



Common name change for gypsy moth

The gypsy moth (*Lymantria dispar*) is a well-known invasive species that became part of the Better Common Names Project led by the Entomological Society of America. The term “gypsy” is considered an ethnic slur. The official new common name is the spongy moth, in reference to the physical appearance of its egg batches, which is already the common name used in France and French-speaking Canada. We applaud the removal of this slur from use.

Andrew Pugh
Scion

Phytophthora podocarpi described as the oomycete causing tōtara blight

Tōtara blight, also known as tōtara needle blight, was first recorded from samples sent to Scion's Forest Health Reference Laboratory (FHRL) in 2011 from Gisborne. An oomycete was found associated with the diseased tissues and was reported by FHRL and MPI as a novel *Phytophthora* species and given the interim name *Phytophthora taxon tōtara*. This oomycete pathogen is now formally described as *Phytophthora podocarpi*.¹

Since 2011, tōtara blight has been recorded across the North Island (Fig. 1), although sporadically. The last time it was reported was over four years ago, despite visiting previously infected sites. To date it has not been recorded in the South Island.

Tōtara blight is commonly found in old remnant pockets of native bush affecting *Podocarpus totara* primarily; however, symptoms of the disease were also recorded from a single *P. laetus* tree (Hall's Tōtara). The disease causes needles to turn a khaki colour, then

blacken before they are cast. Shoot infection also occurs, which causes the shoot and needles to die above the point of infection. This results in dead, brown needles that are retained, which gives the tree a fire-scorched appearance (Fig. 2). Twigs and branches over 10 mm in diameter appear to remain healthy.

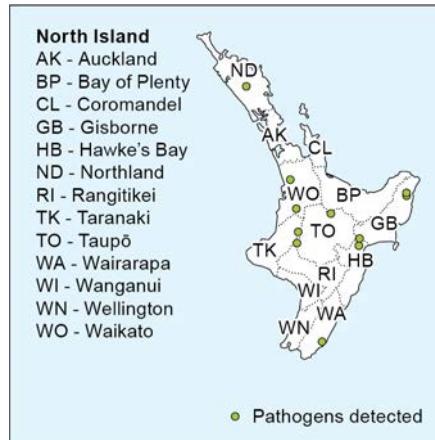


Figure 1. Distribution of *Phytophthora podocarpi* across the North Island of NZ.¹



Figure 2. Symptoms of tōtara needle blight on *Podocarpus totara*.¹

Phytophthora podocarpi has a unique set of morphological characters, and DNA-based methods show that it is distinct from other *Phytophthora* species. Phylogenetically, it was found to be more closely related to the downy mildews than *Phytophthora*. Downy mildews are obligate plant parasites, meaning that they require the plant host for survival, and cannot be cultured on artificial lab media. *Phytophthora* can be grown in the lab, as was the case for this species. For this reason, we described it as a *Phytophthora*. The relationship between *P. podocarpi* and the downy mildews was established a few years ago^{2,3} and has led to speculation that *P. podocarpi* could be a foliar *Phytophthora* ancestor giving rise to the downy mildews.

While we now have a name for the pathogen, there is still a great deal we do not know about its biology, origin, distribution, and sporadic nature. Without current outbreaks, it is difficult to answer these questions; however, traces of *P. podocarpi* might still be found in historical collections (NZFRI-M (Scion's fungal herbarium) and PDD (Manaki Whenua fungal herbarium)) of *Podocarpus* species and may help us tackle these questions. Despite the current low levels of disease caused by this pathogen, the need to raise awareness for long-term protection of this iconic native tree species is ever-present.

A fact sheet about this disease and how to report it can be found at:
<https://www.scionresearch.com/?a=78054>

The species description can be found as an open access article on the Forests journal website:
<https://www.mdpi.com/1999-4907/13/2/214>

Kiryn Dobbie and
Rebecca McDougal
Scion

¹ Dobbie, K., Scott, P., Taylor, P., Panda, P., Sen, D., Dick, M., McDougal, R. (2022) *Phytophthora podocarpi* sp. nov. from Diseased Needles and Shoots of *Podocarpus* in New Zealand. *Forests*, 13, 214.

² Bourret, T.B., Choudhury, R.A., Mehl, H.K., Blomquist, C.L., McRoberts, N., Rizzo, D.M. (2018) Multiple origins of downy mildews and mito-nuclear discordance within the paraphyletic genus *Phytophthora*. *PLoS ONE* 13(3).

³ McCarthy, C., & Fitzpatrick, D.A. (2017). Phylogenomic Reconstruction of the Oomycete Phylogeny Derived from 37 Genomes. *mSphere*, 2(2), e00095-17.

Size does matter

Every year, members of the Ecology and Environment research group (formerly Forest Protection) take part in a friendly vegetable growing competition. This year, the vegetable of choice was the 'Zephyr' zucchini. This variety is different to your regular market zucchini as it produces a distinctive two-toned squash that is yellow with a light green tip. Dubbed the "garden overachievers", summer squashes are considered easy to grow and this variety, with the name zephyr, should really be a "breeze" to grow.

Eager to grow some of Rotorua's finest zucchinis, our competitors were handed little 'Zephyr' plants and seeds to grow their way into the history books. Some growers without gardens had to resort to old flowerpots. After a few weeks, our growers hit their first hurdle. Much of the seed planted did not germinate. It appears that the name threw many of us off as they certainly weren't a breeze to grow. By December, only nine growers had a plant that looked like they would successfully produce a squash worthy of the name.

After a long summer of careful nurturing, bragging, and comparing zucchinis it was time to assess the fruits of their labour. On the 26th of April, ecologist Nicolas Meurisse and his family welcomed all the seasoned vegetable growers to their house for a night of celebration and commiseration. Several awards were presented on the night.



The 2022 vegetable growing competition grand champion, Justin Nairn.

The "You Tried" award was awarded to Stephanie Sopow for her efforts to try and grow a zucchini. The "Most Average" award was awarded to Rebecca McDougal for her plant that produced the zucchini of the most average by mean weight. To Toni Withers the award for "Funkiest zucchini" was handed over for her very curvy zucchini. Justin Nairn had all the bragging rights as he was awarded the "Largest Marrow" award. His largest squash weighed over 2kg! He also took home the grand prize and growing competition shield for having the most successful zucchini plant. A couple of participation awards were also handed out to other successful zucchini growers (Emily Mclay, Ngaio Balfour, Nicholas Meurisse and Darryl Herron) that produced zucchinis that weren't as long, heavy or funky as the show stopping zucchinis from Justin, Toni or Rebecca.

Darryl Herron
Scion

New biosecurity reporting tool launched

Biosecurity New Zealand has released a new web tool for the reporting of suspected exotic pests and diseases. The tool guides users through the reporting process, allowing users to submit photos as well as the location and other pertinent information. The investigation and science teams receiving the reports are aiming to respond to the submitter within 24 hours, similar to the current phone hotline process. The tool supplements but does not replace the current 0800 hotline reporting system. For biosecurity emergencies the 0800 hotline should still be used.

A screenshot of the Biosecurity New Zealand reporting tool website. The header includes the title 'Exotic Pest and Disease Online Notification' and the 'Biosecurity New Zealand' logo. Below the header is a form with instructions: 'Do not use this form to report: • emergency pest requiring immediate action • animal diseases • mass mortality events involving dozens of individual organisms'. It says 'For these situations please call us on 0800 80 99 66.' The form has fields for 'Tell us' and 'File number'. The footer contains links for 'About MPI', 'COVID-19 Information and advice', 'Consultations', 'News', 'Science', 'Legal', 'Resources and terms', 'UPDATES', 'CONTACTS', and social media links. It also includes a 'Disclaimer | MPI copyright | Feedback | Privacy' link and the 'New Zealand Government' logo.

The new reporting tool can be found at <https://report.mpi.govt.nz/pest/>

The phone hotline is 0800 80 99 66

Andrew Pugh
Scion