



MARINE MAMMAL PHYSIOLOGY

Requisites for Ocean Living

Suppose you were designing a marine mammal. What would you need to think about to allow it to live in the ocean? How would you keep it warm? What would you design to allow it to dive for very long periods to extreme depths? Where would it find water to drink? How would you minimize the cost of swimming, and how would it find its prey in the deep and dark? These questions and more are examined in detail throughout this book.

Marine Mammal Physiology: Requisites for Ocean Living is the first textbook focused on how marine mammals live in the sea from a physiological point of view. It explores the essential aspects of what makes a marine mammal different from terrestrial mammals, beyond just their environment. Unlike many publications and books that cover these species from almost all perspectives, this textbook takes a step back to focus on the physiological and biochemical characteristics that have allowed these mammals as a group to exploit effectively the marine environment that is so hostile to humans.

The chapter topics are grouped into major themes: diving and locomotion, nutrition and energetics, reproduction, sensory systems, and environmental interactions. Each chapter is arranged around a common perspective and theme: the big picture challenge and summary and what is known specifically by order. To aid you even further, the authors include a "Toolbox" section in each chapter where they discuss the newest methods for understanding and working on the physiology of marine mammals.



CRC Press
Taylor & Francis Group
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www.crcpress.com

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K23399

ISBN: 978-1-4822-4267-6

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