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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front matter -- Contents -- Preface -- Part 1. The Problem and the Approach -- CHAPTER ONE. The Balance of Nature: What Is It and Why Care? -- CHAPTER TWO. A Primer for Dynamical Systems -- CHAPTER THREE. Of Modules, Motifs, and Whole Webs -- Part 2. Food Web Modules: From Populations to Small Food Webs -- CHAPTER FOUR. Excitable and Nonexcitable Population Dynamics -- CHAPTER FIVE. Consumer-Resource Dynamics: Building Consumptive Food Webs -- CHAPTER SIX. Lagged Consumer-Resource Dynamics -- CHAPTER SEVEN. Food Chains and Omnivory -- CHAPTER EIGHT. More Modules -- Part 3. Toward Whole Systems -- CHAPTER NINE. Coupling Modules in Space: A Landscape Theory -- CHAPTER TEN. Classic Food Web Theory -- CHAPTER ELEVEN. Adding the Ecosystem -- CHAPTER TWELVE. Food Webs as Complex Adaptive Systems -- Bibliography -- Index
Sommario/riassunto	Human impacts are dramatically altering our natural ecosystems but the exact repercussions on ecological sustainability and function remain unclear. As a result, food web theory has experienced a proliferation of research seeking to address these critical areas. Arguing that the various recent and classical food web theories can be looked at collectively and in a highly consistent and testable way, Food Webs synthesizes and reconciles modern and classical perspectives into

a general unified theory. Kevin McCann brings together outcomes from population-, community-, and ecosystem-level approaches under the common currency of energy or material fluxes. He shows that these approaches--often studied in isolation--all have the same general implications in terms of population dynamic stability. Specifically, increased fluxes of energy or material tend to destabilize populations, communities, and whole ecosystems. With this understanding, stabilizing structures at different levels of the ecological hierarchy can be identified and any population-, community-, or ecosystem-level structures that mute energy or material flow also stabilize systems dynamics. McCann uses this powerful general framework to discuss the effects of human impact on the stability and sustainability of ecological systems, and he demonstrates that there is clear empirical evidence that the structures supporting ecological systems have been dangerously eroded. Uniting the latest research on food webs with classical theories, this book will be a standard source in the understanding of natural food web functions.