Part I

REPORTS, REVIEW, AND PUBLICATIONS

REPORT OF THE CALCOFI COMMITTEE

The CalCOFI family of member agencies observed its fortieth anniversary in 1989 by acknowledging past accomplishments and evaluating present strengths in preparation for the global challenges of the years to come. The 40-year CalCOFI collection of physical, chemical, biological, and meteorological data from the California Current is the most complete ocean time series in the world, and has led to an understanding of the pelagic ecosystem that is unmatched in any comparable marine region. CalCOFI has also served as a model of successful collaboration among diverse agencies. An article in this volume chronicles the early history of CalCOFI and the roles of the visionary scientists and managers who partnered in its development.

The sardine resource continues to recover, and the California Department of Fish and Game (CDFG) permitted the fifth 1,000-ton quota fishery in as many years. For the second year, the quota, which opened on January 1, 1990, was allocated between northern (200 tons) and southern (800 tons) California. The 800-ton quota was landed in one week, completing the shortest season to date.

Fishery-related cruises included a 50-day groundfish survey to collect sablefish eggs and evaluate the use of the egg production method for determining spawning biomass; two cruises to collect sardine eggs off southern California and northern Baja California for biomass assessment; two night-lighting cruises to assess recruitment of juvenile Pacific mackerel; and one midwater trawl survey to collect young anchovy, mackerel, and sardines. The quarterly CalCOFI cruises surveying the southern California sector of the California Current were completed. In addition, a rapid but intensive hydrographic survey of the periphery of the station grid was conducted just after the summer cruise, and analysis of data from the 1988 biological/physical survey of the Ensenada Front continued. The purchase of a CTD will permit a gradual change in the techniques used on the CalCOFI surveys, improving the vertical resolution of data without impairing the continuity of the time series.

We used 1989 CalCOFI collections of anchovy eggs and larvae to estimate daily egg production, which was incorporated into a stock synthesis estimate of anchovy spawning biomass. Unusually low water temperatures may have inhibited sexual maturity, reduced spawning activity, and resulted in a low estimate of spawning biomass, since the 1988 year class appeared large, and total biomass was judged to be high. National Marine Fisheries Service (NMFS) and CDFG scientists prepared an amendment to the anchovy Fishery Management Plan to allow a small reduction fishery under circumstances when the total biomass is high but the spawning biomass is below the cutoff level for fishing.

At the third annual meeting of MEXUS-Pacifico, it was suggested that the cooperative scope of this fisheries research agreement between the United States and Mexico be broadened beyond coastal pelagic species to include sea lions, sea turtles, and remote sensing. We continued our routine exchange of fisheries and biological data, and conducted two cruises in Mexican waters to estimate anchovy egg production. For 1990, we planned a port sampling workshop, joint egg production cruises to assess anchovy and sardine biomass, a stock synthesis workshop, and a workshop on fisheries applications of satellite technology. A workshop on aging pelagic fishes was held in Ensenada.

CalCOFI continued to support the Spanish-Portugese Sardine Anchovy Recruitment Program (SARP). We hosted a meeting to review work accomplished over the last three years by SARP participants. A planning meeting sponsored by the Intergovernmental Oceanographic Commission (IOC) of the United Nations Education, Scientific and Cultural Organization followed immediately, and included an *ad hoc* expert consultation session on SARP.

In a break with tradition, the 1989 CalCOFI Conference was held at the Scripps Institution of Oceanography. The symposium, which consisted of invited addresses and a panel discussion, was organized to honor the fortieth anniversary of the CalCOFI program, and to consider what society and its policymakers can reasonably expect in terms of scientific advice concerning large-scale changes

in the ocean. Other facets of the anniversary celebration included the preparation of a brochure and a videotape (for which E. Venrick deserves special thanks) describing CalCOFI and some of its notable achievements; the construction of two new permanent exhibits at the Scripps aquarium-museum; a presentation to Roger Revelle honoring his role in CalCOFI's early years; and some unusually elaborate wining and dining. A special CalCOFI exhibit and a continuous showing of the CalCOFI video were also part of the NMFS Southwest Fisheries Center twenty-fifth anniversary rededication and open house.

Many thanks to the officers and crews who assist us in our work on the University of California RV *New Horizon*, the National Oceanic and Atmospheric Administration ship *David Starr Jordan*, the Southern California Ocean Studies Consortium RV *Yellowfin*, the RV *Shana Rae*, the RV *Westwind*, and the FV *Jonathan Michael*. The Committee also wishes to thank everyone who contributed to volume 31 of *CalCOFI Reports:* editor Julie Olfe for her professional, thorough work and patient assistance; Spanish editor Carina Lange; past CalCOFI Coordinator George Hemingway and current Coordinator Patricia Wolf; and the many peer reviewers for their time, effort, and suggested improvements to the scientific contributions. The reviewers for this volume were Alice Alldredge, John Butler, Dan Cohen, Dudley Chelton, John Cullen, Deborah Day, Thomas Hayward, Dennis Hedgecock, Daniel Huppert, Sharon Kramer, John Marr, Milton Love, Alec MacCall, Marc Mangel, Douglas McLain, Geoffrey Moser, Michael Mullin, Tim Parsons, Elizabeth Venrick, Robin Waples, and James Waters.

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