



# Understanding the biology of polar regions is more important than ever: Introducing associate editors to strengthen polar biology

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Since its founding in 1982 by Gotthilf and Irma Hempel (Hempel 1982), *Polar Biology* and its editorial management have experienced important turning points. Over the years, the editorial board has been constantly revised and expanded by recruiting new scientific authorities in a range of research fields, to recognize changes in the interests of readers and authors and adequately cover a broad range of competence relevant for current ecological research in polar regions and the ever-widening thematic scope of the manuscripts submitted for publication. In 2004, Rolf Gradinger and Bodil Bluhm (formerly Fairbanks, USA, now Tromsø, Norway) were appointed as managing and technical editor, respectively, to support the two founding editors through handling all manuscripts dealing with research in Arctic regions (Hempel et al. 2004). Most significant, however, was Gotthilf and Irma Hempel's resignation from their editorial

tasks in 2008 (Hempel and Hempel 2009) and Dieter Piepenburg's assumption of the chief editor post (Piepenburg 2009).

The year 2022 marks another milestone in the development of *Polar Biology* as an international scientific journal. The editorial board has been restructured more profoundly than before. Seven colleagues, each an internationally acknowledged expert in a specific scientific field with special importance for *Polar Biology* (ranging from terrestrial zoology to microbial ecology to seabird and marine mammal ecology), have been appointed as Associate Editors to streamline and speed up the editorial workflow and manuscript handling of the journal, without compromising thoroughness in the evaluation of submissions:

**Angelina Lo Giudice** is a microbial ecologist interested in the biodiversity, adaptation and role of the prokaryotic communities in aquatic and terrestrial polar environments. She pays particular attention to associations between prokaryotes and marine invertebrates, microbes in the cryosphere and the microbial response to human-derived chemical contamination and climate changes.

**Gabriela Mataloni** is a trained limnologist and phycologist with experience in the diversity and ecology of soil, snow and freshwater microbial communities, mainly microalgae. Present research is focused on the use of planktonic and/or microbial communities as indicators of environmental baseline conditions and changes in wetlands from Patagonia and Antarctica. She has been a member of the editorial board of *Polar Biology* since 2009.

**Barbara Wienecke** is a seabird ecologist with a special interest in ecology and biology of penguins, particularly emperor penguins. Her research currently focuses on changes in population status and trends in relation to variations in the environment. She also has a keen interest in Antarctic history in general and historic biological research in the southern region.

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**Toke Thomas Høye** is a terrestrial ecologist with a special interest in life history variation and community dynamics of arthropods and their trophic interactions. His research focuses on the development of efficient monitoring methods and the interpretation of long-term monitoring data. He is actively involved in fieldwork mostly in the North Atlantic region and primarily in Greenland. He has served on the editorial board of *Polar Biology* since 2018 and has been a guest editor of special issues in this (Høye and Culler 2018) and other journals over the past decade.

**Mario La Mesa** is a fishery biologist with long-term expertise in the biology and ecology of Antarctic fishes, in particular on notothenioids. Current fields of research include key aspects of life history traits, such as age and growth, populations connectivity and dispersal, reproductive strategies and feeding habits, both in Antarctic and sub-Antarctic environments.

**Ryan Reisinger** is a marine ecologist whose research focuses on marine mammals. A particular interest is how the biophysical oceanographic environment influences the behaviour and distribution of marine predators. To address such questions, he uses data from technologies, including animal biologging and remote sensing.

**Alexey Sukhotin** is the director of the White Sea Biological Station “Kartesh” of the Zoological Institute of the Russian Academy of Sciences. His main research interests cover population ecology, ecological energetics, and the physiology of marine benthic invertebrates at geographical and habitat scales. He pays particular attention to the growth, reproduction, ageing and energy fluxes in populations of marine bivalves in sub-Arctic and Arctic regions. Since 2008, he has served as an editor for *Polar Biology* and has been a guest editor for special issues of *Polar Biology* (Sukhotin et al. 2019), *Hydrobiologia* and the *Journal of the Marine Biological Association of the United Kingdom*.

Associate Editors have a more prominent role and further editorial tasks than editorial board members who review manuscripts in their areas of expertise, sometimes suggest relevant reviewers in case of problems to identify reviewers and are occasionally asked to provide advice in editorial decision-making in critical cases. Similar to Guest Editors of Special Issues of *Polar Biology*, Associate Editors are responsible for a wider scope of the editorial processing of submissions from their specific research field, from selection and assignment of peer reviewers, handling of all correspondence with authors and referees, making intermediate decisions on original manuscripts and revisions, to providing recommendations on acceptance or rejection, based on the verdict of the reviewers panel, and to the Chief Editor, who will render the final decision. However, their task is a continuous one that is in effect from one volume to the next for a certain term limit (usually 3–6 years). An equally important role for AEs is to act as ambassadors for the

journal: in cooperation with the chief editor (and, if applicable, additional AEs from the board), they exercise control of the editorial development of the journal and are responsible for applying consistently high editorial standards to all published contributions. Furthermore, they promote the journal within the scientific community, encourage high-quality scientific submissions from colleagues in their field and identify new capable and qualified reviewers for the journal. They will also actively contribute to the improved status and standing of *Polar Biology*, by identifying topics for special issues and advising on changes in policies and procedures to ensure the journal stays relevant and responds to changing needs of polar science.

We feel that the reorganization of editorial board *Polar Biology* is particularly topical and timely, because there has been steadily growing evidence of the key role of polar regions in the global climate system, as well as their pronounced vulnerability to the impacts and risks of climate change, as described, for instance, in the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (IPCC 2014), reiterated in the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (Meredith et al. 2019) and very recently reinforced in the 6th IPCC Assessment Report (IPCC 2021). The scientific community has recognized this special significance and vulnerability and strengthened research planning, coordination and efforts in both polar regions. For example, the International Arctic Science Committee (IASC) has initiated a series of *International Conferences on Arctic Research Planning* (ICARP), in the course of which a roadmap for integrating Arctic research has been developed (Wadhams et al. 2016). The Scientific Committee on Antarctic Research (SCAR) has launched of a number of research programmes, such as the former *Antarctic Thresholds—Ecosystem Resilience and Adaptation* (AnT-ERA) (Gutt et al. 2021), fostering research on biological processes at ecological time scales related to environmental change or the current *Integrated Science to Inform Antarctic and Southern Ocean Conservation* (Ant-ICON), focused on the conservation and management of the Antarctic and the Southern Ocean (Anonymous 2022). Against this background, the publication of sound, research-based, peer-reviewed and original information that enhances our understanding of the biology and ecology of polar regions, and their responses to anthropogenic climatic and non-climatic hazards and pressures on a rise, is of growing international concern. We are confident that with its revamped editorial board *Polar Biology* will be better prepared than ever to face this challenge.

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