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| Descrizione fisica | 1 online resource (XVII, 300 p. 81 illus., 50 illus. in color.) |
| Disciplina | 577.6 577.7 |
| Soggetti | Aquatic ecology Hydrology Microbial ecology Marine sciences Freshwater Geobiology Freshwater & Marine Ecology Hydrology/Water Resources Microbial Ecology Marine & Freshwater Sciences Biogeosciences |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references at the end of each chapters and index. |
| Nota di contenuto | Preface: Building on a history of dual careers in the sciences -- Phagotrophic protists: Central roles in microbial food web -- Drivers that structure biodiversity in the plankton -- The round, the elongated and the stout: selective pressure for phytoplankton shape -- Crossing the freshwater/saline barrier: A phylogenetic analysis of bacteria inhabiting both freshwater and marine ecosystems -- Approaches and challenges for linking marine biogeochemical models with the "omics" revolution -- Out of Africa and into stoichiometry -- Exploring the implications of the stoichiometric modulation of planktonic predation -- On saturating response curves from the dual perspectives of |

photosynthesis and nitrogen metabolism -- Nitrate reductase: a nexus of disciplines, organisms and metabolism -- The ammonium paradox of a high-nutrient low-growth estuary -- Why is planktonic nitrogen fixation so rare in coastal marine ecosystems? Insights from a cross-systems approach -- Where light and nutrients collide: The global distribution and activity of subsurface chlorophyll maximum layers -- An ecosystem in transition: the emergence of mixotrophy in the Arabian Sea -- The Saint Lawrence Island polynya: A 25-year evaluation of an analogue for climate change in polar regions -- Ecological processes and nutrient transfers from land to sea: a 25 year perspective on research and management of the Seine River -- Historical perspectives on water quality and biogeochemical cycling in Pensacola Bay, FL, USA -- Meeting in the middle: on the interactions between microalgae and their predators or zooplankton and their food -- Lake transparency: a window into decadal variations in dissolved organic carbon concentrations in Maine's Mount Desert Island lakes -- Phytoplankton biodiversity in the oligotrophic northwestern Sargasso Sea -- Biological oceanography of the Gulf of Carpentaria: A review -- Discerning the causes of toxic cyanobacteria (*Lyngbya majuscula*) blooms in Moreton Bay, Australia -- Copepod, ctenophore, and scyphomedusae control in structuring the Chesapeake Bay summer mesohaline planktonic food web -- Microbiogeochemical ecophysiology of freshwater hydrothermal vents in Mary Bay Canyon, Yellowstone Lake, Yellowstone National Park WY. .

Sommario/riassunto

This book highlights perspectives, insights, and data in the coupled fields of aquatic microbial ecology and biogeochemistry when viewed through the lens of collaborative duos – dual career couples. Their synergy and collaborative interactions have contributed substantially to our contemporary understanding of pattern, process and dynamics. This is thus a book by dual career couples about dual scientific processes. The papers herein represent wide-ranging topics, from the processes that structure microbial diversity to nitrogen and photosynthesis metabolism, to dynamics of changing ecosystems and processes and dynamics in individual ecosystems. In all, these papers take us from the Arctic to Africa, from the Arabian Sea to Australia, from small lakes in Maine and Yellowstone hot vents to the Sargasso Sea, and in the process provide analyses that make us think about the structure and function of all of these systems in the aquatic realm. This book is useful not only for the depth and breadth of knowledge conveyed in its chapters, but serves to guide dual career couples faced with the great challenges only they face. Great teams do make great science. .
