

## REVIEW OF "REGIONAL FISHERIES OCEANOGRAPHY OF THE CALIFORNIA CURRENT SYSTEM AND THE CALCOFI PROGRAM" BY SAM McCLATCHIE

PAUL FIEDLER, 22 JULY 2013

We have all heard the accolades: CalCOFI is the "world's premier ocean monitoring program," based upon "extensive physical and chemical oceanographic studies, detailed observations of phytoplankton and zooplankton, and comprehensive analyses of fish eggs and larvae." (Ohman and Venrick 2003) John Isaacs called it a "profound and exciting experiment." (Behrman and Isaacs 1992) A review of the historical and scientific basis of the CalCOFI program would seem to be an ambitious endeavor. Sam McClatchie, SWFSC fisheries oceanographer and member of the CalCOFI committee, has taken on this task but appropriately constrained the scope and target audience of the review. The result is his recently published book, *Regional Fisheries Oceanography of the California Current System: The CalCOFI Program*. His expressed intent was "to extract themes relevant to current research rather than to prepare a compendious review of the literature," for use by "graduate students and researchers in oceanography with a special interest in the California Current System." The result is an enjoyable summary of the scientific principles behind the program, the history of the motivating questions and resulting sampling decisions, and the dedicated people involved.

The book is a comprehensive survey of the study of fisheries oceanography in a region with a long history of pioneering oceanographic investigations. It covers relevant scientific principles, regional fisheries, and the history and potential of applying this science to management problems, i.e., fisheries oceanography. The book is well organized, progressing from (1) a quick survey of fisheries, to (2) basic oceanography of the region, to (3) CalCOFI survey design and methodology, to (4) patterns of environmental variability affecting fish populations

over a range of temporal scales, to (5) pioneering studies of predation on fish larvae, to (6) methods for assessing fish stock population parameters, to (7) new paradigms of fisheries science that will continue to evolve based on the CalCOFI data set and the history described in this book. The author does not shy from explicitly stating the limitations of shipboard sampling. He shows how much of our knowledge of this system has been gained by satellite remote sensing and is now being expanded and refined through data collected by drifters and gliders and assimilated into comprehensive physical/biological models.

The writing style is first-person and somewhat casual, so that the book is easier to read than the typical textbook. What really sets the book apart is the nearly fifty pages of "perspectives" contributed by 24 scientists and students who have been involved firsthand in CalCOFI. Unfortunately, many early contributors are no longer with us, but they are remembered here. The vignettes reveal the enthusiasm and dedication of those who work in this field, but more importantly give insight into the decisions, innovations, and compromises that have shaped CalCOFI over the years.

The book is both a valuable summary of regional fisheries oceanography and of the history of fisheries and applied science on the California coast. It will be a useful review and reference point for undergraduate and graduate school students, for practicing scientists, and even for the interested public.

Behrman, D., with J. D. Isaacs. 1992. John Isaacs and his Oceans. AGU ICSU Press. 230 pp.

Ohman, M. D. and E. L. Venrick. 2003. CalCOFI in a changing ocean. *Oceanography* 16(3): 76–85.