logy, light harvesting systems and adaptive features of photosynthetic algae. The unique evolutionary origin of oxyphotobacteria is a valuable chapter for students. The next three chapters of section II deal with regulation and genetics – the regulation of biosynthesis, both light dependent and light independent biosynthesis of chlorophylls. The use of reverse genetic analysis for analysing functional algal genes is a new approach and this aspect would be of interest to workers working on algal genetics.

The subsequent four chapters in section II, address various algal electron transport, oxygen consumption in photo and chlororespiration, the well-known 'water–water cycle', the carbohydrate metabolism and respiration as well as the carbon dioxide-concentrating mechanism in algae. The next four chapters are on algal light harvesting systems (LHS). Chapter 12 introduces to the readers the biophysical aspects of excitation energy transfer in thylakoid membranes. Course instructors and students shall find this chapter a good starting material for further studies on how algal plants capture light by their antenna and harvest light energy for conversion into chemical energy.

The panoramic overviews on the algal light harvesting systems for optimizing light capture, the structural components and types of phycobiliproteins in red algae, cryptomonads and glaucocystophytes as well as the functioning of carotenoids in the LHS in general and particularly the energy transfer from fucoxanthin and pteridinin to chlorophyll have been elegantly presented and these chapters add to the attractive features of the book.

The last four chapters of the book deal with the subjects that are of interest to many researchers in India and abroad. These include photosynthesis in algae, marine macroalgal photosynthesis, UV-B effects and photoinhibition and algal photosynthesis. The chapter on adaptation, acclimation and regulation in algal photosynthesis brings out the recent advances made on cyanobacterial genomics that has helped in our understanding of adaptive strategies for optimizing light harvesting and concentrating CO_2. It also shows that modelling of photosynthesis is useful in predicting the efforts of environmental variations.

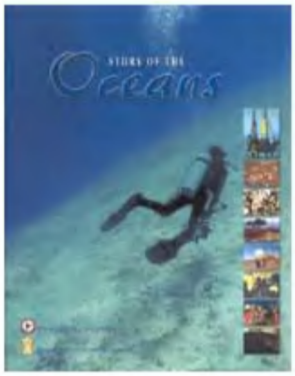
Recalling the number of books that were available earlier to students, the book *Photosynthesis* by G. E. Fogg and *Algal Physiology and Biochemistry* by W. D. P. Stewart remained attractive for long years with the students. Personally, I do not know of any other book that has focused on 'Algal Photosynthesis'. Many books on photosynthesis have appeared but these did not give enough importance to algal photosyntheis. The book under review makes a powerful entry both as a text and reference book.

All the 19 chapters have innovative approaches – they are critical in the analysis of facts and data; the chapters are rich in excellent figures, and diagrams of phylogenetic trees and contain a large body of references. This book is thus not just a book on algal photosynthesis, but a book that provides a unique and excellent picture of photosynthesis in algae. In my opinion, this volume is of enormous contemporary relevance. It not only addresses the intricacies of algal photosynthesis, but also all aspects of algal physiology and genetics. It also points to the usage of algal natural products in phycobiliprotein industries. It deals with nearly on all aspects of algal biology; the presentations by all the contributors are comprehensive and complete and these add to the nature of the book. The volume is impressive in all aspects and more so, because of current global interest in algal biodiversity and biotechnology.

PRASANNA MOHANTY

C/o Head, Life Sciences,
Devi Ahilya University,
Khandwa Road,
Indore 452 001, India
e-mail: photosis@rediffmail.com

Story of the Oceans. Geological Society of India, Bangalore 560 017. 2003. 36 pp.



The Geological Society of India, Bangalore at the instance of the Department of Ocean Development, New Delhi, has brought out a slim, illustrated booklet titled *The Story of the Oceans* to be given free of cost to schoolgoing children to kindle their interest in ocean exploration and ocean resources. The booklet, useful for the general public as well, describes briefly and in an easy-to-understand manner how important the oceans are to us, with the underlying message being, Save the Oceans! It also answers intriguing questions like do the oceans move? Can we know the climates of the past? Are our oceans polluted? Does the benevolent ocean get furious? Economic potential and mineral wealth, owners and users of resources, oceans as a source of food, medicines and sea vegetables, energy from the oceans, life in the oceans and its heritage are all explained vividly with

accompanying beautiful pictures. Satellite oceanography, career opportunities, amazing facts about the oceans, marine sediments, ocean floor and drifting continents are some of the other chapters in this fascinating booklet.