

ic importance to humans, and the threats that mollusks face. The latter include marine and land-based sources of pollution and over-exploitation of commercially valuable species.

There is also a primer on shell collecting, and also short notes on good collecting sites in North America. At its heart, this is a book aimed at shell collectors, be they casual beachcombers or fanatical conchologists. The former will learn much, the latter will no doubt admire the stunning photographs. There is a distinct American bias, both in the selection of photographs and in the shell collecting sites profiled; indeed at times the book reads as an ode to Sanibel Island, Florida, the Mecca of American shell collectors.

The book oscillates between straightforward explanations in layman's terms of the science underpinning malacology, and a rather folksy, and at times highly personal, appreciation of the cultural aspects of sea shells and shelling. While occasionally rather affected, on the whole it is highly readable. Many of the photographs selected sacrifice ecological verisimilitude for art; for example, there are several very beautiful assemblages that would be highly improbable in nature. And, belying the book's American bias, it would be a fortunate day indeed where one found a Spider Conch (from the tropical Indo-Pacific) on a North American beach. For a field naturalist, the book is faintly disappointing in that it tends not to identify in specific terms

most of the shells portrayed. Shelling, unlike birding, is one pastime where getting a grip on the Latin terminology and the taxonomy is essential; for this the reader would be well advised to turn to any one of the several excellent works cited in the short but useful reference section. By the same token, a few sketches illustrating such things as mollusk morphology would have been helpful.

There are a few errors in the text; for example the swans that winter at Chesapeake Bay are Tundra Swan, not Trumpeter Swan, but these errors do not detract from the overall value of the book. One somewhat disappointing aspect of the book, and one in counterpoint to the otherwise conservationist approach, is a section dealing with the collection of live specimens. While pale in comparison to other threats, collectors can pose a considerable threat to vulnerable species and it would have been preferable if the author had concentrated the reader's attention on the collection of non-living material. That said, the author does emphasize the need to respect local regulations. In conclusion, this book is not a scientific reference; however, it does provide a useful primer for anyone keen to explore the world of shelling, and a handsome addition to any collection of "coffee table" books.

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Turtles: An Extraordinary Natural History 245 Million Years in the Making

By Carl J. Franklin. 2007. Voyageur Press, 729 Prospect Avenue, PO Box 1, Osceola, Wisconsin 54020. 160 pages. U.S. \$35.

Turtles provides a brief overview of the turtles of the world along with abundant colour photographs of many of the species. The book is divided into two parts. Part 1, the life and lifestyle of turtles, consists of three chapters. The first chapter covers the taxonomy and internal biology of turtles in roughly 10 pages. Chapter two, the ecology of turtles, covers topics such as thermoregulation, feeding, reproduction, and predators. The third chapter, covering the origin and fossil history of turtles, is only 3 pages long. Part 2, the diversity of modern chelonians, consists of two chapters. One chapter covers the families of Pleurodira, or side-necked turtles, and the other discusses the families of Cryptodira, or hidden-necked turtles. For each family account there is a map illustrating the global distribution of the family, then text discussing shared traits among members of the family and then information on many of the species within the family.

Roughly two-thirds of the book is allocated to Part 2, the family accounts. I found this an unsatisfactory balance. Part 1, which should provide a coherent picture of the various different turtle life history strategies, is just too short and superficial. Likewise, the family

accounts remain superficial because they do not provide systematic species accounts. The information selected for individual species should highlight the unique qualities of that species, but all too often the species profiles rely on just some basic numbers (size, number of eggs laid), distribution (which countries it occurs in) and some general habitat info.

The text also has a number of glaring mistakes. In a text box on Linnaean taxonomy of turtles, the author states that turtles belong to the class Anapsida (page 14). In Linnaean terms, Anapsida is the subclass, while Reptilia (or Chelonia, for splitters) would be the class. The author claims that both McCord's Box Turtle (*Cuora mccordi*) and Zhou's Box Turtle *C. zhoui* are believed to be extinct (pages 39-40), when really he should state they are likely extinct in the wild, as both species still occur in captivity. The author makes use of the most recent phylogenetic work on the genus *Clemmys*, by transferring the Wood Turtle (*Glyptemys insculpta*) to its new genus, but still leaves the Bog Turtle (*G. muhlenbergii*) in the genus *Clemmys*. Other careless errors include stating that there is more than one species within the genus *Actinemys* (page 98), and claiming that there are four species of Painted Turtle (*Chrysemys picta*; page 101), when really there are four subspecies. The Indian Flapshell Turtle (*Lissemys*

punctata) receives two different and somewhat contradictory species accounts, one brief account under its correct subfamily (Cyclanorbinæ; page 134), and a longer account under an incorrect subfamily (Trionychinae; page 139). Despite these errors, there are some good things about this book. Part 1 does provide a very brief and readable introduction to the world

of turtles. The photographs are generally quite good. Ultimately, however, this book could have been greatly improved by a thorough review from an expert on turtles.

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Whales and Seals Biology and Ecology

By Pierre-Henry Fontaine. 2007. Schiffer Publishing, 4880 Lower Valley Road, Atglen, Pennsylvania 19310 USA. 448 pages. U.S. \$35. Paper.

During my career as a marine mammal research scientist I was reluctantly dragged in on several occasions to necropsy and dispose of large dead mammal carcasses found along the beaches of Canada's east or west coast. Almost always these mammoth mountains of mammalian flesh were in an advanced stage of putrefaction. Upon opening the body cavity one would confront what has been termed a "gaseous pudding" and it was challenging to properly identify even the most conspicuous organs. It is with this in mind that I say that I am impressed with the work in hand, which has yielded for the author a large amount of useful, detailed information, gathered with fortitude and persistence, from a source that many would have been wont to avoid.

The illustrations, particularly the excellent photographs of the organs and musculature, will serve as a valuable resource for field biologists learning their way around marine mammal carcasses. The author's expertise in marine mammals comes primarily from his extensive experience in performing necropsies of beach cast cetaceans and to a lesser extent pinnipeds. This book uses this as the point of departure relating the specific adaptations, the senses, nutrition, and locomotion, to the anatomical structures which he has studied and illustrated during his years of studies.

The remainder of the book attempts to give a general account of whales and seals, particularly from the North Atlantic, where the author has worked. The chapter on strandings is devoted to the question of why live cetaceans beach themselves. As the author points out, almost every imaginable reason has been offered from geomagnetic anomalies to suicide. The chapter leaves one hanging as do most articles on this subject. One very important recent work on this subject is the monograph *Marine Mammals Ashore* (J. R. Geraci and V. Loundsbury. 1993. Texas A&M Sea Grant Publication). This not mentioned by the author and would be a valuable source of additional information.

The chapter on mounting marine mammal skeletons will be found especially useful by museums and institutions wishing to do such displays. Little detailed

information exists on this subject and the author has learned valuable lessons in avoiding errors in skeletal reconstruction from his numerous and careful field dissections.

The remaining chapters, while not based on the author's direct experience, are well researched and illustrated. The long association of people with whales and seals is presented in an interesting manner. Some specific examples of marine mammal hunting in the St. Lawrence are little known. The technique on Walrus hunting in the Magdalene Islands, which led to the early extinction of the southern-most Atlantic Walrus stock, is one such example.

The chapter dealing with the complicated subject of marine mammal paleontology gives a good introduction to a discipline which is both difficult to assimilate and where the information is not well organized in any single comprehensive source. This will serve as a good point of departure for students who want to learn more about the origins of marine mammals.

The last chapters, the fact sheets on Cetaceans and Pinnipeds, might be considered useful additions to this general work on marine mammals only because they include the species found in the North Atlantic, which is where most of the author's work has been done. One wonders why the author has included the Northern Elephant Seal (only found in the Pacific) and why the Pacific Walrus (*Odobenus divergens*) is mentioned and shown in one of the illustrations. The Arctic Ringed Seal, which is found as far south as the Labrador coast (Lake Melville) is omitted. A number of up-to-date field guides exist, which give a comprehensive account of the seals and whales in the North Atlantic and would serve their readers more effectively.

I recommend this book to the non-specialist who has an interest in whales in particular. It will also be a useful source of information for field biologists and naturalists who might deal with beach cast remains of marine mammals. It succeeds in what the author set out to accomplish by sharing his considerable knowledge of a subject, in which he has thoroughly immersed himself.

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