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## Frontiers of Biogeography

### Title

Antarctic ecosystems: an extreme environment in a changing world

### Permalink

<https://escholarship.org/uc/item/75z964n7>

### Journal

Frontiers of Biogeography, 5(1)

### Author

Hopkins, David

### Publication Date

2013

### DOI

10.21425/F5FBG16153

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Peer reviewed

## Antarctic ecosystems: an extreme environment in a changing world

Alex D. Rogers, Nadine M. Johnstone, Eugene J. Murphy and Andrew Clarke (editors), 2012, Wiley-Blackwell. 564 pp. £85.00 (hardback) ISBN 9781405198400.

This book arises from a meeting held in the Royal Society (London) and the material has, as it says at the start, been “originally published as an issue of the Philosophical Transactions of the Royal Society B: Biological Sciences<sup>1</sup>... but has been materially changed and updated”. From perusal of the reference lists there is evidence for updating of some of the chapters, but I must confess to not having comprehensively compared this one with the earlier-published. Suffice to say, this is a wide-ranging account of all the material from the original version, plus a bit more, between a single set of covers. The book covers an *Introduction to Antarctic ecology in a changing world* (one chapter), then *Terrestrial and freshwater habitats* (Part 1, three chapters), *Marine habitats and regions* (Part 2, eight chapters), *Molecular adaptations and evolution* (Part 3, three chapters) and *Conservation and management* (Part 4, two chapters). From this, it is clear that there is a strong marine emphasis to the book, but this is not really a bias as much as a reflection of the amount of understanding of the marine versus terrestrial and freshwater habitats.

The authorship includes many notable experts in the field, numbering 78 in total, the geographical distribution of which is worth noting: only five are or were based in the southern hemisphere. None of these was from either a South American country or New Zealand, despite significant Antarctic research programmes in both regions. Nearly half of the authors were either based at the British Antarctic Survey or had passed through that organisation in the relatively recent past.

The book has been edited to a high and consistent standard throughout, as would be expected since it is based on a rigorously reviewed and edited scientific journal. Each chapter does as the title indicates, by both describing the ecosystems and then discussing how they might respond, or how they are responding, to environmental change. The book is a valuable reference source and summary of existing knowledge. Although research advances, and despite the five years since most of the material was first published, this book is likely to remain topical for several years because the logistical constraints of conducting research in the Antarctic tend to determine progress. From my understanding, the only Antarctic ecosystem that is not covered in the book, but which is likely to provide us with genuinely new information, is that of the sub-glacial lakes, but we may need to wait a few more years before there is enough new information from that habitat to merit a review. As an institutional library purchase, I would recommend this book.

David Hopkins

Heriot-Watt University, Edinburgh, UK  
[david.hopkins@hw.ac.uk](mailto:david.hopkins@hw.ac.uk)