

## BOOK REVIEW

**Trees of Panama and Costa Rica.** R. Condit, R. Pérez & N. Daguerre. Princeton & Oxford: Princeton University Press. 2010. 494 pp., 438 colour plates. ISBN 978 0 691 14710 9. US\$45.

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Following in the tradition of Alwyn Gentry, the authors of *Trees of Panama and Costa Rica* have produced a book that aims to help readers identify trees in an area of high diversity. Panama and Costa Rica each hold about 10,000 species of vascular plants, and a significant proportion of these are tree species; an estimate of 3000 is given in the book. This guide does not attempt to include all of these but 493 of the more widespread ones, covering 83 families.

The book starts with a clear introduction to the forest types in the region, with the novel addition of a short guide to easily accessible examples of each. Within the main section of the book, each family is represented by one or more species treatments with a selection of photographs showing bark, leaf, flower or fruit characters, which are helpful and clear. Distribution maps are also provided. The content of the species descriptions shows the impressive extent of knowledge of the authors, resulting from their fieldwork over 20 years. The text is concise and well written. The layout of the species descriptions is good but the placement of the first species' distribution map in each family before the family summary can be confusing when several species are included.

Being familiar with the problems of identifying trees when not in flower or fruit, the authors have been strongly influenced by Gentry's work to provide tools for the identification of woody plants to family or genus using a small range of vegetative characters. Gentry's *Field Guide to the Families and Genera of Woody Plants of Northwest South America* (Colombia, Ecuador, Peru) has been one of the most important guidebooks for tropical America and is used throughout the region. Gentry includes a range of keys to families, which is one of the most useful sections of his book. In *Trees of Panama and Costa Rica* the authors have included a section on tree identification and the major leaf characters used to identify to family. They provide a well-written and useful description of six basic leaf characteristics: opposite versus alternate leaves; simple versus compound leaves; toothed or lobed leaf margins; latex; clustered versus regular spacing of leaves; and stipules. Whilst these are indeed important characters, there are a small number of additional key characters for identifying trees to family that have unfortunately been omitted. These include punctations and glands, hairs and venation – characters commonly used to distinguish between a large number of tropical tree families.

There are two tabulated lists of families and characters within the book. The first comprises 25 common families, categorising them first by leaf arrangement and

whether they are simple or compound. In this it starts to act as a key. However, the families are then listed alphabetically with relevant information for each character given. A similar structure is used for the second, larger table of 117 families in the Appendix. This is a missed opportunity to provide a more useful key, by grouping the families by character rather than using an alphabetical system. Despite this, the book is an impressive piece of work and an indispensable item for fieldwork across Central America for both the professional and amateur botanist.

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