

BOOK REVIEW

Gilbertson, Robert L. 1974. Fungi that decay ponderosa pine. 17½ × 25 cm. 197 pp. with 3 plates and 228 figures. The University of Arizona Press, Tucson. US\$9.50

This work is intended 'to present a manual for the identification of the Basidiomycetes found on ponderosa pine in Arizona and New Mexico'. Of 228 species treated, 200 have been recorded there on ponderosa pine. The additional 28 species have been recorded on this host elsewhere and on many other hosts in Arizona and New Mexico. Interestingly, the Sirex fungus *Amylostereum chailletii* (Pers. ex Fr.) Boidin or *A. areolatum* (Fr.) Boidin recorded on ponderosa pine in New Zealand, and on *Pinus* spp. in the Pacific Northwest, is not included.

This publication is essential for all those involved in the identification of Basidiomycetes associated with decaying ponderosa pine and other conifers. Keys are provided to the orders, families, genera and species discussed. The macroscopic and microscopic characters of all species are described. The importance of microscopic morphology in identification is emphasised by both the excellent line drawings of hyphae, clamp connections, setae, cystidia, crystals, basidia and basidiospores and the complete absence of any illustrations of whole sporophores.

Species descriptions conclude with the type of rot associated with the fungus, and the localities from which the species has been reported. In short chapters the author describes his materials and methods, discusses the ecological significance of wood decaying fungi, decay relationships, and classification of the Basidiomycetes. A useful glossary, a short section on 'Literature Cited' and a species index complete the work. Chapters on decay relationships and ecological significance of wood decay are interesting, but more comprehensive discussions would better complement the excellent species descriptions.

While we agree that classification (and consequently nomenclature) of the Aphyllophorales is in a state of flux, the inclusion of more synonyms and direct reference to synonyms from the species index to the descriptions, rather than to a 'checklist' of 'selected synonyms' would have been highly desirable. Practising forest pathologists and biologists need such assistance to become acquainted with current classification based on phylogeny. Omission of well known synonyms, e.g. *Tomentella ferruginosa* (Hoehn and Litsch.) Sacc. for *Kneiffiella fibrosa* (Berk. and Curt.) Larsen; and the absence of synonyms for the Agaricales covered, e.g. *Omphalia campanella* (Batsch. ex Fr.) Quéf. for *Xeromphalina campanella* (Batsch. ex Fr.) Kuhner et Maire gives an impression that the work is less inclusive than it actually is.

Volume loss to western red rot [caused by *Polyporus anceps* Pk. = *Dichomitus squalens* (Karst.) D. Reid] should progressively decrease as older trees are harvested. In contrast, while *Cryptoporus volvatus* (Pk.) Hubbard (a sap rotter) may not produce sporophores as commonly in Arizona and New Mexico as in the northern portion of the host's range, we were surprised that it was not considered one of the 25 most important decay organisms. With management emphasizing young-growth saw timber the importance of sap rots should increase while that of the formerly more important heart rots decreases.

Species from at least 14 genera covered have been recorded on pine in New Zealand. Our forest pathologists may become all too familiar with this and similar publications as they cope with the recent blowdown of some 2 million cubic metres of pine in the South Island.

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