Funded PhD project – Investigation of Myrtaceae microbial ecology and impacts of myrtle rust

Location: University of Auckland (New Zealand)

Closes: 31 July 2020

Myrtle rust (*Austropuccinia psidii*) is a globally invasive fungal disease that severely affects plants in the myrtle (Myrtaceae) family. Plants in this family include the iconic New Zealand plants pōhutukawa (*Metrosideros excelsa*), mānuka (*Leptospermum scoparium*), and kānuka (*Kunzea ericoides*). Myrtle rust was first found in New Zealand in May 2017. *Austropuccinia psidii* attacks young leaves and shoot tips and in some cases can kill affected plants. Although we have knowledge about the ecology of certain myrtle species, we do not know much about the fungi and bacteria associated with their microbiomes, and the role these might play in disease occurrence or severity.

A three-year scholarship is available to support a PhD student pursuing research on the microbial community of Myrtaceae ecosystems, how they may respond to growth conditions, and the potential effects of myrtle rust. This project will be conducted in collaboration with Manaaki Whenua - Landcare Research and is part of the research programme "Beyond Myrtle Rust: towards ecosystem resilience", funded through the New Zealand Ministry for Business, Innovation and Employment. The scholarship consists of a stipend of NZ$28,200 per annum tax-free and covers University of Auckland PhD fees. The scholarship is open to both domestic and international candidates.

Qualifications and personal qualities:

Applicants for this project should hold, or be undertaking, an MSc or honours degree in ecology, evolutionary biology, genetics, microbiology, plant sciences or closely related fields. Prerequisite qualifications would need to be complete by March 2021, as the candidate should be available to commence the opportunity by April 2021. Applicants must be willing to work in an integrated multidisciplinary research project, and to engage in a range of research activities including field and laboratory work as well as advanced genetic data analytics and statistics.

Strong interest in microbial ecology or mycology. Experience with microscopy, molecular work, field work, or high-throughput sequence analyses is a plus.

Interested applicants should submit a CV to Mahajabeen Padamsee (m.padamsee@auckland.ac.nz) together with transcripts, and a cover letter explaining (i) their motivation for pursuing a PhD and (ii) any career goals they might have for the next 5-10 years, and the names of two potential referees.

Read this ad on Science Careers NZ