

In recent years, scientists have realized that evolution can occur on timescales much shorter than the "long lapse of ages" emphasized by Darwin—in fact, evolutionary change is occurring all around us all the time. This book provides an authoritative and accessible introduction to eco-evolutionary dynamics, a cutting-edge new field that seeks to unify evolution and ecology into a common conceptual framework focusing on rapid and dynamic environmental and evolutionary change.

Andrew Hendry covers key aspects of evolution, ecology, and their interactions. Topics range from natural selection, adaptive divergence, ecological speciation, and gene flow to population and community dynamics, ecosystem function, plasticity, and genomics. Hendry evaluates conceptual and methodological approaches, and draws on empirical data from natural populations—including those in human-disturbed environments—to tackle a number of classic and emerging research questions. He also discusses exciting new directions for future research at the intersection of ecology and evolution.

An invaluable guide for students and researchers alike, *Eco-evolutionary Dynamics* reveals how evolution and ecology interact strongly on short timescales to shape the world we see around us.

ANDREW P. HENDRY is professor in the Department of Biology and the Redpath Museum at McGill University. He is the coeditor of *Microevolution: Rate, Pattern, Process and Evolution Illuminated: Salmon and Their Relatives*.

"Andrew Hendry, one of the leading figures in synthesizing our understanding of how evolution occurs over contemporary timescales, has expanded his view to consider not only how ecology drives evolution, but how evolution impels ecological change, and how the two can feed back upon each other. *Eco-Evolutionary Dynamics* creates an overarching framework that will guide the field for years to come. A must-read for ecologists and evolutionary biologists of all stripes!"

—Jonathan Losos, Harvard University

"This book provides an excellent teaching guide to the interplay of ecological and evolutionary processes in nature. Clearly written, well-organized, and nicely illustrated, it combines an exceptionally broad coverage of the literature with numerous questions for students to address."

—Peter Grant, professor emeritus,
Princeton University

"As pressures on the natural world from human activities continue to increase, what will be the response of species and ecological communities? Is evolution significant for contemporary timescales, and, if so, when and how? How do evolution and ecology interact in today's world? The emerging field of eco-evolutionary dynamics is now unlocking the answers to these important questions. In this book, Andrew Hendry, one of the world's leading experts in the field, develops the conceptual basis, theory, and evidence in this fascinating area of science."

—Georgina Mace, University College London

"A masterful, comprehensive synthesis treating most of today's hot topics in ecology and evolution from the perspective of how ecology affects evolution and, especially, how evolution affects ecology, often remarkably quickly. Hendry depicts myriad impacts at the population, community, and ecosystem levels with well-chosen examples and elegant models that elucidate even complicated and indirect pathways. *Eco-evolutionary Dynamics* is the last word on a subject at the leading edge of exciting research in both fields."

—Daniel Simberloff, University of Tennessee

"In the strict sense, 'eco-evolutionary dynamics' refers to feedback between genetic changes in populations and their ecological features such as abundance. Andrew Hendry treats this and much more in an authoritative introduction to a wide range of topics at the interface of evolutionary genetics and population ecology. Everyone interested in evolutionary ecology will find his book highly rewarding."

—Douglas J. Futuyma, Stony Brook University,
State University of New York

Cover photo: A medium ground finch (*Geospiza fortis*) interacts with the fruit and seed of *Castela galapageia* on Santa Cruz Island, Galapagos. Courtesy of the author.