

Man and the Sea Revisited

The Unnatural History of the Sea.

Roberts, C. M. 2007 Island Press, Washington, D.C. 456 pp. \$28 (hardcover). ISBN 1-59726-102-5.T

For many of us who lament the rapid loss of numerous species from habitat destruction, it may be interesting to learn from a review of our not-too-distant past that we are in good (or rather bad) company with generations past. What is currently happening to species worldwide is the continuation of a centuries-old trend. Nowhere is this more obvious than in the sea. In *The Unnatural History of the Sea*, Callum Roberts takes the reader on a journey back in time through the bloody tragedy of man's encounter with ocean denizens, many of whom are long gone as a result.

Steller's sea cow, the great auk, the Atlantic gray whale, and other lesser-known species were completely decimated. Other species came close to extinction and currently inhabit extremely limited portions of their former range (e.g., the sea otter). Scientifically, reconstructing the history of population fluxes is invaluable, particularly for conservation science because baseline populations are used for determining sustainable yields and restoration goals and for evaluating achievement of conservation efforts. Roberts points out that some current species-saving initiatives deemed successful are misleading because populations existing before modern onslaughts, many of which began during the 17th and 18th centuries, have been incorrectly estimated (e.g., Roman & Palumbi 2003).

Roberts' strength lies in his descriptive passages that are simply riveting (e.g., descriptions of a whale hunt and of the mid-18th century expedition to Bering Island that opens the book). These recreate the oceans of the past in their abundance and

treachery and were derived from numerous firsthand accounts and extensive research. Roberts tells us when many types of hunting and fishing practices began (e.g., records of whaling date back as far as 6000–1000 B.C.) and how they evolved. He conjectures about what caused the end of some species. The Steller sea cow, for example, may have died off because sea otters were culled to the extent that sea urchins, the otters' prey, became so numerous that they decimated the coastal kelp beds that sustained the sea cow. Roberts also details the first measures taken to counter overfishing, some as early as the mid-1200s, and gives a solid indication of their success or failure.

One gets the sense that the hardships (such as piracy, backbreaking labor, disease, and the hazards of shipwreck) endured by early explorers and hunters was well compensated by the plethora of natural resources that surrounded those who ventured out to sea. Today's nature lovers would rejoice to experience some of the abundance Roberts describes. One account from the early 1500s relayed, "So compact are the cod shoals arriving in Vestfjorden [Norway] that a dropped sounding lead may rest on the silvery mass." In another passage, sailors describe fish lying on one another in the waters of Chesapeake Bay and trying to catch them with frying pans.

But seafarers and shoremen spent little time rejoicing in nature's bounty. Until recent history, any account of ocean flora or fauna focused on how to effectively kill and consume it. Roberts writes of both collective temporal and geographic amnesia. The former occurs as each generation comes to view the environment they experience as normal causing deterioration to pass unnoticed. The latter brought people to believe that dwindling wildlife populations only meant these populations had moved elsewhere. These phenomena have continued right up to present day.

One shortcoming of the book is Roberts' focus on exclusively Western society's exploitation of the sea. He touches briefly on how the first Europeans arriving in the New World encountered dense populations of Native Americans living all along the coasts. While briefly admitting that these native populations also affected the sea, Roberts fails to tell us how and to what extent. In regards to more recent assaults on ocean ecosystems, Roberts concentrates on fish capture and largely ignores other impacts, such as those from mariculture, water quality degradation, and climate change.

But going back in time, from Western exploitation that began as mostly European exploitation, it is clear that the consequences of industrialized fishing are catastrophic. About half way through the book, the reader wonders how any redemption is possible. Fish and animal populations are slaughtered so thoroughly and conservation is so inadequate that "natural" species stand no chance whatsoever. (With the book's title, Roberts suggests that anthropogenic actions are "unnatural.") It is hard to see how Roberts can conclude his chapter on the disastrous consequences of overfishing with "it doesn't have to end like that."

Clearly there is hope that the tide can yet be turned, in the author's view, by reforming fisheries management, establishing marine protected areas, and integrating the 2. Roberts reports on some of his own research. On the basis of his findings and others, he makes a justified and well-founded case for marine reserves to rehabilitate marine ecosystems and restore fisheries (e.g., Murawski et al. 2000; Gell & Roberts 2003). A couple of his 7-point fisheries management reforms are less convincing. He largely ignores implementation issues related to mandatory keeping of bycatch and bykill. Similarly, expecting politics to be eliminated from fisheries management decisions seems naïve.

From this intense and frequently heart wrenching tale of tragedy, Roberts does offer hope. All in all, Roberts' use of quoted accounts, his engaging narratives, and personal reflections plus well-researched factual material make this book highly accessible to the layman and invaluable to the scientist. It is a must-read for all those concerned about marine conservation and species preservation overall.

Recently Received Books (January 2008–March 2008)

Acid Rain in the Adirondacks. An Environmental History. J. Jenkins, K. Roy, C. Driscoll, and C. Buerkett. 2007. Cornell University Press, Cornell, New York. 256 pp. \$29.95 (paperback). ISBN 978-0-8014-7424-8.

Confronting the Coffee Crisis. Fair Trade, Sustainable Livelihoods and Ecosystems in Mexico and Central America. C. M. Bacon, V. E. Méndez, S. R. Gliessman, D. Goodman, and J. A. Fox, editors. 2008. The MIT Press, Cambridge, Massachusetts. 400 pp. \$27.00 (paperback). ISBN 978-0-262-52480-3.

Designing Sustainable Forest Landscapes. S. Bell and D. Apostol. 2008. Taylor & Francis, Abingdon, Oxon, United Kingdom. 367 pp. \$100.00 (hardcover). ISBN 978-0-419-25680-9.

The Ecology of Papua. Part One. A. J. Marshall and B. M. Beehler, editors. 2007. Periplus Publishing Group, North Clarendon, Vermont. The Ecology of Indonesia Series. Volume VI. 780 pp. \$49.95 (hardcover). ISBN-13 978-0-7946-0393-9.

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Murawski, S. A., R. Brown, H. L. Lai, P. J. Rago, and L. Hendrickson. 2000. Large-scale closed areas as a fisheries-management tool in temperate marine systems: the Georges Bank experience. *Bulletin of Marine Science* **66**:775–798.

The Ecology of Papua. Part Two. A. J. Marshall and B. M. Beehler, editors. 2007. Periplus Publishing Group, North Clarendon, Vermont. The Ecology of Indonesia Series, Volume VI. 768 pp. \$49.95 (hardcover). ISBN-13 978-0-7946-0483-7.

Emerging Markets for Ecosystem Services. A Case Study of the Panama Canal Watershed. B. S. Gentry, Q. Newcomer, S. C. Anisfeld, and M. A. Fotos III, editors, 2007. The Haworth Press, Binghamton, New York. 396 pp. \$148.00 (hardcover). ISBN 978-1-56022-173-9.

Environment, Power, and Society for the Twenty-First Century. The Hierarchy of Energy. H. T. Odum. 2007. Columbia University Press, New York. 432 pp. \$39.50 (paperback). ISBN 978-0-231-12887-2. \$74.50 (hardcover). ISBN 978-0-231-12886-5.

A Fragile Balance. The Extraordinary Story of Australian Marsupials. C. Dickman and R. W. Ganf. 2007. The University of Chicago Press, Chicago, Illinois. 256 pp. 138 color plates. \$65.00 (hardcover). ISBN 0-226-14630-9.

Roman, J., and S. R. Palumbi. 2003. Whales before whaling in the North Atlantic. *Science* **301**:508–510.

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The Governance of Western Public Lands: Mapping Its Present and Future. M. Nie. 2008. University Press of Kansas, Lawrence, Kansas. 380 pp. \$39.95 (hardcover). ISBN 978-0-7006-1558-2.

The Last Wild Wolves. Ghosts of the Rain Forest. I. McAllister. 2007. University of California Press, Berkeley, California. 192 pp. \$39.95 (hardcover) + DVD. ISBN 978-0-520-25473-2.

The Middle Path. Avoiding Environmental Catastrophe. E. Lambin. 2007. The University of Chicago Press, Chicago, Illinois. 182 pp. \$25.00 (hardcover). ISBN 978-0-226-46853-2.

Oceans Past. Management Insights from the History of Marine Animal Populations. D. J. Starkey, P. Holm, and M. Barnard, editors. 2008. Earthscan, London, United Kingdom. 249 pp. \$127.00 (hardcover). ISBN 978-1-84407-527-0.

Wildlife Conservation in China. Preserving the Habitat of China's Wild West. R. B. Harris. 2007. M. E. Sharpe, Armonk, New York. 384 pp. \$74.95 (hardcover). ISBN 978-0-7656-2057-6.

