BOOK REVIEWS

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Kraus, S. D., and R. M. Rolland (eds.). 2007. The Urban Whale: North Atlantic Right Whales at the Crossroads. Harvard University Press, Cambridge, Massachusetts, 543 pp. ISBN 13: 978-0-674-02327-7, price (hardbound), $55.

The North Atlantic right whale (*Eubalaena glacialis*) is the most endangered of North America's marine mammals. This book is a comprehensive, attractive, and readable account of the current state of knowledge about the species, particularly aspects of its biology pertinent to conservation and recovery. Books that are single-species case histories are out of vogue for some publishers and academics, and edited volumes with chapters by multiple contributors can be uneven, dry, and difficult to read. In contrast, this book is exciting on multiple levels, ranging from changes in the North Atlantic marine ecosystem to the lives of individual whales under scrutiny at population and molecular scales. The chapters are tied together skillfully. The tale that unfolds is rich in history, disturbing in its implications, and inspiring in showing what a dedicated group of researchers can accomplish in the face of major logistic difficulties.

This book has 17 chapters by 35 authors. Each chapter opens with a vignette based mostly on field notes and journal entries. These vignettes bring each topic alive, helping to place the reader into the worlds of right whale researchers and of the beast itself. Chapters are well illustrated with photographs, maps, tables, and graphs that are easy to follow. Headings and subheadings are liberally placed and appropriate, and each chapter has its own list of literature cited. There are 34 color plates. The color plates depict right whales (ranging from group social interactions to forensic bone histology), research in action, and maps of marine habitat features and right whale distributions.

The 1st chapter (by Scott Kraus and Rosalind Rolland) opens with a vignette on repeated sightings of an adult right whale. This female was documented photographically beginning in 1935 when she and her calf were shot at (and the young one killed) on the winter calving area off northeastern Florida. Photoidentification ended in summer of 1995 with an image of her with a surely fatal propeller wound off New England. Thus the story of this one whale mirrors much of what the rest of the book richly delves into: the long timescale of the lives of individual whales and how this makes their demography so susceptible to unnatural impacts on survival and fecundity, the large spatial scale over which their demography must operate, and the transition from populations unprotected from hunting to populations subject to unintended mortality from new anthropogenic forces in an increasingly degraded ocean. Such factors also make this species difficult to study and manage. Chapter 1 then provides a brief synopsis of right whale research and conservation; explains worldwide distribution, abundance, and taxonomy of all species of right whales; and gives overviews of their morphology, ecology, and conservation. Chapter 2 is an in-depth historical analysis by Reeves, Smith, and Josephson of right whale hunting based on many sources, including whaling logs. Their chronicle documents hunting of right whales from at least the 1100s off Norway and Iceland, and their taking by Basque whalers off North America (including the Gulf of St. Lawrence) beginning in the 1500s. Historical sources were examined to reconstruct the past distribution and abundance of right whales and to estimate a rough overall take by whalers.

From these opening perspectives various chapters deal with research techniques and basic biology and ecology including reproduction, movements, distribution, feeding ecology, genetic diversity and genetic identification of individuals, hormones, biotoxins, parasites, animal health, and acoustic communication. These topics are then followed by chapters that assess the implications of ongoing threats to North Atlantic right whales, including conflicts with fisheries (particularly entanglement in nets), ship traffic, and climate change. The penultimate chapter deals with both population and habitat modeling. The final chapter, again by Kraus and Rolland, gives a realistic and sobering definition of "the urban whale syndrome." There are also 3 short appendices and a substantial index.

Given that the population may number only about 300–350 individuals and that threats to them seem relentless, the challenges that may impede recovery of North Atlantic right whales are huge. Logistical issues are also very formidable in a species as difficult to study as right whales, and there is still much to learn that may be useful for management. For example, the book reveals that there are likely undiscovered wintering areas off the coast of the United States. Despite logistical difficulties, the study of right whales has been met by the authors and other right whale researchers with a passion, endurance, and ingenuity that becomes evident as one turns the pages of the book. The researchers developed noninvasive techniques to isolate and quantify reproductive hormones using floating whale feces, obtained by using scent-trained dogs riding the bows of small boats; designed (and redesigned) biopsy tools to collect blubber samples during many days at sea; spent thousands of hours at risk in small aircraft conducting aerial surveys; tediously obtained, cataloged, and matched photoidentification records that must accumulate for decades before yielding life-history information needed to assess vital rates; and performed major logistical feats to dissect, determine causes of death, and salvage tissue samples from large (approximately 50,000 kg) carcasses washed up on beaches. In addition to advancing conservation, all these efforts also have been rewarded by the information now well summarized in this attractive book. I recommend it to all who are interested in wildlife management, life histories of mammals, marine mammalogy, endangered species, and conservation biology. This book would be particularly useful as supplementary material for either undergraduate or graduate courses in these topics, and could stand alone as a basis for seminars in these fields. The audience that would appreciate this book is wide, and depending on the topic could range from lay readers to specialized professionals.—Thomas J. O'Shea, *United States Geological Survey, Fort Collins Science Center, 2150 Centre Avenue Building C, Fort Collins, CO 80526-8118, USA; e-mail: tom_o'shea@usgs.gov*.