A VISIT TO 'THE ISLAND' — LAKE COLERIDGE

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INTRODUCTION

The only true island in Lake Coleridge is the top of a roche mouton, close to the deepest part of the lake and towards its western end (NZMS 260 K35 871680). The hard greywacke bedrock protrudes about 10-15 m above the lake surface but just a short distance away the lake plummets to over 160 m deep. The island covers less than a hectare, being about 50-60 m wide (approx. N-S) and 100-120 m long (approx. E-W). A skirt of exposed rock makes up a wash or splash zone around the edges and a cap of loess covers its rounded top. The nearest mainland shores are 1.2 km to the north and 1.6 km to the south. This article outlines observations made during a brief visit to the island on 16 April 1995. As far as I know no comprehensive listing of the flora has been made previously.

Lady Barker (1870) visited the island in 1867; the only plants she mentioned were "manuka" (actually *Kunzea ericoides*), "white violets and a ground clematis". She also noted the presence of wekas.

Burning of the original forest cover may have taken place about the turn of the century (W.H. Burrows, pers. comm.), although not all trees succumbed as evidenced by a few remaining beech (*Nothofagus solandri* var. *cliffortioides*). No search for charcoal was made during the visit. The rather open woody vegetation on top of the island might have resulted from such a disturbance. However the periodic very dry soil conditions could have caused the openness. In turn the lack of a dense cover has promoted invasion by exotic adventives, in particular broom (*Cytisus scoparius*). Broom was absent in the 1950s (W.H. Burrows, pers. comm.).

The wash/splash zone consists of up to 15-20 m of sloping, creviced rock. At the west end it is exposed to the strong nor-west winds sweeping down the Wilberforce valley from the Main Divide, with resulting large waves. The zone is narrower along the north side, only 5-10 m wide at the east end and down to 2 m at the least exposed, south-east corner.

VEGETATION

A vascular flora of 59 species (39 indigenous, 20 adventive) was recorded and is listed in Table 1.

Two distinct geomorphological zones occur: the bare, steep, rocky sides, and the gently-sloping, soil-capped top. Plants of the two zones are listed separately, although there is considerable similarity in the species composition.

Plants of the wash zone were all short or stunted. For example, two mature cabbage tree specimens over 2 m tall were noted in the middle of the island but there were many squat, stocky plants with trunks about 20 - 30 cm tall growing in the open. Plants there mainly grew along cracks in the bedrock, or in pockets where a little organic material had collected.

Predominant vegetation growing over the top of the island, and rooted into the soil mantle, consist of 2-4 m tall kanuka (*Kunzea ericoides*), rather open in places, along with about equal amounts of exotic broom and all festooned with pohuehue (*Muehlenbeckia australis*) vines. Patches of hound's-tongue (*Phymatosorus diversifolius*) occur on the ground in places. On the south side, where it is cooler and damper, there is a mixed tussock and tufted grass sward in places where the canopy is more open. Mingimingi (*Cyathodes juniperina*) and *Melicytus alpina* are the dominant sub-canopy species amongst kanuka on the drier north side.

A clump of 4 or 5 mountain beech trees clings to the south-east corner of the island. A few dead logs of beech trees were also found. The living trees are between 15 and 30 cm diameter and 6-8 m tall. No beech seedlings were observed.

Two small, gnarled southern rata trees have a toe-hold in rock crevices at the western end. One is about 1 metre tall, 6 cm diameter and has flowered. The other is a 20 cm tall seedling.

ANIMALS

Birds frequently visit, as reflected by the bird-distributed elderberry, and possibly fathen and broom. Ducks and geese use the island as a nesting site free from predators. Mallard ducks flew off as we approached by boat and canada goose goslings have been seen here in the past (W.H. Burrows, pers. comm.). Blackbirds were also present.

Unexpected discoveries were thriving populations of gecko lizards, and grasshoppers. One can only speculate as to how they came to the island: by swimming, on floating debris, or introduced by humans? (like the wekas of Lady Barker's day). The dark grey-skinned geckos were common on the weathered dark-coloured rock of the spray zone. The many crevices offered them ready shelter and escape from pursuing hands.

ACKNOWLEDGEMENTS

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REFERENCE

Broome, M.A. (Lady Barker) 1870. *Station Life in New Zealand.* Whitcombe & Tombs, Christchurch

Table 1 Occurrence of plants found in the two main zones on "The Island", Lake Coleridge

(Key: a = abundant, c = common, o = occasional, r = rare, * = adventive/ T = normally a tree, very reduced in height here; S = shrub; V = vine; F = fern; the rest are herbs or dwarf shrubs)

	Wash/ Splash Zone	Soil Cap Zone		Wash/ Splash Zone	Soil Cap Zone
*Agrostis capillaris**	-	o	*Linum catharticum**	o	-
*A. stolonifera**	-	o	*Luzula* sp.	r	-
*Anthoxanthum odoratum**	-	o	*Melicytus (Hymenanthera) alpina*	o	c
Asplenium richardii F	o	c			
A. flabellifolium F	o	o	*Metrosideros umbellata* T (shrub size only here)	r	-
Carex breviculmis	o	-			
*Cerastium glomeratum**	r	-	*Microtis unifolia*	o	-
*Chenopodium album**	o	-	*Muehlenbeckia australis* V	-	a
Coprosma propinqua S	o	o	*M. complexa* V	c	o
C. lucida S	o	o	*Myrsine australis* T	r	r
C. rugosa S	o	r	*Nothofagus solandri* var. *cliff.* T	-	o
C. atropurpurea	c	-			
Cheilanthes sieberi F	o	o	*Olearia avicenniaefolia* S	c	c
Clematis forsteri V	-	r	*Phymatosorus diversifolius* F	c	c
Cordyline australis T	c	c	*Poa cita*	o	o
Corokia cotoneaster S	-	o	*P. colensoi*	c	o
Cyathodes juniperina S	-	c	*P. kirkii*	o	o
*Cytisus scoparius** S	o	a	*Prunella vulgaris**	-	r
*Dactylis glomerata**	-	o	*Pseudopanax colensoi* S	-	r
Dichelachne crinita	-	c	*Pyrrosia eleagnifolia* F	o	o
*Digitalis purpurea**	-	o	*Rubus squarrosus* V	-	o
Epilobium sp.	o	o	*Rumex acetosella**	o	o
Exocarpus bidwillii S *(root parasite)*	c	o	*R. obtusifolius**	-	r
Griselinia littoralis T	c	o	*Rytidosperma setifolium*	-	o
Hebe salicifolia S	o	o	*Sagina procumbens**	o	-
*Hieracium lepidulum**	c	c	*Sambucus nigra** S	r	o
*H. pilosella**	o	o	*Senecio quadridentatus*	o	o
*Holcus lanatus**	-	o	*Sonchus asper**	-	o
Kunzea ericoides S	c	a	*Stellaria media**	r	-
Lachnagrostis sp.	-	o	*Thelymitra* sp.	r	-
Leucopogon fraseri	c	-	*Trifolium repens**	o	o