

1. Record Nr.	UNINA9910784570703321
Titolo	Carbon dioxide, populations, and communities [[electronic resource] /] / edited by Christian Körner, Fakhri A. Bazzaz
Pubbl/distr/stampa	San Diego, : Academic Press, c1996
ISBN	1-281-02720-0 9786611027209 0-08-050072-2
Descrizione fisica	1 online resource (489 p.)
Collana	Physiological ecology series
Altri autori (Persone)	KörnerChristian <1949-> BazzazF. A (Fakhri A.)
Disciplina	574.5222 581.5/222 20 581.5222
Soggetti	Plants - Effect of atmospheric carbon dioxide on Atmospheric carbon dioxide - Environmental aspects Plant communities Plant ecophysiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Carbon, Dioxide, Populations, and Communities; Copyright Page; Contents; Contributors; Preface; Part I: Population- Level Responses; Chapter 1. Physiological Sensitivity and Evolutionary Responses to Climate Change; I. Introduction; II. The Genetic Bases for Evolutionary Responses to Climate Change; III. Thermal Sensitivity and Evolutionary Responses to Climate Change; IV. Summary; References; Chapter 2. Intraspecific Variation in CO <sub>2</sub> Responses in <i>Raphanus</i> <i>raphanistrum</i> and <i>Plantago lanceolata</i> . Assessing the Potential for Evolutionary Change with Rising Atmospheric CO <sub>2</sub> I. IntroductionII. Experimental Methods; III. Results and Discussion; IV. Conclusions; References; Chapter 3. Selective Responses to Global Change: Experimental Results; References; Chapter 4. Genetic Variation in the Response of Plant Populations to Elevated CO <sub>2</sub> in a Nutrient- Poor, Calcareous Grassland; I. Plant Responses to Environmental Change: Theory and Review of Previous Work; II. An Experiment to Test

Genotypic Responses to Increased CO<sub>2</sub>; III. Results from the Experiment and Discussion; IV. Outlook; V. Summary; References  
Chapter 5. Genetic Variability and the Nature of Microevolutionary Responses to Elevated CO<sub>2</sub>I. Introduction; II. Genetic Variability in CO<sub>2</sub> Responses; III. Effects of Elevated CO<sub>2</sub> on the Selection Process; IV. What Characters Will Be Selected?; V. Possible Effects of Evolutionary Changes on Ecosystem Processes; VI. Summary; References; Part II: Community-Level Responses; Chapter 6. The Changing Vegetation of Europe: What Is the Role of Elevated Carbon Dioxide?; I. Introduction; II. Current Vegetation Changes in Western Europe; III. Plant Functional Types and Response to Elevated CO<sub>2</sub>  
IV. FeedbacksV. Summary; References; Chapter 7. Changing Community Composition and Elevated CO<sub>2</sub>; I. Introduction; II. Methods; III. Results; IV. Discussion; V. Summary; References; Chapter 8. Predicting Responses of Tropical Plant Communities to Elevated CO<sub>2</sub>: Lessons from Experiments with Model Ecosystems; I. Introduction; II. Responses at the Level of the Individual; III. Responses at the Level of the Plant Community; IV. Conclusions and Recommendations; References; Chapter 9. Responses to Elevated CO<sub>2</sub> in Mediterranean Old-Field Microcosms. Species, Community, and Ecosystem Components I. IntroductionII. The Experimental Designs; III. Species Responses within Community; IV. Ecosystem Responses; V. Discussion and Conclusion; References; Chapter 10. Annual Grassland Responses to Elevated CO<sub>2</sub> in Long-Term Community Microcosms; I. Introduction; II. The Jasper Ridge CO<sub>2</sub> Experiment; III. Methods; IV. Analysis; V. Results; VI. Discussion; References; Chapter 11. Effects of Elevated CO<sub>2</sub> on Plant Species Dominance in a Highly Diverse Calcareous Grassland; I. Introduction; II. Design of CO<sub>2</sub> and Plant Diversity Treatments in Calcareous Grassland Communities  
III. Response of Calcareous Grassland Communities to Manipulations of CO<sub>2</sub> and Plant Diversity

---

### Sommario/riassunto

In past decades and in association with a continuing global industrial development, the global atmospheric concentration of carbon dioxide has been rising. Among the many predictions made concerning this disturbing trend is global warming sufficient to melt polar ice-caps thereby dramatically altering existing shorelines. This book will help fill an obvious gap in the carbon dioxide debate by substituting date for speculation.\* \* Includes contributions from leading authorities around the world\* Serves as a companion to Carbon Dioxide and Terrestrial Ecosystems\* The first bo

---