Science

In the twenty-first century, ecologists have increasingly embraced phylogenetics, the study of evolutionary relationships among species, resulting in the discovery of the field's power to illuminate present ecological patterns and processes. Ecologists are now investigating whether phylogenetic diversity is a better measure of ecosystem health than more traditional metrics like species diversity, whether it can predict the future structure and function of communities and ecosystems, and whether conservationists might prioritize it when formulating conservation plans.

In *Phylogenetic Ecology*, Nathan G. Swenson synthesizes this nascent field's major conceptual, methodological, and empirical developments to provide students and practicing ecologists with a foundational overview. Along the way, he highlights those realms of phylogenetic ecology that will likely increase in relevance—such as the burgeoning subfield of phylogenomics—and shows how ecologists might lean on these new perspectives to inform their research programs.

"Swenson is emerging as the world-leading expert in phylogenetic ecology. An excellent introduction for all sorts of audiences, this book presents a modern synthesis of phylogenetic comparative ecology that takes some of the most fundamental questions raised by pioneer biologists (such as Darwin and Hutchinson) and puts them in a contemporary perspective. This is an ambitious and inspiring book. Highly synthetic, it melds current thinking with historical perspectives for illuminating future directions. It is remarkably well done."

Sergio Rasmann, Institute of Biology, University of Neuchâtel

"Swenson clearly establishes that we should move on from using phylogenies as proxies for unmeasured ecological variables and instead use phylogenetic trees as backbones from which we can hang our (phylogenetically informed) ecological analyses. In presenting a strong case for why we should move in this direction, this book finds its niche. Well written and cogent."

Jonathan Davies, Departments of Botany, Forest & Conservation Sciences, Biodiversity Research Centre, University of British Columbia

---

Nathan G. Swenson is professor of biology and director of the Behavior, Ecology, Evolution, and Systematics (BEES) Graduate Concentration Area at the University of Maryland. He is the author of *Functional and Phylogenetic Ecology in R* and a recipient of a Guggenheim fellowship in plant sciences.

The University of Chicago Press
www.press.uchicago.edu

ISBN-13: 978-0-226-67150-5
ISBN-10: 0-226-67150-X