Myrtle Rust Update

December 2018

In this monthly update you will find:

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Where myrtle rust has been found

811 infected properties have been reported since May 2017.

National detections of myrtle rust to date:

Northland - There are 34 sites/properties in Northland with confirmed infection. Most of these are in Kerikeri. Myrtle rust has not been found north of Kerikeri.

Taranaki - There are 281 sites/properties in Taranaki with confirmed infection. Most of these are in New Plymouth and Waitara.

Waikato - There are 96 sites/properties in the Waikato region with confirmed infection. Most of these are in Otorohanga and the Taupo district.

Bay Of Plenty - There are 156 sites/properties in the Bay of Plenty with confirmed infection. Most of these are in Te Puke and Bethlehem.

Auckland - There are 141 sites/properties in the Auckland region with confirmed infection. Most of these are in Remuera.

Wellington - There are 44 sites/properties in the Wellington region with confirmed infection. Most of these are in Lower Hutt and Upper Hutt

Manawatu-Whanganui - There are 25 sites/properties in the Manawatu region with confirmed infection. Most of these are in Fielding.

Tasman - There are 20 sites/properties in the Tasman region with confirmed infection. Most of these are in Collingwood, Patons Rock and Pohara.

Gisborne - There are 3 sites/properties in the Gisborne district with confirmed infection. These sites are all at the Northern tip of the East Cape.

Marlborough - There are 6 sites/properties in the Marlborough district with confirmed infection.
Nelson - There are 5 sites/properties in Nelson with confirmed infection.

Check your myrtle plants this summer

During the warmer summer weather the conditions become ideal for the spread of the fungal disease myrtle rust and there is a risk it will appear in new areas where it hasn't been seen before. We encourage you to check your local myrtle plants this summer to help track the spread of myrtle rust.

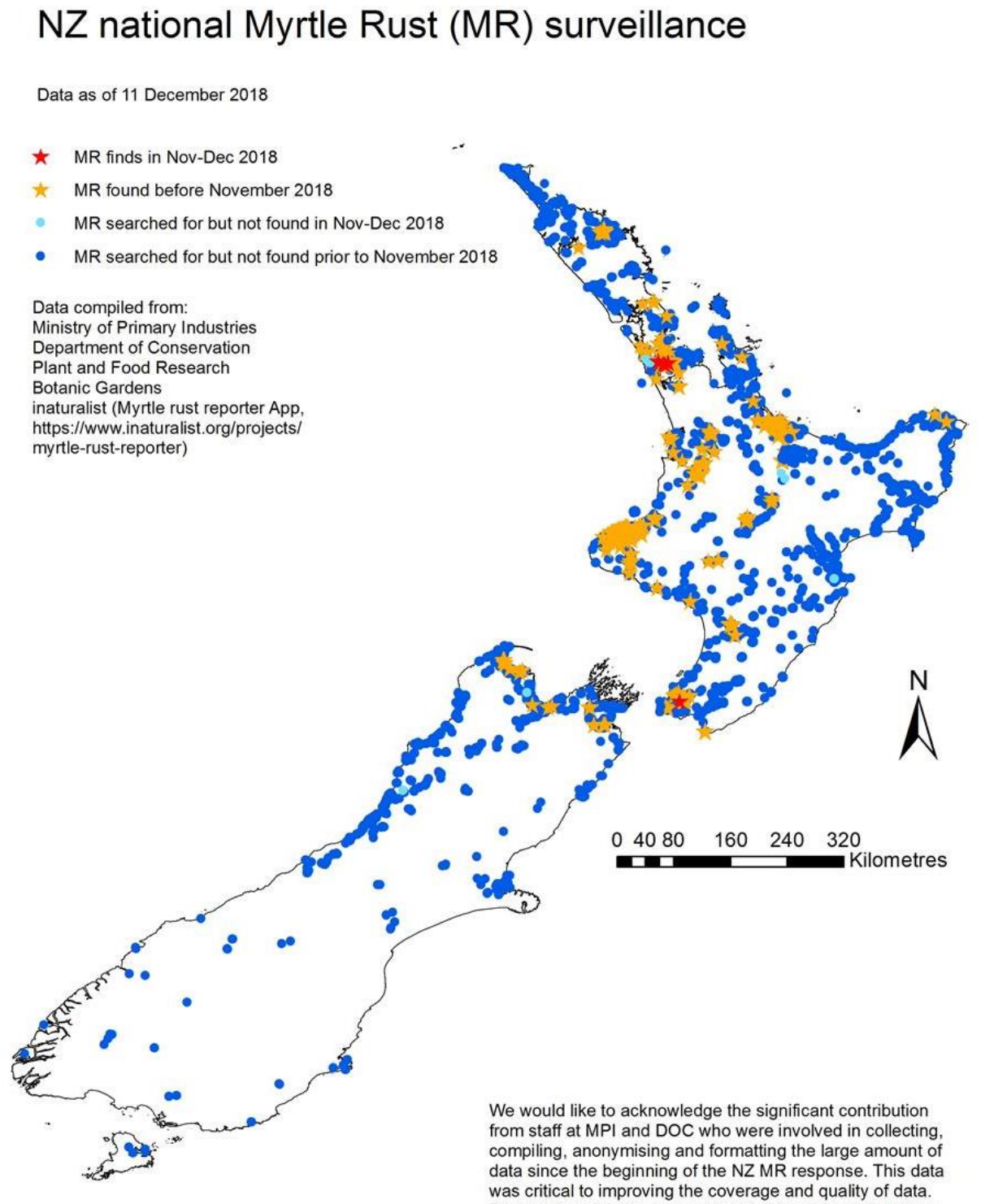
The disease, which is mainly spread by wind, generally attacks shoots and buds and leaf surfaces of the myrtle plants. Infected plants show typical symptoms including bright yellow powdery spots.

If you think you see symptoms remember to not touch or collect samples, but take pictures and report it to Biosecurity New Zealand's Exotic Pest and Disease Hotline on: 0800 80 99 66.

All plants in the myrtaceae family are susceptible to myrtle rust. For a list of myrtle plants in New Zealand you can visit the New Zealand Plant Conservation Network.

Myrtle family species in New Zealand

Myrtle rust surveillance map



We would like to acknowledge the significant contribution from staff at MPI and DOC who were involved in collecting, compiling, anonymising and formatting the large amount of data since the beginning of the NZ MR response. This data was critical to improving the coverage and quality of data. Diagnostic validations were provided by plant pathologists at the Plant Health and Environment Laboratory (PHEL-MPI).

Map by Rebecca Campbell (Plant and Food Research)
Funded by B3

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Online training programme coming early next year

Biosecurity New Zealand has developed an online programme to support community-based surveillance by interested groups. The programme will be launched in the New Year. Understanding where the rust has spread to and what plants are affected will help us build a national picture of spread, climate suitability in different parts of New Zealand and may even provide some clues about which of our plants might have some natural resistance.

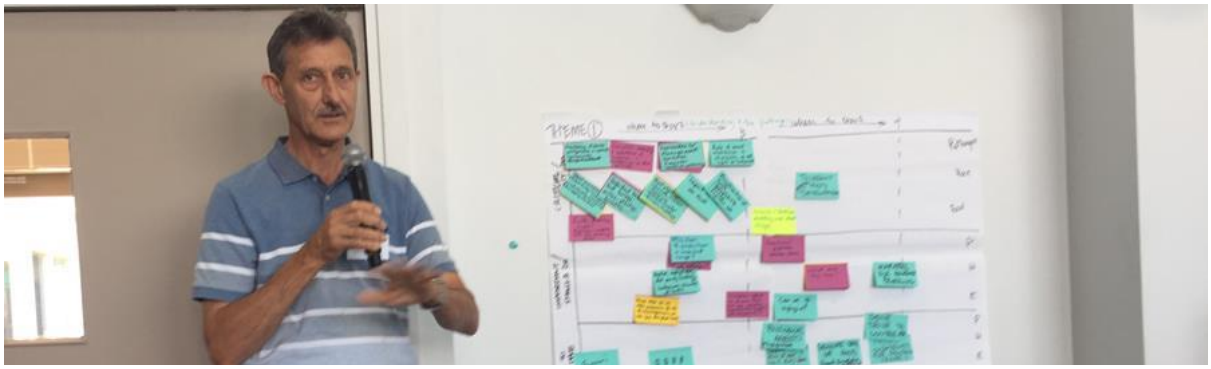
This programme will be hosted on a new website together with useful myrtle rust information from both Biosecurity New Zealand and the Department of Conservation.

Stay tuned for our next newsletter which explain how to access this training.

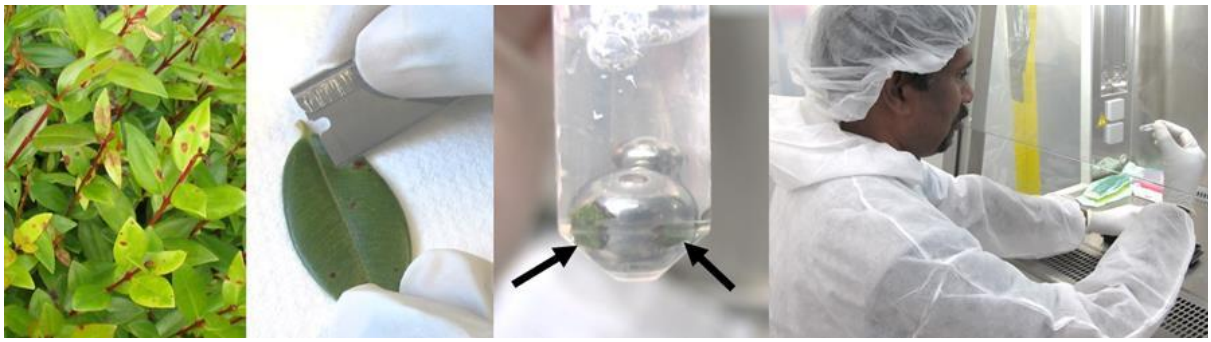
Myrtle rust science symposium

Last week, a Myrtle Rust science symposium was held in Wellington, bringing together a wide range of expertise to discuss what we have learned since myrtle rust arrived in New Zealand and explore ideas about the science that will be needed to help find ways to manage myrtle rust now and in the future. Researchers and scientists from across the country and Australia shared progress on the current programme of work and participated in a workshop to identify high priority future science needs and synergies between current and future work programmes.

Symposium attendees agree that the task of addressing myrtle rust is especially complex and challenging, and that a strong science programme is critical. There was a strong sense of urgency to monitor the spread and impact, harness hearts and minds to help understand the disease, and preserve germplasm. It was recognised that all New Zealanders value our unique myrtle plants and can play a part in tackling myrtle rust.



Dr Robert Beresford from Plant and Food Research discusses research priorities at the symposium



Myrtle rust diagnostics at MPI

When myrtle rust was first found in Australia in 2010, MPI established a working group to prepare for its arrival to New Zealand. At the MPI Plant Health and Environment Laboratory (PHEL), this meant preparing for a suspected incursion and ensuring access to reliable, sensitive and fast diagnostic methods.

Since the choice of DNA based detection methods was limited at the time, PHEL developed a new real-time Polymerase chain reaction (PCR) test, which allows a very sensitive and fast detection of the pathogen, and has since been internationally recognised as a recommended test for myrtle rust.

To learn more about the myrtle rust preparedness and diagnostics at PHEL, read the article in the MPI Surveillance magazine

Read the MPI Surveillance magazine here

Give your plants the best chance against myrtle rust

There is no confirmed way to stop myrtles from contracting the disease, but there are some ways that you can give myrtle plants in your garden the best chance against it.

Caring for your myrtle plants

It's the new spring flush that is most susceptible to infection. To avoid stimulating new growth in warm weather it's recommended that you avoid heavy pruning during warm weather if possible. Instead, prune myrtles only in late autumn and early winter. When pruning, use good hygiene practice, sterilise and disinfect tools and equipment with pure alcohol or methylated spirits to avoid transferring spores.

Reduce soil compaction and injury to tree roots

Reduce or avoid applying any herbicides around trees, trunk or root plate areas. Read the product label, as care is needed with some grass care products which can contain selective herbicides that impact on garden plants and their growth patterns. Avoid lawn care or weed control products around the dripline of a tree. Tree roots do not like soil compaction and this can reduce tree health by stopping water absorbing into the soil, reducing oxygen in the soil as well as physically damaging the roots of trees which can allow the entry of diseases. Consider selecting low clumping or bulb type plant varieties if planting under established trees.

Use Mulch

The use of wood chip mulch could help improve the soil around trees as it helps plant establishment and growth. It helps keep water in the soil, keeps soil cooler, and produces a better habitat for soil microorganisms. Wood mulch may be available for free from arboriculture companies. Keep mulch away from the stem or trunk, but you can pile it up to 20cm deep. Replenish mulch as it breaks down (faster in some seasons than others). Homemade compost is also a good top-dressing for around trees and plants.

Apply Fertiliser

Only use fertiliser on garden or plantation trees. Wild natural trees or stands of vegetation should not be fertilised. Natural products such as fish meal, blood and bone or sheep pellets will support soil microorganisms as well as the plants. Seaweed based fertilisers can also be used, and the use of products with humic acid, and trace minerals can help with soil health and root development. Products with phosphorous and potassium can help with root and shoot development.

Find more information for specific groups here

Help limit the spread of myrtle rust in your area

Here's a few handy tips that will help reduce the risk of spreading myrtle rust in your area.

Arrive clean, leave clean

The forest you visit could be infected with myrtle rust without you knowing it. Before entering such areas for work or recreation, you should minimise the risk of spreading the rust by ensuring your equipment, clothing and tools arrives clean and leaves the area clean.

Buy healthy plants

Make sure myrtle plants bought for your garden are free from the symptoms of myrtle rust. Inspect the leaves and stems of plants before you buy them, and avoid purchasing plants that have signs of disease.

Monitor your plants

Regular monitoring of myrtle plants will alert you to signs of myrtle rust, particularly new, young growth, shoots and seedlings. Early detection in your garden will give you time to consider options for myrtle rust control on your property. If myrtle rust does establish on your property, note which plants become the most severely affected.

Resources for landowners

If you own or manage land with plants that are infected with myrtle rust, you can either:

- care for the plants and monitor the impact of the disease
- remove or prune the infected plants and securely dispose of the waste

If you're transporting and disposing of infected plant material, you must comply with the general permission conditions issued by the Ministry for Primary Industries (MPI).

If you choose to remove or prune infected plants, you may require specialist equipment and technical skills. We recommend you consider hiring an arborist or contractor to remove infected plants on your property, especially if you have large trees.

A step-by-step guide is also available to help you.

For more information on managing myrtle rust on your property go to Biosecurity New Zealand's myrtle rust webpage.

Managing myrtle rust on your property page here

Download How to remove infected myrtle plants

Plant and Food Research Podcast

Dr Robert Beresford, a pathologist and specialists on rusts, from Plant and Food Research talks about understanding the spread of myrtle rust in New Zealand and the risk to New Zealand's native trees from this disease.

Click here to listen to the podcast

Find out more

About myrtle rust:

Biosecurity New Zealand myrtle rust page

DOC myrtle rust page

Myrtle rust research programme webpage

Myrtle rust fact sheet

Read more about myrtle rust

Handy information:

Myrtle rust ID guide

Identification resources

Some other handy resources include:

- The New Zealand Plant Conservation Network
- Definition of the myrtle genus from Encylcopedia Britannica
- Landcare Research Plant Identification and Interactive Keys

- iNaturalist is a place where you can share what you see in nature, set up citizen science and community-based monitoring projects, meet other nature watchers, and learn about New Zealand's natural history
-

Radio New Zealand's 'Our Changing World' podcast on myrtle rust research

Read the story or listen to the full podcast here

Biosecurity New Zealand
Ministry for Primary Industries
Manatū Ahu Matua

Department of Conservation
Te Papa Atawhai

This information is compiled by the Ministry for Primary Industries (MPI) and the Department of Conservation (DOC).

For information about this update, contact MyrtlerustNZ@mpi.govt.nz

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