

## BOOK REVIEW

OOSTERBROEK P.: THE EUROPEAN FAMILIES OF THE DIPTERA. IDENTIFICATION, DIAGNOSIS, BIOLOGY. KNNV Publishing, Utrecht, 2006, 205 pp., (www.knnvpublishing.nl), ISBN 90-5011-245-5 / 978-90-5011-245-1. Price EUR 59.95.

This is clearly the best arranged and the most modern identification key to all recently recognised European families of Diptera, with brief diagnoses of all the 132 Old World families of the insects commonly known as “flies”.

This “Key” has a long history in the Netherlands, and the present very modern version has been verified by more than 25 years editorial activity, especially by the leading Dutch dipterist, Dr Pjotr Oosterbroek. The first Dutch version of P. Oosterbroek was published in 1981, and the increased complexity of this identification key is revealed by the inclusion of 132 families compared to the 107 families treated in the 1981 Key. The increase in the number of families is, however, also partly a result of modern systematic studies, as many former paraphyletic families (Tipulidae, Bibionidae, Mycetophilidae, Bombyliidae, Empididae, and others) have been split into more already generally accepted smaller monophyletic families.

The complexity of the present English identification key is primarily based on a long editorial history of the Dutch versions. Before publishing the present book, P. Oosterbroek prepared a Dutch version published with H. de Jong and L. Sijstermans in 1985 (also by KNNV Publishing, Utrecht), the manuscript of which was previously tested by many Dutch and even foreign dipterists. The English translation was distributed in February 2006 as a test version to more than 30 European dipterists for comments by May 2006. This is why I introduced this book as the “most modern” identification key to Diptera families in Europe.

However, I also evaluated this “Key” above as “the best arranged” identification key. This is because of the consistent arrangement of each double page, where on the right side is the text, and on the opposite left side very simple line drawings are presented, clearly illustrating the main differentiating features of each key thesis and antithesis. The text is so clear and well-arranged, that when I had at my disposal, thanks to P. Oosterbroek, the Dutch version, without any knowledge of Dutch, I could easily understand the dichotomic separation of each couplet simply on the basis of the given Figure number and the corresponding illustration on the opposite page. This means, that

the English Key is simple even for those entomologists who are not well acquainted with the Dipteran morphological terminology.

The Introductory part (pp. 6–23) includes chapters on Classification, with a systematic list of all higher categories and families, each family with the number of genera and species found in Europe; then a very useful chapter Terminology, explaining briefly all the terms used in the text. The main part of the book consists of two fundamental chapters: Identification key (pp. 24–109), and Family descriptions (pp. 110–172). The dichotomous key, with two alternative couplets, consists of morphological characters figured on the corresponding left page (Figs 17–451), so understanding and identification is really very simple. Some families, where the main morphological characters vary to some extent, are treated in the key even several times, to cover all the morphologically varying genera. The chapter Family descriptions gives brief descriptions of all 132 families listed alphabetically, starting with the Acarthophthalmidae, and ending with the Xylophagidae. Each family is headed by a reference to the relevant page of the Key, followed by paragraphs called Systematics (with higher classification and number of genera and species in Europe), then Characters (a brief morphological characteristic), Biology and Identification references (references to the main systematic papers given at the end of the book in the References; pp. 174–193). For every family there is furthermore a very illustrative illustration of the habitus of an adult fly. The end of the book includes, in addition to the References, also a list of the 16 recently available Checklists for European countries (p. 173), brief chapters on Figure details and credits (pp. 194–201), Acknowledgements (p. 202) and a Register of Family names (pp. 203–204). On the back hard cover, there is a very useful key for quick orientation, the so-called Abstract key, which “facilitate finding a particular section of the main key” – hopefully it will be commonly used to help in identifications.

The clear arrangement of the book and the easy way how to identify flies to family level, undoubtedly will make this publication essential for a diverse groups of not only entomologists, but also ecologists, people studying biodiversity or doing general faunistic research connected with protected or otherwise threatened biotopes, and working in various fields of natural and environmental sciences including biomonitoring.

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