

BOOK REVIEWS

'Anticipating the Inevitable': a patch-burn strategy for fire management at Uluru (Ayers Rock-Mt. Olga) National Park by *E.C. Saxon* (Publishers: *C.S.I.R.O., Albert Street, East Melbourne*) 1984. Price \$6.00.

At last, there is an attempt to come to grips with the problems of the huge uncontrolled fires of central Australia with a realistic, economical and practical strategy based on environmental characteristics and biological requirements.

The book provides a fire management strategy for Uluru National Park. Although it is designed for use by managers of that National Park, the philosophy and the methodology developed in it are greatly relevant to the fire management of all of arid Australia, and particularly mulga-spinifex country. It should be studied by everyone with an interest in fire management in arid Australia. My regret is that the title and cover tend to be subtle and not eye catching.

The strategy is based on a premise that the huge wildfires of today are changing the vegetation of the area. This is in contrast to the previous management strategy that Aborigines practised in Central Australia.

Aboriginal people used fire extensively, deliberately and skilfully. European settlement effectively suppressed the Aboriginal fire technology over a few decades around the turn of the century.

"A prime concern in managing wildfires in arid Australia is to limit the extensive wildfires that now originate in the hummock grasslands and spread unchecked into the *Acacia* shrublands . . . It may not be possible to reconstruct the fire management strategy developed by Aborigines for this ecosystem. It is clear however, that a spatial and temporal mosaic of fire-created patches is the regime under which a dynamic system has been maintained for many thousands of years" (Griffin p12).

The conventional approach to fire management i.e. using machinery to make firebreaks, is regarded as inappropriate because it is costly, destructive and

inconsistent with management of extensive natural ecosystems.

The plan develops a method for effectively and economically using strategic patch-burning techniques to produce a spatial and temporal mosaic of burnt patches. It takes into account not only the need to continuously revise the selection of patch-burn sites in an intentionally dynamic system, but also the differing responses of different vegetation associations to fire. For example it takes into account the mosaic of associations that have differing responses to fire, notably mulga which is fire sensitive and spinifex which is fire prone.

The strategy, which was written by E.C. Saxon (who was also editor), G.F. Griffin and G.E. Allen, has been developed as a collaborative research contract between the C.S.I.R.O. Division of Wildlife and Rangelands Research and the Conservation Commission of the Northern Territory.

The illustrations are clear, relevant and informative. They include colour photographs of principal land units and fire effects on vegetation; aerial and ground stereo pairs; vegetation and fire strategy maps with overlays showing fire history and initial sites for strategic patch-burns. There are also numerous line drawings.

It is perhaps a pity that one has to read the subtitle to this volume before the philosophical significance of the principal title becomes apparent. Similarly, it is a pity that the cover illustration, 10 jigsaw pieces each depicting a fragment of the fire ecology — fire management story but none fitting any of the other pieces, is subtle rather than "selling".

A.N. Start

'The Camel' by *R.T. Wilson* (Publishers: *Longman*). Price \$25.

Lambs are enclosed where it's never exposed,
Coops are constructed for hens;
Kittens are treated to houses well heated,
and pigs are protected by pens.
But a camel comes handy
wherever it's sandy —
Anywhere does for me.

Australians are mainly interested in sheep and cattle, and (in the rangelands) with a few other animals that have 'gone feral', like the goat or the rabbit. Few give a thought to the many thousands of camels, now established as feral animals in parts of the desert country of the inland.

However, if anyone does need to know more about the camel, there is now a book, appropriately

named 'The Camel' which can provide all the information required. It contains all that is known about the origin, distribution, biology and management of this intriguing beast of the desert. For instance, I found in it the useful information that the camel is immune to foot and mouth disease, and hence cannot pose a threat in the event of an outbreak in Australia.

If you should find it necessary to have more technical information about the management or husbandry of the camel, you will find a copy of this book a useful addition to your bookshelf.

A.D. Wilson

'Northern Australia: The Arenas of Life and Ecosystems on Half a Continent' by D. Parkes (*Publishers Academic Press, Sydney*) 1984.

This multi-author book, edited by Professor Parkes of the Department of Geography, University of Newcastle, is in essential an account of the natural resources of northern Australia and the human ecology of its inhabitants. (The above, or something like it, might with advantage have been used as a subtitle instead of the somewhat trendy and strident one adopted).

Professor Parkes and the contributors to the volume deserve at least two and a half cheers from scientists, teachers, administrators and intelligent laymen with interests in and responsibilities for northern Australia (here defined as north of 26°S latitude). In the trek of a team of some 26 mettlesome authors over pretty rough and often uncharted country there has been some mismatching, making off in all directions and stumbling into one another, but such lapses are perhaps almost inevitable in multi-disciplinary, multi-author studies of complex topics. To withhold the last half-cheer may thus seem parsimonious, but in this largely excellent book there are deficiencies. In the critique that follows, chapter authors are not specified, for reasons of space only.

The book is in three parts. The first comprises chapters on the resources, 'natural' and human, of the area. After a brisk historico-geographical introduction, there follow chapters on climate, 'interactive natural subsystems' (geology and soils), energy resources and human populations, with a separate section on Aborigines. These are a mixed bag of averagely high standard, though it is almost incredible that the climate of a region, the background fabric of which is vegetation being consumed by stock, is described without reference to evaporation or to length of growing season. The chapter on human populations was, to the reviewer, impenetrable.

The second part deals with the extensive natural ecological communities. It includes an excellent chapter on marine ecosystems, followed by two good

contributions on the characteristics and stability of the rangeland. Useful too is the section on land administration and tenure, those paper rules drafted in cities that have had and still have such important biological consequences. This second part, as does the first, includes a chapter on satellite observation of land and water resources: both stick out like rocks in the general flow of the book but are essential reading.

If the volume had ended with the second part, the reader's reaction, apart perhaps from pleased surprise at the inclusion of marine ecosystems, would have been muted, since most of this stuff has been done before, and while some chapters are better than their corresponding predecessors, some are worse. Furthermore, the depth of assumed technical knowledge varies widely between individual chapters, which casts doubt on the clarity with which the readership target has been envisaged. However, what gives the book its strength and originality is the conjunction of this material with that of the third part, the accounts of 'intensive' north Australian ecosystems — the cattle station, the mining centre. These chapters are valuable essays in human ecology. The third part also includes sections on human climatic stress and health.

To sum up, Professor Parkes and his colleagues have made a brave attempt, for which they deserve every credit, to present a holistic picture of how humans have used and are using the unique but limited pattern of resources in north Australia. If they have not wholly succeeded, if the picture is more like a stained glass window than a canvas, the blame must be put, not on the expertise of the individual contributors, but on their natural independence of approach. Humans are like that.

M.J.T. Norman

'Australian Soil and Land Survey Field Handbook' by R.C. McDonald, R.F. Isbell, J.G. Speight, J. Walker and M.S. Hopkins. ISBN 0 909605 327. (*Publishers: Inkata Press, Melbourne, under the auspices of the Australian Soil and Land Resources Committee for the Standing Committee on Soil Conservation*) 1984. 160 pp. Recommended retail \$21.95.

This book, compiled by people with considerable combined field experience in biological surveys and research, fills a need not previously addressed — that of an authoritative basis upon which surveys of a diverse nature, including the increasingly mandatory "environmental impact statements", may be conducted. It complements similar books relating to soil surveys and will no doubt be used extensively not only by field surveyors, but also by tertiary educationalists in the biological sphere.

The authors of the first chapter inform us that "The Handbook is designed as a reference to attributes necessary for describing systematically the site

and soil conditions as they pertain to landform, vegetation, land surface, soil profile and substrate material". It succeeds remarkably well in achieving this in spite of the complexity of natural ecosystems and the diverse aims and objectives of surveys.

Throughout, all authors are conscious of the necessity for computer compatible data, from the point of view of both storage and manipulation. Examples are given of "site description sheets" which are designed with this in mind. Detailed notes on the use of these sheets are provided as are cards designed for field use containing a succinct summary-reference to codes given in the Handbook.

For the young scientist setting out on a career, this book provides an invaluable base for any field survey with a biological bent: all terms used are clearly defined, and little is left to ponder. The experienced field scientist too will find that the book provides a well researched guide which he can use to improve the efficacy and efficiency of his survey technique.

In summary, this Handbook meets the objectives set by an expert panel which was established at

the original direction of the Standing Committee on Agriculture. These objectives were the development of "interim standards of soil and land classification and mapping capable of general application" and the production of a "handbook of standard terminology and methodology". At the realistic recommended retail price of \$21.95, this Handbook, developed for Australian situations, will get a lot of use in this country, as well as, I suspect, many others.

A.J. Pressland