

Brief Contents

1 Introduction to Ecology: Historical Foundations and Developing Frontiers 1

Section
I

Natural History and Evolution 11

2 Life on Land 11

3 Life in Water 45

4 Population Genetics and Natural Selection 77

Section
II

Adaptations to the Environment 99

5 Temperature Relations 99

6 Water Relations 125

7 Energy and Nutrient Relations 149

8 Social Relations 173

Section
III

Population Ecology 198

9 Population Distribution and Abundance 198

10 Population Dynamics 218

11 Population Growth 241

12 Life Histories 258

Section
IV

Interactions 282

13 Competition 282

14 Exploitative Interactions: Predation, Herbivory, Parasitism, and Disease 303

15 Mutualism 329

Section
V

Communities and Ecosystems 350

16 Species Abundance and Diversity 350

17 Species Interactions and Community Structure 370

18 Primary Production and Energy Flow 390

19 Nutrient Cycling and Retention 410

20 Succession and Stability 431

Section
VI

Large-Scale Ecology 456

21 Landscape Ecology 456

22 Geographic Ecology 481

23 Global Ecology 504

Appendix Statistical Tables 527