

Encyclopedia of Whales, Dolphins and Porpoises

By Erich Hoyt. 2017. Firefly Books. 300 pages, 49.95 CAD, Cloth.

Written by a British-based, dual-citizen Canadian who is a research scientist, conservationist, and author, the *Encyclopedia of Whales, Dolphins and Porpoises* provides an interesting and beautiful global overview of cetaceans. Part pictorial guide, part research overview, part coffee table book, and part call to action, and brimming with incredibly beautiful photographs showing cetaceans in action, this book will appeal to many readers in its attractive, easy-to-read format.

The reader will learn a great deal. The book contains many interesting facts about this hugely popular yet mystical group of marine mammals. In recounting the history of cetacean research and monitoring, the author emphasized the major progress made with the realiza-

tion that individual animals could be photographed and identified by distinctive species-specific features, such as flukes, dorsal fins, pigmentation patterns, scars, and wounds. This led to great advances in previously difficult areas to research such as migration, distribution, and social behaviour. In a general book such as this obviously not all biological facts can be provided, but it does provide an interesting and sometimes astounding array of biological information. It is quite enlightening how little is still known about some cetacean species, even breeding areas and species taxonomy, and how recently much of the known scientific information has been gathered. It was sobering to learn that almost half of all cetaceans globally are considered

Data Deficient, with insufficient data to determine status. The book is filled with many fascinating and interesting facts on cetacean life history, with the author often sharing insights and observations from his own research. The discussion on Killer Whale (*Orcinus orca*) ecotypes (fish-, mammal- and shark-feeding) was particularly well done.

The author conveys successfully the essence of the breadth and methods of various research approaches used today, such as transect surveys, acoustic studies, and faecal analysis. Consistent with his concerns about conservation, he delved into some detail on the potentially harmful nature of invasive studies, such as satellite tagging, outlining a series of questions for researchers considering whether such research should be conducted.

The book is logically laid out, although the content is not always well organized. Chapters on the shared history of humans and cetaceans, cetacean research, basic biology, conservation, and future prospects bracket three central chapters containing species accounts devoted to the life history and social behaviour of the three main cetacean groups: baleen whales, toothed whales, and dolphins and porpoises. Unfortunately, these latter chapters treat individual species inconsistently and do not cover all species, with no clear rationale for what species are and are not included. These chapters do not always build on information in a logical progression, sometimes beginning with a discussion of a specific species and only later in the chapter describing the general characteristics of that particular group of cetaceans, often within the section for one specific species. This confusion is in part due to the use of extensive insert boxes, often placed in the midst of other accounts. This is especially disruptive when extensive insert boxes (e.g., two pages) have been placed in the midst of text, and even in the midst of sentences. They are usually indistinguishable from regular text except for different colouration; in most cases, it would have been less confusing and more effective to treat the information in the text box as just another sequential section in the chapter. Although these three central chapters account for one-third of the book's length, they are less useful for between-species comparisons than the appendix, which provides consistent information on all 90 currently recognized species of cetaceans, including illustrations and brief but standard summaries of size, habitat, range, diet, social aspects, and conservation status. However, the size comparison charts of the three major cetacean groups at the end of each chapter are very illustrative. Each species in these charts is cross-referenced with the species summary in the appendix; further cross-references linked to those species addressed in the central three chapters would have been useful.

Although the author does an admirable job, it is difficult to produce a book such as this that is suitable for lay readers while also covering the necessary scientific detail. One example would be the discussion on taxonomy, where in one complex paragraph the author tries to describe in overview the relationships between and

among 14 species of baleen whales (Mysticetes) in four families, and 76 species of toothed whales (Odontocetes) comprising the large-, medium-, and small-sized toothed whales, all with examples. Some inadvertent technical language was occasionally introduced with inadequate explanation, e.g., the term "fluid fusion fission societies" is introduced at one point but not actually explained until almost 60 pages later and most fully explained 100 pages on. There is also the occasional inadvertent duplication of information, sometimes in close proximity.

A glossary would have been very helpful, even though most terms are described somewhere in the text. Given the general/overview nature of the book, the absence of referenced citations is perhaps not surprising, although I often found myself wanting to know the source of, or to follow-up on, some specific interesting fact. The list of select references for the main sources used also provides recommended further reading. The index is useful and comprehensive, although the print is very small.

A relatively few apparent errors, inconsistencies, or areas of potential confusion in the species status section were noted. A figure showing the four humpback dolphin species switched identification for two of them. Maui Dolphin was referred to inconsistently as both a population and a subspecies of Hector's Dolphin (*Cephalorhynchus hectori*), perhaps a consequence of its relatively recent recognition as a subspecies. A reference to and a photograph of Antarctic Minke Whale (*Balaenoptera bonaerensis*) were included within the species account for Common Minke Whale (*Balaenoptera acutorostrata*) rather than in a separate section. Although listed by the International Union for Conservation of Nature (IUCN) as Critically Endangered, Baiji (*Lipotes vexillifer*) of the Yangtze River is variously described as "extinct", "considered extinct", "driven to extinction", and, perhaps most accurately, as "probably extinct". The Critically Endangered Vaquita (*Phocoena sinus*) is described as the "most endangered cetacean in the world, the one closest to extinction", a designation that only makes sense if one concludes that Baiji is extinct.

Figures are not numbered, and information on them is often presented out of order relative to the text, often by several pages. In many cases, linking a text description to a specific figure to demonstrate what is being explained would have been helpful. Global distribution maps would have been a very valuable addition for all species. For example, two of five populations of Bowhead Whale (*Balaena mysticetus*) globally are identified as Endangered but with no indication of the location of these populations.

The author quite appropriately places a great deal of emphasis on the conservation of and future prospects for cetaceans. Future challenges facing the world's cetaceans are many, and addressing them will take long-term, dedicated commitment from society as a whole. The future of cetaceans is addressed objectively and

realistically, neither glossing over the challenges and probable upcoming extinctions nor giving in to despair or hopelessness. There are many initiatives underway or proposed that would improve the future prospects for many cetacean species. The author also suggests a number of practical measures people can take to get involved as citizen scientists and “whale savers”. While not all species are treated equally, the plight of some of the most imperilled species is eloquently and evocatively described.

The discussion of conservation issues and challenges is extremely interesting and useful, although not always well organized or easy to find. A specific chapter is devoted to this topic, but the author often delves deeply into conservation status or issues in the midst of the species accounts, creating some confusion over where to look for conservation information. Given the recent spate of deaths of North Atlantic Right Whales (*Eubalaena glacialis*) in Canada, it was disappointing that the book’s discussion of threats to this species concentrated almost solely on USA waters. The IUCN status of ceta-

cean species is inconsistently referenced in the species accounts, being identified for some species but not others; it is, however, consistently referenced in the appendix.

This book is very ambitious in its scope and meets many of its objectives. Comprehensive, colourful, and full of interesting facts, it does an excellent job of showing the diversity of cetaceans around the world and raising awareness of conservation challenges and concerns for their future. It does treat some species in more detail than others, sometimes inconsistently addresses different life history components, and specific information is not always easy to find. However, as an overview to the diversity, ecology, and life history of cetaceans and a summary of major conservation challenges facing them now and into the future, it is an excellent addition to your natural history and conservation library.

TED ARMSTRONG
Thunder Bay, ON, Canada