

BOOK REVIEW

BAUERNFEIND E. & SOLDÁN T. 2012: THE MAYFLIES OF EUROPE (EPHEMEROPTERA). Apollo Books, Ollerup, Denmark, 781 pp. ISBN 978-87-88757-45-3. Price EUR 138.00.

This book presents a very comprehensive treatment of the European mayfly fauna, the first such publication in more than a century. To be precise, nothing similar has been published since the excellent monograph of Eaton (1883–1888) “*A Revisional Monograph of Recent Ephemeridae or Mayflies*”.

The authors use their long experience of working on this insect order and have analyzed an enormous volume of information, scattered in numerous publications published over the last ca. 130 years. In doing this they made the life of many a mayfly worker considerably easier. The detailed and wide-scale analytical work based on a huge amount of literature, which varies in quality and is published in many languages, will be greatly appreciated.

The introductory chapter contains general information about the order Ephemeroptera, descriptions of their morphology and explanations of the terminology used throughout the text. Very valuable summarizing information on the anatomy, biology, habitat requirements, development, biogeography and phylogeny of the order is presented. What is missing is a chapter describing methods of collecting, processing and preserving material. This information is useful for beginners or non-specialists and is present in most similar books that focus on more restricted regions (e.g. Landa, 1969; Studemann et al., 1991, etc.).

The systematic part dealing with individual taxa is well arranged and easy to use. Each taxon is characterized in terms of its systematic placement, biology, distribution, type locality, synonymy and where its type material is located. This is the first time in the history of the study of European mayflies, such detailed information about individual taxa is summarized in a single book. In this sense, the book represents the most complex catalogue of European mayflies available. Taxonomic remarks are also excellent, giving all the necessary basic information about the taxonomic problems of the respective taxa clearly and comprehensibly. The critical re-evaluation of many faunistic records throughout Europe is excellent. The two tables at the end of the monograph (table of the distribution of individual species and that summarizing the information on life cycles) are both very useful.

The systematic placement of several taxa could be probably regarded as excessively conservative. In the case of the subfamily Baetinae, the authors adopt a more than twenty year old concept and include all European representatives within the genus *Baetis* s.l. The taxonomy of this group is generally controversial, however at least some taxa such as *Acentrella*, *Alainites* and *Labiobaetis* are widely accepted genera. Moreover, *Baetis* s.l. is untenable when extralimital taxa are considered and it is surely not monophyletic. However, this is not a defect of this book as it is likely the authors adopted this

concept provisionally until there is a wide-scale revision of Baetidae. Additionally, the proposed division of the genus *Ecdyonurus* s.l. into two subgenera (with the newly proposed subgenus *Helvetoraeticus*) is debatable, at least in terms of larval characters, since only one of them (see p. 252) clearly separates both taxa.

One weak point is the illustrations. In the photographic part of the book, several photographs of mayflies are of inferior quality. Since these photographs are only a very marginal part of the publication and not really necessary, it would have been probably better to exclude at least some of these pictures, if there was no possibility of obtaining better ones. The quality of photographs is surprising since the senior author recently published another monograph for fishermen containing a large number of excellent mayfly photographs.

The authors also present a key to both larvae and imagines to the generic level. This key is very useful; the only improvement could have been made by including the page number of the respective taxon chapter with each taxon name in the key, which would make working with this book easier. Although the book contains detailed descriptions of the morphological peculiarities of all the species, the value of the publication could have been even enhanced by including keys to species or to the level of species-group for the highly diverse taxa such as the genera *Baetis* or *Rhithrogena*. Such information would also significantly increase the usefulness of the book for non-taxonomists, e.g. workers involved in the routine monitoring of water quality, freshwater ecologists etc. Nevertheless, that would probably greatly increase the size of what already is a very large book. Moreover, preparing illustrations necessary for accompanying the keys would be probably extremely time-consuming and similar keys already exist for many European regions. The authors probably abandoned the idea of incorporating keys to species for these reasons.

Naturally there are some typographic errors (including absence of diacritics in the geographic names and literature citations) and inconsistencies in the text, but considering the size of the book there are relatively few. By way of demonstration altitude is in some places in feet and in others in metres above sea level, Linné is sometimes cited as Linnaeus and geographical coordinates for longitude and latitude are sometimes interchanged. Information about the geographical distribution of individual species in the text sometimes disagrees with that included in Table I. A photograph of the nymph of *Cercobrachys etowah* is included among the photographs of adults. However, these blunders do not substantially affect the quality of this publication.

Summing up, we are sure that this monograph by Ernst Bauernfeind and Tomáš Soldán will provide a crucial source of information for all mayfly researchers and enthusiasts for a long time to come.

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