

Contents

List of Contributors, ix

History of the British Ecological Society, xiii

Preface, xv

Part 1: Techniques for dispersal studies

- 1 Measuring and modelling seed dispersal of terrestrial plants, 3
D. F. Greene and C. Calogeropoulos

- 2 Monitoring insect dispersal: methods and approaches, 24
J. L. Osborne, H. D. Loxdale and I. P. Woiwod

- 3 From marking to modelling: dispersal study techniques for land vertebrates, 50
R. E. Kenward, S. P. Rushton, C. M. Perrins, D. W. Macdonald and A. B. South

- 4 The measurement of dispersal by seabirds and seals: implications for understanding their ecology, 72
I. L. Boyd

- 5 Inferring patterns of dispersal from allele frequency data, 89
A. F. Raybould, R. T. Clarke, J. M. Bond, R. E. Welters and C. J. Gliddon

Part 2: Dispersal in behavioural and evolutionary ecology

- 6 Sailing with the wind: dispersal by small flying insects, 113
S. G. Compton

- 7 Density-dependent dispersal in animals: concepts, evidence, mechanisms and consequences, 134
W. J. Sutherland, J. A. Gill and K. Norris

vi CONTENTS

- 8 Seed dispersal: the search for trade-offs, 152
K. Thompson, L. C. Rickard, D. J. Hodgkinson and M. Rees
- 9 Manipulating your host: host-pathogen population dynamics, host dispersal and genetically modified baculoviruses, 173
G. Dwyer and R. S. Hails
- 10 Gene flow and the evolutionary ecology of passively dispersing aquatic invertebrates, 194
B. Okamura and J. R. Freeland

Part 3: Dispersal and spatial processes

- 11 Niche colonization and the dispersal of bacteria and their genes in the natural environment, 219
M. J. Bailey and A. K. Lilley
- 12 Dispersal behaviour and population dynamics of vertebrates, 237
H. P. Andreassen, N. C. Stenseth and R. A. Ims
- 13 Dispersal and the spatial dynamics of butterfly populations, 257
R. J. Wilson and C. D. Thomas
- 14 Plant dispersal and colonization processes at local and landscape scales, 279
J. M. Bullock, I. L. Moy, R. F. Pywell, S. J. Coulson, A. M. Nolan and H. Caswell
- 15 Biogeography and dispersal, 303
R. Hengeveld and L. Hemerik

Part 4: Applications of an understanding of dispersal

- 16 Modelling vertebrate dispersal and demography in real landscapes: how does uncertainty regarding dispersal behaviour influence predictions of spatial population dynamics? 327
A. B. South, S. P. Rushton, R. E. Kenward and D. W. Macdonald
- 17 Invasion and the range expansion of species: effects of long-distance dispersal, 350
N. Shigesada and K. Kawasaki
- 18 Success factors in the establishment of human-dispersed organisms, 374
A. N. Cohen

Cambridge University Press

978-0-521-54931-8 - Dispersal Ecology

Edited by James M. Bullock, Robert E. Kenward and Rosie S. Hails

Table of Contents

[More information](#)

CONTENTS vii

- 19 Oases in the desert: dispersal and host specialization of biotrophic fungal pathogens of plants, 395
J. K. M. Brown, M. S. Hovmöller, R. A. Wyand and D. Yu

- 20 Climate change and dispersal, 410
A. R. Watkinson and J. A. Gill

Part 5: Overview

- 21 Overview and synthesis: the tale of the tail, 431
M. Williamson

Index, 445