

PREFACE

The preface to Volume I of "Fish Physiology" noted that a six-volume treatise would attempt to review recent advances in selected areas of fish physiology, to relate these advances to the existing body of literature, and to delineate useful areas for future study. The hope expressed at that time was that the series would serve the biologists of the 1970s as its predecessor "The Physiology of Fishes" (M. E. Brown, editor) has served its readers throughout the 1960s. Our general objectives remain, but with Volumes VII (Locomotion) and VIII (Bioenergetics and Growth) the emphasis has been somewhat altered; these later volumes presented in-depth reviews and assessments of current research in selected areas of fish physiology—especially areas where advances have been particularly rapid during the past decade. In keeping with this concept, we are pleased to add to the series Volumes IXA and IXB on fish reproduction.

When Volume III was published in 1969, the physiology of fish reproduction was reviewed in three chapters. The present treatment in two parts (A and B) attests to the rapid developments in this field. Moreover, Volume IX deals only with selected topics on reproductive physiology, especially the endocrinology, behavior, environmental interactions, and fertility-related topics. Several subjects included in Volume III are not reviewed in these volumes (viviparity, for example), whereas others that now merit consideration in separate chapters were not sufficiently developed to require any comment in Volume III (the hypothalamic hormones and hormone receptors, for example). With the exception of Part A, Chapter 1, which is devoted to the Cyclostomes and Part A, Chapter 2, which is devoted to the Chondrichthyes, the books deal with the much more thoroughly studied teleost fishes.

Volume IX reflects the practical importance of studies in fish reproductive physiology. The control of fertility is now a subject of great economic importance in the manipulation of valuable fisheries resources. Many significant advances and future trends in the research on fertility of teleost fishes are evaluated in several chapters of Part B.

Finally, the editors are happy to express their appreciation to all those who devoted their time to this project; the authors are all active research scientists, and in most cases they had to find the many hours required for writing in an already full program. We are fortunate to have had the pleasant cooperation of the leaders in this rapidly changing area of fish physiology.

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