

SYMPOSIUM ON LARVAL FISH BIOLOGY

PREFACE

The extreme fecundity of many fishes belies the fact that rarely do more than one or two survive among thousands of spawned eggs. Mortality, and its corollary survival, is largely determined among fishes in those early stages known as eggs and larvae. Although information has been accumulating on this subject for over fifty years there has recently been an upsurge of interest in the biology of fish larval stages beyond the taxonomic field. Scientists have come to realize that with knowledge of the distribution of fish eggs and larvae the spawning range can be delimited and that a census of the eggs and larvae in an area can be used to estimate the size of the spawning population. Knowing the diminishing numbers of older larvae allows an assessment of mortality, the number of survivors, and the size of the succeeding year classes. Information on larval food and physiological requirements now permits an intelligent approach to rearing fishes. Ultimately we hope to be able to predict what the effect of the environment is on spawning success.

It is little wonder then that biologists and others concerned with fisheries are finding that an under-

standing of the fluctuations of fish populations depends in large measure on what we know about fish larval stages. This is particularly true of the California Cooperative Fisheries Investigations (CalCOFI) which has the problem of explaining the many fold variations in spawning success of the Pacific sardine. It was therefore timely that this symposium on Larval Fish Biology should form the heart of the CalCOFI Conference held at Lake Arrowhead in October 29 through 31, 1963. In organizing this symposium I intended that it have as broad a base as possible; thus it ranges from the study of fish larvae in fresh water to those in sea water, and from the technology of fish rearing to the basic physiology of single eggs and larvae. I hope this volume will prove useful to those interested in the study, conservation, management and exploitation of the world's fish resources.

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REUBEN LASKER, Editor