

were waiting for us first thing in the morning and after breakfast we said our farewells and thank yous and we departed for Taranaki, full of thoughts of this tough and capable nonagenarian living alone in the King Country!

The following week the three “girls” stayed with Auntie Anne followed by the Davidsons who were separately also taken to the same spots that we were shown. Talking to them afterwards, we were all impressed by how independent Anne is, fit and able. For instance, when a gravel truck met Anne and “the girls” head-on at a tight gravel corner, Anne evidently showed very speedy reflexes taking evasive action. Our visits haven’t totally answered Anne’s

botanical queries, but good herbarium material has been collected, and with further work might be resolved.

Acknowledgements

Your recent botanical guests all thank you Anne for your warm hospitality, sharing your house, history and for the guided tour of your botanical discoveries; Ewen also thanks Yumiko Baba for her initial thoughts on the hīnau, and for the eucalypt addition; Geoff Davidson for the flowering *Olearia* specimen; fellow visitors for the use of their images (acknowledged in the captions); and Rhys Gardner for kindly commenting on the *Olearia* specimens.

References

- Allan, H.H. 1961: *Flora of New Zealand, Vol. I*. Government Printer, Wellington. 1085p.
Simpson, P. 2017: *Totara: a natural and cultural history*. Auckland University Press, Auckland. 287 p.
-

Field trip to Arthur Leigh Titchener Memorial Covenant, Waiheke Island, 20 February 2021

Peter Moosberger

The third day of Auckland’s Covid Alert Level 3 fortunately dropped a level at midnight on the Wednesday prior allowing the trip to proceed under Level 2 rules. The weather was great – a fine and summery day. Most of us were aboard the 9am ferry, and a few travelled on the separate Devonport service. Transport from Matiatia to the top of the reserve had been generously arranged by the QEII Trust. Eighteen be-masked participants were aboard the bus for the ten-minute journey there.

Leaders: *Helen Preston Jones, Chris Floyd* (QEII National Trust). Participants: *Kerry Titchener* (property owner), *QEII Covenanters Sue Fitchett, Lyndsay Maeger*, locals *Helene Adeane, Ksenia Goliban, Lincoln Jackson (and 2 children), Nat Primak, Rod Morton, Hanne Sorensen; and Nona Banks*, Trust Manager for Waiheke Weed Control Trust. ABS members: *Jenny Andrew, Ann Brabant, Maureen Burke, Ewen Cameron, Neil Davies, Beth Gibbs, Leslie Haines, Sarah Hood, Peter Moosberger, Kim Patterson, Juliet Richmond, Mere Roberts, Joshua Salter, Cheryl Taylor, Alison Wesley, Maureen Young*.

On arrival at the Walter Frank Drive entrance we were met by Chris Floyd (who outlined the work of

the Trust and the specifics of this site), and by Kerry Titchener. Kerry’s father had fenced the gully from stock in the mid-1980s, allowing the gully to regenerate unassisted, a far-sighted move to protect the landscape. He set in place the QEII covenant in 2004. It was useful to hear from Nona of the weed control methods, targetting specific species, and seeing the results of the work throughout the visit. Chris briefed us on Health and Safety and distributed an information sheet showing topographical details, an aerial photo of the reserve and the Covid tracer QRcode.

The site, of some 53 ha extent, lies between Walter Frank Drive and Te Wharau Bay about 2 km southwest of Oneroa (Fig. 1). Chris told us the reserve was about a 50/50 mix of secondary coastal forest on the lower hill slopes, and primarily kanuka (*Kunzea robusta*) on the upper slopes, with a small area of raupo (*Typha orientalis*) wetland. Our visit to the site was to explore more of the Waiheke natural areas and to prepare a species list for this reserve. The vascular plant list of Whakanewha Regional Park by Mike Wilcox et al. (2002) was circulated as a checklist for the trip.

The suggested plan of attack outlined by Chris (Fig. 2) was to follow the track down to the stream, then to leave the track and turn right to follow the dry creek bed down towards the lunch area at Te Wharau Bay. The dense raupo swamp area near the end was to be passed by keeping it to our right. Regarding a time schedule he thought we should aim for a midday lunch rendezvous and a swim could be had with high tide about 2:30 pm. Commencing about 2 pm, a much more leisurely return walk by way of the steep well-formed track up from the bay to rejoin the creek and further on the narrow upper track, would allow plenty of botanising before meeting the return bus at 4 pm.

At 10.40 am, with the initial formalities completed, we set off. Kauri (*Agathis australis*) seems absent but as a precaution and good-practice footwear cleaning gear was used near the reserve entry. The track to the creek is narrow and very soon the group was quite spread out. The usual excited botanising with its characteristic stop/start progress had taken over! Every now and then Chris exercised some genial encouragement to keep the column moving along.

Coprosma arborea is especially dominant in the upper areas (Fig. 3), and many were laden with ripe fruit at this time (Fig. 4); according to Lucy Cranwell (1981) this species is often found in association with kauri. Many taraire (*Beilschmiedia tarairi*) were displaying evidence of drought stress. Entire branches had dead leaves. However, it was pleasing to see an abundance of seedlings in many places along the way near the creek bed.

There was much cicada song, but few birds were heard or observed – but we did observe tui, kereru and fantail. Chris mentioned that the spotless crane/puweto/putoto is known to inhabit the swamp but is seldom seen because it is so secretive.

Notable larger trees were: a kahikatea (*Dacrycarpus dacrydioides*) (pointed out by Kerry as the largest and tallest tree in the covenant and thought to be female due to presence beneath of many seedlings), hinau (*Elaeocarpus dentatus*) (near top of track and perhaps the only one), taraire (*Beilschmiedia tarairi*), a kowhai (*Sophora chathamica*), several large kohekohe (*Dysoxylum spectabile*) and puriri (*Vitex lucens*).

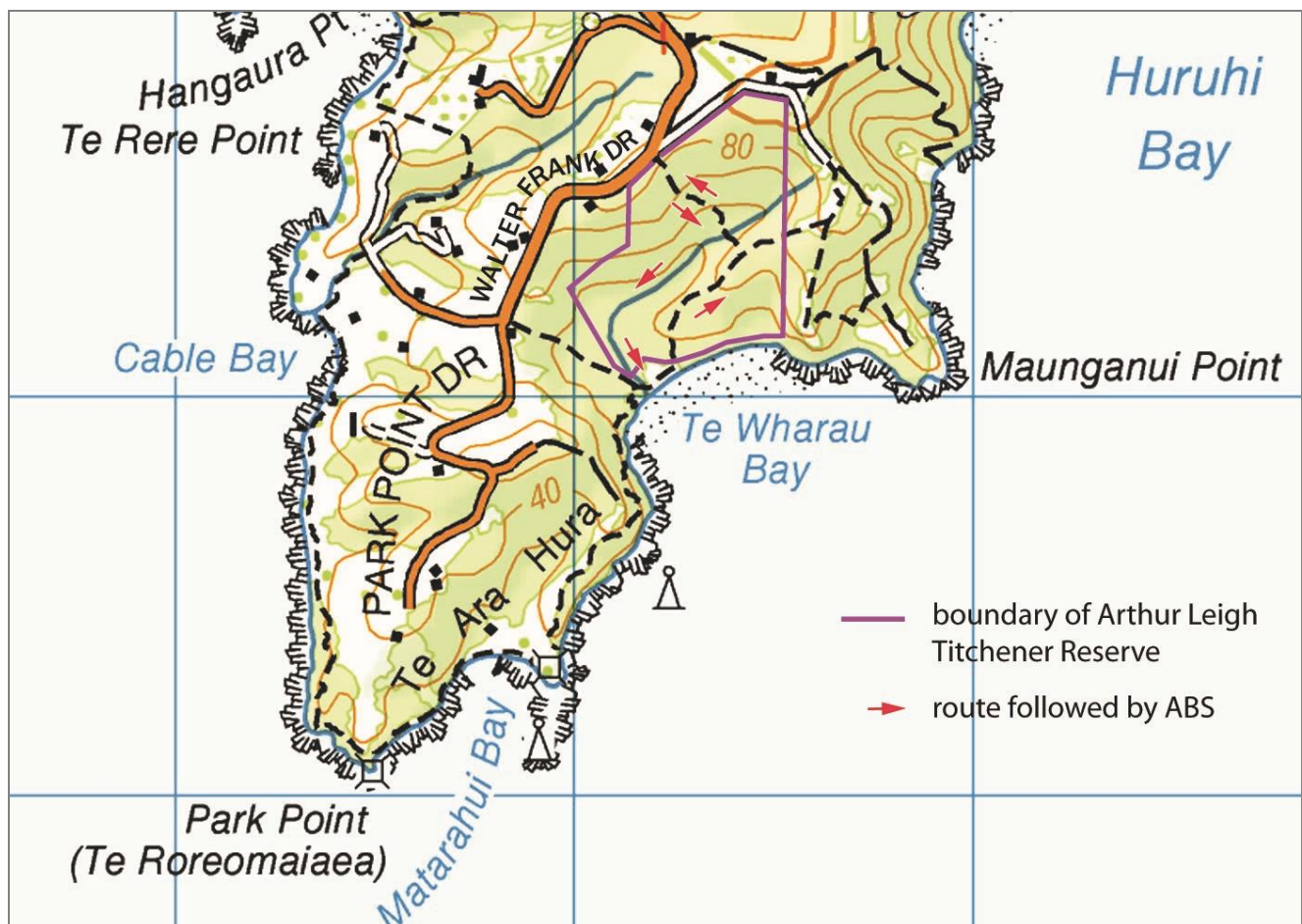


Fig. 1. Location of the Arthur Leigh Titchener Memorial Covenant, Waiheke Island, showing the route taken by ABS from Walter Frank Drive to Te Wharau Bay and back again. Topomap 50 modified by Joshua Salter.



Figs. 2–8: **2.** Chris Floyd addresses the group before entry to the reserve. Photo: J. Salter. All field photos taken on 20 Feb 2021. **3.** *Coprosma arborea* canopy on the way down to the creek. Photo: J. Salter. **4.** Fruits of *Coprosma arborea* ripen to translucent white. 2586 Photo: J. Salter. **5.** Intersection of the track with the dry creek bed. Photo: J. Salter. **6.** Patches of *Asplenium lamprophyllum* were frequent by the creek bed. Photo: E. Cameron. **7.** Nona Banks at a clearing on the way down the creek. Photo: J. Salter. **8.** A pressed Bangalow palm seedling collected by the dry creek bed. Note the broad paired leaflets on the youngest leaf (now brown) and subsequent leaves. AK 382064.

Eventually the creek was reached (Fig. 5). The locals were surprised to see it dry at these upper / middle reaches. This was described as particularly unusual. However, the situation did make initial progress down it somewhat easier. Further downstream, pockets of stagnant water and holes concealed with water-swept debris were

encountered and so the banks either side made for better places to walk. Ferns were frequent by the creek bed, including *Asplenium lamprophyllum* (Fig. 6). On the more open parts of the creek banks woolly nightshade (*Solanum mauritianum*) and moth plant (*Araujia sericifera*) (innumerable seedlings and some mature flowering / podding specimens) were



Figs. 9–14: **9.** Conveniently at eye-level, *Astelia hastata* with male flowers on a forested bank near the creek. Photo: E. Cameron. **10.** Approaching the raupo wetland. Photo: J. Salter. **11.** Lunching in the shade at Te Wharau Bay. Photo: J. Salter. **12.** Te Wharau Bay looking northeast. Photo: J. Salter. **13.** A female mahoe on the forest edge with abundant fruit. Photo: J. Salter. **14.** Lower end of the direct track up from the bay. Photo: J. Salter.

present. Pest plant control with a particular focus on moth plant and rhamnus (*Rhamnus alaternus*) has been an ongoing program of work for Nona, funded by the Titchener family and supported this year through QEII and Auckland Council. Nona, who accompanied us as far as the upper reaches of the wetland, was happy to share her extensive knowledge of the reserve (Fig. 7).

By the creek there were several suspicious looking palm seedlings, some of which Ewen told us were

Bangalow palm (*Archontophoenix cunninghamiana*) (Fig. 8), along with nikau (*Rhopalostylis sapida*) seedlings, although only adult nikau were seen in the reserve. Locally there were a few mature brush wattles (*Paraserianthes lophantha*) with numerous seedlings. The native grass (*Oplismenus hirtellus*) was plentiful and on a bank a clump of *Astelia hastata* was in flower (Fig. 9). There was evidence of human activity in the reserve: a few items were spotted – ball, bucket, bottle, tarpaulin and trowel – mostly in the vicinity of the creek bed.

Once again, the group became a lengthy column slowly negotiating scrubby undergrowth with little evidence of significant paths forward. Eventually signs of the raupo swamp ahead appeared (Fig. 10) and it was time to keep to the true left bank to skirt it. This narrow wetland is over 100 m long, dominated by raupo over 2 m tall, mixed locally with shorter *Bolboschoenus fluviatilis*, with manuka (*Leptospermum scoparium*) and in one place a tussock of the native sedge *Machaerina tenax* on the margin was spotted. A single large willow (*Salix? × fragilis*) was observed across the creek on the west side of the wetland – it would be a good one to remove.

The first reached the mown grassy edges of the bay about 12.30 pm and by 1 pm everyone had made it to the lunch (Fig. 11) and swim area (Fig. 12). This mown area was a little smaller than a rugby field and is owned and maintained by the Council. At the western end by the mouth of the wetland were two exotic conifers c.14m tall: macrocarpa (*Cupressus macrocarpa*) and Bhutan cypress (*C. torulosa*). On the way, Neil found a huge (40 x 40 cm) whau (*Entelea arborescens*) leaf, which Helen used as a parasol. At the edge of the bush there was a magnificent mahoe heavily bristling with its pin-like purple fruit (Fig. 13). Coastal karamu (*Coprosma macrocarpa*) were often seen in full fruit. Evidence of the presence of rabbits (droppings) was seen in the grassy flats.

About 2 pm we started the gradual botanising move uphill, this time via the well-formed track (Fig. 14). Above the creek-crossing, Chris led a small group on a short diversion down off the track to visit

mature kowhai. A few other (smaller) specimens had been seen. Also spotted was a tiny rewarewa (*Knightia excelsa*) seedling. A large tawapou (*Pouteria costata*) was noted along with a sapling. The tree had been damaged by wind resulting in branches badly broken. A single pohutukawa (*Metrosideros excelsa*) in the canopy was located near the top of the track. Climbing rata (*Metrosideros perforata*) creeping on the forest floor was common.

This natural piece of regenerating native forest is a wonderful asset. The vegetation overall was dominated by indigenous species, but along the dry creek bed where we walked there were a few weed species establishing, the most abundant being moth plant. Fortunately, there is a well-managed weed program, but it may be an endless process.

The ferry-bound group were able to board the waiting bus at 3.50 pm and transfer to a well-patronised ferry which conveniently departed at a slightly delayed 4.10 pm, and not far into the trip we were able to see one of the preliminary America's Cup yacht races in the distance south off Maraetai.

Acknowledgments

Our grateful thanks to Kerry, Chris, Nona and the other guardian friends for sharing this beautiful and interesting reserve with us. Thanks to Chris and Helen for the organisation and leadership, Joshua for creating the map and for assisting in the organising of images, and Ewen, Maureen and Beth for your efforts compiling the species list, which will be passed on to QEII to assist in their management of the reserve.

References

- Cranwell, Lucy, M. 1981: *The botany of Auckland*. Auckland Institute and Museum, Auckland, New Zealand.
 Wilcox, M., Spence, A., White, P. 2002: Botanical features of Whakanewha Regional Park, Waiheke Island. *Auckland Botanical Society Journal* 57: 34-46.

Appendix. Arthur Leigh Titchener Memorial Covenant and Council domain, Waiheke Island Checklist of indigenous vascular plants, fungi and vertebrate animals seen on the day, compiled by the Auckland Botanical Society, 20 February 2021

* = exotic species; ×1 = only one seen; AK = voucher herbarium specimen collected

WILD VASCULAR PLANTS (compiled by Maureen Young & Ewen Cameron)

Ferns

Adiantum aethiopicum
Adiantum cunninghamii
Adiantum hispidulum
Asplenium flaccidum
Asplenium lamprophyllum
Asplenium oblongifolium
Asplenium polyodon
Blechnum filiforme

Blechnum minus
Cyathea dealbata
Cyathea medullaris
Deparia petersenii
Diplazium australe
Doodia australis
Lastreopsis glabella
Lastreopsis microsora
Microsorium pustulatum

Microsorium scandens
Pneumatopteris pennigera
Pteris macilenta
Pteris tremula
Pyrrosia elaeagnifolia
Tmesipteris elongata

Gymnosperms

Dacrycarpus dacrydioides

Dicotyledons

Ageratum adenophora *
Alectryon excelsus
Araujia sericifera *
Atriplex prostrata *
Beilschmiedia tarairi
Beilschmiedia tawa
Callitriche muelleri
Calystegia sepium subsp. *roseata*
Calystegia sepium × *C. silvatica* *
Cirsium vulgare *
Clematis paniculata
Coprosma arborea
Coprosma macrocarpa
Coprosma macrocarpa × *C. robusta*
Coprosma rhamnoides
Coprosma robusta
Coprosma spatulata
Corynocarpus laevigatus
Cotonesater glaucophyllus *
Daucus carota *
Dysoxylum spectabile
Elaeocarpus dentatus ×1
Entelea arborescens
Geniostoma ligustrifolium
Haloragis erecta
Hedycarya arborea
Helminthotheca echioides *
Hypericum androsaemum *
Hypochaeris radicata *
Knightia excelsa
Kunzea robusta
Leptospermum scoparium
Leucopogon fasciculatus
Ligustrum lucidum *
Lotus pedunculatus *
Lonicera japonica *
Ludwigia palustris *
Melicope ternata

Melicytus ramiflorus
Metrosideros excelsa
Metrosideros perforata
Muehlenbeckia australis
Myrsine australis
Oxalis exilis
Paraserianthes lophantha *
Parsonsia sp.
Piper excelsum
Pittosporum tenuifolium
Plagianthus divaricatus
Planchonella costata
Plantago lanceolata *
Prunella vulgaris *
Pseudopanax arboreus
Pseudopanax crassifolius
Pseudopanax lessonii
Pseudopanax crassifolius × *P. lessonii*
Ranunculus repens *
Rhamnus alaternus * scarce
Rhaphiolepis bibas (= *Eriobotrya japonica*) * scarce
Rosa rubiginosa *
Rubus cissoides
Rubus fruticosus agg. *
Rumex crispus *
Salix ? × *fragilis* * ×1
Selliera radicans
Senecio bipinnatisectus *
Senecio esleri
Solanum americanum
Solanum mauritianum *
Sonchus asper *
Sonchus oleraceus *
Sophora chathamica
Ulex europaeus *
Vitex lucens

Monocotyledons

Agrostis capillaris *

Anthoxanthum odoratum *
Archontophoenix cunninghamiana *
 (AK 382053, 382064)
Asparagus scandens * scarce
Astelia hastata
Axonopus fissifolius *
Bolboschoenus fluviatilis
 (AK 382021)
Carex dissita
Carex flagellifera
Carex lambertiana
Carex longibrachiata *
Carex ochrosaccus
Carex uncinata
Carex virgata
Cenchrus clandestinus *
Cordyline australis
Cortaderia selloana *
Cyperus ustulatus
Dactylis glomerata *
Dianella latissima/nigra
Ficinia nodosa
Gahnia lacera
Holcus lanatus *
Juncus effusus *
Lepidosperma australe
Machaearina juncea
Machaearina tenax
Microlaena stipoides
Oplismenus hirtellus
Paspalum dilatatum *
Rhopalostylis sapida
Ripogonum scandens
Schoenus tendo
Typha orientalis

CULTIVATED TREES

Cupressus macrocarpa * ×1
Cupressus torulosa * ×1
 (AK 382243)

FUNGI (compiled by Beth Gibbs)

Common gilled mushrooms and allies Order Agaricales (iNaturalistNZ Observation 69969293)
Auricularia cornea on wood (iNaturalistNZ Observation 69969651)
Favolaschia calocera * on wood (iNaturalistNZ Observation 69969809)
Ganoderma sp. on wood (iNaturalistNZ Observation 69969425)
Pluteus sp. deer mushrooms on wood (iNaturalistNZ Observation 70061497)
Polyporus hympomelanus on wood (iNaturalistNZ Observation 69969538)
Stereum versicolor on wood (iNaturalistNZ Observation 69969786)

Birds

fantail	tui
grey warbler	spotless crane – historical
Indian myna *	record from the raupo wetland
kereru	(Chris Floyd pers. comm.)

Mammals

rabbits – droppings by upper road and beach, also nikau seedlings chewed in forest

predator traps - frequent to catch stoats, hedgehogs and rats (Chris Floyd pers. comm.)

The vegetation and vascular flora of Pine Valley Forest, Dairy Flat

Marley Ford & Nick Goldwater

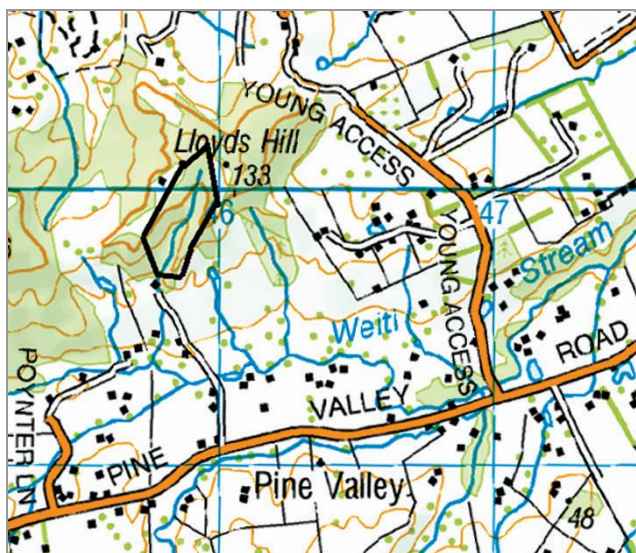


Fig. 1. Location of the study area (delineated by black outline). Topo50 map modified by Joshua Salter. Sourced from www.topomap.co.nz

'Pine Valley Forest' is a six-hectare kauri (*Agathis australis*)-podocarp-broadleaved species forest remnant located on privately owned land near Pine Valley Road, Dairy Flat. The site is characterised by steep forested gullies and spurs and is drained by a permanent stream that at its downstream extent flows through a small wetland at the southern end of the forest (Fig. 1). The forest is in the Rodney Ecological District (Mitchell et al. 1983) and, under the Singers et al. (2017) classification, the ecosystem type of this remnant would be classified as a 'WF11 – kauri, podocarp, broadleaved forest' – a forest type that has 'Endangered' status under the regional IUCN threat classification. This forest is representative of what once covered the northern Auckland Region, but has now been reduced to fragmented relics that persist in rural and urban areas. The preservation and study of this privately owned forest remnant will help the work towards the protection and enhancement of biodiversity within the Auckland



Fig. 2. Mixed conifer forest of kauri and tanekaha on ridge with sparse understorey. All photos except Fig. 9 by M. Ford, 16 Jun 2019.

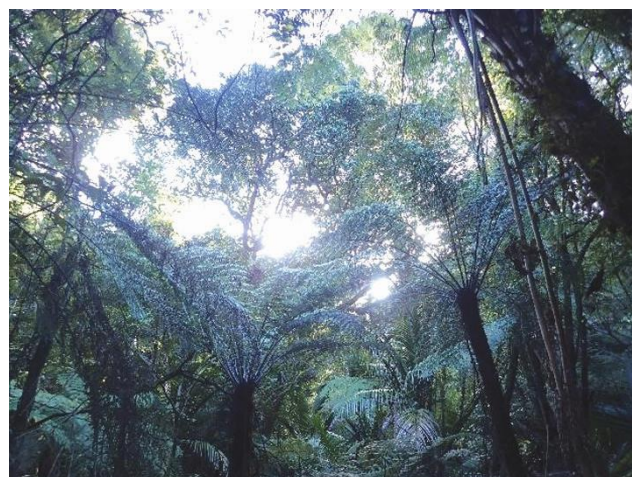


Fig. 3. Gully forest which supports a dense sub-canopy of ponga and nikau under a canopy of pūriri and taraire.