

Contents

- 1 **An Evolutionary Perspective on Plant-Animal Interactions** 1
Kleber Del-Claro and Helena Maura Torezan-Silingardi
- 2 **Chemically Mediated Multi-trophic Interactions** 17
Lee A. Dyer and Christopher S. Jeffrey
- 3 **Escape as a Mechanism of Plant Resistance Against Herbivores** 39
Robert J. Marquis and Renan F. Moura
- 4 **The Genetic Basis of Plant-Herbivore Interactions** 59
Liza M. Holeski
- 5 **Biotic Defenses Against Herbivory** 93
Renan F. Moura, Eva Colberg, Estevão Alves-Silva, Isamara Mendes-Silva, Roberth Fagundes, Vanessa Stefani, and Kleber Del-Claro
- 6 **Pollination Ecology: Natural History, Perspectives and Future Directions** 119
Helena Maura Torezan-Silingardi, Ilse Silberbauer-Gottsberger, and Gerhard Gottsberger
- 7 **Frugivory and Seed Dispersal** 175
Richard T. Corlett
- 8 **Plant-Mediated Above- Belowground Interactions: A Phytobiome Story** 205
Frédérique Reverchon and Alfonso Méndez-Bravo
- 9 **How Plant-Arthropod Interactions Modify the Environment: Concepts and Perspectives** 233
Eduardo Soares Calixto, Danilo Ferreira Borges dos Santos, Diego V. Anjos, and Eva Colberg
- 10 **Disentangling Plant-Animal Interactions into Complex Networks: A Multi-view Approach and Perspectives** 261
Pedro Luna and Wesley Dáttilo

11 The Gift That Keeps on Giving: Why Does Biological Diversity Accumulate Around Mutualisms?..... 283
Judith L. Bronstein

12 Mutualism as a Source of Evolutionary Innovation: Insights from Insect-Plant Interactions 307
Rodrigo Augusto Santinelo Pereira and Finn Kjellberg

13 Impacts of Anthropocene Defaunation on Plant-Animal Interactions...... 333
Kleber Del-Claro and Rodolfo Dirzo

Supplementary Information

Index349

Contents

5 Biotic Defenses Against Herbivory 393
Robert Fagundes, Vanessa Steffert, and Kleber Del-Claro

6 Pollination Ecology: Natural History, Perspectives and Future Directions 119
Helena Maria Torres Stilingard, Iise Silberbauer-Gottberger, and Gerhard Gottberger

7 Frugivory and Seed Dispersal 175
Richard T. Corlett

8 Plant-Mediated Above-Belowground Interactions: A Phylobiome Story 202
Fredérique Réveillon and Alfonso Mendez-Burns

9 How Plant-Animal Interactions Modify the Environment: Concepts and Perspectives 283
Edmundo Soares Calzavara, Danilo Ferreira Borges dos Santos, Diego V. Antez, and Eva Colberg

10 Dismantling Plant-Animal Interactions into Complex Networks: A Multi-view Approach and Perspectives 261
Pedro Luna and Wesley Batista