KAURILANDS SUMMIT 9 – 12 MAY WHANGĀREI 2023

Conservation & Restoration

Ensuring susceptible plant species survive myrtle rust and kauri dieback

Key People

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Ngāti Kuri Kaimahi with an adult rātā Moehau, Te Paki, Far North, 2022

Background

It's a huge challenge to conserve and restore kauri and native plants vulnerable to myrtle rust for future generations.

Working from a pathogen host and ecosystem point of view, this research theme incorporates conservation biology principles to make sure susceptible plant species survive myrtle rust and kauri dieback in Aotearoa.

The team is:

- Helping to prevent the extinction of iconic species
- Protecting at-risk species and ecosystems, and taonga rākau (trees) and locations

"Our youth need to have hope. We know that when we take our people into the bush there's a certain wairua there that heals them."

Riki Nelson - Ngāti Te Wai,
Operations Manager for Kaimai Kauri, speaking to the importance of rangatahi roles in conservation.

Highlights:

- We partnered with Tauranga Moana, Patuharakeke, Ngāti Rua, and Ngāti Kuri to collect kauri leaf material from each of their rohe to determine variations in genetic markers that could assist in its long-term conservation. We have reached agreements to ensure mana motuhake is guaranteed over the material collected.
- We supported a hīkoi to see wild trees of critically endangered rātā Moehau in Te Haumihi and to determine whether they are flowering and observe wild pollinators. This facilitated hands-on learning by rangatahi about techniques for hand pollination of rātā Moehau.
- Our quantitative agent-based models to identify where in the landscape is best to protect and restore the ngahere are progressing well. We have disease spread (kauri dieback and myrtle rust), pest herbivory, climatic variation (droughts), and grass invasion functional within the model.
- We carried out research to determine options for preserving taonga that are critically threatened by myrtle rust – maire tawake and ramarama – through cryopreservation and options for storing seed. We are working with mana whenua, through the Oranga theme, to define best practice in storing seed to recognise the primacy of Māori intellectual property.