

RAPANUI

Scripps Institution of Oceanography  
University of California, San Diego  
La Jolla, California 92093



Rapa Expedition  
R/V Thomas Washington  
November 15, 1990 - May 2, 1991

Approved:

  
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Marvin K. Moss  
Deputy Director  
Scripps Institution of Oceanography

**Rapa Expedition  
R/V *Thomas Washington* Schedule**

<b>Leg</b>	<b>Chief Scientist</b>	<b>End Port</b>	<b>Dates at Sea</b>
Leg I	K. Macdonald (UCSB)	Manzanillo	15 Nov. - 15 Dec. 1990
Leg II	Transit	Easter Island	18 Dec. - 31 Dec. 1990
Leg III	P. Lonsdale (SIO)	Easter Island	03 Jan. - 04 Feb. 1991
Leg IV	K. Macdonald (UCSB)	Easter Island	07 Feb. - 02 Mar. 1991
Leg V	K. Macdonald (UCSB)	Papeete	05 Mar. - 29 Mar. 1991
Leg VI	J. Orcutt (SIO)	San Diego	02 Apr. - 02 May. 1991

## Introduction

This prospectus contains information about Legs One through Six of Rapa Expedition. While the schedule presented in the prospectus is correct as of the date of preparation, it may well change. The *Washington* schedule must be coordinated with the Sea Marc II delivery and installation, as well as a rendezvous with R/V *Ewing*.

"Rapa-Nui" as Easter Island is called by natives comes from two Polynesian words. The etymology of "Rapa" is a derivative of the Polynesian word for "slab of stone or wood". The word "nui" means "great or large". The words together possibly refer to the famous rock carvings found on the island, called moai. The Islanders also call Easter Island, Te Pito o Te Henua - the Navel of the World.

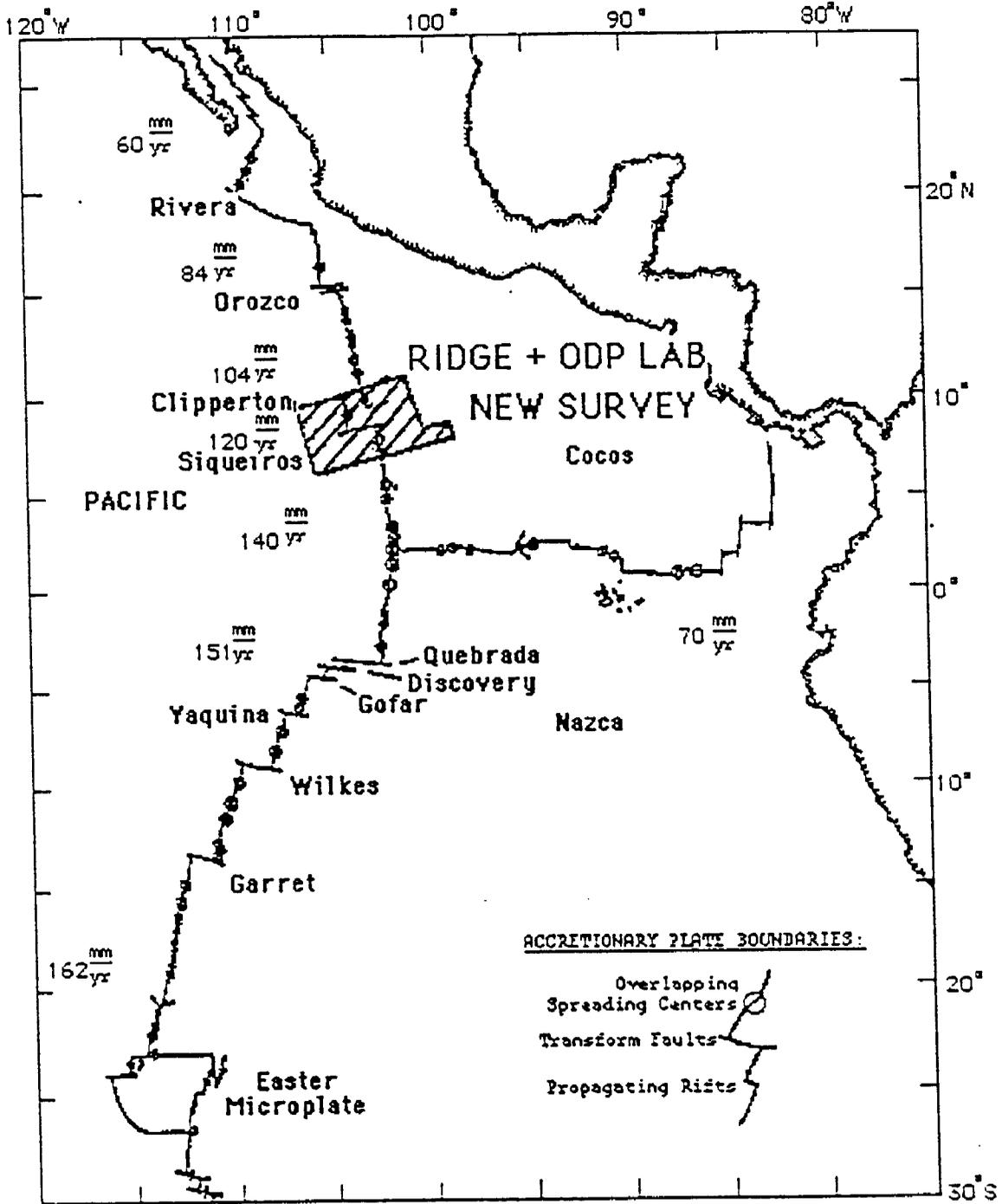
Ken Macdonald  
**Leg One**  
 San Diego to Manzanillo  
 November 15 - December 15, 1990

The goal of this cruise is to understand all of the variables that control the shape of the deep ocean floor, and to be able to predict the importance of terrain elements at various scales in areas which are not completely mapped at a fine scale. To this end we plan to establish a long-term Geologic/Acoustic Natural Laboratory (GANL) near 7° - 10°N on the East Pacific Rise. This cruise will establish the GANL boundaries for a fast-spreading environment and will provide almost total coverage at a large scale within the area using combined Sea Beam and Sea MARC II swath bathymetry and side scan sonar. No seismic reflection will be used.

At the end of the cruise, the ship will transit into Manzanillo for a port stop. It is anticipated that Sea MARC II will run a line along the axis of the East Pacific Rise the way into port North of about 16°N, the rise axis is in Mexican waters. Thus, clearance for that portion of the ridge between 16°N - 19°N is needed. In addition it is hoped that a Sea MARC II line across the Middle America trench outside Manzanillo can be run. Clearance is not needed for the main part of the program near 7°N - 10°N, only for the opportunity to collect new and exciting data on the northern end of our transit into port.

Scientific Party:

1. Ken Macdonald	Chief Scientist	UCSB
2. Rachel Haymon	Researcher	UCSB
3. Steve Miller	Research Specialist	UCSB
4. Doug Wilson	Researcher	UCSB
5. Laura Perram	Post-Doc	UCSB
6. Dan Scheirer	Graduate Student	UCSB
7. Charles Weiland	Graduate Student	UCSB
8. Angela Macias	Assistant	UCSB
9. Rob Pockalny	Graduate Student	URI
10. Clyde Nishimura	SeaMARC II Group	HIG
11. Les Kajiwara	SeaMARC II Group	HIG
12. Gail Yamada	SeaMARC II Group	HIG
13. Beverly Atkins	SeaMARC II Group	HIG
14. Mark Valenciano	SeaMARC II Group	HIG
15. J. Michael Moore	Computer Technician	SIO/STS
16. Ronald Comer	Resident Technician	SIO/STS
17. Dale Stuber	Sea Beam Technician	SIO/STS
18. Stuart Smith	Sea Beam Res. Specialist	SIO/STS



Proposed site for a Pacific/Geologic Acoustic Natural Laboratory