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THIRD INTERNATIONAL CONFERENCE ON CLASSIFICATION,  
PHYLOGENY, AND NATURAL HISTORY OF HYDRADEPHAGA  
(COLEOPTERA)

**Proceedings**

Organized and Edited by

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## INTRODUCTION

In 1982, Rob Roughley and Bill Wolfe organized the First International Conference on the Classification, Phylogeny and Natural History of the Hydradephaga in Toronto. The proceedings of the meetings were published in the *Proceedings of the Academy of Natural Sciences of Philadelphia*, 137(1) in 1985. The second conference was organized by Michel Brancucci and Konrad Dettner and was convened at the XVII International Congress of Entomology in Hamburg in 1984. The results of this symposium were published in *Entomologica Basiliensia*, 11 in 1986. The next two issues of *Quaestiones Entomologicae* (Volume 26, Numbers 2 and 3) mark the culmination of the third such conference held in conjunction with the XVIII International Congress of Entomology in Vancouver in 1988.

The rationale for these International Conferences has been and continues to be to stimulate international collaboration. This is the preferred method for advancing science in general and the study of Hydradephaga in particular. Nevertheless, science is a human endeavour: its advancement depends on the enthusiasm and ideas of the participants. We hope that the latest proceedings will lead to even greater collaboration and further advance the study of Hydradephaga. From this viewpoint, it is encouraging to note that, in the present proceedings, European authors discuss Nearctic taxa and North American authors discuss Palearctic taxa.

As with the other conferences, the majority of the papers in this volume deal with hydradephagan systematics. As such, they represent significant contributions rarely found in one proceeding. Several of these papers treat the systematics of families (Beutel - Gyrinidae; Burmeister - Amphizoidae) and genera (Wolfe and Roughley - *Laccornis*; Roughley - *Dytiscus*). These studies lay a solid foundation for phylogenetic and evolutionary analyses of this important group of aquatic insects.

The five families which comprise the Hydradephaga include 5,000 - 6,000 species in the world fauna and encompass a wide range of structural diversity. An analysis of the literature on Hydradephaga over the last five years suggests that about 200 papers per year are being published by about 200 authors. This literature is primarily systematic-taxonomic-faunistic, suggesting that much more work is needed in these areas. Nevertheless, there are encouraging signs that other studies about natural history, behaviour and ecology of Hydradephaga are becoming more common. This melding of a variety of research efforts holds great promise for both the interpretation of relationships within the Hydradephaga and an understanding of evolutionary changes occasioned by invasions of fresh water.

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