

# Archaeological Art on Mo'orea, French Polynesia: an Overview

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*Stone was possessed with godly power* (Henry 1928:382)

Aside from Roger C. Green's pioneering settlement pattern archaeology carried out in the Opunahu Valley in the early 1960s (Green 1961a; 1961b; Green et al. 1967; Green and Decantes n.d.), followed by Dana Lepofsky's (1994) work on prehistoric agricultural intensification in the same valley in 1991, no systematic survey has been undertaken on Mo'orea. Generally, archaeological inquiry has been limited to documentation and analysis of the elite architecture that is visible on the surface (e.g., Emory n.d., 1933; Decantes 1993; Wallin 1993).

Archaeological art (petroglyphs and sculpture) is the least understood aspect of the cultural remains on Mo'orea. Chronology is sketchy and the past social significance of the images is assumed to have been passive, not a force in culture change. Additionally, the cultural context is missing.

In 1989, the first research on petroglyphs was conducted on Mo'orea. Ultimately, three separate sites with pecked figures, representing eleven individual boulders, were documented (Millerstrom 1989; 1991; 1997; Millerstrom and Baumgartner 1996). In this paper, I present a brief overview of the sites, followed by a discussion of how the images fit into the broader Polynesian context. All archaeological investigation was conducted in cooperation with Maeva Navarro, director of the Département d'Archéologie du Centre Polynésien des Sciences Humaines 'Te Anavaharau', Tahiti (CPSH). Each boulder was given a number provided by CPSH and copies of reports with drawings are housed at CPSH.

record the site, the marae complex was one of the highest ranking of *Arii marae* on Mo'orea, and equal only to Taputapu-atea at Papetoai and Umarea of Afareaitu (Henry 1928:186; Emory 1933:97; Eddowes 1991:7). Eddowes, in his report, notes

## MO'OREA

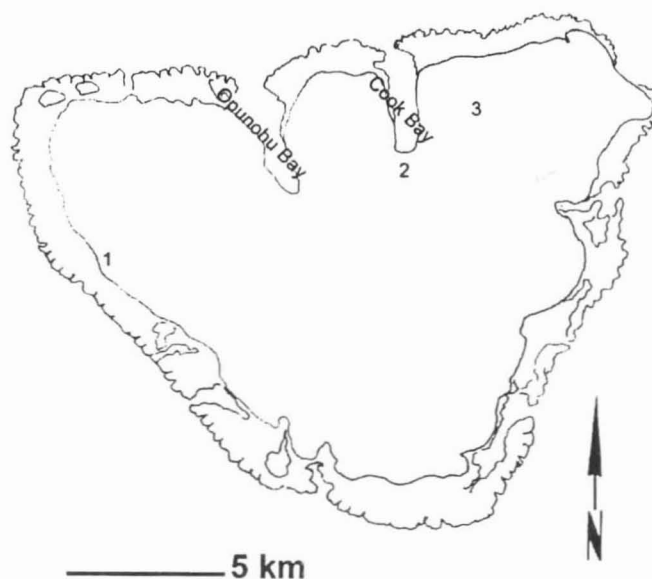


Figure 1. Map of Mo'orea showing location of sites: 1) Marae Nuurua; 2) Paopao; 3) Tefaarahi.

that the *marae* was historically known as 'Te ahu i Nuurua' and was built by the chiefess Tefeafo (Tefe'au) for her brother Punua te rai tua (Baessler 1900:13, in Eddowes 1991:8). Genealogical information indicates that Tefeafo lived some 19 generations before 1900, or AD 1425. However, two smaller structures, Marae Tumu I and II, located adjacent to the western wall of the large court, were probably from an earlier construction period. One of these was a founding *marae* (*ereere fenua*) probably built for the foundation (*tumu*) of the chiefs of Nuurua some 38 generations before 1900, or AD 950 (Emory n.d.:107; Eddowes 1991:8-11). During restoration it was discovered that Marae Tumu I and II are aligned with, but not attached to, the western wall of Te ahu i Nuurua. This spatial arrangement allowed access from Marae Tumu I and II to the large marae, and verifies their antiquity according to oral tradition.

A trapezoidal shaped upright stone (128 cm high) of pinkish basalt that stands in front of Marae Tumu II ahu has three turtle motifs and a pair of eyes pecked into its court face (Figure 2). The turtles are 3/4 cm deep and are executed with sophistication. Their roundish bodies have sweeping curved lines depicting flippers. Sadly, someone has scratched a fish figure and some curved lines on one side the stone. No excava-

### PHYSICAL SETTINGS AND DESCRIPTION OF THE SITES

Mo'orea or Aimeo, a high island of approximately 64 square km, is located 25 km northwest of Tahiti, in the Windward Islands group. Geologically the island is more ancient and thus more eroded than Tahiti. Dramatic sharp mountain ridges extend more than 1500 m above sea level and the island is surrounded by a protective coral reef. Two deep bays, Cook's and Opunohu, located on the north coast, extend inland on each side of Rotui mountain. Prehistorically, people lived more than a km from the coast (Green et al. 1967:216). Mo'orea was sometimes called Fe'e (octopus) because the eight mountain ranges dissect the island into eight natural segments. Formerly the island was the retreat of fugitive Tahitian warriors.

### MARAE NUURUA

Marae Nuurua, a ceremonial site, is located on the shore opposite Taota pass at Haapiti, in the district of Vararu (Figure 1). It was restored in 1991 by Mark Eddowes, an archaeologist with CPSH. The complex, covering nearly one hectare (9,100 square meters), consists of one large *marae* (shrine) with a collapsed *ahu* (temple) on the sea side, and two smaller marae situated to the west. The court of the large marae measures approximately 50 x 100 m (Eddowes 1991:20).

According to Emory, who was the first archaeologist to

tion has been conducted at marae Nuurua. However, two pearl shell blanks for making fishhooks were recovered below the pavement of the court of the large marae (Eddowes 1991:23).

**PAOPAO VALLEY**

The site, located between Paparua and Moua Puta consists of a single large flat outcrop. Measuring 5.5 x 5.90 meters, the outcrop is 1.20 m high (Figure 3). Situated on a leveled area among agricultural terraces, the outcrop is approximately six meters from the eastern edge of Paopao's main river. According to the property owner, Teaharua and Matarau are some of the several names written on the land deed. The image outcrop was first seen by the European landowner sometime prior to World War II. Photographs taken by a family member in 1979 show a few more turtles than were visible in June 1991 when I first visited the area. Aside from four turtle images, only one anthropomorph is visible (Figures 3, 4). A double circle and a single circle were originally turtle motifs, according to the early photographs. One of the figures is unique (Figure 5). It may represent an archery bow, used with games played prehistorically by elites and known to have been practiced on Mo'orea. Or, it may represent a tropical bird. No similar figure has been documented elsewhere in Polynesia and it remains unidentified. In order to document as many figures as possible, we worked at night with kerosene lamps and flashlights.

Due to occasional floods, the outcrop's flat surface is abraded by debris from fallen trees and boulders. Further damage to the outcrop occurred during a cyclone on 13 December, 1991. In 1997 a large part of the center of the image stone has exfoliated and the figures were barely visible.

TEFAARAHI VALLEY (THE BIG VALLEY)

Several large and complex image boulders were discovered in the late 1980s by Derek and Helene Grell, the present owners of the property. The discovery motivated them to promote the site as a tourist attraction. Because this was an unusual site on Mo'orea, the local population was initially suspicious of the images' authenticity. This inspired the owners to contact

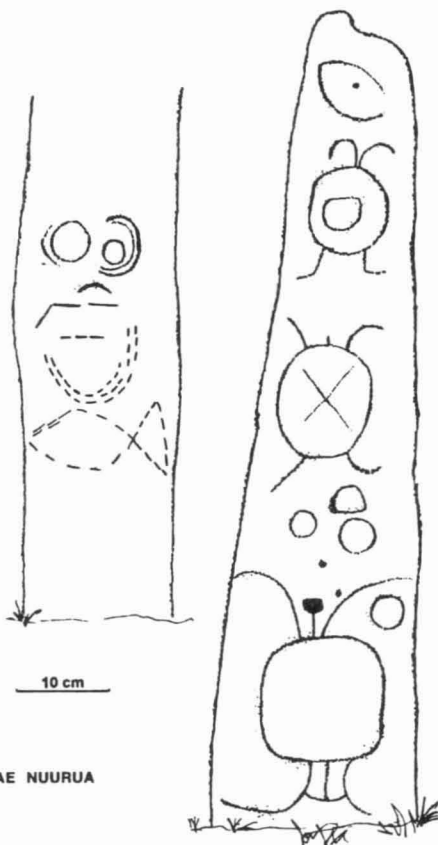


Figure 2. Three turtles and one face/eyes images located on a trapezoidal upright stone at Marae Tumu II.

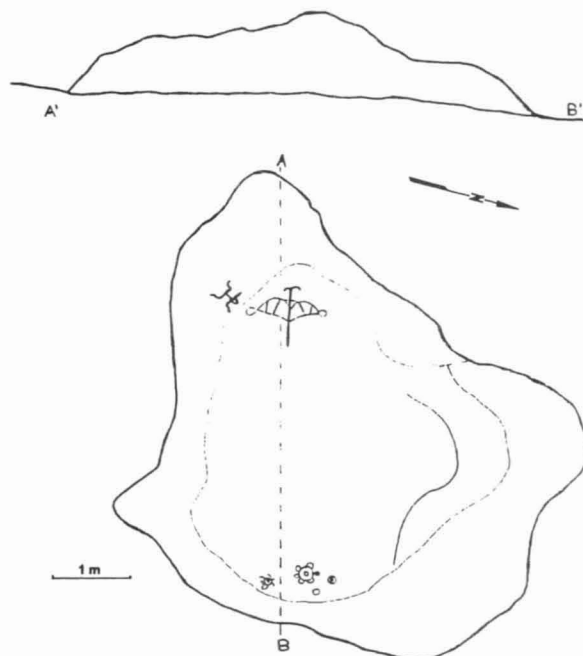


Figure 3. Plan of outcrop within the Paopao Valley with four turtles, one anthropomorph, and one exotic figure. Upper drawing is an east-west cross section of the outcrop.



Figure 4. Turtle images and circles on outcrop in the Paopao Valley.

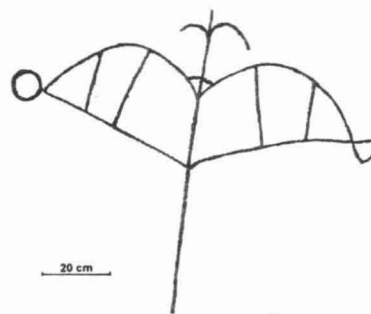


Figure 5. An image, unique and unidentified, on the outcrop in the Paopao Valley.

CPSH to have the images validated and to try and place the site in the history of Mo'orea.

I worked in the valley on several occasions, and each time found additional image boulders. The cultural significance of the site was brought to public attention by our archaeological activities and the visit by Maeva Navarro (with a group of student guides in July 1996). This was noted in the local newspaper (*Les Nouvelles de Tahiti*, lundi 17 Juin 1996; *La Dépêche*, mercredi 10 Juillet 1996).

The petroglyph site is located inland in Tefaarahi Valley (district of Marepa), at the base of a sharp-edged mountain, approximately one km from the coast. Situated about 250-300 m above sea level, the area is relatively steep. Numerous late prehistoric or early historic houses and agricultural terraces are visible in the underbrush. Midden, including sea shells, bones, and one human tooth, was noted on the surface.

Table 1. Petroglyph sites on Mo'orea.

Sites	Number of images	Number of boulders
Tefaarahi Valley	110	9
Marae Nuurua	10	1
Paopao Valley	7	1
Total	127	11

A total of fifty-five individual figures on seven different boulders have been documented at Tefaarahi (Table 1). The largest boulder measures 3.10 by 2.50 meters with an approximate height of one meter and is not associated with any structures. Petroglyphs found on this boulder are shown in Figure 6. However, two anthropomorphs are located on the top surface of a boulder that forms part of a platform, presumably a house site (Figure 7). Two additional boulders are incorporated into a terrace wall (Figures 8 and 9). Some rock art panels are difficult to see and it is likely that more figures are visible under different lighting conditions (e.g., early morning or late afternoon, or by artificial light at night).

All the images were repeatedly pecked, producing U-shaped grooves. The lines range in depth from 2 to 10 mm; width varies from 0.5 to 2-3 cm. Although the figures are oriented in several directions, a southern orientation towards the mountains appears to have been preferred (Table 2). The reason for this is uncertain, except that some mountains in Polynesia were considered to be sacred.

Table 2. Cardinal orientation of panels at Tefaarahi.

Orientation	Number
North	0
South	4
East	1
West	0
Southeast	2
Northwest	1
Facing up	1

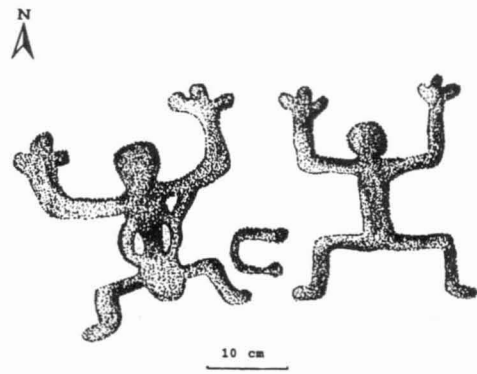


Figure 7. Two anthropomorphs on a boulder that is part of a house platform in Tefaarahi Valley. Note three-fingered hands.

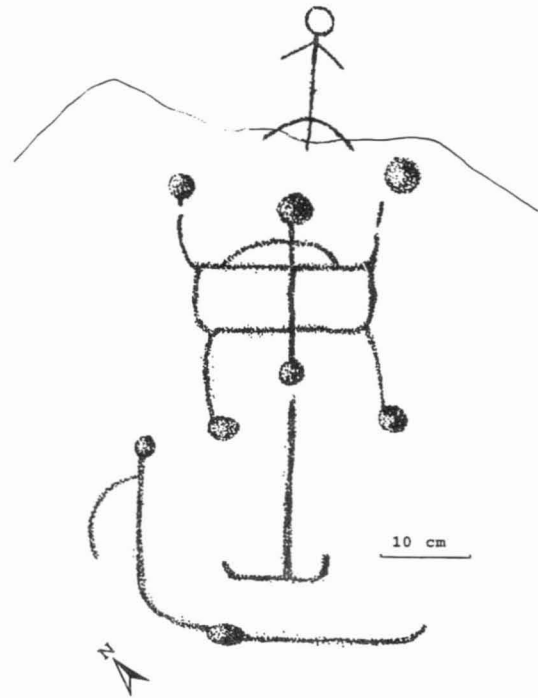


Figure 8. Anthropomorphs on a boulder that is incorporated into a terrace wall in Tefaarahi Valley.



Figure 6. Turtle images and human figures on a large boulder in the Tefaarahi Valley. The panel also contains a few cupules, some of which serve as heads for the turtles and anthropomorphs.

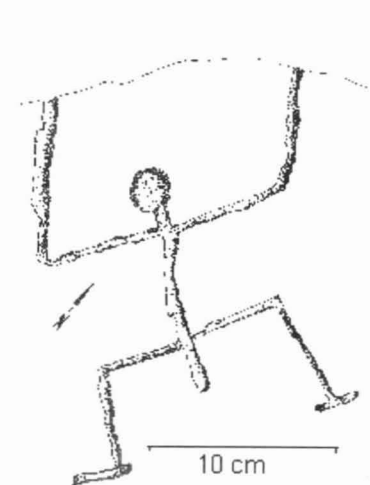


Figure 9. Anthropomorph on boulder in Tefaarahi Valley.

Lepofsky (n.d.) mapped part of Tefaarahi and excavated two test units. She found charcoal samples that were dated to the late prehistoric period. Lepofsky (pers. comm. 1996) opines that, compared with other valleys on Mo'orea, Tefaarahi was marginal for prehistoric agriculture and was probably settled after the more fertile zones were occupied.

The numerous images at Tefaarahi and the relatively few that have been located at other sites may reflect the marginal existence of the previous population (Table 3). It appears that, because of the limited agricultural opportunities in the upper part of Tefaarahi Valley, the inhabitants had a special need to appease and communicate with their gods. Thus the inhabitants engaged in more ceremonies involving image-making than did those living in Paopao Valley and the area around Marae Nuurua, the well-watered areas of Mo'orea.

Unfortunately, a previous owner bulldozed some of the area to make room for cacao, coffee, and banana cultivation. It appears that some of the image boulders were moved in the process. Recently, a section of the slope above the site was leveled for a new villa; erosion will adversely affect the archaeological site.

Relatively little archaeological investigation has taken place at Tefaarahi, thus the cultural history of the area is largely unknown. Although the age of the images is uncertain (they may have been made before the area was occupied), they are probably contemporary with the residential houses and agricultural terraces. The Tefaarahi site is of archaeological interest and further investigation is recommended, particularly in view of the damage that has occurred already to the surrounding area and the site itself.

Table 3. Image sites and associations.

Sites	Architectural association	Environment	Number of images/boulders
Tefaarahi	agricultural terraces, habitation sites	marginal	110/9
Marae Nuurua	ceremonial complex	fertile	10/1
Paopao	agricultural terraces, habitation sites	fertile	7/1

THE MO'OREA PETROGLYPHS IN BROADER CONTEXT

In general, the rock art motifs on Mo'orea fit nicely within the Polynesian imagery already recorded or noted on Tahiti, Bora Bora, Huahine, Raiatea (Emory 1933:171-179; *Inventaire Archeologique de Polynesie Francaise* 1989), Maupiti (Emory 1933); Ra'ivavae (Marshall n.d.; Edwards n.d.; Millerstrom n.d.2) and on the Marquesas Islands (Millerstrom 1997). Turtles, human stick figures, fish and curvilinear geometric figures are part of the Polynesian repertoire (Table 4). However, the spatial distribution of images, the internal spatial relations, and architectural and ecological associations differ. While some inhabitants on islands never pecked images on stones, other island cultures developed some characteristic figures over time, e.g., the triangular muscular anthropomorphs common in Hawai'i (Cox and Stasack 1970; Lee 1989; 1990-91), the birdman figures on Easter Island (Lee 1992) and the human faces in the Marquesas (Millerstrom 1997).

Turtles held a special place in the cultural past of Polynesia. While turtle motifs occur in most islands where images on stones were made (a notable exception is Tubua'i), turtle motifs are especially numerous in Raiatea and Bora Bora (Figure 10).

Turtles are historically known to have been considered as sacred and were sacrificed during special events taking place on *marae*. According to a legend from the Society Islands, the turtle was held as sacred for the gods and only consumed by the elite: kings, priests, and *marae* keepers (Henry 1928:380). Because turtles had the ability to travel on land as well as in the sea, it has been suggested that they were links between the physical and the spiritual world (Rolett 1986).

Geocentric motifs dominate in the Mo'orea image inventory as they do in the Marquesas Islands. Numerically, in the Marquesas (as of 1991), geometric motifs are depicted in 66.3% of the image inventory (Millerstrom 1997:184). This is also the case at the painted rock shelters in Eiaone Valley, Hiva Oa. Of 110 painted figures, 45.5% represent geometrics (ibid.:187).

This may reflect the practice of tattooing which in the Marquesas reached a high level of artistic expression. The same curvilinear geometric and human faces documented in the Marquesas are seen in engraving of tattoos recorded at the time of

Table 4. Type and number of figures in study area.

Types	Number	Percent
Geometric	80	63
Turtle	25	20
Anthropomorph	17	13
Fish	3	2
Unidentified	2	2
Total	127	100

Turtle Images in French Polynesia

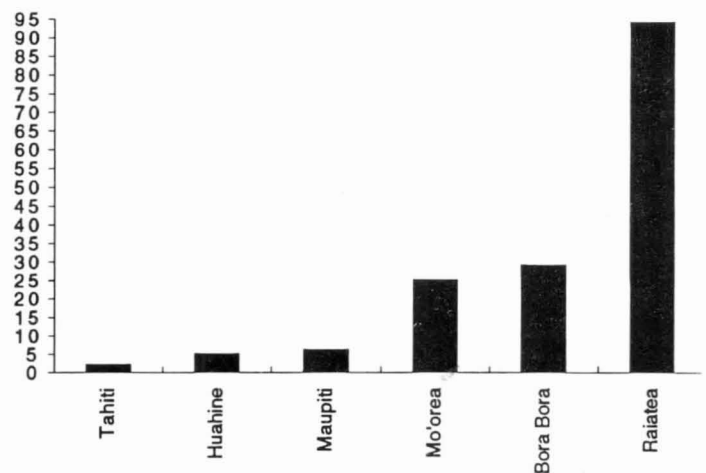


Figure 10. Distribution of turtle images in French Polynesia.

Western contact. While tattoo was extensively practiced in the Societies (Ellis 1969:262-267; Henry 1928:287-289), we know little about the practice in Mo'orea. Ellis, the missionary who lived in Polynesia from 1817 to 1825, wrote that tattoos on men in Tahiti consisted mainly of stars, circles, lozenges, and naturalistic motifs such as coconut trees, breadfruit trees, animals, men engaged in battle, etc. (Ellis 1969:265).

A notable exception to the curvilinear motif repertoire

that is worth mentioning is on Tubua'i. These, for some reason, consist mainly of linear motifs. Only a few anthropomorphs have been documented (Millerstrom 1991).

Except for a large part of Opunahu Valley, systematic archaeological survey has not been undertaken on Mo'orea. New sites with images, probably located inland, may yet be discovered. I do not expect, however, that the discovery of new sites will significantly add to the types of motifs already documented. Future field projects should also include mapping associated structures and archaeological excavations. Detecting a spatial relationship between images and architectural types (e.g., religious vs. residential) may produce a pattern of function. Only extensive excavation linked to image sites, I believe, will yield a relative time frame and illuminate the cultural practice surrounding image making on Mo'orea in the past.

#### ACKNOWLEDGMENTS

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#### REFERENCES

- Baessler, A. 1900. *Neue Südsee-Bilder*. Asher, Berlin.
- Cox, H. J. and E. Stasack. 1970. *Hawaiian Petroglyphs*. Bernice P. Bishop Museum Special Publication 60. Honolulu.
- Descantes, C. 1993. Simple Marae of the 'Opunohu Valley, Mo'orea, Society Islands, French Polynesia. *Journal of the Polynesian Society* 102(2):187-216.
- Eddowes, M. 1991. *Marae Nuurua: Partial Restoration of the Marae Complex*. Département Archéologie Centre Polynésien des Sciences Humaine, Te Anavaharau. Tahiti.
- Edwards, E. n.d. Archaeological Research on Ra'ivavae. 1991. Ms in collection of author.
- Emory, K. P. n.d. Traditional History of Maraes in the Society Islands. 1927. Unpublished ms., Bishop Museum, Honolulu.
- Emory, K. P. 1933. *Stone Remains in the Society Islands*. Bishop Museum Bulletin 116. Honolulu.
- Ellis, Rev. W. 1969. *Polynesian Researches*. Charles E. Tuttle, Vermont.
- Green, R. C. 1961a. Mo'orean Archaeology: a Preliminary Report. *Man* 61:169-73.
- Green, R. C. 1961b. La Plate-forme d'Archer et le Marae de Afareaito, Opunohu, Mo'orea. *Bulletin de la Société d'études Océaniques* 11:310-15.
- Green, R. C., et al. 1967. Archaeology on the Island of Mo'orea, French Polynesia. *Anthropological Papers of the American Museum of Natural History* 51(2), New York.
- Green, R. C. and C. Descantes. n.d. Opunohu Valley Site Records, Mo'orea. 1989. Ms., Department of Anthropology, University of Auckland, New Zealand.
- Henry, T. 1928. *Ancient Tahiti*. Bishop Museum, Honolulu.
- Inventaire Archeologique de Polynesie Francaise* 1989. Département Archéologie du Centre Polynésien des Sciences Humaines "Te Anavaharau."
- La Depeche*, Mercredi 10 Juillet, 1996. Pétroglyphes de Tefaarahi: Un Patrimoine a Protéger.
- Lee, G. 1989. The petroglyphs of Puako, Hawaii. *Rapa Nui Journal* 3(3):4-6.
- Lee, G. 1990-91. Hawai'i, the Big Island. *Rapa Nui Journal* 4(4): 63-64.
- Lee, G. 1992. *The Rock Art of Easter Island: Symbols of Power, Prayers to the Gods*. UCLA: Institute of Archaeology.
- Lepofsky, D. n.d. Archaeological Research on Mo'orea. 1991. Ms in collection of author.
- Lepofsky, D. 1994. *Prehistoric Agricultural Intensification in the Society Islands, French Polynesia*. Ph.D. dissertation, University of California, Berkeley.
- Les Nouvelles de Tahiti*, Lundi 17 Juin, 1996. Mission Archéologique sur les Pétroglyphes.
- Marshall, D. n.d. Notes from Raivavae, 1957. Ms in collection of author.
- Millerstrom, S. n.d.(1). Archaeological research on Mo'orea, 1989. Ms in collection of author.
- Millerstrom, S. n.d.(2). Archaeological research on Tubua'i. 1991. Ms in collection of author.
- Millerstrom, S. n.d. (3). Archaeological Art: 1997 Research Project on Mo'orea. Richard Gump Research Station.
- Millerstrom, S. 1997. Carved and Painted Rock Images in the Marquesas Islands, French Polynesia. *Archaeology of Oceania* 32:181-196.
- Rolett, B. 1986. Turtles, priests, and the afterworld. *Island Societies: Archaeological Approaches to evolution and Transformation*. P.V. Kirch, ed. Cambridge University Press, Cambridge.
- Wallin, P. 1993. Ceremonial Stone Structures. The Archaeology and Ethnohistory of the Marae Complexes in the Society Islands, French Polynesia. *Aun* 18, Societas Archaeologica Upsaliensis, Upsala.

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#### ISLAND CONNECTIONS!

Santa Monica (California) High School is hoping to establish a "sister school" connection/exchange with the school on Easter Island. They also hope to send some students to the island for a seven-day visit and are looking for funding and/or sponsorship. For information regarding this program, contact Tony Collatos, Santa Monica High School, 602 Pico Blvd., Santa Monica CA 90405.  
Email: <WHistSamo@aol.com>

The dates are set for the  
1999 Far Horizons trip to Easter Island:  
22 January to 9 February. The tour will be led by  
Dr Steven Fischer of *rongorongo* fame  
(see Reviews, this issue).  
For information regarding the trip, contact  
Far Horizons  
(800) 552-4575; fax (505) 343-8076.