



Myrtle Rust in Australia

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Myrtle Rust in Australia

- The most significant threat to Australia's ecosystems since the arrival of Europeans
- The disease will likely infect all Myrtaceous plant species in Australia
- Our native biodiversity is threatened at both a flora and fauna level



Images sourced from DEEDI

Myrtle Rust in Australia

- Myrtle rust (*Uredo rangelii*) is a part of the guava rust (*Puccinia psidii*) or eucalyptus rust complex
- The eucalyptus/guava rust complex is native to South America and has subsequently been detected in Central America, Mexico, USA (Florida, Hawaii)



Myrtle Rust in Australia

- Myrtle rust infects plants belonging to the Myrtaceae family, the dominant plant species of most Australian forests..
- Myrtaceae includes the iconic genera of *Eucalyptus*, *Melaleuca* (paperbark), *Callistemon* (bottlebrush) *Leptospermum* (tea tree) and *Syzygium* (lilly pilly).
- Myrtle rust infects primarily young growth of host plants
- This damages leaves, stems, fruits and reduces growth and vigour – may eventually lead to plant death in some species.

Myrtle Rust in Australia

- Myrtle rust can complete its entire life cycle on a single host plant.
- High humidity and moderate temperatures (night temperatures of 15–25°C) favour spore germination.
- The spores have a short generation time of approximately 10 to 23 days.
- The spores can survive for weeks under suitable conditions.

Reference: Threat Specific Contingency Plan, Guava (eucalyptus) rust *Puccinia psidii*, Plant Health Australia March 2009

Myrtle Rust in Australia

- Detected in Central NSW April 2010
- National Interim Response
 - Undertook surveillance and tracing forward backward
 - \$2 million cost shared by Government (50% states and 50% commonwealth)
 - 480 + infected sites detected in 7 months
 - Found outside of linked properties – decision trigger in October/November
- Declared Not Technically Feasible to eradicate – December 2010

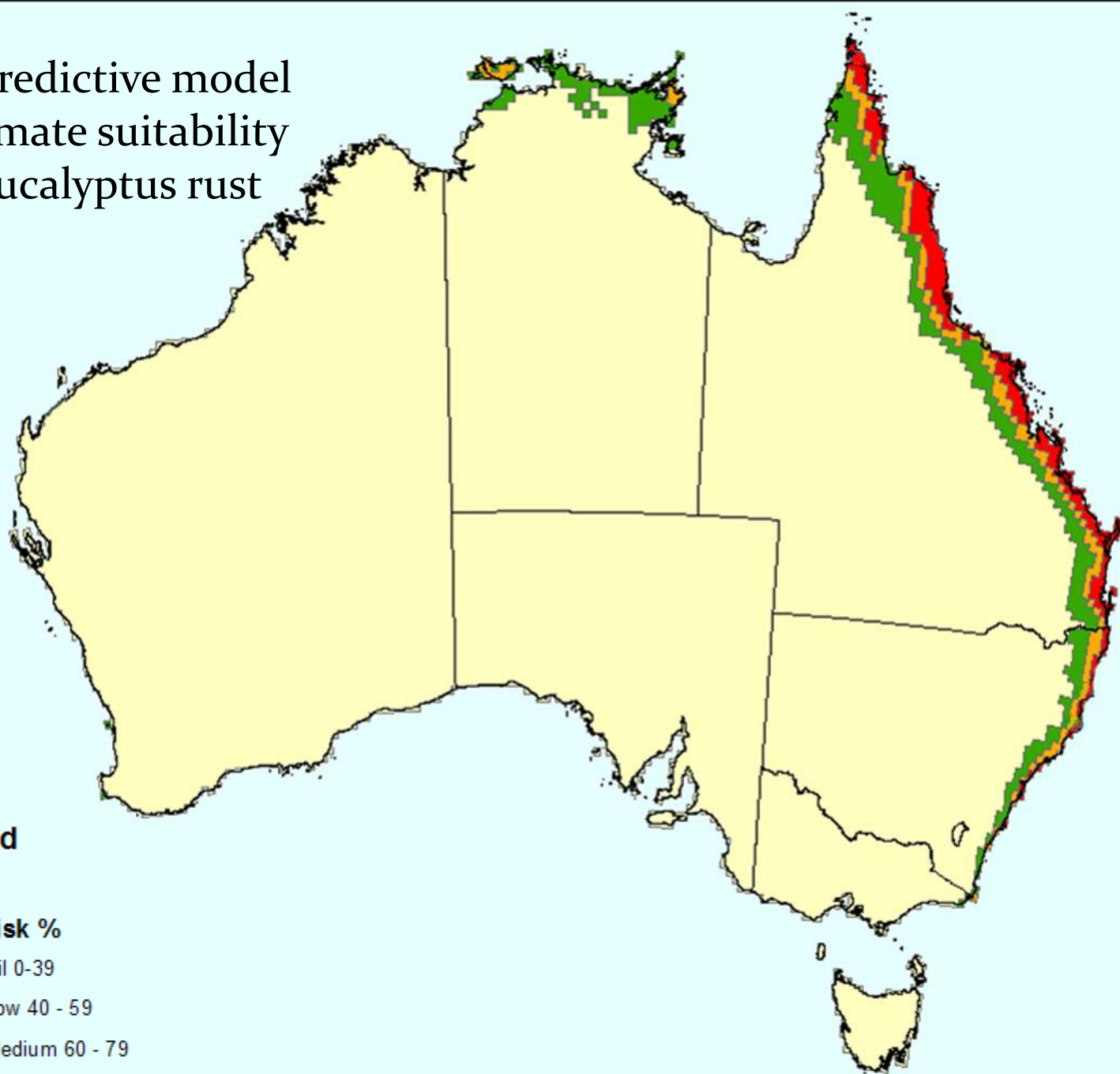
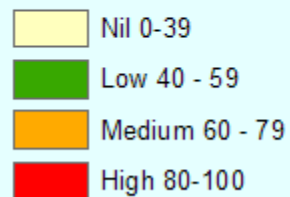


Photo courtesy NSW I&I

One predictive model for climate suitability for eucalyptus rust

Legend

Rust Risk %



Myrtle Rust in Australia

- An estimated 20% of total greenlife grown within nursery production is of the Myrtaceous family
- Nationally a \$3 billion dollar industry could lose more than \$600 000 000 in total production
- The loss to our urban amenity value could be as high and potentially we could see billions of dollars damage in our natural environment
- Plantation forestry a high risk area due to species grown.

Recognising Myrtle Rust

- Myrtle rust requires moisture to enable spore germination (minimum 8 hours darkness required for infection to occur).
- Symptoms can occur within 5–7 days of infection. Longer in cooler conditions
- Spores are generally produced 10–12 days after infection but can occur earlier depending on host, leaf age and environmental conditions.
- Rust spores can survive for up to 3 months. Spores can survive attached to clothing, bark etc.

How to recognise myrtle rust

- Rust symptoms can appear as spots/lesions that are brown to grey, often with red-purple haloes, that go the whole way through the leaf.
- Approximately 10-12 days after infection, spots produce masses of bright yellow or orange-yellow spores (powdery specks) on the lesion surface.

Small purple spots can be early indications of myrtle rust on turpentine (*Syncarpia glomulifera*)

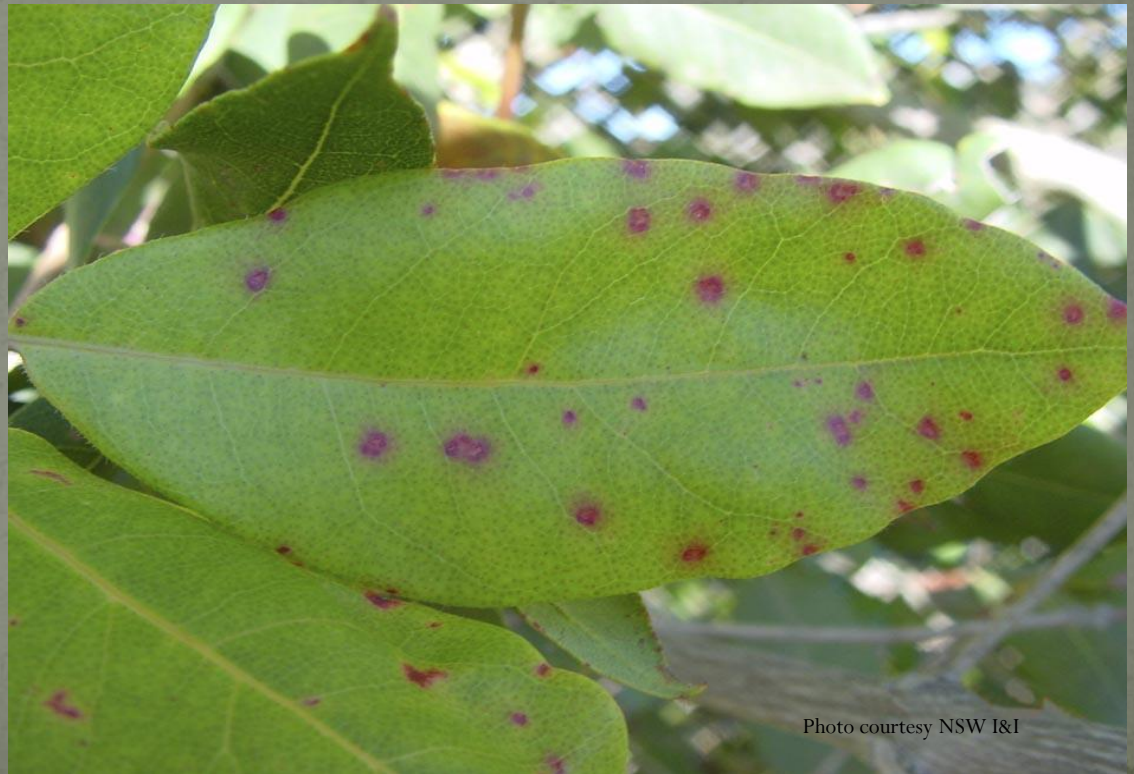


Photo courtesy NSW I&I

How to recognise myrtle rust

- The spores have a distinctive egg-yolk colour, and often appear on the underside of the leaf first.

Newly formed bright yellow pustules of myrtle rust on turpentine (*Syncarpia glomulifera*)



Photo courtesy NSW I&I

How to recognise myrtle rust

- The spores are bright yellow and can be present on the upper and lower surface of leaves and shoots.

Spores of myrtle rust on
turpentine (*Syncarpia glomulifera*)



Photo courtesy NSW I&I

How to recognise myrtle rust

- Older lesions can be dull yellow/brown - ash in colour, and although spore masses may have disappeared close examination with a hand lens (x10) can reveal a few spores present on the lesion.

Infected areas increase in size and often merge with age



Older lesions of myrtle rust on turpentine
(*Syncarpia glomulifera*)

Photo courtesy NSW I&I

How to recognise myrtle rust

- Severe and repeat infection in young trees may result in death of foliage, shoot tips, and green stems resulting in stunted growth and a bushy growth habit.



Severe myrtle rust infection on turpentine
(*Syncarpia glomulifera*)

Photo courtesy NSW I&I

How to recognise myrtle rust

Severe myrtle rust infection on stems and foliage of a scrub turpentine (*Rhodamnia rubescens*) seedling



Photo courtesy NSW I&I

How to recognise myrtle rust

A very serious pathogen to
Australia's natural landscape



Managing Myrtle rust

- National Nursery Industry Myrtle Rust Management Plan
 - Staff management
 - Production hygiene
 - Vector of the pathogen
 - Import risk assessment
 - Origin of greenlife
 - Import treatment
 - Surveillance, Monitoring &
 - Inspection
 - Property
 - Crop
 - Despatch
 - Chemical protection
 - Registered fungicides (PER12156)
 - Curative/protectant
 - Resistance management (rotation)



Nursery & Garden Industry

Australian
Nursery Industry
Myrtle Rust
(Uredo rangelii)
Management Plan
2011

Developed for the
Australian Nursery Industry

Production
Wholesale
Retail

What do you do if you see myrtle rust?

Exotic Plant Pest Hotline

1800 084 881

National Nursery Industry Myrtle Rust
Management Plan

www.ngia.com.au



Issues for the Landscape Industry

- Spreading spores through business activities
- Unknowingly supply of infected material
- Being caught up in new Trade practices regulations re supply of product that is free of disease.
- Access onto production nurseries – browse stock.
- Amenity projects – opportunities, monitor and replace

