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Foissner, W., Blatterer, H., Berger, H. & Kohmann, F. 1991. *Taxonomische und ökologische Revision der Ciliaten des Saprobiensystems. Band I: Cyrtophorida, Oligotrichida, Hypotrichida, Colpodea.* Informationsberichte des Bayerisches Landesamtes für Wasserwirtschaft (Lazarettstr. 67, WD-8000 München 19, F.R.D.). ISSN 0176-4217. 466 pp. $50.00.

This atlas of ciliates is the first of four planned volumes. Its primary aim is to facilitate the identification of limnic ciliates for field ecologists and water pollution experts. Early in this century it was recognized that the composition of freshwater biota reflects the load of organic pollutants to streams, lakes and ponds and a classification of polluted waters (the "Saprobiensystem") is based on this. It is the conviction of the authors that ciliates are very useful in this respect, only they are considered too difficult to identify and the ciliate atlas is an attempt to remedy this.

Each volume will contain descriptions of about 90 species in addition to general parts. In the first volume some 20 pages are devoted to methodology: how to collect samples, microscopy and detailed instructions for fixing, staining and silver impregnation and for preparing specimens for scanning electron microscopy (SEM). The volume also includes an instructive and convincing pictorial key to the species belonging to the treated four orders. The fundamental diagnostic features of the orders are also treated in detail. The core of the book is the description of 82 species. Each species is profusely illustrated; in most cases illustrations include drawings of whole living cells and of especially important details as well as photographs of living and of silver- and protargol-impregnated specimens and SEM photographs. While the work is produced as a loose-leaf book, printing quality of the photographs (and in general) is excellent. The text includes a list of synonyms and of earlier literature, a detailed description and diagnosis, notes on how to avoid confusion with related or similarly looking species, information on distribution and ecology with special reference to the role of environmental factors (e.g., pH, oxygen) and classification of the particular species in the Saprobiensystem. Many of the observations and illustrations are original contributions.

It is, in my view, a shortcoming that the authors do not explain the criteria for including particular species and omitting others. Many of the included species are not particularly associated with eutrophic or organically polluted waters. However, a large number of species, and especially common ones, are included and I expect that most species in any freshwater sample can be identified to the specific level using the book.

Due to the detailed descriptions and the quality and quantity of illustrations this volume sets a new standard for this sort of work and there is really not anything to compare to it. This (and the following volumes) will provide an invaluable tool for anyone who wishes to identify freshwater ciliates and it should stimulate and support the increasing interest among limnologists for protozoan communities. The work will also be indispensable for ciliate taxonomists due to its detailed descriptions and the systematic considerations offered by the authors. I do hope that the fact that the work is not produced by an international science publisher and the fact that it is written in German will not limit its distribution. Everyone interested in ciliate diversity or in the ecology of freshwater protozoa should own a copy.—TOM FENCHEL, *Marine Biological Laboratory (University of Copenhagen), DK-3000 Helsingør, Denmark.*