

Historical drawings, black-and-white photos, and 16 color plates embellish the book. An 1880 etching of Pyramid Lake is contrasted with a recent photo to show the drastic drop in water levels. A photo of a barren Tennessee dam landscape contrasts with a poetic description of the beauties of the river in 1834.

The book emphasizes throughout, the status, environmental, and historical problems of American species. However, two Canadian endemics and several species which range into Canada are discussed. No Canadian conservation organizations are listed. Nevertheless, the Canadian reader should be able to draw useful conclusions from the American experience. And Canadians should take warning that the serious shortage of water in the western United States

may lead to increasing demands to draw on our water supply. Naturalists, anglers, conservationists, and persons working in fish and wildlife agencies on aquatic biota would benefit from having this book in their own library or that of their institution. We all can learn from this book that water is not a limitless resource. Its quality and flow, must be guarded by everyone. The authors and the editors are to be congratulated for producing a high quality, authoritative and very readable volume.

DON E. McALLISTER

Curator, Ichthyology Section, National Museum of Natural Sciences, Ottawa, Ontario K1A 0M8

Chironomidae of the Holarctic Region. Part 1. Larvae

Edited by Torgny Wiederholm. 1983. Entomologica Scandinavica Supplement No. 19. 457 pp. U.S \$73.00.

Entomologica Scandinavica, well known as the publisher of a prestigious entomological journal, has undertaken the ambitious task in its Supplement series of producing, in three volumes, a set of keys and diagnoses to the genera of holarctic chironomids. The first of these, dealing with the larvae, has now appeared in a beautifully manufactured publication which should grace any library for years. The high quality of this publication, however, has been achieved at a hefty price (special price deals are available for the set and those interested should write to the publishers at their Editorial Office, Entomologica Scandinavica, P.O. Box 24, S-240 17, S. Sandby, Sweden).

This first volume is restricted primarily to larval keys and diagnoses, although the relatively short accounts for each genus also include brief notes on ecology and distribution (mainly in continental terms). The text includes only a perfunctory listing of the systematic history of each genus. Synonymies (a particularly severe problem in the Chironomidae) as a result are impossible to resolve from this reference alone and require that the reader also purchase Supplement No. 17 (*A Catalogue of Chironomid Genera and Subgenera of the World Including Synonyms* by P. Ashe, 1983) at an additional U.S. \$15.00. Those already working with the older chironomid literature will find this Supplement a particularly useful guide.

The book does include a general introduction to larval morphology along with a basic guide to the terminology used in the rest of the text. While these are quite adequate for most purposes, there is some confusion in terms. For example, the terms clypeus

and labral sclerite I are used interchangeably in the text, with no apparent mention of their being synonyms. Assistance is available here as well in the form of Supplement No. 14 (*Glossary of Chironomid Morphology Terminology* by O. A. Saether, 1980) at U.S. \$13.60. This latter work is most useful in its attempts to standardize the terminology of earlier chironomid works to one common system. It is not required for use of the present volume on chironomids and is optional only.

The larval keys are primarily to genera, although in certain cases keys to some subgenera and species groups are included. The keys are generally easy to use, and most couplets rely upon distinguishing between reasonable morphological differences. They are of necessity complex due to the scope of coverage, which includes the entire holarctic region. In some cases, as for the Chironominae, this means additional work in preparing the specimens. Some problems may be encountered because of the heavy reliance in the keys on the S-setae. Since these setae may be obscured or difficult to see in all but the best slide preparations, identification attempts using these keys may sometimes be impossible.

Diagrams, so critical in publications of this kind, justifiably make up the major part of the book, comprising over 50% of the total number of pages. However, those familiar with some of the recent taxonomic works on chironomids will be disappointed with their quality. The high standards of other recent publications have been forsaken in favour of line drawings, and though generally clear, the diagrams in some cases can only be described as sketchy. This is particularly disappointing since the diagrams are all large and spaciouly laid out.

Notwithstanding these criticisms, this volume and the subsequent ones on the Pupae and the Adults (assuming the same level of quality) will reign supreme as the basic reference works on chironomids. While intended as an identification guide, it serves to finally assemble in one place the most recent (to 1983, the year of publication — a feat in itself) taxonomic information. For most of those attempting to identify

the chironomid fauna of this continent, this is the only source they are likely to need. Many years in the making, it appears well worth the wait.

REIN JAAGUMAGI

Department of Entomology, Royal Ontario Museum, 100 Queen's Park Crescent, Toronto, Ontario M5S 2C6

Communication and Behavior of Whales

Edited by Roger Paine. 1983. American Association for the Advancement of Science. Selected Symposium 76. Westview Press, Boulder, Colorado. xii + 643 pp. U.S. \$35.00.

Whether perceived through the literary puissance of Herman Melville or the eerie humpback songs accompanied by Judy Collins, whales have long been a group much in the public eye. They are currently a major collision point for powerful economic interests operating amid insufficient international agreements, and their opponents including a diversity of conservationists and zoomystics. This volume reports the proceedings of a recent symposium on the behaviour of this topical group of mammals. The fourteen chapters are arranged into five parts. The first five chapters deal with vocalizations, the area for which the editor is justly famous. Investigations in humpbacks have revealed how singing patterns change within individuals and within seasons, and how aberrant songs give insight into the rules of song production. Two of the chapters deal with the social and behavioural contexts, and possible functions, of vocalizations in killer and right whales. The next four chapters examine the behaviour of several species on the breeding grounds (waters?), as well as attendant features on life history and population size. Particularly intriguing is the report on the aggressive use of callosities between males in right whales. Part 3 consists of two chapters on migrations and stocks of humpbacks, and the usefulness of songs in identifying both individuals and stocks. The two chapters of part 4 report techniques for discriminating the sexes and individuals in nature using morphological cues such as callosities. Part 5 is an annotated bibliography of the literature on humpback and right whales.

The emphasis on a biology of living whales, as opposed to one of carcasses, reflects the contemporary ethos of expanding animal rights. The findings on cultural changes in singing provide a fascinating glimpse into the rich world of these magnificent animals. Much of the material on communication, breeding, and migrations will interest workers in such areas as bird song and mating systems (e.g. the discussion of humpback songs within a phyletic framework of five evolutionary stages, and of dialects versus geographic variation in these songs). The methodological difficulties of classifying vocalizations, in whales and other species, continue to pose major tasks for researchers in communication. More critically, the book suffers from the general failing of symposium proceedings in terms of integration, tightness, and polish. Even as technical papers with necessarily much description, several of the chapters are excessively discursive. Interpretation of data, on group sizes and life history features, in terms of evolutionary theory would have strengthened the relevant chapters and broadened their readership. In such a thick book, it would not have required much space to include a taxonomic chart of at least the cetacean species discussed, the difficulties with right whales notwithstanding. Many of the chapter references would have been usefully merged with the bibliography. Overall, this volume is a solid, if imperfect, updating on the field.

PATRICK COLGAN

Biology Department, Queen's University, Kingston, Ontario K7L 3N6



Jaagumagi, R. 1985. "Chironomidae of the Holarctic Region. Part 1. Larvae, ed. Torgny Wiederholm [Review]." *The Canadian field-naturalist* 99(2), 275–276.
<https://doi.org/10.5962/p.355420>.

View This Item Online: <https://www.biodiversitylibrary.org/item/89190>

DOI: <https://doi.org/10.5962/p.355420>

Permalink: <https://www.biodiversitylibrary.org/partpdf/355420>

Holding Institution

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Sponsored by

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Ottawa Field-Naturalists' Club

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.