



Pustules on tip of *Metrosideros polymorpha* in Hawaii.

Image: E. Killgore, Hawaii Dept. of Agriculture



Symptoms on seedling of *Melaleuca quinquenervia*

Image: E. Killgore, Hawaii Dept. of Agriculture

## Exotic threats of plantation timber: Eucalyptus Rust

### What is it?

Eucalyptus rust (*Puccinia psidii*) affects many Myrtaceous genera including *Eucalyptus*, *Corymbia* and *Melaleuca*, and many native Australian under-storey and amenity species. It is not present in Australia.

Quarantine precautions were in place in Australia in 1986 against the introduction of Eucalyptus rust on plants and seeds of a number of susceptible genera, including species of Eucalyptus (Navaratnam, 1986).

Eucalyptus rust seriously threatens plantation eucalypts outside its current area of occurrence and is also seen as one of the greatest threats to native Myrtaceae in Australia. Contaminated pollen, seed and personal effects pose a source of long distance/intercontinental dissemination of *P. psidii*. This further compromises the integrity of national quarantine and biosecurity measures worldwide. An international project funded by the Australian government (ACIAR) to evaluate the risks to Myrtaceae posed by *P. psidii* has been completed. This study demonstrated the viability and pathogenicity of air-borne spores collected from the personal effects of visitors to heavily-infected *Eucalyptus* plantations.

### What do I look for?

*P. psidii* attacks the foliage, inflorescence and young succulent twigs of its hosts, and fruit of host species, such as guava and *Syzygium*, that have soft fruits. The first symptoms of this disease are chlorotic specks which become pustules producing masses of yellow spores. In severe infections, these pustules can coalesce and parts of the plant can be completely covered with pustules. Under less favourable climatic conditions, or in less susceptible hosts, symptoms are less obvious and pustules may remain small and scattered (1 - 10 mm in diameter).

After about 2-3 weeks, the pustules dry and become necrotic. The disease can cause deformation of leaves, heavy defoliation of branches, dieback, stunted growth and even death. Prolific branching and galling may be a symptom of previous infection in eucalypts and melaleucas.

*P. psidii* attacks the foliage, inflorescence and young succulent twigs of pimento and Eucalyptus, and foliage and fruit of hosts, causing

severe defoliation under certain conditions. Defoliation results in the development of new foliage that in turn becomes diseased. Recurrent infections may culminate in the death of the tree.

## Where is it found?

Eucalyptus rust has been reported from North (including Hawaii and Florida), Central and South America. In addition to eucalypt plantations and guava orchards, it is prevalent in amenity plantings.

## Reporting

Early detection is the key to eradicating Eucalyptus rust if found in Australia. The pathogen can produce thousands of spores in as little as 10 days from first infection, so any delay in reporting would seriously compromise control efforts.

Plantation operators may report suspected exotic pests to the **Exotic Plant Pest Hotline (1800 084 881)** or can directly contact their relevant state agriculture or primary industries department.

To minimise the risk of spread, samples should not be moved until they have been checked by an expert.

This fact sheet is part of the National Plantation Timber Industry Biosecurity Plan. For more information about the Biosecurity Plan, please contact Plant Health Australia.



FOR MORE INFORMATION  
Contact  
Plant Health Australia

Phone: +61 2 6260 4322  
Fax: +61 2 6260 4321  
[www.planthealthaustralia.com.au](http://www.planthealthaustralia.com.au)

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Symptoms of rust on Guava

Image: E. Killgore, Hawaii Dept. of Agriculture

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