

Preface

This concise text first provides a detailed case study highlighting the diversity, distribution, species identification and impact of natural and anthropogenic stresses of a specialized microzooplankton group—loricate ciliate Tintinnids—in an iconic tropical mangrove wetland—Sundarbans, the tide-dominated, vulnerable and prograding megadelta. The field of this choreotrich ciliate biodiversity is rapidly developing as new research challenges and getting intense interest due to its key position in marine planktonic food web as major consumers of pico- and nanoplankton. Hence, they play a crucial role in transferring element and energy from lower small protists to larger protists and mesozooplankton and also constitute an important element of global change research. There is complete dearth of information related to regional case studies of this specialized group of microzooplankton in Sundarbans wetland environment which acts as potential refuge of living marine resources. Hence, the author has taken keen interest in proposing this book based on systematic survey and collections of microzooplankton in coastal regions of Sundarbans during 2010–2012, acclaimed as the World Heritage tropical site in Asia and also designated as a global biodiversity ‘hotspot’. The book gains critical importance as these low-lying coastal zones (LLCZ) are experiencing wide range of pressures due to siltation, eutrophication, coastal development, aquaculture and climate change. These are also considered as disaster ‘hot spots’ potentially vulnerable to extreme events impacted by slow onset processes that include sea level rise, biodiversity loss, flooding, severe cyclones, etc., which act as the key stressors on pelagic organisms including plankton.

The book is intended to serve as a reliable and up-to-date reference source for students, researchers and teachers, who are actively involved in the field of protozoology/marine plankton ecology/marine biology. This would no doubt also serve as a valuable source of useful information for policy makers, coastal zone managers and large sections of people engaged in coastal research and development.

Loricata Ciliate Tintinnids in a Tropical Mangrove
Wetland

Diversity, Distribution and Impact of Climate Change

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