Brief Contents

PART I Vertebrate Diversity, Function, and Evolution 1
1 The Diversity, Classification, and Evolution of Vertebrates 2
2 Vertebrate Relationships and Basic Structure 18
3 Early Vertebrates: Jawless Vertebrates and the Origin of Jawed Vertebrates 47

PART II Non-Amniotic Vertebrates: Fishes and Amphibians 76
4 Living in Water 77
5 Radiation of the Chondrichthyes 104
6 Dominating Life in Water: The Major Radiation of Fishes 122
7 Geography and Ecology of the Paleozoic Era 161
8 Living on Land 171
9 Origin and Radiation of Tetrapods 196
10 Salamanders, Anurans, and Caecilians 220

PART III Sauropsida: Turtles, Lepidosaurus, and Archosaurs 266
11 Synapsids and Sauropsids: Two Approaches to Terrestrial Life 267
12 Turtles 305
13 The Lepidosaurus: Tuatara, Lizards, and Snakes 330
14 Ectothermy: A Low-Cost Approach to Life 371
15 Geography and Ecology of the Mesozoic Era 389
16 Mesozoic Diapsids: Dinosaurs, Crocodilians, Birds, and Others 397
17 Avian Specializations 439

PART IV Synapsida: The Mammals 485
18 The Synapsida and the Evolution of Mammals 486
19 Geography and Ecology of the Cenozoic Era 509
20 Mammalian Diversity and Characteristics 519
21 Mammalian Specializations 553
22 Endothermy: A High-Energy Approach to Life 580
23 Body Size, Ecology, and Sociality of Mammals 606
24 Primate Evolution and the Emergence of Humans 629
25 The Impact of Humans on Other Species of Vertebrates 663

Glossary G-1
Credits C-1
Subject Index SI-1
Name Index NI-1