

Book review

'The delicate and noxious scrub'. CSIRO studies on native tree and shrub proliferation in the semi-arid woodlands of eastern Australia.

By Jim C. Noble (1997)

137 pp. ISBN 0643 05980 6. Price \$29.95

(The book can be purchased either directly from the author at CSIRO Wildlife and Ecology, GPO Box 284, Canberra, ACT 2601 or from CSIRO Publishing, PO Box 1139, Collingwood, VIC 3066.)

Few people in the arid and semi-arid 70% of Australia are unaware of 'woody weeds': unpalatable native shrubs that have proliferated since European pastoralism began over 150 years ago. Few pastoralists are unaware of the massive research effort aimed at understanding these plants and finding economic control methods. This book summarises that research. As the last three decades of research has been dominated by CSIRO (but many others, all acknowledged), it is appropriate that one of the main scientists involved, Jim Noble, has written this wonderful book. It is also fitting that Noble has done it at this stage of his career as CSIRO is relentlessly pushed into three-year bottom-line contract research. The book stands as a testament to the benefit of classical ecological research of the type needed in Australia.

Why do I say the book is "wonderful"? Simply because it is ecology written the way it should be: rigorous science set in an historical context, integrating disparate information from multitudinous sources, seeking solutions to genuine problems, and very elegantly written and published.

Noble starts with a marvelous historical account of the problem. This alone is worth the relatively modest cost of the book. It is also a model for historical – ecological research of the type no longer in fashion. Yet without this type of information, the essential background is lost. The historical background includes a brief but tantalising critical re-evaluation of the all-important 1901 Western Division Royal Commission and concludes with a brief historical overview of pastoral science in western New South Wales.

Chapter 4 summarises 30 years of ecological research into a range of shrub species, and of attempts to find control measures. Most are semi-successful (burning, spraying, blade-ploughing, blitz grazing), with some species under some circumstances. No single measure or combination is applicable to all species or even one species under all circumstances. This is hardly surprising given the range of genetic variation in the species, and the differences in pastoral management involved. Rather than providing endless repetitive details of each study, Noble summarises these in Chapter 5 as case studies under a range of headings. These are not a summary of experiments, but an overview of the main insights gained from the many trials. Equally important, they are a vehicle for offering ecological insights into the behaviour of these very successful and adaptable plants. In Chapter 6 Noble draws together the many threads under two headings "changing perceptions" and (of course!) "future research". Of some interest is his observation:

"The dominant problems confronting governments and landholders today in the semi-arid woodlands are more structural than ecological in character. They relate to such fundamental issues as land tenure, property size, enterprise diversification, incentives for conserving biological diversity, and other related socio-economic matters, all of which have strong policy and political implications". (p. 81).

Yes indeed, and I believe quite strongly that this has in fact been the case for most of the past three decades while the bulk of the woody weed research was being conducted. Does this mean

that the research was misdirected? Most emphatically not! But let's not kid ourselves that it has made a great deal of difference to pastoralists. We now know a lot more about the ecology of these communities, and of the species, but that does not translate into being useful for pastoralists.

The research summarised by Noble has been rigorous, thorough, wide-ranging, well-grounded in theory and building on available information. He does not mention (because it was underway while the book was being published) the so-called research into biological control of native hop bushes near Bourke using native insects. This was biological nonsense from the outset, and should have been dismissed as such. Instead it was funded several times from both WEST 2000 (a joint New South Wales and Commonwealth government initiative aimed at helping graziers in the Western Division of NSW) and other sources. I can only wonder at the refereeing of the grant applications. Unfortunately, this inanity was held out as being grass-roots research and as the key to solving the woody weed problems. Pity about the science!

To return to more positive things, Noble concludes with an exhaustive list of references and several appendices with detailed biographical notes on some of his early sources. An excellent index makes finding information easy.

My only criticism of the book is that there is no detailed analysis of the costs of the many treatments that have been tried. However, Noble does say several times that the costs exceed the value of the land. Perhaps enough said!

The book is extremely well-produced with an attractive range of illustrations that drew me in. It is a pity that more books of such solid content are not as well illustrated with such a range of materials. The inserted colour photos are uniformly excellent and enhance the text. I realise that it was not relevant to the theme of the book, but it would have been nice to see some close-ups of the beautiful flowers of the several weedy species of *Eremophila*. They may well be a problem to pastoralists, but they are truly among the most beautiful Australian flowers. Noble uses footnotes throughout the book, which is somewhat unusual in a 'scientific' book. I did not find them distracting, rather they allowed me to seek additional information if I wanted to. Some of Noble's comments in the footnotes are pure gems.

Who should buy this book? Anyone interested in the arid and semi-arid 70% of Australia. Yes, the book does focus on eastern Australia, but it has numerous references to the Centre and to the west. Anyone with an interest in the environmental history of Australia would benefit from this book. This is a source book on the history and ecology of Australian semi-arid lands. Buy the book, you will certainly enjoy reading it and learn about far more than just woody weeds.

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