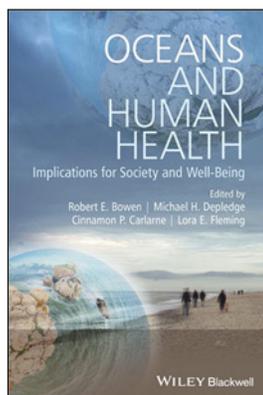


## OCEANS AND HUMAN HEALTH: IMPLICATIONS FOR SOCIETY AND WELL-BEING<sup>1</sup>

This eclectic book, edited by Robert E. Bowen, Michael H. Depledge, Cinnamon P. Carlane, and Lora E. Fleming, contains 11 chapters written by international groups of authors, mostly from the US and UK. Several chapters draw heavily on the Millennium Ecosystem Assessment, a United Nations–initiated review of the consequences of ecosystem change for human well-being. The chapters are abundantly referenced and an index is provided.



The book is only obliquely about the oceans or human health. The editors defend the title by arguing that on the one hand the oceans are a source of human health risks, for example, because they expose people to harmful algal blooms, pathogens such as *vibrio cholera*, floods driven by violent storms, tsunamis, and sea level rise, etc. On the other hand, the oceans are a source of human health benefits, such as protein from seafood, new drugs from natural marine products, and even improved mental health from enjoyment of the sea.

These arguments may be valid, but a reader hoping to learn something about any of these specific health-related risks or benefits will be disappointed by this book.

Although equivocally related to the oceans and human health, a well-written chapter on coastal demography describes the challenges associated with estimating the sizes of populations that live near the sea. Another interesting chapter examines how coastal environments can be monetarily valued, a necessary step in bringing the tools of economics to bear on analysis of government policy options. A chapter on the history of international law and governance argues that current structures are inadequate for managing global environmental problems. The only chapter likely to interest most *Elements* readers is one on the impact of climate change on coastal ecosystems. This nicely balanced, textbook-style review includes such topics as the late Pleistocene/Holocene history of sea level change, glacio-eustatic rebound, and the geomorphic effects of sea level rise on different kinds of coasts. Another chapter discusses the need for remote sensing and high-speed in situ monitoring of coastal and marine ecosystems. This chapter could have been improved by including more specifics about who needs such monitoring, what parameters need to be measured for these users, and what technical bottlenecks currently limit progress.

Several other chapters also are marred by lack of specifics. This, as well as a tendency in several chapters to cite mainly secondary sources, leaves readers feeling that coverage is superficial. For example, a chapter on potable water accomplishes little more than defining terms. A final chapter struggles to find a relationship between all these heterogeneous topics and human health.

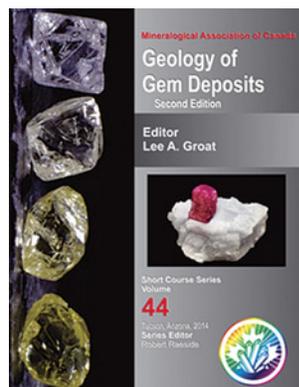
Contrary to the usual practice in compendia of chapters written by independent sets of authors, this book contains no introduction laying out the book's goals. Readers are left to puzzle about the book's purpose. For whom were chapters on these very diverse subjects assembled? If the editors indeed had any plan at all for this book, then that plan was as vast and boundless as the ocean itself. They have launched their small book into this ocean like a rudderless ship.

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## GEOLOGY OF GEM DEPOSITS<sup>2</sup>

This second edition is warmly welcomed by the community of geologists interested in gems and by gemologists interested in geology. The first edition, 7 years old, proved to be a classic for students and for scientists. The second edition mostly reiterates the same chapters, written by the same authors: the geology of diamond, corundum, emerald, other beryls, chrysoberyl, tanzanite and tsavorite, gem-bearing pegmatites, and jade. These chapters have been updated with new data from the recent literature, such as data on the Montepuez ruby deposit, Mozambique (among numerous other examples). The chapter “Tanzanite and Tsavorite” has been almost entirely rewritten by Giuliani and others, taking into account the recent work by this team. There is only one additional chapter, “Geology of Gems and Their Geographic Origin.” This chapter underlines the necessity of first understanding the geology of gems before trying to establish criteria for geographic-origin determination.



As for any review work, one can deplore references that should have been added. For example, the recent works by Schmetzer and others on chrysoberyl should have been cited. However, I personally consider this review up-to-date.

The book ends with a list of descriptions of gem-bearing deposits in Canada. Only transparent gems have been listed, considering translucent to opaque gemstones unworthy. As a result of this choice, some insignificant occurrences are described (for example, occurrences where a few dozen brownish black, heavily fractured tourmalines have been dug), whereas economically significant deposits are not (such as the Okanagan, BC, precious opal deposit exploited for several decades).

Overall, this edition contains some interesting improvements, growing from 276 to 405 pages. Many color figures have been added, and previous black and white figures are now in color. This makes the reading easier and better documented. This will be much appreciated by those who use these figures for educational purposes. Also, color figures now appear at the right of the corresponding text whereas they were grouped at the end of each chapter in the first edition.

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1 Bowen RE, Depledge MH, Carlane CP, Fleming LE (eds) (2014) *Oceans and Human Health: Implications for Society and Well-Being*. Wiley Blackwell, Chichester ISBN 978-1-119-94131-6, 304 pp, hardcover, \$109.95

2 Groat LA (ed) *Geology of Gem Deposits, Second Edition*. Mineralogical Association of Canada, Short Course Volume 44 ISBN: 978-0-921294-54-2, \$60 (\$48 for MAC members)