

JOURNAL of the ADELAIDE BOTANIC GARDENS

AN OPEN ACCESS JOURNAL FOR AUSTRALIAN SYSTEMATIC BOTANY

flora.sa.gov.au/jabg

Published by the

STATE HERBARIUM OF SOUTH AUSTRALIA

on behalf of the

BOARD OF THE BOTANIC GARDENS AND STATE HERBARIUM

© Board of the Botanic Gardens and State Herbarium,
Adelaide, South Australia

© Department of Environment, Water and Natural Resources,
Government of South Australia

All rights reserved

State Herbarium of South Australia
PO Box 2732
Kent Town SA 5071
Australia



Board of the
Botanic Gardens and
State Herbarium



BOOK REVIEW

Plant Life in the World's Mediterranean Climates. California, Chile, South Africa, Australia, and the Mediterranean Basin. Peter R. Dallman (1999). Hardback, pp. 258, photographs (colour, black and white), line drawings. \$95.00. Oxford University Press.

This book uses the engaging idea of comparing the floras of the five separately located mediterranean climates of the world: the Mediterranean Basin from which the climate derives its name, the Western Cape of South Africa, California, Central Chile and the Southern Coast of Australia. These areas are widely separated but lie between 30° and 40° of latitude.

There is a general resume of the legacy of continental break up, which notes the formation of the Northern and Southern Hemisphere. Eurasia and its relationship with North America is described. There are also direct comparisons of the Gondwanan floras especially those of South Africa and Southern Australia.

A detailed description of the weather patterns that define a mediterranean climate is provided supported by explanatory graphs and tables. The book also looks at the adjacent climates and their effects upon the mediterranean climate flora, such as the threat of recurrent fires caused by long periods of drought.

The evolution of the different floras is examined together with the conjectured historical reasons for such adaptations by specific taxa arising from tectonic movement, the subsequent climate change and its effect on the soil formation. The major plant communities of each location are analysed along with effects of the local climate and subtle landscape differences, which create unique microclimates. For example, one has described different plant communities such as the Kwongan and Mallee areas of Australia, the Fynbos and Strandveld of Africa, the Matorral and Coastal Matorral areas of Chile and the Chaparral and Coastal Scrub of California finishing with the Maquis and Garrigue of the Mediterranean Basin.

The arrangement in sections of the text on each plant community allows comparisons to be made of morphological similarities and various modifications, which species in the floras have adopted to survive in their respective environments. This is illustrated by named examples and cross-referenced to taxa with similar adaptations in their respective areas, for example the floras of Southern Africa and Southern Australia. Consequently, reasons are explained for defensive foliage modifications to prevent grazing, dimorphic adaptations to prevent water loss and why certain families have evolved geophytic genera in various locations.

Reference is made to the attraction and exploitation of these areas by mankind and the introduction of food plants, vines and other associated exotic taxa which find the climate so conducive. It is interesting to note listings of plants discussed from the Mediterranean Basin that have been used as garden ornamentals in other mediterranean parts of the world eg. from the Maquis *Arbutus unedo*, *Cercis siliquastrum*, *Ceratonia siliqua* and *Cistus salviifolius* have all been successfully cultivated. It also shows how some introduced species have caused problems of competition with the endemic species eg. *Olea europea*, *Genista hispanica*, *Lavandula stoechas* and *Rosmarinus officinalis* which now prove weedy and difficult to eradicate in certain locations.

There are many splendid photographic portraits and line drawings of the different plants and communities that create these unique floras. The five different regions and their flora are illustrated by spectacular photography. For example there is the architectural Bromeliaceae and the colourful autumn tints of *Nothofagus* from Chile; one is introduced to the various forms of *Protea* and the interesting range of *Erica* which can be found in South Africa. The Coastal Redwoods are displayed along with the flowering *Cercis occidentalis*

of California; interesting structures of Australian *Banksia* are displayed along with vast swathes of the deep blue *Lechenaultia biloba*, whilst finishing with the twisting branches of *Quercus pubescens* and the rock hugging *Cistus* of the Mediterranean Basin.

Dallman supplies a full and interesting list of references for those wishing to extend their reading. The author also includes a section on how to plan a trip to see these areas for oneself. This chapter supplies good information and directs one on how to partake in and enjoy these beautiful Mediterranean climate regions.

This book will inspire botanists and horticulturists, especially those engaged in public education in botanic gardens and other academic institutions. It also supplies the home gardener with an informative reference book to which they can refer.

John Sandham
Botanic Gardens of Adelaide.