

Phycology is the study of algae, the primary photosynthetic organisms in freshwater and marine food chains. Since the publication of the first edition in 1981, this textbook has established itself as a classic resource on this subject. Aimed at upper-level undergraduate and graduate students in phycology, limnology, and biological oceanography, this revised edition maintains the format of previous editions, whilst incorporating the recent developments in the field.

#### New in this edition

- ▶ Algae as a biomass resource. In order to supplant fossil fuels and greatly reduce carbon emissions into the atmosphere, the recent research has focussed on algae as a viable alternative to conventional biofuel sources. Students will learn about the great potential of algal biofuel and the hurdles that this technology has yet to overcome before it can compete in the fuel market.
- ▶ Algal toxins generated during blooms of particular naturally occurring marine algal species. Although perfectly natural, in recent years these toxins have increased their frequency and magnitude due to the surplus of essential nutrients such as nitrogen and phosphorus in the water as a result of Man's activities. Focussing on the biochemistry of these phycotoxins, students will learn how their production is metabolically controlled by the algal cells.
- ▶ Algal molecular systematics. One of the most exciting developments in the past decade has been the application of powerful and ultra-rapid nucleic acid sequencing techniques to the problems of phylogenetic studies, leading to a greater understanding of the evolution of algal groups and their interrelationships.



Online Resources  
**[www.cambridge.org/phycology](http://www.cambridge.org/phycology)**

#### For instructors use:

- ▶ PowerPoint slides and JPEGs of figures from the book

Cover image: *Pyrocystis lunula* dinoflagellate. LM: GERD GUENTHER / SCIENCE PHOTO LIBRARY

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