

Unidentified wood-feeding fungus in a *Melaleuca cajuputi* tree

Subjects: Unidentified wood-feeding fungus, possibly *Ganoderma* (Polyporales: Ganodermataceae).
Gelang tree, *Melaleuca cajuputi* (Magnoliophyta: Myrtales: Myrtaceae).

Subjects identified by: Contributor.

Location, date and time: Singapore Island, Singapore Botanic Gardens, Tanglin Core, Lawn H, 19 December 2012.

Habitat: Trunk and roots of a 90-year old *Melaleuca cajuputi* tree grown in open parkland.

Observer: Contributor.

Observation: An unidentified species of wood-feeding fungus was observed in an old gelam tree (Fig. 1a) which fell during a storm (Fig. 1b). The gelam is known for its medicinal properties which is a form of natural protection for the tree. The fallen tree had a series of old branch pruning wounds and its major stem had been removed in the past for an unknown reason. The remaining tree was less than half of its original size. As a result it had a significant proportion of dead wood which was in the process of decay caused by an unidentified species of fungus (Fig. 2).

The fruiting body of the fungus, potentially *Ganoderma*, was observed (Fig. 2.b.iv, 2.b.v and 2.b.vi). The wood of the tree, normally dark red and hard (Fig. 2.c.i), appeared to be brittle. In the area affected by the fungus, it is white with distinct pattern of black lines (Fig. 2.c.ii). The greatest quantity of fungus-decayed wood was found at the base of the tree, along with the fruiting body (Fig. 2.b.i and 2.b.iii). The proportion of decayed wood was lower higher up the tree. Only a small amount of decay was observed at 3 m above ground (Fig. 2.a.i and 2.a.ii). Fig. 2.b.ii shows the spread of the fungus from decayed wood into solid wood, note the distinct difference in the colour of the wood.



Fig. 1. *Melaleuca cajuputi* in Lawn H of the Singapore Botanic Gardens. a) tree upright on 20 February 2012, b) tree fallen on 19 December 2012, and c) root zone of fallen tree on 19 December 2012. Photographs by Lahiru S. Wijedasa

Remarks: There is relatively little documentation on fungal decay in tropical trees in general. While the identity of the fungus is unconfirmed, its fruiting body appears similar to the genus *Ganoderma*, a group comprising mostly fungi that grow on logs (living or dead) with a preference for feeding on lignin in wood (Corner, 1983; Wijedasa, 2013). In the present observation, we record a species of fungus which has digested the wood of *Melaleuca cajuputi*, causing a distinctive pattern of white decayed wood with black lines, which in future, may assist in the identification of this species of fungus in trees.

References:

Corner, E. J. H., 1983. Ad Polyporaceae I. *Amauroderma* and *Ganoderma*. *Beih. Nova Hedwigia*. 75: 1-182.
 Wijedasa, L. S., 2013. Fungi living long and hard. *Nature Watch*. 21 (2): 18-20.

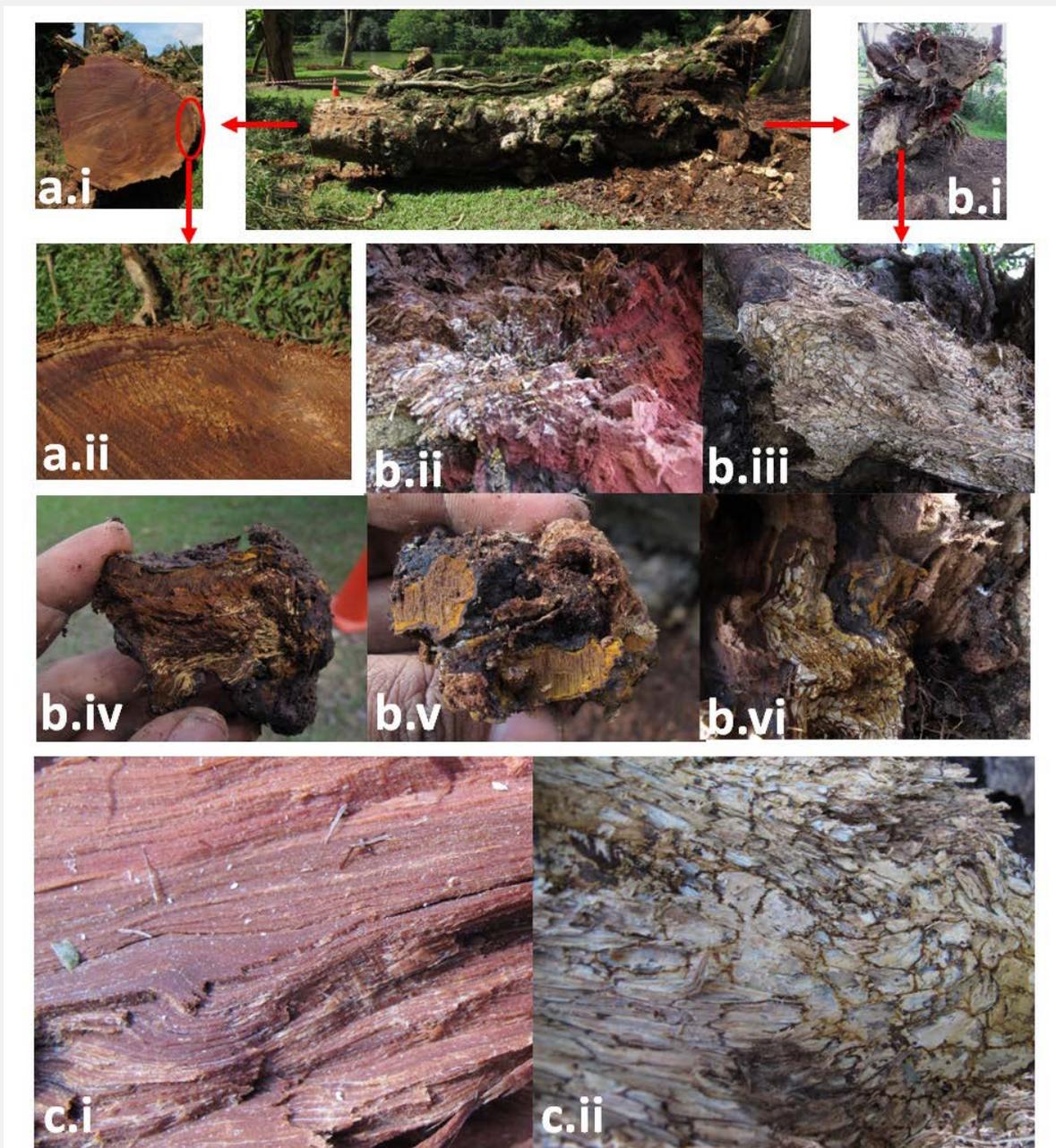


Fig. 2. Images of decayed wood and fungal fruiting body (most likely *Ganoderma*). Note the discoloration of the red coloured wood to white (Fig. b.ii, b.iii, c.i and c.ii) and distinct pattern of black lines on the decayed wood (Fig. b.iii and c.ii). The fungal fruiting body (Fig. b.iv, b.v. and b.vi). The small area of discoloured wood 3 m up the trunk (Fig. a.i and a.ii). Photographs by: Lahiru S. Wijedasa

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