

Indian Journal of Marine Sciences

Special Issue

on

Recent Advances in Biological Oceanography

Guest Editors

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Preface

This Special Issue of *Indian Journal of Marine Sciences* (IJMS) contains some of the papers presented during a National Seminar on 'Recent Advances in Biological Oceanography' held at the National Institute of Oceanography, Goa from 29 to 31 May, 1996 which coincided with superannuation and felicitation of Dr. A.H. Parulekar, Head, Biological Oceanography Division. Of the 142 papers presented during this Seminar, 46 are included in this Issue after peer review. These papers provide information on various facets of marine biology.

Marine and estuarine phytoplankton are the primary sources of chlorophyll and organic carbon production. A number of papers that addressed various aspects of phytoplankton and their relevance in an understanding of marine ecology and ocean productivity as well as their relevance in remote sensing have been included in this Issue.

Zooplankton forms an essential link between primary producers and fish. As such information on their ecology, abundance, type and annual cycles is very useful for evaluating fish production. Some of the papers that have discussed the distribution and ecology of this group from different marine regimes are included in this Issue. Also, a record of a new ascidian species from pearl oyster cages is presented.

Information on benthic biology and ecology is useful for variety of purposes. During the Seminar, many papers discussed the factors regulating seasonal cycles and distribution of macrobenthos in the near-shore regions. In addition to many of these investigations, laboratory studies with certain benthic organisms and the effects of heavy metal and petroleum hydrocarbon pollution on the benthic communities are available in this Issue. Several anatomical changes, structural alterations/damages, accumulation of petroleum hydrocarbons, larval settlement reduction, alterations in filtration rates and oxygen consumption have been reported from these studies on benthic animals.

Exploitable marine fish resources have been the subjects of very many seminars and symposia. During this Seminar, several facets of marine fisheries were deliberated. Among other related studies included in this Issue, the following aspects are documented: the need for adapting newer fishing methods, venturing into new areas to enhance fish catches, demersal fishery potential of certain regions along the west coast, use of remote sensing techniques for locating fish concentrations, damages to fishing nets by puffer fishes as well as the application of molecular and biochemical tools for fish taxonomy. Keeping up with the widespread awareness on importance of conservation and protection of ecosystems, flora and fauna, the need to conserve marine mammals in the EEZ was highlighted during this Seminar and there is a paper on conservation of endangered marine mammals along our coast.

There is an interesting report on the occurrence of a mangrove swamp in the recent geological past when the sea level was 1-3 m lower than present. Also reported are the studies on various marine organisms that are found to produce various compounds of pharmacological importance, an area where the potential for new discoveries abound.

This is an information explosion era. Most of the archived and recent details of marine biology are available on internet these days. There are a couple of papers that detail a development of a module for marine organism systematics and for generating automatic numerical code for marine biota.

Challenges, problems and tasks with marine aquaculture are numerous. True to such diverse aspects of rearing marine animals in confine, there have been numerous papers during this Seminar addressing issues such as, species selection, sex ratio, growth, nutrition and diseases. Some of the selected papers from these deliberations are available in this Issue.

The Editorial Committee constituted for dealing with the screening, reviewing and publishing abstracts and peer-reviewed manuscripts, acknowledges the help and commitment of several individuals at various stages. Among the many that helped, the Committee is particularly grateful to the following: Our Director Dr. E. Desa evinced a very keen interest in the Seminar and in the publication of peer-reviewed papers. The Committee is thankful for all his support. Dr. A.G. Untawale, Organizing Secretary of this Seminar deserves special appreciation for his unstinting involvement and encouragement for completion of this Special Issue. Our special thanks to Dr. D. Chandramohan and Dr. S.N. Harkantra for their help at various preparatory stages of this Special Issue. We thank Mr. S.P. Sharma and Mr. A.Y. Mahale for their care and help with typesetting and printing the Book of Abstracts. This Committee gratefully appreciates the enormous efforts of Dr. Vikram V. Agadi, Editor, *Indian Journal of Marine Sciences (IJMS)* in bringing out this issue. Apart from all colleagues in the institute's Biological Oceanography Discipline, the Committee is thankful to all peer-reviewers for their invaluable advice that surely elevated the presentation of the papers in this Issue.

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