

VEGETATION AND FLORA OF KOPUTAROA SNAIL
RESERVE, HOROWHENUA

COLIN OGLE

Notes and list based on a half-day's visit, 1 April 1986.
Revisited for 30 min, 6 Oct 1986, and revised.

Vegetation

The vegetation reflects differences in water levels and different degrees of disturbance by drainage, clearing, and stock grazing. The least obviously disturbed areas are raupo swamp, kahikatea swamp forest, and patches of divaricating shrubs. Heavily grazed areas are almost totally lacking in native plants. Between the extremes of relatively low disturbance and exotic plant dominance is a mosaic of more or less modified vegetation types, the more extensive of which are listed below.

- (a) kahikatea - [pukatea]-[matai]/[mapou]-[lancewood]/Gahnia xanthocarpa-(supplejack)/(ground ferns) : swamp forest.
- (b) Coprosma propinqua - Olearia virgata - (C. rigida)-(C. tenuicaulis)/(Gahnia xanthocarpa)/[Astelia "grandis"^{*}]-Carex secta : swamp scrub and shrubland.
- (c) raupo - [flax]-[toetoe] : swamp reedland.
- (d) [Cabbage tree]/raupo - Cop. propinqua-(C. tenuicaulis)/Carex secta : swamp reedland (edges of 'c').
- (e) kahikatea/[gorse]/Juncus effusus/pasture grasses : heavily grazed swamp forest (edges of 'a').
- (f) raupo/Juncus effusus-(beggar's ticks)/J. articulatus - creeping buttercup : heavily grazed reedland/(edges of 'a' and 'c').
- (g) Juncus effusus/Yorkshire fog - perennial ryegrass - (crested dog's tail) - (creeping buttercup) : heavily grazed swampy pasture (degraded from 'e' and 'f').

* See Appendix (p.6)

Flora

The attached plant list is probably far from complete, especially since many species seem to be present in very small numbers of individual plants, most grasses lacked seedheads in April, and not all parts of the proposed reserve could be inspected in the time available.

It shows, however, the dominance of native species among woody plants, and exotic species among dicot herbs and grasses. This imbalance is attributable to grazing. When grazing is removed, the least modified areas (kahikatea forest, swamp scrub, and raupo swamp) will change only slowly. The much modified wet areas are expected to become dominated by tall grasses and rushes, (notably Yorkshire fog, tall fescue, Juncus effusus); raupo is likely to spread and become more dense in existing grazed stands. If the reserve is to be predominantly in native plants then certain woody exotic species will need to be controlled, especially gorse, barberry, blackberry, honeysuckle and, perhaps, willows.

Some potentially troublesome weeds will be most easily controlled (even eradicated?) before or immediately following fencing and removal of stock. Physically, access around much of the reserve will be very difficult once stock have been absent for a year or two. Planting of some native plants on areas of high ground (currently in pasture with scattered gorse) and in wet 'pasture' (type 'g') is desirable to suppress exotic species.

VASCULAR PLANT SPECIES LIST

* denotes exotic species

Where the number of individual plants of a species was very low, the number seen is given; abundance is otherwise indicated by:

a = abundant
c = common
o = occasional
u = uncommon

GYMNOSPERMS

<u>Dacrycarpus dacrydioides</u>	kahikatea	(a)
<u>Prumnopitys taxifolia</u>	matai	(2)

DICOT TREES, SHRUBS AND LIANES

<u>Beilschmiedia tawa</u>	tawa	(o)
* <u>Berberis glaucocarpa</u>	barberry	(o)
<u>Carpodetus serratus</u>	putaputaweta	(o)
<u>Clematis paniculata</u>		(2)
<u>Coprosma grandifolia</u>	kanono	(1)
<u>C. propinqua</u>		(a)
<u>C. rigida</u>		(c)
<u>C. robusta</u>	karamu	(o)
<u>C. tenuicaulis</u>		(c)
<u>Coriaria arborea</u>	tutu (1 juvenile)	
<u>Elaeocarpus dentatus</u>	hinau	(1)
<u>E. hookerianus</u>	pokaka	(2)
<u>Fuchsia perscandens</u>	climbing fuchsia	(c)
<u>F. perscandens</u> X <u>F. excorticata</u>		(o)
<u>Geniostoma rupestre</u> var.	hangehange	(u)
<u>Hebe stricta</u> (var. <u>stricta</u> ?)	koromiko	(2)
<u>Hoheria angustifolia</u>	narrow-leaved lacebark	(o)

DICOT TREES, SHRUBS AND LIANES (contd)

<u>Laurelia novae-zelandiae</u>	pukatea	(o)
* <u>Lonicera japonica</u>	honeysuckle	(c)
<u>Melicytus ramiflorus</u>	mahoe	(o)
<u>Metrosideros diffusa</u>	climbing white rata	(u)
<u>M. perforata</u>	climbing white rata	(l)
<u>Muehlenbeckia australis</u>	pohuehue	(o)
<u>M. complexa</u>	pohuehue	(o)
<u>Myrsine australis</u>	mapou	(o)
<u>M. salicina</u>	toro	(u)
<u>Nestegis cunninghamii</u>	black maire	(3)
<u>N. lanceolata</u>	white maire	(2)
<u>Olearia virgata</u>	shrub daisy	(c)
<u>Paratrophis microphylla</u>	small-leaved milktree	(u)
<u>Parsonsia heterophylla</u>	native jasmine	(u)
<u>Pittosporum eugenioides</u>	tarata, lemonwood (1 adult, several juveniles)	
<u>P. tenuifolium</u> var. <u>tenuifolium</u>	kohuhu	(4)
<u>Rubus australis</u>	lawyer	(u)
* <u>R. fruticosus</u> agg.	blackberry	(o)
<u>R. australis</u> X <u>R. cissoides</u>	lawyer	(o)
* <u>Salix cinerea</u>	grey (pussy) willow	(u)
* <u>S. fragilis</u>	crack willow	(u)
<u>Schefflera digitata</u>	pate	(u)
<u>Sapota microphylla</u>	Rowhai	(f)
<u>Syzygium maire</u>	swamp maire	(u)
* <u>Ulex europaeus</u>	gorse (locally common)	
<u>Weinmannia racemosa</u>	kamahi	(u)

DICOT HERBS

* <u>Apium nodiflorum</u>	water celery (locally common)	
* <u>Bidens frondosa</u>	beggar's ticks	(c)
<u>Callitriche muelleri</u>	native starwort	(u)
<u>Cardamine</u> sp. (<u>C. debilis</u> agg.)	bittercress	(o)
* <u>Cerastium glomeratum</u>	mouse-eared chickweed	(u)
* <u>Cirsium palustre</u>	marsh thistle	(o)

DICOT HERBS (contd)

* <u>C. vulgare</u>	Scotch thistle	(c)
* <u>Conium maculatum</u>	hemlock	(u)
* <u>Conyza floribunda</u>	fleabane	(c)
* <u>Daucus carota</u>	wild carrot	(o)
* <u>Galium palustre</u>	marsh bedstraw	(c)
<u>Gnaphalium involucreatum</u>	cudweed	(o)
<u>Hydrocotyle heteromeria</u>	pennywort	(o)
<u>Hypericum japonicum</u>		(u)
* <u>Hypochoeris radicata</u>	cat's ear	(c)
* <u>Lotus pedunculatus</u>	lotus	(c)
* <u>Lythrum hyssopifolia</u>	loosestrife	(u)
* <u>Mimulus guttatus</u>	monkey musk	(o)
* <u>M. moschatus</u>	musk	(u)
* <u>Myosotis laxa ssp caespitosa</u>	water forgetmenot	(u)
* <u>Parentucellia viscosa</u>	tarweed	(u)
* <u>Picris echioides</u>	ox tongue	(u)
* <u>Plantago lanceolata</u>	narrow-leaved plantain	(c)
* <u>P. major</u>	broad-leaved plantain	(o)
<u>Polygonum sp. (P. decipiens</u> auct. NZ)	native willow-weed	(u)
* <u>P. hydropiper</u>	water pepper	(a)
* <u>Prunella vulgaris</u>	self-heal	(o)
* <u>Ranunculus repens</u>	creeping buttercup	(a)
* <u>Rumex conglomeratus</u>	clustered dock	(c)
* <u>R. obtusifolius</u>	broad-leaved dock	(u)
* <u>Senecio bipinnatisectus</u>	fireweed	(o)
* <u>Solanum nigrum</u>	black nightshade	(o)
* <u>S. sublobatum</u>	velvety nightshade	(o)
* <u>Stellaria media</u>	chickweed	(o)
* <u>Taraxacum officinale</u>	dandelion	(u)
* <u>Trifolium pratense</u>	red clover	(u)
* <u>T. repens</u>	white clover	(c)
* <u>Verbena bonariensis (?)</u>	purple-top	(u)

MONOCOT TREE AND LIANES

<u>Cordyline australis</u>	cabbage tree	(o)
<u>Freycinetia baueriana</u> ssp. <u>banksii</u>	kiekie	(l)
<u>Ripogonum scandens</u>	supplejack	(o)

MONOCOT HERBS

* <u>Agrostis capillaris</u>	browntop	(o)
* <u>A. stolonifera</u>	creeping bent	(c)
* <u>Anthoxanthum odoratum</u>	sweet vernal	(o)
<u>Astelia (grandis / fragrans ?)</u>	swamp astelia	(o)
<u>Carex dissita</u>		(o)
<u>C. lessoniana</u>	rautahi	(c)
<u>C. maorica</u>		(u)
<u>C. secta</u> ss.	niggerhead	(c)
<u>C. virgata</u>		(o)
<u>Cortaderia toetoe</u>	toetoe	(o)
* <u>Cynosurus cristatus</u>	crested dog's tail	(o)
<u>Cyperus ustulatus</u>	giant umbrella sedge	(o)
<u>Eleocharis gracilis</u>	slender spike sedge	(c)
* <u>Festuca arundinacea</u>	tall fescue	(c)
<u>Gahnia xanthocarpa</u>		(c)
* <u>Glyceria declinata</u> (?)	floating sweet-grass	(a)
* <u>Holcus lanatus</u>	Yorkshire fog	(a)
<u>Isolepis inundata</u>		(o)
<u>I. prolifer</u>		(c)
* <u>I. sepulcralis</u> (<u>Scirpus chlorostachyus</u>)		(o)
* <u>Juncus articulatus</u>	jointed-leaved rush	(a)
* <u>J. effusus</u>		(c)
<u>J. gregiflorus</u>		(u)
<u>Lemna</u> sp (<u>L. minor</u> auct. NZ)	duckweed	(c)

MONOCOT HERBS

* <u>Lolium perenne</u>	perennial ryegrass	(c)
<u>Microlaena avenacea</u>	bush ricegrass	(l)
* <u>Paspalum dilatatum</u>	paspalum	(o)
<u>Phormium tenax</u>	NZ flax	(o)
<u>Typha orientalis</u>	raupo (locally abundant)	
<u>Uncinia uncinata</u>	hook sedge	(o)

FERNS

<u>Asplenium bulbiferum</u> s.s.	hen and chicken fern	(o)
<u>A. flaccidum</u> ssp. <u>flaccidum</u>	hanging spleenwort	(o)
<u>Blechnum filiforme</u>	creeping blechnum	(u)
<u>B. minus</u>	swamp kiokio	(c)
<u>Dicksonia squarrosa</u>	wheki	(o)
<u>Histiopteris incisa</u>	water fern	(o)
<u>Hypolepis ambigua</u>		(u)
<u>H. distans</u>		(o)
<u>Phymatosorus scandens</u>		(o)
<u>Pneumatopteris pennigera</u>		(o)
<u>Pteridium esculentum</u>	bracken	(o)
<u>Pteris tremula</u>		(o)
<u>Pyrrosia serpens</u>		(c)