

A visit to a small crater wetland on the northern slope of Rainbow Mountain, Maunga Kakaramea

TM 1896017 5753993, Alt 470m

John F.F. Hobbs, 10 June 2018

On a somewhat dull, overcast day nine Botanical Society members gathered on the side of SH 38 to the north of Rainbow Mountain (Maunga Kakaramea). After a brief health and safety chat we took advantage of part of the Te Ara Ahi Cycle Trail to a suitable place to enter the bush and head in a generally southerly direction.

The big plus of the trail was that it saved us scrambling through quite dense blackberry (*Rubus fruticosus*), barbary (*Crataegus monogyna*) and broom (*Cytisus scoparius*). At a suitable site, a low ridge, we headed uphill through secondary forest.

The vegetation to start with was a lush low forest of mainly five-finger (*Pseudopanax arboreus*) with scattered kamahi (*Weinmannia racemosa*) 5 to 10 metres high. A bit further into the bush the kamahi became dominant with scattered emergent rewarewa (*Knightia excelsa*). The sub canopy was five-finger, lancewood (*P. crassifolius*), occasional toronia (*Toronia toru*), rimu (*Dacrydium cupressinum*) saplings. Of particular interest in a kamahi-dominant area was an extensive patch of the epiphytic orchid *Drymoanthus adversus* ranging in size from one to ten cm across growing on the kamahi. Other common epiphytes were hound's tongue (*Microsorium pustulatum*), *Hymenophyllum sanguinolentum* and *H. flabellatum*, *Tmesipteris elongata* on wheki (*Dicksonia squarrosa*), leather-leaf fern (*Pyrrosia eleagnifolia*) and hanging spleenwort (*Asplenium flaccidum*). Ground cover was mainly kiokio (*Blechnum novae-zelandiae*) and in some places quite large patches of the hairy filmy fern (*H. scabrum*), scrambling club moss (*Lycopodium volubile*).

A little higher the vegetation became more scrubby where previously there had been a lot of pine trees mainly *Pinus radiata* and *P. strobus* which had been felled by the Department of Conservation contractors. There was a reasonable amount of regeneration of these pine species so there will be an ongoing weed problem on the mountain for some years to come. Vegetation here was mainly prickly and soft mingimingi (*Leptecophylla juniperina* and *Leucopogon fasciculatus*), Montpellier broom (*Genista monspessulana*), *Olearia furfuracea* and scrambling club moss.

Suddenly the call came that there was "water below!", we had arrived at our destination without having to rely on a compass or GPS! After a brief scramble of

about 10 metres down a steep bank we were at the edge of the crater lake. With there having been quite a bit of rain over the last year the crater had more water in than hoped and no-one had gumboots that would keep feet dry, so Angela bravely took off her boots and waded forth to gather specimens for identification. Meanwhile keen DOC ranger Paul waded forth with trusty saw and gel to deal with a specimen of grey willow (*Salix cinerea*). The high water level discouraged a serious in-depth study of the wetland, so we made a retreat to the south-western corner of the crater to make an exit to higher ground for lunch. The topography here was quite steep ground with more-or-less stable erosion debris offering a variety of mini-habitats each with slightly differing vegetation. At the start of the climb many new species were noted including the tiny *Pterostylis trullifolia*, but mainly small ferns, and in more open ground sharp eyes noted the sundews *Drosera auriculata* and *D. spatulata* and comb fern (*Schizaea fistulosa*), the last with drooping stipes with the length range of 20–30 cm. Leaves of *Calochilus* sp. (probably *C. paludosus* as this species had been recently noted nearby) leaves were also seen.



Overlooking the crater from near lunch spot. Note dead pine trees top right.
Northern crater rim just below top of photo. *Photo: P. Cashmore.*

Lunch was eaten overlooking the crater (*see photo*) on rather open rough ground where there was opportunity for much discussion on the immediate vegetation, mainly ericaceous (*Dracophyllum strictum* and *D. subulatum*, *Gaultheria antipoda* and *G. paniculata*, *Leucopogon fraseri* and scattered *Leptecophylla juniperina*), with orchid leaves (unidentifiable species) in patches. Keen eyes also found a small patch of the sundew *Drosera spatulata*. Also present were an alarming number of exotic conifer seedlings which kept the DOC rangers and one or two others busy.



Lunch above the crater. Note dead pine trees mid background. *Photo: P. Cashmore.*

With the prime target of the mission completed we made our way westwards down what appeared to be an old drainage channel through quite dense inkweed (*Phytolacca octandra*). Further down we picked up the abandoned round the mountain track – some of the markers were still there after probably more than thirty years. Final exit was made across an old clearing then down a rather slippery gully to the cycle track and back to the road.



Looking south-west across the crater wetland. *Photo: P. Cashmore*

Vascular plant species list for the northern crater on Rainbow Mountain

* = naturalised plants; (w) = plants from the wetland and immediate surrounds

Ferns and fern allies

<i>Asplenium flaccidum</i> subsp. <i>flaccidum</i>	hanging spleenwort, makawe
<i>Asplenium oblongifolium</i>	shining spleenwort, huruhuruwhenua
<i>Blechnum novae-zelandiae</i>	kiokio
<i>Cyathea cunninghamii</i>	gully tree fern, ponga
<i>Cyathea dealbata</i>	silver fern, ponga
<i>Cyathea medullaris</i>	black tree fern, mamaku
<i>Cyathea smithii</i>	soft tree fern, katote
<i>Deparia petersenii</i> subsp. <i>congrua</i>	
<i>Dicksonia fibrosa</i>	wheki-ponga
<i>Dicksonia squarrosa</i>	harsh tree fern, wheki
<i>Diplazium australe</i>	southern ladyfern
<i>Gleichenia dicarpa</i>	tangle fern
<i>Histiopteris incisa</i> (w)	water fern, matata
<i>Hymenophyllum bivalve</i>	filmy fern
<i>Hymenophyllum demissum</i>	drooping filmy fern, irirangi
<i>Hymenophyllum flabellatum</i>	fan-shaped filmy fern
<i>Hymenophyllum multifidum</i>	much-divided filmy fern
<i>Hymenophyllum nephrophyllum</i>	kidney fern, konehu
<i>Hymenophyllum rarum</i>	thin filmy fern

<i>Hymenophyllum revolutum</i>	filmy fern
<i>Hymenophyllum sanguinolentum</i>	blood-scented filmy fern, piripiri
<i>Hypolepis ambigua</i>	pig fern
<i>Hypolepis rufobarbata</i>	sticky pig fern
<i>Lastreopsis glabella</i>	smooth shield fern
<i>Leptopteris hymenophylloides</i>	single crepe fern, heruheru
<i>Lindsaea trichomanoides</i>	common lindsaea
<i>Lycopodiella cernua</i>	arching clubmoss
<i>Lycopodium volubile</i>	scrambling clubmoss, waewaekoukou
<i>Microsorium pustulatum</i> subsp. <i>pustulatum</i>	hound's tongue fern, kawaowao
<i>Notogrammitis heterophylla</i>	strap fern
<i>Phlegmariurus varius</i>	hanging clubmoss, iwituna
<i>Polystichum wawranum</i>	common shield fern
<i>Pteridium esculentum</i>	bracken, rahurahu
<i>Pteris tremula</i>	shaking brake, turawera
<i>Pyrrosia eleagnifolia</i>	leather-leaf fern
<i>Schizaea fistulosa</i>	comb fern

Gymnosperms

<i>Dacrydium cupressinum</i>	red pine, rimu
* <i>Pinus nigra</i>	black pine
* <i>Pinus radiata</i>	radiata pine
* <i>Pseudotsuga menziesii</i>	Douglas-fir

Dicotyledons

<i>Aristotelia serrata</i>	wineberry, makomako
<i>Brachyglottis repanda</i>	bushman's friend, rangiora
* <i>Cirsium arvense</i> (w)	Californian thistle
<i>Coprosma lucida</i>	shining karamu
<i>Coprosma robusta</i>	karamu
<i>Corokia buddleioides</i>	korokio
* <i>Digitalis purpurea</i> (w)	foxglove
<i>Dracophyllum strictum</i>	grass tree, totorwhiti
<i>Dracophyllum subulatum</i>	monoao
<i>Drosera auriculata</i>	sundew
<i>Drosera spatulata</i>	sundew
<i>Gaultheria antipoda</i>	snowberry, tawiniwini
<i>Gaultheria paniculata</i>	koropuka
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange
<i>Griselinia littoralis</i>	broadleaf, kapuka
<i>Knightia excelsa</i>	NZ honeysuckle, rewarewa
<i>Leptecophylla juniperina</i> subsp. <i>juniperina</i>	prickly mingimingi
<i>Leptospermum scoparium</i>	teatree, manuka

<i>Leucopogon fasciculatus</i>	soft mingimingi
<i>Leucopogon fraseri</i>	patotara
<i>Lobelia angulata</i> (w)	pratia, panakenake
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	whiteywood, mahoe
<i>Metrosideros diffusa</i>	white climbing rata, akatea
<i>Muehlenbeckia australis</i>	pohuehue
<i>Olearia furfuracea</i>	akepiro
<i>Pelargonium inodorum</i> (w)	kopata
<i>Persicaria decipiens</i> (w)	swamp willow weed, tutuna
* <i>Phytolacca octandra</i> (w)	inkweed
<i>Pittosporum tenuifolium</i>	kohuhu
<i>Pseudopanax arboreus</i>	five finger, whaupaku
<i>Pseudopanax crassifolius</i>	lancewood, horoeka
<i>Ranunculus amphitrichus</i> (w)	water buttercup, waoriki
* <i>Ranunculus flammula</i> (w)	spearwort
<i>Rubus cissoides</i>	bush lawyer, tataramoa
* <i>Rubus fruticosus</i>	blackberry
* <i>Salix cinerea</i> (w)	grey willow
<i>Solanum americanum</i> (w)	black nightshade
<i>Stellaria parviflora</i>	native chickweed, kohukohu
<i>Toronia toru</i>	toru
<i>Weinmannia racemosa</i>	kamahi

Monocotyledons

<i>Austroderia fulvida</i> (w)	toetoe
<i>Baumea rubiginosa</i> (w)	common twig-rush
<i>Calochilus paludosus</i>	brown-bearded orchid
<i>Carex maorica</i> (w)	Maori sedge
<i>Carex secta</i> (w)	ballerina sedge, pukio
<i>Carex virgata</i> (w)	swamp sedge, pukio
<i>Cordyline australis</i> (w)	cabbage tree, ti kouka
<i>Cordyline banksii</i>	forest cabbage tree, ti ngahere
<i>Dianella nigra</i>	blueberry, turutu
<i>Earina mucronata</i>	spring orchid, peka-a-waka
<i>Eleocharis acuta</i> (w)	sharp spike-sedge
* <i>Holcus lanatus</i> (w)	Yorkshire fog
* <i>Juncus effusus</i> var. <i>effusus</i> (w)	soft rush
<i>Lepidosperma australe</i>	square-stemmed sedge
<i>Morelotia affinis</i>	morelotia
<i>Pterostylis trullifolia</i>	trowel-leaved greenhood orchid
<i>Thelymitra longifolia</i>	white sun orchid, maikuku