Record Nr. UNINA9910818994303321 Autore Post Eric S (Eric Stephen) Titolo Ecology of climate change : the importance of biotic interactions / / Eric Post Pubbl/distr/stampa Princeton,: Princeton University Press, 2013 **ISBN** 1-4008-4613-7 Edizione [Core Textbook] 1 online resource (404 p.) Descrizione fisica Collana Monographs in Population Biology;; 68 Classificazione RB 10438 Disciplina 577.2/2 Soggetti Bioclimatology Climatic changes - Environmental aspects Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Frontmatter -- Contents -- Preface: Purpose, Perspective, and Scope --Acknowledgments -- Chapter 1. A Brief Overview of Recent Climate Change and Its Ecological Context -- Chapter 2. Pleistocene Warming and Extinctions -- Chapter 3. Life History Variation and Phenology --Chapter 4. Population Dynamics and Stability -- Chapter 5. The Niche Concept -- Chapter 6. Community Dynamics and Stability -- Chapter 7. Biodiversity, Distributions, and Extinction -- Chapter 8. Ecosystem Function and Dynamics -- Chapter 9. Brief Remarks on Some Especially Important Considerations -- References -- Index -- Backmatter Sommario/riassunto Rising temperatures are affecting organisms in all of Earth's biomes. but the complexity of ecological responses to climate change has hampered the development of a conceptually unified treatment of them. In a remarkably comprehensive synthesis, this book presents

past, ongoing, and future ecological responses to climate change in the context of two simplifying hypotheses, facilitation and interference, arguing that biotic interactions may be the primary driver of ecological responses to climate change across all levels of biological organization. Eric Post's synthesis and analyses of ecological consequences of climate change extend from the Late Pleistocene to the present, and through the next century of projected warming. His investigation is grounded in classic themes of enduring interest in ecology, but developed around novel conceptual and mathematical models of observed and predicted dynamics. Using stability theory as a recurring theme, Post argues that

the magnitude of climatic variability may be just as important as the magnitude and direction of change in determining whether populations, communities, and species persist. He urges a more refined consideration of species interactions, emphasizing important distinctions between lateral and vertical interactions and their disparate roles in shaping responses of populations, communities, and ecosystems to climate change.