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4.5 Summary and conclusionsChapter 5 Functional webs; 5.1 Introduction; 5.2 Interaction strengths; 5.3 A functional food web for the CPER; 5.4 Summary and conclusions; Part II: The dynamics and stability of simple and complex communities; Chapter 6 Energetic organization and food web stability; 6.1 Introduction; 6.2 Energetic organization and stability; 6.3 Distribution of interaction strengths: trophic-level-dependent interaction strengths; 6.4 Summary and conclusions; Chapter 7 Enrichment, trophic structure, and stability; 7.1 Introduction
7.2 Simple primary-producer-based and detritus-based models7.3 Trophic structure and dynamics along a productivity gradient; 7.4 More complex models; 7.5 Connections to real-world productivity; 7.6 Summary and conclusions; Chapter 8 Modeling compartments; 8.1 Introduction; 8.2 Complexity, diversity, compartments, and stability; 8.3 Defining compartments; 8.4 Approaches to studying compartments; 8.5 The energy channel; 8.6 Energy channels-structure and stability; 8.7 Summary and conclusions; Chapter 9 Productivity, dynamic stability, and species richness; 9.1 Introduction
9.2 Trophic structure, dynamics, and productivity9.3 Feasibility revisited; 9.4 Feasibility and the hump-shaped curve; 9.5 Trophic structure and the diversity of production; 9.6 A review of hypotheses; 9.7 Summary and conclusions; Part III: Dynamic food web architectures; Chapter 10 Species-based versus biomass-based food web descriptions; 10.1 Introduction; 10.2 Dynamic food webs-playing Jenga; 10.3 Two case studies; 10.4 Stability, disturbance, and transition; 10.5 Summary and conclusions; Chapter 11 Dynamic architectures and stability of complex systems along productivity gradients
11.1 Introduction

Sommario/riassunto

This novel book bridges the gap between the energetic and species approaches to studying food webs, addressing many important topics in ecology. Species, matter, and energy are common features of all ecological systems. Through the lens of complex adaptive systems thinking, the authors explore how the inextricable relationship between species, matter, and energy can explain how systems are structured and how they persist in real and model systems. Food webs are viewed as open anddynamic systems. The central theme of the book is that the basis of ecosystem persistence and stability rests on the