

Book review

Pasture Degradation and Recovery in Australia's Rangelands — Learning from History

Edited by Greg McKeon, Wayne Hall, Beverley Henry, Grant Stone and Ian Watson.
Published by Department of Natural Resources, Mines and Energy, Brisbane, Australia, 2004.
256 pages. ISBN 1 920920 55 2

This book has now been available for two years, but its message is timeless, and even more pertinent today, given the crippling drought currently gripping much of Australia. As the title suggests, the focus is on documenting the causes of pasture and resource degradation in Australia's extensive rangeland communities, as well as on subsequent recovery events — although sadly the latter has not always been a given.

The purpose of the document, as stated by the lead authors, is to provide reference material for those responsible for grazing land management and its environmental (resource) consequences. Indeed, the bibliography of some 441 citations provides a great introduction to the still-emerging science of range management in Australia. However, it is the wisdom distilled from these sources, and most importantly, the detailed insights and knowledge of the authors themselves, that is the real value of this compilation.

Chapter 1 provides a comprehensive overview of the climate and economic forces contributing to historical degradation episodes in Australia's rangelands. Here is a succinct explanation and summary of all the present terminology now regularly applied to forecasting our weather — ENSO, IPO, SST, El Niño, La Niña, synoptic circulation systems etc. (yes, a necessary glossary of the acronyms peppering the book is included). This chapter also highlights grazing and resource management decisions (such as reduced use of fire), as well as resource limitations (*e.g.* infertile soils and native woody weeds), that have contributed to degradation events. Urban readers and politicians would benefit by understanding the distinction drawn between desirable and undesirable native shrubs (woody weeds) in rangeland environments (as is also well highlighted in Chapter 3).

Chapter 1 teases out the myriad influences contributing to rangeland degradation very well, but it is unfortunate that only passing reference is given to the huge problem of landholders being expected to manage and survive on inadequate 'living areas' — resulting from past sub-division decisions made by all governments administering Australia's rangelands. While such mistakes are now widely acknowledged, there has been hardly any concerted effort to redress this earlier error in land development policy. Consequently, it takes little additional pressure (whether climatic, economic etc.) to tip our 'non-living area' holdings into another degradation cycle, whether at individual property, district or regional scale.

One other cautionary note is also needed. It is quickly becoming fashionable for our media and some politicians to equate 'global warming' with 'drought' or at least as a harbinger of it. Yet, droughts and climate variability have defined Australia's landscapes for millennia — well before factors associated with anthropogenic global warming came into play. It would be very disappointing if all the excellent lessons and insights in this book were subsumed to the mantra of global warming, as this would guarantee that the lessons of history, so well documented herein, would not be learnt!

Chapter 2 is the 'meat' of this work. It thoroughly chronicles eight degradation and recovery episodes in Australia's rangelands, that have taken place since the introduction of domestic livestock. The more or less universality of the themes and causes of degradation and 'recovery' over such a broad variety of landscapes (in WA, SA, NSW, the NT and Qld) is striking. The authors draw upon historical rainfall and stock records, along with their considerable skills in pasture modelling and simulation to reconstruct the sequence of events leading to each degradation episode. They then tellingly relate each episode to climatic forces such as ENSO and IPO/PDO to interpret and identify the various climatic drivers contributing to the various degradation events, with a view to improving predictive capabilities. Certainly, this reader was left well convinced about the potential power and utility of these climatic signals.

Yet, while the events catalogued are comprehensive and cover the major rangeland ecosystems in Australia, there is one notable absentee — Queensland's Mitchell (*Astrelba* spp.) grasslands. The Mitchell grasslands have undoubtedly been subject to drought occurrences similar to those detailed for the eight regions tabulated, and there is no shortage of information for these communities to preclude any necessary interpretation. Therefore, we can reasonably conclude that Mitchell grass communities have largely escaped notable degradation episodes. Perhaps, if we can successfully analyse the reasons for this, we may gain even greater insights into preventing future degradation episodes in the rangelands, in addition to those insights so well documented here.

Chapters 3 and 4 are detailed case studies of particularly well recorded sites in the 'desirable' shrublands of Western Australia and the Mitchell grass and mulga lands of central/south-west Queensland. The message of these chapters is that a wealth of knowledge into sustainably managing our rangelands can now be derived: (1) from intelligent modelling of accumulating data sets sourced from long-term research, and (2) by seeking out those properties/managers who have maintained comprehensive station records over long (decadal) time frames. It is the prime value of this book that its authors and contributors have recognised that all sources of information can be of benefit, nay are essential, if we are to sustainably manage our rangelands into the future. Sadly, from my perspective, I see this appreciation readily apparent in researchers, extension staff and landholders, but often lacking in land administrators, increasingly beholden

to the apparent subjective 'policy' of the government of the day.

This book is very well written, formatted and presented despite its A4 size. All the illustrations and maps are beautifully done and colour is well used to make them easy to read and comprehend. Some well selected prints by Sir Russell Drysdale are even included to highlight that artist's impression of Episode 4. Apart from the illustrations, extensive tabulated data highlight the authors' reliance on factual material to support their observations, insights and conclusions.

There are altogether 45 authors and contributors listed as providing input to this work. Nevertheless the drive and scholarship of the lead author, Greg McKeon, is apparent throughout. The compilation has Greg's imprint all over it, along with his concern for future generations of rangeland managers and administrators to not repeat the errors of the past. It is my conclusion after reading this book that we can all learn much from this well documented and reconstructed history and the material and arguments presented are a very positive step towards this end.

If you need any further encouragement to read and digest this text — here 'tis. The book is available for FREE! So get in early before a smart university

lecturer lists it as a compulsory text for all his/her resource management students. For your copy, just E-mail the aptly named rouseabout@nrm.qld.gov.au requesting the book.

Finally, while you are about it, you might be interested in obtaining a copy of the excellent Wall Poster (see Plate 1.1 in the book or the following web page <<http://www.longpaddock.qld.gov.au/Products/AustraliasVariableClimate>>), highlighting Australia's variable rainfall from 1890 to the present. Posters cost AU \$3.65 and are available in person through the Department of Natural Resources and Water, Land Services Centres and by mail-order via fax or phone from: Service Centre, Department of Natural Resources and Water, Locked Bag 40, Coorparoo Delivery Centre, Queensland 4151, Australia. Phone (07) 3896 3216, Fax (07) 3896 3333 International (+61-7). E-mail: <ServiceCentre.Woolongabba@nrm.qld.gov.au>

Mount this poster inside the door of the smallest room in your house. Whatever your role in managing Australia's rangelands, regular and thoughtful consideration of this poster will certainly make you better for it.

Bill Burrows, 7 Smithwick Place, Emu Park, Qld 4710