

MARAWAIWAI SCENIC RESERVE, OPOTIKI FIELD TRIP

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On 11 April 2010 13 members of the Rotorua Botanical Society gathered on a beautiful autumn day to botanise Marawaiwai Scenic Reserve a few km south of Opotiki off Harrison Rd. This 76 ha DOC reserve, although close to Opotiki, has been rarely visited by botanists and locals alike with the previous RBS visit being in 1986 (Clarkson and Heginbotham 1986) when it was known as the Opotiki and Waioeka Recreation Reserve and was administered by the then Opotiki County Council.

The vegetation and flora of the reserve has been well documented in the West Gisborne report of the Biological Survey of Reserves series (Clarkson and Regnier 1989) with a vegetation map and vascular plant species list produced. As none of the members had been extensively through the entire reserve this vegetation map and species list provided a good basis for identifying areas of interest in the reserve to visit.

The trip started by following the public loop track around the reserve through the kahikatea (*Dacrycarpus dacrydioides*) forest margin alongside the stream. Exotic species such as Japanese walnut (*Juglans ailantifolia*) and Chinese privet (*Ligustrum sinense*) were noted on forest margin running parallel with Harrison Road, although the majority of the larger plants had been recently sprayed by DOC contractors. We had some vigorous discussion here about the ID of several grass species, *Cyperus* species, climbing ratas and small leaved Coprosmas (*C. areolata* vs. *C. spathulata* vs. *C. tenuicaulis*). Other species noted included a small patch of karaka (*Corynocarpus leavigatus*) saplings, several specimens of small-leaved milk tree (*Streblus heterophyllus*) and *Melicope simplex* shrubs.

Further around the loop track we decided it was time to leave the comfort of the track and head off-track up the hill until we reached a large clearing which had

been historically grazed. This was dominated by mainly blackberry (*Rubus fruticosus* agg.) and bracken (*Pteridium esculentum*) in the understorey with scattered Chinese privet (mostly sprayed) around the margins. Of particular note here was an exceptionally large tree of puka (*Griselinia lucida*) growing terrestrially on the forest edge. On the western side of the clearing we dropped into a steep gully filled with nikau (*Rhopalostylis sapida*) and worked our way up a spur towards the puriri forest type near a farm boundary.

Under an area of wheki (*Dicksonia squarrosa*) we came across an extensive patch of comb fern (*Schizaea dichotoma*) scattered in the understorey with more than 40 plants noted. This species is not common in the Bay of Plenty, being more commonly associated with kauri forest. At the same spot we came across another uncommon species, *Peperomia tetraphylla*, growing in a fork and near roots of a tawa (*Beilschmiedia tawa*) tree. As we reached the edge of a nice grove of tall puriri (*Vitex lucens*) we decided to stop for lunch.

Following lunch we continued through puriri forest with scattered tawa and across another nikau filled gully before reaching the farm boundary where the east-west boundary becomes the north-south boundary with farmland. At one point we passed a very large rimu (*Dacrydium cupressinum*) tree towering above the puriri canopy laden with epiphytes. We were still in magnificent puriri forest although it was concerning to find a few wild ginger (*Hedychium gardnerianum*) plants and an abundance of both Chinese and tree privet (*Ligustrum lucidum*) seedlings and saplings in the understory in this area. A few kohekohe (*Dysoxylum spectabile*) were noted but were very sparse despite the coastal nature of the reserve. We followed an old logging track uphill onto the main ridge where vegetation abruptly changed to older secondary forest dominated by kanuka (*Kunzea ericoides*), rewarewa (*Knightia excelsa*) and tanekaha (*Phyllocladus trichomanoides*). Some cattle browsing was noted on many of the understorey shrubs along this ridge.

From here we followed a spur down towards the stream through mostly hard beech (*Nothofagus truncate*) forest. Coming down this spur the epiphytic orchids *Adelopetalum pygmaeum* and *Drymoanthus adversus* were noted at different locations along with a large specimen of *Pittosporum cornifolium* just above head height. Upon reaching the Marawaiwai Stream at the bottom of the spur we turned and headed upstream for a short distance until we came across the small wetland we had been searching for. This was comprised predominantly of raupo (*Typha orientalis*) and *Carex geminata* with scattered wheki on the margins and larger pukatea (*Laurelia novaezelandiae*) on the forest edge. The exotic herb bergamot mint (*Mentha piperita* var. *piperita*) was common in the understorey amongst raupo. Also noted was *Carex vulpinoidea*, swamp millet (*Isachne globosa*) and tall fescue (*Schedonorus arundinacea*), amongst others. Despite searching the elusive swamp maire (*Syzygium maire*) noted by Clarkson and Regnier (1989) was not seen. Without finding much of botanical interest here we followed the stream upstream until we reached pine forest and reserve boundary. As it was 3:30pm and the light was starting to fade, a quick exit from the reserve was initiated.

We clambered up the slope through secondary vegetation and onto the ridge retracing our steps back to the ridge area traversed after lunch. Walking on a broad ridge we followed a flagged track through more stunning puriri forest with abundant nikau in the understorey. This included one particularly large puriri tree with two huge puka trunks climbing up it – obviously a very old tree and much older than most of the other puriri trees in the reserve. A windfall on the track revealed further *Peperomia tetraphylla* in flower allowing people to see and photograph some nice specimens up close. Following this broad ridge around we soon ended up back at the main clearing and a short walk downhill brought us back to the carpark while it was still daylight. Whilst it was a long day for members who had travelled from Hamilton, Taupo, Rotorua and Tauranga, all agreed it was a very rewarding trip. Marawaiwai Scenic Reserve certainly provided a good diversity of vegetation types and certainly some of the best examples of pure puriri forest in the Bay of Plenty. This is typical of many of the forest remnants present

on the flatter country surrounding Opotiki but which, it was noted, is a vegetation type that is virtually extinct throughout the remainder of the Bay of Plenty. This reinforces the importance of lowland reserves such as this for protecting under-represented vegetation associations which are under constant threat from surrounding land uses.

REFERENCES

Clarkson, B., Heginbotham, M. 1986. Opotiki and Waioeka Domain and Hukutaiai Domain field trip - 13 July 1986. *Rotorua Botanical Society Newsletter* 8:25–28.

Clarkson . B.R. and Regnier, C.E. (1989): Scenic reserves of west Gisborne. *Biological Survey of Reserves Report No. 16*. Department of Conservation, Wellington



Puriri forest within Marawaiwai Scenic Reserve (Photo: P Cashmore)

MARAWAIWAI SCENIC RESERVE VASCULAR PLANT SPECIES LIST

Compiled by John F.F. Hobbs ¹

Ferns and Fern Allies

<i>Adiantum cunninghamii</i>	maiden hair fern
<i>Asplenium bulbiferum</i>	hen and chickens fern
<i>Asplenium flaccidum</i>	hanging spleenwort
<i>Asplenium oblongifolium</i>	shining spleenwort
<i>Asplenium polyodon</i>	sickle spleenwort
<i>Blechnum chambersii</i>	lance fern
<i>Blechnum discolor</i>	crown fern
<i>Blechnum filiforme</i>	thread fern
<i>Blechnum membranaceum</i>	
<i>Blechnum minus</i>	swamp kiokio
<i>Blechnum novae-zelandiae</i>	kiokio
<i>Cardiomanes reniforme</i>	kidney fern
<i>Cyathea cunninghamii</i>	gully tree fern
<i>Cyathea dealbata</i>	silver fern
<i>Cyathea medullaris</i>	mamaku
<i>Deparia petersenii</i> subsp. <i>congrua</i>	
<i>Dicksonia squarrosa</i>	wheki
<i>Diplazium australe</i>	southern lady fern
<i>Doodia australis</i>	rasp fern
<i>Grammitis ciliata</i>	hairy strap fern
<i>Huperzia varia</i>	hanging club moss
<i>Hymenophyllum demissum</i>	irirangi
<i>Hymenophyllum flabellatum</i>	lop-sided filmy fern
<i>Hymenophyllum multifidum</i>	fan fern
<i>Hymenophyllum rarum</i>	filmy fern
<i>Hymenophyllum revolutum</i>	filmy fern
<i>Hymenophyllum sanguinolentum</i>	piripiri
<i>Lastreopsis glabella</i>	felted fern
<i>Lastreopsis hispida</i>	hairy fern
<i>Lastreopsis microsora</i> subsp. <i>pentangularis</i>	
<i>Leptopteris hymenophylloides</i>	heruheru
<i>Lycopodium deuterodensum</i>	puakarimu
<i>Lycopodium volubile</i>	climbing clubmoss
<i>Microsorium pustulatum</i> subsp. <i>pustulatum</i>	hound's tongue fern
<i>Microsorium scandens</i>	fragrant fern
<i>Paesia scaberula</i>	ring fern

¹ Based on data from BD Clarkson & CE Regnier (1989), an unpublished species list from Graeme Jane (2005) and data recorded during the Rotorua Botanical Society Field trip, April 2010.

<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>Pteris tremula</i>	shaking brake
<i>Pyrrosia eleagnifolia</i>	leather-leaf fern
<i>Rumohra adiantiformis</i>	leathery shield fern
<i>Schizaea dichotoma</i>	fan fern
* <i>Selaginella kraussiana</i>	selaginella
<i>Tmesipteris elongata</i>	
<i>Tmesipteris lanceolata</i>	
<i>Tmesipteris tannensis</i>	fork fern
<i>Trichomanes venosum</i>	veined bristle fern
Gymnosperms	
<i>Dacrycarpus dacrydioides</i>	kahikatea
<i>Dacrydium cupressinum</i>	rimu
<i>Phyllocladus trichomanoides</i>	tanekaha
* <i>Pinus pinaster</i>	maritime pine
<i>Prumnopitys ferruginea</i>	miro
Dicotylendons	
<i>Acaena anserinifolia</i>	bidibid
<i>Alectryon excelsus</i> subsp. <i>excelsus</i>	titoki
<i>Alsenosmia pusilla</i>	
<i>Aristolelia serrata</i>	wineberry
<i>Beilschmiedia tawa</i>	tawa
* <i>Berberis glaucocarpa</i>	barberry
<i>Brachyglottis repanda</i>	rangiora
* <i>Callitriche stagnalis</i>	starwort
<i>Calystegia sepium</i> subsp. <i>roseata</i>	
* <i>Calystegia silvatica</i>	great bindweed
<i>Cardamine debilis</i> agg.	bitter cress
* <i>Carduus tenuiflorus</i>	winged thistle
<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>	scented clematis
<i>Clematis paniculata</i>	clematis
* <i>Conyza sumatrensis</i>	fleabane
<i>Coprosma areolata</i>	thin leaved coprosma
<i>Coprosma grandifolia</i>	kanono
<i>Coprosma lucida</i>	shining karamu
<i>Coprosma rhamnoides</i>	thorny coprosma
<i>Coprosma robusta</i>	karamu

<i>Coprosma spathulata</i> subsp. <i>spathulata</i>	swamp coprosma
<i>Coprosma tenuicaulis</i>	tree tutu
<i>Coriaria arborea</i> var. <i>arborea</i>	karaka
<i>Corynocarpus laevigatus</i>	hawthorn
* <i>Crataegus monogyna</i>	hawkesbeard
* <i>Crepis capillaris</i>	wild carrot
* <i>Daucus carota</i>	foxglove
* <i>Digitalis purpurea</i>	grass tree
<i>Dracophyllum strictum</i>	sundew
<i>Drosera auriculata</i>	scented sundew
<i>Drosera binata</i>	kohekohe
<i>Dysoxylum spectabile</i>	hinau
<i>Elaeocarpus dentatus</i>	kotukutuku
<i>Fuchsia excorticata</i>	cleavers
* <i>Galium aparine</i>	slender bedstraw
* <i>Galium divaricatum</i>	purple cudweed
* <i>Gamochaeta coarctata</i>	nowberry
<i>Gaultheria antipoda</i>	angehange
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	
<i>Gonocarpus micranthus</i>	
<i>Griselinia lucida</i>	puka
<i>Haloragis erecta</i> subsp. <i>erecta</i>	toatoa
<i>Hebe corriganii</i>	purple-flowered hebe
<i>Hedycarya arborea</i>	pigeonwood
<i>Hoheria sexstylosa</i>	lacebark
<i>Hydrocotyle elongata</i>	hydrocotyle
<i>Hydrocotyle heteromeria</i>	wax weed
<i>Hydrocotyle microphylla</i>	hydrocotyle
* <i>Hypericum androsaemum</i>	tutsan
* <i>Hypochoeris radicata</i>	catsear
* <i>Jacobaea vulgaris</i>	ragwort
* <i>Juglans ailantifolia</i>	Japanese walnut
<i>Knightia excelsa</i>	rewarewa
<i>Kunzea ericoides</i> var. <i>ericoides</i>	kanuka
<i>Laurelia novae-zealandiae</i>	pukatea
<i>Leptospermum scoparium</i> var. <i>scoparium</i>	manuka
<i>Leucopogon fasciculatus</i>	mingimingi
* <i>Ligustrum lucidum</i>	tree privet
* <i>Ligustrum sinense</i>	Chinese privet
<i>Lophomyrtus bullata</i>	ramarama
* <i>Lotus pedunculatus</i>	lotus
<i>Macropiper excelsum</i> subsp. <i>excelsum</i>	kawakawa
<i>Melicope simplex</i>	poataniwha
<i>Melicytus ramiflorus</i>	mahoe
* <i>Mentha piperita</i> var. <i>piperita</i>	bergamot mint

* <i>Metrosideros colensoi</i>	hairy climbing rata
<i>Metrosideros diffusa</i>	white climbing rata
<i>Metrosideros fulgens</i>	winter rata
<i>Metrosideros perforata</i>	small white rata
<i>Mida salicifolia</i>	willow-leaved maire
<i>Muehlenbeckia australis</i>	poheuheu
* <i>Myosotis sylvatica</i> subsp. <i>sylvatica</i>	garden forget-me-not
<i>Myrsine australis</i>	mapou
<i>Myrsine salicina</i>	toro
* <i>Nasturtium officinale</i>	watercress
<i>Nertera depressa</i>	common nertera
<i>Nertera villosa</i>	
<i>Nothofagus truncata</i>	hard beech
<i>Olearia rani</i> var. <i>colorata</i>	heketara
<i>Oxalis exilis</i>	yellow oxalis
* <i>Paraserianthes lophantha</i>	brush wattle
<i>Parsonsia capsularis</i> var. <i>capsularis</i>	small flowered jasmine
<i>Parsonsia heterophylla</i>	Maori jasmine
<i>Passiflora tetrandra</i>	passionfruit
<i>Pennantia corymbosa</i>	kaikomako
<i>Peperomia tetraphylla</i>	
* <i>Phytolacca octandra</i>	inkweed
<i>Pittosporum cornifolium</i>	
<i>Pittosporum tenuifolium</i>	kohuhu
* <i>Plantago lanceolata</i>	narrow-leaved plantain
* <i>Plantago major</i>	broad-leaved plantain
* <i>Prunella vulgaris</i>	selfheal
<i>Pseudopanax arboreus</i>	fivefinger
<i>Pseudopanax crassifolius</i>	lancewood
<i>Quintinia serrata</i>	tawheowheo
<i>Ranunculus reflexus</i>	hairy buttercup
* <i>Ranunculus repens</i>	creeping buttercup
<i>Rubus australis</i>	swamp lawyer
<i>Rubus cissoides</i>	bush lawyer
* <i>Rubus fruticosus</i> agg.	blackberry
* <i>Rubus phoenicolasius</i>	Japanese wineberry
<i>Rubus schmidelioides</i>	bush lawyer
* <i>Rumex acetosella</i>	sheep's sorrel
* <i>Rumex conglomeratus</i>	clustered dock
* <i>Rumex obtusifolius</i>	broad-leaved dock
<i>Schefflera digitata</i>	pate
* <i>Scrophularia auriculata</i>	water figwort
* <i>Senecio bipinnatisectus</i>	Australian fireweed
<i>Solanum aviculare</i>	poroporo
* <i>Solanum mauritianum</i>	woolly nightshade

* <i>Solanum pseudocapsicum</i>	Jerusalem cherry
* <i>Sonchus oleraceus</i>	sow thistle
* <i>Stellaria alsine</i>	bog stichwort
* <i>Stellaria media</i> subsp. <i>media</i>	chickweed
<i>Streblus heterophyllus</i>	turepo
<i>Syzygium maire</i>	swamp maire
* <i>Taraxacum officinale</i>	dandelion
* <i>Trifolium pratense</i>	red clover
* <i>Trifolium repens</i>	white clover
* <i>Verbena bonariensis</i>	purple-top
* <i>Veronica anagallis-aquatica</i>	water speedwell
* <i>Veronica arvensis</i>	field speedwell
<i>Vitex lucens</i>	pururi
<i>Weinmannia racemosa</i>	

Monocotyledons

<i>Adelopetalum tuberculatum</i>	
* <i>Anthoxanthum odoratum</i>	sweet vernal
<i>Astelia solandri</i>	kowharawhara
* <i>Axonopus fissifolius</i>	narrow-leaved carpet grass
<i>Baumea rubiginosa</i>	
<i>Baumea tenax</i>	sedge tussock
* <i>Bromus willdenowii</i>	prairie grass
<i>Carex geminata</i> agg.	rautahi
<i>Carex lessoniana</i>	rautahi
<i>Carex secta</i>	swamp sedge
<i>Carex virgata</i>	swamp sedge
* <i>Carex vulpinoidea</i>	fox sedge
<i>Collospermum hastatum</i>	kahakaha
<i>Cordyline australis</i>	cabbage tree
<i>Cortaderia fulvida</i>	toetoe
* <i>Cyperus eragrostis</i>	umbrella sedge
<i>Cyperus ustulatus</i> f. <i>ustulatus</i>	coastal cutty grass
* <i>Dactylis glomerata</i>	cocksfoot
<i>Deyeuxia avenoides</i> agg.	mountain oatgrass
<i>Dianella nigra</i>	turutu
<i>Drymoanthus adversus</i>	green fleshy orchid
<i>Earina autumnalis</i>	raupeka
<i>Earina mucronata</i>	peka-a-waka
<i>Eleocharis acuta</i>	spike rush
<i>Freycinetia banksii</i>	kiekie
<i>Gahnia pauciflora</i>	gahnia
<i>Gahnia setifolia</i>	gahnia
* <i>Hedychium gardnerianum</i>	wild ginger
* <i>Holcus lanatus</i>	Yorkshire fog
<i>Ichthyostomum pygmaeum</i>	bulb-leaf orchid

<i>Isachne globosa</i>	swamp millet
<i>Isolepis reticularis</i>	clubrush
* <i>Isolepis sepulcralis</i>	
* <i>Juncus articulatus</i>	jointed rush
<i>Juncus edgariae</i>	wiwi
* <i>Juncus effusus</i> var. <i>effusus</i>	soft rush
<i>Juncus planifolius</i>	flat-leaved rush
<i>Juncus sarophorus</i>	leafless rush
* <i>Juncus tenuis</i> var. <i>tenuis</i>	track rush
<i>Lemna minor</i>	duckweed
* <i>Lolium perenne</i>	perennial ryegrass
* <i>Luzula multiflora</i>	woodrush
<i>Microlaena avenacea</i>	bush rice grass
<i>Microlaena stipoides</i>	forest rice grass
* <i>Miscanthus nepalensis</i>	Himalayan fairy grass
<i>Morelotia affinis</i>	
<i>Nematoceras "Kaimai"</i>	
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>	oat grass
* <i>Paspalum dilatatum</i>	paspalum
* <i>Paspalum distichum</i>	Mercer grass
<i>Poa anceps</i> subsp. <i>anceps</i>	broad-leaved poa
* <i>Poa annua</i>	annual poa
<i>Pterostylis banksii</i>	greenhood orchid
<i>Pterostylis graminea</i>	greenhood orchid
<i>Rhopalostylis sapida</i>	nikau
<i>Ripogonum scandens</i>	supplejack
<i>Rytidosperma gracile</i>	danthonia
<i>Rytidosperma unarede</i>	danthonia
* <i>Schedonorus arundinaceus</i>	tall fescue
<i>Schoenus maschalinus</i>	dwarf bog-rush
<i>Schoenus tendo</i>	
<i>Typha orientalis</i>	raupo
<i>Uncinia banksii</i>	hooked sedge
<i>Uncinia ferruginea</i>	hooked sedge
<i>Uncinia silvestris</i>	hooked sedge
<i>Uncinia uncinata</i>	watu
<i>Winika cunninghamii</i>	Winika