
Contents

| | |
|--|------------|
| List of contributors | vii |
| Acknowledgements | ix |
| 1 Introduction <i>John M. Fryxell, E.J. Milner-Gulland, and Anthony R.E. Sinclair</i> | 1 |
| Part 1: The evolution of migration | 5 |
| 2 Understanding the evolution of migration through empirical examples <i>Katherine A. Cresswell, William H. Satterthwaite, and Gregory A. Sword</i> | 7 |
| 3 Theoretical reflections on the evolution of migration <i>Robert D. Holt and John M. Fryxell</i> | 17 |
| Part 2: How to migrate | 33 |
| 4 Mechanistic principles of locomotion performance in migrating animals <i>Anders Hedenström, Melissa S. Bowlin, Ran Nathan, Bart A. Nolet, and Martin Wikelski</i> | 35 |
| 5 Energy gain and use during animal migration <i>Nir Sapir, Patrick J. Butler, Anders Hedenström, and Martin Wikelski</i> | 52 |
| 6 Cues and decision rules in animal migration <i>Silke Bauer, Bart A. Nolet, Jarl Giske, Jason W. Chapman, Susanne Åkesson, Anders Hedenström, and John M. Fryxell</i> | 68 |
| Part 3: Migration in time and space | 89 |
| 7 Uncertainty and predictability: the niches of migrants and nomads <i>Niclas Jonzén, Endre Knudsen, Robert D. Holt, and Bernt-Erik Sæther</i> | 91 |
| 8 Migration quantified: constructing models and linking them with data <i>Luca Börger, Jason Matthiopoulos, Ricardo M. Holdo, Juan M. Morales, Iain Couzin, and Edward McCauley</i> | 111 |
| Part 4: Broader contexts | 129 |
| 9 Migration impacts on communities and ecosystems: empirical evidence and theoretical insights <i>Ricardo M. Holdo, Robert D. Holt, Anthony R.E. Sinclair, Brendan J. Godley, and Simon Thirgood</i> | 131 |

10 Pastoral migration: mobile systems of animal husbandry 144
Roy H. Behnke, Maria E. Fernandez-Gimenez, Matthew D. Turner, and Florian Stammer

11 Conservation and management of migratory species 172
Jennifer L. Shuter, Annette C. Broderick, David J. Agnew, Niclas Jonzén, Brendan J. Godley, E.J. Milner-Gulland, and Simon Thirgood

12 Conclusions 207
E.J. Milner-Gulland, John M. Fryxell, and Anthony R.E. Sinclair

References 216

Index 257