Eur. J. Entomol. **101**: 408, 2004
ISSN 1210-5759

BOOK REVIEW

ANDERSEN N.M. & WEIR T.A.: AUSTRALIAN WATER BUGS. THEIR BIOLOGY AND IDENTIFICATION (HEMIPTERA-HETEROPTERA, GERROMORPHA & NEPOMORPHA). Entomograph Vol. 14. Apollo Books, Denmark, CSIRO Publishing, Australia, 2004. 344 pages + 8 colour plates. ISBN 87-88757-78-1, ISSN 0106-2808 (Apollo Books), ISBN 0-643--09051-7 (CSIRO Publishing). (Hardback) price DKK 420,00 excl. postage. The book can be ordered from: Apollo Books, Kirkeby Sand 19, DK-5771 Stentstrup, Denmark. E-mail: apollobooks@vip.cybercity.dk

This book is the first comprehensive guide to the identification of Australian adult water bugs which show a relatively high level of endemism (14 genera of Australian water bugs are endemic). It provides an overview of 6 families, 30 genera and 129 species of semiaquatic bugs (Gerromorpha), and 9 families, 24 genera and 132 species of true water bugs (Nepomorpha) known to occur on mainland Australia, Tasmania and adjacent islands. Water bugs are presented as a group of insects with a major role in aquatic ecosystems and as important indicators of the biological quality of aquatic habitats.

The book can be subdivided into two major parts with links to one another. The general part (Chapters 1–6) contains much useful data and can serve as a brief introductory textbook for students beginning to study water bug biology. Chapters 1 and 2 contain (1) data on the numbers of taxa and (2) their distribution within Australia, (3) information about characteristic habitats and habits with a key based on habitats and habits, (4) generalized characteristics of water bug respiratory-, locomotion- and feeding strategy, (5) overview of the reproductive biology, which deals with mating, sexual communication, eggs and oviposition, postembryonic development and phenology. There are also paragraphs dealing with (6) wing polymorphism, (7) parasites and comensals, (8) economic importance, and environmental monitoring. Considering all the facts, the respective paragraphs deal with these topics very well from different points of view or cite a lot of relevant literature, only the paragraph "Parasites and comensals" could be expanded. In addition to the parasites described in the text, microsporidians (e.g., Tonka & Weiser, 2000) and larvae of Nematomorpha that live in the body cavity (e.g., Krajewski, 1969) there are other relatively common parasites of true water bugs. Chapter 3, Classification and phylogeny presents not only a survey of important recent developments in water bug phylogeny and of important fossil water bug higher taxa, it also presents some yet unpublished opinions of the authors and of N.M. Andersen's student (M. Bay Hebsgaard). Chapters 4, Identification and 5, Collecting methods and Specimen preparation present guidelines on morphology, morphological terminology and also basic instructions for rearing, preparation, labelling, and information on major Australian water bug collections. The general part ends with an illustrated Key to Adults of Australian Families of Water Bugs (Chapter 6).

The taxonomic part (Chapters 7–21) is ordered by families and well illustrated (drawings, SEM and colour photographs of taxa or details of their morphology important for taxonomy, schematized distribution maps and colour photographs of typical habitats). Each chapter includes the characteristics necessary for identification (family, subfamilies, tribes, genera, respectively) with a key to genera and species, data on distribution and brief review of biology (autecology). The comprehensive, sophisticated and rigourous text, high value of the abundant information and clear and instructive figures are outstanding features of this part of the book. Basic data on the family Helotrephidae, which occur in the Indo-Malayan archipelago but not in the Australian zoogeographic region, are included in this part.

The taxonomic part is a helpful quide for beginners as well as advanced students of the Australian water bug fauna and professional heteropterists.

In the references there are 483 relevant papers or monographs. A checklist of higher taxa and species, and their distribution is included.

In comparison with some "guide-type publications" dealing with the water bug fauna of European regions, areas or states (e.g., Tamanini, 1979; Nieser, 1982; Savage, 1989), this publication has a different character: it is more representative and detailed from the taxonomic point of view.

Generally, it is a pleasure to have and read such an integrated and informative monograph prepared by authors, who are the leading authorities in their field. This excellent handbook is a publication of this type.

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