

FIELD TRIP TO THE CRATER BLOCK CONSERVATION AREA

John F.F. Hobbs

After being postponed as a trip set for a month earlier an opportunity cropped up replacing the April trip. Armed with permits for vehicle access through Timberlands-managed pine forest two vehicles transported seven Rotorua Botanical Society members into the Crater Block Conservation Area (CBCA) to a point some 700 metres grid north of the intersection of Brett and Ash Pit Roads. The plan was to spend an hour or so looking through the area to the south-west of a vehicle track which traverses the area and then head north-east through the forest till we found more open areas due to pumice outwash from Mount Tarawera. From there head north as far as it was practical to go and hopefully get a good view to the south-west of the central North Island mountains.

We entered the forest as planned and near the track stopped in an open area we had a discussion on the surrounding vegetation. Here the ground cover was predominately male fern (*Dryopteris filix-mas*). A discussion soon developed on the distribution and attributes of this fern. Male fern is a weedy species found from Hamilton to Dunedin (Brownsey & Smith-Dodsworth, 1989) and in the Rotorua area many of the city reserves have populations (Hobbs pers. obs.), but in areas of Waimangu, Rerewhakaaitu and the southern slopes of Mt Tarawera it is very common. While appreciating the weed aspects of the plant one must admit that when the fronds are straightening out forming a crown it could be called attractive. Beauty is in the eye of the beholder. Throughout the area west of the road overhead the canopy was kanuka (*Kunzea ericoides*) some eight metres high. On the ground, mosses overwhelmingly dominated, with ferns, and shrubs mainly soft mingimingi (*Leucopogon fasciculatus*), prickly mingimingi (*Leptecophylla juniperina*) with occasional five-finger (*Pseudopanax arboreus*), kohuhu (*Pittosporum tenuifolium*) and wineberry (*Aristotelia serrata*). We then moved southwards taking the easiest route, by animal tracks where possible – mostly dama wallaby (*Macropus eugenii*) and red deer

(*Cervus elaphus scoticus*). Individuals of several species, soft mingimingi, crown fern (*Blechnum discolor*) and wheki (*Dicksonia squarrosa*) in particular, seemed to have suffered from the drought conditions over the summer. The ground in this part of the CBCA is quite flat with a gentle slope towards Lake Waimangu to the south-west, but we came across several old stream channels which didn't look as though they carried very much water if any over recent years. It was in these channels, both the floor and banks, that provided the most interesting botanising with several species of filmy ferns (*Hymenophyllum* spp.) and hard ferns (*Blechnum* spp.). While there didn't appear to be many species present the final count was 96.

After a quick break back at the vehicles we walked northwards through more scrub with subtle differences in that there were more naturalised species appearing such as lotus (*Lotus pedunculatus*), Scotch thistle (*Cirsium vulgare*) and various exotic grasses. When the track came to an abrupt end we moved into fairly open scrub, mainly kanuka, for a couple of hundred metres before coming up against a steep bank about five metres high where we stopped for a appraisal of the surrounding vegetation. The ground here was mainly loose pumice wash debris with virtually no moss at all. The tree species were noticeably more varied, mainly kamahi (*Weinmannia racemosa*), mangeo (*Litsea calicaris*), shining karamu (*Coprosma lucida*) and tree fuchsia (*Fuchsia excorticata*). Here also there were many more epiphytes such as *Hymenophyllum* spp., *Earina* spp. and hound's tongue (*Microsorium pustulatum*). After lunch we headed up the main body of the pumice wash – debris from an eroding gully high up on the Koa Dome on the south-eastern flank of the mountain. The sides of the wash were dominated by tutu (*Coriaria arborea*) on the western side and kanuka and manuka (*Leptospermum scoparium*) on the eastern side. As we gained altitude up the wash and the valley narrowed several less common species – korokio (*Corokia buddleioides*), toru (*Toronia toru*), tawheowheo (*Quintinia serrata*), northern rata (*Metrosideros robusta*) and a large totara (*Podocarpus totara*) – were noted on the mountain-sides. On the more stable pumice areas *Raoulia glabra* and *Luzula subclavata* were noted.

With the altitude just above 600 metres and the sun about to disappear behind the mountain we headed part the way back down the wash admiring the view of the snow covered central North Island mountains to the south, then made use of a handy forestry road back to the vehicles. Much easier than scrub-bashing.

ACKNOWLEDGEMENT

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REFERENCE

Brownsey, P.J.; Smith-Dodsworth, J.C. 1989 New Zealand ferns and allied plants. David Bateman Ltd, Auckland.



Central North Island mountains from the pumice wash at 600 metres.

**VASCULAR PLANT SPECIES LIST FOR THE SOUTHERN PART OF
CRATER BLOCK CONSERVATION AREA ¹**

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Abbreviations I: = Indigenous (116 taxa), N: = Naturalised (35 taxa), * = Naturalised

		South- west area	Wash area
Ferns & Fern Allies (47) (I:46 N: 1)			
<i>Adiantum cunninghamii</i>	common maidenhair		x
<i>Asplenium bulbiferum</i>	hen and chickens fern		x
<i>Asplenium flaccidum</i>	hanging spleenwort	x	x
<i>Asplenium oblongifolium</i>	shining spleenwort	x	x
<i>Asplenium polyodon</i>	sickle spleenwort	x	x
<i>Blechnum chambersii</i>	lance fern, nini	x	x
<i>Blechnum discolor</i>	crown fern	x	x
<i>Blechnum filiforme</i>	climbing hard fern		x
<i>Blechnum fluviatile</i>	kiwikiwi	x	
<i>Blechnum novae-zelandiae</i>	kiokio	x	x
<i>Blechnum penna-marina</i> subsp. <i>alpina</i>	little hard fern	x	
<i>Blechnum vulcanicum</i>	korokio	x	
<i>Cardiomanes reniforme</i>	kidney fern	x	x
<i>Ctenopteris heterophylla</i>		x	x
<i>Cyathea dealbata</i>	ponga; silver fern	x	x
<i>Cyathea smithii</i>	soft tree fern	x	
<i>Dicksonia fibrosa</i>	wheki-ponga	x	x
<i>Dicksonia squarrosa</i>	wheki; harsh tree fern	x	x
* <i>Dryopteris filix-mas</i>	common male fern	x	x
<i>Grammitis billardierei</i>	strap fern	x	
<i>Grammitis ciliata</i>	finger fern	x	
<i>Grammitis pseudociliata</i>	finger fern		x
<i>Histiopteris incisa</i>	water fern	x	
<i>Huperzia varia</i>	hanging clubmoss	x	x
<i>Hymenophyllum bivalve</i>	filmy fern	x	
<i>Hymenophyllum demissum</i>	irirangi	x	x
<i>Hymenophyllum dilatatum</i>	lop-sided filmy fern	x	x
<i>Hymenophyllum flabellatum</i>	fan-shaped filmy fern	x	
<i>Hymenophyllum rarum</i>	thin filmy fern	x	x
<i>Hymenophyllum revolutum</i>	filmy fern		x
<i>Hymenophyllum sanguinolentum</i>	blood-scented filmy fern	x	x
<i>Hymenophyllum scabrum</i>	rough filmy fern	x	x
<i>Hypolepis ambigua</i>	pig fern	x	

¹ This list includes species noted by the author during a foray into the area on 31 Jul 2011.

<i>Leptopteris hymenophylloides</i>	single crepe fern; heruheru	x	
<i>Lycopodium volubile</i>	scrambling clubmoss		x
<i>Microsorium pustulatum</i> subsp. <i>pustulatum</i>	hound's tongue	x	x
<i>Paesia scaberula</i>	lace fern, matata	x	
<i>Pellaea rotundifolia</i>	button fern, tarawera	x	
<i>Pneumatopteris pennigera</i>	gully fern, pakau		x
<i>Polystichum neozelandicum</i> subsp. <i>zerophyllum</i>	shield fern	x	
<i>Polystichum neozelandicum</i> subsp. <i>zerophyllum</i> × <i>P. vestitum</i>	shield fern	x	
<i>Polystichum vestitum</i>	prickly shield fern	x	x
<i>Pteridium esculentum</i>	bracken	x	x
<i>Pteris tremula</i>	shaking brake, turawera		x
<i>Pyrrosia eleagnifolia</i>	leather-leaf fern	x	x
<i>Rumohra adiantiformis</i>	leather-leaf shield fern	x	
<i>Trichomanes elongatum</i>	bristle fern	x	
<u>Subtotals</u>		39	30

Gymnosperms (6) (I:3 N:3)

<i>Dacrycarpus dacrydioides</i>	kahikatea		x
* <i>Pinus contorta</i>	lodgepole pine	x	x
* <i>Pinus nigra</i>	black pine		x
* <i>Pinus radiata</i>	radiata pine		x
<i>Podocarpus hallii</i>	Hall's totara		x
<i>Podocarpus totara</i> var. <i>totara</i>	totara		x
<u>Subtotals</u>		1	6

Dicotyledons (76) (I:51 N:25)

<i>Acaena anserinifolia</i>	bidibid	x	x
<i>Acaena novae-zelandiae</i>	red bidibid; piripiri		x
* <i>Aphanes inexpectata</i>	parsley piert	x	
<i>Aristolelia serrata</i>	wineberry, makomako	x	x
<i>Beilschmiedia tawa</i>	tawa		x
<i>Brachyglottis repanda</i>	rangiora	x	x
* <i>Buddleja davidii</i>	buddleia		x
* <i>Callitriche stagnalis</i>	starwort		x
<i>Cardamine debilis</i> agg. "longstyle"	bitter cress		x
<i>Carpodetus serratus</i>	putaputaweta	x	x
* <i>Cerastium fontanum</i> subsp. <i>vulgare</i>	mouse-ear chickweed		x
* <i>Cerastium glomeratum</i>	annual mouse-ear chickweed		x
* <i>Cirsium vulgare</i>	Scotch thistle		x
<i>Clematis cunninghamii</i>	ngakau-kiore	x	x
<i>Clematis paniculata</i>	clematis; puawhananga	x	
<i>Coprosma</i> × <i>cunninghamii</i>		x	

<i>Coprosma lucida</i>	shining karamu	x	x
<i>Coprosma robusta</i>	karamu	x	x
<i>Coprosma tenuifolia</i>	thin-leaved coprosma		x
<i>Coriaria arborea</i> var. <i>arborea</i>	tutu	x	x
<i>Corokia buddleioides</i>	korokio		x
* <i>Cytisus scoparius</i>	broom	x	x
* <i>Digitalis purpurea</i>	foxglove	x	x
<i>Elaeocarpus dentatus</i>	hinau		x
<i>Epilobium rotundifolium</i>	round-leaved willow-herb		x
* <i>Erica lusitanica</i>	Spanish heath	x	x
<i>Fuchsia excorticata</i>	fuchsia; kotukutuku	x	x
* <i>Gamochaeta coarctata</i>	purple cudweed	x	x
<i>Gaultheria antipoda</i>	snowberry; tawiniwini	x	x
<i>Gaultheria antipoda</i> × <i>G. oppositifolia</i>	koropuka	x	
<i>Gaultheria paniculata</i>	koropuka		x
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange	x	x
* <i>Genista monspessulana</i>	Montpellier broom	x	x
<i>Griselinia littoralis</i>	kapuka		x
<i>Gunnera monoica</i>	solitary gunnera	x	
<i>Hebe stricta</i> var. <i>stricta</i>	koromiko	x	x
<i>Hedycarya arborea</i>	pigeonwood		x
<i>Helichrysum lanceolatum</i>	niniaio	x	
* <i>Jacobaea vulgaris</i>	ragwort	x	x
<i>Knightia excelsa</i>	rewarewa		x
<i>Kunzea</i> aff. <i>ericoides</i> (c)		x	x
<i>Leptecophylla juniperina</i> var. <i>juniperina</i>	prickly mingimingi	x	x
<i>Leptospermum scoparium</i> agg.	manuka	x	x
<i>Leucopogon fasciculatus</i>	soft mingimingi	x	x
<i>Litsea calicaris</i>	mangeao		x
* <i>Lotus pedunculatus</i>	lotus major		x
* <i>Lupinus arboreus</i>	tree lupin		x
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	mahoe	x	x
<i>Metrosideros diffusa</i>	white climbing rata		x
<i>Metrosideros robusta</i>	northern rata		x
<i>Muehlenbeckia australis</i>	puka, poheuheu	x	x
<i>Muehlenbeckia axillaris</i>		x	
* <i>Mycelis muralis</i>	wall lettuce		x
<i>Myrsine australis</i>	mapou	x	x
<i>Olearia furfuracea</i>	akepiro	x	x
<i>Olearia rani</i> var. <i>colorata</i>	heketara		x
<i>Pittosporum colensoi</i>	kohuhu		x
<i>Pittosporum tenuifolium</i>	kohuhu	x	x
* <i>Plantago lanceolata</i>	narrow-leaved plantain	x	
* <i>Prunella vulgaris</i>	selfheal	x	

<i>Pseudopanax arboreus</i>	five finger	x	x
<i>Pseudopanax crassifolius</i>	lancewood; horoeka		x
<i>Quintinia serrata</i>	tawheowheo		x
<i>Ranunculus reflexus</i>	hairy buttercup, maruru	x	x
* <i>Ranunculus repens</i>	creeping buttercup	x	
<i>Raoulia glabra</i>	mat daisy		x
* <i>Rosa rubiginosa</i>	sweet briar	x	
<i>Rubus cissoides</i> agg.	bush lawyer	x	x
* <i>Rubus fruticosus</i> agg.	blackberry	x	x
* <i>Sagina procumbens</i>	pearlwort		x
* <i>Senecio bipinnatisectus</i>	Australian fireweed		x
* <i>Solanum nigrum</i>	black nightshade		x
<i>Toronia toru</i>	toru		x
* <i>Verbascum thapsus</i>	woolly mullein		x
* <i>Veronica persica</i>	scrambling speedwell	x	
<i>Weinmannia racemosa</i>	kamahi	x	x
<u>Subtotals</u>		44	64

Monocotyledons (19) (I:13 N:6)

* <i>Agrostis capillaris</i>	browntop		x
* <i>Anthoxanthum odoratum</i>	sweet vernal	x	x
<i>Astelia fragrans</i>	kakaha	x	x
<i>Astelia solandri</i>	kowharawhara	x	
* <i>Carex divulsa</i>	grey sedge	x	
<i>Cortaderia fulvida</i>	kakaho; toetoe	x	x
* <i>Dactylis glomerata</i>	cocksfoot	x	
<i>Earina autumnalis</i>	Easter orchid; raupeka		x
<i>Earina mucronata</i>	spring orchid; peka-a-waka	x	x
* <i>Holcus lanatus</i>	Yorkshire fog		x
* <i>Juncus tenuis</i> var. <i>tenuis</i>	track rush	x	x
<i>Luzula subclavata</i>	woodrush	x	x
<i>Morelotia affinis</i>			x
<i>Poa anceps</i> agg.			x
<i>Ripogonum scandens</i>	supplejack		x
<i>Rytidosperma gracile</i>	forest fairy grass	x	
<i>Uncinia leptostachya</i>		x	
<i>Uncinia scabra</i>	bastard grass		x
<i>Uncinia uncinata</i>	common bastard grass	x	x
<u>Subtotals</u>		12	14

Totals 96 114