

Part I

REPORTS, REVIEW, AND PUBLICATIONS

REPORT OF THE CALCOFI COMMITTEE

The member agencies of CalCOFI remain strongly committed to cooperative partnership as a means of making optimal use of public resources, sharing ideas in research, and providing a public forum to examine and discuss fisheries problems that concern the people of California. The pelagic ecosystem off the coast of the Californias is multidimensional, dynamic, and complex, and research on that system requires openness to new ideas and approaches, with assurance of the continuity of fundamental CalCOFI data bases. As a result, CalCOFI scientists' work follows two major trajectories. First, quarterly cruises are made off the coast of California to measure the same physical, chemical, biological, and meteorological variables year after year. On these cruises, new technologies, including satellite-mediated information gathering, are employed. Second, this information is used to form hypotheses and test them ashore and at sea, using state-of-the-art methods such as satellite-tracked drogues, very high-frequency sonar, automated sampling devices, and satellite imaging.

The 36-year time series of physical, chemical, biological, and meteorological data from the California Current, collected and processed by the CalCOFI team, constitutes an enormous challenge in data-base management and data access. The Southwest Fisheries Center has continued to develop a user-friendly system for access to the entire data suite. In addition to the development of software, the process has required the verification of some earlier larval identifications in the light of later knowledge. The system, when completed, will make a large body of data readily accessible to qualified researchers, and will greatly increase the knowledge available from CalCOFI's extensive collections.

Determining the spawning biomass of sardines, when their biomass is very low, has been a problem in the past. During the last year, Patricia Wolf of the California Department of Fish and Game, and Paul Smith of the National Marine Fisheries Service (NMFS) used the newly developed egg production method to make a cost-efficient, quantitative determination of the relative magnitude of sardine spawning biomass during times of low biomass levels. This method was employed during May 1985 to determine that the spawning biomass was at least 20,000 short tons, permitting

the opening of a 1,000 ton sardine fishery on January 1, 1986. The 1986 sardine fishery is the first since the moratorium took effect in 1974.

CalCOFI was organized in 1949 as a response to the needs of California's fishing industry, and has a long-standing relationship of cooperation with and service to the industry and to governmental managers. In 1985, CalCOFI researchers from the Southwest Fisheries Center and from the California Department of Fish and Game consulted with industry scientists to discuss management options for Pacific mackerel. Their recommendations resulted in the adoption, by the state legislature, of new law for managing this stock.

The CalCOFI Committee sponsors a conference each October to discuss the status of knowledge about fisheries; the biology of fishes; their environment, including physics, chemistry, meteorology, and—from time to time—fishing gear; and the industry and its politics. The 1985 conference at Idyllwild, California, included a symposium convened by John Grant of the California Department of Fish and Game, entitled "Southern California Nearshore Waters: Selected Patterns and Processes." Some of the papers presented at that symposium are included in this volume.

During the past year, CalCOFI personnel of NMFS's Southwest Fisheries Center, the Marine Life Research Group at Scripps Institution of Oceanography, and the California Department of Fish and Game have fielded four CalCOFI survey cruises of 15 days' duration, two trawl survey cruises, one biomass cruise, two Sardine-Anchovy Program cruises, and one Dover sole trawl-survey cruise. The CalCOFI Committee wishes to acknowledge the officers and crews of NOAA research vessels *David Starr Jordan* and *McArthur* and the University of California's R/V *New Horizon* for their support. The data have been reported in the Scripps Institution of Oceanography Reference Series, the CalCOFI Data Report Series, and other data reports and documents.

The Committee wishes to thank Herbert Frey of the California Department of Fish and Game for his many years of service to the CalCOFI Committee. Herb has served as alternate to the Committee, as a member for two terms, and as CalCOFI Coordinator. He has also served as editor of *CalCOFI Reports* and as executive secretary of the Marine Research Committee of

the State of California—the parent committee of CalCOFI. Richard Klingbeil has been appointed as the new Committee member representing the California Department of Fish and Game.

Finally, the CalCOFI Committee wishes to thank the dozens of reviewers who suggested substantial improvements to the scientific contributions in this volume, Julie Olfe for her very competent and efficient services as editor, the staff who provided translating services and scientific consultation, and to George Hemingway, our current CalCOFI Coordinator.

Copies of this report and other CalCOFI documents may be obtained gratis by addressing a request to: CalCOFI Coordinator, Scripps Institution of Oceanography, A-027, La Jolla, CA 92093.

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