

BOOK REVIEW

PAPE T., BICKEL D. & MEIER R. (eds): *DIPTERA DIVERSITY: STATUS, CHALLENGES AND TOOLS*. Brill Academic Publishers, Leiden, Boston, 2009, 459 pp. ISBN 978 90 04 14897 0. Price EUR 119.00, USD 186.00.

The book consists of 15 chapters arranged in 3 distinct sections, each consisting of an Introduction, several subchapters, a Summary and/or Conclusions, Acknowledgements and References. Each of the chapters is written by one or more authors. The list of 21 contributors is attached to a truthful and very clear Foreword (pp. xiii–xvi) written by Q.D. Wheeler of Arizona State University.

Section I – *Regional diversity of Diptera*, makes up most (pp. 1–275) of the book, includes 9 chapters dealing separately with regional world faunas: Nearctic Diptera: Twenty years later (written by F.C. Thompson), Hawaii's Diptera biodiversity (N.L. Evenhuis), Neotropical Diptera Diversity: Richness, patterns and perspectives (D. de Souza Amorim), Dipteran Biodiversity of the Galápagos (B.J. Sinclair), Palaearctic Diptera – from tundra to desert (T. Pape), Afrotropical Diptera – rich savannas, poor rainforests (A.S. Kirk-Spriggs & B.R. Stuckenberg), Oriental Diptera, a challenge in diversity and taxonomy (P. Grootaert), Diversity, relationships and biogeography of Australian flies (D.K. Yates, D. Bickel, D.K. McAlpine & D.H. Colles) and Biogeography of Diptera in the Southwest Pacific (D. Bickel).

Section II – *Diptera biodiversity: Case studies, ecological approaches and estimation*, includes 3 chapters (pp. 279–345). Chapter 10: Why *Hilara* is not amusing: The problem of open-ended taxa and limits of taxonomic knowledge, is written by B. Bickel; chapter 11: Diptera as ecological indicators of habitat and habitat change, by M. Pollet; and finally, chapter 12: Biodiversity research based on taxonomic revisions – a tale of unrealised opportunities, by T. Dikow, R. Meier, G.G. Vaidya & J.G.H. Londt.

Section III – *Bioinformatics and dipteran diversity* (pp. 349–437) also includes 3 chapters: Chapter 13, written by R. Meier & G. Zhang, deals with “DNA barcoding and DNA taxonomy in Diptera”; chapter 14 by S.L. Winterton deals with “Diptera biodiversity informatics”; finally, G.E. Kampmeier &

M.E. Irwin in chapter 15 discuss the “Meeting the interrelated challenges of tracking specimen, nomenclature, and literature data in *Mandala*”.

At the end of the book there is an Appendix (pp. 440–444), which includes a table of “Species of Diptera per family for all regions”, with numbers of described species based on the *Bio-systematic Database of World Diptera*, its version 10 available at www.diptera.org/biosys.htm. The Appendix is followed by an alphabetical index (pp. 445–459) of all the subjects discussed and Latin scientific names.

This publication is very clearly arranged and printed, and good evidence of the leading position of dipterology within entomology. As Q.D. Wheeler writes in the Introduction, dipterists have always been at the vanguard of taxonomic progress. Wheeler mentions the studies on *Drosophila* so important for modern genetics and the leading position of the famous dipterist Willi Hennig in the study of phylogeny and taxonomy of all animals. It is also noteworthy that Diptera are important in the transmission of world wide diseases, such as malaria, sleeping-sickness and other trypanosomiasis, and this resulted in the leading position of the world regional catalogues of Diptera presented in Section I, which are mostly not available for other insect orders. All the 21 contributors are worldwide authorities on Diptera, and all the chapters are clearly written and represent in Q.D. Wheeler words a “singularly important empirical and theoretical achievement”. There is one chapter in Section II on Diptera biodiversity, written by Dan Bickel, for which as indicated by the author of the Introduction, there is doubt about the validity of the conclusion that it is not necessary to describe all species and concern about the controversial discussion of “open-ended taxa”.

Diptera Diversity is an important publication for all interested in entomology, ecology, taxonomy and other allied sciences. The book will surely be available in the main university and institutional libraries, but because the authors have been provided with pdf files of their chapters, which are frequently sent on-line to colleagues and friends, very few people are likely to purchase this book; even the author of this review has already received pdf files of several chapters of this book.

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