

CONTENTS

<i>Preface</i>	x
<i>Walter P. Carson and Stefan A. Schnitzer</i>	
<i>Foreword</i>	xi
<i>S. Joseph Wright</i>	
<i>List of Contributors</i>	xiii
SECTION 1 INTRODUCTION	
1 Scope of the Book and Key Contributions	1
<i>Stefan A. Schnitzer and Walter P. Carson</i>	3
SECTION 2 LARGE-SCALE PATTERNS IN TROPICAL COMMUNITIES	
2 Spatial Variation in Tree Species Composition Across Tropical Forests: Pattern and Process	11
<i>Jérôme Chave</i>	
3 The Disparity in Tree Species Richness among Tropical, Temperate, and Boreal Biomes: The Geographic Area and Age Hypothesis	31
<i>Paul V.A. Fine, Richard H. Ree, and Robyn J. Burnham</i>	
4 Explaining Geographic Range Size by Species Age: A Test Using Neotropical <i>Piper</i> Species	46
<i>John R. Paul and Stephen J. Tonsor</i>	
5 Patterns of Herbivory and Defense in Tropical Dry and Rain Forests	63
<i>Rodolfo Dirzo and Karina Boege</i>	
6 Ecological Organization, Biogeography, and the Phylogenetic Structure of Tropical Forest Tree Communities	79
<i>Campbell O. Webb, Charles H. Cannon, and Stuart J. Davies</i>	
7 Large Tropical Forest Dynamics Plots: Testing Explanations for the Maintenance of Species Diversity	98
<i>Jess K. Zimmerman, Jill Thompson, and Nicholas Brokaw</i>	
SECTION 3 TESTING THEORIES OF FOREST REGENERATION AND THE MAINTENANCE OF SPECIES DIVERSITY	
8 Tropical Forest Ecology: Sterile or Virgin for Theoreticians?	119
<i>Egbert G. Leigh, Jr</i>	
9 Approaching Ecological Complexity from the Perspective of Symmetric Neutral Theory	121
<i>Stephen P. Hubbell</i>	
	143

10	Functional Basis for Resource Niche Partitioning by Tropical Trees <i>Kaoru Kitajima and Lourens Poorter</i>	160
11	Colonization-related Trade-offs in Tropical Forests and Their Role in the Maintenance of Plant Species Diversity <i>Helene C. Muller-Landau</i>	182
12	Treefall Gaps and the Maintenance of Plant Species Diversity in Tropical Forests <i>Stefan A. Schnitzer, Joseph Mascaro, and Walter P. Carson</i>	196
13	Challenges Associated with Testing and Falsifying the Janzen–Connell Hypothesis: A Review and Critique <i>Walter P. Carson, Jill T. Anderson, Egbert G. Leigh, Jr, and Stefan A. Schnitzer</i>	210
14	Seed Limitation and the Coexistence of Pioneer Tree Species <i>James W. Dalling and Robert John</i>	242
15	Endophytic Fungi: Hidden Components of Tropical Community Ecology <i>A. Elizabeth Arnold</i>	254
SECTION 4 ANIMAL COMMUNITY ECOLOGY AND TROPHIC INTERACTIONS		
16	Tropical Tritrophic Interactions: Nasty Hosts and Ubiquitous Cascades <i>Lee A. Dyer</i>	275
17	Variation in Tree Seedling and Arbuscular Mycorrhizal Fungal Spore Responses to the Exclusion of Terrestrial Vertebrates: Implications for How Vertebrates Structure Tropical Communities <i>Tad C. Theimer and Catherine A. Gehring</i>	294
18	Ecosystem Decay in Closed Forest Fragments <i>John Terborgh and Kenneth Feeley</i>	308
19	Resource Limitation of Insular Animals: Causes and Consequences <i>Gregory H. Adler</i>	322
20	Tropical Arboreal Ants: Linking Nutrition to Roles in Rainforest Ecosystems <i>Diane W. Davidson and Steven C. Cook</i>	334
21	Soil Fertility and Arboreal Mammal Biomass in Tropical Forests <i>Carlos A. Peres</i>	349
SECTION 5 SECONDARY FOREST SUCCESSION, DYNAMICS, AND INVASION		
22	Processes Constraining Woody Species Succession on Abandoned Pastures in the Tropics: On the Relevance of Temperate Models of Succession <i>Chris J. Peterson and Walter P. Carson</i>	367
23	Chance and Determinism in Tropical Forest Succession <i>Robin L. Chazdon</i>	384
24	Exotic Plant Invasions in Tropical Forests: Patterns and Hypotheses <i>Julie S. Denslow and Saara J. DeWalt</i>	409

SECTION 6 TROPICAL FOREST CONSERVATION	427
25 Linking Insights from Ecological Research with Bioprospecting to Promote Conservation, Enhance Research Capacity, and Provide Economic Uses of Biodiversity	429
<i>Thomas A. Kursar, Todd L. Capson, Luis Cubilla-Rios, Daniel A. Emmen, William Gerwick, Mahabir P. Gupta, Maria V. Heller, Kerry McPhail, Eduardo Ortega-Barria, Dora I. Quiros, Luz I. Romero, Pablo N. Solis, and Phyllis D. Coley</i>	
26 Tropical Rainforest Conservation: A Global Perspective	442
<i>Richard T. Corlett and Richard B. Primack</i>	
27 Environmental Promise and Peril in the Amazon	458
<i>William F. Laurance</i>	
28 Contributions of Ecologists to Tropical Forest Conservation	474
<i>Francis E. Putz and Pieter A. Zuidema</i>	
<i>Index</i>	491