

BOOK REVIEW

Fire in Mediterranean Ecosystems: Ecology, Evolution and Management. 2012. By J.E. Keeley, W.J. Bond, R.A. Bradstock, J.G. Pausas, and P.W. Rundel. Cambridge University Press, United Kingdom. 515 pages. Hardback. US\$127. ISBN 978-0-521-82491-0.

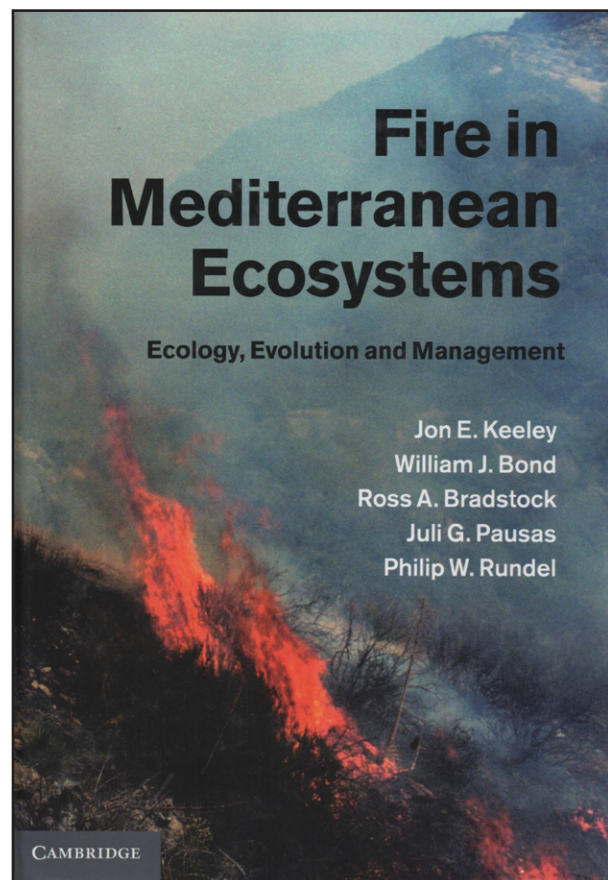
During the past decade, the media have reported on many wildfire “disasters” in mediterranean regions of the world, typically highly populated areas of California (USA), Australia, and Europe. These fires cause significant economic losses through the destruction of homes and other structures, and not infrequently result in loss of human life. It is this socio-economic context that makes mediterranean fire such a relevant topic. *Fire in Mediterranean Ecosystems: Ecology, Evolution and Management* literally defines the scientific scope and content of mediterranean fire ecology at the global scale. The book excels not just in scientific inference and synthesis, but also in linking science to resource management across five continents.

Bucking the current trend of edited books, the authors provide a coherent narrative on the ecology of the most fire-prone systems on Earth. Section I, in three chapters, describes the biogeography of ecosystems in regions with mediterranean-type climate, including a thorough review of vegetation, plant autecology, fire effects, and fire regimes. Section II, in five chapters, focuses on regional patterns, with individual chapters on mediterranean systems in southern Europe and northern Africa, Chile, South Africa, southern Australia, and California. Section III, in six chapters, provides a synthesis of concepts and issues across these regions, including an assessment of management and policy issues.

Fire ecologists trained primarily from the literature on forest ecosystems will find the ecological structure and function of mediterranean systems to be quite distinctive, starting with chapter 3 on fire-related plant traits, in-

cluding an interesting discussion of regeneration mechanisms. The role of humans in shaping ecosystems is a major emphasis in the chapter on the Mediterranean Basin, providing insights on biosocial feedbacks rarely addressed in the North American literature on fire. The other regionally focused chapters do an admirable job of describing the most important features of vegetation, ecology, and fire regimes; although all of these chapters discuss human interactions, management issues are mostly confined to section III.

And it is section III that readers will find most interesting. Here the authors develop an impressive synergy by integrating concepts and data from preceding chapters to describe overarching and sometimes emergent issues among the different mediterranean regions. The evolution of fire-adaptive traits in plants and origins of mediterranean vegetation (chap-



ters 9 and 10), specialties of lead author Jon Keeley, is an excellent biogeographic story grounded in paleoecological evidence—one that I have not seen elsewhere in the fire literature. Community ecologists will enjoy chapters 11 and 12 on species diversity and non-native species, although I did not find these chapters as insightful as the other chapters in this section.

Chapter 13, which may be the highlight of the book, provides an overview of human influences on mediterranean systems, as well as specific management policies and actions. The diverse scientific and management elements of this topic from different countries are especially valuable, providing the opportunity for fire agencies to consider diverse perspectives. The authors do not preach about how to solve current fire problems, but they do emphasize that

fire agencies and political institutions will find solutions only through a solid understanding of fire ecology connected with the realities of urban landscapes.

Fire in Mediterranean Ecosystems is a must-read for all fire scientists, students of fire ecology, and resource managers who work in mediterranean regions. Not only is the price modest considering the quality and quantity (2000 references!) of information, but I anticipate that this authoritative book will have a long shelf life—a good investment for anyone interested in wildfire.

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