BOOK REVIEWS

Temperate Eucalypt Woodlands in Australia: Biology, Conservation, Management and Restoration

Edited by Richard J. Hobbs and Colin J. Yates.
Published by Surrey Beatty & Sons,
Chipping Norton, NSW.
430 pp. ISBN0 949324 86 8.
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JOHN LANDY [1]

TEMPERATE Eucalypt Woodlands in Australia provides a comprehensive account of the biology, conservation and management and rehabilitation of one of the most important broad-vegetation types in Australia. The book is divided into four sections, the distribution and status of woodlands, threats, processes and management, regeneration and repair and finally socio-economic issues. Chapters cover a wide range of issues including tree decline, the role of soil fungi, the impacts and opportunities of fuel wood extraction and the attitude of landholders to environmental issues. The characteristics and current status of the temperate woodlands in each state are separately covered in individual chapters. Contributions are included from many different authors and from sources across Australia and for the first time students, researchers or the general public can access information on this fascinating subject. Extensive bibliographies attached to each chapter will enable the reader to pursue topics in greater detail.

Situated inland from the Dividing Range, the woodlands run from north of the Queensland border through New South Wales, Victoria and to the Eyre Peninsula of South Australia. They are also represented in the northeast and midlands of Tasmania and in the south-west of Western Australia.

Temperate woodlands with their widely spaced trees are the stuff of Australian legends. The paintings of Tom Roberts, Arthur Streeton and Hans Heysen drew heavily on the trees and landscapes of this region and it was a source of inspiration to writers such as Banjo Paterson, Lawson and more recently Judith Wright. Yet what remains now is a fragile and fragmented mosaic in a highly developed agricultural region.

Since the mid-19th century, 500 000 square kilometres of the woodlands have been cleared leaving just remnants of the eucalypt dominated ecosystems that once covered millions of hectares. At first a man could perhaps clear an acre in a day. But with mechanization, particularly that which occurred after the Second World War, rates of clearing as high as 40 hectares an hour became common. Clearing was anything but uniform across the area and was concentrated on those portions of higher fertility usually found on the lower slopes, the plains and the river valleys. Thus, the fragments that remain are scarcely representative of the original great diversity of eucalypt woodlands.

In Victoria, the box ironbark woodlands now have only 15% of their original cover. Only 12% of the grassy woodlands of Tasmania remain, and over 70% of the box ironbark woodlands of New South Wales have been removed. In Western Australia, depending on the agricultural value of the soil, woodland landscapes have been radically altered. The attractive and complex York Gum/Salmon Gum/ Wandoo woodlands have been decimated with the only extensive remnants lying along the periphery of their original distribution. Even these fragments are at risk. Throughout southern Australia, woodlands are threatened by weeds, grazing and feral animals, firewood collection and continued clearing. A recent survey in Central New South Wales found that 42% of the remaining woodland continues to be degraded and it is difficult to find any woodlands in Western Australia not affected by logging or grazing by domestic and feral animals.

This book understandably concentrates on the biology and conservation of woodlands, but in lamenting the widescale disappearance of Australia's temperate woodlands, we must not forget that of all the major ecosystems of Australia the temperate woodlands provided much of the basic agricultural wealth of the country and have played a vital role in the development of the nation. A great proportion of the wool and wheat exported from Australia in the previous 150 years was produced in these cleared woodlands. It is sad that until quite recently the environmental consequences of such indiscriminate clearing was not well understood.

Saving what remains of these woodlands, set as they are amid important agricultural regions, demands innovative approaches unlike those that have been used in the past. The concept of National Parks or large, representative natural reserves is largely irrelevant because fragmentation has rarely left sizeable enough areas and access is often difficult. Where problems exist such as rising saline water tables, individual well-intentioned action by farmers to preserve or rehabilitate woodlands are likely to be doomed unless strategic landscape or catchment based policies are adopted. The solution lies in co-operative ventures involving landholders, governments and the wider community.

For this to be realized there needs to be a much more informed appreciation among the general community of the value of woodlands in preventing land degradation, their value as habitat for a great number of animal and plant species and for their aesthetic appeal. The threats are real and continue to grow yearly. It cannot be the landholders alone who bear the cost of protection and rehabilitation. There is a valuable discussion in the book on the need for landholder incentives including fencing subsidies, rate rebates and tax rebates and the need in some instances to reserve public land and acquire private land. All this "to be underpinned by a safety net through statutory clearance control". Whatever mix of strategies is adopted, in the end they will

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have to be seen by the farmer to be profitable or to protect the long-term viability of the farm.

While many landholders are increasingly interested in retaining their remnant bushlands, they need technical information and financial incentives rather than information aimed at raising their awareness of its value. Landholders generally are very concerned by "dieback", the loss of paddock trees now occurring over a vast area of southern Australia. A chapter on this subject identifies the many complex potential causes of "dieback" ranging from waterlogging, drought, damage by possums and insects. It highlights the essential need for further research to establish the causes of "dieback" in various situations and to identify strategies which would enable existing trees to be protected or to be re-established.

This book is a unique reference for students, teachers and the general reader on the Australian temperate woodlands. It pinpoints the need for further vital research work and above all it is a "wake-up call" at a critical time to inspire the community to action.

You are the Earth

D. Suzuki and K. Vanderlinden, 2000.
Allen and Unwin, Australia.
128 pp. ISBN 1 86508 178 7.
RRP AUD$18.95.

S. HAWKINS[1]

THE communication of basic environmental principles to children should begin at an early age to solidly embed the awareness of human connectivity to the Earth. Everyone is connected to the Earth by the air, the water, and the food they consume. Thus when we degrade the earth, we inevitably degrade ourselves. This is Suzuki and Vanderlinden's strongest message.

You are the Earth is a book aimed at teaching young children (5–12 yrs) foundation environmental concepts. The overall approach of the book is based upon connectivity, in that human activities affecting the environment will eventually affect the human population, at the levels of both the individual and society.

Suzuki and Vanderlinden cover topics such as the air cycle, the water cycle and water conservation, soil science and the importance of soils for food, the sun and photosynthesis, and biodiversity and species extinction. Finally, Suzuki and Vanderlinden give a snapshot of the Earth today, and how individuals *can* make a difference.

The teaching of these concepts by Suzuki and Vanderlinden is utilitarian, in that minimizing human effects on the environment will ultimately benefit humans. This focus parallels society's economic focus of maximizing returns from the environment. I was disappointed that the intrinsic value of the environment, the value just for existing, was not emphasized in this book. The teaching of intrinsic values, a cornerstone to environmental philosophy, should have been a major focus of the book. The failure to cover this results in what could be coined as a failure to teach children a significant segment of morality. Perhaps this viewpoint was the easiest way to rationalize resource conservation to children of a predominantly resource consuming and economically driven society? However, despite this utilitarian viewpoint, the overall message of resource conservation is still very positive and makes a significant contribution to environmental education.

The book finishes with a questionnaire to test children on the environmental concepts iterated in the book, and a series of fun experiments and activities that apply some of these concepts. This final structure enables the book to be used as a text book for primary school students, with learning supported by corresponding activities.

The focus of the book being for young children should not suggest that these foundation environmental concepts would be familiar to adults. When reading this book, I postulated that even my parents would likely not understand basic concepts such as the water cycle or photosynthesis, and thus do not understand how the Earth truly operates. It is likely that environmental awareness among adults, similarly to my parents, fall well below even the basic foundation environmental concepts. Because of this, *You are the Earth* would be an excellent addition to the bookshelf of parents, as well as their children.

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