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Book Reviews

Enter a Mexican tropical dry forest, please

Robichaux, R. H. and Yetman, D. A. (eds) (2000) *The tropical deciduous forest of Alamos: biodiversity of a threatened ecosystem in Mexico*. The University of Arizona Press, Tucson, AZ, USA. ix + 259 pp., figs, tables, index. Hardback: Price US$50.00. ISBN 0-8165-1922-6.

Tropical dry forests are those forests able to cope with a pronounced annual dry season when little or no rain falls. Many plants deal with this dry season by dropping their leaves, especially in the most xeric of tropical dry forests, known as tropical deciduous forests.

Several generations ago, a continuous, diverse canopy of tropical dry forest stretched from north-western Mexico all the way into Costa Rica. Now, this dry forest is considered the most threatened of the major forest types in the region, having been largely replaced by agricultural pastures, fields, and their associated villages, towns and cities. Improved road access and modernized economies over the past 50 years have accelerated the destruction of many of the last areas of tropical dry forest. This destruction is thankfully being matched by increasing efforts by conservationists and biologists to conserve and understand these forests.

The volume edited by Robichaux and Yetman is a valuable and important step forward in the conservation and understanding of the tropical dry forests of Mexico. In it various authors describe what is known about the northernmost of the neotropical dry forests, the tropical deciduous forests of Alamos, Sonora. Only a few hundred kilometres south of the US–Mexican border, these fascinating forests have survived largely thanks to the roughness of the terrain at the base of the Sierra Madre Occidental. Despite their close proximity to the US, the forests have been largely overlooked by biologists, a situation that Robichaux and Yetman seek to remedy with their book.

The core of the book is an introduction to the plant and vertebrate species of the Alamos deciduous forests. Van Devender and colleagues provide an excellent introduction to the flora of the region's forests, including the phenology and ecology of many dominant species. Yetman and colleagues complement this flora chapter by documenting the great many local uses of the tropical deciduous forest trees. This forms a significant basis for the modern sustainable use of these forests. Schwalbe and Lowe introduce the amphibians and reptiles of the region, and also list the local mammal species. Russell similarly introduces the birds. All four chapters include useful appendices listing the species and their local common name(s). These chapters should prove invaluable for future biological and conservation work in the region, and are a useful record for comparison with other better studied neotropical dry forests.

While the focus of the volume is on the Alamos deciduous forests, the scope of the book is wider. Although this may be a reflection of how little is known about the Alamos deciduous forests, the inclusion of the biology and sociology of the neighbouring croplands, villages and other vegetation types will make this publication a far more useful aid for regional conservationists. For example, Burns and colleagues give an account of the many native crop species and varieties in the region, and Schwalbe and Lowe, and Russell, include careful accounts of the amphibian, reptile and bird species in neighbouring habitats in the region, including thornscrub and oak woodlands. Van Devender and colleagues assess the floristic affinities of an Alamos deciduous forest with the floras of other Mexican areas. The closest affinities (only 40% of species in common) are with the Sonoran thornscrub, while only 34% of all plant species, and only 10% of tree species, are shared with the well studied deciduous forest of Chamela, Jalisco, to the south. The Alamos deciduous forests are indeed a unique ecosystem worthy of greater attention and care.

Notably absent from this volume is any account of the invertebrate fauna of the area, because, as Robichaux and Yetman explain, this has yet to be adequately studied. This is an important omission, especially as invertebrates play dominant roles in decomposition, pollination and herbivory in other neotropical forests (e.g. Janzen, 1988; Bullock *et al*., 1995). Hopefully this volume will inspire more entomological research in the area.

Robichaux and Yetman's book forms a solid foundation for the future conservation, study and sustainable management of the dry forests of north-western Mexico. It also proves a complement to the earlier review of global tropical dry forest biology by Bullock *et al*. (1995), and is a useful companion to the recently updated publication of Howard Scott Gentry's famous *Rio Mayo Plants* (Martin *et al*., 1998). It is a goldmine of information for students, biologists and conservationists working in the region, and will hopefully inspire a great many more biological studies in the area.

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