

specific information in spawner-recruit models. Scientists working on population modeling in other kinds of fishes, and animals in general, will find a wealth of ideas in this volume, resulting from the tremendous amount of information on salmon biology and the intense pressure to manage them for the conflicting benefits of fisheries, ecosystems, and the salmon themselves.

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EELS AT THE EDGE: SCIENCE, STATUS, AND CONSERVATION CONCERNS. *Based on a symposium held in Québec City, Canada, 11–13 August 2003. American Fisheries Society Symposium, Volume 58.*

*Edited by John M. Casselman and David K. Cairns. Bethesda (Maryland): American Fisheries Society. \$69.00. xxvi + 460 p.; ill.; index. ISBN: 978-1-888569-96-4. 2009.*

Many freshwater eel (family Anguillidae) populations are undergoing a worldwide collapse. Their decline during the last three decades has been catastrophic—once the most abundant fishes by biomass of many temperate and subtropical river systems, they have, in many regions, been extirpated or reduced to but one percent of their former levels.

A symposium was held in 2003 to discuss the problems and their potential solutions. The editors have herein assembled 67 international participants as authors. Their contributions consist of 27 chapters separated into five parts: Overviews (three papers); Science, Ecology, and Life History; (ten papers); Status and Dynamics (five papers); Movement, Migration, and Barriers (three papers); and Stock Assessment and Management (six papers). Also included are the transcribed panel discussions from the symposium, the traditional Haudenosaunee Closing and Blessing, the text of 17 poster presentations, and the Québec Declaration of Concern entitled Worldwide Decline of Eel Resources Necessitates Immediate Action.

Diadromous fishes are particularly susceptible to human perturbations. Anadromous fishes (such as salmon) face problems similar to those that threaten catadromous eels in that few survive to return to their spawning grounds, and both face the prospect of habitat destruction and barriers (such as dams), while excessive overfishing further reduces their numbers. The semelparous life-history strategy of freshwater eels and Pacific salmon was key to their extraordinary abundance prior to the late 20th century, and is now contributory to their demise.

The chapters range from adequate to good and some are excellent. With few exceptions, papers focus on the capture and management of temper-

ate eel stocks (five of the 15–16 anguillid species) without any mention of the role that these anguillids play in their respective ecosystems. It would be useful to explain the consequences of their removal from the food webs of inland waterways (as salmon biologists now do) in order to capture the attention of an unconcerned citizenry.

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FISH LARVAL PHYSIOLOGY.

*Edited by R. N. Finn and B. G. Kapoor. Enfield (New Hampshire): Science Publishers. \$139.00. xv + 724 p.; ill.; species, common name, and subject indexes. ISBN: 978-1-57808-388-6. 2008.*

A science book might be judged on three criteria: Is it timely, does it fill a gap? Is it scholarly, providing authoritative coverage of a subject? Is it interesting, offering readers a stimulating mental boost? This volume fulfills each criterion.

The book is timely. Diverse audiences should find it complementary rather than duplicative. Readers with a particular interest in the biology of early fish life stages may have publications that focus on larval fishes (E. Kamler. 1992. *Early Life History of Fish: An Energetics Approach*. London: Chapman and Hall; R. C. Chambers and E. A. Trippel. 1997. *Early Life History and Recruitment in Fish Populations*. London: Chapman and Hall; L. Solnica-Krezel. 2002. *Pattern Formation in Zebrafish*. New York: Springer), but none with broad coverage in physiology. Readers in fish physiology can consult one of the volumes in the series *Fish Physiology*, edited by W. S. Hoar, D. J. Randall, and others (1969–2006. New York: Academic Press), or a book that is more modest in scale, but very up to date (D. H. Evans and J. B. Claiborne. 2006. *The Physiology of Fishes*. Third Edition. Boca Raton (FL): Taylor & Francis). These volumes provide little or nothing for those with a particular interest in early life stages.

The chapters in the current book are scholarly and most are interesting. Many of the authors explained why the physiology of larvae is distinctive enough to merit separate consideration. Justifications included the diversity of larval forms, the importance of larvae in aquaculture or population biology, issues arising from ontogeny and organogenesis (e.g., the absence of gills and attendant challenges of ionoregulation), distinctive features of larval ecology, and the tradeoff between rapid growth and stable canalized development.

This volume is organized into seven parts: Ontogeny; Respiration and Homeostasis; Nutrition and Energy; Sensory Physiology; Movement; Control and Defense; and Functional Changes in Form. Some of the chapters I found especially interesting were those