

# Myrtle Rust Crisis Workshop

## Three plants declared critically endangered in New South Wales

Report by Peter Gould

**Myrtle Rust** is a disease caused by an introduced South American fungus *Austropuccinia psidii*. It is one of the gravest biosecurity risks Australia has ever faced and threatens the survival of several species of native plants in the Family Myrtaceae.

On the 8<sup>th</sup> November 2019 three representatives of the LRBG attended a **workshop on Myrtle Rust** organised by the NSW Saving Our Species – SOS Myrtle Rust Project at the Byron Council chambers in Mullumbimby. What we saw and heard there was both enlightening and deeply disturbing.

The **first session, presented by Bob Makinson** (Senior Scientist Threatened Species with Ecosystem Management Science Branch, Office of Environment and Heritage) covered a brief history of the impact of Myrtle Rust since the first outbreak in 2010 on the NSW central coast, its spread from the Victorian border to far North Queensland and the Northern Territory and its impacts on “naïve”, susceptible species. Australia has some 1,400 species of Myrtaceae and ca. 350 of these have been found to be adversely impacted to varying degrees, by Myrtle Rust.

**Three plant species have recently been declared as Critically Endangered** in New South Wales as a result of the impact of Myrtle Rust. They are: Scrub Turpentine (*Rhodamnia rubescens*), Native Guava (*Rhodomyrtus psidoides*) and *Lenwebbia* sp. ‘Main Range’.

*Lenwebbia* sp. ‘Main Range’ is a very rare plant only found in a few cliff edge sites at high altitude in Northern NSW and SE Qld, while both Scrub Turpentine and Native Guava have a broad distribution (from near Gosford to the Qld border in the case of Native Guava and from the Victorian border to SE Qld for Scrub Turpentine). It is virtually unknown for a species so widespread and common to be classified as Critically Endangered.

### Bob Makinson laid out management options for these plants:

- Germplasm salvage – collection of as much propagation material (seeds and cuttings) as possible, with a particular focus on material from healthy plants.
- ‘Ex situ’ (off-site) conservation – establishing plantings, seed orchards at sites outside the area impacted by Myrtle Rust
- Identifying resistance genes in plants
- Breeding for resistant plants and ‘re-wilding’- re-introduction of more resistant varieties into their original distribution range.

### He then detailed what was needed to achieve these ends:

“A large, dispersed, strongly coordinated and protected collection, with as many wild genotypes as possible - Resistance research and breeding - Wild monitoring of survivors for resistant plants - Eventual ‘reintroduction’ or reinforcement of surviving populations”.

The **afternoon session** included a description of the program to assess and protect the small and isolated populations of *Lenwebbia* ‘Main Range’ involving rope work to access the cliff top ledges where it occurs. Only ca. 45 adult plants are known and all show a vulnerability to Myrtle Rust.

There was also a **presentation by Craig Stehn**, Threatened Species Officer, Saving Our Species Program on the protocols for collection and handling of cuttings and seeds of these species. Since these plants are now listed as Critically Endangered it is illegal to collect propagating material without a scientific licence. LRBG volunteer Peter Gould and our gardener Damian Butler have been added to a list of associates to the Scientific Licence.

The **final presentation was on basic hygiene** protocols to help contain the spread of the fungus (See box below).

We can all play a part in preserving the genetic diversity of these three species. Collection of propagation material from as many plants as possible is key to efforts to breed resistance to Myrtle Rust and conserve viable wild populations.

- Learn to identify Scrub Turpentine and Native Guava
- Let us know the location of any plants found on your property or in your area.
- Arrive clean – Leave clean! Observe the basic hygiene protocols.

If you find any of these species growing on your property please let me know: email [petergould268@gmail.com](mailto:petergould268@gmail.com)

### Basic Hygiene Protocol

...for personnel, clothing, footwear tools and equipment

Check for soil, spores, plant material and other debris

Remove all soil, plant material and other debris using hard brush and clean water. Dispose of appropriately (at source site if possible).

Decontaminate boots (brush and bathe in Farmcleanse® or brush and spray liberally with 70% metho / 30% water)

Clothing, bags, field gear and car seats (spray with 70% metho / 30% water) or machine wash.

### Basic Hygiene Protocol

...for vehicles

Check for soil, spores, plant material and other debris in wheel arches and under the vehicle.

Remove all soil, plant material and other debris using hard brush and high-pressure water. Dispose of appropriately (wash down facility).

Decontaminate exterior of vehicle (spray with detergent e.g. Phytoclean®), interior of vehicle – brush out floors and decontaminate internal surfaces (70% metho / 30% water).



Photo 1:

*Myrtle Rust damage. This Scrub Turpentine tree on my property at Terania Creek has suffered more than 90% defoliation.*



Photo 2: *Typical Myrtle Rust damage on leaves of Scrub Turpentine *Rhodamnia rubescens**



Photo 3: *Myrtle Rust damage on leaves of White Myrtle *Rhodamnia argentea**

### References:

Harden, G.J. (ed) 1993, *Flora of New South Wales, Vol 2*, New South Wales University Press, Kensington, NSW.

<http://plantnet.rbgsyd.nsw.gov.au/>

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<http://www.environment.gov.au/biodiversity/invasive-species/diseases-fungi-and-parasites/myrtle-rust>

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