

## Book review: ‘The Encyclopedia of Medical and Veterinary Entomology’

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### Review

In 1996, whilst at a conference in Parma, Italy, I managed to get hold of a copy of the second edition of *Medical and Veterinary Entomology*, authored by Prof. Douglas S. Kettle. For years since its original publication in 1984, this book served as a standard reference source in its field, and often was my starting point when in need of information on insects of medical and veterinary importance that I not worked on as part of my career. Remember, those were the days when the internet was only starting to become a resource for information. Google was still two years away from being founded. With the third version of this seminal publication now in front of me, this begs the question whether or not there is still a need for an encyclopedia now that we are just clicks away from almost anything we want information on. With the two book editions in front of me, and Google scholar, PubMed and other resources at hand, this is the question I set out to answer.

There are striking differences between both editions. Where Kettle used 105 pages to set the stage in a general introduction, Russell, Otranto and Wall are done with just nineteen pages. This is apparent in other sections of the book as well, resulting in the latest volume covering ‘only’ 429 pages in total, compared to 725 pages of Kettle’s book. In the opening section of the new book, many of the same drawings appear as in the second edition, but because of the higher quality of print, they appear much smaller, thereby saving space, but still remaining clear and informative. Lengthy sections on the ‘Classification and Structure of the Diptera’, ‘Mouthparts of insects of medical and veterinary importance and host finding’, ‘Internal structure and function of insects’, and on species complexes, have all been removed. Instead, the authors have added a short chapter describing the context within our field, from disease transmission to the growing importance of forensic entomology, through the globalisation of vector-borne diseases. Noteworthy is the addition of 16 pages of good quality full-colour images.

The contents pages in the new volume provide a much easier reference, with the arthropods being listed in alphabetical order by their common names, not the Latin family names that were more difficult to comprehend for a new-

comer in the field opening Kettle’s book for the first time. In the remainder of the book, the different groups are described under the following headers: Introduction, Taxonomy, Morphology, Life cycle, Behaviour and Bionomics, Medical and Veterinary Importance, and Prevention and Control. Kettle was consistent in describing the life cycle and bionomics of the various groups, but much less so than the current authors, and the more rigid structuring of the current volume is certainly an improvement to the previous edition.

Given their massive importance globally, and because of personal interest, I scrutinised the section on mosquitoes more in-depth than other sections. I immediately noticed a major difference between Kettle’s edition and the current one. Although references are cited at the end of the chapters, these are not directly listed in the text anymore when being cited. This is a shortcoming as it is no longer clear what references to consult after reading sections of the encyclopedia. This was likely done in an attempt to save space but it now makes the reference list at the end of the chapters almost redundant.

An encyclopedia is meant to provide basic information rather than be exhaustive on all matters. This necessarily leads to generalisations rather than descriptions of peculiarities and intricacies of insects, so many of which have become known to science since Kettle’s book from 1995. Nevertheless, the information provided on mosquitoes is authoritative, as well as the sections (albeit it short ones) that describe the major diseases they transmit. However, the section on prevention and control, with a mere two pages devoted to it, is too restricted and it can be questioned if a newcomer in the field will benefit from reading about larvivoracious fish rather than new and exciting developments in other areas like genetic control of mosquitoes (using *Wolbachia* or the RIDL technique) which is not mentioned but has been around for quite some time. Research on and commercialisation of mosquito traps, notably for *Aedes aegypti*, has yielded novel surveillance and control tools; impregnation of clothing has seen major developments and spatial repellents are being developed; attractive toxic sugar baits are being field-tested. Regrettably, again presumably due to space limitations, none of these advances are described.

Of the other sections I scanned, the tsetse flies as well as the black flies sections, were well written and comprehensive. Perhaps most informative to the experienced medical and veterinary entomologist are the sections that deal with 'neglected' groups like the bot flies, tumbu flies, or even the centipeds. These sections provide updated and new information about the biology, behaviour, and importance of these understudied creatures.

*The Encyclopedia of Medical and Veterinary Entomology*, like its predecessor, provides an excellent starting point for the newcomer in the field and will be of use to those teaching in the field, as well as doctors and veterinarians. By nature, an encyclopedia provides short and concise overviews of a myriad of topics, and this encyclopedia is not different. It will be much valued by those needing basic information on arthropods of medical and veterinary importance and thus deserves to be present in your library or on your bookshelf. I have used Kettle's book a lot, and so will likely use Russell, Otranto and Wall's book often as well. Nevertheless, it will now be used more as a jumping board to online resources. The search in Google will be much better informed though.

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