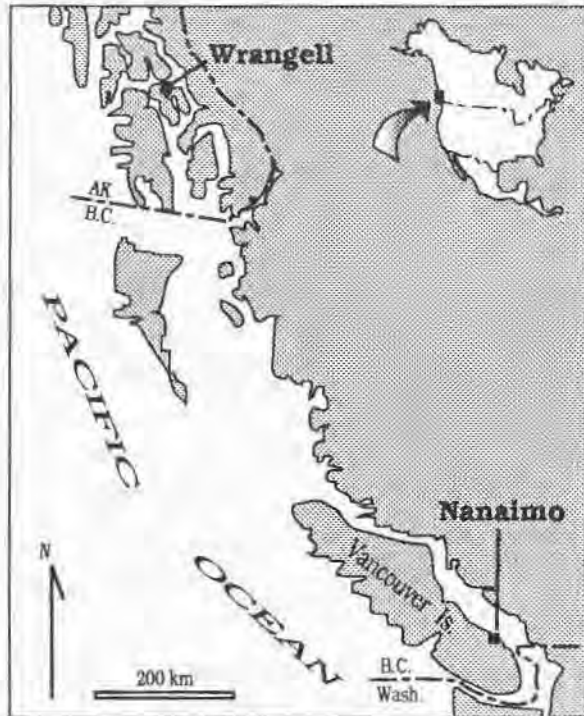


Figure 1. Map indicating location of Wrangell Island, Alaska, and Nanaimo, British Columbia, Canada.

Magazine 1989). Guidebooks to the area publicize the making of rubbings at Wrangell's petroglyph site (e.g., DuFresne 1990). The following discussion compares the management of petroglyph rubbing at these two sites; Nanaimo, in Canada, and Wrangell Island, in Alaska (Figure 1).

#### NANAIMO, BRITISH COLUMBIA, CANADA

An example of site management that includes visitor education and replicas is provided by Petroglyph Provincial Park, a small site near Nanaimo on Vancouver Island, British Columbia. Glyphs extend across an outcrop of relatively soft, gently sloping sandstone. A walkway guides visitors around most of the glyphs (Figures 2 to 5). In the 1970s, prompted by concerns over increasing vandalism, several government agencies met and developed a plan to protect the glyphs (Research and Planning Division, 1979). The plan elements and their implementations to date are summarized in Table 1.

Despite this plan and implementation of important parts of it, the site apparently is not being

monitored on a regular basis. There had been earlier attempts at protection (Kennedy, 1979). As indicated in Table 1, a roof placed over the site and a bronze plaque placed on some of the glyphs, before development of the plan, were identified as problems and subsequently removed.

One noticeable result of the plan is the well-designed interpretive signs. These introduce the visitor to the site, the native cultures, and possible interpretations of the symbols. One sign explains the impacts of rubbings as follows:

This interpretation area contains concrete replicas of many of the clearest and most significant petroglyph designs. The actual petroglyphs are located at the end of the pathway to your left. Because they were carved into relatively soft sandstones, they are too fragile to withstand walking, handling, or the making of rubbings. Therefore, visitors are invited to study and observe the original petroglyphs but are requested to use the replicas for rubbings.

Figure 6 shows a visitor creating a rubbing from one of the replicas in the interpretive area.

Nearby, the Nanaimo Centennial Museum incorporated reproductions of many regional petroglyphs along parts of the pathway around the building (Figure 7). The replicas were made in 1967 and in place at the time the museum opened. According to museum staff member Rick Slingerland (personal communication, 1993), these reproductions were probably created by overlaying to-scale photographs of the original glyphs on the concrete as it was setting and having an artist trace the photographs. School groups and museum-sponsored classes use the concrete reproductions for rubbing and to educate students about both the

Table 1. Petroglyph Provincial Park Plan Elements

1979 Plan Element	Implemented
Add 3 acres to existing 3.8 acres	no, now too late
Student guide-caretakers to monitor vandalism	no
Interpretive signs	yes
Regular monitoring and erosion research	no
Remove detrimental shelter roof	yes
Remove bronze plaques from petroglyphs	yes
Install low guide rail around petroglyphs	yes
Plant indigenous vegetation where needed	?
Create fiberglass casts for "rubbing enthusiasts"	concrete
Build Indian craft gift shop and place for lectures	in the region
Create rock art coordinator position	no





Figure 2. Nanaimo Petroglyph Provincial Park visitors observe petroglyphs from path, staying behind fence that discourages access but allows photography.



Figure 5. One of four examples of carved bottom-fish at the site. A Coast Salish myth tells of a supernatural being named Thochwan who is said to have caught fish and other creatures that he brought to the site and commemorated by pecking their outlines in the stone.



Figure 3. Conspicuous sign not only states the rule but also explains why.

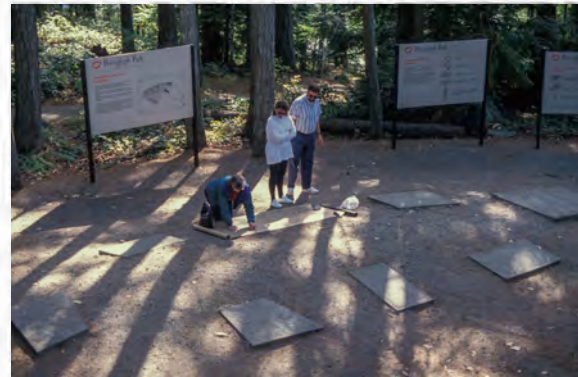


Figure 6. Petroglyph Provincial Park's interpretive area with signs and concrete replicas, where park visitors can make rubbings. One is in use.



Figure 4. Design elements that the park signs refer to as sea-wolves are similar to prehistoric portable art excavated at Prince Rupert and dated at about 2,000 years old.



Figure 7. Some of the petroglyph reproductions along walkway outside Nanaimo Centennial Museum.



Coast Salish culture and the need to respect and not rub the original glyphs; however, the sign at a real glyph outside the museum says nothing about not rubbing.

### WRANGELL, ALASKA

A contrast in management style is provided by the Wrangell petroglyph site. The petroglyphs are carved mostly in moderately hard semischist bedrock and on boulders that are exposed or scattered on a beach (Figures 8 and 9). Some of the glyph-bearing rocks are within the tidal zone in State jurisdiction; those above the tidal zone are in city jurisdiction or on private property (see Barabas 1986, for a discussion of two possible explanations of the function of the glyphs as totemic displays and territorial markers based on information from the Tlingit).



Figure 8. Wrangell whale petroglyph, used by tour guides to "teach" rubbing, is a popular image with tourists and shows lighter surface and wear from repeated use. Glyph is about 0.3 m long.

We visited the site for about two hours in August 1992, during the Wrangell port of call on an Alaskan cruise. Before we disembarked, the cruise-ship staff briefed those going ashore about the attractions of Wrangell, indicating that petroglyph rubbing is a suggested activity. The ship's artist had given lessons in rubbing, and we were told that do-it-yourself supplies could be purchased in town, or one could pay for the Wrangell-area bus tour that included the making of rubbings as one of its features (Figure 10). On the basis of the number of cruise ships and on the participation of as many as several hundred tourists per visit, we estimate that the site is currently being used by several thousand people each year. Before cruise-ship tours (circa 1978), traffic on site was virtually nonexistent.



Figure 9. Without interpretive signs or training in proper rock-art-site-behavior, visitors walk all over the Wrangell glyphs.



Figure 10. Busloads of tourists, rice paper for rubbing in hand, scramble across Wrangell's petroglyph beach.

Free literature available on the dock shows petroglyph rubbing in progress, and signs guide visitors to the rocky beach. However, neither provides cultural/resource-protection information



or guidance as to proper behavior. Visitors arrive in both small and large groups, by foot and bus. Those in "formal" tour groups are shown "how to do it" by guides, but there is no management at the site. People run all over the glyphs because they have only a few minutes to make rubbings with ferns, charcoal, or crayons. Residue from these rubbings sticks to the rock surface. Visitors commonly stand on one glyph to rub another, and go back to town having learned little about the petroglyphs and even less about how their activities can degrade them (Figure 11) (for additional discussion of how walking on glyphs can degrade them, see Coles 1992). Several of the rocks show discoloration from repeated rubbing, stray crayon marks, and lighter surfaces caused by the making of latex molds (Figure 12).



Figure 11. While rubbing one glyph, a Wrangell visitor has her left foot on another glyph, which is already very eroded and hard to see.



Figure 12. Lighter rectangular area enclosing glyphs shows where natural patina of the schistose rock has been altered and removed by the process of mold-making and rubbing a Wrangell glyph. Glyph is about 0.3 m square.

Because most of the rocks are moderately hard and on an exposed beach, they appear resistant to damage, thus leading some local interests to believe that they are indestructible. However, the repeated rubbing and trampling will surely take their toll (Strangstad 1988, Wainwright 1990), especially as tourism in the area increases. In addition, many of the smaller rocks are subject to easy theft. Early in the 20th century, 40 individual glyphs were counted; now only 27 can be found, and the situation could be worse were it not for the vigilance of property owners adjacent to the beach (Lezlie Murray, personal communication, 1993). Six of the boulders have been moved downtown to the museum and library for display and safekeeping. Some of the "missing" glyph boulders may have been buried by sand, which can shift dramatically during storms.

We conclude that visitors to the site are not learning the most important lessons from their visit, that is, the cultural significance of and need to protect the glyphs. There appears to be no official onsite management and, as far as we have been able to learn, no site-management plan.

Since our visit, the U.S. Forest Service has published a brochure about rock art in southeastern Alaska (U.S. Forest Service, 1992), and in cooperation with the city of Wrangell, an information kiosk has been placed at the end of the road to the petroglyph beach. The brochure gives photographic hints and encourages visitors "to take home a memory by taking photos." The kiosk display provides educational material about possible explanations as to who made the petroglyphs and why they are located near the mouth of the Stikine River. Neither the brochure nor the kiosk explicitly mentions rubbing and its negative impacts, nor do they encourage proper rock-art-site behavior, such as not walking on the glyphs. We hope that this start toward site interpretation is the first step toward a comprehensive management plan that will include conservation.

## CONCLUSIONS AND RECOMMENDATION

Comparison between the Wrangell and Nanaimo petroglyph-site management highlights different ways of dealing with the growing interest in Pacific Northwest cultures and the art they created on rocks. The management of Petroglyph Provincial Park in Nanaimo, British Columbia, demonstrates a positive approach that provides for visitor enjoyment, ethnological education, and possible

acquisition of an art object, while simultaneously attempting to protect the irreplaceable resource.

Wrangell's petroglyph beach would definitely benefit from a site-management plan that provided for the safe making of rubbings, the protection of the resources, and the education of its thousands of visitors. Such a plan would provide for the creation of replicas of some of the glyphs for the purposes of making rubbings and educating the public on the negative effects of rubbing real petroglyphs. The plan should incorporate the concerns and responsibilities of the U.S. Forest Service, State of Alaska, City of Wrangell, and area residents including indigenous people and property owners. It could also include provisions for educating cruise-ship personnel regarding the revised local policies. Such a plan would both enhance the value of the petroglyphs to the local economy and be a model for the management of heavily visited rock art sites.

## ACKNOWLEDGMENTS

Ken Hedges, Chief Curator of San Diego Museum of Man, brought these sites to our attention. U.S. Forest Service archaeologist Mark McCallum and interpretive specialist Lezlie Murray provided helpful information on the brochure and kiosk. Ric Simmons of BC Parks sent us a copy of the Petroglyph Park Plan. Nanaimo Centennial Museum display technician Rick Slingerland provided information on the museum replicas. Greg Bettis of Rock Art Research Education shared data on the impacts of rubbing petroglyphs, and Jackie Zak of the Getty Conservation Institute provided helpful references.

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# Added Notes

The original paper was published with gray-scale images that were largely unintelligible. They have been replaced with the color images.

As a result of this paper, the management of the Wrangell petroglyphs has changed. Rubbing of the petroglyphs is no longer permitted, and replicas for rubbing have been provided.



## Replicas for Rubbing

Petroglyph Beach is a protected archaeological site containing the historic pages of a great mystery. The petroglyphs on this deck are replicas of designs from the beach that were put here for you to make rubbings. Rubbing the original petroglyphs causes them to erode away; like tearing the pages from the mystery. So rub-away on these replicas, but experience the originals on the beach with your eyes and cameras only.

### How Good A Detective Are You?

There are more than 40 petroglyphs visible on the beach but many are difficult to see. They are worn smooth by the tides and sand. Test your observation skills and see how many you can count, using eyes only. The sands here at Petroglyph Beach are said to hide many more. "Thunderbird" petroglyph was discovered during construction of the viewing deck. It was buried in the sand and is now on display at the Wrangell Museum.

Help us protect what remains of Alaska's past so future generations may also enjoy this mystery.