

Preface

The Series “From Pole to Pole: Polar Environmental Research during the International Polar Year 2007–2009” was conceived to report achievements of environmental research during the 4th International Polar Year (IPY) 2007–2009. The major aim of this series is to provide updated science-based information on IPY research results and perspectives in all environmental disciplines. This multidisciplinary, multifaceted and international book series aims to ensure that polar science is a leading element in the new science of the twenty-first century.

The scientific value of the series will grow in the years to come, as the volumes will also be available in e-book format, and a continuous update on references and information sources is expected for several years, supported by the Series Editors and the Publisher.

Marine Biology is providing two Volumes under the general title “Adaptation and Evolution in Marine Environments—The Impacts of Global Change on Biodiversity”. Volume 1, which has already been published, has provided a total of 11 contributions, assembled (besides an Introductory Overview) into two themes: Biodiversity and the Environment, and Response to Stress—Adaptations. This volume (Volume 2) contains 11 contributions, collected within three themes:

1. Part I: Biodiversity Evolution and Data Management
2. Part II: Evolution—A Molecular Perspective
3. Part III: Monitoring and Management.

The authors describe the concept, aims and first findings of the respective IPY projects, providing information on results and research perspectives feeding into the framework of IPY 2007–2009. Each contribution is equipped with exhaustive reference lists and relevant web page addresses. We convey our thanks to the authors and reviewers.

In a rapidly changing world with rising sea levels, exhausted fisheries, growing marine pollution and increasing global population demands, the basis for international management must be a realistic assessment of our scientific knowledge. The data from this IPY are making a crucial contribution to how we must approach

the future management of our polar seas to avoid or at least minimise permanent damage to stocks, systems and functionality in the twenty-first century.

These two volumes constitute an extensive summary of the outstanding contribution to the scientific outcome of IPY provided by the marine biology projects in the polar regions. In addition they highlight the fact that this IPY will be remembered as an extraordinary international venture that has set a new model of global collaboration for complex multi-disciplinary and inter-disciplinary initiatives and for collaborations between national polar institutions that will resonate for many years to come.

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Volume 2

The Impacts of Global Change on Biodiversity

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