

BOOK REVIEW

THE BIOLOGY OF SHARKS AND RAYS. By A. P. Klimley. 528 pp. Published by The University of Chicago Press, Chicago, U.S.A., 2013. Price \$40.00. ISBN: 978-0-226-44249-5.

This book is a novel publication in its field – such a cohesive compilation of all aspects of Chondrichthyan fish life was surprisingly non-existent prior to this text. Despite increasing awareness and concern for the integrity of many shark and ray populations, their biology continues to be poorly understood throughout the non-scientific, and even much of the scientific, communities. The book is technically written for a scientific audience; however, with selective and focused reading a motivated layperson could also learn a great deal about these fascinating animals. Here, as a reviewing panel of upper level undergraduate and graduate students, we argue that this book is a successful attempt to provide a textbook on the subject. Such a synthesis of available knowledge comes at a pertinent time for Chondrichthyans, as they become increasingly imperilled by anthropogenic activities.

The book is divided into 16 chapters, each separated into various subsections. Chapter 1 presents a very brief introduction to sharks, rays, and chimaeras and provides a concise overview of the content of the book's chapters. Chapter 2, while dense and heavy on technical terminology, is a necessary explanation of the long evolutionary history of the taxon. Chapters 3–10 are primarily concerned with various aspects of anatomy and physiology. A number of these chapters are specifically devoted to a single sensory system and are relatively technical, but a section highlighting how sharks use their keen senses in conjunction integrates material well. Chapters 11–15 are more behaviour based. Anatomy is often discussed here as well since most Chondrichthyan behaviours are strongly associated with their unique body design. These chapters address a variety of behaviours, from poorly understood courtship and reproduction to interactions with humans (with a strong focus on the misconceptions often associated with these encounters). The final chapter, titled 'Fisheries and Conservation', is an effective ending point to a book of diverse topics. Major focuses in this chapter are shark fishery trends, characteristics that make cartilaginous fishes especially vulnerable to overfishing, and attempts at management.

Although impressed overall, we had several concerns with the text beginning with the inconsistent level of detail both between and within chapters. For some topics, we felt ourselves burdened by the level of detail and for others we were left wanting more. While this should be considered a minor issue, the topics with which the author has more experience are evident. Also, the focus of the book is severely skewed towards sharks, perhaps because sharks have been the subject of the majority of the research literature compared to other members of the Chondrichthyans. Finally, while figures

were generally well designed and a useful accompaniment to the text, on many occasions the author might have considered using higher quality images to portray such charismatic species.

Again, most of our issues with the book are minor and should not discourage a potential reader. While inconsistent detail may be a consequence of the single author, the cohesiveness of the book as a whole is a worthy consequence of that fact. Furthermore, the anecdotal introductions to most chapters provide an easy transition into often very technical material. ‘Spotlight’ sections throughout the chapters highlight interesting asides that explore many topics from electronic tag tracking to intrauterine embryo cannibalism. Finally, ‘discussion questions’ provided at the end of each chapter are thought provoking and direct the reader to further research. Summarizing such a broad range of topics is an ambitious task, and we believe Peter Klimley’s attempt would serve admirably as a textbook.

ROBERT J. BOURDON, MAURICIO CARRASQUILLA-HENAO, BRENNAN COLLICUTT,
CAMERON FRESHWATER, OLIVIA MCMILLAN, AMBER MESSMER, JAMES P. W.
ROBINSON, EASTON R. WHITE and FRANCIS JUANES
Department of Biology, University of Victoria, Victoria, Canada