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Received April 10, 1996; accepted October 2, 1996

*Eur. J. Entomol.* **94**: 565–566, 1997  
ISSN 1210–5759

## BOOK REVIEW

NILSSON A. (ed.): *AQUATIC INSECTS OF NORTH EUROPE: A TAXONOMIC HANDBOOK*. Apollo Books, Stenstrup, Denmark, 1996, 274 pp. ISBN 87-88757-09-9. Price USD 85.00.

This book is the first part of two-volumed treatment of the aquatic insect fauna of North Europe. The following groups are treated in the present volume: Ephemeroptera, Plecoptera, Heteroptera-Gerrhormorpha, Heteroptera-Nepomorpha, Megaloptera, Neuroptera, Trichoptera, Lepidoptera-Pyralidae, and Coleoptera. Of the latter, special chapters are devoted to aquatic species of the following superfamilies, families and subfamilies: Gyrinidae, Haliplidae, Noteridae, Dytiscidae, Hydrophiloidea, Hydraenidae, Dryopoidea, Scirtidae, Chrysomelidae-Donaciinae, and Curculionidae. The section on Coleoptera is introduced by a general

chapter presenting also the key to the individual groups. The subfamilies Helophorinae, Hydrochinae and Spercheinae of the Hydrophilidae are treated as separate families here. Altogether 69 families of aquatic insects are mentioned here. Remaining orders, namely Odonata (9 families) and Diptera (24 families), will be treated in the second volume of this book.

The introductory chapter summarizes the present knowledge on biodiversity of Fennoscandian aquatic insect fauna stressing, not only the lack of useful literature for species identification but also, the absence of up-to-date faunal lists of most truly aquatic insect representatives of most groups in question. This chapter is completed with a very valuable table summarizing scientific and respective Danish, Norwegian, Swedish, Finnish and English trivial family names.

The special chapters are sectioned in the same way. Introductory sections deal with life cycle and phenology, habitats, trophic relationships, state of knowledge, morphology of eggs, nymphs (larvae and pupae) and adults, and methods (collecting, rearing, preparation and conservation). This part of each chapter is followed by keys. Generally, the keys given in the present handbook were designed to make possible the identification of larvae and adults of all aquatic orders and families to genera. This restriction was found necessary as the taxonomic knowledge of larvae in many families is severely limited. Nevertheless, for some orders like Ephemeroptera, Heteroptera, Megaloptera and Neuroptera, of which mostly no up-to-date keys existed and little knowledge was available, keys to species are given. All the chapters are extensively referenced, references are grouped in sections dealing with identification, classification and morphology, natural history, faunistics and sampling methods. The special chapters are closed with a check list showing distribution (or known records) of individual species in Denmark, Norway, Sweden, Finland, Fennoscandian parts of Russia, Iceland, Faroe Islands, and Svalbard. However, the "Fennoscandian part of Russia" is not defined or bordered geographically anywhere in this book. Since I am not able to expertly comment all the chapters of the volume, I concentrated on the second (Ephemeroptera-Mayflies by E. Engblom, pp. 13–53). This chapter represents an original and carefully elaborated contribution, supplemented by much new data on mayfly biology, based on author's personal observations. However, both the general and systematic parts contain some minor mistakes. For instance, incorrect earlier literature data (absence of the imaginal stage in females of

*Prosopistoma*, underwater emergence of *Electrogena lateralis*, etc.) are reiterated. Other points include that: the mayfly subimago is definitely not an adult stage, there is hardly any species having a 3-year developmental period in North Europe (p. 13), the gills of *Rhithrogena* are not movable, there is a marked sexual dimorphism in the shape of cerci in larvae of Caenidae, larvae of *Baetis* develop external genitalia well before the subimaginal moulting (p. 15) and that the correct species name of the only European species of *Brachycercus* is *harrisella* (*harrisellus* being unjustified emendation). Some taxonomical changes, e.g., removing of *Ameletus alpinus* and *Cloeon schoenemundi* from synonymy with *A. inopinatus* and *C. simile*, respectively, should deserve brief comments, at least. *Baetopus tenellus* and *Ecdyonurus lateralis* are now placed in the genera *Raptobaetopus* and *Electrogena*, respectively. The check list appears to be incomplete in many respects, e.g., distributional data on *Cloeon simile* in Iceland or on *Brachycercus harrisella*, *Caenis luctuosa* and *C. macrura* in Karelia are missing. *Electrogena affinis*, *Procloeon ornatum* and *Potamanthus luteus* found by Chernova (1941, *Zool. Zhurn.* 20: 213) in north-eastern Russia are not mentioned at all.

The volume is technically perfect, with very high quality reproductions and graphical arrangement. There is hardly any need to emphasize how useful such a comprehensive treatment is for entomologists, hydrobiologists and biologists in general. This work is, at least, a partial counterpart of the famous Aquatic Insects of North America (1996) edited by R.W. Merritt and K.W. Cummins.

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