

BOOK REVIEW

TREE DISEASES IN VICTORIA

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Edited by Marion Huebner.

Forests Commission Victoria, Melbourne. 1982. 149 pages. A\$8. ISBN 0 7241 3275 9.

Some excellent text-books on tree diseases are available for the specialist but the forester, farmer, or gardener in Australia or New Zealand has had no guide to help him to diagnose disorders of trees. This book goes a long way towards filling this want, though naturally some of the aspects discussed have less relevance to New Zealand conditions.

The introduction makes it clear that this book deals only with fungal diseases. Disorders of abiotic origin and those caused by bacteria, mycoplasmas, and viruses can cause considerable damage to trees, and their omission does limit the usefulness of the book. The symptoms of damage caused by abiotic agencies are listed but, as such symptoms are rarely characteristic enough to allow one to diagnose the cause, the list is helpful only in directing the reader's attention to the fact that not all diseases are caused by living organisms. The introductory chapter concludes with a key to aid diagnosis. The description of symptoms used to distinguish the various diseases in the key has been limited to such an extent that the key is unreliable and frequently misleading.

The major portion of the book is occupied by information on diseases presented in a standard format: description of the disease, hosts and distribution, symptoms and damage, disease cycle and control. The diseases are grouped under three categories: root, butt, and trunk rots, shoot, twig, and foliar diseases, and nursery diseases. These categories generally work well although it seems odd that *Cyttaria gunnii* which produces globose galls on branches and stems of *Nothofagus cunninghamii* but does not cause rot is placed under "root, butt, and trunk rots". The inclusion of *Melampsorium betulinum* under nursery diseases will seem out of place to New Zealanders who are used to seeing the rust on large garden trees. For major diseases such as Armillaria and Phytophthora root-rots, Dothistroma needle blight, "crinkle-leaf" of eucalypts, and poplar leaf rusts, the information supplied is comprehensive and generally accurate. There is the odd slip – *Scirrhia pini* is not restricted to members of the genus *Pinus*; it has been found on *Pseudotsuga menziesii*, *Larix decidua*, and *Picea sitchensis*. Also, if one accepts that Doroguin first described *Dothistroma* from Russia, as the authors evidently do, can the fungus be said to be solely a native of North America? The

Naemacyclus on *Pinus radiata* is not *N. niveus* but *N. minor*. The description of *Leptostroma* as the "female" stage of *Lophodermium* must be a mistake. The name of the original author of the binomial *Phaeocryptopus gaeumannii* has been consistently misspelt – it should be Rohde, not Rhode. The book describes the life-history of the *Melampsora* poplar leaf rust as it occurs in the Northern Hemisphere and emphasises the role of larch, the alternate host, but infection of larch is uncommon in New Zealand (and probably in Victoria); the infection cycle is carried on from poplar to poplar by uredospores which do obviously overwinter, in frost-free and frost-prone areas alike. It may be helpful to make this clear in the next edition, otherwise the rapid spread and persistence of the rust in the absence of larch becomes difficult to understand. The details of the life cycles of most of the minor pathogens are lacking but they are not necessary for diagnosis.

This section is followed by a list of references and then by 47 photographs, 40 of them in colour. The colour photographs, particularly those of fungal fruiting bodies and fungi on eucalypt leaves, are excellent and should be very useful in identification. The illustrations for *Dothistroma* needle blight and *Naemacyclus*, although of good quality, do not show the symptoms well. The black and white photographs of *Armillaria* mycelia are disappointing and the scanning electron micrograph of the *Phaeocryptopus* fruiting body appears to serve no purpose at all.

There is a good glossary, comprehensive pathogen-host and host-pathogen indices, and a general index. These are very useful and add considerably to the value of the book. The editor should be congratulated on a first-class job; the lay-out is clear and I found only a few printing errors (*Diplodea* on p. 40 and *Psuedotsuga* on p. 44).

A book aimed at the amateur diagnostician should have clear descriptions, good illustrations, and a simple key which works – demands which are easier to make than to meet. The book under review does well to satisfy the first two requirements and can be recommended to all with an interest in tree diseases.

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