

State of California
DEPARTMENT OF FISH AND GAME

BUREAU OF MARINE FISHERIES - M V N.B.SCOFIELD
Cruise Report

Cruise: Cruise 8 of the N.B.SCOFIELD for 1951
Sailed: October 9, 1951 from Los Angeles Harbor
Returned: December 3, 1951 to Los Angeles Harbor

Locality: West coast of Mexico and Central America from Magdalena Bay southward to Jicarita Island, Panama, and offshore to Malpelo and Cocos Islands.

Purpose: (1) To obtain juvenile tuna for a study of age analysis methods and to obtain information regarding distribution of juvenile tuna.
(2) To test drift gill nets as a method for obtaining samples of tuna of all sizes, with special emphasis upon young fish.
(3) To gain experience in the use of Japanese style longline gear, as a preliminary to a program to determine the possible high seas distribution of yellowfin tuna in the Eastern Pacific.

Report: Eight juvenile yellowfin tuna, 13 mm. to 32 mm. (1/2 to 1-1/4 inches) in length were taken at Hanniball Bank, Lat. 7° 25' N., Long. 82° 05' W., on November 1. Nine black skipjack, 12 mm. to 26 mm. (1/2 to 1 inch) in length were taken at the same station. These fish were caught in a dip net after being attracted by a light at night, and were the only juvenile tuna taken on the cruise.

Both night and day sets with drift gill nets were made in areas where tuna are taken commercially. Several of the sets were made in the presence of schools of tuna. The nets were fished at depths of 5 to 13 fathoms. Mesh of the nets varied from 2 to 8 inches, stretched measure. Only two tuna were taken in the gill nets; one oceanic skipjack of 250 mm. (9-3/4 inches), standard length, at White Star Bank, Lat. 5° 12' N., Long. 81° 15' W., and one black skipjack about 300 mm. (11-3/4"), standard length, taken near Cano Island, Lat. 8° 31' N., Long. 83° 51' W. The first skipjack was taken from a set made in the location of a school of fish, the second in a "blind" set. Many jacks, snappers and sharks were caught in the nets, so there is evidence that the nets fished well, but for reasons not clearly understood, did not capture tuna efficiently. Sharks, particularly in the southern portion of the operating area, wreaked havoc with the nets, causing much loss of time for mending.

Three experimental sets were made with a drift longline. The mainline was 1000 fathoms in length and bore 100 hooks, spaced 10 fathoms apart. The gear was set to fish at 8 fathoms' depth and squid was used for bait. The first two sets were made in the presence of schools of tuna, but only one tuna, a yellowfin, was taken on the second set. For all fish, sharks included, the following catch per 100 hooks was made: Set #1, nine; Set #2, five; Set #3, three.

Scientific Personnel: R. C. Wilson, Biologist in Charge
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