

State of California - The Resources Agency
Department of Fish and Game
Marine Resources Region
Long Beach, California

CRUISE REPORT 70-S-8 CRAB

Prepared by Nancy E. Nelson

Vessel: N. B. SCOFIELD

Dates: Departed San Pedro November 5, 1970.
Returned San Pedro December 4, 1970.

Areas: Coastal waters from Table Bluff to Oregon border.

Objectives:

1. To determine the depth distribution of male and female market crabs, *Cancer magister*.
2. To determine the relative abundance of legal and sublegal market crabs for mortality studies.
3. To tag all crabs caught at depths of 80 fathoms or more.
4. To conduct exploratory fishing for tanner crabs, *Chionoecetes tanneri*.

Gear: Trawls were made with a 41-foot head rope semi-balloon gulf shrimp trawl with 3/4 inch mesh.

Operations: Trawling for market crabs was conducted during late afternoon and nighttime at 10-fathom intervals along 5 parallel transects (Figure 1).

Tanner crab trawls were made at locations where previous surveys indicated high abundance.

Samples for pesticide analysis were collected at all stations.

Results: A total of 11,430 crabs was caught in 52 trawls, 99 percent of which were of the 1970 year class. Of 122 male crabs taken, 73 were of legal size and 49 were sublegals. Corresponding figures for 55 trawls of the 1969 fall cruise were 640 legal and 748 sublegal crabs.

Crabs disappeared at 40 fathoms along the Table Bluff, False Klamath, and Pelican Bay transects, and at 50 fathoms north of Big Lagoon. A very few crabs were found between 60 and 110 fathoms along the Mad River transect. In contrast, during the 1969 fall cruise good numbers of legal crabs were caught in deeper water along all transects, and out to 100 fathoms on the Redding Rock transect.

These differences in depth distribution and overall numbers of legal crabs seem to indicate that a much smaller population of legal crabs exists this year than last.

Only 3 crabs (2 females and a male) were found deeper than 80 fathoms. All three were caught and tagged on the Mad River transect.

The three tanner crab tows in 250, 300, and 350 fathoms yielded 1, 3, and 48 tanner crabs respectively. At least 2, and possibly 3 year classes were represented in the catch.

A total of 96 samples was collected for Pesticide Analysis (Special Projects #462). The samples included the following:

9 species of sole

7 species of rockfish

Pacific herring

Pacific hake

sablefish

lingcod

northern anchovy

ocean shrimp

tanner crab

All samples were stored at Eureka, awaiting arrangements for analysis.

Personnel: Anthony Black, Vessel Captain
D. Gotshall, Biologist-in-charge
N. Nelson, Biologist
L. Barker, Seasonal Aid

Figure 1

Location of stations
for crab cruise
70-S-8

Legend

Trawling Transect _____
Trawling Station X
Tanner Crab Station T

5 miles

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