

WANGANUI PLANT LIST NO 104**Vascular plants of Lake Kaitoke, Wanganui**

CC Ogle 30 November 1997; CCO & J Campbell 5 Oct 2001

13 June 2004

Last amended 8 September 2004

Species listed by Kelly (1978), and by C&W (Champion & Wells 2003) are indicated separately.

W = species in water or swampy fringes (NZMS R22 26870E, 61360N); **D** = plants of adjoining drylands (the dryland list is a partial list only) (NZMS R22 26876E, 61350N).

All species listed with an abundance rating were recorded by CCO in 1997 and/or 2001. Plant abundances: a = abundant; c = common; o = occasional; u = uncommon; l = local (found in few places, but can be common or abundant in those places, hence la = locally abundant, etc.); x = present, but abundance not assessed.

* denotes adventive species.

<i>Latin name</i>	Common Name	W	D	K 1978	C&W 2003
Gymnosperm tree					
* <i>Pinus radiata</i>	radiata pine		la ¹		
Dicot trees, shrubs and lianes					
* <i>Acacia longifolia</i> (?)	wattle		u		
<i>Coprosma propinqua</i>		o	u		
<i>Coprosma propinqua</i> X <i>C. robusta</i>		u			
<i>Corynocarpus laevigatus</i>	karaka		u		
* <i>Crataegus monogyna</i>	hawthorn	u	o		
* <i>Cytisus scoparius</i>	broom		u		
<i>Leptospermum scoparium</i>	manuka		u		
* <i>Lycium ferocissimum</i>	boxthorn	u	o		
<i>Melicytus ramiflorus</i>	mahoe	u	l		
<i>Muehlenbeckia australis</i>	pohuehue		u		
<i>M. complexa</i>	small-leaved pohuehue	u	u		
<i>Myrsine australis</i>	mapou		u		
<i>Pittosporum tenuifolium</i>	kohuhu		u		
* <i>Populus</i> sp.(unidentified)	poplar		u		
* <i>Rubus fruticosus</i> agg.	blackberry	o	c		
* <i>Salix babylonica</i>	weeping willow		o		

¹ Planted only (none seen self-establishing)

<i>Latin name</i>	Common Name	W	D	K 1978	C&W 2003
* <i>S. cinerea</i>	grey willow	lc			
* <i>S. fragilis</i>	crack willow	c	u		
* <i>Solanum mauritianum</i>	woolly nightshade		u		
<i>Sophora godleyi</i> (?)	kowhai		u		
* <i>Ulex europaeus</i>	gorse	u	la		
Monocot trees, 'shrubs' & lianes					
* <i>Agave americana</i>	century plant		lc		
* <i>Asparagus asparagoides</i>	smilax	u	lc ²		
<i>Cordyline australis</i>	ti kouka (cabbage tree)	o	u		
Dicot herbs					
* <i>Apium nodiflorum</i>	water celery	la			C&W
* <i>Bidens frondosa</i>	beggar's ticks	o			
<i>Callitriche petriei</i>	NZ starwort	la			C&W
* <i>C. stagnalis</i>	starwort	lc			C&W
<i>Centella uniflora</i>		u			
<i>Cotula coronopifolia</i>	batchelor's button	o			
<i>Crassula ruamahanga</i>		lc			
* <i>Foeniculum vulgare</i>	fennel	u	o		
* <i>Galium palustre</i>	marsh bedstraw	c	u		
* <i>Glechoma hederacea</i> CHR	ground ivy	la			
<i>Glossostigma elatinoides</i>		o			C&W
<i>Euchiton involucrata</i> ? (= <i>Gnaphalium involucratum</i> ?)	cudweed	o			
<i>Hydrocotyle hydrophila</i>		lc			
<i>H. novaeseelandiae</i>	swamp pennywort	c			
<i>H. pterocarpa</i>		o			
<i>Lilaeopsis</i> sp.(cf. <i>L. ruthiana</i> /L. nz)	tape measure plant	l			C&W ³
<i>Limosella australis</i> (name used by C&W 2003)					C&W
* <i>Lotus pedunculatus</i>	lotus	lc	lc		
* <i>Ludwigia palustris</i>		c		K	C&W
* <i>Lythrum hyssopifolia</i>	hyssop loosestrife	x			
* <i>Mentha pulegium</i>	pennyroyal	x	?		
* <i>Myosotis laxa</i> ssp. <i>caespitosa</i>	water forget-me-not	o			C&W
* <i>Myriophyllum aquaticum</i> CHR	parrot's feather	c		K	C&W

² Common under the pine forest

³ C& W recorded L. nz; I was unable to identify the *Lilaeopsis* to species: CCO

<i>Latin name</i>	Common Name	W	D	K 1978	C&W 2003
<i>M. propinquum</i>	water milfoil	a		K	
<i>M. triphyllum</i>					C&W ⁴
* <i>Phytolacca octandra</i>	inkweed		o? ⁵		
* <i>Polygonum hydropiper</i> (K as P. spp)	water pepper	x		K.	
<i>P. salicifolia</i>	willow weed	c			C&W ⁶
<i>Potentilla anserinoides</i>	silver weed	u			
* <i>Ranunculus repens</i>	creeping buttercup	c	u		
* <i>R. sceleratus</i>	celery-leaved buttercup	c			
<i>R. sp.</i> (unidentified; <i>R. amphitrichus</i> or <i>R. glabrifolius</i>)	waoriki	u			C&W ⁷
<i>Rorippa palustris</i>		o			
* <i>Rumex crispus</i>	curled dock	u			
* <i>Sagina procumbens</i>	pearlwort	u	o		
* <i>Senecio glastifolius</i>			u		
<i>S. glomeratus</i>	NZ fireweed	u			
* <i>Solanum chenopodioides</i>	velvety nightshade		o		
* <i>Stellaria graminea</i>	stitchwort	lc			
* <i>Urtica urens</i>	nettle		lc?		
* <i>Veronica anagallis-aquatica</i>	water speedwell	?			C&W
* <i>V. serpyllifolia</i>	marsh speedwell	u			
Monocot herbs					
* <i>Arum italicum</i>	Italian arum	u	lc		
<i>Bolboschoenus fluviatilis</i>	kukuraho	la			
<i>Carex dipsacea</i> CHR		u			
* <i>C. divulsa</i>		l			
<i>C. lessoniana</i>		o			
<i>C. maorica</i>		o			
* <i>C. scoparia</i>		o			
<i>C. secta</i>	purei	lc			C&W
<i>C. sinclairii</i> CHR		la			
<i>C. virgata</i>		la			
<i>Cortaderia toetoe</i>	toetoe	o			
* <i>Cyperus eragrostis</i>		o	u		

⁴ Note that C&W did not record *M. propinquum* however

⁵ In the 6 June 2004 version of this list, this species as listed as recorded in the wetland. Previous versions listed it as being found in the drylands, which is correct?: Astrid

⁶ Recorded by C&W as *Persicaria decipiens*

⁷ C&W recorded *R. amphitrichus*; I was unable to identify my sightings of waoriki specifically to *R. amphitrichus* or *R. glabrifolius*: CCO.

<i>Latin name</i>	Common Name	W	D	K 1978	C&W 2003
<i>C. ustulatus</i>	mariscus	la	u		
<i>Eleocharis acuta</i>	sharp spike-sedge	u			C&W
<i>E. gracilis</i>	slender spike sedge	u			
* <i>Glyceria declinata</i>	floating sweet-grass	o			C&W
* <i>Holcus lanatus</i>	Yorkshire fog	o	o		
<i>Isachne globosa</i>	swamp millet	u			C&W
* <i>Juncus articulatus</i>	jointed-leaved rush	o			
* <i>J. bufonius</i>	toad rush	u			
* <i>J. effusus</i>	soft rush	c	c		
<i>J. gregiflorus</i> ⁸ (<i>edgarae</i> ?)		c	c		
<i>J. planifolius</i>		o			
<i>J. sarophorus</i>		o	o		
<i>Lemna</i> sp. (<i>L. minor</i> of NZ authors)	duckweed	?		K	C&W
<i>Microlaena stipoides</i>	meadow ricegrass		la		
* <i>Paspalum distichum</i>	Mercer grass	lc			C&W
<i>Phormium tenax</i>	harakeke, NZ flax	u		K	
* <i>Poa trivialis</i>		lc?			
* <i>Potamogeton crispus</i>	curled pondweed	la			C&W
<i>P. ochreatus</i>	blunt pondweed	o?			C&W
<i>P. pectinatus</i>	fennel-leaved pondweed	c?		K	C&W
* <i>Schedonorus phoenix</i> (= <i>Festuca arundinacea</i>)	tall fescue	u?	?		
<i>Schoenoplectus pungens</i>	three-square	l			C&W
<i>S. validus</i> (K. as <i>Scirpus lacustri</i>)	kapungawha	lc		K	C&W
<i>Schoenus maschalinus</i>		u			
<i>Typha orientalis</i>	raupo	la		K	C&W
<i>Urtica linearifolia</i>	swamp nettle	lc			
<i>Wolffia australiana</i>	watermeal	?		K	C&W
Ferns					
<i>Asplenium flaccidum</i>	hanging spleenwort	u	u		
<i>A. oblongifolium</i>	shining spleenwort	u	u		
<i>A. polyodon</i>	sickle spleenwort	u			
<i>Azolla filiculoides</i> ssp. <i>rubra</i>	Pacific azolla	la		K	C&W
<i>Blechnum minus</i> (of NZ authors)	swamp kiokio	lc			
<i>Cyathea dealbata</i>	ponga	u			
<i>C. medullaris</i>	mamaku	u			
<i>Dicksonia squarrosa</i>	wheki	u			

⁸ June 6 2004 lists this as *J. edgarae*, was unable to check whether nomenclature has changed because Landcare Research website was down: Astrid

<i>Latin name</i>	Common Name	W	D	K 1978	C&W 2003
<i>Histipteris incisa</i>	water fern	u			
<i>Hypolepis ambigua</i>		o	o		
<i>Microsorium pustulatum</i>	hound's tongue fern	u			
<i>Paesia scaberula</i>	ring fern	u			
<i>Pellaea rotundifolia</i>	button fern		u		
<i>Polystichum richardii</i>	hard shield fern		u		
<i>Pteridium esculentum</i>	bracken fern	l	u		
<i>Pteris tremula</i>	shaking brake		u		

NOTES

1. Only the eastern and southeastern edges of the lake were surveyed in November 1997; the whole eastern end and the southern shore from Kaitoke Road to the western end of the lake was covered in Oct 2001.
2. Vegetation: crack willow forest, some grazed through by stock and an ungrazed area between Kaitoke Road and the lake. Grazed areas have native turf plants on and between willow roots: *Crassula ruamahanga*, *Hydrocotyle hydrophila*, *Callitriche petriei*. Ungrazed areas have dense *Carex* beds and water celery. Local areas along the lake shore are dominated by grey willow, often with weeping and crack willows, and *Coprosma propinqua*, toetoe, *Carex secta* and, rarely, harakeke. There are locally dense stands around the shore of raupo or kukuraho and, more rarely, kapungawha. In the northeast corner is a large area of *C. secta*, *C. virgata* and *Cyperus ustulatus*.

A band of *Carex sinclairii* often occupies a zone close to the lake edge in grazed and ungrazed areas. This is a habitat of NZ swamp nettle in the ungrazed area between Kaitoke Road and the lake.

At various places around the shore between the 'pasture' and, usually, a tall sedge zone, are small areas of native turf plants in full light conditions. Such plants require periodic immersion for their survival and to keep 'land plants' from invading their habitat, but they need some exposure for flowering and fruiting. At Lake Kaitoke, these turf plants include two of those named above as being under willows (*Crassula ruamahanga*, *Callitriche petriei*). Other specialised plants of the turfs include *Lilaeopsis* sp., *Glossostigma elatinoides*, *M. propinquum* (also grows in deeper water), batchelor's button and the taller three-square sedge.

3. Notable plants

Species with a national conservation status (de Lange et al. 2004):

***Crassula ruamahanga* (a tiny mat-forming succulent) – status = “at risk – sparse”.**

Scattered at Lake Kaitoke on the bases of willow trees in or close to the water and in turf communities in open on lake margins, including some damp silt and peat. Also known at L. Wiritoa, including shore of “Scoutlands”, and the east end of L Pauri. These 3 locations are the only known ones in Wanganui Conservancy and, until a recent (2000) find in the Waikato, the furthest north in NZ (next nearest to Lakes Wiritoa and Kaitoke is the type locality, near Carterton).

***Urtica linearifolia* (NZ swamp nettle); national status = chronically threatened – gradual decline.** The western-most record for this species, and nearest to Wanganui. Scattered plants around lake edges among ungrazed sedges, including *Carex sinclairii*, *C. secta*, *Cyperus ustulatus*, and on bases of willows.

***Potamogeton pectinatus* (fennel-leaved pondweed): national status = chronically threatened – gradual decline.** Recorded in 7 of the 95 lakes of the Horizons Regional Council area surveyed by Champion and Wells (2003).

Regionally uncommon or declining species of the wetlands include:

***Carex sinclairii* (a soft “cutty-grass”)**

An uncommon plant in lowland North Island; more common in montane wetlands and South Island. The L. Kaitoke population is by far the largest known in lowlands of Wanganui Conservancy. It was eliminated in Rotokawau subdivision near Virginia Lake in about 1995; small amounts remain near Awahuri, L. Marahau, by SH3 at Westmere, behind the Hospice in Virginia Road and at end of Durie Vale Road. All but the last-named are on sand country.

Also: *Callitriche petriei*, *Potamogeton ochreatus*, *Isachne globosa*, *Carex dipsacea*, *Myriophyllum triphyllum*, *Hydrocotyle pterocarpa*, *H. hydrophila*

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