

March 22, 2005

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CRUISE REPORT

VESSEL: *Oscar Elton Sette*, Cruise OES-05-01 (OES-23)

CRUISE PERIOD: 26 January-19 February 2005

AREAS OF OPERATION: In and around Palmyra Atoll and the lee side of the Island of Hawaii (Kona coast) to the vicinity of Cross Seamount (Fig. 1)

ITINERARY:

- 26 Jan Departure was delayed because cargo net became wrapped in the props. One day-at-sea was therefore lost.
- 27 Jan Embarked scientists Richard Brill, Karen Capsela, Daniel Curran, Brittany Graham, Nini Jensen, Eva Landgren, Lenore Litherland, Abigail McCarthy, Lianne McNaughton, Michael Musyl, Jason Romine, and Amanda Southwood. Departed Pier 31, Honolulu, HI at approximately 0800 en route to Pearl Harbor for fueling. At around 1830, began transit to Palmyra Atoll.
- 28 Jan Starting at 0914, deployed approximately 50 longline hooks (no bait) to test hydraulic systems and allow ship's crew, officers, and scientists to re-familiarize themselves with longline operations. Retrieved gear immediately after setting and began transit to Palmyra Atoll while conducting continuous trolling operations in daytime.
- 30 Jan-1 Feb Deployed three longline sets on the way to Palmyra. Continued trolling operations. Details of longline deployments are given in Table 1 with catch details for longline- and troll-caught samples given in Table 2.
- 2-11 Feb Continued longline and troll operations near Palmyra Atoll and Kingman Reef. Visited Palmyra twice (3 Feb - picked up part for ship; 8 Feb - weighed out chemicals) after receiving permission from U.S. Fish and Wildlife Service and The Nature Conservancy.

- 11-15 Feb Began transit to Cross-Swordfish Seamount area after retrieval of longline gear. Continued trolling operations.
- 15-17 Feb Completed transit to Cross Seamount. Deployed the longline 2 times and continued with trolling operations.
- 17-18 Feb Transited to leeward coast of Island of Hawaii because of predicted strong trade winds and high seas. Made one longline deployment and continued with trolling operations until approximately 1630 when we started transit back to Snug Harbor.
- 19 Feb Arrived Snug Harbor; disembarked scientists; end of cruise.

MISSIONS AND RESULTS:

- A. Capture billfishes, tunas, and sharks for attachment of pop-up satellite archival tags (PSATs) and conventional tags.

Made 15 successful longline sets (Table 1). Deployed 11 PSATs on billfishes, sharks, and tunas and placed 24 conventional tags on silky and white-tip sharks (Table 3).

- B. Collect tissue samples for ongoing physiological, biochemical, and anatomical studies of tunas, billfishes, other pelagic teleost species, and sharks.

Took tissue samples from tunas, billfishes, mahimahi, escolar, lancet fish, snake mackerel, barracuda, and blue sharks (Table 2) for ongoing physiological, biochemical, and anatomical studies.

- C. Conduct experiments on vision in pelagic fishes using isolated retinas and standard physiological techniques.

Conducted detailed studies on the visual capabilities of swordfish, tunas, striped marlin, mahimahi, escolar, lancet fish, and blue sharks using isolated retinas or eye lenses.

- D. Conducted experiments to quantify the effects of ambient temperature on the cardiac function in skipjack, yellowfin and bigeye tunas, as well as mahimahi and escolar.

NARRATIVE SUMMARY:

A total of 15 operational longline sets were conducted during the cruise (Table 1) with catch details by gear provided in Table 2. Twenty-four samples of silky and oceanic white-tip sharks were conventionally tagged with 11 PSATs deployed on billfish, sharks, and tunas (Table 3). Biological samples for ongoing physiological and fish vision studies were obtained from most of the other fishes caught. Narrative reports on the objectives and results from the various cooperative studies are provided in Appendix I.

RECORDS:

The following forms, logs, charts, and data records were kept and given to the Pacific Islands Fisheries Science Center upon termination of the cruise. These include all data captured onto computer storage media during the cruise. All the records are filed there unless indicated otherwise in parentheses.

SEAS system data files
 Deck Log-Weather Observation Sheet
 Marine Operations Log (NOAA)
 Project Area and Operations Chartlets
 Station Number and Activity Log
 Fish catch record by species, hook number, bait disposition
 Data from Temperature Depth Recorders (TDRs)

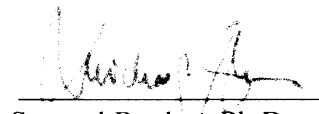
**SCIENTIFIC
PERSONNEL:**

Richard Brill, National Marine Fisheries Service, Northeast Fisheries Science Center
 Karen Capsela, Virginia Institute of Marine Science (VIMS)
 Daniel Curran, National Marine Fisheries Service, Pacific Islands Fisheries Science Center
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Attachments

Fig.1. Areas of fishing operation.

