



## On-the-ground work to safeguard myrtles

*Bec Stanley, a Curator at Auckland Botanic Gardens and Chair of the Botanic Gardens Australia NZ outlines ongoing work to monitor for myrtle rust and safeguard Aotearoa's myrtles.*

Since August 2014 Auckland Botanic Gardens staff have been conducting sentinel surveys for myrtle rust. The initial survey targeted one Myrtaceae species (exotic or native) in a 1km<sup>2</sup> grid covering 64ha of the Gardens. The survey was designed to cover the widest possible area to detect its arrival early at the gardens.

In July 2018 when myrtle rust arrived at the Gardens we started a monitoring project where new species were added (such as all native *Kunzea* species) with the view to describing the impacts of myrtle rust and the phenology of the plants (to document susceptible life history phases). Currently, every month around 40 native and exotic, common and rare Myrtaceae are checked and it is noted whether they are in fruit, flower or bud. The presence of new vegetative buds and growth is also recorded as this is known to be good host tissue for myrtle rust.

This spring *Metrosideros bartlettii* (Rata Moehau) surprised us by flowering (it doesn't flower every year). There are three individuals which have been in cultivation for over 20 years. Many Botanic Gardens, private gardeners and nurseries have these individuals. Auckland Botanic Gardens, Te Papa, Auckland University and Wellington Botanic Gardens are working to cross pollinate these planted individuals to produce as much seed as possible. We want to learn more about its seed, whether it can be banked, and provide more plants to improve the genetic diversity in this plant.

*M. bartlettii* does not form viable seeds unless it is cross pollinated i.e. pollen from a different tree has to get to a flower in order for seed to form. If all the trees grew together insects would do this, but at the moment we need to help Rata Moehau to form viable seeds.

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(Photo: Emma Bodley, Auckland Botanic Garden Conservation & Records Specialist hand pollinating Rata Moehau. Photo by Bec Stanley.)