

PUBLICATIONS

(Annotated list of publications arising from the California Cooperative Oceanic Fisheries Investigations, 1 July 1956 to 30 June 1957)

Ahlstrom, Elbert H., and Harold D. Casey

1956. Saury distribution and abundance, Pacific coast, 1950-55. *U. S. Dept. Interior, Fish and Wildl. Service, Spec. Sci. Rept.: Fisheries*, no. 190, 69 pp.

Information on the saury, obtained on CCOFI cruises, is of two kinds: (1) collections of saury eggs in plankton hauls and (2) visual observations of saury abundance. This report gives the basic data on saury eggs for six years, 1950-1955, and on visual observations of saury abundance at night stations for the period September 1951 through December 1955.

Ahlstrom, Elbert H., and David Kramer

1956. Sardine eggs and larvae and other fish larvae, Pacific coast, 1954. *U. S. Dept. Interior, Fish and Wildl. Serv., Spec. Sci. Rept.: Fisheries*, no. 186, 79 pp.

Basic data on abundance of sardine eggs and larvae in the area surveyed on CCOFI cruises during 1954. Also included are records of abundance of the larvae of northern anchovy (*Engraulis mordax*), jack mackerel (*Trachurus symmetricus*), hake (*Merluccius productus*), Pacific mackerel (*Pneumatophorus diego*), and rockfish (*Sebastes* spp.).

Barham, E. G.

1957. The ecology of sonic scattering layers in the Monterey Bay area. Technical Report No. 1 under N6onr 25127, NSF G911 and NSF G1708, 182 pp., 31 figs.

This report is primarily concerned with deep sea ecology investigated on other programs. However, it does utilize and discuss briefly phytoplankton data accumulated on the CCOFI program and the influence of productivity in modifying and shifting the deep scattering layer.

Bieri, Robert

1956. A method for the microscopic examination and manipulation of plankton on board ship. *J. Cons. Int. Explor. Mer*, vol. XXII, no. 1., pp. 38-41, 3 figs..

The under-way plankton tray, a device for the microscopic examination of plankton on board ship, is described.

Dales, R. Phillips

1957. The pelagic polychaetes of the Pacific Ocean. *Univ. Calif. Scripps Inst. Oce., Bull.*, vol. 7, No. 2, pp. 99-168, 64 figs.

The author has examined many of the CCOFI collections, among others, in this paper, which described the distribution and life histories of several species of marine worms.

Farris, David A.

1956. Diet-induced differences in the weight-length relationship of aquarium fed sardines (*Sardinops caerulea*). *J. Res. Bd. Can.*, vol. 13, no. 4, pp. 507-513.

Sardines which were fed two markedly different types of diet—one a high protein diet, the other a carbohydrate diet—showed differences in weight-length relationship.

Holmes, Robert W., and Theodore M. Widrig

The enumeration and collection of marine phytoplankton. *J. Cons. Int. Explor. Mer*, vol. XXII, no. 1, pp. 21-32, 2 figs.

Methods of enumerating and collecting phytoplankton are discussed in this study, which arose directly out of the CCOFI program.

Johnson, Martin W.

1956. The larval development of the California spiny lobster, *Panulirus interruptus* (Randall), with notes on *Panulirus gracilis* Streets. *Calif. Acad. Sci., Proc.*, vol. XXIX, no. 1, pp. 1-19, 22 figs.

The author draws on data from the CCOFI cruises to describe stages of the spiny lobster larva.

Joseph, David C.

1956. New techniques in ocean electro-fishing are developed. *Outdoor Calif.*, vol. 17, no. 9, p. 13, September.

A report on the preliminary series of electro-fishing experiments conducted by personnel of the Marine Fisheries Branch, California Department of Fish and Game. Reasons for the work, obstacles to using this gear in salt water, and other items are briefly discussed in a non-technical report.

Knauss, John A., and Joseph L. Reid

1957. On the accuracy of the GEK for measuring surface current. *Amer. Geophys. Un., Trans.*, vol. 38, no. 3, pp. 320-325, 2 figs.

The GEK (geomagnetic-electrokinetograph) is one of the standard tools used in the CCOFI program to measure surface currents. The authors made simultaneous observations of GEK measurements and of drifting drogues in order to test the validity of the GEK for surface current measurements. Good agreement was obtained.

Marine Research Committee

1956. *California Cooperative Oceanic Fisheries Investigations, Progress Report, 1 April 1955 to 30 June 1956*. Sacramento: The State Printer. 1 July 1956. 44 pp., 21 figs.

This progress report consists of a review of activities for the period and separate sections on the anchovy, jack mackerel, Pacific mackerel, and eggs and larvae of these species. Publications for the period are listed.

Miller, Daniel J.

1956. Anchovy study shows gain in Southern waters. *Outdoor Calif.*, vol. 17, no. 12, p. 3, 8-9, December.

A short discussion of the anchovy situation in Californian waters has been presented. Catch, population densities, aerial surveys, laws, spawning populations, and movements are mentioned in a non-technical terminology.

Robinson, Margaret K.

1957. Sea temperature in the Gulf of Alaska and the north-east Pacific Ocean, 1941-52. *Univ. Calif. Scripps Inst. Oce., Bul.*, vol. 7, no. 1, pp. 1-98, 61 figs., 1 chart.

In her study of sea temperatures in the northeast Pacific Ocean, the author has utilized data collected in the course of some of the CCOFI cruises.

Thraillkill, James R.

1956. Relative areal zooplankton abundance off the Pacific coast. *U. S. Dept. Interior, Fish and Wildl. Serv. Spec. Sci. Rept. Fisheries*, no. 188, 85 pp.

Contained in the report are distribution charts showing abundance of zooplankton for every CCOFI hydrographic-biological cruise during the seven-year period 1949 through 1955. In addition, there are yearly distribution charts showing the average plankton volumes obtained at each station.

United States Fish and Wildlife Service, South Pacific Fishery Investigations

1956. Zooplankton volumes off the Pacific coast, 1955. *U. S. Dept. Interior, Fish and Wildl. Serv. Spec. Sci. Rept.: Fisheries*, no. 177, 32 pp.

This report deals with zooplankton volumes obtained on 1955 CCOFI survey cruises. This is the sixth report in a continuing series, which, with this report, covers the period 1949-1955. In addition to wet plankton volumes (reported as volume per 1000 cubic meters of water strained), this report contains the basic data on all plankton hauls made during the year, including location, date, duration of haul, depth of haul, and volume of water strained.

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