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BOOK REVIEW

CORKUM L.D. & CIBOROWSKI J.J.H. (eds): *CURRENT DIRECTIONS IN RESEARCH ON EPHEMEROPTERA*. Canadian Scholar's Press, Toronto, 1995, xiv + 479 pp. ISBN 1-55130-075-3. Price USD 30.00.

This volume presents the proceedings of the 7th International Conference on Ephemeroptera held at the University of Maine, Orono, USA, 3–6 August, 1992. The conference was attended by 67 participants from 17 countries and was dedicated to Professor G.F. Edmunds, Jr. (University of Utah, Salt Lake City, USA) in recognition of his life-long contributions to the knowledge of these insects.

The publication contains 35 original contributions. Most of the papers presented at the conference were grouped under broad topics by the editors, and occasionally some papers may cross subject boundaries. The topics included Water Quality, Distributional Patterns, Life History, Morphology, Ecology, and Phylogeny and Systematics. The introductory contribution by W.P. McCafferty on the work of Prof. G.F. Edmunds is followed by the plenary address entitled "Mayflies as Bioindicators of Water Quality on a Global Scale" written by V. Landa. This article shows the Ephemeroptera communities as a very suitable and sensitive system for biomonitoring of some global environmental trends (such as acidification or global warming) provided that there are really long-term data available.

Of the specialized sections, two are worthy of mention, namely Water Quality and Ecology. Study of nymphs of *Stenonema interpunctatum* from the Fenholloway River in Florida showed statistically significant morphological abnormalities of abdominal tracheal gills. Except for the Chironomidae

(damage of mouthparts) this phenomenon has never been observed in aquatic insects so far. Two papers of the section Ecology are devoted to general hydrobiological problems using mayflies for the study of the relationships between stream size and distribution, and floods and disturbance of benthic communities, respectively. The following two papers are devoted to *Palingenia longicauda*, a highly endangered species with relict distribution in some rivers of the Danube basin. New data on abiotic characteristics and description of habitat of the refuge in the Tisza River in Hungary as well as feeding habits, ethological observation and egg structure are presented here. A detailed review on symbiotic associations between Chironomidae and Ephemeroptera summarizes sixty different reported observations involving 24–26 chironomid species. Although the entire association is still not well understood, it seems that at least some parasitic Chironomidae-Orthoclaadiinae may have evolved from commensal ancestors.

Although the contributions included here cover a broad spectrum of research into this order of aquatic insects, this volume, as a whole, represents much more than the proceedings of a conference. It provides a comprehensive coverage of modern information on this group. Moreover, the Ephemeroptera serve as an example for general hydrobiological studies in numerous papers published here.

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

T. Soldán