

FIELD TRIP TO THE UMURUA SCENIC RESERVE

John F.F. Hobbs

A fine day and the certainty of observing the only known population of *Hymenophyllum australis* (until recently *H. atrovirens*) in the Rotorua Ecological District and seeing the Umurua Stream Waterfall encouraged a good turnout of eleven keen botanists at the meeting place at the Mamaku School. Umurua Scenic Reserve (12.1 ha) was set aside to protect a pretty waterfall on the Umurua Stream. The area was logged for podocarps in the not too distant past, then the surrounding land was cleared for farming. The remnant forest is mainly tawa (*Beilschmiedia tawa*), with kamahi (*Weinmannia racemosa*), tawari (*Ixerba brexioides*), rewarewa (*Knightia excelsa*) and scattered emergent rimu (*Dacrydium cupressinum*). To the east the reserve backs onto pine forest and there is very similar native forest surrounding the rest of the reserve with a paper road along the western part of the northern boundary. Many years ago I had read somewhere that groups of people would make a picnic trip on a horse-drawn cart from Mamaku township to see the falls. This trip had been on my mind for some time and in February 2013 I decided to do a reconnaissance for a future field trip. It was probably first botanised by Dave King in 1984, who found 91 species (Clarkson and King, 1987). Although there is an unformed legal road to the reserve from South Road, this has an old fertiliser shed, several fences and a fairly serious gully across it, so the best option was to gain access along a dairy race right to the door, so to speak. So with permission of the farm manager, a convoy of three vehicles made the 1.5 km from South Road in quick time.

We entered the reserve at the north-west corner and almost immediately a discussion developed as to whether a juvenile shrub with trifoliate leaves was a hybrid between *Raukawa anomalous* and five-finger (*Pseudopanax arboreus*). Some people should have known better! Plan A was to investigate the southern area of the reserve as during my 2013 foray I had done most of the northern half. In a shallow gully several tree-ferns carried populations of rusty filmy fern (*Hymenophyllum frankliniae*) and others the veined

filmy fern (*Trichomanes venosum*). Always on the lookout for something different (new habitat = different species) we investigated a small knob where some black hard fern (*Blechnum nigrum*) drew our attention and close by we found bristle fern (*Trichomanes elongatum*), mountain hard fern (*Blechnum vulcanicum*) and a specimen of golden basket fungus (*Clathrus chrysomycelinus*). This uncommon fungus has only been recorded in the Waikato and Bay of Plenty.



Golden basket fungus (*Clathrus chrysomycelinus*)

Making our way down a ridge we noted common lindsaea (*Lindsaea trichomanoides*) which is quite often found on the Mamaku Plateau and a large specimen of thin-barked totara (*Podocarpus cunninghamii*) estimated at 80 cm d.b.h. Before descending to the Umurua Stream we stopped for lunch after which some headed to the base of the falls while others botanised the stream and its banks upstream noting amongst other species a young narrow-leaved mahoe (*Meliclytus lanceolata*). Interestingly, at the top of the falls there was still the population of monkey musk (*Erythranthe guttata*) noted by King 30 years ago (Clarkson and King, 1987). Also near the top of the falls Graeme put a name to the broad-leaved astelia, *Astelia nervosa*, which I had tentatively identified as *A. grandis*. This is another first record for the Rotorua Lakes Ecological District (RLED).



Hymenophyllum australis

At the base of the falls I pointed out the population of *Hymenophyllum australis* (see photo), which I had discovered the previous year, as the only known site of this filmy fern in the RLED. Also found here were *Corybas* “Kaimai” and *Myosotis forsteri* and near the stream a hare’s foot fern (*Leptolepia novae-zelandiae*). Leaving the falls we headed westwards noting a hard fern hybrid *Blechnum novae-zelandiae* × *B. procerum* on the cool side of a ridge. At the top of the ridge we regrouped and I suggested that everyone should follow a short track to the east where there were some magnificent specimens of toatoa (*Phyllocladus toatoa*) on a very steep-sided ridge. Following an old logging/tourist track out we stopped at a junction where there was a very old rimu festooned with epiphytes including *Astelia solandri*, Kirk’s daisy (*Brachyglottis kirkii* var. *kirkii*), perching kohuhu (*Pittosporum cornifolium*) and winika (*Winika cunninghamii*).

Then, back to the cars and as we rounded a bend in the race I thought that I should have asked the farmer for the best time to drive past the milking shed. The yard through which we had to pass was chocka-ful of cows! Not a big drama; with some deft juggling

of cars, cows and gates we emerged back on to South Road with no extra bodywork dents.

Reference

Clarkson, B.R.; King, D.R. 1987. Scenic and allied reserves of Rotorua Lakes and White Island Ecological Districts, Northern Volcanic Plateau. Unpublished report, Botany Division D.S.I.R.



Umurua Falls

Umurua Scenic Reserve Species List

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* = naturalised species

Ferns & Fern Allies

<i>Asplenium bulbiferum</i>	hen and chickens fern
<i>Asplenium flaccidum</i>	hanging spleenwort, makawe
<i>Asplenium polyodon</i>	sickle spleenwort, petako
<i>Blechnum chambersii</i>	lance fern, nini
<i>Blechnum discolor</i>	crown fern
<i>Blechnum fluviatile</i>	kiwikiwi
<i>Blechnum membranaceum</i>	
<i>Blechnum nigrum</i>	black hard fern
<i>Blechnum novae-zelandiae</i>	kiokio
<i>Blechnum novae-zelandiae</i> × <i>B. procerum</i>	
<i>Blechnum procerum</i>	small kiokio
<i>Blechnum vulcanicum</i>	triangular kiokio
<i>Cardiomanes reniforme</i>	kidney fern
<i>Cyathea dealbata</i>	ponga, silver fern
<i>Cyathea smithii</i>	soft tree fern
<i>Dicksonia fibrosa</i>	wheki-ponga
<i>Dicksonia squarrosa</i>	wheki, harsh tree fern
<i>Histiopteris incisa</i>	water fern
<i>Huperzia varia</i>	hanging clubmoss
<i>Hymenophyllum australe</i>	filmy fern
<i>Hymenophyllum demissum</i>	irirangi
<i>Hymenophyllum dilatatum</i>	lop-sided filmy fern
<i>Hymenophyllum flabellatum</i>	fan-shaped filmy fern
<i>Hymenophyllum frankliniae</i>	rusty filmy fern
<i>Hymenophyllum multifidum</i>	filmy fern
<i>Hymenophyllum rarum</i>	thin filmy fern
<i>Hymenophyllum revolutum</i>	filmy fern
<i>Hymenophyllum sanguinolentum</i>	blood-scented filmy fern
<i>Hymenophyllum scabrum</i>	rough filmy fern
<i>Hypolepis ambigua</i>	pig fern
<i>Hypolepis distans</i>	
<i>Hypolepis rufobarbata</i>	sticky pig fern
<i>Leptolepia novae-zelandiae</i>	hare's foot fern
<i>Leptopteris hymenophylloides</i>	single crepe fern, heruheru
<i>Leptopteris hymenophylloides</i> × <i>L. superba</i>	heruheru
<i>Lindsaea trichomanoides</i>	common lindsaea
<i>Lycopodium volubile</i>	scrambling clubmoss
<i>Microsorium pustulatum</i> subsp. <i>pustulatum</i>	hound's tongue

<i>Microsorium scandens</i>	fragrant fern
<i>Notogrammitis billardierei</i>	common strap fern
<i>Notogrammitis heterophylla</i>	comb fern
<i>Paesia scaberula</i>	lace fern, matata
<i>Pneumatopteris pennigera</i>	gully fern, pakau
<i>Polystichum silvaticum</i>	shield fern
<i>Polystichum vestitum</i>	prickly shield fern, punui
<i>Pteridium esculentum</i>	bracken
<i>Rumohra adiantiformis</i>	leather-leaf shield fern
<i>Sticherus cunninghamii</i>	waekura
<i>Tmesipteris elongata</i>	fork fern
<i>Tmesipteris tannensis</i>	fork fern
<i>Trichomanes elongatum</i>	bristle fern
<i>Trichomanes venosum</i>	veined filmy fern

Gymnosperms

<i>Dacrydium cupressinum</i>	rimu
<i>Phyllocladus toatoa</i>	toatoa
<i>Phyllocladus trichomanoides</i>	tanekaha
<i>Podocarpus cunninghamii</i>	thin-barked totara
<i>Podocarpus totara</i> var. <i>totara</i>	totara
<i>Prumnopitys ferruginea</i>	miro

Dicotyledonous trees, shrubs & lianes

<i>Alseuosmia macrophylla</i>	large-leaved toropapa
<i>Aristotelia serrata</i>	wineberry, makomako
<i>Beilschmiedia tawa</i>	tawa
* <i>Berberis glaucocarpa</i>	barberry
<i>Brachyglottis kirkii</i> var. <i>kirkii</i>	Kirk's tree daisy
* <i>Buddleja davidii</i>	buddleia
<i>Carpodetus serratus</i>	marble leaf, putaputaweta
<i>Clematis paniculata</i>	clematis, puawhananga
<i>Coprosma dumosa</i>	
<i>Coprosma grandifolia</i>	kanono
<i>Coprosma lucida</i>	shining karamu
<i>Coprosma robusta</i>	karamu
<i>Coprosma tenuifolia</i>	thin-leaved coprosma
<i>Elaeocarpus dentatus</i>	hinau
<i>Fuchsia excorticata</i>	fuchsia, kotukutuku
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange
<i>Griselinia littoralis</i>	kapuka
<i>Griselinia lucida</i>	puka
<i>Hedycarya arborea</i>	pigeonwood
<i>Ixerba brexioides</i>	tawari

<i>Knightsia excelsa</i>	rewarewa
<i>Leucopogon fasciculatus</i>	soft mingimingi
* <i>Leycesteria formosa</i>	Himalayan honeysuckle
<i>Litsea calicaris</i>	mangeao
<i>Meliccytus lanceolatus</i>	narrow-leaved mahoe
<i>Meliccytus ramiflorus</i> subsp. <i>ramiflorus</i>	mahoe
<i>Metrosideros diffusa</i>	white climbing rata, akatea
<i>Metrosideros fulgens</i>	scarlet rata, winter rata
<i>Muehlenbeckia australis</i>	puka, poheuheu
<i>Myrsine australis</i>	mapou
<i>Myrsine salicina</i>	toro
<i>Nestegis lanceolata</i>	maire
<i>Parsonsia capsularis</i>	akakiore
<i>Pittosporum colensoi</i>	kohuhu
<i>Pittosporum cornifolium</i>	tawhirikao
<i>Pseudopanax arboreus</i>	five-finger, puhou, whaupaku
<i>Pseudopanax crassifolius</i>	lancewood, horoeka
<i>Pseudowintera axillaris</i>	lowland horopito
<i>Pseudowintera colorata</i>	horopito
<i>Quintinia serrata</i>	tawheowheo
<i>Raukawa anomalus</i>	
<i>Raukawa edgerleyi</i>	rauakawa
<i>Rubus cissoides</i> agg.	bush lawyer
* <i>Rubus fruticosus</i> agg.	blackberry
<i>Schefflera digitata</i>	pate
* <i>Ulex europaeus</i>	gorse
<i>Weinmannia racemosa</i>	kamahi

Dicotyledonous herbs

<i>Acaena anserinifolia</i>	bidibid
<i>Callitriche petriei</i> subsp. <i>petriei</i>	starwort
* <i>Callitriche stagnalis</i>	starwort
<i>Cardamine debilis</i> agg. "longstyle"	bitter cress
* <i>Cardamine hirsuta</i>	common bitter cress
* <i>Centaureum erythraea</i>	centaury
* <i>Cirsium vulgare</i>	Scotch thistle
* <i>Conyza sumatrensis</i>	fleabane
* <i>Digitalis purpurea</i>	foxglove
<i>Epilobium billardioreanum</i>	willowherb
<i>Epilobium rotundifolium</i>	round-leaved willow-herb
* <i>Erythranthe guttata</i>	monkey musk
<i>Euchiton involucratus</i>	creeping cudweed
<i>Euchiton japonicus</i>	creeping cudweed
<i>Galium palustre</i>	marsh bedstraw

<i>Gonocarpus micranthus</i>	
<i>Hydrocotyle dissecta</i>	
<i>Hydrocotyle elongata</i>	hydrocotyle
<i>Hydrocotyle heteromeria</i>	hydrocotyle
<i>Hydrocotyle microphylla</i>	hydrocotyle
<i>Hydrocotyle novae-zeelandiae</i> var. <i>novae-zeelandiae</i>	hydrocotyle
* <i>Hypochaeris radicata</i>	catsear
* <i>Jacobaea vulgaris</i>	ragwort
* <i>Leontodon taraxacoides</i>	hawkbit
* <i>Lotus pedunculatus</i>	lotus major
* <i>Ludwigia palustris</i>	water purslane
* <i>Mycelis muralis</i>	wall lettuce
<i>Myosotis forsteri</i> agg.	Forster's forget-me-not
<i>Nertera villosa</i>	hairy forest nertera
<i>Persicaria hydropiper</i>	water pepper
* <i>Plantago australis</i>	swamp plantain
* <i>Plantago major</i>	broad-leaved plantain
* <i>Potentilla indica</i>	Indian strawberry
* <i>Prunella vulgaris</i>	selfheal
* <i>Ranunculus flammula</i>	spearwort
<i>Ranunculus reflexus</i>	hairy buttercup, maruru
* <i>Ranunculus repens</i>	creeping buttercup
* <i>Rumex obtusifolius</i>	broad-leaved dock
* <i>Sagina procumbens</i>	procumbent pearlwort
* <i>Senecio bipinnatisectus</i>	Australian fireweed
<i>Senecio minimus</i>	fireweed
<i>Solanum nodiflorum</i>	small-flowered nightshade
<i>Stellaria parviflora</i> agg.	NZ chickweed
* <i>Taraxacum officinale</i>	dandelion
* <i>Trifolium repens</i>	white clover
<i>Urtica incisa</i>	nettle

Monocotyledons

* <i>Agrostis capillaris</i>	browntop
* <i>Anthoxanthum odoratum</i>	sweet vernal
<i>Astelia fragrans</i>	kakaha
<i>Astelia nervosa</i>	mountain astelia
<i>Astelia solandri</i>	kowharawhara
* <i>Carex demissa</i>	yellow sedge
<i>Carex dissita</i>	forest sedge
* <i>Carex ovalis</i>	oval sedge
<i>Carex solandri</i>	Solander's sedge
<i>Cortaderia fulvida</i>	kakaho, toetoe
<i>Corybas "Kaimai"</i>	spider orchid

<i>Corybas acuminatus</i>	spider orchid
<i>Corybas trilobus</i> agg.	spider orchid
* <i>Dactylis glomerata</i>	cocksfoot
<i>Dianella nigra</i>	NZ blueberry, turutu
<i>Earina autumnalis</i>	Easter orchid, raupeka
<i>Earina mucronata</i>	spring orchid, peka-a-waka
<i>Gabnia pauciflora</i>	cutting sedge
* <i>Holcus lanatus</i>	Yorkshire fog
<i>Isolepis subtilissima</i>	
* <i>Juncus articulatus</i>	jointed rush
* <i>Juncus effusus</i> var. <i>effusus</i>	soft rush
<i>Juncus planifolius</i>	grass-leaved rush
* <i>Juncus tenuis</i> var. <i>tenuis</i>	track rush
<i>Microlaena avenacea</i>	bush rice grass
* <i>Phleum pratense</i>	timothy
<i>Ripogonum scandens</i>	supplejack, kareao
<i>Rytidosperma gracile</i>	dainty bristle grass
<i>Schoenus maschalinus</i>	dwarf bogrush
<i>Simpliglottis cornuta</i>	bird orchid
<i>Uncinia banksii</i>	fine-leaved bastard grass
<i>Uncinia distans</i>	bastard grass
<i>Uncinia ferruginea</i>	bastard grass
<i>Uncinia rupestris</i>	bastard grass
<i>Uncinia uncinata</i>	common bastard grass
<i>Uncinia zotovii</i>	Zotov's bastard grass
<i>Winika cunninghamii</i>	bamboo orchid, winika