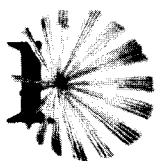


Contents

Preface, viii

Acknowledgments, x



Many Tropical Rain Forests, 1

What are tropical rain forests?, 3

Where are the tropical rain forests?, 4

Rain forest environments, 8

Rain forest histories, 17

Origins of the similarities and differences in rain forests, 24

Many rain forests, 27

Conclusions, 29

Further reading, 29



Plants: Building Blocks of the Rain Forest, 30

Plant distributions, 32

Rain forest structure, 33

How many plant species?, 34

Widespread plant families, 37

Neotropical rain forests, 51

Asian rain forests, 57

Rain forests in New Guinea and Australia, 65

African rain forests, 66

Madagascan rain forests, 70

Conclusions and future research directions, 71

Further reading, 74



Primate Communities: a Key to Understanding Biogeography and Ecology, 75

- What are primates?, 75
- Old World versus New World primates, 76
- Primate diversity, 81
- Primate diets, 82
- Primate communities, 85
- Primates as seed dispersal agents, 94
- Conclusions and future research directions, 95
- Further reading, 97



Carnivores and Plant-eaters, 98

- Carnivores, 98
- Herbivores of the forest floor, 111
- Conclusions and future research directions, 129
- Further reading, 131



Birds: Linkages in the Rain Forest Community, 133

- Biogeography, 134
- Little, brown, insect-eating birds, 139
- Forest frugivores, 143
- Fruit size and body size, 154
- Flower visitors, 155
- Ground-dwellers, 160
- Woodpeckers, 165
- Birds of prey, 167
- Scavengers, 169
- Night birds, 170
- Migration, 172
- Comparison of bird communities across continents, 173
- Conclusions and future research directions, 176
- Further reading, 177



Fruit Bats and Gliding Animals in the Tree Canopy, 178

- Fruit- and nectar-feeding bats, 178
- Feeding habits, 181
- Flying behavior, 183
- Foraging behavior, 184
- Bats as pollinators and seed dispersal agents, 187
- Fruit bat conservation, 188
- Gliding vertebrates, 189
- Conclusions and future research directions, 195
- Further reading, 197



Insects: Diverse, Abundant, and Ecologically Important, 198

- Butterflies, 199
- Ants, 206
- Termites, 218
- Social wasps, 222
- Bees, 223
- Conclusions and future research directions, 230
- Further reading, 232



The Future of Rain Forests, 233

- Different forests, different threats, 233
- The major threats, 241
- The forces behind the threats, 254
- Global climate change*, 260
- How bad is it?, 263
- Rain forest extinctions, 266
- Solutions, 267
- Conclusions and future research directions, 278
- Further reading, 281

References, 282

Index, 307

Color plate section between pp. 150 and 151