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Nota di contenuto	Cover; Title page; Copyright page; Preface; 1 An Introduction to Invasion Ecology; What are invaders and why do we care about them?; A brief history of invasion ecology; The wicked terminological web we weave; The invasion process; Summary; 2 Transport Vectors and Pathways; What's the difference between a vector and a pathway?; Does human-mediated dispersal differ from natural dispersal?; Transport vectors; Which species are transported via what vector group?; Dynamics of transport pathways; Summary; 3 Trends in Numbers of Invaders; Invasion rates through time Geographic patterns in numbers of invadersSummary; 4 Propagules; What are propagules?; Donor region and propagule pressure; Biological mechanisms; Empirical evidence; The hidden influence of propagule pressure; Summary; 5 Disturbance; History and definition of disturbance; Disturbance facilitates invasion?; Restoration and disturbance; Agriculture and urbanization as disturbance; Biotic disturbance; Summary; 6 Establishment Success: The Influence of Biotic Interactions; Conceptual issues; Resistance to invasion; Facilitation of

establishment; Summary

7 Modeling the Geographical Spread of Invasive Species What exactly is geographical spread?; Why do we want to model geographical spread?; The reaction-diffusion model; Long-distance dispersal; Directional dispersal; Stratified dispersal; Other forms of heterogeneity; Summary; 8 Ecological Processes and the Spread of Non-native Species; Population growth; Dispersal; Biotic interactions; The role of heterogeneity; Lag times; Boom and bust; Summary; 9 Ecological Impacts of Invasive Species; Genetic impacts; Individual impacts; Population impacts; Community impacts; Ecosystem impacts Landscape, regional, and global impacts Summary; 10 Impact Synthesis; Perception and recognition of impact; Integrating perception with ecological determinants of impact; A theory of impact?; Finding common currencies; A cross-stage impact formula; Summary; 11 Evolution of Invaders; Founding process; Losses and gains in genetic variability via transport mechanisms; Genetics and post-release success; Local adaptation and life-history evolution; Evolution of native species in response to non-natives; Summary; 12 Predicting and Preventing Invasion; Explanation versus risk assessment Inherent limitations to prediction Risk analysis; Screening risky species; Screening risky transportation vectors; Summary; 13 Eradication and Control of Invaders; Cause for optimism?; Rapid response; Lazarus effect; Long-term control; Sisyphus effect; Summary; 14 Global Climate Change and Invasive Species; Global climate change 101; Non-native species and global climate change; Transport; Establishment; Spread; Impact; Human responses; Summary; References; Supplemental Images; Index

Sommario/riassunto

This new edition of *Invasion Ecology* provides a comprehensive and updated introduction to all aspects of biological invasion by non-native species. Highlighting important research findings associated with each stage of invasion, the book provides an overview of the invasion process from transportation patterns and causes of establishment success to ecological impacts, invader management, and post-invasion evolution. The authors have produced new chapters on predicting and preventing invasion, managing and eradicating invasive species, and invasion dynamics in a changing climate. Moder
