

<i>Pseudoscleropodium purum</i> *	#	Liverworts (compiled by Joshua Salter)	<i>Porella elegantula</i>	#
<i>Ptychomnion aciculare</i>	#	<i>Balantiopsis</i> ? <i>convexiuscula</i>	<i>Psiloclada clandestina</i>	
<i>Sphagnum falcatulum</i>		<i>Bazzania novae-zelandiae</i>	<i>Symphogyna prolifera</i>	#
<i>Sphagnum novo-zelandicum</i>		<i>Bazzania</i> sp.	<i>Telaranea lindenbergii</i> s.str.	
<i>Tayloria callophylla</i>		<i>Lembidium nutans</i>	<i>Thysananthus anguiformis</i>	
<i>Weymouthia cochlearifolia</i>	#	<i>Plagiochila incurvicola</i>	<i>Trichocolea mollisima</i>	
<i>Wijkia extenuata</i>	#	? <i>Plagiochilion conjugata</i>		

Botanical Society Field Trip, 18 June 2022 – Quinns Road, Waitakere Ranges

Ben Goodwin and Geoff Davidson

On the 18th June 2022, 13 members of the Auckland Botanical Society and two local residents met at the intersection of Quinns Road and Piha Road in Auckland's Waitakere Ranges. Attendees on the day were: *Phoebe Andrews*, *Geoff Davidson* (*Organiser, in absentia*), *Wayne Edwards* and *Tai Edwards* (*Quinns Road residents*), *Ben Goodwin* (*Leader*), *Leslie Haines*, *John Millett*, *Philip Moll*, *Peter Moosberger*, *Jessica Reaburn*, *Juliet Richmond*, *Thiagaraj (Tiago) Siva Sankara Sundaramahalingam*, *Brent Torrens*, *Alison Wesley*, *David Wilson* and *Maureen Young*. Braving the rain and fog, the plan for the day was to explore the roadside vegetation along the length of Quinns Road and to compare the differences in the plant composition (particularly invasive plants) between the road's northern and southern ends.

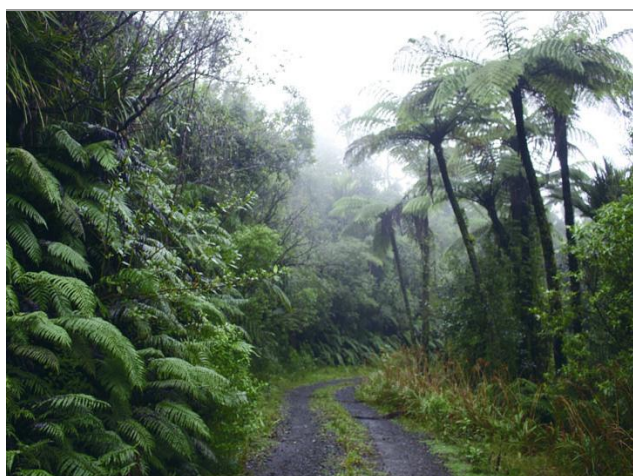


Fig. 1. Southern end of Quinns Road, 18 June 2022. Photo: Ben Goodwin.

Earlier field trips made by the Auckland Botanical Society to Quinns Road occurred on 20 July 1968 (Mead 1968) and on 16 April 2011 (Hutton 2011). Quinns Road meanders for about 2.5 km in a south-easterly direction, parallel to Scenic Drive. The start of the road (its northern end) is a sealed public accessway, bordered on its western side by the Waitakere Ranges Regional Park, and on its eastern side by private properties. After about 1 km, the road crosses into land managed by Chorus Ltd, where it provides an unsealed accessway to their telecommunications transmitter mast (Fig. 1). This southern end of the road is nestled within the Waitakere Ranges Regional Park.

During the 2022 field trip, the most common larger trees observed along the length of Quinns Road were rimu (*Dacrydium cupressinum*), rewarewa (*Knightia excelsa*) and kānuka (*Kunzea robusta*). Typical smaller trees forming the subcanopy and understory included: kanono (*Coprosma autumnalis*), hīnau (*Elaeocarpus dentatus*), hangehange (*Geniostoma ligustrifolium*), houhere (*Hoheria populnea*), māhoe (*Melicytus ramiflorus*), mapou (*Myrsine australis*), tarata (*Pittosporum eugenioides*), five finger (*Pseudopanax arboreus*) and patē (*Schefflera digitata*). Other trees in lower numbers were: Hall's tōtara (*Podocarpus laetus*), kawaka (*Libocedrus plumosa*), miro (*Pectinopitys ferruginea*), kohekohe (*Didymocheton spectabilis*), kōtukutuku (*Fuchsia excorticata*), tawari (*Ixerba brexioides*), pukatea (*Laurelia novae-zelandiae*), mangeao (*Litsea calicaris*), toro (*Myrsine salicina*) and raukawa

(*Raukaua edgerleyi*). Tree ferns of ponga (*Cyathea dealbata*), mamaku (*Cyathea medullaris*) and wheki (*Dicksonia squarrosa*) were prominent, and there were some nīkau (*Rhopalostylis sapida*). The abundance of epiphytic mosses, ferns and orchids (*Earina autumnalis*, *E. mucronata* and *Dendrobium cunninghamii*), as well as the presence of kātote (*Cyathea smithii*) were evidence of the area's elevation (350-380 m asl) and associated high humidity.

The cut banks which run alongside much of Quinns Road were of particular botanical interest during the field trip. Many of these banks were covered in kiokio (*Parablechnum novae-zelandiae*), wharariki (*Phormium cookianum*), *Gahnia* spp. and, locally, kiekie (*Freycinetia banksii*). Observed on drier, more open roadside banks were: *Diphasium scariosum*, *Diploblechnum fraseri*, crown fern (*Lomaria discolor*), ring fern (*Paesia scaberula*), bracken (*Pteridium esculentum*), *Pseudodiphasium volubile*, *Sticherus flabellatus*, *Brachyglottis kirkii* var. *angustior* and sun orchids (*Thelymitra* sp.). Along the southern end of Quinns Road, seepages run through some of the cut roadside banks. *Cranfillia fluviatilis*, shore lobelia (*Lobelia anceps*), maruru (*Ranunculus reflexus*), *Schoenus maschalinus* and a creeping, round-leaved *Epilobium* (probably *Epilobium rotundifolium*), were seen in these wet areas. Wayne Edwards, who has resided on Quinns Road since 1968, recalls that kiokio used to be abundant along the length of the road in the past, but never fully recovered after it was cut back by local authorities (pers. comm., 12 Sep 2022).

Driveway entrances along the public end of Quinns Road offered additional points of interest, with native plantings of: wharangi (*Melicope ternata*), northern rata (*Metrosideros robusta*), *Sophora fulvida*, *Sophora microphylla*, *Elingamita johnsonii*, *Leptostigma setulosum* and *Muehlenbeckia axillaris*. The latter three species were propagated at the Oratia Native Plant Nursery, and planted about 20 years ago (Wayne Edwards, pers. comm., 12 Sep 2022).

One of the aims of the trip was to observe the differences in the composition of weeds along the public, sealed portion of Quinns Road versus the unsealed portion managed by Chorus. Though some weeds (e.g. *Sellaginella krausiana*, *Erigeron karvinskianus*, *Prunella vulgaris* and *Tradescantia*



Fig. 2. Roadside *Miscanthus nepalensis* at southern end of Quinns Road, 18 June 2022. Photo: Ben Goodwin.

fluminensis) are widespread along the full length of Quinns Road, others are curiously restricted to one end or the other. Presumably, this lack of overlap is due to differing management and road maintenance regimes. Notable weeds observed only along the northern end of Quinns Road were: *Bartlettina sordida*, *Geranium purpureum*, *Jasminum polyanthum*, *Plectranthus ciliatus*, *Agapanthus praecox*, *Allium triquetrum*, climbing asparagus (*Asparagus scandens*), *Crocasmia xrocosmiiflora*, *Hedychium* sp., *Lamium galeobdolon*, *Phyllostachys nigra*, and another unidentified bamboo species. Weeds of note that were only seen along the southern end of Quinns Road were: tutsan (*Hypericum androsaemum*), Himalayan honeysuckle (*Leycesteria formosa*), brush wattle (*Paraserianthes lophantha*), shamrock pea (*Paroquetus communis*), Japanese viburnum (*Viburnum japonicum*), grey sedge (*Carex divulsa*), pampas grass (*Cortaderia selloana*), *Entolasia marginata*, veldt grass (*Ehrharta erecta*) and *Miscanthus nepalensis* (Fig. 2). Additionally, *Hydrangea macrophylla*, was seen throughout, but was only common along the northern end of the road. Conversely, gorse (*Ulex europaeus*) and *Aristea ecklonii* appear to have the opposite distribution, being abundant along the southern end of the road but less common further north. As well as the invasive plants, some native species were present along the southern end of Quinns Road, but were not observed along the northern section. These localised species were: tupakihi (*Coriaria arborea*), toatoa (*Haloragis erecta*) and *Hebe macrocarpa*, all being locally common.

Acknowledgements

Thank you to Wayne Edwards who shared his local knowledge of Quinns Road.

References

- Mead, A.D. 1968: Quinn's Road. *Auckland Botanical Society Newsletter* 25(3): 6-8.
Hutton, P. 2011: Trip Report: Upper Nihotupu Reservoir, Waitakere Ranges, Auckland, 16 April 2011. *Auckland Botanical Society Journal* 66(2): 82-83.

Species recorded from Quinns Road, Waitakere Ranges.

Plants recorded during the field trip (or a reference is given) – mostly growing within 2 m of road edges.

- Northern end = sealed part of Quinns Road. Public roadway
Southern end = unsealed part of Quinns Road. Chorus access road
* = Exotic species
pl = Cultivated (mostly near driveway entrances)
= not seen during the June 2022 fieldtrip - record based on herbarium specimen (where voucher no., collector and year of collection is given) and/or Mead (1968)

Species	Notes		
Ferns and allies			
<i>Asplenium bulbiferum</i>	Common	<i>Phlegmariurus billardieri</i> #	Mead 1968 (as ' <i>Lycopodium billardieri</i> ') <i>Pseudodiphasium volubile</i> (<i>Lycopodium volubile</i>)
<i>Asplenium flaccidum</i>		<i>Pteridium esculentum</i>	
<i>Asplenium oblongifolium</i>		<i>Rumohra adiantiformis</i> #	'plentiful' Mead 1968
<i>Asplenium polyodon</i>		<i>Selaginella kraussiana</i> *	
<i>Cranfillia fluviatilis</i> (<i>Blechnum fluviatile</i>)	Southern end only	<i>Sticherus flabellatus</i>	
<i>Cyathea dealbata</i>		<i>Tmesipteris tannensis</i> #	Mead 1968
<i>Cyathea medullaris</i>	Common	<i>Zealandia pustulata</i> (<i>Microsorium pustulatum</i>)	
<i>Cyathea smithii</i>	Few seen; 'numerous' Mead 1968	Gymnosperms	
<i>Dicksonia squarrosa</i>		<i>Cryptomeria japonica</i> * pl	x1, northern end
<i>Diphasium scariosum</i> (<i>Lycopodium scariosum</i>)	Northern end only	<i>Dacrycarpus dacrydioides</i>	Young trees sparse
<i>Diploblechnum fraseri</i> (<i>Blechnum fraseri</i>)		<i>Dacrydium cupressinum</i>	
<i>Hymenophyllum demissum</i>	Rare, southern end	<i>Libocedrus plumosa</i>	Rare, one seen northern end
<i>Hymenophyllum flabellatum</i> #	Mead 1968 (as ' <i>Mecodium flabellatum</i> ') <i>Hymenophyllum nephrophyllum</i>	<i>Pectinopitys ferruginea</i> (<i>Prumnopitys ferruginea</i>)	
	Sparse; Mead 1968	<i>Podocarpus laetus</i>	
<i>Hymenophyllum rarum</i> #	Mead 1968 (as ' <i>Mecodium rarum</i> ') <i>Hymenophyllum sanguinolentum</i>	Dicotyledons	
		<i>Alseuosmia macrophylla</i>	Rare
<i>Icarus filiformis</i> (<i>Blechnum filiforme</i>)		<i>Aristolelia serrata</i>	Rare
<i>Lomaria discolor</i> (<i>Blechnum discolor</i>)		<i>Bartlettina sordida</i> *	Northern end only
<i>Lygodium articulatum</i>	Northern end only	<i>Beilschmiedia tawa</i>	Rare, southern end only
<i>Paesia scaberula</i>		<i>Brachyglottis kirkii</i> var. <i>angustior</i>	Few
<i>Pakau pennigera</i> (<i>Pneumatopteris pennigera</i>)		<i>Brachyglottis repanda</i>	
<i>Parablechnum novae-zelandiae</i> (<i>Blechnum novae-zelandiae</i>)		<i>Carpodetus serratus</i>	
<i>Parablechnum procerum</i> #	Mead 1968 (as ' <i>Blechnum minus</i> ') <i>Phlegmariurus billardieri</i> #	<i>Celastrus orbiculatus</i> * #	AK256393-94, E.K. Cameron, 2002
		<i>Centella uniflora</i>	
		<i>Carmichaelia australis</i>	Rare, southern end only
		<i>Coprosma autumnalis</i>	
		<i>Coprosma lucida</i>	
		<i>Coprosma rhamnoides</i>	

<i>Coprosma robusta</i>		<i>Metrosideros excelsa</i>	Young plants on roadside banks, northern end only
<i>Coriaria arborea</i>	Locally common, southern end only	<i>Metrosideros fulgens</i>	Sparse; Mead 1968
<i>Crassula ovata</i> *	Recent garden discard, southern end	<i>Metrosideros perforata</i>	
<i>Didymocheton spectabilis</i> (<i>Dysoxylum spectabile</i>)	Sparse	<i>Metrosideros robusta</i> pl	x1, northern end
<i>Digitalis purpurea</i>	Sparse	<i>Muehlenbeckia axillaris</i> pl	x1, northern end
<i>Elaeocarpus dentatus</i>		<i>Myrsine australis</i>	
<i>Elatostema rugosum</i>	Local, southern end	<i>Myrsine salicina</i>	Rare, northern end only
<i>Elingamita Johnsonii</i> pl	x1. Northern end	<i>Nestegis lanceolata</i>	
<i>Entelea arborescens</i>	Rare. Possibly naturalised from earlier plantings (Wayne Edwards, pers. comm., 18 June 2022)	<i>Olearia furfuracea</i>	
		<i>Olearia rani</i>	
<i>Epilobium ?rotundifolium</i>	Local, southern end	<i>Paraserianthes lophantha</i> *	Rare, southern end.
<i>Erigeron karvinskianus</i> *		<i>Parochetus communis</i> *	Frequent, locally common along southern end; AK258924, E.K.Cameron, 2002
<i>Erythrina x sykesii</i> * pl	x1, northern end	<i>Piper excelsum</i>	Southern end only
<i>Euchiton japonicus</i>		<i>Pittosporum eugenioides</i>	Common
<i>Fuchsia excorticata</i>	Northern end only	<i>Pittosporum kirkii</i> #	Mead 1968
<i>Geniostoma ligustrifolium</i>		<i>Pittosporum tenuifolium</i>	
<i>Geranium purpureum</i> *	Northern end only	<i>Plectranthus ciliatus</i> *	Northern end only
<i>Griselinia lucida</i>		<i>Pleroma urvilleanum</i> * pl	x1, northern end
<i>Haloragis erecta</i>	Southern end only	<i>Pomaderris kumeraho</i>	Rare, northern end only
<i>Hebe macrocarpa</i>	Locally common, southern end	<i>Prunella vulgaris</i> *	
<i>Hedycarya arborea</i>		<i>Pseudognaphalium luteoalbum</i>	Southern end only
<i>Hoheria populnea</i>		<i>Pseudopanax arboreus</i>	Common
<i>Hydrangea macrophylla</i> *	Common along northern end, rare along southern end	<i>Pseudopanax crassifolius</i>	Common
<i>Hydrocotyle dissecta</i>		<i>Pseudopanax crassifolius</i> x <i>P. lessonii</i>	Rare, northern end only
<i>Hydrocotyle moschata</i>		<i>Pseudopanax lessonii</i>	Rare, northern end only
<i>Hydrocotyle tripartita</i> *	Southern end only	<i>Quintinia serrata</i> #	AK262646, J.Rattenbury, 1960
<i>Hypericum androsaemum</i>	Local, southern end	<i>Ranunculus reflexus</i>	Local, southern end
<i>Ixerba brexioides</i>	Rare, southern end; Mead 1968	<i>Raukawa edgerleyi</i>	Few trees seen, some good-sized; AK265622, J. Rattenbury, 1954; Mead 1968; Hutton 2011
<i>Jasminum polyanthum</i> *	Northern end only	<i>Rhododendron</i> cv. * pl	At least two Azalea cultivars, northern end
<i>Knightia excelsa</i>		<i>Rubus cissoides</i>	
<i>Kunzea robusta</i>		<i>Schefflera digitata</i>	Common
<i>Laurelia novae-zelandiae</i>	x1 large tree, southern end	<i>Senecio hispidulus</i>	Southern end only
<i>Leptospermum scoparium</i>		<i>Sophora fulvida</i> pl	x1, northern end
<i>Leptostigma setulosum</i> pl	x1, northern end	<i>Sophora microphylla</i> pl	x1, northern end
<i>Leucopogon fasciculatus</i>		<i>Syzygium smithii</i> *	Rare, northern end only
<i>Leycesteria formosa</i> *	Southern end only	<i>Tradescantia fluminensis</i> *	
<i>Litsea calicaris</i>	Rare, southern end	<i>Ulex europaeus</i> *	Throughout, but much more abundant along southern end
<i>Lobelia anceps</i>	Local, southern end	<i>Verbascum ?blattaria</i> *	Southern end only
<i>Lobelia pedunculata</i> *	Southern end only	<i>Verbena incompta</i> *	Southern end only
<i>Melicope ternata</i> pl	x1, northern end.		
<i>Melicytus ramiflorus</i>	Common; AK261864, J.Rattenbury, 1960		

<i>Viburnum japonicum</i> *	Few shrubs, southern end; AK255058, C.R.McKain, 2001; AK256391-92, 258923, E.K.Cameron, 2002	<i>Entolasia marginata</i> *	Localised, Chorus land
Monocotyledons		<i>Ehrharta erecta</i> *	Localised, Chorus land
		<i>Freycinetia banksii</i>	Mead 1968
<i>Agapanthus praecox</i> *	Northern end only	<i>Gahnia pauciflora</i>	
<i>Allium triquetrum</i> *	Northern end only	<i>Gahnia setifolia</i>	
<i>Aloe ?arborescens</i> * pl	x1, northern end	<i>Gahnia xanthocarpa</i>	
<i>Aristea ecklonii</i> *	Throughout, but much more common along southern end	<i>Gladiolus undulatus</i> *	Rare, northern end only
<i>Arthropodium cirratum</i>	Northern end only	<i>Hedychium</i> sp. *	Northern end only
<i>Asparagus scandens</i> *	Northern end only	<i>Lamium galeobdolon</i> *	Northern end only
<i>Astelia hastata</i>		<i>Microlaena stipoides</i>	
<i>Astelia solandri</i>	Occasional; Mead 1968	<i>Microtis unifolia</i>	Rare, northern end only
<i>Astelia trinervia</i>	Rare, southern end	<i>Miscanthus nepalensis</i> *	Common, southern end; AK198426, J.Mackinder, 1988
<i>Carex divulsa</i> *	Sparse, southern end	<i>Oplismenus hirtellus</i>	
<i>Cordyline australis</i> pl?	x1, northern end, possibly planted	<i>Phormium</i> ?cv. pl	Localised, northern end only. A <i>P. cookianum</i> -derived cultivar
<i>Cordyline banksii</i>	Occasional	<i>Phormium cookianum</i>	
<i>Cortaderia selloana</i> *	Southern end only	<i>Phyllostachys nigra</i> * pl	x1 large colony, northern end
<i>Crocsmia xcrocosmiiflora</i> *	Northern end only	? <i>Pseudosasa japonica</i> * pl	x1 large colony, northern end
<i>Cyperus albostratus</i> *	Northern end only, localised	<i>Rhopalostylis sapida</i>	Natural plants throughout; a few cultivated, northern end
<i>Dendrobium cunninghamii</i>	Rare; Mead 1968	<i>Ripogonum scandens</i>	
<i>Dianella nigra</i>		<i>Schoenus maschalinus</i>	Local, southern end
<i>Dracophyllum latifolium</i>	Rare, southern end.	<i>Thelymitra</i> sp./spp.	Northern end only
<i>Earina autumnalis</i>	Occasional; Mead 1968		
<i>Earina mucronata</i>	Common		

A biodiversity survey of Waikereru Ecosanctuary, Waimatā, Gisborne

Marley Ford, Mark Smale & Kelly Gilbride

Introduction

Waikereru Ecosanctuary is located 6.5 km north of Gisborne, on Riverside Road (Fig. 1). The Waimatā River runs past the east side of the property. Waikereru forms part of an extensive tract of hill country and lies within the Waiapu Ecological District (McEwen 1987). The riverside bush and the hills are protected by QEII National Trust covenants, with several other large QEII covenanted blocks nearby on neighbouring properties beyond the western ridge. The Gisborne area has been surveyed relatively little but supports a wide range of biodiversity (McEwen 1987; Smale et al. 2013).

Geology

The Waiapu Ecological District consists mostly of late Cenozoic (Miocene-Pliocene) mudstone-sandstone

hill country with unstable Eocene, Palaeocene and late Cretaceous indurated siltstone (McEwen 1987). Waikereru comprises mostly moderately steeply dissected hill country on undifferentiated, fossiliferous mudstone (papa) and tuffaceous sandstone (Smale et al. 2013) and on the valley floor, Quaternary fan gravels and alluvium with some tephra coverbeds on the more elevated and older surfaces that have not been inundated by flood deposits since European settlement (Mazengarb & Speden 2000; Smale et al. 2013;). The altitude of the Ecosanctuary ranges from 40 m to 420m asl.

History

Waikereru is named for the flocks of kereru (*Hemiphaga novaeseelandiae*) that live in the local forests. In pre-European times a small unfortified