



Photosynthesis in the Marine Environment

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Marine Photosynthesis is important in forming the basis of nearly all marine food webs and it provides for at least half of the planet's primary production. Marine plant 'ecophysiology' is an expanding field for which many researchers would appreciate an up-to-date overview...

Photosynthesis in the Marine Environment provides a comprehensive explanation of photosynthetic processes related to the special environment in which marine plants live. It presents the general mechanisms of photosynthesis, the specific properties of seawater in sustaining primary production, and the main differences in light capturing and carbon acquisition between terrestrial and marine plants.

The different photosynthetic organisms of the various marine habitats are introduced—the phytoplankton (both cyanobacteria and eukaryotes) in open waters, macroalgae, marine angiosperms and photosymbiont-containing invertebrates. The text also describes how these organisms evolved, and how some marine plants can, through their photosynthetic characteristics, change the environment for other organisms.

Written by an international team of researchers, representing real working experience from across the globe, this book includes:

- Unique, detailed coverage of photosynthesis in phytoplankton, marine macrophytes (macroalgae and, especially, seagrasses) and photosymbionts in marine invertebrates
- Explanations of the various ways in which photosynthesis can be measured, with emphasis on novel *in situ* measurements, and the extent to which these can serve as a proxy for plant growth and productivity
- Recent findings from marine photosynthesis studies, and a look to the ecological aspects of marine plant photosynthesis and growth, with predictions for the future
- The background to common methodologies used in marine photosynthetic research
- Clear, full-colour photos and illustrations, summary notes and suggested further reading

An accessible introduction for undergraduates, graduates and BSc college students in ecology, marine sciences and marine biology, this is also a valuable reference text for marine management professionals and researchers in the fields of terrestrial plant and general marine sciences wanting to brush up on photosynthesis.



A companion website with additional resources is available at:
www.wiley.com/go/beer/photosynthesis

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www.wiley.com/wiley-blackwell



Also available
as an e-book

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