

Bay restoration work – that they have lost sight of how productive and grand this estuary once was – and that without a clear vision of the Chesapeake’s past, contemporary restoration attempts are too modest and ultimately insufficient.

Well-illustrated with charts, historical illustrations, photographs and maps, this brief book is organized around a series of anecdotal case studies: shad and river herring, oysters, diamond-backed terrapins, waterfowl, sturgeon, and blue crabs. Each case study draws from a range of primarily regional sources in recreating the status of the nineteenth-century fishery (and market hunting for waterfowl), and how that has since changed. The book is full of fascinating historical information and is compelling in its argument that Chesapeake Bay was a far more productive ecosystem than most contemporary managers or environmentalists realize. Not a historian by training, Kennedy does not spend much space on larger historical contexts or drivers for the changes he describes, other than briefly identifying as key factors increasing population, changing patterns of selling seafood out of the region, and changes in technology (for instance, canning). Similarly, the author does not analyse policy, and though it mentions fisheries management and restoration policies, it does not attempt a full discussion of the processes that led to these regulations and laws.

In a few places, especially in the two-page afterword, Kennedy addresses the larger problem with using historical baselines. Given that ecosystems are never static, that climate is changing, that human populations are several orders of magnitude larger in the watershed, that some species are now gone and others introduced, what is realistic for restoration? Kennedy ultimately decides that “understanding the productivity that the system was once capable of supporting ecologically and economically may help us aim higher in our restoration efforts and encourage spending what is required in terms of human and monetary resources to make the ecosystem less polluted and more productive” (p. 101). And in this, he indicates his key goal: not to convince people to return Chesapeake Bay to an arbitrary historical set point (say, 1832), but to inspire contemporary environmentalists to “aim higher” in what they attempt to accomplish, and to encourage state and federal governments to spend more in pursuit of these goals.

The book is highly readable, appropriate for a general audience, and will be of interest to old Chesapeake hands as well as new readers interested in fisheries and ecosystem management.

DOI: 10.3366/anh.2023.0853

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SALVADOR, Andreia. *Interesting shells*. The Natural History Museum, London: 2022. 256 pp.; illustrated. Price £12.99 (hardback). ISBN 9780565095109. (In North America marketed as *Fascinating shells – an introduction to 121 of the world’s most wonderful mollusks*. University of Chicago Press, Chicago. Price \$22.50 (cloth). ISBN 9780226819136.)

The Natural History Museum (NHM), London, has over 8 million molluscs in its collections including 66,000 type specimens, quite a task then for Andreia Salvador, Curator of Marine Gastropoda and Mollusca Historical Collections and author of this book, to whittle that down to 121 species. The writing of *Interesting shells*, a lovely mini-coffee-table book with stunning photographs, demonstrates she has risen admirably to the challenge.

The book is a nice example of stealth education, as what appears to be largely a collection of beautiful photographs with accompanying captions, each of around 150 words, actually provides a large amount of information. When I first opened the book, I expected it to be a standard account of a variety of species, with details such as habitat, range, behaviour and so on. Those facts are certainly included, but each shell has been used as a launchpad to discuss many different topics. These include aspects of malacology and conchology such as the history of collectors, the background and origins of societies and journals, cultural and culinary practices involving molluscs, anatomy and physiology, current environmental issues such as invasive species, habitat loss and over-harvesting, and much more besides.


This plethora of interesting facts scattered throughout the book included many new to me, despite having been a natural history curator for many years. For example, I never knew that harp snails have a

capacity for autotomy and can break off a part of their foot to distract a predator in the same way a lizard can shed its tail; or that lucinid bivalves such as *Codakia orbicularis* (Atlantic tiger lucina) contain symbiotic bacteria which convert inorganic molecules into nutrients for the host allowing the molluscs to exploit otherwise inhospitable habitats; and how it was a Scottish malacologist, the Reverend Robert Boog Watson (1823–1910), described new species collected on the HMS *Challenger* expedition and wrote the general molluscan reports.

One of my few criticisms would be that there was a missed opportunity to highlight the NHM Data Portal, by including the catalogue number of each shell photographed, so encouraging the reader to find out more about the actual specimens by going online. This could have been explained in a single paragraph. Tying printed literature to the ever-expanding online resources of the NHM is a necessary step to spread awareness of scientific information to the general public. Another criticism is that the title could have been a bit more interesting. The title used for the North American market is a bit of an improvement but on the flip side that cover only bears a photograph of a single shell, *Charonia tritonis* (Triton's trumpet). The British edition, with the shorter title, has a more eye-catching cover showing more than twenty different shells.

A one-page glossary and a common-names index provide enough for general readers but may frustrate those of a more scholarly bent searching for a specific specimen or further information. Suitable for anyone with an interest in natural history, as a general introduction to the Mollusca, and for shell enthusiasts, the many wonderful photographs will surely be of wide interest.

DOI: 10.3366/anh.2023.0854

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KISLING, Vernon N. (editor). *Zoo and aquarium history: ancient animal collections to conservation centers*. Second edition. CRC Press, Boca Raton and Abingdon: 2022. xvi, 431 pp.; illustrated. Price US \$130.00 (hardback), US\$53.05 (ebook). ISBN 9781032252797 (hardback), 9781003282488 (ebook).

This imposing volume aspires to suggest the number and variety of living animal collections that humans have assembled. As its title indicates, the editor Vernon Kisling and his fellow contributors have aimed for comprehensiveness, at least in terms of chronology and geography. With the exception of the initial chapter, which covers ancient animal collections generally, the chapters are organized geographically, proceeding from Ireland and Britain, through continental Europe, the Anglophone settler colonies, the Middle East, Asia, Africa to Latin America. (Since the first edition was published in 2000, chapters on zoos in Canada, the Middle East, Israel and China have been added.). All of them cover spans of centuries, and some cover spans of millennia. The backgrounds of the contributors are varied; most have experience as zoo professionals, and only a few are historians. Perhaps for that reason, *Zoo and aquarium history* seems more like an encyclopaedia or a textbook than part of the very lively, recent, scholarly conversation regarding the history of zoos. Each chapter begins with its own table of contents; the numbered subsections mostly indicate time periods or national divisions. The chapters are full of facts, and they often broach current scientific, political and ethical issues, but they do not offer synthetic arguments or interpretations, either internally or as a group. In consequence, *Zoo and aquarium history* does not replace the (geographically more limited) overview in *Zoo: a history of zoological gardens in the west* (2003) by Eric Baratay and Elisabeth Hardouin-Fugier (ISBN 9781861892089, reviewed in *Archives of Natural History* 31: 371 (2004)). Although the chapters share an emphasis on information, they vary greatly in the detail of their citations, which tend to be sparsest in those dealing with Anglophone cultures.

*Zoo and aquarium history* will therefore serve primarily as a supplement or background resource for scholars interested in the history of the institutions that it catalogues. It does not provide a reliable guide to recent scholarship. For example, the chapter on Britain and Ireland does not reference either Takashi Ito's *London Zoo and the Victorians, 1828–1859* (2014) or Andrew Flack's account of the Bristol Zoo, *The wild within: histories of a landmark British zoo* (2018); similarly, the chapter on Japan fails to mention Ian Miller's *The nature of the beasts: empire and exhibition at the Tokyo Imperial Zoo*, even though it touches