

BOOK REVIEW

BECKER N., PETRIĆ D., BOASE C., LANE J., ZGOMBA M., DAHL C & KAISER A.: MOSQUITOES AND THEIR CONTROL. Kluwer Academic/Plenum Publishers, New York, Boston, Dordrecht, London, Moscow, 2003, xxi+498 pp. ISBN 0-306-47360-7.

This book, which is a detailed monograph of European mosquitoes, is divided into 4 parts and 16 chapters. It has an extensive bibliography and subject and taxonomy indexes.

The first chapter is devoted to systematics. The position of the family Culicidae in the order Diptera is discussed as well as the position of particular subfamilies. The brief chapter concludes with a tabular summary of world mosquito genera.

The following chapter, "Biology of mosquitoes" describes the development of mosquitoes from egg to imago, biology of particular groups, reproduction strategy and basic data on physiology.

The chapter entitled "Medical importance of mosquitoes" provides a detailed list of diseases transmitted by mosquitoes.

The fourth chapter, "Mosquito research", briefly but richly describes the most important methods of research. Collection of eggs and larvae in the field, various traps for adults, important data on mosquito rearing and techniques for entomology collections are mentioned as well as cytotaxonomical methods for distinguishing sibling species. It is a pity that the authors did not expand this chapter. A specialist does not find anything new here and this chapter is too brief for a beginner.

The first part ends with a chapter devoted to morphology of all the developmental stages of mosquitoes, excluding eggs. The chapter is appended by numerous pictures of excellent quality and crucial for the correct use of the keys, which follow this part.

The following two parts are the strength of the book. Chapters 6–10 are identification keys and descriptions of all European mosquito species. Mosquito males, females and 4th instar larvae are keyed. Keys are well constructed, with plenty of pictures of important details. This part of the book is extremely useful because a similar elaboration of European mosquitoes is only available in Lindner's monograph, which is somewhat out of the date and in the Russian "*Fauna of USSR*", which is even older. The attentive reader can not overlook unusual spelling of the

species names *puchritarsis* (*Ochlerotatus* – here it is *pulcritarsis*) and *pulchripalpis* (*Orthopodomyia* – here it is *pulcripalpis*). Later authors modified the original (and evidently incorrect) spelling by Rondani. However, because only the name first published is valid it is necessary to use the incorrect spelling (see note on page 338). The part devoted to descriptions of all the developmental stages contains also data on the biology, distribution and medical importance of particular species. This part of the book is very valuable and will undoubtedly serve as a basic manual for determining European mosquitoes for many years.

The 4th part (chapters 11–16) deals with contemporary methods of control. Special attention is devoted to *Bacillus thuringiensis israelensis* (or BTI–H14), which together with *Bacillus sphaericus*, are the only biological agents that are effective in the field. Among others, BTI is the only insecticide that can be used to control mosquito larvae in the field in the majority of European countries. However, all other pathogens and predators used to suppress mosquito populations are mentioned. Chapter 12 lists the currently used chemical insecticides including analogues of juvenile hormone. Chemical composition and mode of action of all preparations are mentioned. Resistance, which is an important topic, is also discussed. Two chapters mention "physical control" – e. g. draining of wetlands, use of oils and personal protection, such as repellents and mosquito nets. This part concludes with chapters "Integrated pest management" and "Implementation and integration of mosquito measures into routine treatments".

The book ends with thirty-two pages of "References", and "Subject" and "Taxonomic indices".

This book is a very carefully and perfectly researched monograph on European mosquitoes. Because of the importance of this group of insects, this book should be in libraries of institutions working on entomology and of public health laboratories. It is necessary to congratulate the authors on preparing such an outstanding monograph, which undoubtedly will be the foundation for studies on this medically important insect group for many years.

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