

## BOOK REVIEW

DOMÍNGUEZ E. (ed.): *TRENDS IN RESEARCH IN EPHEMEROPTERA AND PLECOPTERA*. Kluwer Academic/Plenum Publishers, New York, Boston, Dordrecht, London, Moscow, 2001, xiii + 478 pp. ISBN 0-306-46544-2. Price USD 135.00.

This volume contains the proceedings of the 9th International Conference on Ephemeroptera and the 12th International Symposium on Plecoptera held in Tafi del Vale, Tucumán, Argentina, August 16–21, 1998, and August 20–23, 1998, respectively, and a joint symposium held on August 20, 1998. The conference was attended by more than 80 participants from 25 countries and was dedicated to Dr. M. T. Gillies (Great Britain) and Prof. W.L. Peters (Florida A & M University, Tallahassee, USA) in recognition of their life-long contribution to the knowledge of these insects.

The publication contains 54 original contributions. Most of the papers presented at the conference were grouped under five topics by the editor, with some of the papers crossing subject boundaries. Besides comments on the diversity of Ephemeroptera in the world, the topics include Ecology and Behaviour, Biogeography and Distribution, Phylogeny and Systematics, and Morphology and Ultrastructure.

Of the specialised sections, two are worthy of mention, namely Status of the Knowledge of Ephemeroptera in the World, and Ecology and Behaviour. Following a brief introduction, these subjects are treated by region: North East Asia, Australia, African-Malgasy Region, New Zealand and New Caledonia, Europe, and the Oriental Region. Naturally, individual treatments vary from a simple enumeration of species, genera and families in the respective regions to critical evaluation of trends in taxonomic research, definition of priorities and guidelines for future research. The papers show that mayflies, even of areas like Europe or North America, which are considered to be well studied, are not well known, and taxonomic revisions of various genera are needed. Fauna of other continents (e.g. Afrotropics) is practically unknown and many of the few species are known only from a single developmental stage.

Moreover, taxonomy is considered “old-fashioned” in most developed countries even though fundamental for any ecological and behavioural study, including water quality assessment or biomonitoring, genetics, biology or evolution.

The section Ecology and Behaviour (20 papers) concentrates on life cycles, seasonal occurrence and emergence, abundance, biodiversity, longitudinal and altitudinal distribution, community and taxocene structure of both mayflies and stoneflies.

Although these problems have been studied for a long time most of the data is for temperate areas, or, more precisely the Northern Hemisphere. It is very important that most of the contributions deal with little known Southern Hemisphere species in tropical and subtropical mountain streams of the Andean-Patagonian river system, mostly in Venezuela, Bolivia and Argentina. This section also contains valuable contributions on the long recognised but little explored use of vibrations in communication (drumming) and mate-searching behaviour of stoneflies, a detailed review and list of mayfly predators, and parthenogenetic and bisexual populations of the mayfly *Ephemera notata*. Three papers are devoted to *Dinocras cephalotes* and *Pteronarcys californica*, respectively; species with very long, semivoltine but plastic life cycles, and methods of studying these unusual life cycles in aquatic insects are discussed and compared.

Although the contributions cover a broad spectrum of research on aquatic insects, they represent much more than the proceedings of a conference. They provide a comprehensive coverage of modern information as well as “free niches” or “white places on the map” for future research. Moreover, both the Ephemeroptera and Plecoptera are used as examples in general limnological and hydrobiological studies in many of the papers published here.

The book is concise, including selected and carefully reviewed papers. However, the reproduction of the photographs is not always excellent and it is a pity that we had to wait for more than three years for this publication.

*T. Soldán*