1. Record Nr. UNINA9910416103903321

Titolo	Evolutionary Ecology of Plant-Herbivore Interaction / / edited by Juan Núñez-Farfán, Pedro Luis Valverde
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-46012-6
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XIX, 376 p. 48 illus., 40 illus. in color.)
Disciplina	574.524 577.8
Soggetti	Evolution (Biology) Plant ecology Plant physiology Plants - Development Evolutionary Biology Plant Ecology Plant Physiology Plant Development
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Chapter 1 - Introduction: Plant-herbivore interaction -- Section I - The evolution of Plant Defense -- Chapter 2 - Natural selection of plant defense against herbivores in native and non-native ranges -- Chapter 3 - Plant demographic effects of herbivores -- Chapter 4 - Towards a unifying quest for an understanding of tolerance mechanisms to herbivore damage and its eco-evolutionary dynamics -- Chapter 5 - The extended microbiota: how microbes shape plant-herbivore interactions -- Chapter 6 - How plants defend themselves is based on what they remember -- Chapter 7 - Ecological genomics of insect-plant interactions: The case of gall inducing insects -- Chapter 8 - The ecology of inbreeding depression in plant defense -- Chapter 9 - The role of trichomes in plant-herbivore interactions -- Chapter 10 - Resource allocation and defense against herbivores in wild and model plants -- Section II - Community ecology of interactions -- Chapter 11

- Intra-specific variation in plant-arthropod traits and interactions along ecological gradients: evidence from latitudinal studies -- Chapter 12 - Ecosystem engineering by insect herbivores: non-trophic interactions in terrestrial ecosystems -- Chapter 13 - What is a better source? Sex-biased herbivory and its effects on tritrophic interactions -- Chapter 14 - Natural herbivore regulation in tropical agroecosystems: importance of farming practices and landscape structure -- Chapter 15 - Functional Plant Traits and Plant-herbivore Interactions -- Chapter 16 - The evolutionary context of interactions between herbivorous insects, pathogenic fungi and their host plants -- Chapter 17 - Plant domestication and trophic interactions -- Chapter 18 - Defaunation, domestication, and dispersal in plant communities -- Chapter 19 - Meta-analysis of the diversity and structure of understory plant communities in tropical forests impacted by Defaunation -- Chapter 20 - To escape or to defend? The role of enemies in bare and edaphically challenging environments -- Chapter 21 - Plant defense evolution: a macroevolutionary approach in the genus Datura -- Chapter 22 - The evolution and diversification of a neotropical generalist herbivorous: The history of the grasshopper Genus Sphenarium Charpentier, 1842 -- Chapter 23 - Evolution among weevils and their host plants: interaction between the genera Trichobaris LeConte and Datura L -- Chapter 24 - Host chemical divergence is a better predictor of herbivore diversity than latitude -- Chapter 25 - Concluding remarks.

Sommario/riassunto

Plant-herbivore interactions are a central topic in evolutionary ecology. Historically, their study has been a cornerstone for coevolutionary theory. Starting from classic ecological studies at the phenotypic level, it has since expanded to molecular and genomic approaches. After a historical perspective, the book’s subsequent chapters cover a wide range of topics: from populations to ecosystems; plant- and herbivore-focused studies; in natural and in man-modified ecosystems; and both micro- and macro-evolutionary levels. All chapters include valuable background information and empirical evidence. Given its scope, the book will be of interest to both students and researchers, and will hopefully stimulate further research in this exciting field of evolutionary biology.