

Timber Pests and Diseases

by W. P. K. FINDLAY.

Pergamon Press. 280 pp., 57 illustrations. 30s.

The blurb suggests that this book will be valuable to students at colleges of technology and at universities, and also to all concerned with a wide range of occupations including furniture manufacture, forestry, architecture, building, estate and land management and boat building. This is indeed an impressively wide range of potential purchasers. I think the suggestion is probably justified; I would however consider it more appropriate reading for the occupations mentioned rather than for college of technology or university students. That it would be a useful and broadly based introduction to timber deterioration for the latter category is not doubted.

The real value of this book I feel is that, for people who use wood in its many and varied forms and uses, it provides a clearly and simply written account of the causes of deterioration in timber and the measures that need to be taken to minimise or eliminate the losses resulting from deterioration. Before discussing types of deterioration, Dr. Findlay has a very valuable section on the nature of wood. As well as describing basic structure and composition, durability of timber is dealt with at some length. The basis for differences in durability from one species to another is discussed and a useful heartwood durability classification is given on page 16. It struck me reading this section that if a little more thought was given to the type or species of timber used for specific purposes considerable deterioration could be prevented and savings in money terms accomplished. Dr. Findlay gives useful information in this section on the uses of timbers based on his durability classification.

In the section dealing with causes of deterioration in timber the more common destructive agencies are briefly discussed. These include mechanical wear, decomposition by fire or prolonged heating, chemical

attack, fungal decay, insect attack and attack by other animals, marine borers, birds etc. The following three chapters consider in more detail fungal decay and damage caused by insects. There is an interesting and useful section covering the structure, reproduction and classification of fungi. For instance on page 35 Dr. Findlay says that "removal of the fructication no more checks the growth of the fungus than plucking fruit checks the growth of a tree". I am sure that this truth would surprise not a few people. This section is followed, logically, by an important section discussing the conditions that must exist for fungi to develop. Each factor is considered separately and adequately. As with timber durability mentioned earlier a knowledge of these factors and an appreciation of their importance could prevent a lot of unnecessary decay occurring in buildings and elsewhere. Insects are dealt with similarly, but are divided into sections (1) Coleoptera, Hymenoptera and Lepidoptera and (2) Isoptera (termites). There is a very large section devoted to the death watch beetle (*Xestobium rufovillosum*) and the furniture beetle (*Anobium punctatum*) detailing their habitats their preferred oviposition locations and methods for their control and prevention. The section on termites is of interest; while most of these insects are unlikely to successfully establish themselves in Ireland, Dr. Findlay states (p.128) that "the climate in parts of Great Britain does not differ greatly from that around La Rochelle in France where *reticulitermes lucifugus* var *santonensis* is well established, and is quite a pest in orchards and gardens".

The chapter dealing with diseases of standing trees seems a little out of place in a book which is otherwise devoted to felled or converted timber. The title of the chapter—Diseases of Standing Trees—is itself somewhat misleading. In fact apart from a brief introductory section the bulk of the chapter is devoted to wood rotting fungi, their effects and prevention. This is however a small criticism as the chapter does impart useful information on the more common timber decay organisms affecting standing trees. I liked particularly the section dealing with prevention of top rot in park, roadside and garden trees. There is a lot of very sensible advice here for local authorities and private garden owners concerning selection of trees and shrubs for planting in relation to their future development and treatment, including examples of good and bad pruning practice and methods and materials for treatment of pruning wounds. I must repeat that while I liked this section a person looking for this sort of information would be unlikely to seek it initially in this book.

There follows a thorough section on the care of timber after felling and conversion, which discusses, among other things, the reasons for removing logs from the forest as soon after felling as possible, factors associated with storage and protection of logs and seasoning storage and protection of sawn timber.

Decay of timber in buildings is likewise treated in a comprehensive manner. Once again Dr. Findlay places emphasis on the causes for both dry rot and wet rot in buildings. Descriptions of the principal fungi and the types of damage caused by them are given as are methods for treating various types of damage to different structures or timber components. There is a useful table on page 192 which describes the principle observable features of the more common fungi responsible for rot in buildings.

The concluding chapters deal with protection of timber used on farms, in gardens, in ships and boats, for marine works, in vehicles, in aircraft etc. I do not intend to comment individually on all of these. The most practical suggestion in the section on protection of timber on farms and in gardens is that "surface application of preservative is of little value on timber that is permanently in contact with the earth" (p.22). This point is reinforced by Mr. Milne Home whom Dr. Findlay quotes "I think an important point in this—that if you use untreated wood for fencing stakes you will put in at least three and possibly four, to equal the life of one creosoted stake. If you take it as low as three and calculate the labour involved in doing three times over what you would otherwise only require to do once, you will see that the small additional expense of using creosote as preservative is very well spent money". There is a fascinating account of the importance of decay in the timbers of warships during the 16th, 17th and 18th centuries. Dr. Findlay comments "that it is not therefore surprising that the first serious attempts to understand the causes of decay and to discover means for its prevention were undertaken by those responsible for His Majesty's Ships of War".

Taken in total I think this a good book which should enjoy a wide readership, not as a definitive text, its scope is too wide for this, but as a reference book in technical libraries and as a useful and informative source for persons who, though not specifically interested in timber deterioration, have cause to handle or use timber for a variety of reasons. Finally, I must say that I found the book very readable. It is not often that one is entertained by a technical book. Dr. Findlay writes with simplicity and clarity and with a pleasant sense of humour and historical background which should generate sufficient interest in the reader to assimilate the wealth of information contained within the book. The lay out and type face are good and do not place any strain on the reader. Many of the illustrations while good photographs might have been more benefit to the non specialist reader had they been in colour. I am thinking particularly here of illustrations showing the effect of decay organisms on timber.

Gerard de Brit.