



Fig. 7. Superfluous mown grass between forest on slope above the lake (out of sight, left) and main stand towards houses. RO Gardner 30 Aug 2023.



Fig. 8. Three isolated old kohekohe; the RH one almost dead. RO Gardner 30 Aug 2023.

the species (for its growth, if not its reproduction). I have never seen flowers on the single remaining tree, nor could I find any fruit endocarps in the litter around it, so its continuance here will probably have to be through clonal propagation.

5. Proper tracking, preferably by boardwalks, would reduce the damage to the ground cover and understorey presently occurring (cf. the situation in Smith's Bush.).

6. The lake edge might also carry a boardwalk that would join with the end of the existing one at the western end of the Kitchener Park section.

7. The lake-edge vegetation west to Kitchener Park seems to need help in gaining height and diversity. Enrichment with suitable species (kahikatea, cabbage tree, pukatea, putaputaweta) is suggested.

8. Towards the western end of Kitchener Park the land becomes steep, scrubby and weed infested, and restoration of forest here would conflict with adjacent property owners' desires of lake views. Restoration of a lower-stature cover (mainly of *Coprosma macrocarpa*?) could be a workable compromise.

References

- Auckland Libraries. Heritage Collections, Map 4131: "Takapuna villa sites for positive sale...", 1863.
 Auckland Libraries. Heritage Collections, Map 4142: "Hurstmere estate, Lake Takapuna", 1886.
 Gardner, R.O. 1986: Native bush at Sylvan Park, North Shore, Auckland. *Auckland Botanical Society Newsletter* 41: 36–42.
 Perrie, L. 2021: [new names for *Phymatosorus pustulatus*] <https://blog.tepapa.govt.nz/2021/12/20/a-new-scientific-name-for-one-of-aotearoas-most-common-ferns-kowaowao-again/>

Exploring the botanical wonders of Rangitoto Island – ABS field trip 19th August 2023

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It was an overcast winter's morning as we waited for the ferry to take us to Rangitoto Island, an iconic

volcanic landmass situated in the Hauraki Gulf, just a 25-minute ferry trip from downtown Auckland. With our notebooks, cameras, and a sense of excitement, we set out to uncover the botanical treasures that this 600-year old island had to offer. The day was destined to be a great one when we were greeted by 'Nationally Endangered' bottlenose dolphins (*Tursiops truncatus*) as we docked at the Rangitoto Wharf.

Upon arrival we couldn't help but admire the fragrant white flowers of exotic *Freesia leichtlinii* near the wharf, as well as colonies of whisk fern (*Psilotum nudum*) on basalt outcrops. Non-vascular species here included an *Asterella* liverwort and feather moss



Figs. 1–4: 1. *Pulchrinodus inflatus* holding tiny dew droplets, near the wharf. Photo: BP, 19 Aug 2023. 2. *Facelis retusa* growing on the loose scoria. Photo: JS, 19 Aug 2023. 3. Close up of *Facelis retusa*, a new record for the island. Photo: JS, 19 Aug 2023. 4. Necklace fern (*Asplenium flabellifolium*) near Kidney Fern Glen. Photo: BP, 19 Aug 2023.

(*Pulchrinodus inflatus*), still holding drops of morning dew (Fig. 1). After a briefing from trip leaders Leslie and Maureen, we made our way towards Kidney Fern Glen. Along the way, we observed the usually-epiphytic *Astelia solandri* growing at ground level, the monoecious drooping flower spikes of tutu/tupakihi (*Coriaria arborea*), and small plants of *Facelis retusa* (Figs. 2, 3), a new record for the island. We also came across two of the more interesting finds of the day: hot rock fern (*Pellaea calidirupium*) and necklace fern (*Asplenium flabellifolium*) (Fig. 4).

We arrived at Kidney Fern Glen to discover a lush oasis under the canopy of pōhutukawa (*Metrosideros excelsa*). All of the ferns were looking particularly luxuriant thanks to the consistently wet weather that 2023 had provided. The kidney ferns (*Hymenophyllum nephrophyllum*) (Fig. 5) were thriving and Maureen challenged us with spotting the very occasional fertile frond, for which the winner would receive a 'virtual chocolate fish'. Keen botanisers got out their hand lenses to look closely at the filmy ferns *Hymenophyllum*

cupressiforme (Fig. 6) and *H. sanguinolentum*. Some thought that they saw *H. revolutum* in the Kidney Grove, but later suspected that it was possibly just *H. cupressiforme*, which is abundant there. If a future visit can confirm the presence of *H. revolutum*, this would be a new record for Rangitoto Island. Other observations within the Glen included *Metrosideros perforata*, *Oplismenus hirtellus*, *Astelia banksii* (Fig. 7) and *A. solandri*, the epiphytic orchids *Dendrobium cunninghamii* and *Earina autumnalis*, and abundant flowering pixie cap (*Acianthus sinclarii*).

As we reached the open Parade Ground, an area largely barren of vascular species, we witnessed the slow, steady colonisation of mānuka (*Leptospermum scoparium*). The *Racomitrium* moss was thriving on the loose scoria surfaces, along with colonies of *Cheilanthes sieberi* (Fig. 8).

Species such as akepiro (*Olearia furfuracea*), five finger (*Pseudopanax arboreus*), and pōhutukawarātā hybrids (*Metrosideros excelsa* × *M. robusta*) were observed close to the open Summit Track

edges. Prickly mingimingi (*Leptecophylla juniperina*) was sporting its tiny white flowers, and weedy prickly hakea (*Hakea sericea*) was popping up around the place. The unusually large size of the puka (*Griselinia lucida*) leaves stood out, but the true highlight was seeing Kirk's tree daisy (*Brachyglottis kirkii* var. *kirkii*) showing off clusters of large white daisy flowers (Fig. 9). Comb fern (*Notogrammitis heterophylla*) and the fireweed (*Senecio diaschides*) were also nestled in amongst the loose scoria of the open lava fields.

Both the track width and size of the group lessened as we continued down Wilson's Park Track (Fig. 10). We huddled around a bank where several winter greenhood orchids (*Pterostylis alobula*) (Fig. 11; see also cover illustration) were present, and later came across *P. trullifolia* with its larger, spout-like 'lip', and the larger *P. banksii* showing off a pinkish hue. The carnivorous *Drosera auriculata* was spotted on the track edge, and the relatively

large fruits of the pygmy tree orchid (*Bulbophyllum pygmaeum*) caught our eye.

As the substrate changed from lava fields to the loose scoria, tānekaha (*Phyllocladus trichomanoides*) and the occasional tall rewarewa (*Knightia excelsa*) were present amongst the *Kunzea* canopy. The many mamakū (*Sphaeropteris medullaris*, previously *Cyathea medullaris*) that had fallen victim to 2019 and 2020 summer droughts was a sad sight (Fig. 12). Silver fern (*Alsophila tricolor*, previously *Cyathea dealbata*), and whekī (*Dicksonia squarrosa*) were also in poor condition, but seemed to have fared better than the mamakū. A diversity of ground ferns were also observed, including rasp fern (*Doodia australis*), rosy maidenhair (*Adiantum hispidulum*), kiokio (*Parablechnum novae zealandiae*), shaking brake (*Pteris tremula*), thread fern (*Icarus filiformis*, previously *Blechnum filiforme*), various *Hymenophyllum* species, and an occasional *Deparia petersenii*.



Figs. 5–8: 5. Kidney ferns (*Hymenophyllum nephrophyllum*), in the aptly named Kidney Fern Glen. Photo: BP, 19 Aug 2023. 6. Close up of filmy fern (*Hymenophyllum cupressiforme*), Summit Track. Photo: AW, 19 Aug 2023. 7. *Astelia banksii* growing under the pōhutukawa canopy, not far from the wharf. Photo: BP, 19 Aug 2023. 8. *Cheilanthes sieberi* growing on the loose scoria, Summit Track. Photo: BP, 19 Aug 2023.



Figs. 9–12: **9.** Kirk's tree daisy (*Brachyglottis kirkii* var. *kirkii*) in flower, growing on scoria, Summit Track. Photo: BP, 19 Aug 2023. **10.** Bot-soccers beginning to head down Wilson Park Track. Photo: BP, 19 Aug 2023. **11.** A group of winter greenhood orchids (*Pterostylis alobula*) along Wilson Park Track. Photo: BP, 19 Aug 2023. **12.** The remnants of mamakū (*Sphaeropteris medullaris*) that didn't survive recent summer droughts, Wilson Park Track. Photo: BP, 19 Aug 2023.

The exotic *Cyrtanthus elatus* was locally common along Wilson Park Track, a remnant of Wilson and Leary's early 1900s exotic garden experiment (Wilcox et al. 2007; Wilcox 2015). In the understorey, a single mangeao (*Litsea calicaris*) seedling was spotted, along with an abundance of karamū (*Coprosma robusta*) seedlings, and puawananga (*Clematis paniculata*). Ben noted the expanding presence of twiggy coprosma (*Coprosma rhamnoides*) within areas of scoria in recent years.

The birds were not readily enticed by the drizzly weather, although the pīwakawaka/fantails (*Rhipidura fuliginosa*) were their usual friendly selves. The occasional chatter of the tīeke/saddleback (*Philesturnus rufusater*) could be heard, and a flock of pōpokatea/whiteheads (*Mohoua albicilla*) hopped through the treetops as we

descended from the summit, making haste to catch the 4 pm ferry.

The fascinating botany of Rangitoto Island is a testament to nature's resilience and the diversity of our indigenous plant species. I personally left the island with a profound appreciation for the diversity of life that calls this island home and will certainly be visiting again soon.

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References

- Wilcox, M.D. (ed.). 2007: Natural History of Rangitoto Island. Hauraki Gulf, Auckland, New Zealand. *Auckland Botanical Society Bulletin* No. 27.
- Wilcox, M. 2015: A visit to Rangitoto Island. *Auckland Botanical Society Journal* 70: 147-149.