

Otari Garden Nursery and Plant Conservation Laboratory

This month, 14 of our Botany Group to visit Otari Gardens, the only one in NZ dedicated solely to native plants. Staff member Megan Ireland met us and took us for a tour through the plant nursery and Karin Van Der Walt explained her work to us in the conservation facility.



u3a Tawa Botany Group, photo by Rosemary Smith



Megan Ireland, photo by Gwyneth Armitage

Beautiful Plant Photos taken by Ian Hulston



A Ponga



A Whau

Research Work Undertaken in Otari Laboratory

The aim of the scientific research conducted by Karin Van Der Walt is to save many of New Zealand's native plant species from extinction.



Karin Van Der Walt, Conservation and Science Advisor (WCC)

Methodology

- Volunteers take field trips around NZ to gather threatened species of plants - sometimes dangling from ropes on crumbly cliffs!
- Back at Otari, under the guidance of Karin, seeds are stored at -196°C in liquid nitrogen, a process known as cryogenic conservation.
- The healthiest seeds are selected from examination under a microscope.
- Seed germination then takes place, a complex process involving the understanding of each species preferred environment for growth.
- A series of climate-controlled fridges replicate the temperatures and 24-hour light and brightness preferences for each seed species.

- Once well germinated, the staff at Otari-Wilton Gardens take over their care until plants are strong enough to be planted out into the gardens, and eventually re-established into the wild.

Among the first seeds being cryopreserved are those of swamp maire trees (*Syzygium maire*). Otari, in collaboration with Te Papa are also working on Bartlett's Rātā (*Metrosideros bartlettii*) - New Zealand's rarest tree with just 13 left in the wild in three separate populations. A further project is research relating to native orchids, and the shrubs ramarama (*Lophomyrtus bullata*) and rohutu (*Lophomyrtus obcordata*) which are threatened by Myrtle Rust.

Botany Group Future Trips - Our trips this second semester include to Aotea Lagoon and Battle Hill Forest Park

Helen Roper