

REVIEWS

THE NEW ZEALAND BEECHES: Ecology, Utilisation and Management, by J. A. Wardle. N.Z. Forest Service, 1984.

Foresters will be pleased to see this text on New Zealand's beech forests. In terms of area, landscape prominence, wood volumes or total biomass, native *Nothofagus* species dominate our national forest estate. Though only of minor importance as a source of commercial timber products, beech forests form the setting for popular recreational pursuits, they act as a major reservoir of habitat for indigenous flora and fauna, and are home to introduced animals now of considerable economic worth, whilst stands of beech provide effective protective cover over extensive steep-land river catchments in both the North and South Islands. Dr John Wardle of the Forest Research Institute, as author of this N.Z. Forest Service publication, does not understate the significant multiple functions of beech forest and acting upon their predominant role successfully tackles a most comprehensive review of these forests and their "ecology, utilisation and management".

The task of collating hundreds of publications into a readable yet accurate account is difficult and demanding. Wardle has accomplished this particularly well despite the additional handicap of incorporating a full sixty years of references and an equal span of internal Forest Service reports and studies. Such an approach does have disadvantages as the depth and repeatability of individual items of study or observation can vary widely — for instance L. F. Roth may suspect *Armillaria* mortality amongst regenerated beech crops (p. 197) but if background observations did not include examining regeneration amongst sites of natural catastrophes similar to clearfelling (windthrow) then is the contribution all that valuable to the beech forest story?

The collective weight of many Forest Service high country surveys forms a considerable data base which is useful in quantifying trends and sequences amongst beech forest. Salient relationships to environmental variables are clearly outlined; it is pleasing to note the attention paid to soils' influence on forest composition. Wardle's own long-standing research amongst indigenous forest, particularly South Island mountain beech/black beech forests, allows recognition and development of coherent themes from the disjointed and frequently short-term nature of literature reviewed. The vulnerability of established forest through inter-

actions of climatic events (snow, wind, drought) with biota (*Platypus* pinhole beetles in particular) is a well-composed theme — the travelling forester/ecologist will obtain from this book a new appreciation of the skeletons of large beech along the Inangahua's Rahu Saddle or the windthrown "coupes" scattered about Mt White in the upper Waimakariri catchment. Similarly Chapter 4 (Types and Sequences) warrants compulsory study by all natural science students who wish to work with any indigenous forest as Wardle highlights the arbitrary content of all forest classification and the inherent conflicts between the pragmatic utility of cover-typing maps and the ecological sophistication of multi-species typing.

The New Zealand Beeches is not a "coffee table" publication for casual inspection. It is a solid volume of condensed knowledge. The scattering of photographs are almost exclusively black and white but are of excellent quality. I regarded the print and layout as clear, though the general presentation is understandably textbook-frugal. Presentation of maps depicting forest distribution (Chapters 2 and 3) are disappointing in their scale, choice of screens and a peculiar reluctance to repeat the legend. The illustration by map and photograph of detailed cover-typing and multi-species descriptions for samples of beech forest would benefit this book and be in sympathy with the detail of the text.

The more discursive chapters that address the utilisation and management of beech forests provide a balance that is unfortunately missing from the normal publicity surrounding issues in beech forest management be it timber cutting or venison recovery operations. The practice of forestry in New Zealand and resource management generally will benefit in future years if secondary and tertiary educators employ *New Zealand Beeches* in their lectures and classwork.

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NOTE

TEMPERATE BROAD-LEAVED EVERGREEN FORESTS

A volume thus entitled has been published (1983) by Elsevier, as part of a planned series on the ecosystems of the world. The Editor-in-Chief of the series is David W. Goodall of CSIRO Division of Land Resources, and this volume has been edited by J. D. Ovington of Australian National Parks and Wildlife Service. The volume of 239 pp. contains a section (pp. 33-70) by P. Wardle (Botany Division, DSIR) with M. J. A. Bulfin and J. Dugdale, entitled "Temperate Broad-leaved Evergreen Forests of New Zealand".