

September 12, 2000

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CRUISE REPORT

VESSEL: Townsend Cromwell, Cruise 00-10 Leg II (TC-260)

CRUISE PERIOD: August 26–September 2, 2000

AREA OF OPERATION: Channel waters between Maui, Molokai and Lanai, main Hawaiian Islands (Fig. 1)

TYPE OF OPERATION: This cruise leg supported remote camera surveys and mixed gas diving to make a preliminary in situ assessment of the commercial black coral beds off Maui. A parallel objective of this survey was a rigorous comparison of two diving technologies; conventional open circuit mixed gas diving and mixed gas rebreather diving.

ITINERARY:

26 August	Start of cruise. On board Ray Boland, Frank Parrish, Mike Sawyer, Richard Pyle, John Earle and Yoko Nonogaki. Departed Snug Harbor at 1300 and proceeded to Maui.
27- 30August	Conduct surveys of the region's black coral using remote video system followed by open circuit and closed circuit dives into the coral beds. On the 30 th Rich Pyle and John Earle disembarked.
Aug 31 - Sept 1	Continue surveys in the channel waters using remote video system and open circuit divers. Depart evening of September 1 for Snug Harbor.
September 1	Arrive Snug Harbor 0600; all disembark. End of cruise.

MISSIONS AND RESULTS:

- A. Conduct a preliminary survey of Maui's commercial black coral beds.

Areas surveyed included known harvest sites including, "Stonewall," "Most Radicals," and "Circus." Spatial distribution of coral was assessed using a remote video camera deployed from the ship. In areas where coral beds were located information on the height, base diameter and associated fish community was collected using divers.

- B. Comparison of diving technology.

Compare conventional open circuit mixed gas diving (NOAA accepted) to closed circuit mixed gas diving (rebreathers evaluated). Ten mixed gas dives (four rebreather dives; six open circuit dives) were conducted in the course of the cruise. The first four dives were devoted to paired comparison profiles between the rebreathers and the open circuit dive teams. For the remaining dives the profiles were dictated by the occurrence of coral trees. During one dive the rebreather team doubled bottom time of the open circuit dive team from 25 minute to 50 minutes.

**SCIENTIFIC
PERSONNEL:**

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Attachment