

range of subjects. However, the book is derived from a course taught from 1975 to 2001, and it shows. Relatively few of the approximately 660 references are post-1995, and there is little mention of many exciting recent developments. For example, although they have been a major research focus in the past decade, neither dispersal nor (population) connectivity are in the index or glossary, but the former is briefly mentioned in the text in the context of marine reserves. Larval behavior in relation to dispersal and settlement is ignored. The authors show how otolith rings are useful for aging, but only briefly mention in the introduction that otolith microchemistry can elucidate early life-history events. Marine fish biologists will find this book a useful and authoritative treatment of the more traditional aspects of fish early life history and research on it.

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#### FEEDING AND DIGESTIVE FUNCTION OF FISHES.

*Edited by J. E. P. Cyrino, D. P. Bureau, and B. G. Kapoor. Enfield (New Hampshire): Science Publishers. \$135.00. xiii + 575 p.; ill.; index. ISBN: 978-1-57808-375-6. 2008.*

This interesting book combines contributions that address feeding behavior, feeding ecology, digestive anatomy, and physiology to generate a broad examination of feeding and digestion in fishes. This is quite a task given the numerous aspects of feeding that could be addressed. Feeding is multidimensional, starting with prey detection and acquisition and ending with digestion. This activity can be influenced by many factors, both abiotic and biotic, and many features of feeding change through ontogeny.

The first two chapters emphasize the ecology of freshwater fishes of Brazil. Chapter 3 focuses on abiotic and biotic factors that influence feeding activity, with an emphasis on salmon. There is an odd transition to fish digestion with Chapter 4. This is unusual because a later chapter (Chapter 9) again discusses feeding behavior. Chapter 4 is, however, very broad in that it briefly covers nutrition, extensively examines digestion, and then discusses the development of digestive mechanisms. Moving from this very broad chapter, Chapter 5 goes into an extensive discussion of temperature adaptation of digestive enzymes. The next two chapters switch gears by broadly assessing digestion in freshwater and marine fish larvae, respectively. After another chapter on larvae, the volume contains the eclectic Chapter 9, which addresses digestion, feeding ecology, feeding mechanics, predator-prey relationships, and feeding behavior of elasmobranch fishes. Although this chapter

could have been separated into two separate discussions, it is a very nice addition to the book. It is, however, odd that the volume lacks a parallel chapter that describes the feeding behaviors and mechanics of teleost fishes. Following this focus on ecology and behavior, Chapter 10 again addresses digestive function, but this time emphasizing protein sources. After Chapter 11, which is an extensive discussion focused on nutrition and disease resistance in fishes (containing many useful tables), the book concludes with a relatively short chapter on bioenergetics.

The organization of the volume seems a bit haphazard, and several key topics are not included. Better flow from chapter to chapter would have made the book more cohesive and integrated. Despite this issue, *Feeding and Digestive Functions of Fishes* includes a wealth of information on a number of important topics related to fish feeding and digestion. Researchers and students will be delighted by the extensive detail, many tables, and color photographs. For those generally interested in feeding, this volume will be a fantastic resource.

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#### HANDBOOK OF MARINE FISHERIES CONSERVATION AND MANAGEMENT.

*Edited by R. Quentin Grafton, Ray Hilborn, Dale Squires, Maree Tait, and Meryl Williams. Oxford and New York: Oxford University Press. \$199.00. xiv + 770 p.; ill.; index. ISBN: 978-0-19-537028-7. 2010.*

This large volume of 56 papers sets out with the goal to stimulate improved management by synthesizing approaches to fisheries management and marine conservation worldwide. As such, it has a strong focus on fisheries economics, and less emphasis on fisheries biology or ecology. It is structured into four major sections, starting with nine "overview" papers on everything from world fish markets to gender dimensions in fisheries management. I enjoyed the introductory chapter by the editors where they suggest that marine conservation and fisheries management have arrived at a crossroads, where historical blockages to sustainability must be removed. However, there is a strong focus on rights-based approaches to fisheries management (catch shares and similar economic tools for allocating catches) that largely reflects the editors' personal interests. Although I agree that these play a role, it seems that they are given a lot of weight here and are not very well integrated with other approaches.

The second section presents eight chapters on Ecosystem Conservation and Fisheries Management, largely focusing on examples of bycatch re-