

Review

Nilsson, A. 1997: *Aquatic Insects of North Europe. A taxonomic handbook. Volume 2. Odonata-Diptera.* — Apollo Books 440 pp. ISBN 87-88757-15-3.

Volume 2 completes this masterpiece about aquatic insects in Northern Europe started in 1996. These two volumes improve radically the research possibilities in this field, as a huge amount of knowledge has been collected between the covers of these volumes. These books together are a must for all aquatic-invertebrate ecologists.

Volume 2 starts with a list of contributors, including a total of 25 names with a great deal of reputation and talent. Next, Anders N. Nilsson, the editor of the whole handbook, gives a short introduction to this volume. He underlines the marked variation between the different chapters, which is caused by the enormous variation in the knowledge of the biology and larval morphology of the different taxa. It is interesting that a total of about 2800 aquatic insect species are known from Northern Europe, as mentioned in this textbook. Another interesting point, at least geopolitically, is the fact that as far as Trichoptera are concerned the Russian areas of Fennoscandia are not separate from Finland — what might President Boris Yeltsin think about that? Finally, there are a few important corrections to Volume 1 and some new references plus a summary table of the numbers of species of aquatic insects in each order and family in the different Fennoscandian areas.

The insect orders covered in Volume 2 are Dragonflies and Damselflies (Odonata) and flies (Diptera). The presentation of each chapter (dipterans are discussed in 22 chapters, mostly as one family) follows the style of Volume 1, i.e. the introduction consists of life cycles and phenology, habitats, trophic relationships, morphology (egg, larva and adult), methods of collecting, rearing, preparation and conservation. Under "Keys" a key is given to the levels which are possible within the group in question. The different states of general knowledge of each group are especially obvious here — there are still great gaps to be filled! I tried the keys in some groups familiar to me and found that they worked. I also tested them in less familiar groups by taking some identified samples from our museum collections and then blindly verifying the identification. They seemed to work even then!

Each chapter ends with a reference list grouped under the following headings: Identification, Classification and

Morphology, Natural History and Faunistics. These are naturally just guidelines for references, so that a beginner can find where to start. However, in the case of horse-flies, I saw to my disappointment that the article of Jaakko Karvonen dealing with the Finnish species published in *Annales Entomologi Fennici* in 1969 was not included. Every part ends with a checklist of Northern European species. This is surely a useful list and should encourage people to dig out new national species.

There are some inconsistencies in the use of terminology, which is quite understandable in a massive work with so many authors. The introduction to Diptera says that *Brachycheira* is an old name for *Orthorrhapha* plus *Cyclorrhapha*. On page 88, however, there is a key for aquatic *Brachycheira*! Well, this is not a big fault, since most of the readers may be more familiar with the last mentioned name at any rate. Also, some printing errors occur, but Christine Dahl has provided a list of them concerning her article of mosquitoes. These were as follows: *Finlaya* instead of *Finlayia* p. 163, 174, 177 and 182; filariasis instead of schistosomiasis p. 170 (medical importance); add 37c before 38d under & 22; saddle instead of pecten p. 174 under & 25; add 32 before 33 first & p. 178. In a huge work of this kind it is surely very difficult to avoid misprints and small errors here and there. But if such errors occur in the key, for instance, they may be truly embarrassing. It would therefore be nice if the editor-in-chief Anders Nilsson had collected these errors. They could then be published on the pages of this journal, which probably reaches a whole lot of people working on aquatic insects.

The two volumes of *Aquatic Insects of North Europe* were published by Apollo Books and they are available from the address "Kirkeby Sand 119, DK-5771 Stenstrup Denmark" at the following prices: Volume 1 when ordered separately: Danish Kroner 450,00 excl. postage. Volume 2 when ordered separately: Danish Kroner 550,00 excl. postage. Volumes 1 & 2 when ordered together: Danish Kroner 900,00 excl. postage.

Juhani Itäimies