

Conserving Forest Biodiversity: A Comprehensive, Multiscaled Approach

David B. Lindenmayer and Jerry F. Franklin
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OVER several years Lindenmayer and Franklin have developed a position that the long-term conservation of many forest animals relies on both an expanded, representative reserve system and management of production forest to assist in the conservation of biodiversity (e.g., Gibbons and Lindenmayer 1997; Lindenmayer and Franklin 1997, 2000; Lindenmayer and Pope 2000). In this book they present a detailed explication of that position, organized into four broad sections:

- principles for biodiversity conservation in the matrix (including the importance of the matrix in key areas of ecology such as metapopulation dynamics, habitat fragmentation, and landscape connectivity and general principles for matrix management);
- biodiversity conservation across multiple spatial scales (including using natural disturbance regimes to guide human disturbance and landscape-level and stand-level elements of matrix management);
- case studies in developing multiscaled plans for biodiversity conservation (illustrating the concepts above, plus the role of adaptive management and monitoring);
- adaptive management and the human aspects of matrix management (including social dimensions and tensions in implementing matrix-based forest management).

The approach is strongly interdisciplinary, drawing on research in conservation biology, landscape ecology, restoration ecology and silviculture. There is also consideration of social, political and cultural issues. The detailed discussions of the relevant literature, examples from Australia, the United States and South America and carefully chosen case studies of significant experimental work in biodiversity management in production forests combine with the breadth of the approach to produce a book with appeal to research professionals, postgraduates and advanced undergraduates.

For many readers the breadth will be one of the greatest attractions of the book. Not only is there an integration of several different disciplines in the approach to biodiversity conservation, but the international range of examples and case studies alerts readers to developments both locally and globally. Thus researchers or managers concentrating on a particular region may benefit from overviews of

research and practice elsewhere. From an Australian perspective, I was pleased with the thorough coverage of the major Tumut experiment from eastern Australia, the overview of biodiversity in mountain ash forests and the excellent, succinct account of adaptive management in Tasmanian forestry (p.180). Not all readers will consider the final chapter on the social dimensions of matrix management, but I found this to be one of the most important sections of the book. It acknowledges specifically the social and political dimensions of resource management and thereby encourages scientists to consider the wider context of their work. Referencing throughout is extensive, so the book provides a ready introduction to key papers in the voluminous literature. The authors also endeavour to cover all sides of controversial issues, providing a vital sense of balance.

However, the breadth also means that important background issues are not always fully developed. For example, the authors acknowledge that their coverage is limited in scope with regard to the broad disciplines of landscape ecology and conservation biology (p. 39). I also noticed that while precautionary approaches to forest management were raised (p. 264) there was no explicit definition of the precautionary principle, nor reference to examples of how it might be quantified or applied directly to forest management (e.g., Calver *et al.* 1999; Di Stefano 2001). Other readers may be disappointed that the potential of silviculture to manipulate production stands for biodiversity conservation is not developed as thoroughly as some of the specialist sources (e.g., Florence 1996). Treating all issues raised at depth could only be accomplished by a significant lengthening of the book. On balance, I believe that the authors were correct in opting for a more concise account at the price of loss of detail. The great advantage remains the integration of approaches, especially for readers who already have depth of coverage in some of the background disciplines or who wish to grasp the essentials of application rather than all the underlying theory.

Issues of breadth of coverage versus depth are also significant for lecturers considering setting the book either as a text or recommended reading. Able final year students in ecology and conservation biology will find the book refreshing, with its practical applications answering the perennial question of "what use is this in the real world?" Other pedagogical advantages include the key point summaries accompanying the numerous case studies and the conclusions section in other chapters. However, it may be necessary to supplement this book with detailed reading on specific topics (e.g., Burgmann and Lindenmayer 1998 for a background in principles of conservation biology). Those tempted to reproduce a single chapter in a photocopied "brick" of student resources should note that

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references are collected in a single section at the end, rather than placed at the end of individual chapters.

The presentation standard of the book is high in both paperback and hardback editions and copies should wear well in libraries. Numerous black and white diagrams and photographs enhance the text and the avoidance of colour presumably helped to contain the price. The index is comprehensive, but there is no separate index of authors that would be helpful for tracing the contributions of those cited to different aspects of forest management.

Overall, Lindenmayer and Franklin is undeniably a valuable reference for researchers, managers and students interested in the conservation of forest biodiversity. It deserves to attract a wide readership.

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Magpie Alert: learning to live with a wild neighbour

Jones, D. 2002.
University of New South Wales Press Ltd.
pp 157 ISBN 0 86840 668 6
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BOOKS are written for many different reasons. To my mind, *Magpie Alert* is unique in this regard as it attempts to bridge the gap between enjoyment of suburban wildlife and fear of dangerous attack from a wild bird.

The Australian Magpie *Gymnorhina tibicen* poses an unusual problem. They are one of the few species that has thrived under the changed environment created not only by our agriculture, but by our suburban lawns and playing fields over which magpies forage for insects and their larvae.

For most of the year magpies are welcome as part of the family by suburban households, but over a short period of a few weeks the occasional “rogue” individual takes it upon himself to defend his nestful of young, and in doing so attacks passers-by, particularly young children and people on bicycles.

Each year, the responsible authorities receive reports of these attacks and attempt to remedy the situation and soothe the public, but the easy solution of shooting the culprit, as was done in the past, is no longer acceptable to a public taught to appreciate the wildlife around them. What is an enemy to a kid on the way home from school may well be another family’s much loved garden visitor.

This continuing problem was raised by the Queensland Parks and Wildlife Service who were fortunate enough to involve the cooperation of Griffith University with a specialist group – the Suburban Wildlife Research Group (SWRG), led by the author of *Magpie Alert*, Dr Darryl Jones. This book is the result of eight years investigation by SWRG through the work of Jones and several students undertaking post-graduate research under his direction.

The book consists of seven chapters covering a broad range of topics in logical sequence, starting with an appreciation of the suburban landscape “the dynamics of suburban life” as shown by the rapidly developing city of Brisbane. The change from native bush with its seasonal fluctuations to a suburbia with perennially green well-watered lawns proved to be

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