CONTENTS

Preface ix

1 Vegetation succession: past and present perceptions 1
   J. MILES Institute of Terrestrial Ecology, Banchory Research Station, Hill of Brathens, Glassel, Banchory, Kincardineshire, AB3 4BY, UK

2 Modelling successional processes in ecosystems 31
   M.B. USHER Department of Biology, University of York, Heslington, York, YO1 5DD, UK

3 Contributions of plant population dynamics to understanding early succession 57
   A.M. MORTIMER Department of Botany, University of Liverpool, P.O. Box 147, Liverpool, L69 3BX, UK

4 Some generalizing ideas about colonization and succession in green plants and fungi 81
   P.J. GRUBB Botany School, University of Cambridge, Downing Street, Cambridge, CB2 3EA, UK

5 Seed characteristics in relation to succession 103
   M. FENNER Department of Biology, The University, Southampton, SO9 5NH, UK

6 Mating systems and colonizing success in plants 115
   A.H.D. BROWN and J.J. BURDON Division of Plant Industry, CSIRO, P.O. Box 1600, Canberra, ACT 2601, Australia

7 Features of colonizing animals: phenotypes and genotypes 133
   P.A. PARSONS Department of Genetics and Human Variation, La Trobe University, Bundoora, Victoria, 3083 Australia

8 Colonization of ephemeral habitats 155
   J. HANSKI Department of Zoology, University of Helsinki, P. Rautatiekatu 13, SF-00100 Helsinki 10, Finland

9 Colonization and speciation 187
   H.L. CARSON Department of Genetics, University of Hawaii, 1960 East-West Road, Honolulu, Hawaii 96822, USA
Contents

10 Colonization, succession and resource availability: ecosystem-level interactions
P.M. Vitousek and L.R. Walker Department of Biological Sciences, Stanford University, Stanford, California 94305, USA

207

11 Are there assembly rules for successional communities?
J.H. Lawton Department of Biology, University of York, Heslington, York, YO1 5DD, UK

225

12 Experimental studies on the evolution of niche in successional plant populations:
F.A. Bazzaz Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, Massachusetts 02138, USA

245

13 Genetic change during succession in plants
A.J. Gray Institute of Terrestrial Ecology, Furzebrook Research Station, Wareham, Dorset, BH20 5AS, UK

273

14 Herbivores and plant succession
P.J. Edwards and M.P. Gillman Department of Biology, The University, Southampton, SO9 5NH, UK

295

15 Secondary succession: patterns and strategies
V.K. Brown and T.R.E. Southwood* Imperial College at Silwood Park, Ascot, Berkshire, SL5 7PY, UK and
*Department of Zoology, University of Oxford, South Parks Road, Oxford, UK

315

16 Change and persistence in some marine communities
J.H. Connell Department of Biological Sciences, University of California, Santa Barbara, California 93106, USA

339

17 Are communities ever stable?
M.H. Williamson Department of Biology, University of York, Heslington, York, YO1 5DD, UK

353

18 Invasions of forest communities during the Holocene: beech and hemlock in the Great Lakes region
M.B. Davis Department of Ecology and Behavioral Biology, University of Minnesota, 318 Church Street S.E., Minneapolis, Minnesota, 55455, USA

373
Contents

19 The spatial context of regeneration in a neotropical forest
S. P. HUBBELL and R. B. FOSTER "Department of Zoology, University of Iowa, Iowa City, Iowa 52242, USA and Department of Botany, Field Museum of Natural History, Chicago, Illinois 60605, USA

20 Dominant and subordinate components of plant communities: implications for succession, stability and diversity
J. P. GRIME NERC Unit of Comparative Plant Ecology, Department of Botany, The University, Sheffield, S10 2TN, UK

21 What makes a community invasible?
M. J. CRAWLEY Imperial College at Silwood Park, Ascot, Berkshire, SL5 7PY, UK

Author Index

Subject Index