

Desmidiaceenflora von Österreich, Part I. R. Lenzenweger. *Bibliotheca Phycologica* 101. Berlin & Stuttgart: J. Cramer. 1996. 162pp, incl. 17 plates (full-page line drawings), 177 line drawings in the text and index. ISBN 3 443 60028 X. DM90.00 (paperback).

This is the first of a series of three installments comprising the 'Desmid Flora of Austria'. Desmids represent a morphologically very distinctive group of green algae, phylogenetically related to the 'land plant lineage' or *Charophyceae* where they are part of the order *Zygnematales* or conjugating green algae. The present volume deals with the families *Gonatozygaceae*, *Peniaceae*, *Closteriaceae* and *Desmidiaceae*, leaving the genera *Cosmarium*, *Cosmocladium*, *Arthrodesmus*, *Xanthidium*, *Staurodesmus* and *Staurastrum* as well as the filamentous desmids to the two forthcoming parts of the *Desmidiaceenflora*.

Compared with other groups of freshwater algae, desmids have always enjoyed the dedicated attention of a sizeable loyal group of microscopists many of whom are non-professional phycologists but whose detailed observations have made very substantial contributions to our knowledge of the morphological diversity and variation of these plants. It is perhaps this audience that Lenzenweger had in mind when writing the *Desmid Flora* since the text is characterized by a high level of user-friendliness.

First, one of the introductory chapters preceding the floristic text provides useful hints and suggestions for collecting living material in the field. This is followed by a brief summary of the distribution and ecology of desmids in which eight major types of habitat are described. Secondly, a real bonus of the taxonomic part of the book that will be welcomed by the uninitiated desmidiologist, is a visually very attractive taxonomic key. A useful starting point is a table with illustrations depicting the desmid genera occurring in Austria. Perusal of this table should allow the reader to determine quickly to which genus a desmid specimen belongs. The remainder of the taxonomic part is an account of all genera that are known for Austria. The keys to the species are not only strictly dichotomous, they also contain – where necessary – small line drawings that are helpful to illustrate complex or otherwise difficult to describe morphological features that need to be addressed at that point of the identification key. All species entries include notes on synonyms, a brief morphological description, and key ecological and distributional data. Detailed line drawings of each species, assembled in 17 plates, appear at the end of the book.

The book clearly represents one of the highlights of the *Bibliotheca Phycologica*. The clarity and compactness of Lenzenweger's style and the quality of the illustrations will enhance the book's attractiveness beyond the Austrian or German-speaking phycological circles that the author initially may have targeted.

H. J. SLUIMAN