

Preface

As was noted in the preface to the first edition, the idea for a single-volume on fish physiology dates from 1969, when DHE taught a graduate course in that subject for the first time at the University of Miami. The primary literature was often hard to find or too technical, and Hoar and Randall's Fish Physiology series (Academic Press) was just starting to be published as single volumes devoted to specific areas of research. Forty-four years later, the success of the first three editions of *The Physiology of Fishes* suggests that a single volume is still timely; hence, this fourth edition.

Because we felt that the utility and scientific interest of this fourth edition would be maximized by fresh approaches, and topics, we secured new authors for all but one of the chapters, and they come from three continents and five countries. In addition to completely new treatments on many of the original topics, we now have chapters on such timely topics as muscle plasticity, metabolism and membranes, oxygen sensing, endocrine disruption, pain, cardiac regeneration, and neuronal regeneration.

As in the past, we hope that this volume will be of interest to aquatic biologists, ichthyologists, fisheries scientists, and, of course, to comparative physiologists who still want to learn more about the physiological strategies that are unique to fishes, and those shared with other organisms.