

WHANGAPARAOA DUNES AND WHANARUA BAY SCENIC RESERVE

FIELD TRIP

Paul Cashmore

The weekend of 2-3 October 2010 saw eleven Rotorua Botanical Society members and partners make the now annual trip up to the East Cape area to spend a weekend in new and exciting habitats rarely looked at by botanists.

Day 1: Whangaparaoa Dunes

After meeting our leader Tim Senior at his Whanarua Bay QE II bach, we off-loaded our gear and headed further around the coast to Whangaparaoa Bay near Cape Runaway. Tim had organised access for us to botanise the extensive dune systems between SH 35 and the coast. This dune system has been recognised as one of the better remaining examples of coastal dune systems remaining in the Bay of Plenty and one of the few with extensive backdunes, including wetlands, still intact.

We followed an old vehicle track from the road into the dunes, with members heading off in all directions in search of interesting species. Most of the backdunes are comprised of extensive areas of pohuehue (*Muehlenbeckia complexa*) vineland interspersed with a mosaic of bracken-*Microlaena stipoides*-blackberry vine-grassland. Occasional patches of knobby clubrush (*Ficinia nodosa*), giant umbrella sedge (*Cyperus ustulatus*) and cocksfoot (*Dactylis glomerata*) were present throughout. The presence of old fenceposts showed that the area had previously been grazed but stock were no longer present and the pohuehue was rapidly recolonising the remaining grassland. Apart from the scattered blackberry (*Rubus fruticosus* agg.) and exotic grass species throughout, few other significant weed species were noted. Pampas (*Cortaderia selloana*), a common weed problem in coastal dunes in the Bay of Plenty, was present in a few places but was generally not common and easily controllable.



View westwards across the backdune wetlands at Whangaparaoa (Photo: P. Cashmore)



Lunch beside a rock outcrop, Whangaparaoa Bay (Photo: J. Hobbs)

We soon came across one of the many dune swale wetlands in the backdune system. In this area, these seemed to be mainly colonised by *Baumea articulata* sedgeland. Reaching the beach, we botanised along the foredune which was dominated by spinifex-pohuehue-lupin grass-vineland. Although the foredune was not extensive, it appeared in relatively good condition with minimal human or animal pest impacts at this end of the beach. No marram (*Ammophila arenaria*) was noted, although saltwater paspalum (*Paspalum vaginatum*) was present in parts. Near the stream mouth we settled for lunch below a small knob with conspicuous yucca plants (*Yucca deliciosa*) on the seaward side.

After lunch we followed a vehicle track back to the cars and drove further along SH 35, stopping to admire several larger wetlands close to the road. The largest of these comprised a large area of open water fringed by Pacific azolla (*Azolla filiculoides*) with a mosaic of raupo reedland and *Baumea articulata* sedgeland around it. To properly appreciate the size of the block we drove further and climbed a ridge which gave extensive views south and west across the pohuehue-dominated backdunes. Several other small wetland swales with open water and *Baumea articulata* sedgeland were also visible.

To the north, an extensive wetland system was present. This appeared to have an infestation of mature and sapling grey willow (*Salix cinerea*) along the southern edge and road margin, which appeared to be gradually spreading. The predominant vegetation type in the remainder of the wetland was manuka-karamu-flax-*Baumea articulata* shrub-sedgeland interspersed with areas of raupo reedland. After a short wetland excursion which proved to be very wet following a wet September, we retreated to the safety of the road and headed to the coastal access at Beach Road.

Here we walked towards the mouth of the Whangaparaoa River to the north. Amongst a few northern New Zealand dotterels, we noted the extensive saltwater paspalum on the shallow estuary behind the dunes. Amongst spinifex (*Spinifex sericeus*) and knobby clubrush were extensive areas of South African iceplant (*Carpobrotus edulis*) and local

marram. Pingao (*Ficinia spiralis*) was also present and there was some debate as to how much was natural versus planted. We then returned to the bach for the evening.

Day 2: Whanarua Bay Scenic Reserve

On the second day we travelled down the road to visit the DOC-administered Scenic Reserve which encompasses the steep face and hills behind Whanarua Bay township. We headed uphill across the steep face that had been logged by DOC contractors several years earlier to remove a large stand of radiata pine (*Pinus radiata*). The cutover area had been left to naturally regenerate and was a mix of pampas-tutu-koromiko-radiata pine-kawakawa-karamu grass-shrubland. Natural regeneration was vigorous and would eventually overtop and shade out pampas, provided follow-up control was undertaken on the crop of radiata pine seedlings germinating. We picked up a track on the main ridge and followed this uphill. Further on, this formed the boundary between the logged area and the native vegetation. It appeared from aerial photos that this part of the reserve must have been previously cleared and farmed as the vegetation on the face in the gully behind the main ridge was comprised mainly of kohuhu-fivefinger-mamaku-manuka-karamu forest which was relatively young.

Following the main ridge, we soon reached the top of the hill and ridge junction which had clearly been a large pa site. A few new weed species including *Lilium formosanum* and cotoneaster (*Cotoneaster glaucophyllus*) were noted occasionally along track margins. After admiring the view over a snack, we followed the ridge heading inland to a large grassy clearing. It soon became apparent as to why the clearing was grassy, with abundant sign of stock browsing here and in the adjoining forest, surprising given it was a long downhill trip to the nearest farm from here. Most members botanised around the clearing while a few keener ones headed further south along the ridge inland. This enabled a better look into the remainder of the 148 ha reserve.

Along the spurs and ridge could be seen mature unlogged forest comprised of areas of rimu (*Dacrydium cupressinum*) emergent above hard beech (*Nothofagus truncata*) forest. The

remainder appeared to be (rimu-northern rata)/tawa-rewarewa-puriri forest typical of the semi-coastal zone. Abundant supplejack (*Ripogonum scandens*) and mamaku (*Cyathea medullaris*) was noted. A hybrid northern rata-pohutukawa was seen where pohutukawa (*Metrosideros excelsa*) meets northern rata (*M. robusta*) on the inland hillslopes.

We returned to the pa site for lunch, then followed the track down to the east. Many more archaeological features, mostly kumara pits, were noted further down the ridge along with extensive bark striping on fivefinger (*Pseudopanax arboreus*) which, following some later discussion, we decided was deer browsing. Following the track further down towards the reserve boundary we were soon in (pohutukawa-northern rata)/tawa-rewarewa-kohekohe-(puriri) forest. This was an excellent example of coastal forest with abundant nikau (*Rhopalostylis sapida*), supplejack and ponga (*Cyathea dealbata*) in the subcanopy and kiekie (*Freycinetia banksii*) in the understorey. *Arthropteris tenella* on and around the bases of kohekohe (*Dysoxylum spectabile*) and tawa (*Beilschmiedia tawa*) was a special find. The kohekohe appeared to be in relatively good condition. The track passed a few large northern rata trees on the way down before eventually heading out to SH 35 via a driveway.

In summary, this was an excellent weekend visit to two very different habitats – one an outstanding dune and swale wetland system, the other an outstanding example of coastal and semi-coastal forest. Both are relatively threatened ecosystems in the North Island. It was good to see the trip was well attended and there was some great weather for all to enjoy the experience.

WHANGAPARAOA BAY DUNES (Pukeamaru ED)

NZMS 260 Y14 508 900

John F.F. Hobbs, Elizabeth Miller and Paul Cashmore

* denotes naturalised species

Ferns

Azolla filiculoides

Blechnum minus

Blechnum novae-zelandiae

Cyathea medullaris

Cyathea smithii

Dicksonia squarrosa

Microsorium pustulatum

Pteridium esculentum

Common Name

Pacific azolla

swamp kiokio

kiokio

mamaku

soft tree fern

wheki

hound's tongue fern

bracken

Dicotyledonous plants

* *Achillea millefolium*

* *Anagallis arvensis* subsp. *arvensis* var. *arvensis*

* *Apium nodiflorum*

Apium prostratum subsp. *prostratum* var. *filiforme*

* *Arctotheca calendula*

* *Cakile maritima*

* *Callitriche stagnalis*

Calystegia sepium subsp. *roseata* × *C. soldanella*

Calystegia soldanella

* *Cardamine hirsuta*

* *Carpobrotus edulis*

* *Cerastium fontanum* subsp. *vulgare*

Chenopodium ambiguum

* *Cirsium vulgare*

* *Conyza sumatrensis*

Coprosma lucida

Coprosma repens

Coprosma rhamnoides

Coprosma robusta

Coprosma tenuicaulis

Cotula coronopifolia

* *Daucus carota*

Dichondra repens

* *Dipsacus fullonum*

* *Epilobium ciliatum*

* *Foeniculum vulgare*

* *Galium aparine*

Geniostoma ligustrifolium var. *ligustrifolium*

* *Geranium dissectum*

yarrow

scarlet pimpernel

water celery

New Zealand celery

Cape weed

sea rocket

starwort

panahi

bitter cress

ice plant

mouse-ear chickweed

glaucous goosefoot

Scotch thistle

fleabane

karamu

taupata

red-fruited coprosma

karamu

hukihuki

bachelor's button

wild carrot

Mercury Bay weed

wild teasel

tall willow-herb

fennel

cleavers

hangehange

cut-leaved geranium

* <i>Geranium molle</i>	dove's foot cranesbill
<i>Haloragis erecta</i> subsp. <i>erecta</i>	toatoa
<i>Hebe stricta</i> var. <i>stricta</i>	koromiko
* <i>Hypochoeris radicata</i>	catsear
* <i>Jacobaea vulgaris</i>	ragwort
* <i>Lactuca serriola</i>	prickly lettuce
* <i>Lapsana communis</i>	nipplewort
* <i>Leontodon taraxacoides</i>	hawkbit
* <i>Lepidium didymum</i>	twin cress
<i>Leptospermum scoparium</i>	manuka
<i>Lobelia anceps</i>	punakuru
* <i>Lonicera japonica</i>	Japanese honeysuckle
* <i>Lotus pedunculatus</i>	lotus
* <i>Ludwigia palustris</i>	water purslane
* <i>Lupinus arboreus</i>	tree lupin
* <i>Lythrum junceum</i>	hyssop loosestrife
<i>Macropiper excelsum</i> subsp. <i>excelsum</i>	kawakawa
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	mahoe
* <i>Mentha pulegium</i>	pennyroyal
* <i>Mentha suaveolens</i>	apple mint
* <i>Modiola caroliniana</i>	creeping mallow
<i>Muehlenbeckia australis</i>	pohuehue
<i>Muehlenbeckia complexa</i>	pohuehue
* <i>Myoporum aff. insulare</i>	
* <i>Myosotis laxa</i> subsp. <i>caespitosa</i>	water forget-me-not
<i>Myrsine australis</i>	mapou
<i>Nasturtium officinale</i>	watercress
* <i>Orobanche minor</i>	broomrape
* <i>Oxalis articulata</i>	sourgrass
<i>Oxalis rubens</i>	sand-dune oxalis
* <i>Paronychia brasiliiana</i>	Brazilian whitlow
<i>Pittosporum crassifolium</i>	karo
* <i>Plantago coronopus</i>	buck's horn plantain
* <i>Plantago lanceolata</i>	narrow-leaved plantain
* <i>Plantago major</i>	broad-leaved plantain
* <i>Polycarpon tetraphyllum</i>	allseed
* <i>Populus alba</i>	white poplar
* <i>Prunus persica</i>	peach
<i>Pseudognaphalium luteoalbum</i> agg.	pukatea
* <i>Ranunculus repens</i>	creeping buttercup
* <i>Ranunculus sceleratus</i>	celery-leaved buttercup
* <i>Rosa rubiginosa</i>	sweet briar
* <i>Rubus fruticosus</i> agg.	blackberry
* <i>Rumex acetosella</i>	sheep's sorrel

* <i>Rumex conglomeratus</i>	clustered dock
* <i>Rumex pulcher</i>	fiddle dock
* <i>Salix cinerea</i>	grey willow
* <i>Salix fragilis</i>	crack willow
* <i>Senecio angulatus</i>	Australian fireweed
* <i>Senecio vulgaris</i>	common groundsel
* <i>Silene gallica</i>	catchfly
* <i>Solanum nigrum</i>	black nightshade
* <i>Soliva sessilis</i>	Onehunga weed
* <i>Sonchus oleraceus</i>	puha
* <i>Taraxacum officinale</i>	dandelion
<i>Tetragonia tetragonoides</i>	kokihi
* <i>Trifolium repens</i>	white clover
* <i>Ulex europaeus</i>	gorse
* <i>Verbena bonariensis</i>	purple-top
* <i>Veronica arvensis</i>	field speedwell
* <i>Veronica persica</i>	scrambling speedwell
* <i>Vicia sativa</i>	vetch

Monocotyledonous plants

* <i>Agrostis stolonifera</i>	creeping bent
* <i>Allium triquetrum</i>	three-cornered garlic
* <i>Alocasia brisbanensis</i>	elephant's ear
* <i>Anthoxanthum odoratum</i>	sweet vernal
<i>Apodasmia similis</i>	oioi
<i>Baumea articulata</i>	jointed twig-rush
<i>Baumea rubiginosa</i>	
<i>Baumea teretifolia</i>	pakihi rush
<i>Bolboschoenus fluviatilis</i>	ririwaka
* <i>Briza maxima</i>	large quaking grass
* <i>Bromus willdenowii</i>	prairie brome
* <i>Canna indica</i>	canna lily
<i>Carex "raotest"</i>	
<i>Carex geminata</i> agg.	rautahi
<i>Carex pumila</i>	sand sedge
<i>Carex virgata</i>	purei
<i>Cordyline australis</i>	ti kouka
* <i>Cortaderia selloana</i>	pampas
* <i>Crocasmia ×crocosmiiflora</i>	montbretia
* <i>Cynodon dactylon</i>	Indian doab
* <i>Cyperus congestus</i>	purple umbrella sedge
<i>Cyperus ustulatus</i> f. <i>ustulatus</i>	giant umbrella sedge
* <i>Dactylis glomerata</i>	cocksfoot
* <i>Ehrharta erecta</i>	veld grass

<i>Ficinia nodosa</i>	wiwi
<i>Ficinia spiralis</i>	pingao
* <i>Glyceria fluitans</i>	floating sweet grass
* <i>Hedychium gardnerianum</i>	kahili ginger; wild ginger
<i>Holcus lanatus</i>	Yorkshire fog
<i>Isachne globosa</i>	swamp millet
<i>Isolepis reticularis</i>	clubrush
* <i>Juncus articulatus</i>	jointed rush
* <i>Juncus effusus</i> var. <i>effusus</i>	soft rush
* <i>Juncus tenuis</i> var. <i>tenuis</i>	track rush
<i>Lemna minor</i>	duckweed
<i>Microlaena stipoides</i>	patiti
<i>Microtis unifolia</i>	onion-leaf orchid
* <i>Nymphaea</i> sp.	water lily
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>	creeping beard grass
* <i>Paspalum vaginatum</i>	saltwater paspalum
* <i>Pennisetum clandestinum</i>	kikuyu
<i>Phormium tenax</i>	harakeke, flax
* <i>Poa annua</i>	annual poa
<i>Poa billardierei</i>	sand tussock
* <i>Schedonorus arundinaceus</i>	tall fescue
<i>Spinifex sericeus</i>	spinifex
* <i>Sporobolus africanus</i>	ratstail
<i>Typha orientalis</i>	raupo
* <i>Yucca deliciosa</i>	yucca
* <i>Zantedeschia aethiopica</i>	arum lily
<i>Zoysia pauciflora</i>	

WHANARUA BAY SCENIC RESERVE (Motu ED)

NZMS 260 Y14 332 795

John F.F. Hobbs, Elizabeth Miller and Paul Cashmore

* denotes naturalised species

Ferns & fern allies

Adiantum cunninghamii
Adiantum viridescens
Arthropteris tenella
Asplenium bulbiferum
Asplenium flaccidum
Asplenium oblongifolium
Asplenium polyodon
Blechnum chambersii
Blechnum filiforme
Blechnum novae-zelandiae

Common Name

common maiden hair
maiden hair
jointed fern
hen and chickens
hanging spleenwort
shining spleenwort
sickle spleenwort
nini
thread fern
kiokio

<i>Cyathea dealbata</i>	silver fern
<i>Cyathea medullaris</i>	mamaku
<i>Doodia australis</i>	rasp fern
<i>Hymenophyllum demissum</i>	irirangi
<i>Lastreopsis microsora</i> subsp. <i>pentangularis</i>	
<i>Leptopteris hymenophylloides</i>	crepe fern
<i>Lycopodium volubile</i>	climbing clubmoss
<i>Microsorium pustulatum</i>	hound's tongue fern
<i>Microsorium scandens</i>	fragrant fern
<i>Paesia scaberula</i>	lace fern
<i>Pneumatopteris pennigera</i>	gully fern
<i>Polystichum wawranum</i>	common shield fern
<i>Pteridium esculentum</i>	bracken
<i>Pteris macilenta</i>	sweet fern
<i>Pyrrhosia eleagnifolia</i>	leather-leaf fern
<i>Tmesipteris elongata</i>	fork fern
<i>Tmesipteris sigmatifolia</i>	fork fern
Gymnosperms	
<i>Dacrydium cupressinum</i>	rimu
<i>Phyllocladus trichomanoides</i>	tanekaha
* <i>Pinus radiata</i>	radiata pine
<i>Prumnopitys ferruginea</i>	miro
<i>Prumnopitys taxifolia</i>	matai
Dicotyledonous plants	
<i>Acaena anserinifolia</i>	piripiri
<i>Alectryon excelsus</i> subsp. <i>excelsus</i>	titoki
* <i>Anagallis arvensis</i> subsp. <i>arvensis</i> var. <i>arvensis</i>	scarlet pimpernel
* <i>Apium nodiflorum</i>	water celery
<i>Aristotelia serrata</i>	wineberry
<i>Beilschmiedia tawa</i>	tawa
<i>Brachyglottis repanda</i>	rangiora
<i>Calystegia sepium</i> subsp. <i>roseata</i>	pohue
<i>Calystegia tuguriorum</i>	native bindweed
<i>Carpodetus serratus</i>	putaputaweta
<i>Centella uniflora</i>	centella
* <i>Cirsium arvense</i>	Californian thistle
* <i>Cirsium vulgare</i>	Scotch thistle
<i>Clematis cunninghamii</i>	clematis
<i>Clematis paniculata</i>	clematis
* <i>Conyza sumatrensis</i>	broad-leaved fleabane
<i>Coprosma grandifolia</i>	kanono
<i>Coprosma lucida</i>	glossy karamu
<i>Coprosma lucida</i> × <i>C. robusta</i>	

<i>Coprosma rhamnoides</i>	red-fruited coprosma
<i>Coprosma robusta</i>	karamu
<i>Coprosma spathulata</i> subsp. <i>spathulata</i>	
<i>Coriaria arborea</i> var. <i>arborea</i>	tutu
<i>Corynocarpus laevigatus</i>	karaka
* <i>Cotoneaster glaucophyllus</i>	cotoneaster
* <i>Daucus carota</i>	wild carrot
<i>Dichondra repens</i>	Mercury Bay weed
* <i>Digitalis purpurea</i>	foxglove
<i>Dracophyllum latifolium</i>	neinei
<i>Dysoxylum spectabile</i>	kohekohe
<i>Elaeocarpus dentatus</i>	hinau
<i>Entelea arborescens</i>	whau
<i>Euchiton limosus</i>	cudweed
* <i>Galium divaricatum</i>	slender bed straw
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange
* <i>Geranium molle</i>	dovesfoot cranesbill
<i>Griselinia lucida</i>	puka
<i>Haloragis erecta</i> subsp. <i>erecta</i>	shrubby haloragis
<i>Hebe parviflora</i>	koromiko
<i>Hebe stricta</i> var. <i>macroura</i>	koromiko
<i>Hebe stricta</i> var. <i>stricta</i>	koromiko
<i>Hedycarya arborea</i>	porokaiwhiri
<i>Hoheria sexstylosa</i>	houhere, lacebark
<i>Hydrocotyle microphylla</i>	hydrocotyle
* <i>Hypericum androsaemum</i>	tutsan
* <i>Hypochoeris radicata</i>	catsear
<i>Knightsia excelsa</i>	rewarewa
<i>Kunzea ericoides</i>	kanuka
<i>Laurelia novae-zeelandiae</i>	pukatea
<i>Leptospermum scoparium</i>	manuka
* <i>Leucanthemum vulgare</i>	oxeye daisy
<i>Leucopogon fasciculatus</i>	mingimingi
* <i>Linum catharticum</i>	purging flax
<i>Litsea calicaris</i>	mangeao
* <i>Lonicera japonica</i>	Japanese honeysuckle
* <i>Lotus pedunculatus</i>	lotus
<i>Macropiper excelsum</i> subsp. <i>excelsum</i>	kawakawa
<i>Melicope ternata</i>	wharangi
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	mahoe
<i>Metrosideros diffusa</i>	rata
<i>Metrosideros excelsa</i>	pohutukawa
<i>Metrosideros excelsa</i> × <i>M. robusta</i>	
<i>Metrosideros fulgens</i>	rata

<i>Metrosideros perforata</i>	aka
<i>Metrosideros robusta</i>	northern rata
<i>Mida salicifolia</i>	mida
* <i>Modiola caroliniana</i>	creeping mallow
<i>Muehlenbeckia australis</i>	pohuehue
* <i>Myosotis arvensis</i>	field forget-me-not
* <i>Myosotis laxa</i> subsp. <i>caespitosa</i>	water forget-me-not
<i>Myrsine australis</i>	mapou
<i>Nertera depressa</i>	stinky nertera
<i>Nestegis lanceolata</i>	white maire
<i>Nothofagus truncata</i>	hard beech
<i>Olearia arborescens</i>	tree daisy
<i>Olearia rani</i> var. <i>colorata</i>	heketara
<i>Oxalis exilis</i>	creeping oxalis
<i>Ozothamnus leptophyllus</i>	tauhinu
* <i>Paraserianthes lophantha</i>	brush wattle
<i>Parsonsia capsularis</i>	NZ jasmine
<i>Pelargonium inodorum</i>	kopata
* <i>Physalis peruviana</i>	Cape gooseberry
* <i>Phytolacca octandra</i>	inkweed
<i>Pittosporum tenuifolium</i>	kohuhu
* <i>Plantago lanceolata</i>	narrow-leaved plantain
* <i>Prunella vulgaris</i>	selfheal
<i>Pseudopanax arboreus</i>	five finger
<i>Pseudopanax crassifolius</i> × <i>P. lessonii</i>	
<i>Pseudopanax lessonii</i>	houpara
<i>Quintinia serrata</i>	tawheowheo
* <i>Ranunculus repens</i>	creeping buttercup
* <i>Rosa rubiginosa</i>	sweet briar
<i>Rubus australis</i> × <i>R. cissoides</i>	
<i>Rubus cissoides</i>	tataramoa
* <i>Rubus fruticosus</i> agg.	blackberry
<i>Schefflera digitata</i>	pate
* <i>Senecio bipinnatisectus</i>	Australian fireweed
* <i>Senecio vulgaris</i>	common groundsel
<i>Solanum laciniatum</i>	poroporo
* <i>Solanum nigrum</i>	black nightshade
* <i>Sonchus oleraceus</i>	puha
* <i>Ulex europaeus</i>	gorse
* <i>Verbascum thapsus</i>	woolly mullein
* <i>Verbena bonariensis</i>	purple-top
<i>Veronica plebeia</i>	
<i>Vitex lucens</i>	puriri
<i>Wahlenbergia violacea</i>	rimuroa

Weinmannia racemosa

kamahi

Monocotyledonous plants

* <i>Agrostis capillaris</i>	browntop
* <i>Agrostis stolonifera</i>	creeping bent
* <i>Anthoxanthum odoratum</i>	sweet vernal
<i>Carex dissita</i>	forest sedge
* <i>Carex divulsa</i>	grey sedge
<i>Collospermum hastatum</i>	kahakaha
<i>Cordyline australis</i>	cabbage tree
<i>Cordyline banksii</i>	forest cabbage tree
* <i>Cortaderia selloana</i>	pampas grass
* <i>Dactylis glomerata</i>	cocksfoot
<i>Dianella nigra</i>	turutu
<i>Drymoanthus adversus</i>	green fleshy orchid
<i>Earina mucronata</i>	peka-a-waka
<i>Ficinia nodosa</i>	wiwi, knobby clubrush
<i>Freycinetia banksii</i>	kiekie
<i>Gahnia setifolia</i>	gahnia
* <i>Hedychium gardnerianum</i>	wild ginger
* <i>Holcus lanatus</i>	Yorkshire fog
<i>Ichthyostomum pygmaeum</i>	piripiri
* <i>Juncus effusus</i> var. <i>effusus</i>	soft rush
<i>Juncus planifolius</i>	flat-leaved rush
* <i>Lilium formosanum</i>	Formosan lily
<i>Microlaena avenacea</i>	bush rice grass
<i>Microlaena stipoides</i>	meadow rice grass
<i>Microtis unifolia</i> agg.	common onion orchid
* <i>Miscanthus nepalensis</i>	Himalayan fairy grass
<i>Morelotia affinis</i>	
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>	creeping beard grass
* <i>Paspalum dilatatum</i>	paspalum
<i>Pterostylis banksii</i>	tutukiwi
<i>Rhopalostylis sapida</i>	nikau
<i>Ripogonum scandens</i>	supplejack
* <i>Sporobolus africanus</i>	ratstail
* <i>Stenotaphrum secundatum</i>	buffalo grass
<i>Thelymitra longifolia</i>	white sun orchid
<i>Uncinia banksii</i>	hookgrass
<i>Uncinia ferruginea</i>	hookgrass
<i>Uncinia filiformis</i>	hookgrass
<i>Uncinia uncinata</i>	hookgrass