tem processes is central to this conception of rewilding. Yet documentation of these impacts in this book is mostly limited to nonexperimental and often mixed evidence for carnivores, largely ignoring the rich and strong experimental evidence for large herbivores. The chapter on land abandonment overlooks the rich restoration-related literature, and the volume fails to mention the continental-scale rewilding of the North American deciduous forest ecosystem. Elsewhere, ecological restoration is criticized for being strongly plant-biased, in a publication whose own taxonomic biases are even narrower.

These biases are reflective of the current field of rewilding, and these quibbles come from someone who is steeped in plant-herbivore ecology and ecological restoration. *Rewilding* will engender lively and productive discussions in many settings. As a review of myriad aspects of rewilding as it stands today, and its vision for the future, this book is as ambitious as rewilding itself, and will find a place on the shelf of many students of conservation, restoration, and applied ecology. Its vision of rewilding may be the harbinger of both conservation's and the planet's future.

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A Theory of Global Biodiversity. *Monographs in Population Biology, Volume 60.*

By Boris Worm and Derek P. Tittensor. Princeton (New Jersey): Princeton University Press. $49.95. xi + 214 p.; ill.; index. ISBN: 978-0-691-15483-1. 2018.

This monograph addresses a long-standing and challenging problem in biology: explaining latitudinal variation in biodiversity. Using an ambitious approach termed "mechanistic macroecology," the authors develop a predictive algorithm based on identified patterns and purported drivers of biodiversity in both marine and terrestrial systems. We reviewed this volume as part of a graduate-level seminar at the University of California, Santa Cruz. The book, written by two marine macroecologists, is geared toward a scientific audience seeking to understand large-scale patterns and processes of biodiversity.

The volume is organized into seven coherent and well-integrated chapters. The authors first describe empirical global trends in species richness over four distinct realms (terrestrial, coastal marine, pelagic, and deep sea) and identify the predictors most commonly associated with these patterns at the scale of 800x800 km grid cells (Chapters 2 and 3). After asserting that species richness patterns are mainly driven by temperature, the authors develop a spatially explicit metacommunity model based on Hubbell's neutral theory, but in which temperature drives speciation rates in accordance with Brown et al.'s metabolic theory (Chapter 4). Incorporating additional realm-specific factors associated with habitat area and productivity, Worm and Tittensor predict patterns of species richness in the four realms and compare the results to empirical data (Chapter 5). The final two chapters cover the conservation implications and major conclusions of the study.

The inclusion of marine systems as three distinct realms was interesting and novel, and counterbalances historic terrestrial biases in global biodiversity research. However, the selected realms and large spatial scale employed did have some limitations. Not much could be said about the deep sea, for which conclusions were drawn from only a single taxonomic group (brittle stars), whereas a more thorough exploration of terrestrial realms (e.g., freshwater ecosystems) or subgroups of taxa (e.g., plants) might have provided greater insight. Furthermore, the authors try to incorporate niche theory into their model, but only consider thermal niches, which do not expand far beyond metabolic theory. Local-scale aspects of the Hutchinsonian niche such as biotic interactions are largely ignored. Finally, the proposed conservation implications of the model may not apply at the local scales of most current conservation work. The authors acknowledge some of these limitations and invite the scientific community to modify and apply their model to answer new questions.

We applaud their efforts to develop a synthetic, biogeographic model based on first principles. However, we would have liked more details about the model itself, including an online supplement containing the model code. The design of the graphics occasionally hinders interpretation, in particular regarding the relationship between predicted and observed species richness presented in Chapter 5. The model generally underpredicts the steepness of observed latitudinal gradients, raising new questions as to which additional drivers of biodiversity might explain this result. Overall, Worm and Tittensor's book generated lively discussions and provides a useful starting point on which to build vertically or laterally in the effort to understand global-scale patterns of biodiversity.

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