

**CLIPPERTON CRUISE REPORT
CORAL DRILLING ON THE M/V ROYAL STAR
05 APRIL 1994 TO 04 MAY 1994**

by

David A. Mucciarone

Rice University cruise participants: Brad Linsley, Jerry Wellington, David A. Mucciarone, Robb Houston, and Andy Zimmerman

Logistics:

Brad and I departed Houston Hobby airport at 0915 on 4/5/94 via Southwest Airlines and arrived in San Diego, CA at 1100. Andy and Robb arrived at 1130 and Jerry at 2000 on 4/6/94. The days prior to departure on the M/V Royal Star were spent gathering supplies and assembling the hydraulic drill unit. A special base had to be constructed in order for the drill to fit and be stable in a Zodiac. We departed at 1100 on 4/7/94 for San Benitos, Mexico.

Daily activities:

05 April 1994 Depart Houston at 0915, arrived in San Diego at 1100.
06 April 1994 Work on hydraulic coral drill, gather supplies, pick up Andy, Robb, and Jerry at airport.
07 April 1994 Depart San Diego at 1100 for transit to San Benitos.

Transit to Clipperton: The M/V Royal Star departed at 1100 on 4/7/94 headed for San Benitos, Mexico. We arrived at San Benitos at 1530 on 4/8/94 in time to make one dive. I used this dive as a check out dive for Brad. The water was 61°F and visibility around 100'. We departed at 1900 for San Benidicto on 4/8/94. On 4/11/94 we arrived at San Benidicto, Mexico. We made one dive on the pinnacle and one along the island. Brad and I again made another check out dive on the pinnacle, the water here was 75°F and visibility around 80'. The island dive was used as a check out dive for Brad, Robb and Andy. We departed San Benidicto at 1900 for Clipperton. During the transit we calibrated the Hobo Temp temperature probes, I repaired on the photographers cameras (Jim Black), and we had group meetings to show the proper use of the drill and how the drilling operation works.

Daily activities:

08 April 1994 Arrived at San Benitos, 1530 - made one coral reconnaissance/site survey, depart at 1900 for transit to San Benidicto.
09 April 1994 Transit to San Benidicto, begin calibration of Hobo Temp temperature probes.
10 April 1994 Transit to San Benidicto.
11 April 1994 Arrived at San Benidicto, 1030 - made two coral reconnaissance/site survey, depart at 1900 for transit to Clipperton.
12 April 1994 Transit to Clipperton..
13 April 1994 Transit to Clipperton., finish Hobo Temp temperature probe calibration.

Clipperton: We arrived at Clipperton Atoll at 0745 on 4/14/94. A total of 13 days were spent at Clipperton performing such activities as coral drilling, fish sampling, staining corals, bathymetric survey, and deployed temperature probes. The species of coral drilled was *Porites lobata*. A total of 15 coral cores were drilled from 6 different heads of *Porites lobata* (See map and table for location and statistics). The coral cores drilled were from the northeast, east and southwest portions of the island. Twenty one sounding transects were performed encompassing the entire island (See map for location of transects). We departed Clipperton on 4/26/94 at 1745 for our transit Clarion Island.

Daily activities:

- 14 April 1994 Arrived at Clipperton, 0745- Coral reconnaissance and set up for drilling.
- 15 April 1994 Drilled coral core C-1
- 16 April 1994 Coral reconnaissance, set up for drilling and drilled coral cores C-2A, C-2B, and C-3.
- 17 April 1994 Coral reconnaissance and assisted Jerry collect fish specimens.
- 18 April 1994 Set up for drilling and drilled coral cores C-4A and C-4B.
- 19 April 1994 Coral reconnaissance, collected small coral heads at 20', 40', and 70', assisted Jerry collect and process coral samples, and assisted Peter Glynn do bathymetric profiles around Clipperton.
- 20 April 1994 Coral reconnaissance, set up for drilling, and drilled coral core C-3B and C-3C. Visited the island.
- 21 April 1994 Coral reconnaissance, assisted Jerry collect and process fish specimens, and assisted Peter Glynn do bathymetric profiles around Clipperton.
- 22 April 1994 Coral reconnaissance, set up for drilling, and drilled coral core C-5A, C-5B, C-5C, and C-5D.
- 23 April 1994 Coral reconnaissance, deployed Hobo Temp temperature probe and stained 3 small heads.
- 24 April 1994 Coral reconnaissance, set up for drilling, drilled coral core C-6A, C-6B, and C-6C, and deployed second Hobo Temp temperature probe.
- 25 April 1994 Coral reconnaissance and collected small coral heads.
- 26 April 1994 Coral reconnaissance, photographed quadrangles, packed up drilling equipment, departed Clipperton at 1745 for Clarion Island.

Transit to Carbo San Lucas: We began our return on 4/26/94 from Clipperton to San Diego at 1745. On the return trip we had scheduled stops for Clarion Island, Roca Partida, San Benidicto and finally Carbo San Lucas, Mexico. We used these stops to collect fish specimens for Jerry, and do a coral reconnaissance and site survey. Time was also used to clean and pack up the hydraulic drilling unit. We arrived at Clarion on 4/29/94 at 0930 and departed on 5/1/94 at 1800 for Roca Partida. The ship only stayed for a few hours on 5/2/94, did some coral reconnaissance and collected some fish and then headed for San Benidicto. We arrived at San Benidicto at 0330 on 5/3/95 and again only stayed a few hours. We did the usual fish collecting and coral reconnaissance then departed for Carbo San Lucas at 1000. The M/V Royal Star arrived in Carbo San Lucas at 0830 on 5/4/94, cleared customs, and departed at 1330 for Los Angeles on United Airlines, departed LA at 1735 arriving in Houston Hobby at 2315 on Southwest Airlines.

Daily activities:

- 27 April 1994 Transit to Clarion Island.
- 28 April 1994 Transit to Clarion Island.
- 29 April 1994 Arrive at Clarion, 0930 - Coral reconnaissance, finish packing coral drill - ready to ship.
- 30 April 1994 Coral reconnaissance, assist Jerry with coral and fish collecting and processing.
- 01 May 1994 Coral reconnaissance, assist Jerry with fish collecting and processing, departed Clarion for transit to Roca Partida at 1800.
- 02 May 1994 Arrive Roca Partida, 1115 - coral reconnaissance, assist Jerry with fish collecting and processing, departed Roca Partida for transit to San Benidicto at 1400.
- 03 May 1994 Arrive at San Benidicto, 0330 - coral reconnaissance, assist Jerry with fish collecting and processing, departed San Benidicto for transit to Carbo San Lucas at 1000.
- 04 May 1994 Arrive at Carbo San Lucas, 0800 - clear customs, off load equipment, depart at 1330 and arrive in Houston at 2315.