



BOOK REVIEW

Dennis, A. J., E. W. Schupp, R. J. Green and D. A. Westcott (eds) 2007. **Seed dispersal: Theory and its application in a changing world**. CAB International, Wallingford, Oxfordshire, xvii+684 pp. ISBN: 978-1-84593-165-0, hardcover, price: EUR 95.00, GBP 60.00, USD 120.00.

This book is a fourth in a series of edited volumes that have appeared at long intervals related to International Symposia/Workshops on the subject. It is also notable that with its 700 pages of total length the book is the biggest of the series, demonstrating the increasing vigour and vibrancy of the field. Indeed, since dynamic aspects of vegetation science and animal/plant interactions were put in the frontier of ecology, seed related studies receive particular interest indicating the key role of seeds in the mentioned processes.

The book consists of 29 chapters most of them written by invited lecturers of the Brisbane (Australia) Conference on frugivores and seed dispersal, held in 2005. The 70 authors from 18 countries with their expertise covering botany, zoology, forestry, ecology, microbiology and evolutionary ecology offer a diverse and colourful approach of the subject. Chapters are arranged in four parts, and each of them starts with an introductory text (written by the editor(s) of the given part) that draws the Reader's attention to the questions studied in the succeeding chapters, as well as their significance in a wider context.

Part I, "Frugivores and frugivory" edited by A. J. Dennis, includes some excellent chapters dealing with the interactions between animals, fruits and their seeds thus highlighting how the act of an animal eating fruit can influence the survival, dormancy and germination of seeds and the subsequent probability of survival and growth rate for seedlings. It does not attempt to cover all aspects of this broad field but instead provides some novel insights and comprehensive reviews, filling in some gaps.

Part II, "Seed and seedling shadows" edited by D. A. Westcott, calls our attention to the obvious fact that quantity of seeds dispersed and distance from the plant they are taken have a profound influence on subsequent dynamics. This is the minimum knowledge to understand and predict the outcomes of the evolutionary, biogeographical and ecological processes that are influenced by seed and fruit dispersal.

Part III, "Seed fate and establishment" edited by E. W. Schupp, discusses the transition from spatial patterns of seed-fall to the fate of seeds and seedlings. The context of the population and community in which plant-frugivore and plant-plant interactions are embedded receives thorough dis-

cussion as well. Though the chapters of this part are predominantly empirical, Readers could also come across new facts that expand our view on models, e.g., discussions on exceptions concerning the Jansen-Connell model about density- and distance-dependent recruitment.

Part IV, "Management implications and conservation" edited by R. J. Green and A. J. Dennis, highlights the far-reaching consequences for the process of seed dispersal brought about by loss of diversity in seed-dispersing animals. The large data sets presented from a range of geographical regions are used for both supporting conclusions developed in the chapters and demonstrating the application of theory in practical conservation issues. Probably the main conclusion to be drawn from the chapters in part IV is that, despite resilience, the loss or decline of seed dispersers is likely to result in a cascading loss of diversity. Direct and active management, potentially even including relocation of large seeds, and reintroduction of dispersers (see e.g., Corlett, Chapter 24), will be required to alleviate these losses.

The editorial work and typeset of the book is at the highest standard. The four major parts of the volume are followed by three appendices, a glossary and an index. Appendix 1 lists 829 plant genera with mean seed dimensions (length, width and roundness) and number of species known to be subjected to frugivore dispersal in four rain forests on different continents. Appendix 2 lists 155 vertebrate species consuming fruit in four tropical rain forests on different continents showing body masses and how seeds are treated. Appendix 3 is about families, species, habitats, fruit size, fruit colour and type of seed disperser of fleshy-fruited species studied at Fazenda Rio Negro, Nhecolandia, Brazil. The Glossary explains 77 terms and expressions that are used in studies of seed dispersal. These supplements make the volume an easy to use source of knowledge.

I would equally recommend this book for researchers and students interested in either plant or animal ecology and conservation. Beyond directly utilizable information of the chapters, the book will most probably serve as scientific inspiration for studying seed dispersal and related issues.

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