A plethora of different theories, models, and concepts make up the field of community ecology. Amid this vast body of work, is it possible to build one general theory of ecological communities? What other scientific areas might serve as a guiding framework? As it turns out, the core focus of community ecology—understanding patterns of diversity and composition of biological variants across space and time—is shared by evolutionary biology and its very coherent conceptual framework, population genetics theory. *The Theory of Ecological Communities* takes this as a starting point to pull together community ecology's various perspectives into a more unified whole.

Mark Vellend builds a theory of ecological communities based on four overarching processes: selection among species, drift, dispersal, and speciation. These are analogues of the four central processes in population genetics theory—selection within species, drift, gene flow, and mutation—and together they subsume almost all of the many dozens of more specific models built to describe the dynamics of communities of interacting species. The result is a theory that allows the effects of many low-level processes, such as competition, facilitation, predation, disturbance, stress, succession, colonization, and local extinction to be understood as the underpinnings of high-level processes with widely applicable consequences for ecological communities.

Reframing the numerous existing ideas in community ecology, *The Theory of Ecological Communities* provides a new way for thinking about biological composition and diversity.

Mark Vellend is professor of biology at the Université de Sherbrooke. He is a 2015 recipient of an E. W. R. Steacie Fellowship from the Natural Sciences and Engineering Research Council of Canada.

"This is a much-needed synthesis on the key processes shaping ecological communities. Vellend puts his theoretical framework in historical context, presents testable hypotheses derived from the theory, and evaluates them in an extensive review of the empirical literature. Vellend's framework and synthesis will help community ecologists make significant progress in our understanding of how nature works."

—**Diego P. Vázquez**, Argentine Institute for Dryland Research and National University of Cuyo

"Many people have suggested that community ecology is a morass of unique cases. Vellend's book audaciously challenges this view. Borrowing from evolution, he proposes just four general rules to cover all of community ecology. He fleshes this out with detailed examples, R code, and a mapping between his framework and traditional concepts. All community ecologists will have to respond to Vellend in their work, as this is the rare book that will dominate the discussion for years to come."

—**Brian McGill**, University of Maine

"With clear and succinct definitions of complex ideas, this book constructs a theory of ecological communities based on fundamental processes of selection, drift, dispersal, and speciation. Vellend offers a useful framework that includes evolution as well as ecological factors and he makes a significant contribution to the field."

—**Marcel Holyoak**, University of California, Davis

"This book is a selective review of the sprawling field of community ecology. Vellend provides an impressive conceptual synthesis that helps students and practitioners pull together the discipline's wide range of perspectives into a coherently organized whole."

—**Robert Holt**, University of Florida

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