STRICKMAN, D., FRANCES, S. P., AND DEBBOUN, M. 2009. Prevention of Bug Bites, Stings, and Disease. xviii + 323 pp. Oxford University Press, New York. ISBN 970-0-19-536577-1, hardback, \$74. Also ISBN 978-0-19-536578-8, paperback, \$19.95.

The 3 authors have well-established, professional credentials in regard to arthropod bites, stings, and the diseases they vector. They also are the authors of *Insect Repellents: Principles, Methods, and Uses*, published in 2006. The information they provide in *Prevention of Bug Bites, Stings, and Disease* is sound and useful. If you have a professional interest in this area, this book would be a valuable addition to your library. However, I think the book has serious problems in meeting its intended goal as a handy reference to the general public.

While I have not seen a copy of the paperback, it is moderately priced, unlike the overpriced hardback version. I do not understand why a book intended for the general public should have been designed in such a way as to add to its cost and thereby reduce its sales. For example, the book is designed in non-standard shape,  $9.3 \times 4.9$  inches. I spoke to 2 people who work in or with the publishing industry, and they told me that a book of this shape requires additional editing and other costs. The font used throughout is a sans serif, which makes it harder to read since most of the book is simply text, with very little white space. As stated in *The PC is not a Typewriter* (Williams 1992), "Extensive studies have concluded that serif type is more readable in extended text than sans serif type. It's not known exactly why... Ever seen a novel written in sans serif type?" This was not the only printing problem in the text. The numerous sidebars were printed in a smaller font on a medium gray background, which made reading those areas more difficult. Here I need to make a point. The authors are not solely responsible for these problems and others, as the book was published by the Oxford University Press. That company's editors had the responsibility to correct or not introduce these problems and several others in the book.

The very first page of Chapter 1 states that readers need to be able to identify the arthropod that stung them so they can request additional information from the scientific community. The authors then spend time instructing readers how to classify, identify, and name a biting or stinging pest. Thus, I found it interesting that the authors use "yellow jacket" as 2 words, except in 1 table where these insects are correctly listed as "yellowjackets." Chapter 1 also includes 51/3 pages of a graphical identification key that takes biting and stinging arthropods down to class (i.e., scorpions, centipedes), group (i.e., biting midges, ants, fleas), and sometimes species (i.e., bed bug). This key is inadequate for non-professionals who need to identify many types of biting and stinging pests. It is hard to understand why this graphical key is

so lean when you consider that Chapter 7 has a larger than necessary, full page drawing of a man in a long sleeve shirt and trousers (showing how to avoid bites), and Chapter 8 has 15 pages of drawings of plants from which natural repellents are obtained. For example, was it really necessary to include a two-thirds-page drawing of a celery plant? Many are plants most people will never see in their outdoor activities and are unnecessary to the purpose of the book. When I took my first entomology course as an undergraduate, what fascinated me about insects, and perhaps led me to a career as an entomologist, was the complexity of such small organisms. I was disappointed to see a graphic of various insect mouthparts that was limited to two-thirds of a  $9.3 \times 4.9$  inch page. The portion dealing with fly mouthparts was so inadequate that it contributed nothing to the book and leaves the reader with no understanding of the differences in mouthparts of various flies.

The center of the book has 8 pages of 44 fullcolor photographs of arthropods. The quality of these photographs makes them simply representative of groups and not particularly useful for identification purposes. One of the largest photographs is that of a tarantula hawk, yet its size left no room for the caption, which had to appear on the bottom of the preceding right hand page. This is another example of poor editing. Many of these arthropods, dark in color, could have been displayed in larger black and white images that would have contributed more to identification and perhaps reduced the cost of the book. I fail to understand why, near the end of the book, 5 caterpillars with urticating hairs, a group where color is important for identification, were displayed in black and white photographs. One image is of the mourning cloak caterpillar, Nymphalis antiopa. I checked with 2 lepidopterists, both of whom told me that this caterpillar does not have urticating hairs. Hidden in the smaller text in a gray box, several pages away from the image, is the statement, "The only butterflies with urticating caterpillars are brush-footed caterpillars (family Nymphalidae), represented (italics are mine) by the mourning cloak butterfly caterpillar . . ." This is another example of poor editing, organization, and selection of images, which gave me the feeling this book was rushed to publication.

The book is intended to be a current reference for the general public. However, the authors are experts in repellents and found it difficult to limit themselves to current recommendations. For example, Chapter 5 describes how to use insecticides to kill or repel arthropods. Yet before the authors begin providing useful information on how to do this, they require the reader to wade through a 6-page discussion on the history of DDT and its effects. In fact, this is a problem throughout most of the book. To obtain useful information, the reader often must read through an entire chapter. Some chapters have split-out sections related to certain pest groups or information categories, but this is not consistent throughout the book. In some chapters these subsections have bold headings, in others the headings are a lighter, bigger font. Did each of the authors have responsibility for different chapters? Why did the editors fail to correct this inconsistency?

If the intent of the book is to make information on stinging and biting arthropods, and their repellents, easily accessible to the general public, why make it hard to find that information? For example, listing groups of arthropods in alphabetical order makes sense when you want someone to find information on that group quickly. Yet this is not done. As examples, Chapter 1 lists information on arthropods in this order, "soft ticks . . . lice ... bed bugs ... kissing bugs"; while Chapter 13 lists "centipedes ... wasps ... ants" in that order. And I remember one long paragraph that began with a discussion of scorpions, ended with information on ants, and discussed wasps and bees in between.

If there is a second edition, I hope there is more editing and thought on organization before publication.

## References Cited

WILLIAMS, R. 1992. The PC is Not A Typewriter. Peach-Pit Press, Berkeley California. p. 49.

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