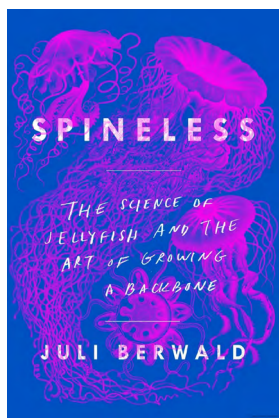


Spineless: The Science of Jellyfish and the Art of Growing a Backbone

By Juli Berwald. 2018. Riverhead Books. 352 pages, 16.00 USD, Paper.

Spineless is primarily a popular science book, with a dash of memoir thrown in for good measure. The two-part subtitle—*The Science of Jellyfish and the Art of Growing a Backbone*—reflects both elements of the writing. *The Science of Jellyfish* accounts for most of the book, and what you would expect from a well-written, well-researched non-fiction science book. The second part, *the Art of Growing a Backbone*, unfolds haltingly throughout the book, culminating in the final page of the last chapter. The memoir component is the personal story and thesis of the author, her journey to jellyfish science and speaking up for ocean health.

The author holds a Ph.D. in ocean sciences, and her interest in jellyfish stems from formative experiences during her undergraduate and graduate programs. Not a jellyfish researcher herself, the somewhat winding narrative element describes an intellectually bored writer, editor, scientist, and mother developing a burning interest in jellyfish at an age when her family vacation time could be planned to coincide with researcher interviews and fieldwork adventures. Although it can be a bit disjointed at times, the personal story of the author and the process of her enmeshment in the world of jellyfish science come together well in the last third of the book. This mix, science fact punctuated by personal moments of the author's life and experience, sets this book apart from many popular science works. Whether or not you enjoy the threads of personal narrative will likely depend on your own experiences and perspec-



tives, but they are by no means the dominant element of the work.

Spineless is a book to suit a broad audience. It certainly has enough fascinating information, new research, and unanswered questions to satisfy interested readers. The book probes and highlights the many unknowns of jellyfish: where they grow, what they eat, and what eats them. Topics explored include jellyfish biology, ocean acidification, commercial fishing, and invasive species. Compared with other popular science works, this is a longer book, not the average short romp through a subject, and the print is small, making it longer than it looks. This allows space for interviews and research conducted over many years, all of which is meticulously cited in the “Notes” section at the end of the book.

Ostensibly organized into parts of the jellyfish life cycle—Planula, Polyp, Strobila, Ephyra, and Medusa—the writing doesn't seem to closely follow this logic, except for the last section which links to the previous pages in the author's jellyfish journey. Although a few gorgeous drawings of jellyfish life stages are included, the book would have benefitted from some additional illustration, particularly depicting the main species discussed. As it is, image-oriented readers may find themselves switching intermittently to a web browser or making notes for later. The writing quality is very good throughout. Although the feel of the writing changes in the last third or so of the book where the author includes her own and her family's personal experiences with jellyfish science and expeditions, the author's prose is easy to follow and usually descriptive enough to make up for the lack of images.

Exploring jellyfish research through the lens of a devoted hobbyist and interviewer turned collaborator, this book reveals the remarkable knowns and surprising unknowns of jellyfish and their role in the future of our oceans. It is well worth a look.

HEATHER A. CRAY
Waterloo, ON, Canada