

Matakana Island Field Trip 12 November 2016

Sarah Beadel

A good-sized group of 15 keen botanists met at the Ōmokoroa Ferry. The ferry trip was idyllic and we then drove to the northeastern end of the Island. There are numerous wetlands of various shapes and sizes at that end of the Island, and we briefly visited several of them looking for suitable habitat for wetland *Pterostylis* species. Water levels in the wetlands were relatively high as a result of the very wet spring, which made access somewhat difficult.

The first wetland we visited was dominated by a willow canopy with indigenous species common in the understorey, and forming the canopy locally, including *Machaerina juncea*, *M. articulata*, local mānuka, and scattered *Carex secta*. We found *Carex fascicularis* (a new record for the Island; a regionally uncommon species known from only a handful of sites in the region) in this first small wetland, along with a few *Cyclosorus interruptus* (classified as At Risk-Declining in de Lange *et al.* 2013), *Dianella haemastica*, and one dead frond of *Thelypteris confluens* (classified as At Risk-Naturally Uncommon).

We then moved to the dunes at the Bowentown mouth of Tauranga Harbour for lunch, travelling through the fantastic rushlands and shrublands beneath the stunted pine stands. The understorey comprises scattered shrubs of kānuka (*Kunzea robusta*), mingimingi (*Leucopogon fasciculatus*), prickly mingimingi (*Leptecophylla juniperina* var. *juniperina*), dense oioi (*Apodasmia similis*), and *Machaerina juncea*, with a ground cover of mosses and lichens. *Zoysia pauciflora* is locally common here, and *Muehlenbeckia complexa* and *Ficinia nodosa* are also present. On the low open foredunes there are scattered clumps of pingao (*Ficinia spiralis*), spinifex (*Spinifex sericeus*), and marram (*Ammophila arenaria*), with occasional *Carex pumila* and *Calystegia soldanella*.

A banded dotterel and a variable oystercatcher were on the beach whilst we were having lunch, and our intrepid spider expert, Bryce McQuillan, found a katipo spider

(*Latrodectus katipo*). As we walked around the tip of the Island we saw three pied shags drying themselves on the beach. Other fauna species of interest were also found during the day, including katipo, shore skink (*Oligosoma smithi*), and an earwig (*Anisolabis* sp.).

We stopped at the small islet on the harbour side of the Island that, when the Botanical Society first visited the Island in 1988, was open to the estuary. The mouth is now entirely blocked by sand and the area that previously supported indigenous herbfields is dominated by dense saltwater paspalum (*Paspalum vaginatum*), an exotic grass. There are a few medium-sized pōhutukawa (*Metrosideros excelsa*) around the margins of this estuary, and sea rush is establishing in areas that, during our last visit six or seven years ago, were a monoculture of saltwater paspalum.

We then walked further along the edge of the Island until we arrived at the largest raupō wetland on the Island. We had no luck searching for orchids in this wetland so we then checked out the wetland to the northwest of the raupō wetland. Whilst we found abundant *Cyclosorus interruptus* in this wetland and heard a few fernbird, we did not find any *Pterostylis*. Royal fern (*Osmunda regalis*) is present locally on the Island but we only saw one plant during the entire day. We then walked back to the vehicles through the stunted pine forest with the diverse, dense indigenous understorey, stopping to discuss the taxonomy of larger kānuka present occasionally beneath the pines. We eventually decided that these trees were *Kunzea robusta*.

On the way back to the ferry we had just enough time for a quick stop on the dunes at Pipeline Road. The dune vegetation here was relatively healthy, apart from a small area immediately adjacent to the access track where there was a small population of dimorphotheca (*Osteospermum fruticosum*). Some exotic grasses and herbs were also locally prominent, including ripgut brome (*Bromus diandrus*), prairie brome (*Bromus willdenowii*), and purple groundsel (*Senecio elegans*). Pingao (At Risk-Declining), spinifex, *Ficinia nodosa*, *Muehlenbeckia complexa*, and *Carex testacea* were all common here, along with a few plants

of *Senecio biserratus* and *Lachnagrostis billardierei*. Eight flowering *Pimelea villosa* (At Risk-Declining) were present on the eastern side of the road. These may have been planted, although *P. villosa* does occur naturally on the Island. At the base of the foredune, just out of reach of the top of the tide, both species of sea rocket that occur in New Zealand were present: *Cakile maritima* subsp. *maritima* and *Cakile edulenta* var. *edulenta*. One addition to a list of plant species recorded on the Island (Beadel 2011) was found, and this list has been updated with the most recent scientific names and is attached to this article.

We arrived back at Opueroa about 10 minutes before the ferry was due to leave, and once we were all loaded it left immediately for Omokora, seven minutes ahead of schedule, so it was lucky that we had arrived early. Also, whilst the weather forecast had been for torrential rain, we managed to avoid rain all day. Matakana once again turned on a stunning day, and I am sure that we will be back again.

References

- Beadel S.M. 2009: Checklist of indigenous and naturalised plants of Matakana Island. Rotorua Botanical Society Newsletter 53: 27-40.
- Beadel S.M. 2011: Checklist of indigenous and naturalised plants of Matakana Island. Appendix 1 in Wildland Consultants 2011: Ecological aspects of a 'Whole of Island Plan' for Matakana Island. Wildland Consultants Ltd Contract Report No. 2729. Prepared for Western Bay of Plenty District Council and others. 42 p.
- de Lange P.J., Rolfe J.R., Champion P.D., Courtney S.P., Heenan P.B., Barkla J.W., Cameron E.K., Norton D.A., and Hitchmough R.A. 2013: Conservation status of New Zealand vascular plants, 2012. New Zealand threat classification series. Department of Conservation, Wellington.

Checklist of indigenous and naturalized plants of Matakana Island

Sarah Beadel, 2016

Based on numerous visits between 1989 and 2016 (see also Beadel 2009 and 2011).

Key

1. Planted
2. Occurs naturally and planted

Indigenous species

Gymnosperms

<i>Agathis australis</i> ²	kauri
<i>Dacrydium cupressinum</i> ¹	rimu
<i>Dacrycarpus dacrydioides</i> ²	kahikatea
<i>Podocarpus totara</i> var. <i>totara</i> ¹	totara

Monocot. trees and shrubs

<i>Cordyline australis</i> ²	ti kouka, cabbage tree
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Dicot. trees and shrubs

<i>Aristotelia serrata</i> ¹	makomako, wineberry
<i>Avicennia marina</i> subsp. <i>australasica</i>	manawe, mangrove
<i>Brachyglottis repanda</i>	rangiora
<i>Coprosma acerosa</i> s.s.	sand coprosma, tarakupenga
<i>Coprosma lucida</i>	karamu, glossy karamu
<i>Coprosma repens</i> ²	taupata
<i>Coprosma robusta</i> ²	karamu
<i>Coprosma tenuicaulis</i>	hukihuki, swamp coprosma
<i>Coprosma propinqua</i> × <i>C. repens</i>	
<i>Coriaria arborea</i>	tutu
<i>Corynocarpus laevigatus</i> ²	karaka
<i>Dodonaea viscosa</i> ²	akeake
<i>Entelea arborescens</i> ²	whau
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange
<i>Hebe stricta</i> var. <i>stricta</i> ²	koromiko
<i>Hoheria populnea</i> ¹	houhere
<i>Knightia excelsa</i>	rewarewa
<i>Kunzea robusta</i> ²	kanuka
<i>Laurelia novae-zelandiae</i>	pukatea
<i>Leptospermum scoparium</i> agg. ²	manuka
<i>Leucopogon fasciculatus</i>	mingimingi
<i>Leucopogon fraseri</i>	patotara
<i>Macropiper excelsum</i> subsp. <i>excelsum</i>	kawakawa
<i>Melicytus novae-zelandiae</i>	coastal mahoe
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	mahoe
<i>Metrosideros excelsa</i> ²	pohutukawa
<i>Myoporum laetum</i> ²	ngaio
<i>Myrsine australis</i> ²	mapou
<i>Olearia solandri</i>	

Ozothamnus leptophyllus
Pimelea villosa s.s.
*Pittosporum crassifolium*²
*Pittosporum eugenoides*¹
*Pittosporum tenuifolium*²
Plagianthus divaricatus
Pomaderris amoena
*Pseudopanax arboreus*²
Pseudopanax crassifolius
*Pseudopanax lessonii*²
*Vitex lucens*²

tauhinu
 autetaranga
 karo
 tarata
 kohuhu
 marsh ribbonwood, makaka
 tauhinu
 whauwhaupaku, five finger
 horoeka, lancewood
 houpara
 puriri

Dicot. lianes

Calystegia sepium subsp. *roseata*
Clematis paniculata
Muehlenbeckia australis
Muehlenbeckia complexa

puawananga
 puka
 pohuehue

Lycopods and psilopsids

Lycopodium volubile

waewaekoukou

Ferns

Adiantum cunninghamii
Adiantum hispidulum
Asplenium appendiculatum subsp. *maritimum*
Asplenium bulbiferum
Asplenium flaccidum
Asplenium oblongifolium
Asplenium polyodon
Azolla filiculoides
Blechnum filiforme
Blechnum minus
Blechnum novae-zelandiae
Blechnum parrisiae
Blechnum vulcanicum
Cardiomanes reniforme
Ctenopteris heterophylla
Cyathea dealbata
Cyathea medullaris
Cyclosorus interruptus
Deparia petersenii subsp. *congrua*
Dicksonia squarrosa
Diplazium australe
Gleichenia dicarpa
Gleichenia microphylla
Histiopteris incisa
Hymenophyllum demissum
Hymenophyllum multifidum
Hymenophyllum sanguinolentum
Hymenophyllum scabrum

huruhuru tapairu

 mouku, hen and chicken fern
 makawe
 huruhuruwhenua
 petako
 retoretore
 panako
 swamp kiokio
 kiokio
 pukupuku
 korokio
 kidney fern, konehu

 ponga, silver fern

 wheki

 tangle fern
 waewaekaka, swamp umbrella fern
 matata, water fern
 irirangi, filmy fern
 mauku, filmy fern
 piripiri, filmy fern
 mauku, filmy fern

<i>Hypolepis ambigua</i>	
<i>Hypolepis distans</i>	
<i>Microsorium pustulatum</i>	kowaowao, hounds tongue fern
<i>Paesia scaberula</i>	matata
<i>Pellaea rotundifolia</i>	tarawera, button fern
<i>Pneumatopteris pennigera</i>	pakau
<i>Pteridium esculentum</i>	rarahu, bracken
<i>Pteris macilenta</i>	sweet fern
<i>Pteris tremula</i>	turawera, shaking brake
<i>Pyrrosia eleagnifolia</i>	leather-leaf fern
<i>Rumohra adiantiformis</i>	
<i>Thelypteris confluens</i>	

Orchids

<i>Earina autumnalis</i>	raupeka
<i>Earina mucronata</i>	peka-a-waka
<i>Microtis unifolia</i> agg.	maikaika
<i>Thelymitra longifolia</i>	maikuku
<i>Thelymitra pauciflora</i>	slender sun orchid
<i>Winika cunninghamii</i>	

Grasses

<i>Austroderis fulvida</i> ²	toetoe
<i>Austrostipa stipoides</i>	
<i>Deyeuxia avenoides</i>	
<i>Deyeuxia quadriseta</i>	
<i>Dichelachne crinita</i>	patiti, plume grass
<i>Isachne globosa</i>	swamp millet
<i>Lachnagrostis billardiarei</i>	perehia
<i>Lachnagrostis filiformis</i>	perehia
<i>Microlaena stipoides</i>	patiti, meadow rice grass
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>	
<i>Poa anceps</i> agg.	
<i>Poa pusilla</i>	
<i>Rytidosperma gracile</i>	
<i>Spinifex sericeus</i> ²	kowhangatara, spinifex
<i>Zoysia pauciflora</i>	

Sedges

<i>Bolboschoenus fluviatilis</i>	purua grass
<i>Bolboschoenus medianus</i>	purua grass
<i>Carex breviculmis</i>	
<i>Carex fascicularis</i>	
<i>Carex geminata</i> agg.	rautahi
<i>Carex maorica</i>	
<i>Carex pumila</i>	
<i>Carex secta</i>	purei
<i>Carex testacea</i>	
<i>Carex virgata</i>	purei
<i>Cyperus ustulatus</i> f. <i>ustulatus</i>	toetoe, upokotangata

<i>Eleocharis acuta</i>	
<i>Eleocharis sphacelata</i>	giant spike sedge, ngawha
<i>Ficinia nodosa</i>	wiwi
<i>Ficinia spiralis</i> ²	pingao
<i>Isolepis cernua</i>	
<i>Isolepis inundata</i>	
<i>Isolepis prolifera</i>	
<i>Lepidosperma australe</i>	
<i>Machaerina arthropphylla</i>	
<i>Machaerina articulata</i>	
<i>Machaerina juncea</i>	
<i>Machaerina rubiginosa</i>	
<i>Machaerina tenax</i>	
<i>Machaerina teretifolia</i>	
<i>Morelotia affinis</i>	
<i>Schoenoplectus pungens</i>	
<i>Schoenoplectus tabernaemontani</i>	kapungawha
<i>Schoenus apogon</i>	
<i>Schoenus maschalinus</i>	
<i>Schoenus nitens</i>	
<i>Schoenus tendo</i>	wiwi
<i>Tetraria capillaris</i>	
<i>Uncinia uncinata</i>	kamu matau a Maui

Rushes

<i>Apodasmia similis</i>	oioi
<i>Empodisma minus</i>	wire rush
<i>Juncus caespiticus</i>	
<i>Juncus edgariae</i>	wi
<i>Juncus kraussii</i> var. <i>australiensis</i>	wi, sea rush
<i>Juncus pallidus</i>	wi
<i>Juncus planifolius</i>	
<i>Juncus prismatocarpus</i>	
<i>Juncus sarophorus</i>	wi
<i>Luzula picta</i> var. <i>picta</i>	

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

<i>Arthropodium cirratum</i>	rengarenga
<i>Astelia banksii</i>	
<i>Astelia solandri</i>	kowharawhara
<i>Astelia trinervia</i>	mauri
<i>Collospermum hastatum</i>	kahakaha
<i>Dianella haemata</i>	
<i>Dianella nigra</i>	turutu
<i>Lemna minor</i>	karearea
<i>Phormium tenax</i>	harakeke, flax
<i>Potamogeton cheesemanii</i>	manihi
<i>Sparganium subglobosum</i>	maru, burr reed
<i>Triglochin striata</i>	arrow grass
<i>Typha orientalis</i>	raupo

Composite herbs

<i>Cotula coronopifolia</i>	bachelor's button
<i>Euchiton audax</i>	
<i>Euchiton collinus</i>	
<i>Euchiton sphaericus</i>	
<i>Lagenifera pumila</i>	papataniwhaniwha
<i>Pseudognaphalium luteoalbum</i> agg.	pukatea
<i>Senecio biserratus</i>	
<i>Senecio glomeratus</i>	pukatea
<i>Senecio lautus</i> var. <i>lautus</i>	
<i>Senecio minimus</i>	
<i>Senecio quadridentatus</i>	cotton fireweed, pekapeka

Dicot. herbs (other than composites)

<i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>filiforme</i>	tuutae kooau, New Zealand celery
<i>Callitriche stagnalis</i>	starwort
<i>Calystegia soldanella</i>	panahi, shore bindweed
<i>Centella uniflora</i>	
<i>Chenopodium ambiguum</i>	
<i>Dichondra repens</i>	Mercury Bay weed
<i>Disphyma australe</i> subsp. <i>australe</i>	horokaka
<i>Epilobium nummulariifolium</i>	
<i>Epilobium pallidiflorum</i>	tawarewa
<i>Galium propinquum</i>	mawe
<i>Gonocarpus incanus</i>	piripiri
<i>Gonocarpus micranthus</i>	piripiri
<i>Haloragis erecta</i> subsp. <i>erecta</i>	toatoa
<i>Hydrocotyle heteromeria</i>	
<i>Hydrocotyle novae-zeelandiae</i> var. <i>novae-zeelandiae</i>	
<i>Hydrocotyle pterocarpa</i>	
<i>Lilaeopsis novae-zeelandiae</i>	
<i>Limosella lineata</i>	mudwort
<i>Lobelia anceps</i>	punakuru
<i>Lobelia angulata</i>	panakenake
<i>Myriophyllum propinquum</i>	
<i>Nertera depressa</i>	
<i>Oxalis rubens</i>	sand oxalis
<i>Pelargonium inodorum</i>	kopata
<i>Persicaria decipiens</i>	tutunawai
<i>Ranunculus acaulis</i>	
<i>Ranunculus amphitrichus</i>	kawariki
<i>Ranunculus macropus</i>	raoriki
<i>Ranunculus reflexus</i>	maruru
<i>Rorippa palustris</i>	hanea
<i>Samolus repens</i> var. <i>repens</i>	makaokao
<i>Sarcocornia quinqueflora</i>	ureure, glasswort
<i>Selliera radicans</i>	remuremu
<i>Solanum americanum</i>	raupeti
<i>Stellaria parviflora</i>	kohukohu

<i>Tetragonia implexicoma</i>	
<i>Tetragonia tetragonioides</i>	
<i>Wahlenbergia violacea</i>	rimuroa

Naturalised species

Excludes planted species such as garden plants, crops, and shelterbelts

Gymnosperms

<i>Pinus patula</i>	patula pine
<i>Pinus pinaster</i>	maritime pine
<i>Pinus radiata</i>	radiata pine

Dicot. trees and shrubs

<i>Acacia mearnsii</i>	black wattle
<i>Acacia sophorae</i>	coastal wattle
<i>Banksia integrifolia</i>	banksia
<i>Berberis glaucocarpa</i>	barberry
<i>Buddleja davidii</i>	buddleia
<i>Cestrum elegans</i>	red cestrum
<i>Chamaecytisus palmensis</i>	tree lucerne
<i>Chrysanthemoides monilifera</i>	boneseed
<i>Cotoneaster glaucophyllus</i>	cotoneaster
<i>Elaeagnus ×reflexa</i>	elaeanthus
<i>Erica caffra</i>	hedge heath
<i>Erica lusitanica</i>	Spanish heath
<i>Eriobotrya japonica</i>	loquat
<i>Eucalyptus</i> sp.	eucalyptus
<i>Juglans</i> sp.	walnut
<i>Leptospermum laevigatum</i>	coastal tea tree
<i>Leycesteria formosa</i>	Himalayan honeysuckle
<i>Ligustrum lucidum</i>	tree privet
<i>Ligustrum sinense</i>	Chinese privet
<i>Lupinus arboreus</i>	lupin
<i>Lycium ferocissimum</i>	boxthorn
<i>Paraserianthes lophantha</i>	brush wattle
<i>Paulownia tomentosa</i>	paulownia
<i>Pelargonium</i> sp.	geranium
<i>Populus</i> sp.	poplar
<i>Prunus campanulata</i>	flowering cherry
<i>Rhamnus alaternus</i>	Italian evergreen buckthorn
<i>Ricinus communis</i>	
<i>Rosa</i> sp.	climbing rose
<i>Rubus</i> sp. (<i>R. fruticosus</i> agg.)	blackberry
<i>Salix cinerea</i>	grey willow
<i>Solanum mauritianum</i>	woolly nightshade
<i>Tecomaria capensis</i>	Cape honeysuckle
<i>Ulex europaeus</i>	gorse

Dicot. lianes

<i>Actinidia deliciosa</i>	kiwifruit
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<i>Anredera cordifolia</i>	madeira vine
<i>Araujia sericifera</i>	moth plant
<i>Hedera helix</i>	ivy
<i>Jasminum polyanthum</i>	jasmine
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Passiflora edulis</i>	black passionfruit
<i>Rumex sagittatus</i>	climbing dock

Ferns

<i>Azolla pinnata</i>	ferny azolla
<i>Osmunda regalis</i>	royal fern

Grasses

<i>Agrostis capillaris</i>	browntop
<i>Agrostis stolonifera</i>	creeping bent
<i>Aira caryophylla</i> subsp. <i>caryophylla</i>	silver hairy grass
<i>Ammophila arenaria</i>	marram
<i>Anthoxanthum odoratum</i>	sweet vernal
<i>Avena sativa</i> ²	wild oat
<i>Axonopus fissifolius</i>	narrow-leaved carpet grass
<i>Briza minor</i>	shivery grass
<i>Bromus diandrus</i>	ripgut brome
<i>Bromus willdenowii</i>	prairie grass
<i>Catapodium rigidum</i>	hard grass
<i>Cortaderia selloana</i>	pampas grass
<i>Dactylis glomerata</i>	cocksfoot
<i>Ehrharta erecta</i>	veld grass
<i>Elytrigia pycnantha</i>	sea couch
<i>Elytrigia repens</i>	couch
<i>Entolasia marginata</i>	bordered panic grass
<i>Eragrostis brownii</i>	bay grass
<i>Glyceria fluitans</i>	floating sweetgrass
<i>Glyceria maxima</i>	reed sweetgrass
<i>Holcus lanatus</i>	Yorkshire fog
<i>Lagurus ovatus</i>	haretail
<i>Lolium perenne</i>	rye grass
<i>Miscanthus nepalensis</i>	Himalaya fairy grass
<i>Paspalum dilatatum</i>	paspalum
<i>Paspalum vaginatum</i>	saltwater paspalum
<i>Pennisetum clandestinum</i>	kikuyu grass
<i>Poa annua</i>	annual poa
<i>Poa pratensis</i>	Kentucky bluegrass
<i>Schedonorus arundinaceus</i>	tall fescue
<i>Sporobolus africanus</i>	ratstail
<i>Stenotaphrum secundatum</i>	buffalo grass
<i>Vulpia bromoides</i>	vulpia hair grass

Sedges

<i>Cyperus congestus</i>	purple umbrella sedge
<i>Cyperus eragrostis</i>	umbrella sedge

Cyperus involucratus

umbrella sedge

Rushes

Juncus acuminatus

sharp-fruited rush

Juncus articulatus

jointed rush

Juncus bufonius var. *bufonius*

toad rush

Juncus effusus var. *effusus*

soft rush, leafless rush

Juncus tenuis var. *tenuis*

track rush

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

Agapanthus praecox

agapanthus

Asparagus asparagoides

smilax

Canna indica

canna lily, Indian shoot

Colocasia esculenta

taro

Crocasmia ×crocosmiiflora

montbretia

Hedychium gardnerianum

kahili ginger, wild ginger

Kniphofia uvaria

red hot poker

Tradescantia fluminensis

tradescantia

Zantedeschia aethiopica

arum lily

Composite herbs

Achillea millefolium

yarrow

Aster subulatus

sea aster

Cirsium arvense

California thistle

Cirsium vulgare

Scotch thistle

Conyza parva

smooth fleabane

Conyza sumatrensis

broad-leaved fleabane

Crepis capillaris

hawksbeard

Erigeron karvinskianus

Mexican daisy

Gamochaeta coarctata

purple cudweed

Hypochoeris radicata

catsear

Jacobaea vulgaris

ragwort

Lactuca serriola

prickly lettuce

Lapsana communis

nipplewort

Leontodon taraxacoides

hawkbit

Leucanthemum vulgare

oxeye daisy

Mycelis muralis

wall lettuce

Osteospermum fruticosum

rain daisy, dimorphotheca

Senecio bipinnatisectus

Australian fireweed

Senecio elegans

purple groundsel

Senecio skirrhodon

gravel groundsel

Senecio sylvaticus

wood groundsel

Sonchus asper

prickly puha

Sonchus oleraceus

puha, sow thistle

Taraxacum officinale

dandelion

Dicot. herbs (other than composites)

Anagallis arvensis

scarlet pimpernel

Atriplex prostrata

orache

Beta vulgaris

silverbeet

<i>Brassica</i> sp.	
<i>Cakile edentula</i>	sea rocket
<i>Cakile maritima</i>	sea rocket
<i>Cannabis sativa</i>	hemp, cannabis
<i>Carpobrotus edulis</i>	ice plant
<i>Cerastium glomeratum</i>	annual mouse-ear chickweed
<i>Chenopodium album</i>	fathen
<i>Chenopodium ambrosioides</i>	Mexican tea
<i>Conium maculatum</i>	hemlock
<i>Daucus carota</i>	wild carrot
<i>Digitalis purpurea</i>	foxglove
<i>Epilobium ciliatum</i>	tall willow herb
<i>Euphorbia lathyris</i>	caper spurge
<i>Euphorbia peplus</i>	milkweed
<i>Foeniculum vulgare</i>	fennel
<i>Fumaria muralis</i>	scrambling fumitory
<i>Galium aparine</i>	cleavers bedstraw
<i>Galium palustre</i>	marsh bedstraw
<i>Lotus angustissimus</i>	slender birdsfoot trefoil
<i>Lotus pedunculatus</i>	lotus
<i>Ludwigia palustris</i>	water purslane
<i>Lunaria annua</i>	honesty
<i>Lycopus europaeus</i>	gypsy wort
<i>Malva parviflora</i>	small-flowered mallow
<i>Mentha pulegium</i>	penny royal
<i>Modiola caroliniana</i>	creeping mallow
<i>Myosotis arvensis</i>	field forget-me-not
<i>Nasturtium officinale</i>	watercress
<i>Orobanche minor</i>	broomrape
<i>Oxalis pes-caprae</i>	
<i>Pastinaca sativa</i>	wild parsnip
<i>Persicaria hydropiper</i>	water pepper
<i>Persicaria maculosa</i>	willow weed
<i>Phytolacca americana</i>	pokeweed
<i>Phytolacca octandra</i>	inkweed
<i>Plantago lanceolata</i>	narrow-leaved plantain
<i>Polycarpon tetraphyllum</i>	allseed
<i>Polygonum aviculare</i>	wireweed
<i>Prunella vulgaris</i>	selfheal
<i>Ranunculus acris</i>	giant buttercup
<i>Ranunculus flammula</i>	spearwort
<i>Ranunculus repens</i>	creeping buttercup
<i>Ranunculus sceleratus</i>	celery-leaved buttercup
<i>Raphanus raphanistrum</i> subsp. <i>maritimus</i>	
<i>Raphanus raphanistrum</i> subsp. <i>raphanistrum</i>	wild radish
<i>Rumex acetosella</i>	sheep's sorrel
<i>Rumex obtusifolius</i>	broad-leaved dock
<i>Silene vulgaris</i> subsp. <i>vulgaris</i>	bladder campion
<i>Sisymbrium officinale</i>	wild mustard, hedge mustard
<i>Solanum chenopodioides</i>	velvety nightshade

Solanum nigrum
Stellaria alsine
Stellaria media
Trifolium pratense
Trifolium repens
Tropaeolum majus
Verbena bonariensis
Veronica arvensis
Vicia sativa
Viola sp.

black nightshade
bog stitchwort
chickweed
red clover
white clover
garden nasturtium
purple-top
field speedwell
vetch



Kiekie (*Freycinetia banksii*) beside the Pakihi Track. See article, page 28. Photo: Nick Miller