Debashish Bhattacharya (ed.): **Origins of Algae and their Plastids.** - Springer-Verlag, Wien - New York 1997. ISBN 3-211-83036-7. 287 pp., öS 1890.00, DM 270.00, USD 179.00.

The main goal of this book is to provide current results and hypotheses on the origins of algae and their plastids using gene/protein sequence comparisons. The understanding of plastid endosymbiosis (the accepted theory for the origin of the plastid) is critical for understanding of algal origin. Plastids have been laterally transferred multiple times in algal evolution. Resolution of plastid origins has been greatly advanced by the recent availability of plastid sequence data from all the major algal groups for comparative analyses. This volume provides a highly readable, thorough, and up-to-date account of major findings in algal, cyanobacterial, and plastid phylogeny.

The book starts with an introduction to algal phylogeny and to the most common methods used in the construction of evolutionary trees. The next chapter concerns the molecular systematics of oxygenic photosynthetic bacteria (*Cyanophyta* and *Prochlorophyta* are included under this term). The subsequent 12 chapters deal with specific aspects of the phylogeny of plastids and all the major algal groups. These chapters are introduced by the chapter dealing with the origin of plastids and their spread *via* secondary symbiosis.

Green, red, heterokont, and dinoflagellate algae are treated in separate chapters by leading experts on these groups. Text is accompanied by illustrative tables, schemes of phylogenetic trees, pictures, and electron micrographs, and supplemented with a list of references.

Sharing of so many authors (34) warrants on one hand, that the particular topics of interest are presented in a sufficient depth, but on the other hand, it contributes rather to a heterogeneity in style and form of the chapters. We can meet here a very specialized chapter dealing with the complete sequence of the *Cyanophora paradoxa* cyanelle genome as well as the chapter hypothesizing the *Charophyceae* evolution and the origin of land plants. Taking the book as a whole, this heterogeneity is in favour of the reader who gets an as broad as possible amount of up-to-date information. I recommend this book to all students looking for a recent, deep, and broad information on the evolution of algae and phylogeny of their plastids.

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