

INTERNATIONAL RESEARCH GROUP ON WOOD PROTECTION

Section 1

Biology

**Laboratory Evaluation of Soft Rot Resistance of Non-Durable
Lesser-Known Malaysian Hardwoods**

by

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Abstract

Resistance of six non-durable lesser-known Malaysian hardwoods, Pulai (*Alstonia* spp.), Rubberwood (*Hevea brasiliensis*), Ludai (*Sapium* spp.), Jelutong (*Dyera costulata*), Gaham Badak (*Blumeodendron tokbrai*) and Kayu arang (*Diospyros* spp.) compared with temperate Scots pine sapwood (*Pinus sylvestris*), were evaluated using the unsterile soil burial (mixed with *Chaetomium globosum*) versus vermiculite-burial (of *C. globosum* only) laboratory techniques and decay rates expressed as either percent mass/mass or percent mass/volume basis. Scots pine was expectedly soft rot resistant but Pulai wood was almost immune to decay. Other wood species varied from being moderately to highly susceptible to soft rot decay. The vermiculite-burial technique favoured greater soft rot degradation activity than unsterile soil-burial. Results also suggest that soft rot decay rates of susceptible woods could also be accelerated with higher surface area/volume ratios of test blocks. The use of mass/volume basis indicated similar reduced degrees of soft rot resistance among most test wood species whereas apparent differences among woods were found using mass/mass comparisons probably due to variable basic densities among these timbers.

Keywords: Soft rot, Decay test, Wood durability, Soil-burial, Vermiculite-burial, Tropical timbers, lesser-known timbers, *Chaetomium globosum*

1. INTRODUCTION

High tropical biodegradation hazards pose a major threat to the utilization of untreated moderately or non-durable timber structures and components under Malaysian

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