

THE SILENT DEEP: THE DISCOVERY, ECOLOGY AND CONSERVATION OF THE DEEP SEA.

By Tony Koslow. Chicago (Illinois): University of Chicago Press. \$35.00. vi + 270 p + 16 pl; ill.; index. ISBN: 0-226-45125-9. 2007.

When I first saw this coffee-table style volume, my immediate thought was how will it add to Gage and Tyler's excellent textbook, *Deep-Sea Biology: A Natural History of Organisms at the Deep-Sea Floor* (1991. Cambridge: Cambridge University Press)? The answer is manifold. First, the gorgeous photographs and line drawings of deep-sea organisms and exploration give it broad appeal. The text is deceptive, in that it is written in a way that nonspecialists can follow and enjoy, but it is also extremely detailed and scholarly in its thoroughness. This trick is achieved by using a narrative style and numbered references that allow the flow of the text so that readers do not realize that Koslow has summarized a very large number of key studies for them in his detailed history of the exploration, study, and utilization of deep-sea environments.

The enthusiasm of the author for deep-sea ecosystems shines through with personal thoughts and anecdotes that most of us expunge from our terse and often dry writing. Not so here! Koslow presents a compelling story that begins with a section on early exploration through the Challenger Expedition, then moves through scientific progress in deep-sea ecology over the last century, and ends with a compelling and passionate section on very disturbing human impacts. Because this organization scheme follows the historical sequence, it works extremely well and makes it very "untextbook" in form. The author is unique among deep-sea biologists in that he comes to the field from a background in fisheries science, and is therefore also able to bring a management and policy perspective to the problem that few others could. The text is a real joy to read, and because it focuses on a subset of deep-sea issues—namely exploration, ecology, and conservation—it actually complements the Gage and Tyler volume very well. The current book is scholarly in offering new insights to specialists, but it is meant to be read by nonscientists who are interested in learning something about the largest habitat on Earth. Koslow is to be commended for providing an important textbook and viewpoint that is highly recommended for anyone with a professional or personal interest in deep-sea ecosystems.

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WAVE-SWEPT SHORE: THE RIGORS OF LIFE ON A ROCKY COAST.

By Mimi Koehl; photographs by Anne Wertheim Rosenfeld. Berkeley (California): University of California Press. \$39.95. xii + 179 p; ill.; index. ISBN: 0-520-23812-5. 2006.

This volume presents an excellent introduction to the natural history and biology of the shore for non-specialists. For many, a visit to the shore is a pleasant escape or a favorite holiday. This book will encourage readers to look at the shore and the organisms it harbors with a new eye. Marine shores are one of the most physically rigorous environments, and one that has provided a rich model system for studies of ecology, physiology, and biomechanics.

As is indicated in Chapter 1, this is a book of "how" organisms survive and thrive on the shore, which is explained by morphology, mechanics, and biophysics, rather than "why" questions, which are the essences of ecology and evolution. Chapter 2 focuses on water, its power both in terms of physical forces, but also in terms of the essential need for the presence (or absence) of water for life on the shore. Chapter 3 deals with waves, boundary layers, and the nonintuitive way in which water moves and works. For many, it will be surprising to learn that even on the most wave-swept shore, there are places where organisms are protected from the forces of moving water, and the extreme differences in flow seen by organisms over very short distances allow much of the rich diversity found there. Chapter 4 moves to the properties of organisms faced with the rigors of shore life. It also illustrates that organisms have found many different types of solutions to these problems enhancing the diversity we see. This chapter also does a superb job of explaining important concepts in mechanics (such as stress, strain, and fracture) and how both the material and structural properties of organisms affect their responses. Chapter 5 concerns the large-scale movement and mixing of water. Although moving water is a physical challenge for organisms, for many (especially those that are sessile), it is also essential for the delivery of food and nutrients and the dispersal of offspring. Chapter 6 takes us to the shore in the absence of water—when the tide is low or the fringing areas are high on the shore, and the ways organisms cope with heat and desiccation. The only constant in the shore environment is change, which is covered in Chapter 7. Here, the author deals with both physical and biological changes that occur from short time scales (such as waves washing in and out) to long time scales (such as seasons) and how the timing of life matches these changes.

Each of the eight chapters is complimented by excellent illustrations and many beautiful photographs of common animals and plants, as well as

scenes that illustrate concepts. The photographs alone make the book one that many readers will want in their home. The author also provides useful footnotes with definitions and references for additional readings for anyone who wants to know more. In a time when public scientific literacy is low, this volume provides an excellent and visually appealing entrée into this wonderful world. The audience for this book includes educated nonexperts, and it should be especially appealing to anyone who lives close to or regularly visits the shore. I think this would also make an excellent textbook in a science course for nonmajors. The appeal of the photographs combined with the approachable prose and excellent deciphering of science and engineering into intuitive and easy to relate to concepts will help demystify science for many nonexperts, and may inspire students to want to learn more about biology, biomechanics, and the natural world.

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**WILD CARIBBEAN: THE HIDDEN WONDERS OF THE WORLD'S MOST FAMOUS ISLANDS.**

By Michael Bright. New Haven (Connecticut): Yale University Press. \$25.00 (paper). 224 p; ill.; index. ISBN: 978-0-300-12549-8. 2007.

This is a well-written, idyllic, armchair voyage of exploration of the biological diversity of the islands of the Caribbean Sea. A companion volume to a four-part television series produced for the Travel Channel, the book is laden with color photographs and accurate, detailed accounts of the natural history of many of the enormous variety of organisms that inhabit one of the world's hotspots of biological diversity. For a popular work, I particularly liked the geological context and human historical accounts that help explain the evolutionary development and contemporary distribution of this diversity.

It is, however, painful for me to read this book from my perspective of over four decades of travel and biological research in the region. The greater Caribbean washes the shores of over 35 nations—from among the poorest to the richest in the world—with perhaps 200 million people. The island and mainland areas have suffered from all of the insults of a relentlessly expanding human population: deforestation; rampant development; pollution; overexploitation; and alarming social and economic problems, to name but a few. On too many pages I was confronted by a brilliant photograph of a reptile, bird, or mammal and the unrequited expectation that the text would discuss the alarming trend of decline or threatened or endangered status of that particular species. For example, the ivory-billed woodpecker, unseen in Cuba since at least 1986, is miraculously brought to life.

Although the book concentrates on terrestrial species, the blithe and breezy accounts of coral reefs, fishes, sharks, turtles, and manatees are perhaps even more flagrantly idealized. The author ignores the tragic losses of habitats and populations to overfishing, habitat loss, and coral diseases that have raised alarms and international calls for action. The term “shifting baseline syndrome,” coined to describe the perception of decline in fisheries, comes to mind (see D Pauly. 1995. *Trends in Ecology and Evolution* 10(10):430). Until we recognize what we have lost, we cannot influence the public, set goals, and implement governance policies that might allow humans to live sustainably with what is left of the natural patrimony of the planet.

Acknowledging its high production values, excellent illustrations, and scientifically informed text, *Wild Caribbean* reads, perhaps not unexpectedly, like an ecotourism development department brochure. For an old Caribbean hand, it is a sad, nostalgic trip through the “paradise” that once was and may never be again.

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**SAVING PUGET SOUND: A CONSERVATION STRATEGY FOR THE 21ST CENTURY.**

By John Lombard. Published by American Fisheries Society, Bethesda (Maryland), in association with University of Washington Press, Seattle (Washington). \$35.00 (paper). xvii + 336 p; ill.; index. ISBN: 0-295-98674-3. 2006.

This is an ambitious volume that wrestles with a key challenge facing modern North American society: How do we conserve natural ecosystem functions in a human-altered landscape? Like other books of this genre, Lombard argues for major changes to the management regimes currently in place and a fundamental reevaluation of societal values and economic decision-making. He concludes that urban environments, as presently configured, are essentially lost from a conservation perspective. The author condemns urban sprawl within the Puget Sound region, and argues that conservation priority should be given to those natural areas that contribute most to the ecosystem services of a region. His analysis is multidisciplinary and focuses on the legislative, regulatory, and judicial context for the current state of Puget Sound's endangered salmon runs, water quality, and growth management. His review of the history and current application (or misapplication!) of Washington State's Growth Management Act is particularly insightful.

This book is, however, not without its shortcomings. For example, climate change is frequently