

Berger H., Foissner W., and Kohmann F. (1997): **Bestimmung und Ökologie der Mikrosaproben nach DIN 38 410**. Gustav Fischer Verlag, Stuttgart, DM 68,-. ISBN 3-437-25026-4.

This recent publication in the German language provides a taxonomic account of important and commonly found representatives of free-living protists, combined with a description of their ecology. The major purpose of the book is to give an overview of those microorganisms that are considered key organisms in the "saprobiety index". The saprobiety index is a standardized method applied mostly in central and northern Europe to determine the biological quality of aquatic environments. The degree of "pollution" is determined with the help of a range of indicator organisms, summarized in an administrative list (DIN 38 410). Among these organisms, 80 different taxa of microbes (bacteria, fungi and protists) play an important role. Although primarily intended for the rather specialized audience of applied stream ecologists, the scope of the book reaches far beyond this. It is useful for all aquatic ecologists and for those persons with a particular interest in both protistan taxonomy and their ecology.

The book is divided into an introductory part (chapters 1, 2, and 3), a comprehensive section devoted to the organisms (chapter 4), a glossary, literature references and a register (chapters 5, 6, and 7). After the general introduction (chapter 1), the scope of the book is outlined, and the concept of the saprobiety index explained in chapter 2. However, for persons not familiar with this concept and its administrative basis, the explanation of the saprobiety index and its implications are somewhat difficult to follow. A complete account of all relevant organisms is given, including a series of lists and tables containing their classification according to ecological parameters and the saprobiety index. Chapter 3 contains information on how to use the book and a description of some methods for the collection, processing and microscopical examination of the organisms. This section is particularly useful

for those investigators who do not have access to expensive and specialized laboratory equipment and consumables, yet the methods recommended are well suited for the identification of the key organisms. In chapter 4, the organisms relevant for the saprobiety index are classed into rough taxonomic units (schizomycetes, mycophytes and the three major functional groups of free-living protists – rhizopodes, flagellates and Ciliophora). Identification aides in the form of keys are provided, and brief introductions are given for each of the main groups. These are followed by more specialized keys, and detailed information on the morphology, cellular organisation, characteristic form of locomotion and ecology of representatives of each group is given. These descriptions are illustrated with a multitude of high quality drawings and micrographs. A particularly useful feature of this part is a paragraph describing species that can easily be mistaken for the organism in question. The glossary (chapter 5) is appropriate for the scope of the book, and the explanations of the scientific terms are easy to understand. The list of literature (chapter 6) is very useful, as it does not only contain references to textbooks that should be easy to obtain from libraries, but also citations of original research articles as a basis for those researchers who want to get more in-debt information on the organisms. A complete species index can be found at the end of the book.

This book provides a nice overview of free-living microorganisms commonly found in freshwater environments. It can be highly recommended to persons interested in aquatic ecology and will be useful for both beginners and those more experienced in the field of protistan ecology. Unfortunately, at present the book is only available in German, and the title is rather specialized and abstract, which does not give justice to the general value of the book. Due to these two shortcomings it may therefore not attract the attention of the wide readership it is relevant for, although it is available at an affordable price.

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