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Report for New Zealand Trip 2026

Part of my reasoning for choosing to study at Kew was the opportunity to travel; it was with great anticipation and many weeks of planning that the 3 weeks of travelling the length of Aotearoa, New Zealand materialised. The aim was to see the pteridological collections of as many botanical gardens as possible, and to be able to contrast them with wild habitats of conservation areas to be able to truly experience the real home of ferns.

Starting in Dunedin, I was warmly welcomed by a crisp winter morning and was blown away by the dawn chorus that surrounded me at the botanic garden. I was given a wonderful tour of the garden with Kate Caldwell and Dylan Norfield before heading to nearby native bush to experience the diversity of wild habitat. Climbing through thick forest, the canopy rapidly diminishing in height the higher we climbed before turning to alpine scrub at the top of Leith Saddle, it was stunning to behold the coast stretched out before us. The wealth of epiphytes within these canopies was breathtaking. Specimens of *Trichomanes venosum* and old colonies of *Blechnum montanum* were abundant in the understories. However, possum damage, including bark stripping and girdling, was visible and is an ever-constant battle across Aotearoa.



Image 1: View from top of Leith Saddle, with Dylan, Kate and myself.

I returned to Dunedin the following day to see the propagation facilities, which were a beguiling combination of a new facility and traditional facilities, incorporating 100 year old potting benches and cutting-edge seed preparation and storage areas. I was shown the collection of *Craspedia argentea*, the species of which has only one location in the wild, the study of which is ongoing, including pollination and propagation. Having been given the opportunity to see the native habitat areas within the garden and bird enclosures, I then had the chance to grab some data for my research into fern taxonomy. One could also marvel at the *Microsorium pustulatum*, as they spill from the borders and climb skyward up tree trunks, and hellebores flowering in mid-June reminding me that the seasons are upside-down to familiar Britain.

The drive to Christchurch had a wonderful stop at the Moeraki Boulders, where I spotted a couple of *Blechnum montanum* and *Pteridium esculentum* on the sand banks, coping unexpectedly well with the salt spray from the beach. Whilst the evidence of the 2011 Earthquake is still very much visible in Christchurch, the city has rallied and the murals capture the connections to the earth, plants and bird life. From Christchurch, I took a day excursion to the Hinewai nature reserve, in the extinct caldera of Akaroa, and was richly rewarded with stunning views across the bay. There I found the rare-to-cultivation *Dracophyllum traversii*, the elusive *Cordalyne indisia*, and nestled amongst the undergrowth, the enchanting *Tmesipteris elongata*.

Christchurch Botanic Garden welcomed me with a tour of their herbarium and historic library, some of which was shipped out from London in the 19th century. Having had a sneak peek the day before, the renovation of the Cunningham display house was well underway. The fernery here was unique in style, with its interior clad in spilt tree fern trunks. Not only did this create the perfect wall surface for epiphytes, it created a visual illusion of a dark back drop, which seemed to make the fernery feel bigger, emphasized foreground plantings and foliage. There were stunning specimens of *Marattia salicifolia* and *Blechnum colensoi*. Luke Martin, curator of native gardens in CBG had organised a visit to Fern Factor, run by leading commercial fern propagator, Paul Michael, who was enthusiastic to show us the propagation facility for ferns from spore. This facility included artificial lighting, Japanese ultrasonic fogging and a range of climate-controlled polytunnels, for germination hardening off and growing on. It was a real pleasure to see industry secrets from an expert in New Zealand flora and to understand how numerous problems had been overcome using methodological advancements.



Image 2: View of the inside of the Fern house in Christchurch Botanic Garden

An early start to reach the 8am ferry at Picton meant leaving Christchurch at 2.15am although a brief stop to stretch my legs meant I nearly missed the ferry as the stars were so breathtakingly beautiful. The ferry crossing to Wellington was very calm and the top deck view of the multitude of inlets and bays across the coast was stunning. Small island colonies of undisturbed plants were visible, but so too were the masses of *Pinus radiata* that has escaped the timber plantations and become invasive across the country.

Arriving in Wellington, the first stop was Atari Bush, home to native wild jungle, formal botanic gardens and its very own tree top walkway. From this view point the richness of epiphytes that greets visitors and the vista across Wellington is breathless with forest swathing the hills into the distance. An old stand of *Pseudopanax ferox* was festooned with lichen, whilst the river eel basking in the ford was a real treat as it sat waiting under the footbridge for its next meal to swim by. Known by the Māori people as 'Tuna' these fish are protected and have a huge cultural significance; I had not expected to be confronted with one in person. The size and scale of the *Cyathea dealbata* growing on the slopes beside the

river were beyond my expectations. With huge crosiers reaching skyward forming an array of pinnate wonder, enrobed with thick black scales.

Venturing further and deeper into the native forest to stand in the presence of the 800 year old Remu (*Dacrydium cupressinum*) was another treat, whilst the meandering trail yielded many ground-dwelling spore-bearers, such as the *Asplenium oblongifolium* and epiphytes such as the two-formed foliage of the *Arthropteris tenella*, twining its way up stem and branch alike.

The following day I returned to Otari Bush and was greeted by Jen Alderton-Moss from the Orchid Lab. She demonstrated the extensive work of culturing beneficial mycorrhizal fungi with sterilised leaf litter to successfully grow orchid seedlings. Tim Park and Megan Ireland kindly showed me around the gardens, including their 'Fronstage' garden and their fern collections. Tim champions New Zealand native flora and showed me a variety of significant New Zealand species, including *Pennantia baylissiana* and its hybrid form that has self-seeded in the garden. We were even fortunate enough to catch a glimpse of glow worms, clinging to the rock-faces in glittering strands.

Venturing further north, I made a stop at Tararua Forest Park and was enraptured to find *Hymenophyllum nephrophyllum* (also known as Raurenga). As I traversed the long, winding forest paths, I came across the worlds largest moss, *Dawsonia superba*, amidst the towering palms. Driving to Whanganui, I met with Lucky Wildermoth, who showed me the display house, fernery and gardens of Whanganui Botanic Garden, before we headed out of town to Bason Garden, which was bequeathed to Whanganui BG. The garden has three display houses, that each have a different climate and a fern house, which is about to get a new roof, so it was a treat to see before the renovation. Bason has many charming viewpoints, native ecology, (including grassland habitat) and secluded lakes holding the New Zealand native *Azolla rubra*.

The next destination was New Plymouth via a coastal lighthouse, shipped from London in 1864, but I stopped for a walk through the wooded reserve of Te Papa-Kura-o-Taranki (formerly Lucy's Gully). Here groves of *Pseudotsuga menziesii* under-storied with palms were hypnotic, but further in the wild bush took over that was thick with epiphytic *Astelia hastata* and Filmy ferns (including *Trichomanes venosum* and *Hymenophyllum dilatatum*).



Image 3: View of Mount Taranaki from the summit of the Mangorei track path.

The following day I aimed for the Pouakai Tarns via the Mangorei Track, climbing over 700m over 7 ½ miles of steps, through forest and alpine scrub, which featured some wonderful wind sculpted conifers. Over root and under limb the track lead, over gully and around cliff edge until the Pouakai hut emerged ahead and the view over the city spread out below. This was nothing once I saw Mount Taranaki; its snowcapped summit hidden beneath thick cloud until I reached the tarns, when it lifted long enough to see the summit. My botanical highlights were the large filmy ferns draping the trees, several foliaceous lichens and *Leptopteris superba*. The return journey was much more of a downhill jog as the sun faded and temperature began to drop.



Image 4: view inside of fern house in Pukekura Park.

Feeling sore and aching, I spent the next day in Pukekura Park Botanical Garden. The mesmerizing *Marattia salicifolia* had self-set in numerous beds along the garden's slopes, showing the change in latitude, I had experienced since starting at Dunedin. There were even *Sticherus cunninghamii* growing outdoors, and cycads. The display house held three different levels and descended as you ventured further in, until you reached the subterranean tunnels of the native fern house. Kept cool by the earth walls, this trove of native flora displayed epiphytic *Earina autumnalis* (Orchidaceae), decadent *Doodia australis* and more magnificent *Marattia salicifolia*. The wider park held several majestic old trees and a healthy Kauri tree (*Agathis australis*), the species of which is being attacked in most of the country by *Phytophthora agathidicida* (Kauri Dieback Disease), which will actively seek out Kauri roots in the soil. The additional presence of Myrtle rust (*Austropuccinia psidii*), which hit New Zealand in 2017 in wind-blown spores from Australia, means the endemic species of New Zealand are under constant threat from international pathogens. Whilst exotic ornamentals are also affected, Pōhutukawa (*Metrosideros excelsa*) is also at risk from Myrtle rust and could face serious changes in populations over the coming years.

The last leg of driving was via the Waitomo Caves and Museum, and was an opportunity to see living cave Weta. The museum holds numerous skeletons that had fallen into the caves, including moa, kiwi and bats, and made for an excellent glimpse into New Zealand's fauna.

My final stop in Auckland was marred by a stomach bug, but I still managed to make the arranged day at Auckland Botanic Garden, where Barbara Wheeler had curated a day to show me the whole garden. From native flora to seed and propagation facilities to Harekeki (*Phormium tenax*) collections, this was a brilliant way to conclude the end of the trip. The *Tecomanthe speciosa* was in full bloom and there was even *Pyrrosia eleagnifolia* nestled within the bases of cacti. With one last night in the city, I had chance to see the Sky Tower illuminated against the harbor before embarking on the plane that would take me around the globe and return to Kew.

This was a unique and exquisite opportunity that was only made possible with financial support from the Kew Guild, The Merlin Trust and the Bentham-Moxon Trust. My thanks go to the excellent and welcoming Horticulturists, Curators and Botanists I met along the way. I very much intend to continue to expand on my knowledge of New Zealand flora from ongoing correspondence and hope to be able to return to Aotearoa soon.