

Contents

Preface.....	ix
Acknowledgments	xi
Editors.....	xiii
Contributors.....	xv

Section I Phylogeny and Zoogeography

1. The Origin and Relationships of Early Chondrichthyans.....	3
<i>Eileen D. Grogan, Richard Lund, and Emily Greenfest-Allen</i>	
2. Elasmobranch Phylogeny: A Mitochondrial Estimate Based on 595 Species	31
<i>Gavin J.P. Naylor, Janine N. Caira, Kirsten Jensen, Kerri A.M. Rosana, Nicolas Straube, and Clemens Lakner</i>	
3. Phylogeny of Batoidea	57
<i>Neil C. Aschliman, Kerin M. Claeson, and John D. McEachran</i>	
4. Phylogeny, Biology, and Classification of Extant Holocephalans	97
<i>Dominique A. Didier, Jenny M. Kemper, and David A. Ebert</i>	

Section II Form, Function, and Physiological Processes

5. Biomechanics of Locomotion in Sharks, Rays, and Chimeras.....	125
<i>Anabela M.R. Maia, Cheryl A.D. Wilga, and George V. Lauder</i>	
6. Prey Capture Behavior and Feeding Mechanics of Elasmobranchs	153
<i>Philip J. Motta and Daniel R. Huber</i>	
7. Energetics, Metabolism, and Endothermy in Sharks and Rays	211
<i>Diego Bernal, John K. Carlson, Kenneth J. Goldman, and Christopher G. Lowe</i>	
8. Food Consumption and Feeding Habits	239
<i>Bradley M. Wetherbee, Enric Cortés, and Joseph J. Bizzarro</i>	
9. Integrative Multisensor Tagging: Emerging Techniques to Link Elasmobranch Behavior, Physiology, and Ecology.....	265
<i>Nicholas M. Whitney, Yannis P. Papastamatiou, and Adrian C. Gleiss</i>	
10. Reproductive Biology of Elasmobranchs.....	291
<i>Christina L. Conrath and John A. Musick</i>	
11. Hormonal Regulation of Elasmobranch Physiology.....	313
<i>James Gelsleichter and Andrew N. Evans</i>	
12. Sensory Physiology and Behavior of Elasmobranchs.....	349
<i>Jayne M. Gardiner, Robert E. Hueter, Karen P. Maruska, Joseph A. Sisneros, Brandon M. Casper, David A. Mann, and Leo S. Demski</i>	
13. Recent Advances in Elasmobranch Immunology	403
<i>Carl A. Luer, Catherine J. Walsh, and Ashby B. Bodine</i>	

Section III Ecology and Life History

14. Assessing the Age and Growth of Chondrichthyan Fishes.....	423
<i>Kenneth J. Goldman, Gregor M. Cailliet, Allen H. Andrews, and Lisa J. Natanson</i>	
15. Population Dynamics, Demography, and Stock Assessment.....	453
<i>Enric Cortés, Elizabeth N. Brooks, and Todd Gedamke</i>	
16. Genetics of Sharks, Skates, and Rays.....	487
<i>Edward J. Heist</i>	
17. Predator–Prey Interactions.....	505
<i>Michael R. Heithaus and Jeremy J. Vaudo</i>	
18. An Updated Look at Elasmobranchs as Hosts of Metazoan Parasites	547
<i>Janine N. Cairns, Claire J. Healy, and Kirsten Jensen</i>	
19. Assessing Habitat Use and Movement.....	579
<i>Colin A. Simpfendorfer and Michelle R. Heupel</i>	
Index.....	603