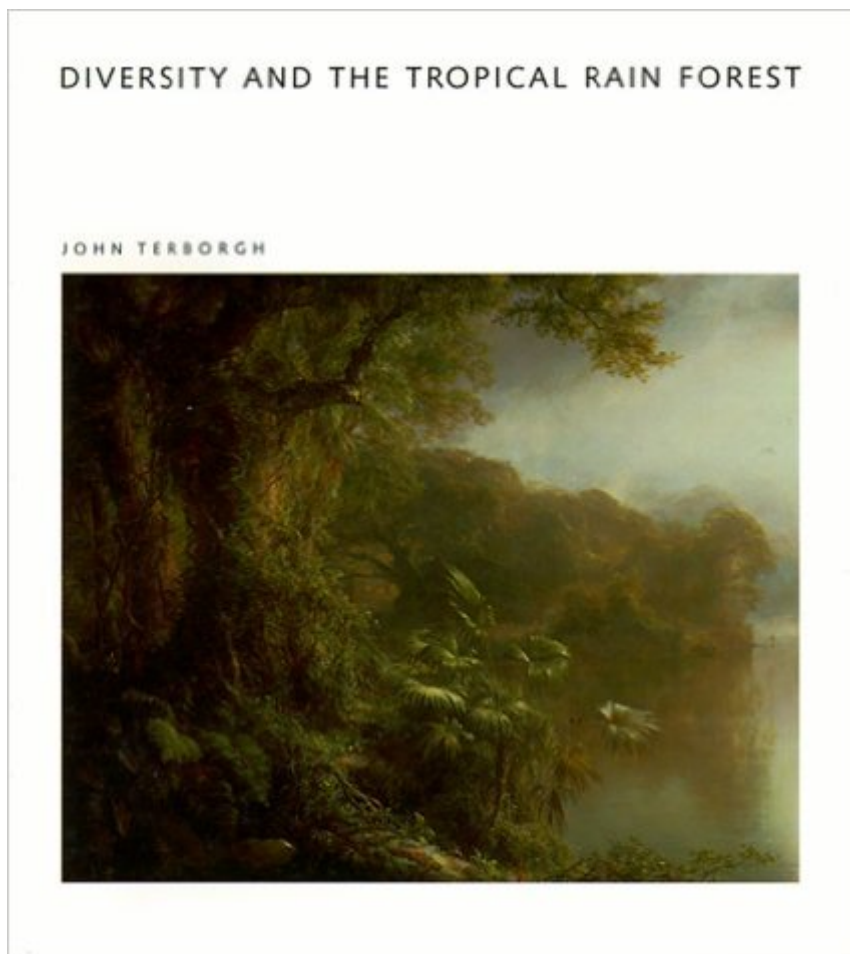


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Diversity And The Tropical Rain Forest: A Scientific American Library Book (Scientific American Library Series)



Synopsis

The tropical rain forest is the most exuberant manifestation of nature's diversity, and the abundance of life it nurtures has captured the fascination of scientists since the time of Darwin. A single tree in the rain forest may support as many as 150 species of beetle alone, and 300 different kinds of trees may inhabit a single hectare. That same hectare may be home to over 41,000 different species of insects. Why are there so many species? Why do tropical forests in particular contain so many species of trees--or for that matter, of birds, reptiles, or almost anything else? What can we learn by studying this remarkable diversity and what can be done to preserve it? In this sumptuously illustrated volume, veteran scientist and teacher John Terborgh shows how scientists approach these critical questions. At the heart of the study of biodiversity is the investigation of the ecological processes that accommodate diversity and the evolutionary processes that generate it. Separate in principle, these two sets of factors are intricately interwoven, and it is this complex interrelationship that *Diversity and the Tropical Rain Forest* seeks to unravel. The book begins with an overview of the results of evolution as expressed in large-scale phenomena--the patterning of tropical vegetation on climatic gradients, the adaptation of plants to a wide range of soil conditions, and the contrasting degrees of diversity found in temperate versus tropical forests. The ensuing chapters on ecology examine the rain forest on a smaller scale, presenting the most recent theories of how the dynamic relationships between plants and animals, under the influence of the tropical climate, have maintained such a profusion of forms of life. The focus then returns to evolution, as Terborgh examines the mechanisms that generate diversity, the checks and balances that govern the extinction of species, and the similar evolutionary adaptations of organisms living continents apart. In concluding, Dr

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Customer Reviews

This is not a "natural history" book cataloging the variety of animals, but rather takes a "conservation biology" approach to trying to understand the exuberance of the tropics, worldwide. The conflicting theories are presented as a compelling mystery. At one point midpoint through the book we are left with the circular argument that there are more animal species because there are more plant species, and there are more plant species because there are more animal species. Fortunately, a following chapter on evolution presents some of the advances out of the quandary. The book is beautifully illustrated, and some real striking figures are of the mammal diversity (arboreal/terrestrial, and diurnal versus nocturnal) of mammals in Borneo, or the example of convergence in new world and old world tropics. Perhaps the chapter on management of the tropics did not delve deep into looking at the social issues at play (I found Hecht and Cockburn's "The Fate of the Forest" a good look at those dynamics in the). The application of conservation biology studies on fragmentation and genetic diversity are important conservation issues though. There are sparse mentions of the indigenous people, for example in the while there were 6-12 million there are now less than 200,000.

Definitely a good crossing between an academic text and a story. Clearly presented in nice, rounded chapters and full of great pictures & diagrams. If you're looking to read about all the different life forms in the tropical forests, this is not the book for you. However, if you want to learn the basics of tropical ecology and biodiversity in general, this is an excellent place to start! Well worth the money.

A beautiful book. Anyone with an interest in the wonder and connectiveness of the rainforest should read this book. Dr. Terborgh illustrates beautifully the importance of each living part of the forest. From the towering canopy to the microscopic fungi on the forest floor. Another book worth reading is "Tropical Nature". I learned so much and this book is simple and fun to read. Not too "scientific". More like stories around a campfire. Things are fact not because of scientific proof, but fact because it was witnessed.

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