

Book Review

MARINE MAMMALS OF THE WORLD: A COMPREHENSIVE GUIDE TO THEIR IDENTIFICATION. Thomas A. Jefferson, Marc A. Webber, and Robert L. Pitman. Illustrations by Brett Jarrett. Academic/Elsevier Press, Amsterdam. Hardcover. ISBN 978-0-12-383853-7, 573 pp.

In the past 15 years or so, there have been several quite good guides to marine mammals—that diverse assemblage of about 128 whales, dolphins, porpoises, seals, sea lions, fur seals, walrus, manatees, dugong, sea and marine otter, and polar bear—that have adapted to life in the seas and some mighty rivers. This guide is the most comprehensive and, to my mind, the best.

Part of what makes the book so good, I believe, is that it is written by colleagues adept at identifying marine mammals in their natural habitats—the three authors are intimately familiar with the majority of those 100+ species (on the back cover, it is stated that collectively they have observed 112 of 128 in nature!) and have not only a scientific knowledge but a feeling for the ways of surfacing, the splashes caused by, the silhouettes, the shadings and colorations, the leaps and group types of many of their topic animals. This is akin to what experienced naturalist birders call the jizz of a bird—the overall impression or appearance garnered from size, coloration, shape, posture, flying style, and other habitual movements. It is what we humans use when we recognize a good friend from a distance by stance, head and arm movements, and so forth. Of course, upon closer inspection, sometimes we are wrong in our identification, but this is where the science part, the details of identification in humans, birds, and mammals, takes precedence. The authors have attempted to impart this intimate knowledge by their vivid descriptions and copious numbers of all-color, in-the-field photos of animals engaged in blowing, leaping, social grouping, and other behaviors. The animals “come alive” in this guide more so than in most others (save perhaps equally as well in the pocket guide *Whales, Dolphins, and Other Marine Mammals of the World* by Hadoram Shirihai, 2006, Princeton University Press). The illustrations by artist Brett Jarrett are superb (and he also illustrated the Shirihai guide).

What more is there to say? Well, the book is also a compendium of other useful information.

Chapter 1 explains how to use the book as a guide to general and specific identification, developmental variations, uncommon color morphs, the detection of hybrids and other anomalous animals, variations in individuality, scarring, the use of IUCN status reports, and more. Chapter 2 provides a basic short primer on marine mammal biology, including what is a marine mammal (one that takes food wholly or predominantly from the aquatic environment and has ancestors who lived in the sea, even if now living in certain rivers or land-locked lakes), a short listing of them all, evolutionary history, zoogeography, anatomy and physiology, reproduction and life history traits, feeding ecology, causes of natural and anthropogenic mortalities, social organization, behavior, and single and mass strandings. Chapter 3 consists of a very welcome description of taxonomic groupings in general, above the species level, and Chapters 4 through 7 (cetaceans, pinnipeds, sirenians, and others—sea and marine otters and the polar bear, and extinct ones treated separately)—the obvious “meat” of the book, comprising about 450 pages—provides the detailed species accounts, with taxonomic background, species characteristics, a world or regional map for primary and secondary ranges, recognizable regional geographic forms, a “can be confused with” section, distribution, ecology and behavior, feeding and prey, threats and status, references, and—of course—the primary side illustration and select photographs. In the cases of calf or pup and male/female morphological differences, there are separate paintings of each.

Chapter 8 provides something that many terrestrial but few marine mammal guides have (excepting the excellent precursor to this guide, the black and white 1993 FAO guide to the *Marine Mammals of the World* by the same Tom Jefferson and Marc Webber of the present one, plus the amazing now deceased naturalist/scientist Steve Leatherwood), and this is a set of six dichotomous “go to step xx” keys, updated and expanded for “a” cetaceans based on general experience and “b” skull morphology, “c” and “d” for pinnipeds, and “e” and “f” for sirenians. The general appearance keys can be used at any level of experience, while the skull keys are recommended for more advanced users. Chapter 9 summarizes important recognition characters for potentially confusing similar species to help distinguish (1) seven large beaked whales;

(2) 14 Mesoplodon beaked whales; (3) three similar “blackfish”—the melon-headed, pygmy, and false killer whales; and (4) nine long-beaked marine dolphins of the *Delphinus*, *Stenella*, and *Tursiops* genera. This chapter can be used as a “quick and cheap” guide if the keys are not needed as one already knows approximately with what one is dealing. It would be nice to see references in this section to pages of taxonomic descriptions where the photos and drawings reside, and perhaps this can be added in a second edition.

Chapter 10 has a useful grab-bag of glossary words used in identification, behavior, and some aspects of ecology. Chapter 11 contains references used throughout the text, and the book is ended by indexes of common and scientific names. The inside front cover has labels of cetacean color and morphology, and the inside back cover has labels of pinniped morphology, with photos of a baleen whale and striped dolphin, and a fur seal and seal, respectively.

If I do have potential mild criticisms, they are these: one, while the authors clearly acknowledge (on p. 5) that written and mapped ranges of animals may be woefully inadequate due to lack of data, there is some expression of ranging where the species is clearly not present. I base this on the dusky dolphin about which I pretend to know more than about most other species, and the fact that the southern coastline of Australia is labeled as its “primary range.” This is simply not the case, and only very occasional sightings and strandings have been recorded there and to the south of the mainland, off Tasmania. It may prove in the future that all of southern Australia is “secondary range,” but “primary,” never! Two, I notice a general hesitancy for absolute statements, even if the data are overwhelming. Once again, I’ll give the dusky dolphin example: “In Peru, calving is believed to peak in . . . spring; while in Argentina, South Africa, and New Zealand, calving appears to occur in summer . . .” (p. 200). Well, the data are beyond believing and appearing; they are good and copious data, and the seasonalities of calving are as they are. Similarly (as far as hesitancy and defined accuracy are concerned), “New Zealand dolphins appear to engage in feeding deeper in the water column than do those from Argentina” (p. 200) could be re-stated as “In New Zealand, dusky dolphins feed at night on meso-pelagic prey in deep waters such as in the Kaikoura Canyon, and in some other areas feed in day-time in shallow bays. The daytime feeding is similar to that of near-shore continental shelf feeding in Argentina.” In other words, while there is much that is unknown, I see no reason why that which is known cannot be clearly stated. Because I have this disagreement with statements on one species

about which I know more, I suspect that other specialists may have similar (mild) complaints about their areas of specialty.

My minor quibbles above notwithstanding, I recommend this comprehensive and up-to-date guide to every budding as well as serious marine mammalogist. I have used it and will continue to use it in my own undergrad and grad courses here at Texas A&M University. When one provides a rare “almost all positive” review such as this, a full disclosure is also appropriate—Marc Webber was my student (and Hal Markowitz’s) years ago, and he wrote a superb master’s thesis on morphology of dusky and Pacific white-sided dolphins after helping to start out our dolphin research in New Zealand. Tom Jefferson was both my master’s student for excellent work on Dall’s porpoises and Ph.D. student for the first-ever detailed description of all known species of the Gulf of Mexico (and we wrote a book together on that subject). Bob Pitman I know as our most experienced open ocean marine mammal naturalist and scientist—on Earth. I am (justifiably, I believe) “proud of” the first two, but I do not believe that this background of affiliation and friendship has colored this review. It is simply a great book, and that’s that.

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