Lobban, C.S., Harrison, P.J.: **Seaweed Ecology and Physiology**. – Cambridge University Press, Cambridge, U.K., 1997. ISBN 0-521-40897-00. 366 pp., USD 29.95 (paperback edition).

This book, devoted to a highly important group of algae, was first published in 1994 (hardback edition) and reprinted in 1997 (both hardback and paperback editions). The term "seaweeds" traditionally includes only macroscopic, multicellular marine red, brown and green algae. Yet, each of these algal groups also has microscopic, if not unicellular, representatives. Actually, all seaweeds are unicellular at some stage of their life cycles. Also, some marine littoral blue-green algae and some benthic diatoms resemble and behave like seaweeds. The seaweeds thus represent a taxonomically heterogeneous grouping of marine algae. The reviewed book considers both macroscopic and microscopic environments, and how the above named algae respond to these environments.

The ecology and physiology of seaweeds has received a thorough and comprehensive treatment in this book. The nine chapters of the book follow a logical sequence. After the treatment of the morphology, life histories and morphogenesis of seaweeds in Chapter 1, a characteristic follows in Chapter 2, of seaweed communities and their responses to the driving environmental factors. The latter chapter includes six essays, contributed by invited authors, on particular types of seaweed communities. Chapter 3 applies the approaches of community and population ecology to the description of biotic interactions both among seaweeds and between seaweeds and the herbivores grazing on them.

Further chapters, except for the last one, are devoted to individual aspects of the physiological ecology of seaweeds. The comprehensive Chapter 4, on light and photosynthesis, treats the photosynthesis in seaweeds from all relevant viewpoints, starting from the light conditions in oceanic habitats, through the respective roles of pigments and pigment-protein complexes, action spectra and "chromatic adaptation", to carbon fixation pathways, products of photosynthesis and their translocation, and, eventually, to the models and ecological implications of carbon budgets and net production in seaweeds. Chapter 5, on nutrients in seaweeds, includes not only a classical ecophysiological treatment of the plant-nutrient interactions, but also a text dealing with seaweed growth, development, and reproduction in relation to nutrient supply. The effects of two crucial factors, namely temperature and salinity, on seaweeds, are the subject of Chapter 6, presenting a logical transition from broad ecological and phytogeographical considerations to physiological and biochemical ones. Another crucial factor, water motion (currents, laminar and turbulent flow, wave action) and its impact on seaweeds, is treated separately in Chapter 7. At present, however, pollution and eutrophication also belong to the crucial factors affecting marine life, including that of seaweeds. Chapter 8 discusses the responses of seaweeds to the heterogeneous set of pollution impacts ranging from thermal pollution to that with pesticides or industrial effluents.

Chapter 9, dealing with the mariculture of seaweeds, gives the readers a good idea of the immediate usefulness of seaweeds as a valuable natural resource. An Appendix, by P.C. Silva and R.L. Moe, informs on the taxonomic classification of all algae mentioned in the book's text. A rich list of references (51 pages!) and index conclude the whole book.

This book is written in a clear style, is richly equipped with tables and illustrated with numerous figures and black-and-white photographs. Anyone that wants to learn essential and up-to-date facts about the life of such importatnt organisms as seaweeds, about their role in the nature and the appreciation of their human use, will find this book most useful. The more so, as it also includes brief chracteristics of methods employed in seaweed studies both in the nature and in the laboratory. The book is also highly didactic. It can therefore serve as a textbook in advanced university courses and as a reliable source of first-hand information and of references to the literature giving more details, on the biology, ecology and physiology of marine algae.

J. KVĚT *(Třeboň)*