# CONTENTS

*List of contributors vii*

**Foreword by Professor Tim Flannery xiii**

**Introduction xv**

1. A separate creation: diversity, distinctiveness and conservation of Australian wildlife 1
   David A. Nipperess

2. New Zealand – a land apart 24
   William G. Lee and Daphne E. Lee

3. The ecological consequences of habitat loss and fragmentation in New Zealand and Australia 45
   Poppy Lakeman Fraser, Robert M. Ewers and Saul Cunningham

4. The impacts of climate change on Australian and New Zealand flora and fauna 65
   Abigail Cabrelli, Linda Beaumont and Lesley Hughes

5. Unwelcome and unpredictable: the sorry saga of cane toads in Australia 83
   Richard Shine and Benjamin L. Phillips

6. Invasive plants and invaded ecosystems in Australia: implications for biodiversity 105
   Rachael V. Gallagher and Michelle R. Leishman

7. Environmental weeds in New Zealand: impacts and management 134
   Margaret C. Stanley and Imogen E. Bassett

8. The insidious threat of invasive invertebrates 162
   Darren F. Ward

9. Pollution by antibiotics and resistance genes: dissemination into Australian wildlife 186
   Michael Gillings

10. Invasive vertebrates in Australia and New Zealand 197
    Cheryl R. Krull, Josie A. Galbraith, Al S. Glen and Helen W. Nathan

11. Freshwaters in New Zealand 227
    Mike J. Joy

12. A garden at the edge of the world; the diversity and conservation status of the New Zealand flora 240
    Carlos A. Lehnebach

13. The evolutionary history of the Australian flora and its relevance to biodiversity conservation 259
    Maurizio Rossetto

14. Protecting the small majority: insect conservation in Australia and New Zealand 278
    Gregory I. Holwell and Nigel R. Andrew

15. Terrestrial mammal diversity, conservation and management in Australia 298
    Mark D. B. Eldridge and Catherine A. Herbert

16. Marine mammals, back from the brink? Contemporary conservation issues 322
    Robert Harcourt, Helene Marsh, David Slip, Louise Chilvers, Mike Noad and Rebecca Dunlop

17. Australian reptiles and their conservation 354
    Jonathan K. Webb, Peter S. Harlow and David A. Pike
18. New Zealand reptiles and their conservation  382
   Nicola J. Nelson, Rod Hitchmough and Jo M. Monks
19. Isolation, invasion and innovation: forces of change in the conservation
    of New Zealand birds  405
   Sarah Withers
20. Australian birds: current status and future prospects  422
   Stephen T. Garnett, Judit K. Szabo and Donald C. Franklin
21. Austral amphibians – Gondwanan relics in peril  440
    Jean-Marc Hero, J. Dale Roberts, Conrad J. Hoskin, Katrin Lowe,
    Edward J. Narayan and Phillip J. Bishop
22. Predators in danger: shark conservation and management in Australia,
    New Zealand and their neighbours  467
    Paolo Momigliano, Vanessa Flora Jaiteh and Conrad Speed
23. ‘Ragged mountain ranges, droughts and flooding rains’: the evolutionary history and
    conservation of Australian freshwater fishes  492
    Leanne Faulks, Dean Gilligan and Luciano B. Beheregaray
24. Down under Down Under: Austral groundwater life  512
    Grant C. Hose, Maria G. Asmyhr, Steven J. B. Cooper and William F. Humphreys
25. Fire and biodiversity in Australia  537
    John C. Z. Woinarski, Allan H. Burbidge, Sarah Comer, Dan Harley, Sarah Legge,
    David B. Lindenmayer and Thalie B. Partridge
26. Terrestrial protected areas of Australia  560
    Ian D. Craigie, Alana Grech, Robert L. Pressey, Vanessa M. Adams, Marc Hockings,
    Martin Taylor and Megan Barnes
27. Australian marine protected areas  582
    Alana Grech, Graham J. Edgar, Peter Fairweather, Robert L. Pressey
    and Trevor J. Ward
28. Marine reserves in New Zealand: ecological responses to protection
    and network design  600
    Nick Shears and Hannah L. Thomas
29. Conclusion: conservation onboard Austral Ark needs all hands on deck  624
    Adam Stow

Index  628

Colour plate section between pages 304 and 305.