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BOOK REVIEW

SERVICE M. W. **Medical Entomology for Students.** Second edition. Cambridge University Press, Cambridge, 2000. X+283 pages. Format 150×225 mm. Soft cover. Price Lstg 22.95. ISBN 0-521-66659-7

The author is Emeritus Professor of Medical Entomology at the Liverpool School of Tropical Medicine. He has written over 200 research papers on medical entomology and given advice and training in the field in over 50 countries. As stated in the first edition (by Chapman and Hall, 1996), the aim of this book was to provide basic information on recognition, biology and medical importance of arthropods and guidelines for their control. This second edition followed generally the same style and format. The volume is composed of 20 chapters. Within the narrative and conceptual framework of each chapter featured are external morphology, internal anatomy, life cycle, medical importance, and control. Each chapter is concluded with a list of references under the headings 'further reading'.

Chapters 1 through 15 are devoted to families of insects of medical importance. Chapters 1 through 3 focus on mosquitoes (Culicidae) – vectors of malaria, filarial nematodes and arboviruses. General introduction provides insights into the external morphology of mosquitoes, their life cycle, classification, medical importance and control. Further on, analyzed are anopheline mosquitoes including the genus *Anopheles*, and culicine mosquitoes including genera *Culex*, *Aedes*, *Haemagogus*, *Sabethes*, *Mansonia*, *Coquillettidia* and *Psorophora*. Chapter 4 examines the blackflies (Simuliidae) – this family contains four genera that bite humans. The *Simulium* species transmit filarial nematode causing onchocercosis. Phlebotomine sandflies (Phlebotominae) are discussed in chapter 5. Species of two genera – *Phlebotomus* and *Lutzomyia* embrace both Old and New Words vectors of leishmaniases, sandfly virus and bartonellosis (Carrion's disease). The next set of chapters 6 through 8 takes account of three families of dipterans: biting midges (Ceratopogonidae), horseflies (Tabanidae) and tse-tse flies (Glossinidae) – vectors of African sleeping sickness. Chapters 9 and 10 are concerned with flies while surveying the common house fly *Musca domestica*, the greater house-fly *Muscina stabulans*, the stable-fly *Stomoxys calcitrans*, the *Fannidae* and the myiasis-producing flies' families Calliphoridae, Sarcophagidae and Oestridae. Chapters 11 and 12 focus on fleas (Siphonaptera) and lice (Anoplura). Chapters 13 and 14 provide coverage of bedbugs (Cimicidae) and triatomine bugs (Triatominae) – transmitters of Chagas disease. Chapter 15 deals with cockroaches (suborder Blattaria) namely with medically important species: the German cockroach *Blatta orientalis* and the American cockroach *Periplaneta americana*. These species mediate the transmission and harbourage of various pathogenic viruses, bacteria, protozoans and helminths.

Subsequent chapters give attention upon diverse groups of arachnids. Chapters 16 and 17 are concerned with soft (Argasidae) and hard ticks (Ixodidae). The only important disease transmitted to humans by soft ticks is the tick-borne relapsing fever. From the medical point of view the more important genera of hard ticks are *Ixodes*, *Dermacentor*, *Amblyomma*, *Haemaphysalis*, *Rhipicephalus* and *Hyalomma*. Some species of hard ticks present vectors of some species of rickettsiae *Coxiella burneti*, *Francisella tularensis* and many arboviruses. Next coming chapters 18 through 20 analyse the scabies mites (Sarcoptidae), scrub typhus mites (Trombiculidae) and miscellaneous other groups (Demodicidae, Pyroglyphidae and other mites).

The volume is concluded with a glossary of common terms relevant to medical entomology that are used in this book or that are pertinent to vector biology and control. Accurate line drawings feature adult insects and arachnids and their developmental stages, structural parts, principal characters of the various stages in the life cycle and a world map showing malaria epidemiological zones. In addition, there are summary-type tables overviewing main anopheline vectors of malarial plasmodia and principal mosquitoe transmitters of filarial worms. A clear, concise writing style makes this book accessible to undergraduate and graduate students of medical entomology, parasitology, tropical medicine and pest management, for whom it should be essential reading. The book is also intended as a substantial resource of information for physicians, health officials and community health workers, and those studying for a scientific degree of parasitology or medical entomology.

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