

Brief Contents

1 An Introduction to Ecology 3

SECTION ONE Organismal Ecology 24

- 2 Evolution and Genetics 27
- 3 Natural Selection, Speciation, and Extinction 47
- 4 Behavioral Ecology 77

SECTION TWO Physiological Ecology 102

- 5 Temperature 105
- 6 Water 125
- 7 Nutrients 143

SECTION THREE Population Ecology 158

- 8 Demographic Techniques and Population Patterns 161
- 9 Life Tables and Demography 179
- 10 Population Growth 195

SECTION FOUR Species Interactions 220

- 11 Competition and Coexistence 223
- 12 Facilitation 245
- 13 Predation 265
- 14 Herbivory 285
- 15 Parasitism 303
- 16 Population Regulation 321

SECTION FIVE Community Ecology 338

- 17 Species Diversity 341
- 18 Species Richness Patterns 357
- 19 Species Richness and Community Services 377
- 20 Succession 399
- 21 Island Biogeography 415

SECTION SIX Biomes 432

- 22 Terrestrial Biomes 435
- 23 Marine Biomes 467
- 24 Freshwater Biomes 487

SECTION SEVEN Ecosystems Ecology 502

- 25 Food Webs and Energy Flow 505
- 26 Biomass Production 525
- 27 Biogeochemical Cycles 549