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Book review

J. Huisman, H.C.P. Matthijs, P.M. Visser (Eds.), Harmful Cyanobacteria, Springer, The Netherlands, 2005, ISBN 1-4020-3009-6, HB, p. 255, € 59

Two conference proceedings one published in 1964 (Algae and Man—Plenum Press) and the other in 1968 (Algae, Man and the Environment—Syracuse University Press), were the first to include a discussion of toxic blue-green algae (cyanobacteria). Since then several volumes have addressed the increasing international occurrence of harmful cyanobacteria waterblooms. The main ones include; 1981 (The Water Environment—Algal Toxins and Health – Plenum Press); 1993 (Algal Toxins in Seafood and Drinking Water – Academic Press); 1994 (Detection Methods for Cyanobacterial Toxins – The Royal Society for Chemistry) and 1999 (Toxic Cyanobacteria in Water – A Guide to Their Public Health Consequences, Monitoring and Management – E&FN Spon). In addition several volumes on natural product toxins have included reviews of the subject and proceedings of the marine harmful algae symposia—most notable being the 2000 publication on Seafood and Freshwater Toxins (Pergamon Press) have provided good information on toxic cyanobacteria.

Regional publications on toxic cyanobacteria are less frequent but include the 1994 book—Cyanobacterial Research in Australia (CSIRO Australia). This current book – Harmful Cyanobacteria – continues the regional publication series and represents results growing out of the European Unions funding of several important scientific projects on cyanobacteria and their toxins within Europe, Scandinavia and Eastern Europe.

The book is a welcome addition to the body of international studies on harmful cyanobacteria and demonstrates their widespread occurrence and importance as agents of water-based disease. It is also a nice acknowledgement of the contributions to aquatic ecology and cyanobacteria waterblooms in Europe by Professor Luuc Mur, emeritus professor at the University of Amsterdam.

The book is presented as 9 chapters bound by a nice historical perspective in Chapter 1 the genetic basis of microcystin production in Chapter 2 and ending with Chapter 8 on remote sensing of cyanboacteria blooms and Chapter 9 on Water Safety Plans as they pertain to monitoring and management of toxic cyanobacteria. The "meat" of this volume is in the middle with 5 excellent chapters on ecology of cyanobacteria waterblooms, including Chapter 3, Cyanotoxin Dynamics; Chapter 4, Nutrient Limitation of Freshwater Cyanobacteria; Chapter 5, Nutrient Limitation of Marine Cyanobacteria; Chapter 6, Ecophysiology and Chapter 7, Population Dynamics. It is hoped that these core 5 chapters, along with the 4 chapters that wrap this volume, will provide the scientific basis for studies in the future that will lead to an ability to mitigate harmful cyanobacteria waterblooms. This will not likely happen however until we take aggressive action to reduce human impacts on our supplies of freshwater-steps that include watershed management policies that reduce nutrient inputs, and minimize development of wetlands.

As it stands the book will have a general appeal to anyone, especially persons who have to deal with issues of toxic cyanobacteria and are interested in a better understanding of the topic. Probably more important it will appeal to the more serious researcher wishing to keep up with this increasingly diverse and widespread subject so that they can develop new ideas and directions for their own research into harmful cyanobacteria.

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