



Book reviews

Elizabeth C. Losos, Egbert G. Leigh (Eds.). Tropical Forest Diversity and Dynamism: Findings From a Large Scale Plot Network, University of Chicago Press. p. 645 (Cloth) Price: \$95.00, (Paper) Price \$38.00, ISBN 0-226-49346-6, ISBN 0-226-49345-8

This is an amazing book. Every biologist interested in tropical forests, be they a taxonomist, ecologist or evolutionary biologist, should have this book on their shelves to dip into from time to time, to browse through in a leisurely fashion, or just to read from cover to cover and enjoy thoroughly. Losos and Leigh have lovingly edited an incredible compilation of papers based around the global network of tropical forest plots – the 50 hectare plots – that brings out all the inherent excitement and complexity of the unparalleled sets of data emerging from these studies. This is a truly global collaboration – of the over 100 contributors to papers in the book, more than half of them are from the countries in which the Forest Dynamics Plots are situated; this is not the developed world driving research, this is a real joint project on a global scale. The CTFS (Center for Tropical Forest Science) network of large plots began with the 50 hectare plot on Barro Colorado Island in Panama; conceived and set up by Steve Hubbell and Robin Foster in 1980 – 25 years ago. As the “mother plot”, the BCI 50 hectare plot is almost the standard against which all others are measured – but interestingly, the papers in this book show quite convincingly that having one plot is just not good enough, the message is ‘the more the merrier’. The papers in the book are arranged in seven sections – an introduction, a section rather tellingly entitled “the whole is greater than the sum of the plots”, a section on habitat specialisation, on canopies and soils, on diversity in general, on the role of pests, and a final and quite fascinating section detailing each of the plots – how it works, what stage it is in and (if you read it carefully enough) how they each differ. The

papers range from classical analyses of floristics and species richness to a new neutral theory of forest ecology to the comparison of breeding systems in different forests to new statistics for the analysis of these large and complex data sets – the spectrum is enough to keep anyone amused for ages! The data being collected in the network are fascinating, but also rare in the extreme – being long-term and spatially explicit. The sheer amount of work involved in each of these plots is mind-boggling – imagine measuring each tree greater than 1 cm diameter at breast height in 50 hectares, and then doing it again and again. But it is this sheer persistence and attention to detail that makes these data unique. To me, the overriding impression of the data and their analysis can be summed in the observation that there can be a multiplicity of explanations for everything observed, as one paper puts it, there is “no simple explanation for...” This is in one way satisfying, but in another way frustrating – but I feel an accurate and compelling assessment of the state of knowledge of the world in which we live. It would be nice if all could be explained with a few equations and simple models, but what this book – and the CTFS plot network – really shows, is that tropical forests are not only diverse, but complicated. Only data such as those being gathered by a veritable army of dedicated scientists in the plots that are, and the plots that will yet be made, will help us elucidate general patterns, if they exist. I found this book profoundly satisfying for its honesty, depth and completeness – it will be a reference for decades to come.

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