

Foreword

The Seventh Symposium of Polar Biology was held at the National Institute of Polar Research (NIPR), Tokyo from 9 to 11 January 1985. This symposium is part of five annual NIPR symposia covering the following disciplines; upper atmosphere physics, glaciology and meteorology, earth sciences, Antarctic meteorites and biology.

This symposium aimed to synthesize the results of the Second International BIOMASS Experiments phase I (SIBEX I) and the information from other activities related to the Biological Investigations of Marine Antarctic Systems and Stocks (BIOMASS) and also from the northern cold region study. As part of the international program of SIBEX I (1983-84), R. V. HAKUHO MARU, Ocean Research Institute of the University of Tokyo and T. S. UMITAKA MARU of the Tokyo University of Fisheries carried out multidisciplinary researches of the oceanic ecosystem of the Southern Ocean in the region south of Australia. R. V. KAIYO MARU of Fisheries Agency of Japan undertook physical, chemical and biological researches in the area off Enderby Land. The icebreaker SHIRASE also took part in the SIBEX I project on the way of her relief cruise to and from Syowa Station, Antarctica. A three-year project on the coastal marine ecosystem study was conducted in the vicinity of Syowa Station between 1982 and 1984. This year-round research project was planned to gain a complete understanding of the Southern Ocean ecosystem as a whole in cooperation with the above-mentioned offshore researches by the vessels.

A total of 220 scientists participated in the meeting and 52 papers were presented in the oral session and 23 in the poster session. They covered articles on the principal elements of Antarctic ecosystems, physical and chemical environment, phytoplankton and primary production, zooplankton and micronekton, benthic animals, sea birds and marine mammals. They included topics on the transportation of matter and the transfer of artificial pollutant in the ecosystem. This volume contains 55 articles out of 75 papers presented at the symposium. The results of researches on board UMITAKA MARU were published in the Transactions of the Tokyo University of Fisheries No. 6 which was issued in March 1985 by the University. Therefore, the abstracts of all papers contributed to the Transactions, though some of them were read at the symposium, are included in this proceedings as collected abstracts.

Considering that the BIOMASS is an internationally coordinated programs, papers of foreign scientists were called on and 6 papers were submitted to the poster session. Prof. George A. KNOX, University of Canterbury, New Zealand was invited as a distinguished participant. He gave a special lecture, "Recent New Zealand marine research in the Ross Sea Sector of Antarctica", which is also included in this volume.

At this opportunity, on behalf of all Japanese marine biologists involved in the BIOMASS project, the present editors express their sincere thanks to Prof. Takesi NAGATA, former Director of NIPR, for his advice, encouragement and support in promoting Japanese contributions to BIOMASS.

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