

State of California
DEPARTMENT OF FISH AND GAME

MARINE FISHERIES BRANCH - M/V N.B. SCOFIELD
Cruise Report

- Cruise: Cruise 3 of the N.B. SCOFIELD for 1953. 53-S-3.
Sailed: June 3, 1953, from Los Angeles Harbor.
Returned: June 25, 1953, to Los Angeles Harbor.
- Locality: Continental shelf area from Avila, California, to San Diego, California.
- Purpose: A trawl survey of the regions mid and deep waters to determine if bottom fish and shrimp exist in commercial quantities, and to experiment with a new midwater trawl using a single boat. Deep water trawl and plankton samples were to be taken off the Southern California coast.
- Report: The first portion of the trawl trip was devoted to adjusting the rigging on the new commercial size midwater trawl for proper operation. The midwater trawl has a mouth opening of 35 feet square, and has small wings at each of the four corners. The net length is 100 feet and is constructed of 21-thread, $4\frac{1}{2}$ -inch mesh. The opening of the net mouth is maintained while towing at high speeds (7 knots) by using commercial otter doors to spread the net, in conjunction with four small paravane doors attached to the short wings of the net.

Shrimp and bottom fish exploratory work was then undertaken with the 10-foot beam trawl off Pt. Huneme and west of Santa Barbara. Small catches of prawns (Pandalus platyceros) were recorded. A sizeable catch of shrimp (Pandalus jordani) was taken off Gaviota.

Fishing activity was then shifted to the Avila region where an extension of the present commercial shrimp bed was found, this new bed being 12 miles west of Pt. Sal in 90-100 fathoms. The midwater trawl was used off Avila, and small catches of rockfish and blackcod were made before the net became fouled and torn on an uncharted reef.

Dr. Earl S. Herald, a photographer, and script writer were aboard on June 6 to photograph exploratory trawling operations for the television program series, "Science in Action", to be released during the fall of 1953.

Rough seas prevented any otter trawling in deep water, so fishing activity was moved to the Santa Barbara Channel. Several exploratory shrimp deep water stations were occupied in this area. The boat held open house on June 17 for the benefit of the delegates to the American Association for the Advancement of Science meetings being held at Santa Barbara.

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Seas calmed north of Pt. Conception and two sets were made with commercial size otter trawling gear. About 300 pounds of large dover sole were taken in the first set. Weather again stopped further deep water work. The boat sailed south to explore for shrimp off Southern California. The 90-100 fathom curve between Pt. Dume and Santa Monica submarine canyon was explored and a new shrimp bed found. One 55-minute test drag with 10-foot beam trawl resulted in a catch of 123 pounds of large shrimp. The 90-100 fathom curve was explored from Diana Pt. to San Diego and found that most areas were too rough to trawl. Trawling was done off Oceanside and San Diego with little success.

Fifty-three stations were occupied with a total of 79 hours of trawl net time in the water. A load of live specimens was delivered to both Steinhart Aquarium, San Francisco, and Scripps Institute of Oceanography, La Jolla, California. Collections of preserved fauna were made for several scientific institutions.

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