World Monuments Fund continues support to help in the preservation of Orongo

A. Elena Charola
Proposed working sessions include local perspectives on environment and resources, resource exploitation and political-environmental activism, local economic history, archaeology and prehistoric transformation, people and rainforest: human-forest interaction.

* Pacific Connections: Policy and Technology in the Information Economy (PTC'97), January 19-22, 1997, Honolulu, Hawaii. For information, contact Pacific Telecommunications Council, 2454 S. Beretania Street, Suite 302, Honolulu HI 96826. Fax: (808) 944 4874 or email: ptc97@ptc.org

* Multi-Ethnic Literatures Conference, April 18-20, 1997, University of Hawaii at Manoa. Deadline for proposals is October 15, 1996. For information, contact 1997 MELUS Conference Chair, University of Hawai`i, Mānoa Department of English, Honolulu, HI 96822. Fax (808) 959 3083 or email: rhsu@hawaii.edu

* The VIII Pacific Science Inter-Congress, July 13-17, 1997 at Suva, Fiji. Information on this meeting can be had by contacting to Dr. Mahendra Kumar, Secretary-General, % School of Pure & Applied Sciences, University of the South Pacific, PO Box 1168, Suva, Fiji. Fax: (679) 314007.

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A. Elena Charola, Ph.D.
WMF Easter Island Program Consultant
Great Neck, NY, July 5th, 1996

During November 1995, WMF sponsored a French technical mission to evaluate the problems of the Mata Ngarau site at Orongo. (1) The mission was carried out by Professors Vouve and Clement, of the University of Bordeaux, in collaboration with Prof. Marchetti, of the University of Chile. After tests and analysis were performed on the samples taken from the site, a comprehensive report was compiled by Vouve and Clement.

The report consists of several chapters dealing with the climate and hydrogeology of the area, and the mineralogy, petrography and soil mechanics of the rocks and soils in the area. The stability problem affecting this area can be summarized as follows:

- the soil is fairly porous and due to the south-west exposure dries fast, resulting in cracking and powdering thus facilitating their transportation by rain water;
- during heavy downpours localized losses through sliding produces the concave geomorphology visible on the external slope of the Rano Kau volcano;
- the erosion of the soil facilitates the displacement of pebbles, cobbles and eventually larger boulders;
- this process has been continuously active over the past centuries and explains the loss of most of a terrace around the Mata Ngarau site of which only a narrow ledge remains (2);
- two different lava flows can be distinguished in this area. A more resistant one, from which the keho slabs used for the construction of the houses were taken, and a more weather-susceptible basalt, on whose boulders most petroglyphs were carved.

The Report ends with recommendations for suggested actions to help stabilize the site:

- improvement of the drainage of the site to the north, into the crater lake;
- improvement of the roofs of the houses by the use of a geotextile covering under the soil layer;
- grass seeding over all the exposed soil and the roofs to improve the stability and water movement in the soil;
- design of an appropriate visitor circuit and its enforcement. The design of structures over some of the houses should be considered to prevent visitors from standing on the house roofs.

The final recommendation considers the stabilization of the site through the construction of a retaining wall along the sea-side and the reconstruction of the original platform around this site. Such a construction requires good anchoring in the sound rock, if possible in the more resistant lava flow. At present, the delimitation of the weathered front and the sound rock underneath the site is not known. To determine the exact location of this front, further borings are required.

The drilling necessary to determine the sound to weathered rock front requires a far more complex mission due to the machinery involved in the sampling. At the request of the Consejo de Monumentos Nacionales and CONAF, WMF is currently discussing the organization of a second technical mission by the same team.

The final objective of this second technical mission is to develop the design of the retaining wall and its appropriate anchoring into the sound rock. Any construction that is not appropriately anchored can result in far more damage than no construction at all.

References

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