

The Resources Agency of California
Department of Fish and Game
Marine Resources Operations

Cruise Report 63-S-2 - Exploratory
Prepared by E.A. Best

Vessel: N. B. SCOFIELD

Dates: Departed from San Pedro March 8, 1963
Returned to San Pedro March 27, 1963

Locality: Santa Barbara Channel and offshore from San Luis Obispo Bay.

Purpose: 1. To make biological surveys of representative ecological areas.
2. To explore offshore areas for trawling grounds.

Results: Stations were sought in 20, 50, 100, 250, and 500 fathoms for otter trawling. Midwater trawling was planned at each of the bottom-trawling stations at the middle depth (half way to the bottom). All tows were for 30 minutes. All fishes and invertebrates were identified, enumerated, weighted and/or measured. Samples of unidentified or unusual animals were saved for scientists specializing on the different groups.

Santa Barbara Channel

In the Santa Barbara Channel, trawling stations were accomplished on two transects:

Gaviota to Santa Rosa Island Transect

Otter trawl: Eight otter-trawl stations were made at depths of about 50, 100, 230, and 300 fathoms. At the 50-fathom depth, Pacific sanddabs (Citharichthys sordidus), English sole (Parophrys vetulus), ratfish (Hydrolagus colliei), and northern midshipmen (Porichthys notatus) were most abundant; small stripetail rockfish (Sebastes saxicola), a small splitnose rockfish (S. diploproa), Pacific hake (Merluccius productus), and a slender sole (Lyopsetta exilis) were taken at 100 fathoms; Dover sole (Microstomus pacificus), Pacific hake, filetail cat shark (Parmaturus xaniurus), and rattails (Coryphaenoididae) were taken from 230 fathoms. Extremely soft mud was encountered at 310 fathoms, however, filetail cat sharks, California smoothtongue (Leuroglossus stilbius) and unidentified gastropods were trawled from there.

Midwater trawl: Six midwater-trawl stations were occupied on this transect. No fish were caught in four trawls at the 50 and 100 fathoms. At the two deeper areas lanternfish (Myctophidae), dogfish (Squalus acanthias), California smoothtongue, ribbonfish (Trachipterus altivelis) and juvenile rockfish (Sebastes spp.) were taken.

Point Conception to San Miguel Island Transect

Otter trawl: Five bottom-trawl stations were completed in this transect at 50, 70, 120, and 250 fathoms. Ratfish and northern midshipmen were abundant at 50 fathoms; small rockfishes and ratfish were taken

at 70 fathoms; rex sole (Glyptocephalus zachirus) and small rockfish were present at 120 fathoms; and Dover sole, Pacific hake, rattails, shortspined channel rockfish (Sebastes alascanus) and aurora rockfish (Sebastes aurora) were taken at 250 fathoms. Several hours scouting with the echo-sounder failed to indicate suitable bottom for trawling at depths beyond 250 fathoms.

Midwater trawl: Five midwater hauls were made at approximately the same locations as the bottom-trawl stations. At 50- and 100-fathom depths post-larval Pacific sanddabs, speckled sanddabs (Citharichthys stigmaeus), and Dover sole were taken in quantity. At the deeper levels lanternfishes and argentinids predominated the catch.

San Luis Obispo Bay

Otter trawl: Five bottom trawls were made at depths of 20, 50, 230, and 300 fathoms. Sand sole (Psettichthys melanostictus) and English sole predominated the catch at 20 fathoms; Pacific sanddabs, stripetail rockfish and northern midshipmen were abundant at 50 fathoms; dogfish, stripetail rockfish and splitnose rockfish were taken at 100 fathoms; Dover sole, shortspine channel rockfish and sablefish were abundant at both 230 and 300 fathoms. Considerable good trawling bottom was indicated at 300 fathoms, but shallower levels lying as a ridge farther off-shore were rougher. More exploratory work should be done in this area.

Midwater trawl: Four midwater hauls were made to coincide with the deeper bottom stations; no midwater haul was made at 20 fathoms. About 10 pounds of northern anchovies (Engraulis mordax) made up the entire catch at 50 fathoms. Post-larval sanddabs, both Pacific and speckled, were abundant at 100 fathoms. At the two deeper stations lanternfish were abundant, lesser numbers of other bathypelagic species and three female Pacific hake (one ripe and two spent) were taken.

All cephalopods were preserved for study by Dr. S.S. Berry, Redlands. Invertebrates collected were presented to the Allan Hancock Foundation for study. One bottom haul was made to collect live specimens for Marineland of the Pacific.

Personnel: R. B. Mitchell - Vessel Captain
E. A. Best - Biologist-in-Charge
J. B. Phillips - Biologist - March 17-23
G. Bickford - Assistant
J. G. Smith - Assistant

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