



# Botany of Rotorua

**Botany of Rotorua is compiled by Bruce D. Clarkson, Mark C. Smale and Chris E. Ecroyd and was published in 1991 by Forest Research Institute, Rotorua. The retail price is \$39.95.**

This well-laid-out book describes and illustrates the botany of the Rotorua Lakes Ecological District which is described in the introductory chapter as one of the most distinctive districts in New Zealand.

Short chapters by a variety of authors cover the following topics: physical factors that shape plant habitats; history of the vegetation; native forest; exotic forest; pasture; naturalised vegetation of roadsides, waste places and urban areas; aquatic vegetation, lake shore vegetation; mires; vegetation of thermal areas; a century of change on Mount Tarawera; threatened and local native plants; coastal plants inland; mosses and liverworts; fungi; and traditional uses of wild plants. Each chapter is illustrated with well-chosen, high-quality photos that illustrate particular points in the text. In addition, each chapter comes with its own title page laid out in a uniform style.

At the back of the book there is a list of references and recommended reading for each chapter. This is followed by a glossary of technical terms and a detailed index that includes both common and scientific names for plant species mentioned in the text.

The overall emphasis of the text is descriptive rather than analytical or ecological. This may mean that the book will be used more for referencing rather than being read from cover to cover. More information on, for example, why particular native forest types are in certain locations would have made for more interesting reading. In addition, it would have been helpful for the book to indicate areas and vegetation associations that are of particular significance. Several chapters (for example vegetation of thermal areas and aquatic vegetation) did include more ecological information.

Careful editing has standardised the writing style, which is generally easy to read. Careful attention has been paid to the up-to-date use of scientific names. Common names are used where they exist and they are followed by the scientific name in brackets.

A strong point of the book is the use of many high-quality photographs throughout the text. These photos which are of habitats, plants, plant communities and individual communities are a valuable supplement to the text. This extensive use of such high-quality photographs considerably widens the potential readership.

## BOOK REVIEWS

I found the chapter on the History of the Vegetation very interesting, although to be true to its title the chapter should have covered more than the terrestrial plants of the district. At the other end of the book, the chapter on Traditional Uses of Wild Plants is particularly interesting and appropriate for a book on the Botany of Rotorua.

The Aquatic Vegetation is another important chapter for Rotorua, given

the importance of lakes in the district. I would have liked to have seen a clearer distinction made between native and exotic vegetation and in particular between a major lake without exotic oxygen weeds (now only Lake Rotomahana) and lakes with oxygen weeds.

Another distinctive habitat in the Rotorua district is the thermal areas. The two chapters on these areas provide the reader with information on each of the major thermal areas, which should be helpful for visitors.

At \$39.95 the Botany of Rotorua represents good value for money. The extensive use of high-quality photographs and the well-laid-out, clearly-written text gives the book a wide potential readership.

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# The Young Eucalypt Report

**The Young Eucalypt Report, edited by C.M. Kerruish and W.H.M. Rawlins and published by CSIRO, is available from CSIRO Bookshop, 314 Albert St., East Melbourne, Victoria 3002.**

The sub-title of this important publication is: Some management options for Australia's regrowth forests. The report outlines the results of the "young eucalypt programme, an ambitious five-year research, development and demonstration project funded and managed by CSIRO and the forest authorities and forest industries of Victoria and Tasmania. The participants combined their resources to examine the implications of thinning the faster-growing, ash-type eucalypts and of using the young wood.

Within the programme there were eight projects, and the bulk of the book consists of reports on these individual aspects written by the project coordinators. The major results can be briefly summarised as follows:

- About 100,000 ha of fast-growing

regrowth suitable for thinning was identified. This consisted largely of regenerating *Eucalyptus regnans*, *E. delegatensis*, *E. nitens*, *E. obliqua* and *E. globulus* following logging and wildfire.

- The most productive regime was predicted to yield, per hectare per year over a shorter rotation, 55% more wood than the traditional unthinned regime.
- Sawlog losses from decay as a result of wounding can be restricted to only 5% of the total volume.
- Levels of drying degrade obtained in the younger wood using the best technique were little different from those currently attained by using traditional practices (quarter-sawing and drying) on timber from older and larger trees. With effective drying, back-sawing is more profitable even for large trees and allows the sawing of much smaller trees.
- Thinning could be used profitably as pulpwood.
- Thinned stands have higher NPVs than unthinned stands and this ranking is insensitive to changes in key parameters

which were the subjects of the research projects.

The editors state that it was decided to focus this work on the technological and economic implications of alternative management strategies without considering the longer-term biological and environmental issues. This was done in order to encourage industrial participation in the programme but it remains to be seen whether or not such an approach is still viable in Australia. Their report clearly shows that a significant proportion of Australia's future hardwood needs can be met by thinning some regrowth forests to increase wood production. It may even be true, as they state, that it is simplistic to believe that there is a choice between plantations and logging native forests. But to our trans-Tasman neighbours it should be obvious that the public and their elected representatives are keen on simple solutions to forestry problems!

This is nevertheless a very readable report on an ambitious and successful cooperative project. It should be prescribed reading for anyone interested in the management of natural forests, and also contains useful information relevant to eucalypt plantations and the utilisation of young eucalypt wood.

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## International passport for goods in transit

Almost every log of timber leaving New Zealand carries its own "passport" – a barcoded label with a unique number which identifies its vital statistics of type, grade and origin.

It is essential information a ship's captain needs to know, like ballast, to keep the ship steady. It is also used by everyone else along the transport and distribution chain to keep track of the goods, whether logs, food, machinery or other products.

Labels on logs relate to the forestry company which grew the trees, the transport company taking the logs to dockside, the stevedores in the marshalling yard handling them, the ship taking them overseas and their ultimate destination.

Harry Malone, Managing Director of one of New Zealand's biggest labels and barcode manufacturers, Allmark Industries in Auckland, says labels and barcodes are passports – unique travelling numbers – for any goods in transit within New Zealand or overseas.

Internationally, barcodes with a grid of thick and thin black lines or computerised numbers, identify all details of the

product, from its country of origin to its batch number.

Manufacturers are increasingly asked to barcode the outside of packages as well. A supplementary international code has been devised to go on the outside of cardboard cartons and other packaging to identify the number of units inside.

Transport and distribution industries are paying a lot more attention to labelling and barcoding for all types of goods, from logs to trays of kiwifruit, says Mr Malone. Scanning systems are now an integral part of the manufacture, transport and sale of goods.

They are also security measures to keep track of goods and to ensure delivery. Barcoding is increasingly used in-house to improve stock control, reduce handling and eliminate errors.

At Tauranga port, export logs have barcoded labels stapled on to them before delivery to the ship. Each log's unique number is downloaded into a central computer, where every detail about the log and its movements will be recorded.

Bill Rutherford, manager of a major company in charge of marshalling and labelling the timber at Tauranga port, says the changeover from a manual system to barcoding has been a steep learning curve for the industry over the past few years.

The kiwifruit industry was one of the innovators with pallets of kiwifruit barcoded at dockside. But unlike kiwifruit, which cannot be loaded in wet weather conditions, timber logs are moved in any weather. Labelling hardware technology had to be developed to withstand the snow, rain, sleet and burning sun.

"Barcoding has to be done to eliminate errors," says Mr. Rutherford. "The industry cannot function without it. That is the bottom line. We're motoring very fast. We'll see some sharp innovations this year as more barcoding is used for marshalling and stevedoring."

previously been abused. Developments in Sweden also prove that planned, cultivated forestry can be successfully combined with action strategies that safeguard and preserve the values inherent in nature itself as well as biological diversity, the author adds.

## Plantation forestry – road to revitalise a natural resource

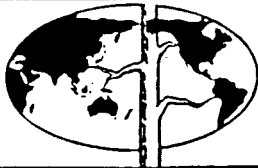
Well-organised plantation forestry is perhaps the best example of a strategy aimed at solving the problems of raw materials. The systems must be based on an economically sound approach in harmony with the great natural cycles that control the global environment, says Jan Remröd, a Swedish forestry professor and author of the new book "The Forest of Opportunity".

Plantation forestry is based on thoroughly planned silviculture and management, as well as prudent application of the forest resources. Because growth and felling are in balance, the forests will never run out, but continue to be a constantly producing natural resource.

It is in this way that Swedish forestry has been pursued for more than a century. Nowadays, there is more forest

in Sweden than ever before and forests have been drawn upon as a source of raw material for an industry which has made a very tangible contribution to the development of prosperity.

It should be remembered, however, that at the end of the 19th century the forests of Sweden were in a deplorable state, Professor Remröd says. The situation was very similar to that being experienced today in many of the developing countries. Then work got under way at the turn of the century on the enormous task of restoring the forests. Bare lands were afforested and sparse forests made larger and denser. This work was extremely successful. During the current century, the Swedish timber stock has almost doubled, while annual growth has trebled. This proves that it is possible to revitalise a natural resource that has



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