



# Mokes Veg

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## Introduction

This book was compiled from information stored on the website of the New Zealand Plant Conservation Network ([www.nzpcn.org.nz](http://www.nzpcn.org.nz)).

This website was established in 2003 as a repository for information about New Zealand's threatened vascular plants. Since then it has grown into a national database of information about all plants in the New Zealand botanic region including both native and naturalised vascular plants, threatened mosses, liverworts and fungi.

Funding to develop the website was provided by the New Zealand Government's Terrestrial and Freshwater Biodiversity Information System Programme (TFBIS).

The species information used on the website has come from a variety of sources. The indigenous vascular plant text was written largely by Dr Peter de Lange (former Network Vice President). Peter based the descriptions on a wide range of sources including the Flora of NZ Series (Allan 1961, Moore and Edgar 1970 and Webb et al 1987) as well as numerous other taxonomic treatments. For a full bibliography of information sources see the References at the end of this book.

Where no published treatment was available Peter used herbarium specimens and his own knowledge of the flora to prepare species pages. Various other contributors have provided text and additional information to many species pages including botanists such as Mike Thorsen, John Barkla, Cathy Jones, Simon Walls, Nick Singers and many others. The threatened fungi text was written by Eric Mackenzie and Peter Buchanan (Landcare Research).

More than 200 photographers have kindly provided images to illustrate the website and for use in this book especially John Smith-Dodsworth, Jeremy Rolfe, Peter de Lange, Wayne Bennett and Gillian Crowcroft.

## The New Zealand Botanic Region

The information on the Network website, from which this book was compiled, is for species that are indigenous to or naturalised within the New Zealand Botanic Region as defined by Allan (1961). The New Zealand botanic region encompasses the Kermadec, Manawatawhi/Three Kings, North, South, Stewart Island/Rakiura, Chatham, Antipodes, Bounties, Snares, Auckland Campbell island/Motu Ihupuku and Macquarie.

## About the Network

The Network has more than 800 members worldwide and is New Zealand's largest non-governmental organisation solely devoted to the protection and restoration of New Zealand's indigenous plant life.

The vision of the New Zealand Plant Conservation Network is that *'no indigenous species of plant will become extinct nor be placed at risk of extinction as a result of human action or indifference, and that the rich, diverse and unique plant life of New Zealand will be recognised, cherished and restored'*.

Since it was founded in 2003 the Network has undertaken a range of conservation initiatives in order to achieve its vision.

That work has included:

- Training people in plant conservation
- Publishing plant books, reports and posters
- Raising money for the David Given Threatened Plant Research Trust to pay for plant conservation research scholarships
- Advocacy to raise awareness of the importance of plant life in general and especially New Zealand's status as a Global Centre of Plant Diversity
- Lobbying central and regional government and business to protect indigenous plant life
- Educating people about plant life through the Network website
- Connecting people through the monthly newsletter, the Network conference and the annual general meeting

## What is a threatened plant?

The NZ Threatened Plant Committee was formed in 1991 and ever since then it has met at regular intervals to review the status of indigenous vascular plants. It is made up of a small group of botanists that between them have an extensive knowledge of the native plants of New Zealand. This group is chaired by Dr Peter de Lange of the New Zealand Department of Conservation.

This committee applies a set of criteria to each native plant to determine its conservation status. The resulting list of species classified as threatened is published in the NZ Journal of Botany (see for example de Lange et al. 2009). The main threat categories used are: Extinct, Critical, Endangered, Vulnerable, Declining. Other categories used are: Recovering, Relict, Naturally Uncommon, Coloniser, Vagrant and Data Deficient. For vascular plants the threat status used in this book is taken from the 2009 conservation assessment (see de Lange et al 2009).

More recently other committees have been established to review the status of non-vascular plants but their lists are yet to be published.

## *Acaena novae-zelandiae*

**Common Name(s):**

red bidibid

**Current Threat Status (2012):**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2043](http://nzpcn.org.nz/flora_details.asp?ID=2043)



**Caption:** Karitane Peninsula,  
Otago

**Photographer:** John Barkla



**Caption:** Karitane Peninsula,  
Otago

**Photographer:** John Barkla



## *Achillea millefolium*

**Common Name(s):**

yarrow

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2415](http://nzpcn.org.nz/flora_details.asp?ID=2415)



**Caption:** *Achillea millefolium*  
**Photographer:** John Sawyer



**Caption:** Hutt River Trail north of Stokes Valley. Jun 2006.  
**Photographer:** Jeremy Rolfe

# *Acianthus sinclairii*

## Common Name(s):

Heart-leaved orchid, Pixie cap

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic, Present on Raoul (Kermadec Islands group), Three Kings Island group, North, South, Stewart and Chatham Islands. In the South Island rare in the east south of Marlborough, extending to Fiordland in the west.

## Habitat:

Coastal to montane (up to 1100 m a.s.l.). Usually in lightly shaded to heavily shaded shrubland and forest. Very rarely found in more open, sunny habitats. Often near streams or within seepages in forest.

## Features\*:

Diminutive perennial herb. Plants at flower up to 100 mm tall, often elongating further in seed. Stem erect, slender, hyaline suffused with red or purple. The single leaf sessile, inserted at about one half to one quarter up stem, 10-35 mm long, green sometimes mottled or flecked maroon, ovate, acuminate, base cordate. Raceme to 50 mm long. Floral bract small, membranous, foliaceous, green or green tinged with maroon, ovate. Flowers 1-10 not obviously scented; perianth 6-8 mm long, more or less erect, usually greenish, often purpled, with dull red on labellum. Sepals shortly and abruptly caudate; dorsal sepal broadly lanceolate to ovate, concave, arched over column; lateral sepal similar of similar length, linear-lanceolate. Petals shorter, lanceolate, acuminate. Labellum shorter than sepals, broad-ovate; apex acute and more or less recurved, often coarsely papillose; proximal portion deeply concave, bearing two rounded calli at base. Column shorter than labellum, without wings. Pollinia globose, 4 in each anther cell, more or less coherent, eventually breaking into tetrads of grains toward the end of flowering.

## Flowering:

January - October

## Fruiting:

April - December

## Threats:

Not Threatened.

## \*Attribution:

Description adapted from: Moore and Edgar (1970).

## References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Indigenous Tracheophyta - Monocotyledons except Graminae. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1449](http://nzpcn.org.nz/flora_details.asp?ID=1449)



**Caption:** Coromandel, June  
**Photographer:** John Smith-Dodsworth



**Caption:** Kapiti Island. June 2005.  
**Photographer:** Jeremy Rolfe

# *Adiantum aethiopicum*

## Common Name(s):

maidenhair, makaka, true maidenhair

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. New Zealand. North and South Islands from Te Pahi south to the Waikato and Bay of Plenty, thence rather localised and often absent from large areas until the Wairarapa. Recorded once from the Buller River gorge in the South Island but not seen recently in the South Island. Also New Caledonia, Australia and South Africa.

## Habitat:

Coastal to lowland. Despite its delicate appearance *Adiantum aethiopicum* is often found in very dry, exposed sites in short grassland, on clay pans, stable dunes systems, open scrub and forest. It is also occasionally found in periodically flooded ground in riparian forest and on damp clay banks in shaded gullies.

## Features\*:

Tufted, stoloniferous fern. Rhizome long-creeping (stoloniferous), to 3 mm diameter; wiry, c.1.5 mm diameter; scales chartaceous, yellow, transparent, broadly deltoid, entire, often spirally curled. Fronds yellow-green or bright green, densely tufted, or sometimes scattered along stolons up to 750 mm long. Stipe to 400 mm long, glossy, glabrous, red-brown, bearing conspicuous basal scales similar to those of rhizome. Lamina 120-400 × 50-230 mm, 3-pinnate, ovate to deltoid. pinnae narrowly deltoid. Pinnules round to flabellate; distal margin sometimes shallowly lobed; lobe margins entire or obscurely dentate when sterile; stalks not articulate. Sori 1-5 along the base of the distal margins, 1(-2) per lobe; soral flaps reniform, lunate to sublunate, usually at the base of a shallow sinus (notch) on the pinnule margin. Spores 64 per sporangium, with largest diameter (34.6-)41.1(-53.6) microns.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet Prepared for NZPCN by P.J. de Lange (Updated 4 May 2011). Description adapted from Bostock (1998).

## References and further reading:

Bostock, P.D. 1998: Adiantaceae. Flora of Australia 48: 248-263.

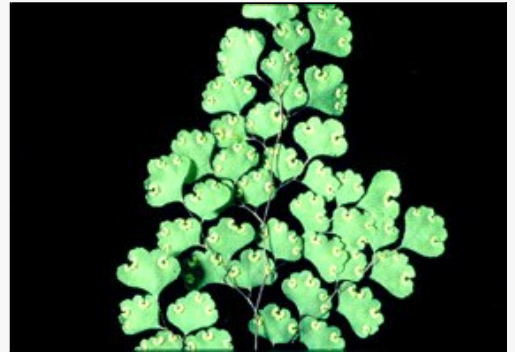
Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2045](http://nzpcn.org.nz/flora_details.asp?ID=2045)



**Caption:** Stony Bay, Coromandel  
**Photographer:** John Smith-Dodsworth



**Caption:** Stony Bay, Coromandel  
**Photographer:** John Smith-Dodsworth



# *Adiantum cunninghamii*

## Common Name(s):

Common maidenhair, Cunninghams maidenhair

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. Kermadec, Three Kings, North, South, Stewart and Chatham Islands.

## Habitat:

Common throughout in coastal and lowland forest, occasionally extending into upper montane forests. Usually found on banks, cliff faces and amongst boulders - especially on limestone, marble, basalt or andesite rocks.

## Features\*:

Tufted, terrestrial fern. Rhizomes, short- to long-creeping. Stipes and rachises glabrous. Fronds adaxially dark green or glaucescent, abaxially paler, glaucous green, ovate to elliptic. Lamina 100-350 x 50-240 mm, 2-3-pinnate at base, Ultimate segments stalked to one side, oblong, tending to curve acroscopically at apices, upper margins irregularly toothed, lower margins smooth, glabrous. Indusia kidney-shaped, glabrous.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened.

## \*Attribution:

Fact Sheet Prepared for NZPCN by: P.J. de Lange (June 2005).  
Description adapted from Brownsey & Smith-Dodsworth (2000).

## References and further reading:

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1475](http://nzpcn.org.nz/flora_details.asp?ID=1475)



**Caption:** Sori

**Photographer:** Jeremy Rolfe



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth

## *Adiantum hispidulum*

### Common Name(s):

rosy maidenhair

### Current Threat Status (2012):

Not Threatened

### Flowering:

Not applicable - spore producing

### Fruiting:

Not applicable - spore producing

### References and further reading:

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2046](http://nzpcn.org.nz/flora_details.asp?ID=2046)



**Caption:** Coromandel  
**Photographer:** John Smith-Dodsworth



**Caption:** Coromandel  
**Photographer:** John Smith-Dodsworth



## *Agave americana*

### **Common Name(s):**

century plant

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Thrives in dry conditions, coastal cliffs, sand dunes.

### **Features:**

Very large perennial plant with rosette growth form. The leaves are up to 2 m long, are fleshy and triangular in cross section. The leaves are leathery, glaucous and have coarse teeth on the margins. Leaves are usually dull green, although a variegated form is also present. After 10 to 15 years vegetative growth it produces a large woody spike (scape) up to 10 m tall with a terminal panicle of many yellow flowers. Black seeds are produced in 5 cm long capsules.

### **Flowering:**

February, March.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2453](http://nzpcn.org.nz/flora_details.asp?ID=2453)



**Caption:** Kaitoke Lake, Wanganui.  
Apr 2007.

**Photographer:** Colin Ogle



**Caption:** Kaitoke Lake, Wanganui.  
Apr 2007.

**Photographer:** Colin Ogle

# *Agrostis capillaris*

## Common Name(s):

browntop

## Current Threat Status (2009):

Exotic

## Habitat:

Terrestrial. Plant of coastal, lowland, montane and subalpine habitats (Timmins & MacKenzie 1995). The plant is able to grow on poor soils of low fertility (Timmins & MacKenzie 1995). Plant usually outcompeted on high fertility sites (Timmins & MacKenzie 1995). The plant is prevalent on the heavy soils of the Wairarapa (Hilgendorf 1926). Plant found in scrub and forest margin, both short and tall tussocklands, herbfields, fernlands, sanddunes and river beds (Timmins & MacKenzie 1995). The plant is found in cultivated lands and pasture communities (Hilgendorf 1926).

## Features:

Tufted perennial grass to 70 cm tall. Roots with rhizomes, occ stolons. All parts hairless, dark to bluish-green. Leaf blade flat, short and narrow, 100-150 x 1-5 mm, ribs regular, margins slightly rough. Ligule short, membranous and translucent, almost invisible. Leaf sheath rounded, usually smooth. Emerging leaf rolled. Seedhead open, usually up to 15cm long with spreading branches, fine, light brown, seeds tiny, brown.

## Flowering:

December, January

## Fruiting:

mid-late April

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2477](http://nzpcn.org.nz/flora_details.asp?ID=2477)



**Caption:** Ahuriri Valley

**Photographer:** John Barkla



**Caption:** Hutt River. Mar 2007.

**Photographer:** Jeremy Rolfe

## *Aira caryophyllea* subsp. *caryophyllea*

### Common Name(s):

silvery hair grass

### Current Threat Status (2009):

Exotic

### Features:

Small annual grass growing in dull green or reddish-green, erect tufts. Long ligule. Spiklets very small and silvery on hair-like branches. Each spiklet has two awns which cross.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2457](http://nzpcn.org.nz/flora_details.asp?ID=2457)



**Caption:** Lawn of Aira on old dune, Queens Park, Whanganui

**Photographer:** Colin Ogle



**Caption:** Coromandel. November

**Photographer:** John Smith-Dodsworth



## *Allium triquetrum*

### **Common Name(s):**

onion weed

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Disturbed forest and shrubland, streamsides, herbfields, bare land. Especially after spraying or other clearance to bare land.

### **Features:**

Perennial herb to about 60 cm, strong garlic smell. Bulbs to 10-15 mm diameter, with offset bulbs. Leaves 2-5, linear, fleshy, keeled, 20-60 cm long, with white papery sheaths. The leaves usually die back in late spring. Flower stalk is three-sided, 20-60 cm high, fleshy and soft, sheathed by leaves at the base. Flowers are bell-shaped, 10-15 mm long, 5 petalled, white with green stripe on the petals, on drooping stalks. Seed capsules 7 mm diameter containing small black seeds.

### **Flowering:**

October, November

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2483](http://nzpcn.org.nz/flora_details.asp?ID=2483)



**Caption:** Hutt Valley. Sep 2007.

**Photographer:** Jeremy Rolfe



**Caption:** Onion weed

**Photographer:** John Barkla

## *Amaranthus lividus*

**Common Name(s):**

purple amaranth

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2494](http://nzpcn.org.nz/flora_details.asp?ID=2494)



**Caption:** Lower surface of leaf showing mucron in retuse apex. Wanganui, Feb 2011.

**Photographer:** Colin Ogle



**Caption:** Upper surface of leaf showing mucron in retuse apex. Wanganui, Feb 2011.

**Photographer:** Colin Ogle

## *Amaryllis belladonna*

**Common Name(s):**

belladonna lily, Naked ladies

**Current Threat Status (2009):**

Exotic

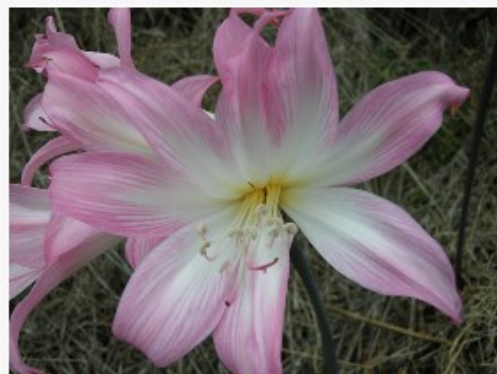
**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2472](http://nzpcn.org.nz/flora_details.asp?ID=2472)



**Caption:** Te Kopi, Cape Palliser

**Photographer:** John Sawyer



**Caption:** Te Kopi, Cape Palliser

**Photographer:** John Sawyer



*Anagallis arvensis* subsp. *arvensis* var  
*arvensis*

**Common Name(s):**  
pimpernel

**Current Threat Status (2009):**  
Exotic

**For more information, visit:**  
[http://nzpcn.org.nz/flora\\_details.asp?ID=2465](http://nzpcn.org.nz/flora_details.asp?ID=2465)



**Caption:** Cape Palliser.  
**Photographer:** Jeremy Rolfe



**Caption:** Cape Palliser.  
**Photographer:** Jeremy Rolfe



*Anagallis arvensis subsp. arvensis var. caerulea*

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4456](http://nzpcn.org.nz/flora_details.asp?ID=4456)



**Caption:** Te Paki. Nov 2007.

**Photographer:** Jeremy Rolfe



**Caption:** Anagallis arvensis subsp. arvensis var. caerulea

**Photographer:** John Smith-Dodsworth

# *Anthosachne kingiana* subsp. *multiflora*

**Common Name(s):**

blue grass, blue wheat grass

**Current Threat Status (2012):**

Data Deficient

**Distribution:**

Indigenous. In New Zealand present from the Three Kings Islands south throughout North Island to the South Island from Nelson to Banks Peninsula. Also present in Eastern Australia.

**Habitat:**

Primarily a coastal species of cliff faces, and rocky ground, utilising rocks of various substrates but showing a decided preference for base-rich substrates such as limestone, calcareous mudstone, siltstone and sandstones, basalt or the zeolite-rich facies of greywacke. On offshore islands it occasionally grows on open clay pans

**Features\*:**

Tufted, stoloniferous, glaucous to green grass. Leaf-sheath 6-10 mm, striate, glabrous or retrorsely short hairy. Ligule 0.2-0.5 mm, margin frayed. Leaf-blade 100-200 × 2-4 mm, flat bright green or glaucous, ribbed, underside with small antrorse teeth or glabrous, upper with antrorse short hairs or prickle-teeth on ribs, margin shortly prickle-toothed. Culm 300-600(-900) mm, erect, suberect or drooping. Inflorescence 100-250 mm, of up to 6-15 spikelets. Spikelets 14-25 mm, of 7-12 florets. Glumes ± equal, 5-9 mm, 3-5-nerved, keeled, broad, margins papery, ciliate; keel and nerves prickle-toothed, sometimes extending into a short awn. Lemma apex often bifid, awn absent or about length of lemma. Palea 9-12 mm, apex truncate, retuse, ciliate. Rachilla 1-2.5 mm, hairy. Callus 0.75-1 mm, with scattered short hairs. Anthers 3-5 mm, purple or yellow.

**Flowering:**

September -February

**Fruiting:**

October -May

**Threats:**

Not Threatened but there are indications that it is slowly declining from some parts of the North Island (Northland, Auckland and Wellington) due to weed invasion of its habitat. Where it occurs this species needs to be carefully monitored as it may yet warrant formal listing.

**\*Attribution:**

Fact sheet sprepared for NZPCN by P.J. de Lange June 2005. Description adapted from Edgar & Connor (2000).

**References and further reading:**

Barkworth, M.E.; Jacobs, S.W.L. 2011: The Triticeae (Gramineae) in Australasia. *Telopea* 13: 37-56.

Edgar, E.; Connor, H.E. 2000: *Flora of New Zealand*. Vol. V. Lincoln, Manaaki Whenua Press.

Govaerts, R. 2014: New combinations for Philip Island wheat grass, *Anthosachne kingiana* subsp. *kingiana* (Poaceae). *Journal of the Adelaide Botanic Gardens* 27: 23-24.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2124](http://nzpcn.org.nz/flora_details.asp?ID=2124)

## *Anthoxanthum odoratum*

**Common Name(s):**

sweet vernal

**Current Threat Status (2009):**

Exotic

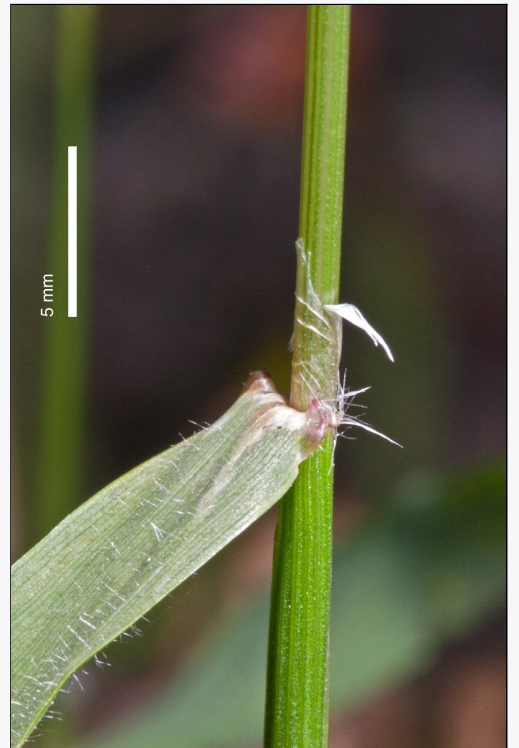
**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2529](http://nzpcn.org.nz/flora_details.asp?ID=2529)



**Caption:** Lower Hutt. Dec 2011.

**Photographer:** Jeremy Rolfe



**Caption:** Leaf node showing membranous ligule. Lower Hutt. Dec 2011.

**Photographer:** Jeremy Rolfe

***Apium prostratum* subsp. *prostratum*  
var. *prostratum***

**Current Threat Status (2009):**

Exotic

**References and further reading:**

Gardner, R. 2000. A variant of the native sea celery *Apium prostratum*(Umbelliferae). Auckland Botanical Society Journal, 55: 81

Johnson, A. T., Smith, H. A. (1972). Plant Names Simplified: Their pronunciation, derivation and meaning. Landsman Bookshop Ltd: Buckenhill, UK.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4462](http://nzpcn.org.nz/flora_details.asp?ID=4462)

## *Apodasmia similis*

### Common Name(s):

jointed wire rush, oiioi

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. Three Kings, North, South, Stewart and Chatham Islands.

### Habitat:

Mostly coastal in estuaries, saltmarshes, dunes and sandy flats and hollows. Occasionally inland in gumland scrub, along lake margins, fringing peat bogs or surrounding hot springs.

### Features\*:

Dioecious, rush-like perennial herb. Rhizomes 3-7 mm diameter, covered in closely sheathing, imbricating, dark brown scales, 10-20 mm long, each enclosing a tuft of coarse brown hairs. Culms numerous, 0.5-2.6 x 1.5-2.5(-3.0) mm, densely packed, erect, sometimes with upper third decurved to more or less pendulous, simple, terete, glaucous, grey-green, yellow-green or red-green. Leaves reduced to bract-like sheaths, these dark brown or maroon-black, regularly spaced at 70-90 mm intervals at the base of the culm, 10-60 mm apart higher up; margins entire. Male inflorescences, paniculate or fascicled, bearing numerous stalked spikelets; upper floral bracts ovate-lanceolate, mucronate, red-brown to maroon, margins membranous; tepals 6-4 more or less completely hyaline, the outer longer, brownish, the inner shorter, paler; stamens 3; ovary rudimentary. Female inflorescences fascicled, spikelets more or less sessile; upper floral bracts ovate, mucronate, > tepals; tepals 6, the outer keeled, lanceolate, acuminate, inner flat, smaller, more or less hyaline, more obtuse, mucronate; styles 3, united to midway, bright red to orange-red; staminodes 0. Fruit c.1 x 0.5 mm, triquetrous, indehiscent. Seed c.1 x 0.4 mm, oblong-elliptical, golden-brown, surface reticulate, both ends apiculate, one end dark brown, the other, almost white.

### Flowering:

October - December

### Fruiting:

December - March

### Threats:

Not Threatened

### \*Attribution:

Description adapted from Edgar and Moore (1970).

### References and further reading:

Briggs, B.G. & Johnson, L.A.S. (1998) New genera and species of Australian Restionaceae (Poales). *Telopea* 7: 345-373. [http://www.rbgsyd.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0004/73237/Tel7Bri345.pdf](http://www.rbgsyd.nsw.gov.au/__data/assets/pdf_file/0004/73237/Tel7Bri345.pdf)

Moore, L.B.; Edgar, E. 1970: *Flora of New Zealand*. Vol. I. Government Printer, Wellington.

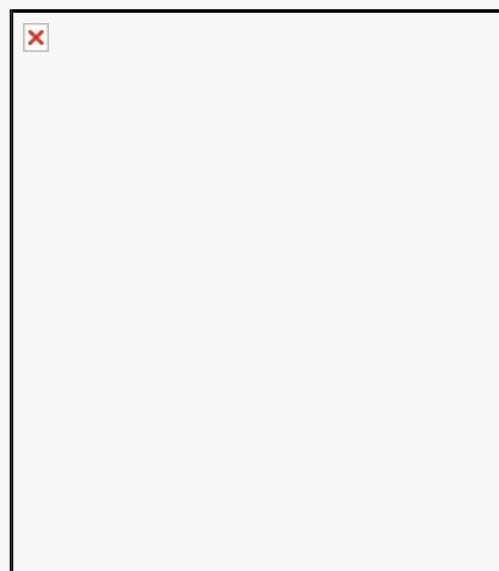
Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2052](http://nzpcn.org.nz/flora_details.asp?ID=2052)



**Caption:** *Apodasmia similis*  
**Photographer:** Bec Stanley



**Caption:** *Apodasmia similis*  
**Photographer:** Bec Stanley



# *Araucaria heterophylla*

**Common Name(s):**

Norfolk Island pine

**Current Threat Status (2009):**

Exotic

**References and further reading:**

Gardner, R., Hambly, G., Kneijber, J. 2000. *Araucaria heterophylla* (Araucariaceae) and its relatives. Auckland Botanical Society Journal, 55: 83-87

Waller, B. 2001. Some observations on the germination of *Araucaria heterophylla* (Norfolk island pine) at South Kaipara head. Auckland Botanical Society Journal, 56: 14

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2498](http://nzpcn.org.nz/flora_details.asp?ID=2498)



**Caption:** Herne Bay, Auckland

**Photographer:** John Sawyer



**Caption:** Herne Bay, Auckland

**Photographer:** John Sawyer

## *Argyranthemum frutescens*

**Common Name(s):**

marguerite

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2546](http://nzpcn.org.nz/flora_details.asp?ID=2546)



**Caption:** *Argyranthemum frutescens*

**Photographer:** John Smith-Dodsworth



**Caption:** *Argyranthemum frutescens*

**Photographer:** John Smith-Dodsworth



## *Arthropodium cirratum*

### **Common Name(s):**

Renga lily, Rengarenga, Rock lily

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1515](http://nzpcn.org.nz/flora_details.asp?ID=1515)



**Caption:** In cultivation

**Photographer:** Jesse Bythell



**Caption:** Coromandel, November

**Photographer:** John Smith-Dodsworth

# *Arthropteris tenella*

## Common Name(s):

Jointed fern

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. New Zealand: Three Kings, North, South and Chatham Islands (Rekohu and Rangiauria). Also Australia, Lord Howe and Norfolk Islands. In New Zealand reaching its southern limits on Banks Peninsula and Rangiauria (Pitt Island).

## Habitat:

Coastal and lowland forest. Usually found scrambling over rocks and climbing up tree trunks.

## Features\*:

Rhizomatous terrestrial and/or epiphytic ferns. Rhizome 1.5-4.0 mm diameter, widely creeping; upper surface densely covered with spreading elongate, red-brown, often marginally toothed scales (these shedding with age). Fronds 120-300 mm long, tapering towards base and partly to apex; uppermost pinna pair and terminal pinna usually enlarged. Stipes 20-120 mm long; abaxial rachis surface bearing scattered scales and sparse to dense short curled hairs; adaxially sparsely invested with scales or not. Pinnae bearing similar hairs abaxially, ± glabrescent, and on proximal portion of adaxial and abaxial midrib (here persistent); base not auriculate; apex usually attenuate but acuminate or rounded in sterile pinnae. Sterile pinnae 5-110 × 10-18 mm; margins entire. Fertile pinnae 18-160 × 5-23 mm; margins entire to crenate (scalloped). Sori round, in one row either side of midrib, set at 2/3 to 3/4 distance from midrib to margin; indusium absent.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by: P.J. de Lange (26 February 2012). Description adapted from Bell (1998) and Brownsey & Smith-Dodsworth (2000)

## References and further reading:

Bell, G.H. 1998: Davalliaceae. Pp. 434-450. Flora of Australia 48. Australian Biological Resources Study, CSIRO Canberra

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1516](http://nzpcn.org.nz/flora_details.asp?ID=1516)



**Caption:** Rotokare, Taranaki. Jul 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Rotokare, Taranaki. Jul 2013.

**Photographer:** Jeremy Rolfe



# *Asplenium bulbiferum*

## Common Name(s):

Hen and chicken fern, pikopiko, mother spleenwort

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North, South, Stewart and Chatham Islands

## Habitat:

Coastal to subalpine. Usually in lowland forest where it is a common species of the ground-layer, especially in high rainfall areas. Commonly associated with riparian forest, and as a species of base-rich substrates. Frequently sympatric and so commonly forming hybrids with other asplenia. It is commonly sympatric with *A. gracillimum* Colenso.

## Features\*:

Rhizome short, stout, erect, bearing ovate scales up to  $15 \times 5$  mm. Stipes 50-300 mm long, brown on underside, green above, stout, covered in small brown ovate scales. Laminae lanceolate to elliptic, 0.15-1.20 m, 70-300 mm, bi- to tripinnate, sometimes bearing bulbils. Raches pale green to yellow-green, scaly, prominently grooved, usually bulbiferous. Pinnae 15-30 (or more) pairs, ovate to narrowly ovate, acuminate, shortly stalked,  $30-200 \times 10-50$  mm, scaly on underside, basal pair pointing downwards when fresh. Secondary pinnae sessile or shortly stalked, very narrowly elliptic to ovate or elliptic, obtuse, deeply serrate or sometimes almost pinnate, decreasing in size from base to apex, basal acroscopic pinnule often enlarged (up to  $40 \times 10$  mm). Ultimate pinnules narrowly oblong,  $\pm$  entire to crenate-serrate, up to 10 mm long. Sori numerous, broad, submarginal, 2-4 mm long.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange (3 February 2005). Description from: Brownsey (1977)

## References and further reading:

Brownsey, P.J. 1977: A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15: 39-86.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1520](http://nzpcn.org.nz/flora_details.asp?ID=1520)



**Caption:** *Asplenium bulbiferum*

**Photographer:** Wayne Bennett



**Caption:** Silverstream, Upper Hutt. Apr 2006.

**Photographer:** Jeremy Rolfe

# *Asplenium decurrens*

## Common Name(s):

northern shore spleenwort

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. New Zealand: Kermadec, Three Kings and North Islands from Te Pahi to just south of the Tongaporutu River in the west at to Lottin point in the east. Present in Australia

## Habitat:

On coastal rocks or amongst petrel scrub especially in places exposed to salt spray

## Features\*:

Rhizome stout, often forming a hard woody mass above ground, bearing brown, shiny, ovate, acuminate scales up to 15 ~ 4 mm. Stipes 20-180 mm long, dark brown at base, green above, stout, covered in narrowly triangular scales with acute or acuminate apices. Laminae lanceolate to ovate, 40-200 ~ 20-70 mm, dull green, very thick and fleshy, pinnate. Rachis green, stout, prominently grooved and scaly. Pinnae 4-18 pairs, narrowly ovate to oblong, obtuse to acute, crenate-serrate to entire, cuneate at base, 10-40 ~ 7-12 mm, scaly on the underside. Sori up to 10 mm long, not reaching to lamina edge. Spores (39)45-52(60) microns long, (25)29-33(38) microns wide

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet Prepared for NZPCN by: P.J. de Lange 29 August 2007.  
Description adapted from Brownsey (1977).

## References and further reading:

Brownsey, P.J. 1977: A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15: 39-86.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2057](http://nzpcn.org.nz/flora_details.asp?ID=2057)



**Caption:** L'Esperance Rock, Kermadec Islands. May 2011.

**Photographer:** Peter de Lange



**Caption:** L'Esperance Rock, Kermadec Islands. May 2011.

**Photographer:** Peter de Lange



# *Asplenium flaccidum*

## Common Name(s):

Drooping spleenwort, hanging spleenwort

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. Kermadec, Three Kings, North, South, Stewart, Chatham and Snares Islands. Also present in Australia and the wider Pacific

## Habitat:

Coastal to montane (at the tree limit). In tall forest, scrub or rough boulder strewn ground. Mostly epiphytic on various native trees but also found on the ground.

## Features\*:

Mostly epiphytic. Rhizome short, stout, erect, bearing dark brown subulate scales up to  $20 \times 2$  mm. Stipes 50-200 mm (or more) long, brown on underside, green above, flaccid, sparingly covered in small subulate scales with long filiform apices. Laminae lanceolate to elliptic, 150-900 (or more)  $\times$  50-250 mm, dull green, thick, leathery, limp and pendulous, pinnate to bipinnate. Raches green, sparingly scaly. Pinnae in 5-20 (or more) pairs, linear, acuminate, long stalked, 50-150  $\times$  5-20 mm; degree of dissection very variable, sometimes only divided into very short obtuse segments, sometimes pinnate. Pinnules very variable in length, from oblong and obtuse to linear and acute, up to 15  $\times$  2 mm. Basal acroscopic pinnule occasionally much longer than that next to it. Sori submarginal, linear, 2-10 mm long. Spores (31-)36-44(-50) micrometre long, (19-)23-27(-33) micrometre wide

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened

## \*Attribution:

Description modified from Brownsey (1977)

## References and further reading:

Brownsey, P.J. 1977: A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15: 39-86.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1521](http://nzpcn.org.nz/flora_details.asp?ID=1521)



**Caption:** *Asplenium flaccidum*  
**Photographer:** Wayne Bennett



**Caption:** Sori, Dunedin  
**Photographer:** John Barkla

# *Asplenium haurakiense*

## Common Name(s):

Hauraki Gulf Spleenwort

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand, Three Kings Islands, Northern North Island to Waitakere Coastline in the west and Whale (Moutohoura) Island in the east

## Habitat:

Strictly coastal. Mostly terrestrial, growing in exposed or sheltered sites, often in positions subject to salt spray, also in petrel scrub and on small offshore islands it frequently grows around petrel burrows in dense forest.

## Features\*:

Mostly terrestrial. Rhizome short, stout, erect, bearing dark brown ovate scales with very thick cell walls, up to  $20 \times 2$  mm. Stipes 50-200 mm (or more) long, brown on underside, green above, firm and erect, sparingly covered in small ovate scales with very thick walls. Laminae oblong to elliptic, 100-400 (or more)  $\times$  40-200 mm,  $\pm$  dull or more often glossy green, thick, leathery, stiff and erect, pinnate to bipinnate. Raches green, sparingly scaly. Pinnae in 5-20 (or more) pairs, linear to narrowly ovate, acuminate, long stalked, 20-150  $\times$  5-20 mm; degree of dissection very variable, sometimes only divided into very short obtuse segments, sometimes pinnate. Pinnules oblong and obtuse to linear and acute, up to  $8 \times 2$  mm. Basal acroscopic pinnule frequently much longer than that next to it, up to 40 mm long, and itself pinnatifid. Sori submarginal, linear, 2-7 mm long. Spores (38-)43-49(-54) micrometre long, (20-)26-31(-38) micrometre wide

## Flowering:

Not applicable -  
spore producing

## Fruiting:

Not Applicable - Spore Producing  
(Healthy plants produce spores  
throughout the year)

## Threats:

Not Threatened

## \*Attribution:

Description modified from Brownsey (1977)

## References and further reading:

Brownsey, P.J. 1977: A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15: 39-86.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1522](http://nzpcn.org.nz/flora_details.asp?ID=1522)



**Caption:** Motuokino, Coromandel  
**Photographer:** John Smith-Dodsworth



**Caption:** At Motuokino,  
Coromandel  
**Photographer:** John Smith-Dodsworth

# *Asplenium lamprophyllum*

## Common Name(s):

None known

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: North Island (Te Pahi south to near Wanganui and the northern Hawkes Bay but only common north of Mokau and Gisborne)

## Habitat:

Coastal to montane. Mostly found within alluvial forest, always in shaded sites or on the buttresses of swamp trees, or in other forested areas on free draining soils, on clay banks, or on basalt or limestone rock outcrops and rock strewn ground. Usually forming carpet over extensive areas.

## Features\*:

Rhizome creeping, up to 150 mm long, pale green with a few scattered scales, stoloniferous. Stipes 60-200 mm long, pale green above, brown below, deeply grooved, covered in small, very dark, triangular to ovate scales which have thick cell walls. Laminae lanceolate to elliptic, 150-600 × 70-200 mm, light green, glossy above, thin, bipinnate. Raches green, scaly, prominently grooved. Pinnae 12-20 pairs, lanceolate to narrowly ovate, acuminate, stalked, 30-100 × 5-25 mm, scaly on underside; lower pinnae themselves pinnate, upper ones pinnatifid. Pinnules sessile or shortly stalked, elliptic, often deeply serrate, 10-20 × 5-15 mm. Sori 3-10 mm long, nearer mid-vein than margin. Sporangia orange brown.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened

## \*Attribution:

Description from Brownsey (1977).

## References and further reading:

Brownsey, P.J. 1977: A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15: 39-86.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1523](http://nzpcn.org.nz/flora_details.asp?ID=1523)



**Caption:** Smith's Bush, Auckland. May 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth



# *Asplenium oblongifolium*

## **Common Name(s):**

Shining Spleenwort

## **Current Threat Status (2012):**

Not Threatened

## **Distribution:**

Endemic. New Zealand: Kermadec, Three Kings, North, South, and Chatham Islands. In the South Island known from the Marlborough sounds south to Hokitika and Banks Peninsula

## **Habitat:**

Coastal to montane (but mostly found within coastal and lowland areas). Occupying a diverse range of habitats from coastal cliffs and rock stacks to deep forest where it may be an epiphyte or grow on the ground.

## **Features\*:**

Rhizome stout, often forming a hard woody mass above ground, bearing pale brown, shiny, ovate, acuminate scales up to 30 × 7 mm. Stipes 80-200 mm long, dark brown, stout, densely covered in narrow scales with very long filiform apices. Laminae oblong to elliptic, 0.18-1.00 m long, 100-350 mm wide, dark green and glossy above, pinnate. Rachis brown below, green above, stout, slightly ridged, scaly. Pinnae 4-15 pairs, lanceolate to narrowly oblong or ovate, acuminate, crenate-serrate to ± entire, cuneate at base, 40-150 × 10-30 mm, frequently covered in very small hair-like scales on the underside. Sori up to 20 mm long, not reaching lamina edge.

## **Flowering:**

Not applicable - spore producing

## **Fruiting:**

Not applicable - spore producing

## **Threats:**

Not Threatened

## **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange 29 August 2007. Description from Brownsey (1977).

## **References and further reading:**

Brownsey, P.J. 1977: A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15: 39-86.

## **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1525](http://nzpcn.org.nz/flora_details.asp?ID=1525)



**Caption:** *Asplenium oblongifolium*  
**Photographer:** Wayne Bennett



**Caption:** *Asplenium oblongifolium*  
**Photographer:** Wayne Bennett



# *Asplenium polyodon*

**Common Name(s):**

sickle spleenwort

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Indigenous. New Zealand: Kermadec, Three Kings, North, South, Stewart and Chatham Islands. Also Madagascar, Indo-Malaysian, Australia, and the Pacific Islands. In the South Island mainly western, in the east found as far south as Bull Creek on the coast south of Dunedin

**Habitat:**

Coastal to montane. In scrub and dense forest, often as an epiphyte but also on rock outcrops, fallen logs and on the ground.

**Features\*:**

Rhizome stout, short creeping, densely covered in red-brown, narrowly triangular scales up to 10 × 1 mm. Stipes 100-300 mm long, dark brown, stiff, densely covered in scales similar to but smaller than those of the rhizome. Laminae lanceolate, 250-500 (or more) × 100-200 mm, dark green and glossy above, paler and dull below, frequently pendulous, pinnate. Raches dark chocolate brown, very scaly. Pinnae 25 (or more) pairs, narrowly angular-ovate to ovate, sometimes with a large rounded basal acroscopic lobe, acuminate, doubly serrate, 50-100 × 10-20 mm, scaly and with prominent veins on underside. Sori often slightly curved away from the midrib, up to 2 mm long.

**Flowering:**

Not applicable - spore producing

**Fruiting:**

Not applicable - spore producing

**Threats:**

Not Threatened

**\*Attribution:**

Description from: Brownsey (1977).

**References and further reading:**

Brownsey, P.J. 1977: A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15: 39-86.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2059](http://nzpcn.org.nz/flora_details.asp?ID=2059)



**Caption:** *Asplenium polyodon*

**Photographer:** Wayne Bennett



**Caption:** *Asplenium polyodon*

**Photographer:** Wayne Bennett

## *Astelia banksii*

### **Common Name(s):**

Coastal astelia, shore kowharawhara

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. Confined to the North Island where it occurs in coastal situations south to about the Kawhia and Tauranga Harbours

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1527](http://nzpcn.org.nz/flora_details.asp?ID=1527)



**Caption:** *Astelia banksii*

**Photographer:** Wayne Bennett



**Caption:** Flower of *Astelia banksii*

**Photographer:** Wayne Bennett



## *Astelia trinervia*

### **Common Name(s):**

Kauri grass

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. In the North Island common from Te Pahi to near Awakino in the West and Tauranga in the East. In the South Island known only from North West Nelson

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1539](http://nzpcn.org.nz/flora_details.asp?ID=1539)



**Caption:** *Astelia trinervia*

**Photographer:** Wayne Bennett



**Caption:** *Astelia trinervia*

**Photographer:** Wayne Bennett



## *Atriplex prostrata*

**Common Name(s):**

orache

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2504](http://nzpcn.org.nz/flora_details.asp?ID=2504)



**Caption:** Puraukaunui Bay,  
Catlins

**Photographer:** John Barkla



**Caption:** Puraukaunui bay,  
Catlins

**Photographer:** John Barkla

# *Austroblechnum norfolkianum*

## Common Name(s):

None Known

## Current Threat Status (2012):

At Risk - Naturally Uncommon

## Distribution:

Indigenous. Common on Raoul Island (Kermadec Island group) and the Three Kings Islands, otherwise uncommon and sparingly distributed on mainly offshore islands from the Cavallis south to Mayor Island. Known on the Chatham Islands from South East (Rangatira) Island. Also on Norfolk Island where it is now seriously at risk of extinction

## Habitat:

Strictly Coastal. This species is most frequently seen on the outer Hauraki Gulf offshore islands, and on the more remote Three Kings and Kermadecs. It favours shaded sites, usually in or near petrel colonies, or near penguin trails and nests.

## Features\*:

Tufted fern. Rhizomes stout, erect. Covered in old stipe ends. Stipes of sterile fronds 50-150 mm long, scaly at base. Sterile laminae narrowly elliptic, pinnate, 350-900 x 90-180 mm, dark green to bright green, never red-tinged. somewhat fleshy, upper surfaces shining, glabrous. Sterile pinnae in 35-60 pairs, longest at the middle, 50-90 x 8-18 mm, falcate and tapering to acute apices, gradually reducing to short flanges at base, margins finely toothed, bases adnate. Fertile fronds only slightly shorter than sterile.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not threatened in New Zealand, although close to extinction on Norfolk Island. In New Zealand it has a primarily northern offshore island distribution, and is by and large uncommon except on the Kermadec and Three Kings Islands.

## \*Attribution:

Fact Sheet by P.J. de Lange 6 June 2005. Description from Brownsey & Smith-Dodsworth (2000).

## References and further reading:

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand ferns and allied plants. David Bateman Ltd, Auckland

Gasper, A.L.; de Oliveira Dittrich, V.A.; Smith A.R.; Salino, A. 2016: A classification for Blechnaceae (Polypodiales: Polypodiopsida): New genera, resurrected names, and combinations. *Phytotaxa* 275: 191-227.

Perrie, L.R.; Wilson, R.K.; Shepherd, L.D.; Ohlsen, D.J.; Batty, E.L.; Brownsey, P.J.; Bayly, M.J. 2014: Molecular phylogenetics and generic taxonomy of Blechnaceae ferns. *Taxon* 63(4): 745-758.

PPG 1: The Pteridophyte Phylogeny Group 2016: A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54: 563-603.

Pyner, T. 2017: A new classification of Blechnum. British Pteridological Society. <https://ebps.org.uk/new-classification-blechnum/>

Wilcox, M.; Warden, J. 2017: Botany of Hillsborough coast bush reserves, Manukau Harbour, Auckland. *Auckland Botanical Society Journal* 72: 32-46.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=225](http://nzpcn.org.nz/flora_details.asp?ID=225)



**Caption:** cult. ex Gt Mercury Is.

**Photographer:** John Smith-Dodsworth



**Caption:** Great Mercury Island

**Photographer:** John Smith-Dodsworth



# *Austroderia splendens*

## Common Name(s):

Toetoe

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. A northern species common from the Three Kings Islands south to about Waikawau in the west and Ohiwa Harbour in the east - exact southern limit unclear.

## Habitat:

Abundant in coastal situations, within dunefield, associated shrublands, on cliff faces and on offshore islands.

## Features\*:

Generally a robust, stout, rhizomatous tussock forming grass up to 6 m tall when in flower. Leaf sheath clothed in long hairs, pale green, copiously covered in white wax. Ligule 3 (or more) mm long, contraligule (a long in hairs at the leaf blade/culm junction) present. Leaf blade 2-3(-4.8) x 0.3-0.5 m, yellow-green, green to dark-green, upper side glabrous, underside basally with dense weft of hairs, this becoming sparse toward midribs, trending toward minutely hairy throughout. Culm up to 6 m, inflorescence portion up to 1 m tall, erect to nodding, plumose. Spikelets numerous, 40 mm with 2-3 florets per spikelet. Glumes equal, 40 mm with awn-like apex, > florets. Lemma 11 mm, 3-nerved, scabrid. Palea 9 mm, keels ciliate. Callus hairs 4 mm. Rachilla 1 mm. Flowers either perfect or female. Anthers of perfect flowers 6 mm, in females 4 mm. Ovary of perfect flowers 0.7 mm, stigma - styles 2 mm; female flowers with ovary 1 mm, stigma-style 4 mm. Seed 4-5 mm.

## Flowering:

September - November

## Fruiting:

October - March

## Threats:

Abundant and not threatened. Often naturalising in suitable habitats.

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 1 October 2006.  
Description adapted from Edgar & Connor (2000).

## References and further reading:

Edgar, E.; Connor, H.E. 2000: Flora of New Zealand. Vol. V. Grasses. Manaaki Whenua Whenua Press, Christchurch.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1759](http://nzpcn.org.nz/flora_details.asp?ID=1759)



**Caption:** Lake Morehurehu

**Photographer:** Lisa Forester



**Caption:** Surville Cliffs, North Cape. Feb 2011

**Photographer:** Jeremy Rolfe



## *Avena barbata*

**Common Name(s):**

slender oat

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3479](http://nzpcn.org.nz/flora_details.asp?ID=3479)



**Caption:** Ahuriri Estuary, Napier.

**Photographer:** Jeremy Rolfe



**Caption:** Ahuriri Estuary, Napier.

**Photographer:** Jeremy Rolfe

## *Avena fatua*

**Common Name(s):**

wild oat

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3489](http://nzpcn.org.nz/flora_details.asp?ID=3489)



**Caption:** Spikelets. Wanganui. Jan 2011.

**Photographer:** Colin Ogle



**Caption:** Spikelets. Wanganui. Jan 2011.

**Photographer:** Colin Ogle

## *Banksia integrifolia*

### Common Name(s):

banksia

### Current Threat Status (2009):

Exotic

### Habitat:

Terrestrial. Threat to well drained sites, e.g.. sand dunes.

### Features:

Large shrub or small tree to about 10 m high. Leaves narrowly elliptic with densely serrate margins. Deep shining green above and white beneath. Inflorescence mostly 9-12 cm long, erect, forming a broadly cylindrical cone, pale green or pale greenish yellow. Fruiting cone woody, with brown felty indumentum persisting in lower part, valves opening widely to expose seed. Cones may persist on the tree a long time after flowering.

### Flowering:

May, June, July

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=3493](http://nzpcn.org.nz/flora_details.asp?ID=3493)



**Caption:** Immature spike of fruit; cultivated hedge plant, Castlecliff Beach, Whanganui

**Photographer:** Colin Ogle



**Caption:** Banksia integrifolia tree

**Photographer:** John Smith-Dodsworth



## *Beilschmiedia tarairi*

### **Common Name(s):**

Taraire

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. Confined to the North Island where it most common north of Auckland and Thames. However it also occurs in scattered pockets in the west south of Port Waikato to the Kawhia Harbour, inland at Pukemokemoke (near Tauhei), and in the east it occurs very locally from the eastern end of Papatea Bay to East Cape.

### **Habitat:**

Common canopy forming tree in lowland and lower montane forests north of Auckland. Often associated with kauri (*Agathis australis*), and pohutukawa (*Metrosideros excelsa*), and on basalt rocks and soils puriri (*Vitex lucens*).

### **Features\*:**

Evergreen tree up to 22 m tall, with very broad canopy crown. Trunk to 1 m diam. Bark smooth, dark brown. Branches stout, spreading. Branchlets, young leaves, petioles and young inflorescences densely clad in reddish brown tomentum. Foliage closely alternate, erecto-patent, simple, leathery. Petioles (8-)10(-12) mm. Leaves (36-)50-72(-85) x (26-)34-48 (-56) mm, wide-elliptic to wide-obovate, dark green and glabrous above, bullate, glaucous below, with stout veins covered in reddish brown tomentum, margins entire, apex rounded, retuse and mucronate. Inflorescence and erect, axillary panicle up to 100 mm long. Flowers sexually perfect, 3-5 mm diam., greenish, often partially clothed in dense reddish-brown tomentum, perianth cleft into 6, stamens 12. Fruit an erect, ellipsoid to ovoid drupe (28-)30(-35) x (14-)16(-18) mm, 1-seeded, pericarp fleshy, dark purple when ripe, covered in waxy glaucous bloom.

### **Flowering:**

(September-) November (-December)

### **Fruiting:**

March - November

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange 12 February 2004. Description adapted from Allan (1961) and Wright (1984).

### **References and further reading:**

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Wellington, Government Printer.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

Wilcox, M.D. 2001. Establishment of forest monitoring plots in Kirks Bush Papakura with special reference to Taraire (*Beilschmiedia tarairi*). Auckland Botanical Society Journal, 56: 76-79.

Wright, A. E. 1984: *Beilschmiedia* Nees (Lauraceae) in New Zealand. *New Zealand Journal of Botany* 22: 109-125.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1540](http://nzpcn.org.nz/flora_details.asp?ID=1540)



**Caption:** Wenderholm

**Photographer:** John Barkla



**Caption:** Taraire leaves

**Photographer:** DoC

## *Beilschmiedia tawa*

### Common Name(s):

Tawa

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. Common throughout the North Island. In the South Island common from Cape Farewell east through the Marlborough Sounds. Extending south of there only in the east where it almost reaches Kaikoura (the southern limit is just north of the main town).

### Habitat:

Major canopy dominant in the lowland and lower montane forests of the North Island and northern South island. May form pure stands but usually occurs in close association with podocarps such as rimu (*Dacrydium cupressinum*).

### Features\*:

Evergreen tree up to 35 m tall. Trunk straight, 1.2-2 m diam., with buttressed base. Bark smooth, dark brown. Branches erect to spreading, slender to moderately robust. Young branchlets, leaves and inflorescences finely pubescent, hairs simple, pale golden. Foliage opposite to sub-opposite, simple, somewhat leathery when mature. Petioles (6-)8 (-12) mm. Leaves (30-)40-80(-95) x (8-)11-16(-40) mm, narrowly to broadly lanceolate sometimes elliptic, yellow-green to green, glabrous when mature, undersides glaucous. margins entire, and undulate, apex acute to acuminate. Inflorescences, an erect, axillary panicle up to 100 mm long. Flowers sexually perfect, 2-4 mm diam, pale green, perianth cleft into 6 segments, ovate-oblong, stamens 12. Fruit a pendulous, ellipsoid to ovoid drupe (20-)30(-38) x (9-)12(-18) mm, 1-seeded, pericarp fleshy, dark purple-black when ripe, glaucous or shiny.

### Flowering:

(October-) January (-May)

### Fruiting:

(December-) January (-March)

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 12 February 2004. Description adapted from Allan (1961) and Wright (1984).

### References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Wellington, Government Printer.

de Lange, P.J.; Cameron, E.K. 1999: The vascular flora of Aorangi Island, Poor Knights Islands, northern New Zealand. *New Zealand Journal of Botany* 37: 433-468

Moorfield, J. C. 2005: *Te aka : Māori-English, English-Māori dictionary and index*. Pearson Longman: Auckland

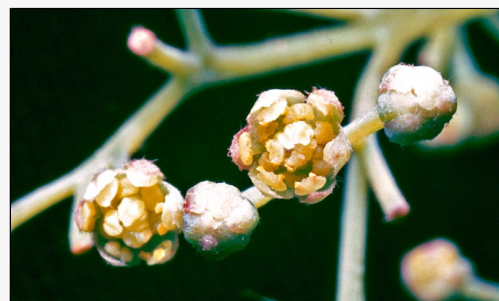
Landcare Research. Ngā Tipu Whakaoranga - Māori Plant Use Database. <http://maoriplantuse.landcareresearch.co.nz>

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309.

Wright, A. E. 1984: *Beilschmiedia* Nees (Lauraceae) in New Zealand. *New Zealand Journal of Botany* 22: 109-125.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1541](http://nzpcn.org.nz/flora_details.asp?ID=1541)



**Caption:** Flowers ex Hakarimata Range.

**Photographer:** John Braggins



**Caption:** Flowers of *Beilschmiedia tawa*

**Photographer:** Wayne Bennett

## *Bidens pilosa*

**Common Name(s):**

cobblers' pegs

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3515](http://nzpcn.org.nz/flora_details.asp?ID=3515)



**Caption:** Motukakarikitahi, June

**Photographer:** John Smith-Dodsworth



**Caption:** Bidens pilosa

**Photographer:** John Barkla



## *Borago officinalis*

**Common Name(s):**

borage

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2553](http://nzpcn.org.nz/flora_details.asp?ID=2553)



**Caption:** in cultivation

**Photographer:** Jesse Bythell



**Caption:** cult, Coromandel.

December

**Photographer:** John Smith-Dodsworth

# *Botrychium australe*

## Common Name(s):

parsley fern, patotara

## Current Threat Status (2012):

At Risk - Naturally Uncommon

## Distribution:

Indigenous. Throughout North and South Islands with one old Chatham Island record. Present in Australia, Papua New Guinea and South America.

## Habitat:

Lowland to alpine. A species of open ground, short and tall tussock grassland, forest clearings, shrubland, river flats, reverting pasture and seasonally flooded ground. It has also been collected from the margins of peat bogs in the Huntly Basin, lower Waikato.

## Features\*:

Red-green (bronze) to bright green, fleshy to succulent plant. Roots thick, fleshy, distinctly ridged and contracted. Sterile laminae 1(-2), stalked, broadly ovate or 5-angled, divided 3-5-times, 30-250 x 30-150 mm, the ultimate segments blunt-ended, 1-7 mm wide. Fertile laminae 1(-2) borne on a narrower but longer stalk, fertile portion shorter and narrower than sterile laminae, divided 3-5-times, bearing numerous, spherical, yellow-brown sporangia up to c.10 mm diam.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Generally uncommon and of sporadic distribution. In some habitats it can be locally abundant, but in many places it is now scarce. There is some evidence of losses happening in the northern part of its range but as yet this seems insufficient to warrant a higher threat listing

## \*Attribution:

Fact Sheet by P.J. de Lange 6 June 2005. Description from Brownsey & Smith-Dodsworth (2000).

## References and further reading:

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand ferns and allied plants. David Bateman Ltd, Auckland

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=226](http://nzpcn.org.nz/flora_details.asp?ID=226)



**Caption:** Young frond. Taurewa.  
**Photographer:** © John Braggins



**Caption:** Sporangia. Te Anau.  
**Photographer:** © John Braggins

## *Brachyglottis repanda*

### **Common Name(s):**

rangiora, bushman's toilet paper, bushman's friend

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. North Island throughout. South Island - north west Nelson to just south of Greymouth in the west, and near Kekerengu in the east. Naturalised on Banks Peninsula, Otago Peninsula, and on Stewart Island at Oban.

### **Habitat:**

Common in coastal, lowland and lower montane shrubland and open forest. Often a pioneer species.

### **Features:**

Shrub to small tree up to 6 m or more tall. Trunk one or more arising from ground, covered in somewhat corky bark. Branches stout, spreading, rather brittle, initially densely clad in fine white to buff tomentum becoming glabrescent with age. Petiole stout, grooved, 80-100 mm long. Leaves leathery, 50-250(-300) X 50-20(-30) mm, dark green to pale green above, undersides clad in fine, appressed vivid white hairs, broad- to ovate-oblong, obtuse to subacute, obliquely cordate to truncate at base, margins distantly dentately lobed to sinuate. Inflorescence a much branched panicle. Capitula 5 mm diam., numerous, without ligules (discoïd). Involucral bracts 3 mm long, narrow-oblong to narrow spatulate, margins scarious except at base. Florets 10-12, yellow. Seeds (cypsela) narrowly oblong-elliptic to oblong elliptic, 1-1.8 mm long, ribs 6, rounded, broad. Pappus 2-3 mm, buff-yellow, scabrid.

### **Flowering:**

(July-) August-October  
(-November)

### **Fruiting:**

(October-) November-  
December (-January)

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1562](http://nzpcn.org.nz/flora_details.asp?ID=1562)



**Caption:** *Brachyglottis repanda*  
**Photographer:** Wayne Bennett



**Caption:** *Brachyglottis repanda*  
**Photographer:** Wayne Bennett



## *Brassica napus* var. *napus*

### **Common Name(s):**

weed rape, rape

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3520](http://nzpcn.org.nz/flora_details.asp?ID=3520)



**Caption:** Brassica napus L. var. napus

**Photographer:** John Smith-Dodsworth



**Caption:** Brassica napus L. var. napus

**Photographer:** John Smith-Dodsworth

## *Brassica oleracea* var. *oleracea*

**Common Name(s):**

wild cabbage

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3522](http://nzpcn.org.nz/flora_details.asp?ID=3522)



**Caption:** Stokes Valley. Nov 2001.

**Photographer:** Jeremy Rolfe



**Caption:** Brassica

**Photographer:** John Smith-Dodsworth

## *Briza maxima*

**Common Name(s):**

large quaking grass

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3529](http://nzpcn.org.nz/flora_details.asp?ID=3529)



**Caption:** Spikelets, Whanganui.  
Nov 2011.

**Photographer:** Colin Ogle



**Caption:** Old spikelets. Wanganui.  
Jan 2011.

**Photographer:** Colin Ogle



## *Briza minor*

**Common Name(s):**

shivery grass

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3526](http://nzpcn.org.nz/flora_details.asp?ID=3526)



**Caption:** Mount Stewart,  
Manawatu. Dec 2012.

**Photographer:** Colin Ogle



**Caption:** Coromandel, October

**Photographer:** John Smith-  
Dodsworth

## *Bromus diandrus*

**Common Name(s):**

rippgut brome

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3533](http://nzpcn.org.nz/flora_details.asp?ID=3533)



**Caption:** Whitiāu Scientific Reserve, Whanganui. Nov 2011.  
**Photographer:** Colin Ogle



**Caption:** Bromus diandrus  
**Photographer:** John Smith-Dodsworth

## *Bromus hordeaceus*

**Common Name(s):**

soft brome

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3534](http://nzpcn.org.nz/flora_details.asp?ID=3534)



**Caption:** Pasture dominated by soft brome. Whanganui. Nov 2011.  
**Photographer:** Colin Ogle



**Caption:** Bromus hordeaceus  
**Photographer:** John Smith-Dodsworth



## *Bromus willdenowii*

**Common Name(s):**

prairie grass

**Current Threat Status (2009):**

Exotic

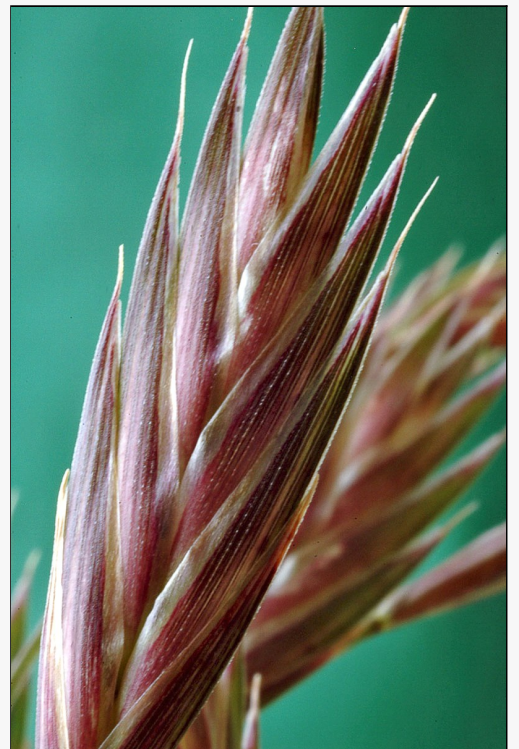
**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3544](http://nzpcn.org.nz/flora_details.asp?ID=3544)



**Caption:** Part inflorescence. Whanganui. Nov 2011.

**Photographer:** Colin Ogle



**Caption:** Spikelet. Whanganui. Nov 2011.

**Photographer:** Colin Ogle

## *Calendula officinalis*

**Common Name(s):**

marigold

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3565](http://nzpcn.org.nz/flora_details.asp?ID=3565)



**Caption:** Robinson Crusoe Island,  
Chile

**Photographer:** John Sawyer



**Caption:** In waste area, Castlecliff  
Beach, Whanganui

**Photographer:** Colin Ogle

## *Calystegia sepium* subsp. *roseata*

### Common Name(s):

pink bindweed

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. New Zealand, Three Kings, North, South, Stewart and Chatham Islands, Indigenous throughout the southern hemisphere

### Habitat:

A weedy species of coastal and lowland successional habitats, which very rarely extends to montane forest. Often found along the margins of wetlands. Pink bindweed has also spread into urban areas where it can be very aggressive.

### Features\*:

Summer-green, rhizomatous vine, all parts exuding white latex. Roots thickened, white. Stems glabrescent, purple, purple-red. Leaves membranous, dark to yellow-green 30-140(-170) x 25-90(-110) mm, usually narrowly triangular, sagittate, with or without tails, sinus deeply cleft to rounded. Flowers solitary; peduncles 30-120 mm long, glabrescent, ridged or narrowly winged. Bracts 12.5-30 x 10-15 mm, broad-ovate, base rounded or cordate, apex obtuse and mucronate, Sepals 120-150 mm, lanceolate-ovate. Corolla (30)-50(-70) mm long, limb 40-60 mm diam., pink to dark-pink with white mid-petaline bands. Stamens 20-25 mm long. Stile > stamens. Capsules papery, subglobose, c.10 mm diam. Seed triangular-ovoid, dark brown to almost black.

### Flowering:

September - April (-June)

### Fruiting:

October-August

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 1 November 2005. Description adapted from Allan (1961) and Webb et al. (1988), supplemented with observations made from fresh and dried material.

### References and further reading:

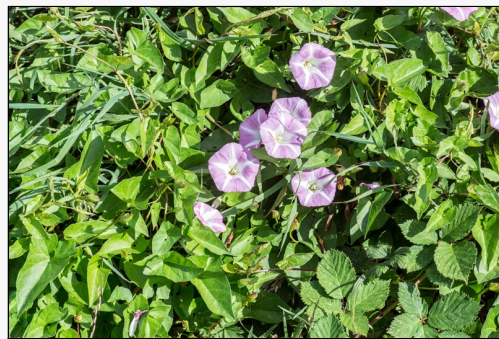
Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons. Christchurch, New Zealand, Botany Division, D.S.I.R..

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2079](http://nzpcn.org.nz/flora_details.asp?ID=2079)



**Caption:** Paraparaumu Beach.  
**Photographer:** Jeremy Rolfe



**Caption:** Paraparaumu Beach.  
**Photographer:** Jeremy Rolfe



# *Calystegia soldanella*

## Common Name(s):

shore bindweed, shore Convolvulus, rauparaha

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. Kermadec, Three Kings, North, South, Stewart and Chatham Islands. Indigenous to both Northern and Southern Hemisphere temperate regions.

## Habitat:

Coastal or inland along lake shorelines. Usually in sand or shell banks but also grows in fine gravel or pumice, talus slopes and on occasion in coastal turf or on cliff faces.

## Features\*:

Perennial herb with stout, white, deeply descending, fleshy roots and numerous prostrate branching stems forming dense patches. Stems glabrous. Petioles 80 mm or less, slender. Leaves (10-)50(-80) x (10-)50(-75) mm, reniform, fleshy, glossy, entire; sinus shallow and rounded; apex emarginate, obtuse or acute. Flowers solitary; peduncles ribbed, 100 mm long. Bracts ovate, cordate, obtuse 12-18 mm long. Sepals nearly = bracts, obtuse. Corolla 20-40 x 25-50 mm, campanulate, pink with white mid-petaline bands. Capsule 15-20 mm long, broad-ovoid, apiculate. Seeds dark brown, smooth.

## Flowering:

August-March

## Fruiting:

Present throughout the year

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 1 November 2005. Description adapted from Allan (1961) and Webb et al. (1988), supplemented with observations made from fresh and dried material.

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons. Christchurch, New Zealand, Botany Division, D.S.I.R..

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2080](http://nzpcn.org.nz/flora_details.asp?ID=2080)



**Caption:** Fortrose Spit

**Photographer:** John Barkla



**Caption:** Macauley Island

**Photographer:** John Barkla

# *Calystegia tuguriorum*

## Common Name(s):

Climbing convolvulus, NZ bindweed

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. North, South, Stewart and Chatham Islands. Present in Chile and on the Juan Fernandez islands

## Habitat:

Coastal to lowland. Usually in shrubland and along forest margins. occasional found on the margins of wetlands. It often favours grey scrub and bare lava or open rock strewn ground.

## Features\*:

Perennial vine or scrambling plant producing numerous, slender, much-branched puberulent twinning stems. Often forming dense patches. Petioles up to 40 mm, slender. Leaves (10-)40(-50) x (15-)30(-40) mm broad-ovate to deltoid or reniform, entire or sinuate; base cordate, sinus shallow and broad; apex acute to acuminate. Peduncules terete to slightly winged, (30-)110 mm long, > leaves. Bracts broadly ovate to suborbicular; base cordate, apex apiculate. Sepals similar to and < or = bracts. Corolla (25-)50 x (30-)60 mm diam., funnelform, white. Capsule 8-12 mm, broad-ovoid. Seeds orange, smooth.

## Flowering:

September - March

## Fruiting:

Present throughout the year.

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 1 November 2005. Description adapted from Allan (1961) and Webb et al. (1988), supplemented with observations made from fresh and dried material.

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309.

Wilcox, M.D. 2002. *Calystegia tuguriorum* in Auckland. *Auckland Botanical Society Journal* 57: 25

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons. Christchurch, New Zealand, Botany Division, D.S.I.R..

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1582](http://nzpcn.org.nz/flora_details.asp?ID=1582)



**Caption:** North Otago

**Photographer:** John Barkla



**Caption:** North Otago

**Photographer:** John Barkla



## *Cardamine debilis* agg.

### Common Name(s):

NZ bitter cress

### Current Threat Status (2012):

Non Threatened

### Threats:

Not Threatened

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1584](http://nzpcn.org.nz/flora_details.asp?ID=1584)



**Caption:** Taihape. Nov 1988.

**Photographer:** Colin Ogle



**Caption:** Tararua Range. Nov 2012.

**Photographer:** Jeremy Rolfe



## *Carex breviculmis*

### Common Name(s):

grassland sedge

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous, North and South Islands. Also Australia, New Guinea, Lord Howe and Norfolk Islands

### Habitat:

Coastal to montane. Usually in open grassland, gum land scrub, clay pans, on rock stacks, and talus slopes and other similar sparsely vegetated sites.

### Features\*:

Shortly rhizomatous; tufted sedge usually forming low-growing, close-packed, bright green patches. Culms hidden among leaves, usually 10-20 mm long; basal sheaths dull brown. Leaves much > culms, 1.5-3.0 mm wide, grass-like, recurved, channelled, margins exceedingly finely and closely scabrid almost throughout. Spikes 2-5, approximate, pale green; terminal spike male, usually sessile; remaining spikes female, occasionally with a few male flowers at the top, 6-9 mm long, ± pedunculate, clustered round base of male spike; subtending bracts leaf-like, very narrow-linear, the uppermost almost filiform, margins finely scabrid. Glumes > utricles, ovate, pale green, almost white, membranous, midrib green, stiff, thickened, produced to a stout, finely hispid awn. Utricles c.2.5 × 1.0 mm, biconvex or subtrigonal, fusiform, pale yellow-green, faintly many-nerved, pubescent all over; beak slightly narrowed, pale green, c.0.5 mm long, orifice ± truncate; stipe c.0.3 mm long, often much contracted. Stigmas 3. Nut c.1.5 mm long, obtusely trigonal, oblong, obovoid, light brown, surmounted by a minute, persistent, dilated style-base.

### Flowering:

August - December

### Fruiting:

October - May

### Threats:

Not Threatened

### \*Attribution:

Fact Sheet prepared by P.J. de Lange (110 August 2006). Description adapted from Moore and Edgar (1970)

### References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2029](http://nzpcn.org.nz/flora_details.asp?ID=2029)



**Caption:** Mangatoetoe Stream, Palliser Bay. Growing in partial shade.

**Photographer:** Jeremy Rolfe



**Caption:** Mangatoetoe Stream, Palliser Bay. Growing in partial shade.

**Photographer:** Jeremy Rolfe

# *Carex flagellifera*

## Common Name(s):

Glen Murray tussock, Trip Me Up

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: North, South, Stewart and Chatham Islands.

## Habitat:

Coastal to montane. Usually in free draining soils under scrub or open forest. Rarely in wetlands or in permanently damp, shaded sites.

## Features\*:

Usually densely tufted, dark green, yellow-green to red-green plants. Culms 350-750(-900) × 0.5-1.0 mm, or slightly wider, close-packed, trigonous or subtrigonous, smooth or slightly scabrid for a short distance below inflorescence, usually elongating in fruit up to c. 2.8 m, initially erect, soon prostrate and long trailing; basal sheaths dark brown, occasionally tinged with red-purple, nerves ± distinct. Leaves numerous, usually > culms, 1.5-2.5(-4.0) mm. wide, bright shining green, yellow-green or reddish, spreading or drooping at the tips, channelled, margins sharply scabrid. Spikes 4-8; terminal 1-2(-3) spikes male, close together, slender; remaining spikes female, 15-30(-40) × 3-5 mm, usually distant, usually pedunculate but ± erect, often male at the base, rarely male at the top also. Glumes ± = utricles, broadly ovate, usually obtuse, often with fimbriate margins, occasionally almost emarginate, subcoriaceous, dark or light red-brown, occasionally distinctly nerved, midrib distinct and thickened, conspicuously light brown, almost cream, produced to a short, slightly scabrid awn. Utricles 2.0-2.5(-3.0) × c. 1.5 mm, unequally biconvex, almost plano-convex, elliptic-ovoid, light brown at base, usually dark brown towards the top, smooth and shining, or faintly nerved on the more convex face, margins glabrous, rarely very slightly scabrid below beak; beak c. 0.4 mm long, acutely bidentate, margins slightly scabrid; stipe c. 0.3 mm. long. Stigmas 2. Nut < 1.5 mm long, biconvex, ovoid-oblong, dark brown.

## Flowering:

September - November

## Fruiting:

Throughout the year

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

## References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1406](http://nzpcn.org.nz/flora_details.asp?ID=1406)



**Caption:** Transverse section of leaf. Palliser Bay. Feb 2011.

**Photographer:** Jeremy Rolfe



**Caption:** In cultivation. Dec 2007.

**Photographer:** Jeremy Rolfe



## *Carex spirostris*

### Common Name(s):

Coastal Sedge, Petrel Scrub Sedge

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. North Island from Te Pahi south to the Horowhenua and Wairarapa. Most common in northern part of range, particularly along the coast and on many of the Hauraki Gulf islands.

### Habitat:

Favouring coastal to lowland forest, usually in semi-shaded sites on banks, colluvium or gently sloping sites overlying free draining, fertile soils. Also a conspicuous sedge of offshore islands in the Hauraki Gulf where it is one of the main species found under forest within petrel colonies.

### Features\*:

Densely caespitose, tufted, dark green sedge of high fertility sites in shaded coastal forest, lowland forest and forested offshore islands (especially within petrel colonies). Culms 0.1-1.2 m x 1.5-2 mm; basal sheaths dark red-purple. Leaves equal to or greater than culms, 2.5-6 mm wide, double-folded, with keel and margins distinctly scabrid. Inflorescence of 4-6-8 spikes; terminal spike male, often compound, with female flowers intermixed in the secondary spikes; remaining spikes female with a few male flowers at the base, equal to or slightly longer than male spikes, 15-85(-100) x 3-4 mm, uppermost spikes closely set, shortly pedunculate, lowermost spikes rather distant, drooping on slender filiform peduncles; subtending bracts leaf-like, much longer than inflorescence, almost the same width as foliage leaves. Glumes equal to or slightly than utricles in length, bright red-purple, rather membranous, deciduous, lanceolate, subacute to almost emarginated, midrib extended as a long scabrid awn. Utricles 3-4 x 1 mm, triquetrous, fusiform, conspicuously ribbed with pale veins, margins smooth, pale grey below, above bright red and narrowed (often rather abruptly) to a 1.5 mm long beak; crura scabrid; stipe 0.5 mm long. Stigmas 3. Nut 2 mm long, yellow, yellow-brown or rarely light brown, oblong, trigonous.

### Flowering:

August - October

### Fruiting:

September - March

### Threats:

Not Threatened

### \*Attribution:

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

### References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1421](http://nzpcn.org.nz/flora_details.asp?ID=1421)



**Caption:** North Cape. Feb 2011.

**Photographer:** Jeremy Rolfe



**Caption:** North Cape. Feb 2011.

**Photographer:** Jeremy Rolfe



## *Carex testacea*

### Common Name(s):

Speckled Sedge, Trip Me Up

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. New Zealand: North and South Islands. Uncommon in the South Island.

### Habitat:

Coastal to montane. In sand dunes, coastal forest and scrub, dense forest or short tussock (*Festuca novae-zelandiae* (Hack.) Cockayne) grassland.

### Features\*:

Densely tufted, 0.3-0.6(-0.8) m high, usually dark red to orange-red sedge. Culms < or > leaves, often exceedingly elongated at maturity, up to 2 m long, trailing, prostrate, < 1 mm diameter, often almost filiform, trigonous or subtrigonous, glabrous or slightly scabrid below the inflorescence; basal sheaths dark brown or red-brown, nerves distinct. Leaves 1.0-2.5(-3.0) mm wide, channelled, usually reddish or orange-green, sometime slight green, harshly scabrid. Spikes 3-5, ± approximate; terminal spike male, c. 1 mm diameter, ± = female spikes in length, on a filiform peduncle; remaining spikes female, 5-25 (-30) × c. 5 mm, often with a few male flowers at the base, sessile, or the lowest more distant and shortly pedunculate. Glumes (excluding awn) ± = utricle, broadly ovate, thin and membranous, often deeply emarginate, occasionally entire, very light brown with darker flecks, midrib usually brown-spotted, produced to a scabrid awn of variable length. Utricles c. 2.5 × 1.5 mm, ± plano-convex, broadly ovoid, pale yellow-brown below, purple-brown above, nerved, more strongly so on the more convex face, shining, narrowed abruptly to the deeply bifid beak c. 0.5 mm long, margins and orifice usually finely scabrid, occasionally ± contracted below to a stipe c. 0.5 mm long. Stigmas 2. Nut c. 1.5 mm long, biconvex, dark brown, almost black.

### Flowering:

September - December

### Fruiting:

November - May (but may be present throughout the year)

### Threats:

Not Threatened

### \*Attribution:

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

### References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1424](http://nzpcn.org.nz/flora_details.asp?ID=1424)



**Caption:** Otama Beach, February

**Photographer:** John Smith-Dodsworth



**Caption:** At Otama Beach, February

**Photographer:** John Smith-Dodsworth

## *Carex virgata*

### Common Name(s):

swamp sedge, pukio, toitoi, toetoe

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. New Zealand: North, South, Stewart and Chatham Islands.

### Habitat:

Widespread from sea level to about 1000 m a.s.l. in open, swampy conditions and also in damp sites within lowland forest. In parts of the country this sedge is often the dominant carice of lowland alluvial forest.

### Features\*:

Rhizomatous, densely clumped to tussock-forming sedge. Rhizome 5 mm. diameter. Culms 150–900 mm. x c.1.5 mm, trigonous, grooved, harshly scabrid; basal sheaths shining, grey-brown to dark brown, sometimes black. Lvs much > culms, 0.5–1.2 m tall, 1.5–4.5 mm wide, channelled, light green, harsh and rigid, keel and margins strongly scabrid. Inflorescence a narrow 100–260 mm long panicle with stiff erect branchlets, the lower-most quite distant. Spikes, androgynous, 4–6 mm. long, sessile, grey- or yellow-brown, male flowers terminal, lower spikes on each branchlet subtended by a pale membranous bract with a long scabrid awn often > spike. Glume ± = or slightly < utricles, membranous, ovate, acute, dull brown, with a prominent pale midrib, this often scabrid in lowermost glumes. Utricles 2.0–2.5 x c.1.0 mm, plano-convex, ovoid, light grey with distinct brown nerves; tapering to a brown beak c.0.5 mm long with a bifid orifice and conspicuously denticulate margins; abruptly contracted to a narrow stipe c.0.2 mm. long. Stigmas 2. Nut slightly > 1 mm. long, biconvex, ovoid, dark brown.

### Flowering:

October - December

### Fruiting:

December - May

### Threats:

Not Threatened

### \*Attribution:

Fact Sheet prepared by P.J. de Lange (10 August 2006). Description adapted from Moore and Edgar (1970)

### References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1426](http://nzpcn.org.nz/flora_details.asp?ID=1426)



**Caption:** Flower of *Carex virgata*  
**Photographer:** Wayne Bennett



**Caption:** Flower of *Carex virgata*  
**Photographer:** Wayne Bennett



# *Carmichaelia australis*

## Common Name(s):

common broom

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: North and South Islands (except southern South Island)

## Habitat:

Coastal to montane, on river terraces, stream banks, colluvium, rock outcrops, talus and fan toe slopes, among tussock grassland and grey scrub, on the edge and margins of dense bush, forest, and in swamps

## Features\*:

Shrub, 2-8 × 2-5 m. Branches up to 100 mm diameter, ascending and spreading. Cladodes 30.0-200.0 × 1.5-8.0 mm, ascending or spreading, linear, striate, weakly plano-convex to strongly flattened and compressed, green, yellow-green, or brown-green, glabrous to sparsely hairy, apex obtuse to subacute; leaf nodes 4-15. Leaves 1-3-foliolate, present on seedlings and rarely on adults, terminal leaflet larger; lamina 3.0-22.0 × 1.3-16.0 mm, obovate to oblong, fleshy, green, sometimes with dark mottling, surfaces glabrous to moderately hairy, apex emarginate, base cuneate; petiole 1-10 mm long, glabrous to moderately hairy, green; petiolule < 0.25 mm long, glabrous or sparsely hairy, light green. Leaves on cladodes reduced to scales, < 0.5 mm long, broad-triangular, glabrous, apex subacute, margin hairy. Stipules c.1.0 × c.1.5 mm, free, broad-triangular, upper surface glabrous, lower surface glabrous or glabrescent, apex subacute, margin hairy. Inflorescence a raceme, 1-3 per node, each with 4-15 flowers. Peduncle 1-10 mm long, glabrous to moderately hairy, green, occasionally flushed red. Pedicel 2-4 mm long, glabrous to sparsely hairy, pale green. Calyx 1.3-1.7 × 1.7-2.2 mm, campanulate, green, outer surface glabrous to moderately hairy. Calyx lobes 0.2-0.4 mm long, triangular, inner surface glabrous, appressed to corolla or rarely weakly spreading, apex acute. Standard 4.0-6.0 × 5.0-6.5 mm, obovate, patent, positioned in central part of keel, keeled, apex retuse; inner surface white, sometimes with a purple blotch, purple-veined; outer surface white, green at base, purple-veined; claw c.1 mm long, pale green. Wings 4.0-5.0 × 1.7-2.2 mm, oblong, longer than keel, apex obtuse; inner and outer surfaces white, purple-veined; auricle rounded, white; claw c. 1.5 mm long, pale green. Keel 3.2-4.2 × c.1.5 mm, apex obtuse; distal part of inner and outer surfaces purple, proximal part white; auricle < 0.5 mm long, rounded, pale green; claw c.1.5 mm long, pale green. Stamens 3-4 mm long. Pistil c.4 mm long, exserted, glabrous. Pods 6.5-15 × 2.0-5.5 mm, oblong, broad-oblong, elliptic, broad-elliptic, or sometimes orbicular, laterally compressed, erect or spreading, brown, grey, or black, valves dehiscent; beak 0.5-2.5 mm long, in a central apical position, stout, pungent-tipped. Seeds 1-5 per pod, 2.2-4.0 × 1.7-2.8 mm, oblong to reniform, orange, red, green, or yellow-green and often with black mottling, usually persistent on replum.

## Flowering:

October - February

## Fruiting:

November - May

## Threats:

Not Threatened

## \*Attribution:

Description from Heenan (1996)

## References and further reading:

Heenan, P.B. 1996: A taxonomic revision of *Carmichaelia* (Fabaceae - Galegeae) in New Zealand (part II). *New Zealand Journal of Botany* 34: 157-177. For full synonymy see this paper.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1596](http://nzpcn.org.nz/flora_details.asp?ID=1596)



**Caption:** *Carmichaelia australis*  
**Photographer:** Wayne Bennett



**Caption:** *Carmichaelia australis*  
**Photographer:** Wayne Bennett



## *Centaurium erythraea*

**Common Name(s):**

centuary

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3602](http://nzpcn.org.nz/flora_details.asp?ID=3602)



**Caption:** Stokes Valley. Dec 2005.  
**Photographer:** Jeremy Rolfe



**Caption:** Coromandel, December  
**Photographer:** John Smith-Dodsworth

## *Centella uniflora*

### **Common Name(s):**

Centella

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2084](http://nzpcn.org.nz/flora_details.asp?ID=2084)



**Caption:** Stokes Valley, Lower Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Developing fruit, Stokes Valley, Lower Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe

## *Cerastium glomeratum*

**Common Name(s):**

annual mouse-ear chickweed

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3605](http://nzpcn.org.nz/flora_details.asp?ID=3605)



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth



**Caption:** Cerastium glomeratum

**Photographer:** John Smith-Dodsworth



## *Chenopodium murale*

**Common Name(s):**

nettle-leaved fathen

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3675](http://nzpcn.org.nz/flora_details.asp?ID=3675)



**Caption:** *Chenopodium murale*

**Photographer:** John Smith-Dodsworth



**Caption:** *Chenopodium murale*

**Photographer:** John Smith-Dodsworth

## *Chenopodium triandrum*

### **Common Name(s):**

pigweed

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. Kermadec, Three Kings, North, South Stewart and Chatham Islands

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1829](http://nzpcn.org.nz/flora_details.asp?ID=1829)



**Caption:** Banks Peninsula

**Photographer:** Melissa Hutchison



**Caption:** Pencarrow, Wellington Harbour. Feb 1992.

**Photographer:** Jeremy Rolfe

## *Chenopodium trigonon* subsp. *trigonon*

### Common Name(s):

pigweed

### Current Threat Status (2012):

Not Threatened

### Threats:

Not Threatened

### References and further reading:

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2118](http://nzpcn.org.nz/flora_details.asp?ID=2118)



**Caption:** Chatham Islands

**Photographer:** John Sawyer



**Caption:** Chatham Islands

**Photographer:** John Sawyer



# *Chionochloa bromoides*

## Common Name(s):

Coastal Tussock, Seabird Tussock

## Current Threat Status (2012):

At Risk - Naturally Uncommon

## Distribution:

Endemic. North Island where virtually confined to northern offshore islands and easterly headlands from the Bay of Islands south to the Poor Knights, Chickens and Mokohinau Islands. One westerly outlier occurs at Maunganui Bluff.

## Habitat:

Coastal on cliff faces, bluffs, rock stacks, and in petrel scrub. Well established plants often have their bases heavily burrowed by sea birds such as diving petrels.

## Features\*:

Gynodioecious, stout, pendent often sprawling, bright green tussock with persistent leaves and sheaths. Leaf-sheath to 150 mm, shining yellow, keeled, persistent and entire, becoming fibrous, margin abundantly long hairy below, apical tuft of hairs to 4 mm; adaxially with many minute interrib hairs. Ligule to 1.5 mm. Leaf-blade to 500 × 10 mm, flat or shallowly U-shaped, smooth, persistent, adaxially glabrous except for long hairs on margin below and some short or long hairs, sometimes dense, at base. Culm to 700 mm, internodes glabrous. Inflorescence to 200 mm, very congested; rachis and main branches glabrous but with some long hairs at axils; pedicels short and densely hairy. Spikelets of up to 6 florets. Glumes acute or slightly awned, < adjacent lemma lobes, many prickle-teeth abaxially and a few adaxially; lower to 12 mm, 1-3-nerved, upper to 16 mm, 5-nerved.

Lemma to 9 mm; hairs dense at margin and in all internerves though sometimes absent from all or some, less than or equal to sinus, prickle-teeth abundant abaxially and adaxially on lobes and margins; lateral lobes to 5 mm including awn to 3 mm or acute, rarely dividing from awn at sinus; central awn to 22 mm from indistinct straight column. Palea to 10 mm, prickle-teeth abaxially and on flanks. Callus to 1.5 mm, hairs to 5 mm. Rachilla to 0.5 mm. Lodicules to 1.75 mm. Anthers to 5.5 mm in male-fertile flowers, up to 3 mm in male-sterile flowers. Male-fertile flowers with stigma-styles to 3.5 mm, ovary to 1.5 mm, and male-sterile flowers to 5 mm, ovary 1.5 mm. Seeds to 3.5 mm.

## Flowering:

September - December

## Fruiting:

November - March

## Threats:

Not Threatened. Listed because it is a naturally uncommon, regional endemic.

## \*Attribution:

Description modified from Edgar and Connor (2000)

## References and further reading:

Edgar, E.; Connor, H.E. 2000: Flora of New Zealand. Vol. V. Grasses. Christchurch, Manaaki Whenua Press. 650 pp.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=439](http://nzpcn.org.nz/flora_details.asp?ID=439)



**Caption:** Central Valley mouth, Fanal Island

**Photographer:** Peter de Lange



**Caption:** Maunganui Bluff (November)

**Photographer:** John Smith-Dodsworth

## *Cirsium vulgare*

### **Common Name(s):**

Scotch thistle

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Relatively open conditions are required for germination and establishment (West, 1996). Wasteland, roadsides, pastures, gardens, cultivated land, disturbed forest (Webb et al., 1988). Track edges, slips, barer ridges, under light gaps in the forest (West, 1996).

### **Features:**

Taprooted biennial 50-150cm tall; stems branched and covered in fine cobweb-like hairs; prickles pale 4-10mm long; purple flowers 28-33mm long (Webb et al., 1988). The flowers are clustered at the end of the stem and the numerous wind-dispersed seeds (West, 1996).

### **Flowering:**

November, December, January, February, March

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3706](http://nzpcn.org.nz/flora_details.asp?ID=3706)



**Caption:** *Cirsium vulgare*

**Photographer:** John Sawyer



**Caption:** Seed heads. Lake Waikato, near Waverley, Taranaki. Mar 2013.

**Photographer:** Robyn Ogle

# *Clematis paniculata*

**Common Name(s):**

white clematis, puawananga

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Endemic. North, South and Stewart Islands. Naturalised on Chatham Island.

**Habitat:**

Coastal to montane in shrubland or tall forest (up to 1000 m a.s.l.).

**Features\*:**

Robust high-climbing evergreen woody vine. Main stems woody up to 200 mm diameter at base, branching in upper ½ or less, bark grey-brown, furrowed, branchlets stout, pliant, glabrescent. Leaves dark and glabrous above, pale green and sparsely covered in white hairs beneath, 3-foliolate, (50-)-70-130-(10) × 60-120(-190) mm; leaflets coriaceous, broadly ovate to broad-oblong, cordate to truncate at base; margin entire to crenately toothed or lobed near apex, rarely deeply lobed to almost dissected; petiole (20-)-30-60(-70) mm long. Flowers unisexual, in compound axillary dichasial cymes. Bracts paired; lower pair often leaf-like, united, usually inserted below middle of pedicel. Male flowers: sepals 6, imbricate, white, glabrous above, hairy beneath, spatulate to obovate or oblong, 25-35(-60) × 8-15-(24) mm; stamens numerous; anthers 1.5-2.0(-2.5) mm long; filaments sparsely hairy or glabrous. Female flowers: sepals 6, similar to male, (16)-20-25-(40) × 7-10(-13) mm; staminodes few. Achenes hairy, 2-4 mm long. Style (2.5)-3.5-6.5 cm long at fruiting, plumose. Fruits not persistent.

**Flowering:**

July - November

**Fruiting:**

October - January

**Threats:**

Not Threatened

**\*Attribution:**

Description adapted from Webb et al. (1988)

**References and further reading:**

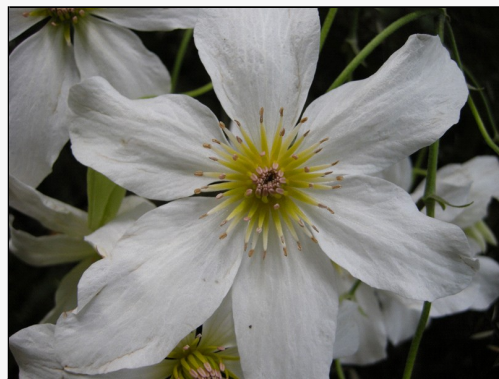
Esler, A.E. 1969. Leaves of *Clematis paniculata*. Wellington Botanical Society Bulletin, 36: 40

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

Webb et al. (1988), Flora of New Zealand Vol. IV. DSIR Botany Division, Lincoln.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1683](http://nzpcn.org.nz/flora_details.asp?ID=1683)



**Caption:** Ruahine Range, near Sunrise Hut

**Photographer:** John Sawyer



**Caption:** Dunedin Town belt

**Photographer:** John Barkla



*Coprosma macrocarpa* subsp.  
*macrocarpa*

**Common Name(s):**

large-seeded Coprosma

**Current Threat Status (2012):**

At Risk - Naturally Uncommon

**Distribution:**

Endemic. Confined to the Three Kings Islands. A single specimen found on Aorangi Island (Poor Knights) may be a recent introduction from the adjacent mainland, as this plant is now commonly cultivated in northern New Zealand. Naturalised in Auckland and around Wellington cities

**Threats:**

A local endemic, common on but confined to the Three Kings Islands. A single record from the Poor Knights Islands is probably a chance naturalisation from the nearby mainland where it is now commonly cultivated

**References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1720](http://nzpcn.org.nz/flora_details.asp?ID=1720)



**Caption:** Coprosma macrocarpa subsp. macrocarpa fruits

**Photographer:** John Smith-Dodsworth, Ex Cult. November



**Caption:** A plant of Coprosma macrocarpa subsp. macrocarpa fruits

**Photographer:** John Smith-Dodsworth, Ex Cult. November

## *Coprosma macrocarpa* subsp. *minor*

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. Confined to the North Island and near shore islands (except the Three Kings Islands) from North Cape south to Kawhia Harbour and Hicks Bay

### **Threats:**

Not Threatened

### **References and further reading:**

Gardner, R. 2006. Flowering time in *Coprosma macrocarpa* subsp. *minor* (Rubiaceae). Auckland Botanical Society Journal, Volume 61: 122-123.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1721](http://nzpcn.org.nz/flora_details.asp?ID=1721)



**Caption:** *Coprosma macrocarpa* subsp. *minor*

**Photographer:** Peter de Lange



**Caption:** Coromandel, August

**Photographer:** John Smith-Dodsworth

# *Coprosma repens*

## Common Name(s):

taupata, looking glass plant, mirror plant

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. Three Kings, North and South Islands as far south as Greymouth in the west and Rarangi in the east but now extensively naturalised throughout the South Island, Stewart and Chatham Islands. Also naturalised on Norfolk Island and in Hawaii, in Australia, California and South Africa.

## Habitat:

Coastal (rarely inland: Kaitaia – Awanui River, Huntly Basin and in the Manawatu – especially the upper Rangitikei River). A common species of rock stacks, islets, islands coastal cliffs, talus slopes and boulder field. Also a common component of petrel scrub on northern offshore islands, and in coastal forest where it often forms the main understorey and rarely is co-dominant in the canopy. Frequently associated with other coastal *Coprosma*, especially *C. crassifolia*, *C. macrocarpa* subsp. *macrocarpa* and subsp. *minor*, *C. rhamnoides*, *C. neglecta*, and members of the *C. acerosa* complex. Hybrids between *C. repens* and *C. acerosa* are common and are known as *C. xkirkii*, less frequently hybrids between it and *C. crassifolia* are found (*C. xbuchananii*) and with both *C. rhamnoides* and *C. neglecta*.

## Features\*:

Dioecious (rarely monoecious) shrub or small tree up to 8 m tall, prostrate and widely spreading in exposed sites, shrubb to arborescent in more sheltered situations; branches firm and more or less pliant when young becoming more brittle with age, bark dark to light brown, underbark green; branchlets initially pubescent with short patent hairs, becoming glabrous with age. Leaves on fleshy glabrous, slender to stout petioles 8-16 mm long. Stipule shortly sheathing, margin finely pubescent, otherwise outer surface pubescent, inner more or less glabrous, broad-deltoid, subacute to subtruncate; denticles up to 4 either side of a single large, dark black apical denticle, conspicuous, central one prominent. Lamina thick, subfleshy, coriaceous, 5-90 × 4-60 mm, dark glossy green above, paler and dull below; broad-oblong, elliptic-oblong, broadly ovate-oblong to suborbicular, rounded to truncate, usually apiculate (slightly emarginate to retuse on Three Kings and northern Hauraki Gulf Islands), apiculus caducous, cuneately narrowed to base; margins plane to slightly recurved (very occasionally inrolled). Vein reticulations evident above and especially below. Flowers in compound clusters on branched peduncles. Male flowers 3-20 per cluster; calyx-teeth minute; corolla funnelform, lobes 4-5, acute, about = tube. Female flowers usually 3 per cluster; calyx-teeth short, obtuse; corolla subfunnelform, c.5 mm long, lobes acute or obtuse, < tube; stigmas stout (Perfect flowers occasional (though with pollen often aborted or malformed) through out range but especially common on the northern offshore islands). Drupe orange-red, red (rarely yellow), obovoid often slightly compressed, 8-12 × 8-10 mm

## Flowering:

June - February

## Fruiting:

July - June

## Threats:

Not Threatened

## \*Attribution:

Description based on Allan (1961) though supplemented with additional measurements and observations taken from herbarium specimens and wild plants.

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Government Printer, Wellington.

Dawson, J.W. 1961. *Coprosma*. The Spike (or Victoria University College Review). Victoria University of Wellington Student's Association.

Gordon, H.D. 1959. Sex ratio in *Coprosma repens* (rubiaceae). Wellington Botanical Society Bulletin, 31: 11

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1730](http://nzpcn.org.nz/flora_details.asp?ID=1730)



**Caption:** Awhitu Peninsula, Auckland region

**Photographer:** John Sawyer



**Caption:** Coprosma repens

**Photographer:** Wayne Bennett



## *Coprosma rhamnoides*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

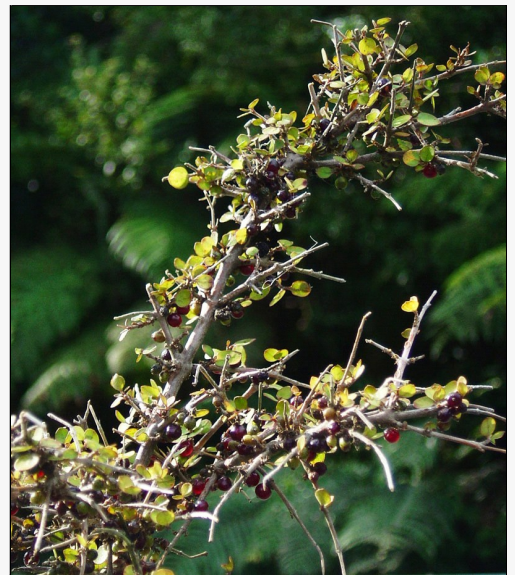
### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1731](http://nzpcn.org.nz/flora_details.asp?ID=1731)



**Caption:** *Coprosma rhamnoides* (female)

**Photographer:** Wayne Bennett



**Caption:** Fruit of *Coprosma rhamnoides*

**Photographer:** Wayne Bennett

# *Cordyline australis*

## Common Name(s):

cabbage tree, ti, ti kouka, palm lily

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. Common in the North, South and Stewart Islands. Probably naturalised on the Chatham Islands.

## Habitat:

Widespread and common from coastal to montane forest. Most commonly encountered on alluvial terraces within riparian forest.

## Features:

Tree up to 20 m tall, trunk stout, 1.5-2 m diam, many-branched above (prior to flowering, trunk slender and solitary, branching happens after the first flowering). Bark corky, persistent, fissured, pale to dark grey. Leaves numerous (0.2-)0.3-1(-1.5) x (0.2)-0.3(-0.6) m, dark to light green, narrowly lanceolate to lanceolate, erect to erecto-patent, scarcely inclined to droop, midrib indistinct. Petiole indistinct, short. Inflorescence a panicle. Peduncle stout, fleshy 40 mm or more in diam., panicle of numerous flowers, (0.6-)1(-1.8) x .3-0.6(-0.8) m, branching to third or fourth order, these well spaced, basal bracts green and leaf-like, ultimate racemes 100-200 mm long, 20 mm diam., bearing well-spaced to somewhat crowded, almost sessile to sessile flowers and axes. Flowers sweetly perfumed, perianth 5-6 mm diam., white, tepals free almost to base, reflexed. Stamens about same length as tepals. Stigma short, trifid.

## Flowering:

(September-) October-  
December (-January)

## Fruiting:

(December-)  
January-March

## Threats:

Populations have been decimated from some parts of the country due to a mysterious illness linked to a Myoplast Like Organism (MLO) which is believed to cause the syndrome known as Sudden Decline. Plants stricken with this illness suddenly, and rapidly, wilt, with the leaves failing off still green. If the bark is peeled off the base of the tree near the soil line blackened or rotten spots are typically present. Once stricken with Sudden Decline there is no cure and the trees can die within days. Recently there has been some evidence to suggest the severity of Sudden Decline is lessening.

## References and further reading:

Beever, R. et al. 1996. Sudden decline of cabbage tree. *NZ Journal of Ecology*, 20(1): 53-68

Duguid, F. 1976. *Cordyline australis* at Lake Kopureherehe. *Wellington Botanical Society Bulletin*, 39: 46-47

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1744](http://nzpcn.org.nz/flora_details.asp?ID=1744)



**Caption:** Awhitu Regional Park, Auckland region

**Photographer:** John Sawyer



**Caption:** *Cordyline australis*

**Photographer:** Wayne Bennett



## *Cortaderia jubata*

### **Common Name(s):**

purple pampas grass

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Forest light gaps, slips, margins, disturbed sites, open habitats, riverbeds, cliffs, inshore and offshore islands, tussockland, fernland, herbfield, duneland, coastline, gumlands, salt marsh, estuaries, shrublands.

### **Features:**

Large-clump-forming grass to 3 m+. Leaf base very hairy, no white waxy surface. Leaves with conspicuous midrib which does not continue into leaf base, no secondary veins between midrib and leaf edge. Both leaf surfaces dark green, snap readily when tugged. Dead leaf bases spiral like wood shavings. Flowerhead erect, dense, uniform, fluffy, bright purple, fading to dirty brown, Jan- Mar.

### **Flowering:**

January, February,  
March

### **Fruiting:**

March-April (Timmins & MacKenzie  
1995).

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3752](http://nzpcn.org.nz/flora_details.asp?ID=3752)



**Caption:** Cortaderia jubata with Cortaderia fulvida in foreground. Puntagirua Stream, Paliser Bay.

**Photographer:** Jeremy Rolfe



**Caption:** North of Silverstream Scenic Reserve, Upper Hutt. Apr 2006.

**Photographer:** Jeremy Rolfe



## *Cortaderia selloana*

### **Common Name(s):**

pampas grass

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. A coastal and lowland plant found between sea level and 800 metres. Plant grows in sites of all levels of fertility from low to high. The plant grows in a wide variety of soils from pumice and coastal sands to heavy clay (Ford 1993). Coloniser of open ground (West, 1996). A plant that occurs in low or disturbed forest (including plantations), wetlands, grasslands, scrub, cliffs, coastlines, islands, forest margins, riverbanks, shrubland, open areas, roadsides and sand dunes. The plant's primary habitat is disturbed ground.

### **Features:**

Large-clump-forming grass to 4 m+. Leaf base smooth or sparsely hairy, no white waxy surface (cf. toetoe - *Austroderia* - species). Leaves with conspicuous midrib which does not continue into leaf base, no secondary veins between midrib and leaf edge. Leaves bluish-green above, dark green below, snap across readily when tugged (toetoe species have multiple ribs in the leaves, making the leaves difficult to snap across). Dead leaf bases spiral like wood shavings, which makes pampas grasses more flammable than toetoe species. Flower head erect, dense, fluffy, white-pinkish, fading to dirty white, (Jan)-Mar-Jun.

### **Flowering:**

March, April, May

### **Fruiting:**

April-May (Timmins & MacKenzie 1995).

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3753](http://nzpcn.org.nz/flora_details.asp?ID=3753)



**Caption:** Plimmerton. Jun 2006.

**Photographer:** Jeremy Rolfe



**Caption:** Plimmerton. Jun 2006.

Glabrous leaf base.

**Photographer:** Jeremy Rolfe

## *Corymbia ficifolia*

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4550](http://nzpcn.org.nz/flora_details.asp?ID=4550)



**Caption:** *Corymbia ficifolia*  
**Photographer:** Geoff Hare



**Caption:** *Corymbia ficifolia* -  
flowers  
**Photographer:** Geoff Hare



## *Corynocarpus laevigatus*

### **Common Name(s):**

Karaka, kopi

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. Exact indigenous distribution uncertain due to its widespread historic planting by Maori. Common from Raoul and the Three Kings Islands, throughout the North and South Islands to Banks Peninsula and Okarito. Also on the Chatham Islands. Most botanists accept it as native only to the northern half of the North Island. It is widely naturalised in lowland forests, from gardens and 'conservation plantings' well south of its presumed natural range. Seedlings can form dense carpets to the exclusion of other native regeneration (Costal et al. 2006). It is probably naturalised from deliberate Polynesian plantings on Raoul and the Chatham Islands.

### **Habitat:**

Common in mainly coastal situations, often a major component of coastal forest, rarely dominant. Occasionally found inland, and then often in association with Maori cultural deposits.

### **Features\*:**

Leafy canopy tree up to 15 m tall. Trunk stout up to 1 m diam., Bark grey. Branches stout, erect to spreading. Petioles 10-15 mm long. Leaves dark green above paler beneath, thick, leathery, (50-)100-150(-200) x (30-)50-70 mm, glossy, elliptic to obovate-oblong, margins recurved. Inflorescence a stout, erect panicle up to 200 mm long, peduncles and pedicels short, somewhat fleshy, pale green. Flowers 4-5 mm diam., greenish-cream to off-white or pale yellow. Sepals suborbicular, petals 5, obovate-spathulate, alternating with 5 subpetaloid staminodes. Fruit an ellipsoid to ovoid drupe 25-40(-46) mm long, flesh pale yellow to orange. Endocarp a fibrous reticulum surrounding a smoother, harder papery layer beneath. This structure enclosing a single seed (kernel).

### **Flowering:**

August - November

### **Fruiting:**

January - April

### **Threats:**

Abundant and not threatened. Often naturalising in suitable habitats.

### **\*Attribution:**

Fact Sheet prepared for NZPCN by P.J. de Lange (1 September 2004). Description based on Allan (1961).

### **References and further reading:**

Allan, H.H. 1961: Flora of New Zealand. Vol. 1. Wellington, Government Printer.

J.A. Costall, R.J. Carter, Y. Shimada, D. Anthony & G. L. Rapson (2006). The endemic tree *Corynocarpus laevigatus* (karaka) as a weedy invader in forest remnants of southern North Island, New Zealand, *New Zealand Journal of Botany*, 44:1, 5-22, DOI:10.1080/0028825X.2006.9513002

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1762](http://nzpcn.org.nz/flora_details.asp?ID=1762)



**Caption:** Seedlings. Lake Westmere, Whanganui. Feb 2013.

**Photographer:** Colin Ogle



**Caption:** Seedlings. Lake Westmere, Whanganui. Feb 2013.

**Photographer:** Colin Ogle



## *Cotula coronopifolia*

### **Common Name(s):**

bachelor's button, yellow buttons, waterbuttons

### **Current Threat Status (2012):**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2304](http://nzpcn.org.nz/flora_details.asp?ID=2304)



**Caption:** *Cotula coronopifolia*

**Photographer:** Wayne Bennett



**Caption:** North Otago

**Photographer:** John Barkla

## *Crassula colligata* subsp. *colligata*

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. In New Zealand known from North and South Islands but more common in the eastern South Island. Common in Australia

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2093](http://nzpcn.org.nz/flora_details.asp?ID=2093)



**Caption:** Sutton Salt lake

**Photographer:** John Barkla

## *Crassula multicava* subsp. *multicava*

### Common Name(s):

fairy crassula

### Current Threat Status (2009):

Exotic

### Habitat:

Terrestrial.

### Features:

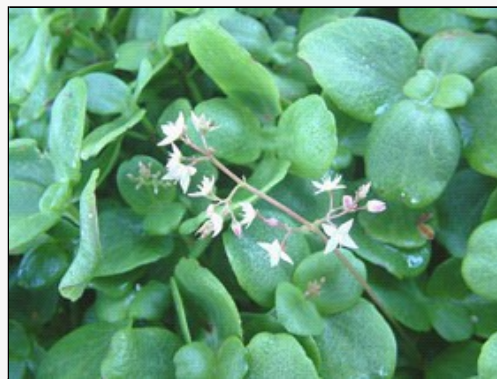
Glabrous perennial herb; stems prostrate, creeping, sprawling or decumbent, rooting at nodes. Leaves shortly petiolate, sometimes with petioles to 2 cm long, mostly on distal ascending part of stems, not decussate or imbricate except in small rosettes at stem apices, to 45-(55) x 40-(43)mm, broadly ovate, broadly oblong-elliptic, to suborbicular or almost square, flat, entire, green or glaucescent, often suffused with red, especially towards margins, dotted with numerous whitish or reddish hydathodes; base rounded, truncate or subcordate; apex rounded or more or less emarginate. Inflorescence a loose thyrse, to about 10 cm long but very variable in size; main axis with very small bracts. Flowers 5-merous, 8-12 mm diameter, usually 12-numerous, on pedicels slightly < to = flowers. Calyx 1.5-2 mm long; lobes triangular. Corolla star-like, petals free and patent, (4)-5-6 x 1-2 mm, narrowly triangular or triangular-lanceolate, rose to crimson in bud, pale pink inside at anthesis; apex acute. Stamens 3-4 mm long, < carpels. Scales 0.2-0.3 mm long, more or less rectangular (wider than long). Fruits and seeds not seen, but flowers often replaced by small plantlets in inflorescence branch axils. (Webb et al 1988).

### Flowering:

August, September, October, November, December, January, February

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=3769](http://nzpcn.org.nz/flora_details.asp?ID=3769)



**Caption:** Papa Aroha, November  
**Photographer:** John Smith-Dodsworth



**Caption:** Papa Aroha, November  
**Photographer:** John Smith-Dodsworth



## *Crassula sieberiana*

### Common Name(s):

none known

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous: New Zealand: Three Kings, North, South, Chatham Islands (also Australia)

### Features\*:

Short-lived perennial or annual herb forming dull green, pink, reddish-green or red clumps; stems 10-50(-200) mm long, sprawling, ± decumbent, suberect to erect, slender, sometimes rooting at nodes in moist conditions, much-branched. Leaves connate at base, 2.0-2.5(-4.0) × 0.5-0.7(-1.0) mm, c.0.7 mm thick, lanceolate or ovate-lanceolate, flattened above, convex beneath; apex acute. Flowers in small cymose clusters in lf axils, not star-like or fragrant, 4-merous, 2-3 mm diameter; pedicels < 1 mm long at anthesis, to c.2 mm long and ± = leaves at fruiting. Calyx lobes c.1.0-1.2 × 0.7-0.8 mm, very broadly ovate, acute to short-acuminate. Petals c.0.8-0.9 × 0.5-0.6 mm, broadly ovate, green or reddish green with pink tips, shortly acuminate, slightly < calyx lobes. Scales c.0.3 mm long, very narrowly spatulate. Follicles smooth. Seed 0.3-0.5 mm long.

### Flowering:

August - December

### Fruiting:

October - March

### Threats:

Not Threatened

### \*Attribution:

Description modified from Webb et al. (1988)

### References and further reading:

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: Flora of New Zealand. Vol. IV. DSIR Botany Division, Christchurch.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2095](http://nzpcn.org.nz/flora_details.asp?ID=2095)



**Caption:** Beacon Rock

**Photographer:** Melissa Hutchison



**Caption:** Wainuiomata River mouth.

**Photographer:** Jeremy Rolfe

## *Crepis capillaris*

**Common Name(s):**

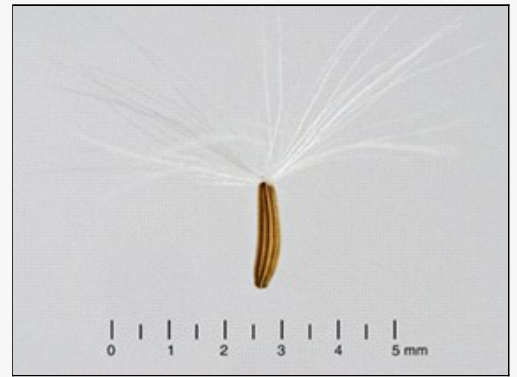
hawksbeard

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3736](http://nzpcn.org.nz/flora_details.asp?ID=3736)



**Caption:** Stokes Valley, Lower Hutt. Achene. Jan 2007.

**Photographer:** Jeremy Rolfe



**Caption:** *Crepis capillaris*

**Photographer:** John Smith-Dodsworth

## *Crocoshmia paniculata*

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3758](http://nzpcn.org.nz/flora_details.asp?ID=3758)



# *Cupressus macrocarpa*

**Common Name(s):**

macrocarpa

**Current Threat Status (2009):**

Exotic

**Habitat:**

Terrestrial. regenerating bush and scrub near planted trees and hedgerows.

**Features:**

Medium sized tree to about 36 metres. Has distinctive fluted trunk when mature, bark is thick, reddish brown beneath often becoming whitish on the surface. Adult foliage comprises many small dark green scales closely appressed to the branchlets, but not flattened. Juvenile foliage more needle like, and not appressed. Male cones up to about 3 mm long, yellow and knobbly arising on the tips of the branches. Female cone are also terminal, rosette-like at first, becoming a rounded brown cone with 8-14 scales when mature. Usually 10-20 small seeds per cone scale.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3776](http://nzpcn.org.nz/flora_details.asp?ID=3776)



**Caption:** Awhitu Regional Park - NZ's largest macrocarpa tree  
**Photographer:** John Sawyer



**Caption:** South Karori, Wellington. Aug 2012.  
**Photographer:** Jeremy Rolfe

# *Cyathea dealbata*

## **Common Name(s):**

silver fern, ponga

## **Current Threat Status (2012):**

Not Threatened

## **Distribution:**

Endemic. From the Three Kings Islands south to Mahers Swamp in the west and Dunedin in the east of the South Island.

## **Habitat:**

Common, primarily coastal and lowland habitats but extending to lower montane. Preferring dry forest and shrubland, often under pines.

## **Features\*:**

Tree fern up to 10 m tall (very rarely without trunk). Trunk covered in long-persistent, peg-like, stipe bases. Stipes slender, silvery-white when young, maturing pale brown. Harsh to the touch, covered in pale-brown scales. Scales without marginal spines. Fronds up to 4 m long, horizontal, somewhat arching, 3-pinnate. Dead fronds falling. Longest primary pinnae 300-550 mm, pale green above, white below (very rarely pale green) below. Under surfaces sparingly clad in curly hairs. Indusia covering sori at maturity, opening at maturity to form a deep cup with a smooth rim.

## **Flowering:**

None (spore bearing)

## **Fruiting:**

None (spore bearing)

## **Threats:**

Not Threatened.

## **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange March 2004.  
Description adapted from Brownsey & Smith-Dodsworth (2000).

## **References and further reading:**

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

## **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1776](http://nzpcn.org.nz/flora_details.asp?ID=1776)



**Caption:** *Cyathea dealbata*

**Photographer:** Wayne Bennett



**Caption:** *Cyathea dealbata*

**Photographer:** Wayne Bennett



# *Cyperus ustulatus*

## Common Name(s):

Coastal cutty grass, Giant umbrella sedge, cyperus

## Current Threat Status (2012):

Not Threatened

## Distribution:

Abundant in the North Island and northern South Island, west to Fiordland, and not threatened. Naturally uncommon at its eastern South Island limit, where it is known only from Tai Tapu, Motukarara, Banks Peninsula and the Rakaia River mouth. Also on the Chatham Islands, where it is not very common.

## Habitat:

Coastal to lowland sites in open ground. Tolerant of a wide range of habitats and conditions but evidently preferring wetland margins, seepages, streamsides, lagoon and estuary margins.

## Features\*:

Robust, 0.6–2.0 m tall, with leaves crowded at base of culms. Culms triquetrous, glabrous, striated. Leaves 0.6–1.2 m long, 8–15 mm wide, lamina coriaceous, strongly keeled, multitubular with numerous septa prominent on the abaxial side, margins and keel very sharply and minutely serrulate; sheath brown. Inflorescence a terminal umbel 40–140 mm long, of 6–12 unequal rays; rays usually unbranched, rarely with secondary branches at base; involucre of numerous leaf-like bracts very much > inflorescence Spikelets 8–13 mm long, numerous, dark brown or yellow-brown, crowded on each ray into a dense spike 35–70 mm. long. Glumes 5–20 in each spikelet, ovate-oblong, obtuse or mucronate, hard, smooth and shining, keeled, red-brown with white nerves, 2(-3) lowermost and 1–2 uppermost glumes smaller, empty, the remainder fertile. Stamens with persistent filaments. Nut 1.5–2 × c.0.5 mm., c.1/2 length of glume, linear-oblong, trigonous, brown.

## Flowering:

July - December

## Fruiting:

July - April

## Threats:

Not Threatened

## \*Attribution:

Description adapted from Moore and Edgar (1970)

## References and further reading:

Heenan and de Lange (2005). *N.Z.J.Bot.* 43: 351-359: *Cyperus insularis* (Cyperaceae), a new species of sedge from northern New Zealand.

Moore, L.B.; Edgar, E. 1970: *Flora of New Zealand*. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1430](http://nzpcn.org.nz/flora_details.asp?ID=1430)



**Caption:** *Cyperus ustulatus* f. *ustulatus*

**Photographer:** Wayne Bennett



**Caption:** *Cyperus ustulatus* f. *ustulatus*

**Photographer:** Wayne Bennett



## *Cyrtomium falcatum*

**Common Name(s):**

holly fern

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3779](http://nzpcn.org.nz/flora_details.asp?ID=3779)



**Caption:** New Plymouth. Jun 2012.

**Photographer:** Colin Ogle



**Caption:** *Cyrtomium falcatum*

**Photographer:** John Smith-Dodsworth

## *Dactylis glomerata*

### Common Name(s):

cocksfoot

### Current Threat Status (2009):

Exotic

### Habitat:

Terrestrial. A plant of coastal, lowland, montane and subalpine habitats (Timmins & MacKenzie 1995). Plant grows in scrub and forest margin, shrubland, tussockland, herbfields, fernland, sand dune hollows and riverbeds (Timmins & MacKenzie 1995).

### Features:

Hairless, erect, greyish to bluish green, strongly tufted perennial grass to 1 m tall. Roots fibrous. Emerging leaf folded; ligule 2-12 mm long, membranous, often torn; sheath strongly flattened, sharply keeled. Leaves 100-450 x 2-14 mm, rough towards boat-shaped tip, harsh when old, dull beneath with prominent sharp keel. Seedhead a large panicle, with one-sided clusters of flattened spikelets. Seeds with bristly ends.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=3809](http://nzpcn.org.nz/flora_details.asp?ID=3809)



**Caption:** Spikelets. Whanganui. nov 2011.

**Photographer:** Colin Ogle



**Caption:** Spikelets. Whanganui. nov 2011.

**Photographer:** Colin Ogle



## *Dendroconche scandens*

### Common Name(s):

fragrant fern, mokimoki

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. New Zealand: North, South and Chatham Islands - widespread from North Cape to Franz Josef (Westland). Also Australia (Eastern Australia (Queensland, New South Wales and Victoria), also Lord Howe Island.

### Habitat:

Coastal to lowland, in forest. *Dendroconche scandens* is a common creeping fern covering rock piles, tree and tree fern trunks and bare ground. Unlike the superficially similar *Zealandia pustulata*, *Dendroconche scandens* is much less drought tolerant and so prefers less open, shaded and damper situations.

### Features\*:

Epiphytic or rupestral scrambling or climbing fern. Rhizomes long-creeping, 2-4 mm diameter, rather slender, flexuose (wiry), densely invested in persistent scales. Scales 2.0-8.0 × 1.0-2.2 mm, dark brown to purple-brown, ovate to narrowly ovate, squarrose, acuminate, minutely dentate near base. Fronds 75-580 × 10-30 mm (simple fronds 45-39 × 6-31 mm), dull green. Stipes 6-160 mm long, slender, pale, glossy, sparsely scaly. Lamina membranous, deeply pinnatifid or simple, strongly, pleasantly scented when fresh or recently dried. Pinnae in 1-20 pairs, 8-100 × 2.5-18 mm, falcate, strongly ascending, tapering toward apices, base adnate, tapering into stipe; margins often undulose; veins reticulate, usually forming only 1 series of areoles between costa (midrib in simple fronds) and lobe margin, glabrous part from a few scattered scales on midrib and costae. Sori in 1 row close to margin on each side of costa of laminal lobe or midrib in simple fronds, rounded or sometimes elongated or oval, impressed into abaxial lamina, forming low protuberances on the adaxial lamina surface. Spores orange-brown.

### Flowering:

Not applicable - spore producing

### Fruiting:

Not applicable - spore producing

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (13 January 2012). Description adapted from Brownsey & Smith-Dodsworth (2000) and Bostock & Spokes (1998).

### References and further reading:

Bostock, P.D.; Spokes, T.M. 1998: Polypodiaceae. Pp. 468-495. Flora of Australia 48. Australian Biological Resources Study, CSIRO Canberra

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

Testo, W.L.; Field, A.R.; Sessa, E.B.; Sundue, M. 2019: Phylogenetic and morphological analyses support the resurrection of *Dendroconche* and the recognition of two new genera in Polypodiaceae Subfamily Microsoroideae. *Systematic Botany* 44(4): 1-16. DOI 10.1600/036364419X15650157948607

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2202](http://nzpcn.org.nz/flora_details.asp?ID=2202)



**Caption:** Under the leaf of *Microsorium scandens*

**Photographer:** Wayne Bennett



**Caption:** *Microsorium scandens* (Mokimoki)

**Photographer:** Wayne Bennett



# *Dianella nigra*

## Common Name(s):

turutu, New Zealand blueberry, inkberry

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North and South Islands

## Habitat:

coastal to montane (rarely subalpine) (1-1100 m a.s.l.). Colonising a wide variety of habitats from open coastal headlands, gumland scrub and less frequently peat bogs through to dense forest and subalpine scrub.

## Features:

Loose tussock forming evergreen perennial herb, forming dense to open, diffuse clumps; rhizomes horizontally 150 mm (or more) long, strong and well developed. Leaves 250-800 x 12-18 mm, uniformly green to dark green, with distinct dark marginal bands 2-4 mm wide, discolorous, upright to strongly curved and distinctly drooping, more or less flat, lamina smooth and more or less glossy; margin and midrib of the leaf undersides smooth to scabrid, teeth often prominent; apex acute, leaf sheaths equitant, tightly clasping, surface light green to dark green with a reddish margin; apex acute to subacute. Inflorescence erect to spreading, up to 1 m long, exerted above the leaves; scape slender, arching, base asymmetric and up to 100 x 75 mm diameter; panicle 300-500 mm long, branches spreading, short, regularly spaced; cauline leaves subtending branches, leaf-like at the base but reducing in size and becoming bract-like distally; cymules 3-7-flowered; pedicels 10-17 mm long, slightly recurved, terete; bracteoles 1.0-1.2 x c.0.2 mm, narrow triangular, subtending pedicels caducous. Flowers nodding, 9-11 mm diameter, opening early morning, collapsing late afternoon, perianth segments strongly recurved at anthesis; sepals 4.4-4.5 x 1.6-1.7 mm, oblong, undersides olive-green flushed red-brown, upper surface paler, apex obtuse; petals 3.5-4.0 x 2.3-3.4 mm, obovate, white, midvein olive-green, apex obtuse to retuse; filaments 6, 1.3-1.4 mm long, white; anthers 1.3-1.4 x c.0.4 mm, yellow-brown, struma 1.2-1.4 x c.0.6 mm, obovate, yellow, minutely papillose; ovary 1.4-1.6 x 1.1-1.3 mm, green, more or less globular; style 1.7-2.1 mm long, white. Berry 8-20 x 7-10 mm, ovoid to oblong, grey-white and dull to strongly violet-blue and glossy, pericarp spongy. Seeds 1.8-2.1 x 2.3-3.0 mm, ovoid, black, shiny.

## Flowering:

November - December

## Fruiting:

December - May

## Threats:

Not Threatened

## References and further reading:

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1788](http://nzpcn.org.nz/flora_details.asp?ID=1788)



**Caption:** *Dianella nigra*

**Photographer:** Wayne Bennett



**Caption:** *Dianella nigra*

**Photographer:** Wayne Bennett

## *Dichelachne crinita*

### Common Name(s):

long-hair plume grass

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. Throughout North, South, Stewart, Chatham and Kermadec Islands. Also in Australia and most of the Pacific Islands.

### Habitat:

Coastal to subalpine. Usually in open ground under light scrub, under light forest cover, in tussock grassland, on clay pans and along roadsides. Also frequently encountered on rock outcrops, in associated talus, on boulderfield and as an urban weed of rough pasture, kerbsides and industrial wasteland.

### Features\*:

Light green to yellow-green, stout, tall tufted grass. Branching extravaginal. Leaves less than or equal to the erect to somewhat nodding narrow plumed culms. Leaf-sheath light brown, with minute, soft, appressed, retrorse hairs. Ligule 0.5-1.5 mm, membranous, undersides minutely scabrid, more or less truncate, minutely ciliate, occasionally asymmetric. Leaf-blade up to 400 x 1.5-5.0 mm, stiff, flat or slightly inrolled, gradually tapering, strongly ribbed, underside scabrid near apex, upper surface minutely scabrid on margins and ribs. Culm 0.3-1.2 m, internodes glabrous or minutely scaberulous below panicle. Panicle 100-250 mm, erect, spicate, light green to straw-yellow, often tinged with purple, densely branched, close-set, erect branches hidden by spikelets pulled together by entwining awns; rachis, branchlets and pedicels closely short-scabrid; spikelets, numerous, glossy. Glumes very narrow, linear-lanceolate, silvery; lower 4.5-9.0 mm, more or less equal to glume, shortly aristate, upper 5.5-10.0 mm long, equal to or greater than lemma, apex acuminate. Lemma 4.5-8.0 mm long, minutely scabrid, apex scarcely bifid; awn 20-30 mm, light green to purple, inserted 1.5-3.0 mm below lemma apex, column straight, awn more or less falcate and twisted about once. Palea 3-5 mm long, very narrow, keels minutely scabrid near ciliate apex. Callus hairs to 0.7 mm. Rachilla prolongation 0.1 mm long. Lodicules 0.5-0.7 mm long, membranous, elliptic, acute, apically ciliate. Anthers 1-3, 0.7-2.0 mm in opened flowers, 0.2-0.9 mm long in cleistogamous flowers. Seed 2.0-2.5 x 0.3-0.4 mm.

### Flowering:

September - February

### Fruiting:

October - July

### Threats:

Not Threatened

### \*Attribution:

Description modified from Edgar and Connor (2000)

### References and further reading:

Edgar, E.; Connor, H.E. 2000: Flora of New Zealand. Vol. V. Grasses. Christchurch, Manaaki Whenua Press. 650 pp.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2103](http://nzpcn.org.nz/flora_details.asp?ID=2103)



**Caption:** Rangitoto Island  
**Photographer:** John Barkla



**Caption:** *Dichelachne crinita*  
**Photographer:** John Barkla



## *Dichondra brevifolia*

**Common Name(s):**

Dichondra

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Probably endemic. Three Kings, North, South, Stewart and Chatham Islands

**Threats:**

Not Threatened

**References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

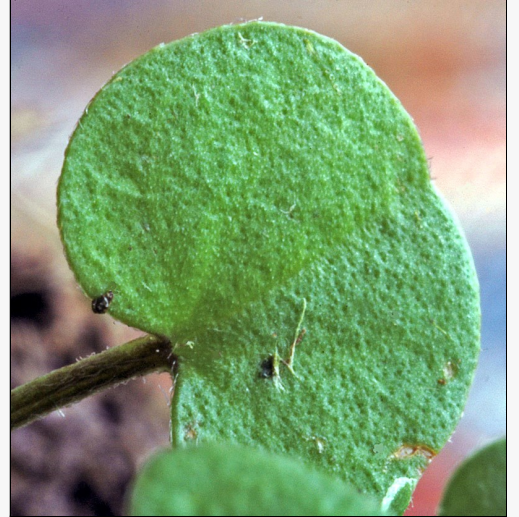
**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2106](http://nzpcn.org.nz/flora_details.asp?ID=2106)



**Caption:** Whanganui, in mown lawn

**Photographer:** Colin Ogle



**Caption:** Whanganui, in mown lawn

**Photographer:** Colin Ogle



## *Dichondra repens*

### Common Name(s):

Mercury Bay weed, Dichondra

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. Three Kings, North, South, Chatham Islands. Found throughout the world

### Flowering:

September - February

### Fruiting:

November - May

### Threats:

Not Threatened

### References and further reading:

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2107](http://nzpcn.org.nz/flora_details.asp?ID=2107)



**Caption:** Lake Kohangapiripiri, Wellington. Oct 2008.

**Photographer:** Jeremy Rolfe



**Caption:** Lake Kohangapiripiri, Wellington. Oct 2008.

**Photographer:** Jeremy Rolfe

# *Dicksonia squarrosa*

## Common Name(s):

rough tree fern, harsh tree fern, wheki

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North, South, Stewart and Chatham Islands.

## Features\*:

Tree ferns up to 8 m tall. Rhizomatous usually forming colonial stands. Rhizomes numerous spreading from main stock 1–2 m or more distant, giving rise to subsidiary erect caudices. Trunk slender, solitary, bifurcated (sometimes several times over), up to c.200 mm diam., composed of long-persistent, black stipe bases, interwoven dark brown to black rootlets, red-brown hairs and dormant or active aerial buds. Fronds numerous, persistent or not in death, either falling or forming an untidy, tattered skirt (especially on young plants); in life erect, arching, forming an often tattered, untidy crown, 1.0–2.0(–2.6) m long, 0.5–1.0 m wide. Stipes (180–)280–300(–320) mm long, black, ± rugose, base densely clad deciduous dark red-brown to brown filiform hairs 30–40(–55) mm long; rachises initially clad in dark reddish brown hairs when young, becoming rugose with age. Lamina (0.68–)1.6–(2.28) m long, oblong-lanceolate, (2–)3–4-pinnate, adaxially light to dark glossy green, abaxially paler, harshly coriaceous; primary pinnae 250–500 mm long, deltoid-ovate to lanceolate, acuminate; secondary pinnae close-set to ± overlapping, 50–80 mm long, acute. Barren pinnules 10–18 mm, acute, often sharply toothed, widened and confluent at base, shallowly concave; fertile pinnules close-set, narrowly confluent at base, 10–15 mm long; lobes strongly concavo-convex c.5 mm. long, rounded, each bearing a sorus. Sorus ± rounded, terminating veins at fertile pinnae margins; sporangia on raised receptacle, partially obscured by in rolled pinnae margin, and delicate, submembranous inner indusium. Spores golden brown to red-brown.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet Prepared for NZPCN by P.J. de Lange (10 November 2012). Description by P.J. de Lange.

## References and further reading:

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1791](http://nzpcn.org.nz/flora_details.asp?ID=1791)



**Caption:** *Dicksonia squarrosa*

**Photographer:** Wayne Bennett



**Caption:** *Dicksonia squarrosa*

**Photographer:** Wayne Bennett



## *Digitaria sanguinalis*

**Common Name(s):**

summer grass

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3802](http://nzpcn.org.nz/flora_details.asp?ID=3802)



**Caption:** Leaf sheath and base of blade. Wanganui. Mar 2010.

**Photographer:** Colin Ogle



**Caption:** Emerging inflorescence. Wanganui. Mar 2010.

**Photographer:** Colin Ogle



## *Disphyma australe subsp. australe*

### Common Name(s):

horokaka, native ice plant, New Zealand ice plant

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. New Zealand: Three Kings, North, South, Stewart and Chatham Islands

### Habitat:

Coastal (rarely inland). Mostly on cliff faces, rock stacks, and boulder/cobble beaches, more rarely in saltmarsh and estuaries. Often in petrel scrub on offshore islands, and extending into coastal forest around petrel burrows. Occasionally on limestone or sandstone cliffs in lowland forest (Western Waikato).

### Features\*:

Trailing, succulent herb. Stem terete, glabrous. Short shoots prostrate, rooting freely at nodes. Leaves 3-angled, linear-lanceolate to oblong, acute, often mucronate, tapering to connate base, 6-40 × 4-9 mm; margins entire, smooth, very rarely with a few papillae towards the distal end of the keel. Flowers 20-40 mm diameter. Sepal keel entire, smooth. Petals uniformly white to deep pink, in 3-5 rows, 10-30 mm long. Stamens 4-6 mm long; inner filaments hairy at base. Stigmas (5)-6-8-(10). Capsule valves 5-10, with parallel or ± divergent expanding keels; placental tubercle rounded or o. Seeds brown, obovoid, rugose, c. 1 mm long.

### Flowering:

Present throughout the year

### Fruiting:

Present throughout the year

### Threats:

Not Threatened

### \*Attribution:

Description modified from: Webb, C. J.; Sykes, W. R.; Garnock-Jones, P. J. 1988: Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons. 4. Christchurch, New Zealand, Botany Division, D.S.I.R. Forms natural intergeneric hybrids with both *Carpobrotus chilensis* and *C. edulis*.

### References and further reading:

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1796](http://nzpcn.org.nz/flora_details.asp?ID=1796)



**Caption:** Dunedin  
**Photographer:** John Barkla



**Caption:** Awhitu Peninsula (west coast), Auckland region  
**Photographer:** John Sawyer

## *Disphyma australe* subsp. *stricticaule*

### Common Name(s):

Kermadec Ice plant

### Current Threat Status (2012):

Naturally Uncommon

### Distribution:

Endemic. Kermadec Island group.

### Habitat:

Coastal. On rock stacks, cliff faces, banks, cobble and boulder beaches, or in the vicinity of bird nesting grounds. Widespread and common.

### Features\*:

Trailing, succulent herb. Stem terete, glabrous. Short shoots erect or nearly so, rarely rooting at nodes. Leaves 3-angled, linear-lanceolate to oblong, acute, often mucronate, tapering to connate base, 6-40 × 4-9 mm; margins papillate. Flowers 20-40 mm diameter. Sepal keel papillate. Petals uniformly white to deep pink, in 3-5 rows, 10-30 mm long. Stamens 4-6 mm long; inner filaments hairy at base. Stigmas (5)-6-8-(10). Capsule valves 5(-6), with parallel or ± divergent expanding keels; placental tubercle rounded or o. Seeds brown, obovoid, rugose, c. 1 mm long.

### Flowering:

Throughout the year

### Fruiting:

Throughout the year

### Threats:

Not threatened within its small geographic range

### \*Attribution:

Description modified from Webb et al. (1988)

### References and further reading:

Webb, C. J.; Sykes, W. R.; Garnock-Jones, P. J. 1988: Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons. 4. Christchurch, New Zealand, Botany Division, D.S.I.R.

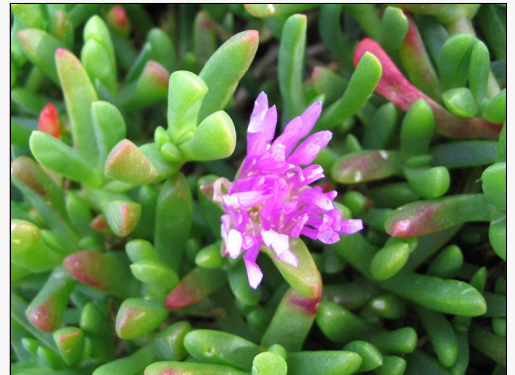
### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=466](http://nzpcn.org.nz/flora_details.asp?ID=466)



**Caption:** Fishing Rock, Raoul Island.

**Photographer:** Peter de Lange



**Caption:** Macauley Island

**Photographer:** John Barkla



## *Doodia australis*

### Common Name(s):

rasp fern

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. Kermadec Islands (Raoul and Macauley Islands). New Zealand: Three Kings, North and South Islands from Te Pahi south to Wellington, the Marlborough Sounds, north-west Nelson and Banks Peninsula. Abundant north of the Waikato, otherwise scarce. Present in Australia, Norfolk and Lord Howe Islands.

### Habitat:

Coastal to lowland in open or forested sites, within light scrub, in rough pasture, and even known as a weedy fern of urban gardens and environments.

### Features\*:

Vegetative reproduction by stolons or shortly branching rhizome. Rhizome rarely prostrate and creeping; clad in dense black scales. Fertile and sterile fronds mostly similar sometimes moderately dimorphic. Fronds more or less erect or sterile fronds sometimes inclined to prostrate; harsh; lamina 110-600 mm long. Stipes and rachis bearing brown scales, these more persistent at the stipe base though mostly shed at frond maturation; pubescent. Lower pinnae attached by costae, sometimes with auricles developed, or very rarely adnate to the rachis, lowest pair rarely longer than the pairs immediately above them; middle pinnae usually completely, but often partly, adnate, occasionally decurrent, rarely auriculate; upper pinnae adnate to decurrent. Pinnae c. 20-50 pairs or subopposite; middle pinnae rounded, acute or acuminate at apex. Terminal pinna 3-55 mm long (1/3 - 1/9 - 1/43 of frond length). Longest pinnae 5.0-100.0 × 2.5-10 mm. Distance between middle pinnae 1-8 mm (1/2-2X pinna width). Sori in one row, a second row often partly to nearly completely developed; discrete to more or less confluent, sometimes covering pinna midrib. Indusium c.2 mm long rarely less. more or less linear.

### Flowering:

Not applicable - spore producing

### Fruiting:

Not applicable - spore producing

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (4 March 2012). Description adapted from Parris (1973) where this species was treated as *Doodia media* subsp. *australis*.

### References and further reading:

Gasper, A.L.; de Oliveira Dittrich, V.A.; Smith A.R.; Salino, A. 2016: A classification for Blechnaceae (Polypodiales: Polypodiopsida): New genera, resurrected names, and combinations. *Phytotaxa* 275: 191-227

Parris, B.S. 1973: The genus *Doodia* (Blechnaceae: Filicales) in New Zealand. *New Zealand Journal of Botany* 10: 585-610.

Perrie, L.R.; Wilson, R.K.; Shepherd, L.D.; Ohlsen, D.J.; Batty, E.L.; Brownsey, P.J.; Bayly, M.J. 2014: Molecular phylogenetics and generic taxonomy of Blechnaceae ferns. *Taxon* 63: 745-758.

PPG 1: The Pteridophyte Phylogeny Group 2016: A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54: 563-603.

Wilcox, M.; Warden, J. 2017: Botany of Hillsborough coast bush reserves, Manukau Harbour, Auckland. *Auckland Botanical Society Journal* 72: 32-46.



**Caption:** Kerikeri

**Photographer:** John Barkla



**Caption:** Westmere, Whanganui.

**Photographer:** Colin Ogle

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2110](http://nzpcn.org.nz/flora_details.asp?ID=2110)



## *Doodia squarrosa*

### **Current Threat Status (2012):**

At Risk - Naturally Uncommon

### **Distribution:**

Endemic. Kermadec Islands (Macauley Island). New Zealand: North Island from Northland to Wellington.

### **Habitat:**

Coastal and lowland alluvial forest, river banks (often in the flood zone), near water falls and in geothermal areas, usually in dappled light or sunny situations. Appears to show a strong preference for base-rich substrates such as basalt, limestone, and the apatite-rich facies of greywacke.

### **Features\*:**

Tufted fern arising from shortly erect rhizomes. Stipes 50-150(-200) mm long, along with rachises clad in sparse, brown, caducous scales otherwise glabrous. Fronds dimorphic, the sterile ones prostrate and smaller than the erect, fertile ones. Fronds 14-450 x 15-80 mm, firmly fleshy, glabrescent, pink when young maturing green to dark green. Pinnae in 15-35 pairs, lower and middle pairs stalked, the others fused (adnate) to stipe. Fertile terminal pinna 15-155 mm (conspicuously longer than all other pinnules, up to 1/8 length of entire frond). Indusia linear.

### **Flowering:**

Not applicable - spore producing

### **Fruiting:**

Not applicable - spore producing

### **Threats:**

Occupying a range of habitats, several of which are vulnerable to the spread of aggressive weeds. Within Auckland City the species has virtually been eliminated by excessive plant collecting, a factor which also threatens it in the Wellington region. Populations within the geothermal fields of the Bay of Plenty are at serious risk from the spread of taller weed species, especially grasses, such as Indian doab (*Cynodon dactylon*).

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange (2 February 2005). Description adapted from Parris (1973) and Brownsey & Smith-Dodsworth (2000)

### **References and further reading:**

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

Gasper, A.L.; de Oliveira Dittrich, V.A.; Smith A.R.; Salino, A. 2016: A classification for Blechnaceae (Polypodiales: Polypodiopsida): New genera, resurrected names, and combinations. *Phytotaxa* 275: 191-227.

Parris, B.S. 1973: The genus *Doodia* (Blechnaceae: Filicales) in New Zealand. *New Zealand Journal of Botany* 10: 585-610.

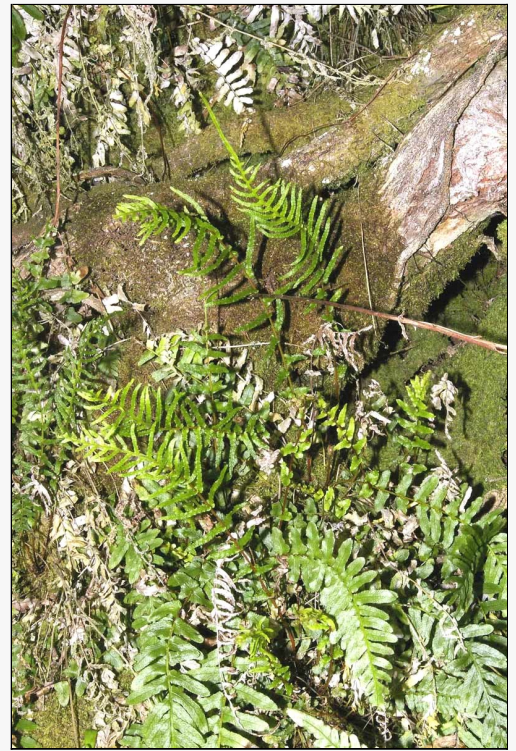
Perrie, L.R.; Wilson, R.K.; Shepherd, L.D.; Ohlsen, D.J.; Batty, E.L.; Brownsey, P.J.; Bayly, M.J. 2014: Molecular phylogenetics and generic taxonomy of Blechnaceae ferns. *Taxon* 63: 745-758.

PPG 1: The Pteridophyte Phylogeny Group 2016: A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54: 563-603.

Wilcox, M.; Warden, J. 2017: Botany of Hillsborough coast bush reserves, Manukau Harbour, Auckland. *Auckland Botanical Society Journal* 72: 32-46.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=165](http://nzpcn.org.nz/flora_details.asp?ID=165)



**Caption:** Stony bay, Coromandel  
**Photographer:** John Smith-Dodsworth



**Caption:** Stony bay, Coromandel  
**Photographer:** John Smith-Dodsworth

# *Dysoxylum spectabile*

## Common Name(s):

kohekohe, New Zealand mahogany

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North and South Islands. In the South Island not extending much beyond the Marlborough Sounds, reaching a southern limit near the Hurunui River (Napenape).

## Habitat:

Common and sometimes dominant or co-dominant tree of coastal to lowland forest.

## Features:

Tree up to 15 m tall usually with abroad, spreading canopy. Trunk up to 1 m diam., branches stout, erect then spreading. Bark pale brown, under bark green. Leaves compound, imparipinnate, alternate on pulvinate petioles up to 40 mm long, leaflet pairs 4-6, (50-)-150(-200) x (20-)30(-80) mm, opposite to subopposite, bright green, yellow-green to dark green, ovate to obovate-oblong, leathery, margins somewhat undulate. Plants gynodioecious, with fixed female and inconstant males on different trees. Inflorescence a cymose, drooping, panicle arising from trunk and branches (cauliflorous). Flowers c. 30 mm diam., fleshy. Pedicels short. Calyx divided to base, lobes broad-oblong, abruptly pointed, ciliate, petals linear, 10 mm, spreading, waxy white or greenish. Capsules, woody, broad-obovoid to subglobose, 3-4-celled, c. 25 mm long, green. Seeds 2 per cell, orange or scarlet.

## Flowering:

March - June

## Fruiting:

April - August

## Threats:

Not Threatened. However, where possum and rat numbers are high this species is not actively regenerating. Possums defoliate trees, and will heavily browse inflorescences such that few succeed in flowering and setting fruit. Rats are major seed predators. Only where control of these animals is undertaken, or on possum and rodent-free offshore islands can one see kohekohe flowering, fruiting and regenerating freely. If numbers of these introduced animals remain unchecked, it is clear that kohekohe will decline and vanish from large parts of its natural range.

## References and further reading:

Duguid, F. 1985. Kohekohe *Dysoxylum spectabile* as an accidental epiphyte. Wellington Botanical Society Bulletin, 42: 11

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1825](http://nzpcn.org.nz/flora_details.asp?ID=1825)



**Caption:** Colonial Knob Scenic Reserve, Porirua.

**Photographer:** Jeremy Rolfe



**Caption:** Colonial Knob Scenic Reserve, Porirua.

**Photographer:** Jeremy Rolfe



## *Eleocharis acuta*

### **Common Name(s):**

sharp spike sedge

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. In New Zealand found on the Kermadec, North, South, Stewart and Chatham Islands. Also in Australia and on Norfolk Island.

### **Habitat:**

Coastal to montane. Common in open to partially shaded permanently damp ground. Usually in swamps, and on stream, river, pond, and lake margins. Sometimes present in seepages within pasture.

### **Features\*:**

Terrestrial or semi-aquatic sedge forming yellow-green to green somewhat distinct, crowded tufts. Rhizomes, lignaceous, widely creeping, 1-2 mm diameter. Culms more or less crowded in distant tufts, 15.0-900.0 x 0.5-2.5 mm, more or less erect, terete, distinctly striated; lower sheath dark red to maroon with an oblique orifice, upper sheath paler, closely appressed to culm, orifice usually truncate or rarely slightly oblique, with dark thickened edge and distinct mucro at back. Spikelet 5-25 x 2-5 mm, cylindrical, acute at apex. Glumes numerous, basal 2 sterile, shorter, broader and paler than rest, upper glumes ovate-lanceolate with hyaline apices. Hypogynous bristles 6-8, some =, some > nut. stamens 3. Style 3-fid. Nut 1.5 x 1.0 mm, obovoid, biconvex or plano-convex, pale brown, smooth or faintly reticulate; the small persistent style-base triangular, compressed, white or very pale brown.

### **Flowering:**

September - January

### **Fruiting:**

October - May

### **Threats:**

Not Threatened

### **\*Attribution:**

Description adapted from Moore and Edgar (1970)

### **References and further reading:**

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2120](http://nzpcn.org.nz/flora_details.asp?ID=2120)



**Caption:** *Eleocharis acuta*

**Photographer:** Wayne Bennett



**Caption:** *Eleocharis acuta* at

Opuatia

**Photographer:** Wayne Bennett



## *Elytrigia repens*

**Common Name(s):**

couch

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3875](http://nzpcn.org.nz/flora_details.asp?ID=3875)



**Caption:** Elytrigia repens  
**Photographer:** John Smith-Dodsworth



**Caption:** Elytrigia repens  
**Photographer:** John Smith-Dodsworth



# *Entelea arborescens*

## Common Name(s):

Whau

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. Three Kings, North (including Little and Great Barrier Islands) and South Islands. In the North Island, whau is locally common from Te Pahi to about Kawhia and Mahia Peninsula south of there it is known from a few sites in the northern Taranaki, eastern Wairarapa, Cape Palliser, at Paekakariki and Wellington. In the South Island it is confined to the Golden Bay area of North-West Nelson. Whau naturalises easily and has become established in many places, especially around baches and urban plantings.

## Habitat:

Coastal to lowland forest or shrubland. Usually in open sites such as around recent slips, tree falls, cliff faces, boulder slopes, sand dunes or on the margins of streams, rivers, lagoons and lakes. Mostly near the coast however it may occur well inland in some places e.g., the Waikato River near Hamilton, Rotorua. Some inland and southern North island occurrences are thought to be derived from deliberate plantings by Maori.

## Features\*:

Shrub or small spreading tree up to c. 8 m tall; trunk up to 0.25 m dbh; wood-weight very light; bark firm, grey, tearing in long fibrous strips when cut. branches numerous, upright than spreading; branchlets, leaves, petioles, inflorescences densely clad in soft whitish branched hairs; leaf-scars oval or lunate. Leaves alternate, softly membranous (wilting readily if picked), green, bright green to yellow green, ± glossy, venation distinct when fresh or dry; petioles 80-300 mm long, stout; stipules linear-acuminate, ± persistent. Lamina 50-100-150(-300) × 50-100-150-(260) mm, obliquely very broad-ovate, abruptly acuminate, cordate at base, margins doubly crenate-serrate, sometimes obscurely lobed, 3-5-7-subpalmately lobed. Inflorescence a subumbellate many-flowered cyme. Flowers (3-)4-5-merous. Peduncle 100-300 mm long, stout, pedicels 10-40 mm long. Sepals free, 8-10-12 mm long, narrowly lanceolate to triangular, acuminate; petals (3)-4-5, 10-30 × 10-30 mm, orbicular to suborbicular, white, crumpled. Stamens numerous, mostly free sometimes connate at base, filaments 10-18(-20) mm long, white, anthers versatile, yellow. Ovary 5-10 mm long, broadly to narrowly globose or ovoid, hispid, 5-7-locular, ovules numerous, style simple, stigma ± globular to broadly capitate, fringed or toothed. Fruit a bristly capsule 20-35 mm diameter, subglobose to globose, black to charcoal when ripe, invested by numerous, rigid, spinose, black to charcoal coloured hairs 15-25 mm long. Seeds numerous, 1.9-2.9 mm long, obovate, elliptic to broadly elliptic, glarvous, surface granular, orange-yellow, pale brown, or orange-brown. Description of seeds by Webb & Simpson (2001).

## Flowering:

August - November

## Fruiting:

December - June

## Threats:

Not Threatened. However, recent field work gathering samples for a Marsden study into the possible past use of whau by maori indicates that whau is much less common in the North island than it once was. browsing pressure from cattle, goats and horses, clearance of coastal scrub of housing and the spread of invasive woody shrubs and trees into many northern coastal areas may be threatening some populations.

## \*Attribution:

Fact Sheet Prepared for NZPCN by: P.J. de Lange 10 February 2011. Description of seeds by Webb & Simpson (2001).

## References and further reading:

Webb, C.J.; Simpson, M.J.A. 2001: Seeds of New Zealand Gymnosperms and Dicotyledons. Christchurch, Manuka Press.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1377](http://nzpcn.org.nz/flora_details.asp?ID=1377)



**Caption:** Fruits, Auckland  
**Photographer:** John Barkla



**Caption:** Awhitu Regional Park, Auckland  
**Photographer:** John Sawyer



## *Eragrostis brownii*

**Common Name(s):**

bay grass

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3883](http://nzpcn.org.nz/flora_details.asp?ID=3883)



**Caption:** Inflorescence, Whangehu River mouth. Feb 2013.  
**Photographer:** Colin Ogle



**Caption:** Spikelet. Whangehu River mouth. Feb 2013.  
**Photographer:** Colin Ogle



## *Erigeron sumatrensis*

**Common Name(s):**

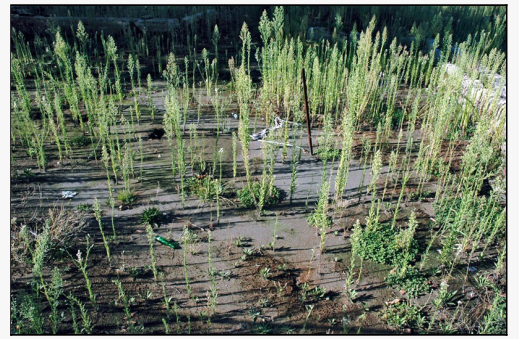
broad-leaved flea-bane

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3727](http://nzpcn.org.nz/flora_details.asp?ID=3727)



**Caption:** Whanganui. Mar 2011.

**Photographer:** Colin Ogle



**Caption:** Whanganui. Mar 2011.

**Photographer:** Colin Ogle

## *Euchiton audax*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1869](http://nzpcn.org.nz/flora_details.asp?ID=1869)



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth

## *Euchiton involucratus*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2128](http://nzpcn.org.nz/flora_details.asp?ID=2128)



**Caption:** Hutt River, north of Stokes Valley. Dec 2007.

**Photographer:** Jeremy Rolfe



**Caption:** Hutt River, north of Stokes Valley. Dec 2007.

**Photographer:** Jeremy Rolfe



## *Euchiton japonicus*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Flann, C. 2010: Morphometric study of *Euchiton* (Gnaphalieae: Asteraceae). *Australian Journal of Botany* 23: 285-305

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2127](http://nzpcn.org.nz/flora_details.asp?ID=2127)



**Caption:** Terminal cluster of capitula.

**Photographer:** Jeremy Rolfe.  
Stokes Valley. Jan 2007.



**Caption:** Close up of capitula showing involucre bracts.

**Photographer:** Jeremy Rolfe.  
Stokes Valley. Jan 2007.

## *Euphorbia peplus*

**Common Name(s):**

milkweed

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3808](http://nzpcn.org.nz/flora_details.asp?ID=3808)



**Caption:** Coromandel. October  
**Photographer:** John Smith-Dodsworth



**Caption:** At the Coromandel.  
October  
**Photographer:** John Smith-Dodsworth

## *Festuca rubra* subsp. *rubra*

### **Common Name(s):**

red fescue

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial.

### **Features:**

Tufted perennial grass spreading from rhizomes. Leaves arise from the base and have sheath 3-7 cm, often with bright red veins, and an almost glabrous blade of 5-25 cm long and 0.5-2 mm wide, dark to bluish green. Knob-like swellings at junction of blade and sheath.

Flowering culm up to 45 cm tall, panicle usually 5-10 cm tall, closely held clusters of spikelets.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3944](http://nzpcn.org.nz/flora_details.asp?ID=3944)



**Caption:** *Festuca rubra* subsp. *rubra*

**Photographer:** John Smith-Dodsworth



**Caption:** *Festuca rubra* subsp. *rubra*

**Photographer:** John Smith-Dodsworth



# *Ficinia nodosa*

## Common Name(s):

wiwi, knobby club rush, ethel sedge

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. Kermadec, Three Kings, North, South, Stewart and Chatham Islands. Widespread in the southern Hemisphere

## Habitat:

Mostly coastal but occasional extending into montane area (up to 700 m a.s.l.). In a wide range of habitats but favouring open situations - commonly on sand, especially on sand dunes, sandy beaches and at the back of estuaries. Sometimes colonising sandstone, limestone of volcanic rock outcrops in lowland forest. Rarely in tussock grassland.

## Features\*:

Rhizome short, 5-10 mm diameter, ascending to subhorizontal, woody, covered with red-brown bracts 5-10 mm long. Culms numerous, somewhat woody, 0.15-2.0 m, 1-2 mm diameter, yellow-green to bronze-green, densely packed on rhizome, rush-like, rigid and erect (sometimes in lush specimens with upper third curving over), terete or slightly compressed, finely striated when dry. Leaves reduced to 3-6 basal sheaths, the uppermost 50-130 mm long, brown or red-brown, the oblique orifice slightly dilated. Inflorescence an apparently lateral, solitary, hemispherical head, 7-15 mm wide, comprised of numerous, densely crowded, sessile spikelets; subtending bract continuous with the culm, rigid, erect, pungent, > inflorescence. Spikelets 3-4 mm long, ovoid, light brown. Glumes broadly ovate, obtuse, margins entire, more or less apiculate. reddish towards the tips, lateral nerves conspicuous. Hypogynous bristles 0. Stamens 3. Style-branches 3. Nut 1 mm long, < 1 mm wide, plano-convex to trigonous, apiculate, dark brown to almost black, shining.

## Flowering:

September - December

## Fruiting:

November - May

## Threats:

Not Threatened

## \*Attribution:

Description adapted from Moore and Edgar (1970)

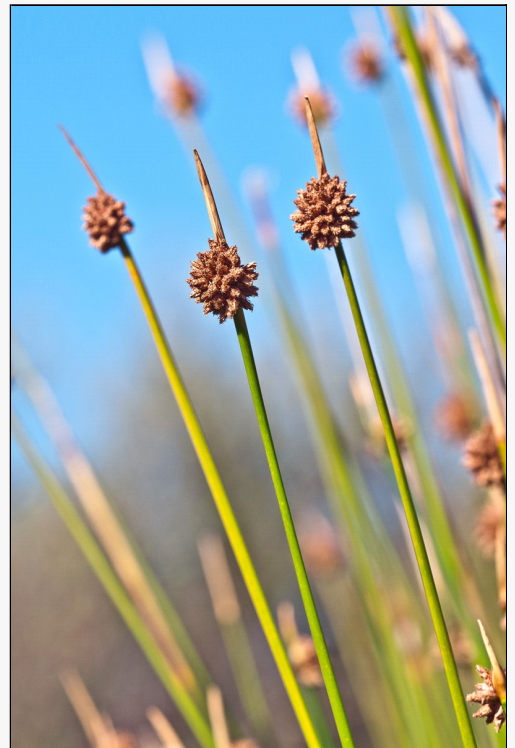
## References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2133](http://nzpcn.org.nz/flora_details.asp?ID=2133)



**Caption:** Pauatahanui Inlet. Feb 2012.

**Photographer:** Jeremy Rolfe



**Caption:** Pauatahanui Inlet. Feb 2012.

**Photographer:** Jeremy Rolfe

## *Ficus carica*

### **Common Name(s):**

Fig

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. waste places, scrubland.

### **Features:**

Deciduous, dioecious shrub or small tree up to 10 m high. Young stems +/- glabrous to moderately hairy, becoming glabrous. Leaves sparsely to moderately hairy above, often densely hirsute below, usually deeply palmately 3-7 lobed and irregularly serrate or crenate, broadly ovate, obtuse to cordate and symmetric at base, c. 10-25 cm long; veins usually not prominently raised; petiole < blade; stipules 2 per node, glabrous, oblong, caducous. Inflorescence sparsely hairy, pyriform, green, shortly pedunculate. Syncarp green to purplish, 5-8 cm long; achenes irregularly ovoid to subglobose, c. 2mm long. (Webb et al 1988).

### **Flowering:**

December, January, February

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3945](http://nzpcn.org.nz/flora_details.asp?ID=3945)



**Caption:** Ficus carica

**Photographer:** John Smith-Dodsworth



**Caption:** Ficus carica

**Photographer:** John Smith-Dodsworth

## *Fumaria muralis* subsp. *muralis*

**Common Name(s):**

scrambling fumitory

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3959](http://nzpcn.org.nz/flora_details.asp?ID=3959)



**Caption:** Coromandel, November

**Photographer:** John Smith-Dodsworth



**Caption:** Coromandel, November

**Photographer:** John Smith-Dodsworth



# *Gahnia lacera*

## Common Name(s):

cutty grass

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North Island from Te Pahi south to about Awakino in the west and East Cape in the East.

## Habitat:

Coastal to lowland (rarely extending up to 500 m a.s.l. in mountain ranges close to the sea). Colonising a variety of substrates which may be seasonally waterlogged though otherwise dry. Usually found in scrub or open forest.

## Features\*:

Stout, bambusiform, perennial sedge forming dense, yellowish-green tufts. Rhizome shortly creeping, 5-8 mm diameter, very hard, lignaceous, long persistent when dead. Culms 0.6-2.0 m, 2-4 but up to 6 mm diameter at the base. Leaves numerous, almost all cauline and = or > culms; lamina up to 380 mm long and 9 mm wide, yellow-green, green or dark green, flat or involute, glabrous, margins scabrid; sheaths all closely appressed to and enclosing base of culm, rugose above, maturing dark brown to almost black, smooth and glossy towards the node. Panicle 20-600 x 30-60 mm, rigid, usually erect, many-flowered, light brown with branchlets 20-160 mm long, usually in dense though more or less distant clusters along the axis of the panicle. Spikelets 1-flowered, 8 mm long, alternate on the branchlets, sessile or shortly stalked. Glumes 4-5; the outer 2-3 light red-brown; inner glumes pale cream, with a red lacerate apex. Stamens 4. Style-branches 3. Nut 3.5-4.5 mm long, slightly < 2 mm diameter, oblong-ellipsoid or oblong-obovoid, lustrous black, with a minute apiculate apex, endocarp obscurely transverse striate within.

## Flowering:

July -  
November

## Fruiting:

Fruits may be present throughout the year

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet prepared by P.J. de Lange (30 October 2005). Description adapted from Moore and Edgar (1970)

## References and further reading:

Gardner, R.O. 1996. *Gahnia pauciflora* and *G. procera* and a note on *G. lacera*. Auckland Botanical Society Journal, 51: 7-10.

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1903](http://nzpcn.org.nz/flora_details.asp?ID=1903)



**Caption:** *Gahnia lacera*

**Photographer:** Wayne Bennett



**Caption:** *Gahnia lacera*

**Photographer:** Wayne Bennett

## *Gaillardia x grandiflora*

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3962](http://nzpcn.org.nz/flora_details.asp?ID=3962)

## *Galium aparine*

**Common Name(s):**

cleavers

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3982](http://nzpcn.org.nz/flora_details.asp?ID=3982)



**Caption:** Raglan, west Coast of North Island

**Photographer:** John Sawyer



**Caption:** Robinson Crusoe Island, Chile

**Photographer:** John Sawyer



## *Gamochaeta purpurea*

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3889](http://nzpcn.org.nz/flora_details.asp?ID=3889)

## *Gamochaeta simplicicaulis*

### Current Threat Status (2009):

Exotic

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=4009](http://nzpcn.org.nz/flora_details.asp?ID=4009)



**Caption:** Coromandel, October  
**Photographer:** John Smith-Dodsworth



**Caption:** At the Coromandel,  
October  
**Photographer:** John Smith-Dodsworth

## *Gazania rigens*

**Common Name(s):**

gazania

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3992](http://nzpcn.org.nz/flora_details.asp?ID=3992)



**Caption:** Matapouri Bay,  
Northland

**Photographer:** John Sawyer



**Caption:** Castlepoint Scenic  
Reserve, near pine trees

**Photographer:** John Sawyer



## *Geniostoma ligustrifolium* var. *crassum*

### **Current Threat Status (2012):**

Naturally Uncommon

### **References and further reading:**

Murray, B.G.; de Lange, P. J. 1999: Contributions to a chromosome atlas of the New Zealand flora - 35. Miscellaneous families. *New Zealand Journal of Botany* 37: 511-521.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=495](http://nzpcn.org.nz/flora_details.asp?ID=495)



**Caption:** Surville Cliffs

**Photographer:** Peter de Lange



**Caption:** Surville Cliffs. Oct 2009.

**Photographer:** Jeremy Rolfe

## *Geniostoma ligustrifolium* var. *ligustrifolium*

**Common Name(s):**  
hangehange

**Current Threat Status (2012):**  
Not Threatened

**Threats:**  
Not Threatened

**References and further reading:**

Conn, B.J. 1980: A taxonomic revision of *Geniostoma* subg. *Geniostoma* (Loganiaceae). *Blumea* 26: 245-364.

Connor, H.E.; Edgar, E. 1987: Name changes in the indigenous New Zealand flora, 1960–1986 and Nomina Nova IV, 1983–1986. *New Zealand Journal of Botany* 25: 115-170.

Murray, B.G.; de Lange, P. J. 1999: Contributions to a chromosome atlas of the New Zealand flora - 35. Miscellaneous families. *New Zealand Journal of Botany* 37: 511-521

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1923](http://nzpcn.org.nz/flora_details.asp?ID=1923)



**Caption:** Puketi Forest, Northland  
**Photographer:** Dean Baigent-Mercer



**Caption:** Puketi Forest, Northland  
**Photographer:** Dean Baigent-Mercer

## *Geniostoma ligustrifolium* var. *majus*

### **Current Threat Status (2012):**

Naturally Uncommon

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=496](http://nzpcn.org.nz/flora_details.asp?ID=496)



**Caption:** South West Island

**Photographer:** Peter de Lange



**Caption:** South West Island

**Photographer:** Peter de Lange



## *Geranium dissectum*

**Common Name(s):**  
cut-leaved cranesbill

**Current Threat Status (2009):**  
Exotic

**For more information, visit:**  
[http://nzpcn.org.nz/flora\\_details.asp?ID=3966](http://nzpcn.org.nz/flora_details.asp?ID=3966)



**Caption:** Coromandel, November  
**Photographer:** John Smith-Dodsworth



**Caption:** At the Coromandel,  
November  
**Photographer:** John Smith-Dodsworth

## *Geranium gardneri*

**Common Name(s):**

gardner's Geranium

**Current Threat Status (2009):**

Exotic

**Habitat:**

Weed of rough pasture, road and streetside verges, derelict land, urban waste, coastal scrub and grassland

**Flowering:**

Throughout the year

**Fruiting:**

Throughout the year

**References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4129](http://nzpcn.org.nz/flora_details.asp?ID=4129)



**Caption:** *Geranium gardneri*

**Photographer:** Peter de Lange



**Caption:** Auckland

**Photographer:** Geoffrey Williams

## *Geranium molle*

### **Common Name(s):**

doves foot cranesbill

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Common weed of wasteland, grassland, and open places within coastal to montane forest.

### **Features:**

Annual herb to 450 mm tall; stem usually branched from base, pilose, with long eglandular hairs 1.0-1.7 mm long and short glandular/eglandular hairs < 0.5 mm long. Basal rosette leaves persistent; lamina 9-4 x 9-52 mm, divided for 0.5-0.75 of its length, pilose, with eglandular appressed hairs; segments 7-9, usually 3(-4)-lobed at apex; lower cauline leaves alternate; petioles to 140 mm, with patent, long eglandular hairs 1.0-1.5 mm long and short glandular/eglandular hairs < 0.5 mm long; stipules 6-9 x 1.5-4.0 mm, ovate-lanceolate, sometimes lobed, abaxially eglandular pilose, glabrous adaxially. Bracts 2-3 x 1.3-1.5 mm, pilose with eglandular hairs on abaxial surface and on the margin, glabrous adaxially; peduncles 5-80 mm long, eglandular pilose (hairs 1.0-1.8 mm long) with short (< 0.5 mm) glandular/eglandular hairs; pedicels 5-15 mm, pilose, with eglandular patent hairs 1.0-1.8 mm, and short (< 0.5 mm) glandular/eglandular hairs. Sepals (1-)2.5-5.5(-6) x (0.9-)1.2-2.1(-2.5) mm, mucronulate, with scarious margins 0.1-0.2 mm wide, with eglandular hairs 1.0-1.5 mm long and some shorter (< 0.5 mm) eglandular/glandular hairs on the abaxial side, glabrous on the adaxial side. Petals (3-)4.5-8.5(-10.5) x (1.5-)2.0-5.0-(7.0) mm, emarginate (notch 1.0-2.5 mm deep), with short claw, bright purple. Stamens 10, filaments 4-5 mm, lanceolate, glabrous except for few cilia on the proximal half; anthers 0.7-1.5 x 0.3-0.5 mm, purple. Gynoecium 5-6 mm long; stigma purple. Fruit 8-14 mm long; mericarps 1.8-2.1 x 1.2-1.4 mm, transversely wrinkled, without longitudinal rib, covering the seed completely, glabrous on the surface, with a few ciliae at the base; rostrum 6-11 mm long, with a narrowed apex 1-3 mm, pilose (with erect-patent eglandular hairs ca. 0.3 mm long); stigmatic remnant c.1-2 mm long, with 5 pilose lobes. Seeds 1.4-1.8 x 1.0-1.2 mm, brownish.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3994](http://nzpcn.org.nz/flora_details.asp?ID=3994)



**Caption:** Kaitorete Spit.  
Canterbury  
**Photographer:** Melissa  
Hutchison



**Caption:** Kaitorete Spit  
**Photographer:** Melissa  
Hutchison



## *Geranium solanderi*

### Common Name(s):

Solander's geranium

### Current Threat Status (2012):

At Risk - Declining

### Distribution:

Indigenous. North, South and Chatham Islands (including many northern offshore islands). Indigenous to Australia.

### Habitat:

Coastal to montane (0-600 m a.s.l.). Formerly widespread in short tussock grasslands, on lava fields, clay pans and on rocky coastal headlands.

### Features\*:

Perennial herb 0.12-1.0 m tall. Rootstock 2.4-19.1 mm diam., without fusiform roots. Stem erect to ascending, with straight, patent to retrorse, non-appressed, eglandular hairs 0.4-1.8 mm long. Basal leaves in a ± deciduous rosette; lamina 12-45 × 14-57 mm, polygonal in outline, cordate, palmatifid (divided for 0.5-0.8 of its length), pilose, with ± erect, eglandular hairs; segments 5-7, obtriangular, 2.2-6.8 mm at the base; petioles to 180 mm long, with patent, eglandular hairs 0.4-1.7 mm long; stipules 2.2-8 × 0.5-2.1 mm, with eglandular hairs on abaxial surface and on the margin, glabrous adaxially. Inflorescence 2-flowered cymules, solitary; peduncles (4-)40(-61) cm long, with patent to retrorse, not appressed, eglandular hairs 0.3-2.0 mm long; bracteoles 1.5-7.4 × 0.3-0.8 mm, lanceolate, with eglandular hairs on abaxial surface and on the margin, glabrous adaxially; pedicels 8-34 mm long, with patent to retrorse, not appressed, eglandular hairs 0.2-2.0 mm long; pedicel and peduncle together usually overtopping the subtending leaf. Sepals (3.2-) 4.2-5.2(-6.3) × 1.6-2.7 mm, lanceolate, with scarious margins 0.1-0.2 mm wide, with eglandular hairs 0.1 mm long on the abaxial side (and eglandular hairs 0.4-1.8 mm long on the margin), glabrous adaxially. Petals (3-)6(-8.1) × 1.4-4.2 mm, entire, without claw, glabrous on both sides, ciliate on the basal margin, purplish. Filaments 2.4-4.5 mm long, yellowish, glabrous on both sides, ciliate on the basal margin, with hairs up to 0.1-0.3 mm long; anthers 0.4-0.8 × 0.2-0.7 mm, yellowish. Nectaries glabrous. Gynoecium 2.5-4.8 mm long, yellowish. Fruit 13.1-20.6 mm long; mericarps 2.2-3.2 × 1.1-1.8 mm, smooth, with erect-patent, eglandular hairs 0.1-1.5 mm long, usually blackish; rostrum 8.8-15.1 mm long, without a narrowed apex, with erect-patent, eglandular hairs 0.1-1.1 mm long; stigmatic remains (0.6-)1-1.4(-1.6) mm long, with 5 hairy lobes. Seeds 1.6-2.2 × 0.9-1.6 mm, reticulate.

### Flowering:

September - April

### Fruiting:

October - June

### Threats:

Not Threatened. However, it has declined from large parts of its former range due to rabbit browsing and the spread of taller, faster growing weeds. If these factors continue it may well qualify in the not to distant future as Threatened.

### \*Attribution:

Fact Sheet prepared by P.J. de Lange 14 April 2008. Description adapted from Aedo et al. (2005) supplemented with observations based on fresh and cultivated specimens.

### References and further reading:

Aedo, C., O. Fiz, M. L. Alarcón, C. Navarro, and J. J. Aldasoro. 2005. Taxonomic revision of *Geranium* sect. *Dissecta* (Geraniaceae). *Systematic Botany* 30: 533-558.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2140](http://nzpcn.org.nz/flora_details.asp?ID=2140)



**Caption:** *Geranium solanderi*.

**Photographer:** John Smith-Dodsworth



**Caption:** *Geranium solanderi*

**Photographer:** Peter de Lange

## *Gladiolus carneus*

**Common Name(s):**

Painted lady

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4694](http://nzpcn.org.nz/flora_details.asp?ID=4694)



**Caption:** Whanganui garden, ex-Castlecliff dunes where naturalised  
**Photographer:** Colin Ogle



**Caption:** Muddy Creek, Waitakere. Oct 2007.  
**Photographer:** Jeremy Rolfe

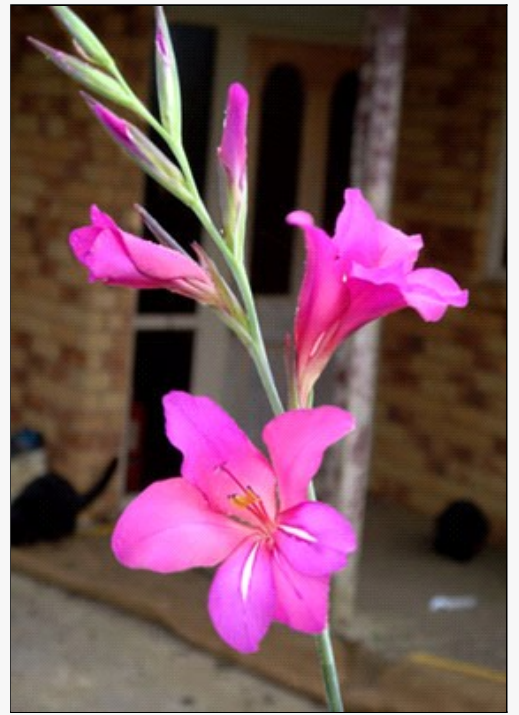
## *Gladiolus communis subsp. byzantinus*

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4925](http://nzpcn.org.nz/flora_details.asp?ID=4925)



**Caption:** Pitt Island. Nov 2008.

**Photographer:** Peter de Lange



## *Gladiolus dalenii*

**Common Name(s):**

gladiolus

**Distribution:**

Uncommon in wild in NZ, usually as garden discard.

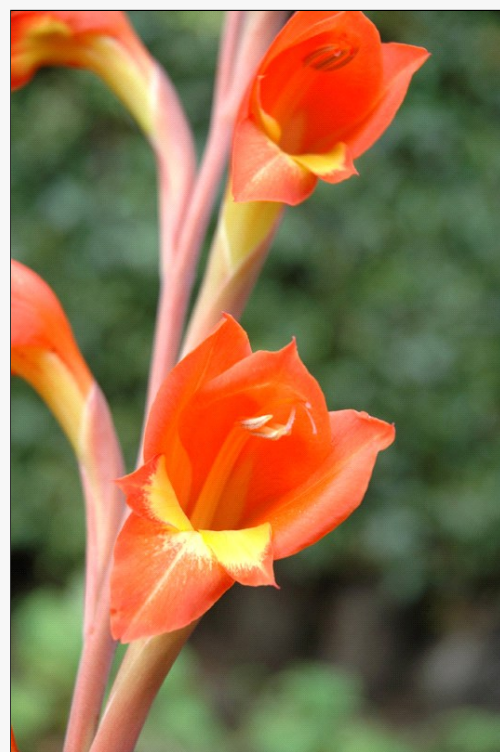
**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=7715](http://nzpcn.org.nz/flora_details.asp?ID=7715)



**Caption:** Garden, Whanganui

**Photographer:** Colin Ogle



**Caption:** Garden, Whanganui

**Photographer:** Colin Ogle

## *Gladiolus undulatus*

**Common Name(s):**

gladiolus

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4003](http://nzpcn.org.nz/flora_details.asp?ID=4003)



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth

## *Gonocarpus incanus*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2144](http://nzpcn.org.nz/flora_details.asp?ID=2144)



**Caption:** Fruit. Stokes Valley, Lower Hutt. Jun 2013.

**Photographer:** Jeremy Rolfe



**Caption:** *Gonocarpus incanus*

**Photographer:** Peter de Lange



## *Haloragis erecta* subsp. *erecta*

### Common Name(s):

toatoa, fire weed, shrubby Haloragis

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. New Zealand: Kermadec, North, South, Stewart and Chatham Islands.

### Habitat:

Coastal to montane in forest or scrub. Often on slip scars or colonising recently cleared ground. Often appearing following fire (hence one of the common names).

### Features\*:

Perennial herb or subshrub. Stems to c.1 m tall, decumbent to erect, freely branching, 4-angled, glabrous or scabrid. Leaves opposite. Petiole (0.2)-0.5-1.7-(3) cm long. Lamina (12-)15-70(-90) × (3-)-5-25-(-35) mm, lanceolate to elliptic or oblong-elliptic, strongly serrate with teeth to 4 mm long, glabrous or scabridulous; lateral veins obscure; base cuneate to truncate. Dichasia of 3-7 flowers; primary bracts ± serrate. Pedicels 0.5-0.6 mm long, to 1 mm at fruiting, deflexed until anthesis. Flowers 4-merous, often reddish. Sepals 0.8-1.2 mm long, deltoid, erect, persistent. Petals 1.5-.0(-2.5) mm long. Stamens 8. Anthers 1.2-1.7 mm long, oblong, red or yellow, the inner < outer. Ovary 4-celled, ribbed. Stigmas ± pink. Fruit 1.8-3.0 × 1.5-2.5(-4.0) mm (including the usually present, variable, deltoid wings), usually ovoid, rugose or smooth between ribs or wings.

### Flowering:

Throughout the year

### Fruiting:

Throughout the year

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (3 November 2005). Description based on Webb et al. (1988) and observations made from fresh material.

### References and further reading:

Cunningham, A. 1839: *Florae insularum Novae Zelandiae precursor; or a specimen of the botany of the islands of New Zealand. Annals of Natural History* 3: 29-34.

Moorfield, J. C. (2005). *Te aka : Maori-English, English-Maori dictionary and index*. Pearson Longman: Auckland, N.Z.

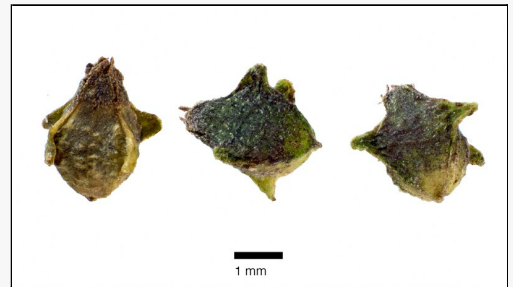
Orchard, A.E. 1975: Taxonomic Revisions in the Family Haloragaceae. I. The Genera *Haloragis*, *Haloragodendron*, *Glischrocaryon*, *Meziella* and *Gonocarpus*. *Bull.Auckland Inst.Mus.* 10: 1-299.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

Webb, C. J.; Sykes, W. R.; Garnock-Jones, P. J. 1988: *Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons*. Christchurch, New Zealand, Botany Division, D.S.I.R.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1966](http://nzpcn.org.nz/flora_details.asp?ID=1966)



**Caption:** Fruit. Stokes Valley, Lower Hutt. Apr 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Catlins

**Photographer:** John Barkla

# *Hedycarya arborea*

## Common Name(s):

Porokaiwhiri, Pigeonwood

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. Three Kings, North and South Islands. In the South island uncommon in the east south of Kaikoura reaching its southern limit on that coastline on Banks Peninsula, it is more ranging in the west reaching northern Fiordland at least.

## Habitat:

A common forest tree of coastal and lowland forest, extending into montane areas in the warmer parts of the North Island

## Features\*:

Tree up to 12 m. tall; trunk up to 0.5m dbh, clear of branches for first few metres, ; bark dark grey to brown-grey, firm (not flaking) finely tessellated. Branches numerous, upright to spreading; branchlets finely brown-pubescent at tips. Leaves coriaceous, glabrous except for midrib and main veins and petioles, adaxially dark green, glossy or glaucescent, abaxially similar but paler and dull; petioles 10-15-20(-35)mm long; lamina 40-120(-180) × 25-30(-50-60) mm, elliptic-obovate, oblanceolate to lanceolate, cuneately narrowed to base, obtuse to subacute or acute, margins distantly serrate (with occasional subentire leaves) or toothed. Inflorescence a branched raceme; peduncles and pedicels slender, pubescent. Male with perianth c.10 mm diameter, pubescent, stamens numerous, anthers sessile. Female with perianth c.6 mm diameter; carpels up to 20. Drupe 1-seeded, ovoid, 10-15(-16) mm long, red or orange-red up to 10 per branch. Endocarp 9-14 mm long, elliptic to obovate, rarely circular, brown to grey-brown, surface ± smooth, usually with a few irregular bumps and/or longitudinal ridges. Description adapted from Allan (1961) and Webb & Simpson (2001).

## Flowering:

December - February

## Fruiting:

March - June

## Threats:

Not Threatened

## \*Attribution:

Factsheet prepared for NZPCN by P.J. de Lange 20 February 2011.  
Description adapted from Allan (1961) and Webb & Simpson (2001).

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Wellington, Government Printer.

de Lange, P.J.; Cameron, E.K. 1999: The Vascular Flora of Aorangi Island, Poor Knights Islands, Northern New Zealand. New Zealand Journal of Botany 37: 433-468.

de Lange, P.J.; Murray, B.G. 2002: Contributions to a chromosome atlas of the New Zealand flora – 37. Miscellaneous families. New Zealand Journal of Botany 40: 1-24.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

Webb, C.J.; Simpson, M.J.A. 2001: Seeds of New Zealand Gymnosperms and Dicotyledons. Christchurch, Manuka Press.

Wright, A. E. 1984: Beilschmiedia Nees (Lauraceae) in New Zealand. New Zealand Journal of Botany 22: 109-125.



**Caption:** Hedycarya arborea (Porokaiwhiri)

**Photographer:** Wayne Bennett



**Caption:** Fruit of Hedycarya arborea

**Photographer:** Wayne Bennett

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=805](http://nzpcn.org.nz/flora_details.asp?ID=805)

## *Helichrysum lanceolatum*

### **Current Threat Status (2012):**

Not Threatened

### **References and further reading:**

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=809](http://nzpcn.org.nz/flora_details.asp?ID=809)



**Caption:** Otago Peninsula  
**Photographer:** John Barkla



**Caption:** Cooks Cove, East Coast  
**Photographer:** John Sawyer



## *Histiopteris incisa*

### Common Name(s):

histiopteris, water fern, mata, bat's wing fern

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. New Zealand: Also eastern and south-eastern Australia and Tasmania, Lord Howe and Norfolk and throughout the tropics and southern temperate regions.

### Habitat:

Coastal to subalpine. Usually in open sites. *Histiopteris* is typically a primary colonizer of disturbed ground such as in clearings caused by tree falls, or in forest that has been seriously damaged by browsing animals. It is often common in pine forest, on roadside cuttings, and sometimes may be found in urban areas.

### Features\*:

Terrestrial often summer green fern (deciduous in cooler areas). Rhizomes long-creeping, scaly. Stipe and rachis chestnut-brown at base otherwise mostly yellow-brown (sometimes glaucescent), glabrous except for basal scales, glossy; stipe 0.15-1.2 m long, 5-10 mm diameter. Lamina 0.3-2.3 × 0.15-1.2 m, yellow-green, glaucescent or glaucous (irrespective distinctly glaucous when young), glabrous, ovate, 3-4-pinnate at base. Pinnae sessile, basal pinnules reduced, stipuliform; veins reticulate. Primary pinnae in opposite pairs; longest 130-600 × 70-350 mm, arising at narrow angles, sessile. Secondary pinnae opposite, arising at wide angles; longest 40-200 × 20-90 mm, with basal pair sometimes reduced to stipules. Tertiary pinnae opposite; longest 10-45 × 6-15 mm, sometimes divided into quaternary pinnae. Ultimate pinnules adnate to midribs; margins entire or crenate; apices obtuse. Sori ± continuous around margins, borne on connecting vein, bearing paraphyses; indusia absent, sori protected by reflexed membranous lamina margin. Spores pale, tuberculate.

### Flowering:

None (spore bearing)

### Fruiting:

None (spore bearing)

### Threats:

Not Threatened

### \*Attribution:

Fact Sheet Prepared for NZPCN by P.J. de Lange 11 January 2011. Description adapted from Brownsey (1998) and Brownsey & Smith-Dodsworth (2000)

### References and further reading:

Brownsey, P.J. 1998: Dennstaedtiaceae: Flora of Australia 48: 214-228.

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2154](http://nzpcn.org.nz/flora_details.asp?ID=2154)



**Caption:** Dew on emerging frond. Western Hutt hills. Mar 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Emerging frond. Western Hutt hills.

**Photographer:** Jeremy Rolfe

## *Holcus lanatus*

### Common Name(s):

Yorkshire fog

### Current Threat Status (2009):

Exotic

### Distribution:

Common throughout New Zealand.

### Habitat:

A wide range of disturbed wet and dry sites, often in fens.

### Features\*:

Tufted, sometimes stoloniferous, softly hairy, greyish green perennials, 35-110 cm. Leaf-sheath firmly membranous, striate, ± keeled above near ligule, villous with long, fine, silky hairs, basal sheaths often purplish. Ligule (0.6)-1-3 mm, ± truncate, denticulate, apex finely ciliate and occasionally with a few long hairs, abaxially villous. Leaf-blade (2.5)-4.5-15-(20) cm × (1.5)-3-10 mm, pubescent and with longer soft hairs, narrowed to acuminate tip; margins finely ciliate, and with longer hairs. Culm erect, or ascending from geniculate base, nodes and internodes pubescent. Panicle 4-18 × 1.5-7 cm, lanceolate, ovoid or sometimes oblong, dense to lax, erect or nodding; rachis and branches pubescent. Spikelets 3.8-5.5 mm, whitish, pale green, or purplish. Glumes stiff-ciliate on keels and lateral nerves of upper glume, elsewhere minutely scabrid to shortly pubescent; lower sometimes slightly shorter, narrow-lanceolate, acute to mucronate, upper broader, elliptic, mucronate, or awned to 0.8 mm. Lemma 2-2.7 mm, elliptic-lanceolate, glabrous, shining, keel sparsely finely prickletoothed, apex minutely ciliate-scabrid; lower lemma awnless, upper lemma narrower, awn stout, 1.4-2.8 mm, inserted c. 0.4 mm below tip of lemma, becoming recurved and uncinat. Palea keels sparsely short-ciliate above, apex obtusely lobed, minutely ciliate. Callus hairs few, to 1 mm. Rachilla glabrous. Anthers 1-2.2 mm. Caryopsis 1-1.5 × 0.4-0.5 mm.

### Flowering:

Spring to early summer

### Fruiting:

Summer to autumn

### \*Attribution:

Factsheet prepared by Paul Champion and Deborah Hofstra (NIWA). Features description from Edgar and Connor, (2000).

### References and further reading:

Johnson, A. T. and Smith, H. A (1986). Plant Names Simplified: Their pronunciation, derivation and meaning. Landsman Bookshop Ltd: Buckenhill, UK.

Edgar E. and H. Connor. 2000. Flora of New Zealand. Volume 5. Manaaki Whenua Press: Lincoln, New Zealand.

Johnson PN, Brooke PA (1989). Wetland plants in New Zealand. DSIR Field Guide, DSIR Publishing, Wellington. 319pp.

Champion et al (2012). Freshwater Pests of New Zealand. NIWA publication. <http://www.niwa.co.nz/freshwater-and-estuaries/management-tools/identification-guides-and-fact-sheets/freshwater-pest-species>

Lambrechtsen, N.C. (1986). What grass is that? A guide to identification of some introduced grasses in New Zealand by vegetative characters. New Zealand DSIR Information Series no. 87

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=4078](http://nzpcn.org.nz/flora_details.asp?ID=4078)



**Caption:** *Holcus lanatus*

**Photographer:** John Barkla



**Caption:** Flower head of *Holcus lanatus*

**Photographer:** Trevor James (AgResearch)



# *Hydrangea macrophylla*

**Common Name(s):**

hydrangea

**Current Threat Status (2009):**

Exotic

**Habitat:**

Terrestrial. Persistent around old homesteads, near water and on forest margins.

**Features:**

Deciduous rounded shrub to about 2 m tall with suckering habit. Leaves tend to be towards the end of the branches and are ovate and up to about 20 x 15 cm, margins coarsely serrate. Flower head either rounded or flat. Usually composed of sterile flowers (especially in cultivation) but can have fertile flowers in centre. Seed capsule to about 5 mm long.

**Flowering:**

November, December, January, February, March.

**References and further reading:**

Johnson, A. T. and Smith, H. A (1986). *Plant Names Simplified: Their pronunciation, derivation and meaning*. Landsman Bookshop Ltd: Buckenhill, UK.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4088](http://nzpcn.org.nz/flora_details.asp?ID=4088)



**Caption:** Robinson Crusoe Island, Chile

**Photographer:** John Sawyer



**Caption:** Robinson Crusoe Island, Chile

**Photographer:** John Sawyer



## *Hypochoeris radicata*

**Common Name(s):**

catsear

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4027](http://nzpcn.org.nz/flora_details.asp?ID=4027)



**Caption:** *Hypochoeris radicata*

**Photographer:** John Smith-Dodsworth



**Caption:** Hutt River north of Stokes Valley. Apr 2006.

**Photographer:** Jeremy Rolfe

# *Hypolepis ambigua*

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: Three Kings, North, South, Stewart and Chatham Islands.

## Habitat:

Coastal to montane. A 'weedy' species of disturbed sites in open forest, forest cleanings, forest margins, in scrub, and in open grassland. It is often a component of brackenfield and as with *H. dicksonioides*, *H. ambigua* frequently colonises urban areas, where at times it can become a troublesome 'weed'.

## Features\*:

Rhizome long-creeping, 2–4 mm diameter, covered in red-brown hairs up to 2.5 mm long, stipes arising at intervals of 90–200 mm (abundant near growing tip, sparse elsewhere). Stipes 80–600 mm long, 1.5–5 mm diameter, red-brown at very base, pale red-brown or yellow-brown above, covered at base in red-brown hairs, up to 3 mm long, sparse above and paler. Laminae ovate or broadly ovate, 0.2–1.2 × 0.15–1.0 m, bipinnate at apex, tripinnate or quadripinnate below. Rachis red-brown or yellow-brown at base, green at apex, sparsely covered in pale brown hairs like those of stipe. Primary pinnae in 22–30 pairs, opposite or subopposite, the lowest arising at 20–50° to stem upper ones at 70–90°, the longest near the base 150–550 × 85–270 mm; lowest ones 50–240 mm apart, middle ones 15–80 mm apart; upper ones narrowly ovate or ± parallel-sided, lower ones ovate or broadly ovate narrowly winged. Secondary pinnae narrowly ovate or broadly ovate; parallel-sided, broadly winged, 50–160 × 20–53 mm those on the lower pinnae decreasing markedly in length along the pinnae. Tertiary pinnae narrowly ovate or parallel-sided, 10–30 × 5–12 mm. Quaternary pinnae (when present) 2.5–8.0 × 1.5–4.0 mm. Veins reaching margin at tooth apex. Hairs: glistening colourless nonglandular hairs on underside of lamina, costae and midribs, absent from lamina margin; brown-tinged hairs on upper surfaces abundant on midribs; 0.3–1.0 mm long (mostly c.0.5 mm), those on pinna midribs and costae often longer. Sori: one on acroscopic edge of each ultimate segment, originating away from margin; protected at maturity by slightly reflexed pinnules margin which also often bears a few short hairs at this point; hairs also often present in sorus (0.3–0.5 mm long). Spores pale, brown, echinate.

## Flowering:

Not Applicable - Spore Producing

## Fruiting:

Not Applicable - Spore Producing

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (8 November 2012). Description from Brownsey & Chinnock (1984).

## References and further reading:

Brownsey, P.J.; Chinnock, R.J. 1984: A Taxonomic revision of the New Zealand species of *Hypolepis*. *New Zealand Journal of Botany* 22: 43–80.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=853](http://nzpcn.org.nz/flora_details.asp?ID=853)



**Caption:** Cannon Point Walkway, Upper Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Sori, Cannon Point Walkway, Upper Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe



## *Iris foetidissima*

### **Common Name(s):**

stinking iris

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. A plant of coastal and lowland habitats (Timmins & MacKenzie 1995). A plant of low forest, scrub and forest margin communities, also found in waste places (Timmins & MacKenzie 1995).

### **Features:**

Clump-forming perennial to 80 cm. Rhizomes red-brown, up to 15 mm diameter. Leaves leathery, dark green, broad, sword shaped, 15-25 mm x 60-100 cm, foul smelling when crushed. Flowering stem 60-80 cm, erect. Flowers up to 10 cm diameter, dull yellow with greenish-brown markings (Occasionally brownish-purple). Seed capsule green, 3-sided, 5 cm long, splitting issuing many scarlet round seeds, 5 mm diameter.

### **Flowering:**

November, December

### **References and further reading:**

Johnson, A. T. and Smith, H. A (1986). Plant Names Simplified: Their pronunciation, derivation and meaning. Landsman Bookshop Ltd: Buckenhill, UK.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3309](http://nzpcn.org.nz/flora_details.asp?ID=3309)



**Caption:** Doctors Point

**Photographer:** John Barkla



**Caption:** *Iris foetidissima*

**Photographer:** John Smith-Dodsworth



## *Isolepis cernua* var. *cernua*

### Common Name(s):

slender clubrush

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. New Zealand. Almost cosmopolitan but apparently absent from S.E. Asia.

### Habitat:

Mostly coastal on damp sand, or peat within sand flats, dune slacks, fringing lagoons and slow flowing brackish water, on coastal rocks and boulder beaches. More rarely inland around lake margins, and in peat bogs (especially restiad bogs)

### Features\*:

Variable in size, in dense tufts or with a shortly branched ascending rhizome. Culms 20-200 mm long, usually c. 0.5 mm. diameter or less, but occasionally up to 1 mm diameter. Leaves 1-4 or 0, ± = culms, or much < culms, c. 0.5 mm wide, or often reduced to shortly mucronate sheaths; sheaths dark red-purple at the base, lighter brown towards the truncate orifice. Inflorescence of 1-(2-3) spikelets; subtending bract ± = or usually slightly > spikelets, 3-25 mm long, setaceous or leaf-like, caducous. Spikelets 2.0-5.0 × 1.0-2.5 mm, elliptical, obtuse, almost white, or green, or with red-brown markings. Glumes 1-2 mm. long, broadly ovate, only slightly concave with keel not prominent, obtuse, green to very pale straw coloured, or with red-brown markings at the sides, margins entire, membranous, rounded towards the tip, or with the keel at tip of glume somewhat thickened and ± excurrent, lateral nerves conspicuous. Hypogynous bristles 0. Stamens 3, rarely 2 or 1 in occasional glumes. Style-branches 3. Nut us. slightly < 1 mm. long, but occasionally slightly > 1 mm., c.0.5 mm. wide, obovoid or occasionally elliptical-obovoid, plano-convex, or subtrigonal and obtusely angled at the back, rounded at the tip and sharply apiculate, red-brown or dark grey at maturity, minutely but very distinctly reticulate.

### Flowering:

August - December (may be present throughout the year)

### Fruiting:

October - May (may be present throughout the year)

### Threats:

Not Threatened

### \*Attribution:

Description from Moore and Edgar (1970).

### References and further reading:

Johnson, A. T. and Smith, H. A (1986). *Plant Names Simplified: Their pronunciation, derivation and meaning.* Landsman Bookshop Ltd: Buckenhill, UK.

Moore, L.B.; Edgar, E. 1970: *Flora of New Zealand. Vol. II.* Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2166](http://nzpcn.org.nz/flora_details.asp?ID=2166)



**Caption:** Coromandel  
**Photographer:** John Smith-Dodsworth



**Caption:** Coromandel  
**Photographer:** John Smith-Dodsworth

## *Juncus bufonius* var. *bufonius*

### Common Name(s):

toad rush

### Current Threat Status (2009):

Exotic

### References and further reading:

Johnson, A. T. and Smith, H. A (1986). *Plant Names Simplified: Their pronunciation, derivation and meaning*. Landsman Bookshop Ltd: Buckenhill, UK.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=4026](http://nzpcn.org.nz/flora_details.asp?ID=4026)



**Caption:** *Juncus bufonius*  
**Photographer:** John Smith-Dodsworth



**Caption:** *Juncus bufonius*  
**Photographer:** John Smith-Dodsworth



## *Kunzea ericoides*

### Common Name(s):

Manuoa, Titira, Atitira, Kanuka

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. New Zealand: Northern South Island only - north of the Buller and Wairau Rivers. Most common in North West Nelson.

### Habitat:

Coastal to lowland shrubland, regenerating forest and forest margins, also present in montane forest, ultramafic shrubland and very occasionally present in subalpine shrubland.

### Features\*:

Trees up to 18 m. Trunk 1–4, 0.10–0.85 m d.b.h. Early bark brown to grey-brown, ± elongate, usually firmly attached, margins elongate sinuous, ± entire with scarcely any flaking; old bark similar. Branches slender, initially ascending soon spreading, apices often pendulous. Branchlets numerous, slender, glabrescent; indumentum sparse, deciduous, hairs divergent 0.02–0.05 mm long; leaves of branchlets densely crowded along stems. Leaves sessile, ± glabrous, except for the margins; lamina 4.0–25.0 × 0.5–1.8 mm, green to yellow-green, linear, linear-lanceolate, to narrowly lanceolate, straight or with upper ¼ weakly recurved, apex acute, sometimes cuspidate, base attenuate; lamina margins initially finely sericeous, glabrate or glabrous; hairs forming a fine, discontinuous band failing just short of lamina apex. Inflorescence a compact corymbiform to shortly elongate 3–15-flowered botryum up to 60 mm long. Pherophylls foliose ± persistent, 1 per flower; lamina 3.0–7.8 × 0.9–1.4 mm, elliptic, lanceolate to narrowly lanceolate, apex acute, base attenuate; Pedicels 1.6–3.8 mm long at anthesis, usually glabrous. Flower buds pyriform to narrowly obconic, apex of mature buds weakly domed to flat, calyx lobes distant. Flowers 4.1–8.3 mm diam. Hypanthium 1.4–3.2 × 1.9–4.1 mm; sharply obconic, apex terminating in 5 persistent suberect to spreading calyx lobes; hypanthium glabrous (very rarely with basal ¼ finely, sparsely covered in minute hairs). Calyx lobes 5, suberect to spreading, 0.4–1.0 × 0.4–1.0 mm, orbicular, obtuse to broadly deltoid, red-green, pink or crimson, margins glabrous or finely ciliate. Receptacle green or pink at anthesis, darkening to crimson or dark magenta after fertilisation. Petals 5, 1.4–2.6 × 1.5–2.0 mm, white, orbicular, suborbicular to narrowly ovate, spreading, apex rounded, entire or very finely denticulate, oil glands usually not evident when fresh, ± colourless. Stamens 10–34 in 1–2 weakly defined whorls, filaments white. Anthers dorsifixed, 0.35–0.48 × 0.16–0.24 mm, broadly ellipsoid. Pollen white. Anther connective gland prominent, pink or pinkish-orange when fresh, drying red to orange, ± spheroidal ± coarsely papillate. Ovary 4–5 locular, each with 16–24 ovules in two rows on each placental lobe. Style 1.5–2.2 mm long at anthesis; stigma capitate, about 1¼ × the style diam., flat, cream or white, flushing pink after anthesis, surface very finely granular-papillate. Fruits rarely persistent, 1.9–3.4 × 1.8–3.9 mm, glabrous, dark green to reddish-green, maturing brown to grey-brown to grey-black, cupular, barrel-shaped, shortly cylindrical to hemispherical, calyx valves erect with the apices incurved, split concealed by dried, erect, free portion of hypanthium. Seeds 1.00–1.05 × 0.32–0.50 mm, semi-glossy, orange-brown to dark brown, obovoid, oblong, oblong-ellipsoid, or cylindrical and ± curved, surface coarsely reticulate.

### Flowering:

October-February

### Fruiting:

November-March

### Threats:

Not threatened, though some stands are at risk from clearance for farmland or through felling for firewood.

### \*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange 25 August 2014. Description modified from de Lange (2014).

### References and further reading:

de Lange, P.J. 2014: *A revision of the New Zealand Kunzea ericoides* (Myrtaceae) complex. *Phytokeys* 40: 185p doi: 10.3897/phytokeys.40.7973.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=885](http://nzpcn.org.nz/flora_details.asp?ID=885)



**Caption:** *Kunzea ericoides* - tree showing weeping branches characteristic of this species

**Photographer:** Peter de Lange



**Caption:** Marahau

**Photographer:** Peter de Lange



# *Lachnagrostis billardierei* subsp. *billardierei*

## Common Name(s):

sand wind grass

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. Common throughout New Zealand and Australia

## Habitat:

Mainly coastal (rarely inland). On sand dunes, cobble and boulder beaches, on cliff faces, in free draining sites along estuarine river banks, and fringing coastal ponds and lagoons. Sometimes on limestone or calcareous sandstone bluffs well inland.

## Features\*:

Stiffly tufted, glaucous to bluish-green perennial grass, 100-600 mm tall, with capillary-branched panicles sometimes overtopped by leaves. Branching intravaginal. Leaf-sheath papery, with wide membranous margins, closely striate, smooth but sometimes scaberulous above on nerves, light brown to amber. Ligule 1.0-4.5 mm, tapered above, entire to erose, undersides scabrid. Leaf-blade 50-240 x 2.5-10.0 mm, flat, harsh, scaberulous on ribs and on margins throughout, more or less abruptly narrowed to firm, more or less blunt, more or less cucullate apex. Culm 40-400 mm, erect, or decumbent at base, included within uppermost leaf-sheath, internodes densely finely scabrid. Panicle 60-240 x 100-240 mm, purple-green to wine-red, lax, with long, whorled, ascending branches, later spreading and panicle becoming as broad as long; rachis and branches scaberulous, spikelets single at tips of ultimate panicle branchlets, on pedicels thickened above. Spikelets 4-6 mm, pale green, purple-green or red-green. Glumes 1-3-nerved, narrow-lanceolate, acuminate, usually smooth, sometimes sparsely scabrid, margins wide, hyaline, mid-nerve scabrid. Lemma 3-4 mm, more or less two-thirds length of glumes, smooth, or often scabrid above (especially on nerves), membranous, shining, elliptic-lanceolate, lateral nerves excurrent to short awns 0.5-1.0 mm long; central awn 4.5-9.0 mm, fine, geniculate from lower third of lemma (rarely middorsal). Callus hairs more or less dense, very short, 0.3-0.7 mm, c. one-tenth length of lemma. Rachilla prolongation 0.5-1.0 mm, tipped by a thick tuft of hairs 1.0-1.5 mm and more or less equivalent in length to palea. Lodicules slightly > 0.5 mm, lanceolate, acute. Anthers 0.5-1.0 mm. Seed 1.3-1.8 x 0.5-0.8 mm.

## Flowering:

August - February

## Fruiting:

December - June

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet by P.J. de Lange 14 April June 2005. Description modified from Edgar & Connor (2000)

## References and further reading:

Edgar, E.; Connor, H.E. 2000: Flora of New Zealand. Vol. V. Grasses. Christchurch, Manaaki Whenua Press. 650 pp.

Gardner, R.O. 2014: Notes on the wind grass *Lachnagrostis filiformis* (Poaceae). *Auckland Botanical Society Journal* 69: 168-170.

Trinius, C.B. 1820: *Fundamenta Agrostographiae*. J.G.Huebner, Vienna.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2180](http://nzpcn.org.nz/flora_details.asp?ID=2180)



**Caption:** *Lachnagrostis billardierei*

**Photographer:** John Sawyer



**Caption:** *Lachnagrostis billardierei*

**Photographer:** John Sawyer

# *Lachnagrostis filiformis*

## **Common Name(s):**

New Zealand wind grass

## **Current Threat Status (2012):**

Not Threatened

## **Distribution:**

Indigenous. Common throughout New Zealand. Found in Australia and on many of the Pacific Islands

## **Habitat:**

Coastal to subalpine. Widespread in a variety of open situations and often found as an urban weed, especially in waste land around puddles and in muddy ground. Common around lakes, and fringing ponds, streams and on wetland margins. An opportunistic species that has probably increased its range following human settlement.

## **Features\*:**

Rather variable, usually slender, upright, tufted, glaucous green, light green to yellow green, annual or short-lived perennial grass up to 700 mm tall; whole plant usually withering early and culms not breaking up below panicle. Branching intravaginal. Leaf-sheath firmly membranous, distinctly ribbed, glabrous below, very finely scabrid above. light green, later light brown. Ligule 1-5 mm, oblong, rounded or tapered, later lacerate, undersides with sparse prickle-teeth. Leaf-blade 25-200 x 1.5-3.0 mm, usually flat, sometimes involute and 0.5-1.0 mm diameter, glabrous, or ribs scabrid; margins very finely scabrid, apex finely acute. Culm 100-350 mm, erect to spreading, internodes usually densely, minutely scabrid, occasionally smooth. Panicle 90-300 x 5-250 mm, yellow green, faintly purple-green drying white, delicate, enclosed at base by the uppermost leaf-sheath, at first contracted, later very lax; branches filiform, numerous, unequal, very finely scabrid, primary branches naked for much of length, with spikelets in clusters of 2-many, towards tips of the much shorter capillary secondary branches. Spikelets 2.5-4.2 mm, pale silvery green to purplish. Glumes subequal, acute to acuminate, usually glabrous, membranous, very narrow linear-lanceolate, lower glume usually slightly longer and more acuminate; keel scabrid. Lemma 1.3-2.3 mm long, one half to two-thirds length of glumes, 5-nerved, moderately covered with very short hairs, oblong-ovate, glabrous near hyaline, truncate, erose apex, lateral nerves very short excurrent; awn 3-6 mm geniculate, more or less mid-dorsal or form c. upper one third. Pale three-quarters - four-fifths length of lemma, keels 0.1 mm apart, apex subobtuse. Callus ringed by minute hairs 0.3-0.4 mm, to one quarter of lemma. Rachilla prolongation absent or 0.3 mm long tipped with hairs to 0.8 mm long. Lodicules 0.5-0.9 mm, linear, acute. Anthers 0.2-0.3 mm. Seed 0.8-1.3 x 0.3-0.5 mm long.

## **Flowering:**

September - April

## **Fruiting:**

October - June

## **Threats:**

Not Threatened

## **\*Attribution:**

Fact Sheet by P.J. de Lange 27 June 2006. Description modified from Edgar and Connor (2000)

## **References and further reading:**

Edgar, E.; Connor, H.E. 2000: Flora of New Zealand. Vol. V. Grasses. Christchurch, Manaaki Whenua Press. 650 pp.

Gardner, R.O. 2014: Notes on the wind grass *Lachnagrostis filiformis* (Poaceae). *Auckland Botanical Society Journal* 69: 168-170.

Trinius, C.B. 1820: *Fundamenta Agrostographiae*. J.G.Huebner, Vienna.

## **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2181](http://nzpcn.org.nz/flora_details.asp?ID=2181)



**Caption:** Pa Hill, Coromandel

**Photographer:** John Smith-Dodsworth



**Caption:** Pa Hill, Coromandel

**Photographer:** John Smith-Dodsworth

# *Lachnagrostis littoralis* subsp. *littoralis*

**Common Name(s):**

coastal wind grass

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Endemic. Common in coastal habitats throughout the North Island, northern South Island and Chatham Islands

**Habitat:**

Strictly coastal. Usually on exposed cliff faces, in coastal turf, and amongst boulders or on cobble beaches. Occasionally found in petrel scrub or in damp depressions within sand dune systems. Rarely found in estuaries on mud banks or amongst saltmarsh vegetation.

**Features\*:**

Densely tufted, light green to greyish green or glaucous, annual grass 30-400 mm tall, whole plant often withering early and culms not breaking up below panicle. Branching intravaginal. Leaf-sheath finely striate, subhyaline, smooth or minutely scabrid above. Ligule 0.2-3.0 mm, oblong, tapered, subobtusate or denticulate, sometimes lacerate, undersides sparsely scabrid. Leaf-blade firm 10-80 x 1.5-5 mm, flat, or sometimes involute and 0.5 mm diameter, underside smooth or minutely papillose, rarely scabrid, upper surface minutely scabrid on ribs and margins, leaf tip acute to subobtusate. Culm 10-140 mm, included within leaf-sheaths, internodes finely scabrid below panicle, rarely visible until culm breaks up at maturity. Panicle 20-120 x 5-85 mm, delicate, ± contracted, later spreading, enclosed at base by sheath of uppermost culm-leaf; branches and branchlets ± erect, all ± equal in length, slender, sparsely scabrid, naked for much of their length, the ultimate branchlets tipped by 1-2 spikelets. Spikelets 2.5-6.0 mm, light green or greenish brown, slender. Glumes narrow elliptic-lanceolate, usually equal or the upper slightly shorter, acute to acuminate to shortly mucronate, 1-nerved, smooth, keel scabrid, margins hyaline, finely scabrid above. Lemma 1.5-2.5 mm long, oblong-ovate, 5-nerved with scattered to rather dense short silky hairs, often glabrous above, lateral nerves shortly excurrent, faintly scabrid; awn 3-6 mm long, ± mid-dorsal, geniculate, slightly twisted near base. Palea slightly < lemma, nerves 0.1-0.2 mm apart, keels minutely excurrent, faintly scabrid at apex. Callus hairs dense, very short, to 0.5 mm long covered one-fifth of lemma. Rachilla prolongation minute 0.2-1.0 mm, with hair tuft 0.5-1.5 mm long. Lodicules 0.7 mm long, linear, acute. Anthers 0.3-1.0 mm. Seed 1.0-1.5 x 0.4-0.7 mm.

**Flowering:**

September - May

**Fruiting:**

October - June

**Threats:**

Not Threatened but can be uncommon over parts of its range

**\*Attribution:**

Fact Sheet by P.J. de Lange 14 April June 2005. Description modified from Edgar and Connor (2000)

**References and further reading:**

Edgar, E.; Connor, H.E. 2000: Flora of New Zealand. Vol. V. Grasses. Christchurch, Manaaki Whenua Press. 650 pp.

Gardner, R.O. 2014: Notes on the wind grass *Lachnagrostis filiformis* (Poaceae). *Auckland Botanical Society Journal* 69: 168-170.

Trinius, C.B. 1820: *Fundamenta Agrostographiae*. J.G.Huebner, Vienna.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=887](http://nzpcn.org.nz/flora_details.asp?ID=887)



## *Lactuca saligna*

**Common Name(s):**

willow leaf lettuce

**Current Threat Status (2009):**

Exotic

**References and further reading:**

Johnson, A. T. and Smith, H. A (1986). Plant Names Simplified: Their pronunciation, derivation and meaning. Landsman Bookshop Ltd: Buckenhill, UK.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3352](http://nzpcn.org.nz/flora_details.asp?ID=3352)

## *Lagenophora pumila*

### Common Name(s):

Papataniwhaniwha

### Current Threat Status (2012):

Not Threatened

### Threats:

Not Threatened

### References and further reading:

Drury, D.G. 1974: A Broadly Based Taxonomy of *Lagenifera* Section *Lagenifera* and *Solenogyne* (Compositae-Astereae), with an Account of their Species in New Zealand. *New Zealand Journal of Botany* 12: 365-395

Nicolson, D.H. 1996: (1233) Proposal to conserve the name *Lagenophora* (Compositae) with a conserved spelling. *Taxon* 45: 341-342

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=894](http://nzpcn.org.nz/flora_details.asp?ID=894)



**Caption:** Waituhi Saddle. Jan 2009.

**Photographer:** Jeremy Rolfe



**Caption:** Pakuratahi Forks, Kaitoke.

**Photographer:** Jeremy Rolfe

## *Lastreopsis velutina*

### **Common Name(s):**

Velvet fern

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Gardner, J.J.S.; Perrie, L.; Shepherd, L.; Nagalingum, N.S. 2017: Taxonomic Placement of Unassigned Species of Lastreopsis Ferns (Dryopteridaceae) Using Phylogeny. *Systematic Botany* 42: 385–391.

Labiak, P.H.; Sundue, M.; Rouhan, G.; Moran, R.C. 2015: New combinations in *Lastreopsis* and *Parapolystichum* (Dryopteridaceae). *Brittonia* 67: 79–86.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=900](http://nzpcn.org.nz/flora_details.asp?ID=900)



**Caption:** Pukemokemoke

**Photographer:** Peter de Lange



**Caption:** Silverstream, Upper Hutt. Oct 2006.

**Photographer:** Jeremy Rolfe



## *Lathyrus odoratus*

**Common Name(s):**

sweet pea

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3360](http://nzpcn.org.nz/flora_details.asp?ID=3360)

## *Lathyrus tingitanus*

**Common Name(s):**

Tangier pea

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3380](http://nzpcn.org.nz/flora_details.asp?ID=3380)



**Caption:** Whanganui. Nov 2011.

**Photographer:** Colin Ogle



**Caption:** *Lathyrus tingitanus*

**Photographer:** John Smith-Dodsworth

## *Leontodon autumnalis* subsp. *autumnalis*

**Common Name(s):**

autumn hawkbit

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3385](http://nzpcn.org.nz/flora_details.asp?ID=3385)



## *Leontodon taraxacoides*

**Common Name(s):**

hawkbit

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3386](http://nzpcn.org.nz/flora_details.asp?ID=3386)



**Caption:** Stokes Valley.

**Photographer:** Jeremy Rolfe



**Caption:** Leaf hairs. Stokes Valley.

**Photographer:** Jeremy Rolfe

## *Lepidium didymum*

**Common Name(s):**

twin cress

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3702](http://nzpcn.org.nz/flora_details.asp?ID=3702)



**Caption:** *Lepidium didymum*  
**Photographer:** Jeremy Rolfe,  
April 2006, Stokes Valley



**Caption:** *Lepidium didymum*  
**Photographer:** John Smith-  
Dodsworth

# *Lepidium oleraceum*

## Common Name(s):

Nau, Cooks scurvy grass

## Current Threat Status (2012):

Threatened - Nationally Endangered

## Distribution:

Endemic. New Zealand, Kermadec Island group, Three Kings Island group, North, South, Stewart Islands and the Bounty Islands group.

## Habitat:

Now strictly coastal, *L. oleraceum* is usually found in friable well manured soils, guano deposits, or rock crevices associated with seabird roosts and nesting sites. Occasionally it grows under taller vegetation, and then usually near petrel or shear water burrows. The species is now mainly found on rock stacks, islets, and windshorn headlands on rodent free offshore islands. In some places it has been found growing on sand or gravel beaches, and in one location it grows on boulders and clay that are part of an artificial sea wall. Historically this species was also known from the upper Waitaki Valley, well inland from the sea. This suggests that before human occupation it was once more widespread away from coastal situations.

## Features\*:

Glabrous, much-branched, perennial, herb up to 1 x 1 m, usually less. All parts strongly pungent when bruised. Stems erect to decumbent, stout, somewhat woody near base, flexuous. Petioles winged of variable length. Leaves 20-100 x 15-40 mm, decreasing in size toward stem apices, dark green to green, fleshy, somewhat succulent, narrow-oblongate, obovate to elliptic, margins, deeply and evenly serrated, cuneately narrowed at base. Inflorescences racemose, terminal and lateral, usually leaf-opposed 30-150 mm at fruiting; pedicels erectopatent, 3-10 mm long at fruiting. Flowers fragrant. Sepals 1-2 x 0.5-1 mm. Petals white, 2.5-3.5 x 0.5-2 mm, obovate-spathulate. Stamens 4, yellow. Silicles 3-5 x 2.5-5 mm, broadly ovate, truncate at base, apex acute, not winged; style 0.1-0.2 mm; seeds 1.5-2 mm, ovoid, orange-brown

## Flowering:

Flowers appear year-round, but mainly from September to March.

## Fruiting:

Fruiting occurs from December to April. Seed production is rapid so flowers, immature and ripe seed capsules are often found on the same plant.

## Threats:

Seriously threatened by loss of indigenous sea bird nesting grounds because it is dependent on high-fertility soils and regular cycles of animal induced disturbance. It is susceptible to a range of introduced pests and diseases, including rodents, snails, aphids, leaf miner, diamond back moth and cabbage white butterfly, and is browsed by cattle and other livestock. A fungus-like disease (*Albugo candida* (J.F.Gmel.) Kuntze) is also a problem; and the plant has been and continues to be over-collected by people.

## \*Attribution:

Description adapted from Webb et al. (1988).

## References and further reading:

Allan, H.H. 1961. *Flora of New Zealand. Volume I. Indigenous Tracheophyta: Psilopsida, Lycopsida, Filicopsida, Gymnospermae, Dicotyledones.* Wellington, Government Printer.

Sawyer, J.W.D., de Lange, P.J. 2007. *Lepidium oleraceum* - a threatened herb of coastal Wellington. *Wellington Botanical Society Bulletin*, 50: 30-36

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988. *Flora of New Zealand. Volume IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledones.* Christchurch, New Zealand, Botany Division, D.S.I.R.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=71](http://nzpcn.org.nz/flora_details.asp?ID=71)



**Caption:** Albugo infestation on leaf. Ex Mana Island. Feb 1986.

**Photographer:** Colin Ogle



**Caption:** Cabbage white butterfly larva on *Lepidium oleraceum* in cultivation. Feb 1986.

**Photographer:** Colin Ogle



# *Lepidosperma australe*

## Common Name(s):

Square sedge, square-stemmed sedge

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North, South, Stewart and Chatham Islands.

## Habitat:

Coastal to alpine (up to 1300 m a.s.l.), usually in open ground, seral vegetation or peat bogs. Colonising seasonally dry, or well drained substrates as well as permanently wet substrates such as peat.

## Features\*:

Stout, rush-like sedge forming dense blue-green to dark green patches up to 2 m tall. Rhizomes short, lignaceous, 2-3 mm diameter, bearing distant apiculate, dark brown scales. Culms quadrangular, glabrous, densely packed, rigidly erect, coriaceous, 0.2-2.0 m tall, 1.0-2.5 mm diameter, dark blue or grey-green (glaucous). Leaves all reduced to brown, sheathing, membranous, mucronate bracts, or the upper 1-2 with laminae quadrangular, or occasionally trigonous 50-350 mm long with subulate, pungent, dark brown apices. Inflorescences a 10-40 x 5-15 mm, dense, contracted, spicate head; subtending bract usually < inflorescence with a rigid, subulate awn up to 15 mm long. Spikelets 1-flowered, 4-5 mm long, on short, stout, stiff stalks. Glumes 4-6, the lowest broadly ovate, mucronate, the upper ones ovate-lanceolate, acuminate, coriaceous, papillose with scabrid midrib and margins, midrib distinctly thickened; only the uppermost glume fertile, the rest empty. Hypogynous scales 6, 0.5 mm long, white, triangular when mature, fused at the base to form a 6-lobed persistent cup. Anthers with an elongated red connective. Nut 4 mm long, lustrous light brown, more or less trigonous, oblong-ellipsoid, smooth, narrowed above to the persistent, scabrid style-base.

## Flowering:

August -  
December

## Fruiting:

October - July (often present year  
round)

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (8 September 2006). Description adapted from Moore & Edgar (1970).

## References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=904](http://nzpcn.org.nz/flora_details.asp?ID=904)



**Caption:** *Lepidosperma australe*  
**Photographer:** Wayne Bennett



**Caption:** Coromandel, March  
**Photographer:** John Smith-Dodsworth

## *Leptospermum scoparium* var. *scoparium*

### Common Name(s):

manuka, tea tree, kahikatoa

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous to New Zealand and Australia. Most Australian forms of *L. scoparium* do not match the range seen in New Zealand. However, plants from Tasmania are very similar to, if not identical with some South Island forms, differing mainly by their wider leaf base, and longer, more pungent leaf apex. Manuka was also collected once from Rarotonga by Thomas Cheeseman in the 1800s. It has not been found there since, and is assumed to have been a failed introduction. Further study using DNA sequencing is underway to resolve the status of *L. scoparium* forms both here and in Australia.

### Habitat:

Abundant from coastal situations to low alpine habitats.

### Features\*:

Decumbent shrub, subshrub, shrub, or small tree up to 5 m in height and in decumbent forms 2-4 m across. Bark light grey to charcoal grey, peeling in long papery flakes, these curling with age. Wood red. Branches numerous erect, spreading or decumbent, arising from base, sometimes sprouting adventitious roots and/or layering on contact with soil. Young branches, young leaves and flower buds densely to sparingly clad in long silky, white hairs. Leaves leathery, pale to dark green, glabrescent to glabrous, linear-filiform, narrowly lanceolate, lanceolate, oblanceolate, to elliptic or obovate (5-)10-15(-20) x 1-2-5(-8) mm, invariably apex drawn out into a long stiff, pungent point, midrib usually distinct sometimes obscure, leaf margin finely crenate, veins simple, scarcely branched. Flowers solitary in leaf axils, (8-)10-20(-25) mm diam. Receptacle dark red, crimson or pink. Petals white, sometimes flushed pink or dark red. Stamens numerous.

### Flowering:

Throughout the year

### Fruiting:

The capsules are long persistent so invariably mature plants always possess at least some capsules.

### Threats:

Not threatened, though some stands are at risk from clearance for farmland or through felling for firewood.

### \*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange 1 February 2004. Description by P.J. de Lange.

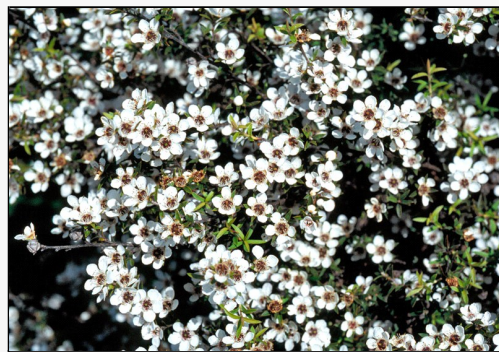
### References and further reading:

Gardner, R. 2002. Notes towards an excursion Flora .Manuka *Leptospermum scoparium* myrtaceae. Auckland Botanical Society Journal, 57: 147-149

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2302](http://nzpcn.org.nz/flora_details.asp?ID=2302)



Photographer: © John Braggins



Caption: Flowers of *Leptospermum scoparium* var. *scoparium*

Photographer: Wayne Bennett



## *Lilaeopsis novae-zelandiae*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=934](http://nzpcn.org.nz/flora_details.asp?ID=934)



**Photographer:** Rebecca Stanley



**Photographer:** Rebecca Stanley



## *Linum bienne*

**Common Name(s):**

pale flax

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3422](http://nzpcn.org.nz/flora_details.asp?ID=3422)



**Caption:** Te Paki. Nov 2007.  
**Photographer:** Jeremy Rolfe



**Caption:** Te Paki. Nov 2007.  
**Photographer:** Jeremy Rolfe

## *Lobelia anceps*

### Common Name(s):

New Zealand Lobelia, shore Lobelia

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. New Zealand: Kermadec, Three Kings, North, South and Chatham Islands. Also present in Australia, South America (Chile) and South Africa

### Habitat:

Coastal to lowland. Usually in exposed sites on rocky shores, cobble beaches, cliff faces, at the back of saltmarshes in and around seepages. Also along riversides and around inland lakes and/or in seepages within open lowland forest.

### Features\*:

Herb forming diffuse to compact patches up to 400 mm long, with vegetative parts glabrous; sap clear. Stems erect to wide spreading or prostrate, not usually rooting at nodes; branchlets narrowly winged, grooved. Leaves very variable; petioles flat, to c.10 mm long. Lamina submembranous to ± succulent, entire or variously toothed; lamina of lower leaves 10-50 × 5-20 mm, broad-ovate to oblong-ovate, sometimes purplish, decurrent at base. Leaves becoming narrower and petioles shorter above; uppermost leaves sessile, narrow, linear to lanceolate or spatulate, 10-60 × 1-5 mm (sometimes leaf shape varies little from base to shoot apex). Peduncles 2-7 mm long, usually puberulent. Calyx lobes 0.9-1.5 mm long, linear to triangular, acute or acuminate. Corolla 6-10 mm long, white, pale blue (often deeper blue on lower lip), less commonly pale pink; lobes of lower lip 5-8 mm long, linear to oblong. Capsule 6-12 mm long, narrow-clavate to almost cylindrical

### Flowering:

August - May

### Fruiting:

October - August

### Threats:

Not Threatened

### \*Attribution:

Fact Sheet by P.J. de Lange 2 February 2006. Description based on Allan (1961), Webb et al. (1988) supplemented with observations made from fresh material

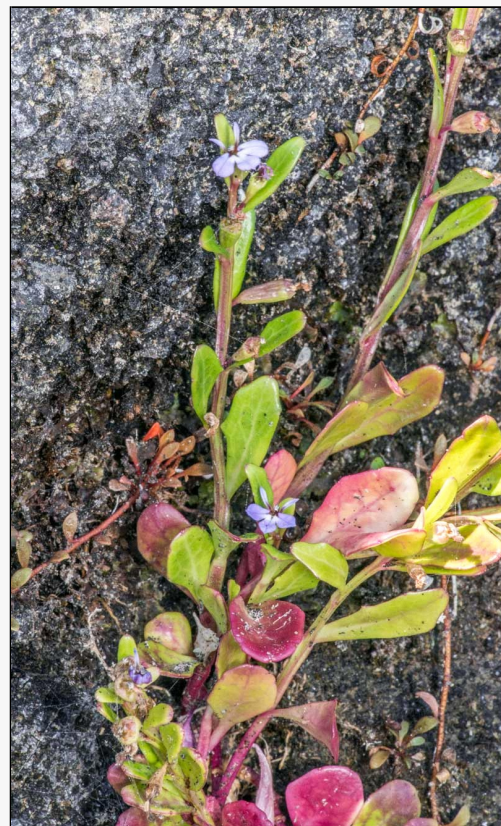
### References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Government Printer, Wellington.

Webb CJ, Sykes WR, Garnock-Jones PJ 1988. Flora of New Zealand. Vol. IV. Botany Division, DSIR, Christchurch.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2189](http://nzpcn.org.nz/flora_details.asp?ID=2189)



**Caption:** Kaupokonui, south Taranaki coast.

**Photographer:** Jeremy Rolfe



**Caption:** Chatham Island

**Photographer:** John Sawyer



*Lolium arundinaceum* subsp.  
*arundinaceum*

**Common Name(s):**  
tall fescue

**Current Threat Status (2009):**  
Exotic

**Habitat:**  
Terrestrial.

**Features:**  
Tall, erect, strongly tufted, coarse, perennial grass. Leaves 100-600 x 3-12 mm, flat, mod ribbed, harsh, yellow-green, hairless except at leaf base, margins rough, glossy beneath. Leaf base stout, encircles stem with collar, hairy; sheath base occ brownish-purple; emerging leaf rolled. Ligule up to 2 mm long, membranous, firm, greenish. Seedhead an open panicle, 5-25 cm long; seeds large, clustered in coarse spikelets 10-20 mm long.

**For more information, visit:**  
[http://nzpcn.org.nz/flora\\_details.asp?ID=2688](http://nzpcn.org.nz/flora_details.asp?ID=2688)



**Caption:** Schedonorus  
arundinaceus  
**Photographer:** John Smith-  
Dodsworth



**Caption:** Schedonorus  
arundinaceus  
**Photographer:** John Smith-  
Dodsworth



## *Lolium perenne*

### **Common Name(s):**

perennial rye grass

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Roadsides and tracks, pasture, river flats and banks, waste land and sand dunes, lowland to montane

### **Features:**

Loosely tufted, dark green, hairless, perennial grass. Leaves soft, thin, 30-200 x 2-6 mm, regularly ribbed above, very glossy and smooth beneath, joined to stem with small collar. Leaf sheath reddish-purplish at base; inner sheath smooth, pale green; emerging leaf folded. Ligule up to 2 mm long, membranous, light green. Seedhead distinctive, erect, thin, flattened, slightly zigzagged; with seeds in small clusters arranged alternately.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3440](http://nzpcn.org.nz/flora_details.asp?ID=3440)



**Caption:** *Lolium perenne*  
**Photographer:** John Smith-Dodsworth



**Caption:** *Lolium perenne*  
**Photographer:** John Smith-Dodsworth

## *Lotus angustissimus*

**Common Name(s):**

slender birdsfoot trefoil

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3446](http://nzpcn.org.nz/flora_details.asp?ID=3446)

# *Lotus pedunculatus*

## Common Name(s):

lotus

## Current Threat Status (2009):

Exotic

## Distribution:

Common in higher rainfall areas throughout New Zealand.

## Habitat:

Terrestrial. Especially common in wetter areas. Waste places, pasture, frequently along drains and in swamps.

## Features\*:

Clover-like perennial legume, scrambling to 1 m (2 m if supported). Roots fibrous. Stems with stolons, hollow, hairless to moderately hairy, woody at base often dying back to base in dry conditions. Leaves stalkless, 3-foliolate with 2 smaller leaflets (stipules) at base, usually with a few hairs beneath and on margins; leaflets 8-22 mm long, with conspicuous lateral veins. Flowers pea-like, 11-13 mm long, fragrant, golden yellow; clustered 5-12 on stalk 12-15 cm long, Nov-Mar. Seed pods straight, thin, 15-35 mm long.

## Flowering:

November, December, January

## Fruiting:

Summer and autumn

## \*Attribution:

Factsheet prepared by Paul Champion and Deborah Hofstra (NIWA).

## References and further reading:

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. (1988). Flora of New Zealand Volume 4: Naturalised pteridophytes, gymnosperms, dicotyledons. Botany Division, DSIR, Christchurch. 1365 pp.

Popay et al (2010). An illustrated guide to common weeds of New Zealand, third edition. NZ Plant Protection Society Inc, 416pp.

Johnson PN, Brooke PA (1989). Wetland plants in New Zealand. DSIR Field Guide, DSIR Publishing, Wellington. 319pp.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=3453](http://nzpcn.org.nz/flora_details.asp?ID=3453)



**Caption:** Seed of Lotus pedunculatus

**Photographer:** Trevor James (AgResearch)



**Caption:** Flower of Lotus pedunculatus

**Photographer:** Trevor James (AgResearch)



## *Lotus suaveolens*

**Common Name(s):**

hairy birdsfoot trefoil

**Current Threat Status (2009):**

Exotic

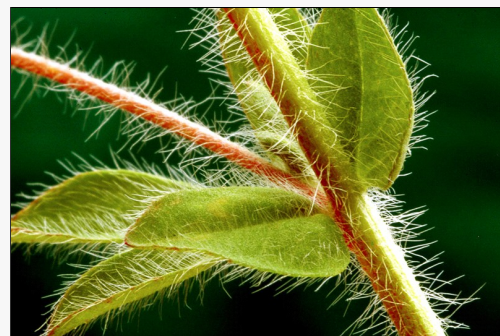
**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3448](http://nzpcn.org.nz/flora_details.asp?ID=3448)



**Caption:** Abaxial surfaces of leaves and stipules. Whanganui. Nov 2011.

**Photographer:** Colin Ogle



**Caption:** Stipules. Whanganui. Nov 2011.

**Photographer:** Colin Ogle

# *Lycium ferocissimum*

## Common Name(s):

boxthorn

## Current Threat Status (2009):

Exotic

## Habitat:

Terrestrial. A plant of lowland and coastal habitats. A plant of low fertility sites. The plant occurs in sites with stony ground and gravel, as well as ungrazed areas. A plant that occurs in sand dunes. Other sites that the plant occurs are shrublands, coastal scrub (Porteus 1993) and other coastal area as well as scrub on cliffs, banks and roadsides. A plant of coastal shrublands and disturbed waste places.

## Features:

Densely branched evergreen shrub, 1~6m high. Shoots and young leaves with minute glandular scales. Leaves subsessile or shortly petiolate, alternate on young shoots but on mature stems mostly in fascicles on short spurs along the rigid branch spines. Lamina 5~43 x 3~12mm, oblong, linear-oblong or spatulate; base attenuate; apex rounded-truncate. Flowers 1~2 together, on short spurs. Pedicels slender, around 5mm long at flowering, to 2cm long at fruiting. Calyx 4~8mm long, tubular-campanulate; teeth triangular, obtuse to acute. Corolla 10~13mm long; tube broad-cylindric; lobes 4~5mm long, obovate, pale mauve or cream; apex rounded. Filaments hairy at base. Fruit 5~12mm diam., globular or obovoid, scarlet.

## Flowering:

July, August, September, October, November, December, January, February, March

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=3164](http://nzpcn.org.nz/flora_details.asp?ID=3164)



**Caption:** Near Raglan, west coast, North Island

**Photographer:** John Sawyer



**Caption:** *Lycium ferocissimum*

**Photographer:** John Sawyer

## *Malus x domestica*

**Common Name(s):**

Apple

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3429](http://nzpcn.org.nz/flora_details.asp?ID=3429)



**Caption:** in cultivation

**Photographer:** Jesse Bythell



**Caption:** Autumn foliage on cv. 'Monty's Surprise'; garden, Virginia Heights, Whanganui

**Photographer:** Colin Ogle



## *Malva arborea*

### **Common Name(s):**

tree mallow

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Waste places, cultivated land, Coastal sites.

### **Features:**

Stout biennial herb, usually with a single stem up to 2 m tall. Stems hairy when young, becoming hairless and woody at base when older. Leaves velvety to the touch, with 5-7 lobes, up to 20 cm across. Lilac to purple flowers arranged in clusters at end and along upper parts of the stem. 6-8 seeds per fruit.

### **Flowering:**

August, September, October, November, January, February, March, April, May.

### **References and further reading:**

Ray, M.F. 1998: New combinations in *Malva* (Malvaceae: Malveae).  
Novon 8: 288-295.

Hill, S.R. 2009: Notes on California Malvaceae including nomenclatural changes and additions to the flora. Madroño 5.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3387](http://nzpcn.org.nz/flora_details.asp?ID=3387)



**Caption:** *Malva dendromorpha*

**Photographer:** John Barkla



**Caption:** Pauatahanui Inlet. Jun 2006.

**Photographer:** Jeremy Rolfe

## *Medicago lupulina*

**Common Name(s):**

black medick

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3151](http://nzpcn.org.nz/flora_details.asp?ID=3151)



**Caption:** *Medicago lupulina*

**Photographer:** John Smith-Dodsworth



**Caption:** *Medicago lupulina*

**Photographer:** John Smith-Dodsworth

## *Medicago nigra*

**Common Name(s):**

bur medick

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3170](http://nzpcn.org.nz/flora_details.asp?ID=3170)



**Caption:** *Medicago nigra*

**Photographer:** John Smith-Dodsworth



**Caption:** *Medicago nigra*

**Photographer:** John Smith-Dodsworth



## *Melaleuca citrina*

### **Common Name(s):**

common red bottle brush, crimson bottle brush, lemon bottlebrush, honey myrtle

### **Fruiting:**

Hard persistent capsules

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=7689](http://nzpcn.org.nz/flora_details.asp?ID=7689)



**Caption:** Inflorescences on street berm shrub, Mount View Road, Whanganui

**Photographer:** Colin Ogle

## *Melicytus novae-zelandiae*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=972](http://nzpcn.org.nz/flora_details.asp?ID=972)



**Caption:** Coromandel, October

**Photographer:** John Smith-Dodsworth



**Caption:** Tuhuia Is, Coromandel,  
April

**Photographer:** John Smith-Dodsworth

## *Melicytus ramiflorus*

### **Common Name(s):**

mahoe, hinahina, whitey wood

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic subspecies. Three other subspecies occur, one endemic to Norfolk (probably a different species), one to Fiji and one to Samoa. In addition forms from Raoul Island (Kermadec Islands Group) and the Three Kings and eastern Northland may warrant formal recognition. Research into this variation is in progress.

### **Habitat:**

Abundant small tree of coastal, lowland, and lower montane forests throughout the country.

### **Features:**

Shrub or small tree up to 15 m tall. Trunk 1 or more, 0.6-0.8 m diam, typically much branched from near base. Wood soft, white. Bark greyish-white, underbark bright green. Branchlets numerous, twiggy, rather brittle. Petioles 20 mm or more long. Leaves, firmly fleshy, 50-150 x 30-50 mm, light or dark green, lanceolate-oblong to elliptic oblong, apex acute to acuminate (rarely obtuse), leaf margins coarsely serrated (very rarely subentire, or irregularly coarsely toothed). Inflorescence 2-10 flowered fascicles arising from branchlets or leaf axils. Flowers 3-4 mm diam., female or inconstant male (flowers types on separate plants) borne on slender pedicels 5-10 mm long. Bracts subtending flowers, calyx lobes minute, petals greenish-yellow, yellow (rarely cream), lanceolate, apex obtuse. Anthers sessile, stigma 4-6-lobed. Fruit a violet, dark blue or purple berry, 4-5 mm diam., obovoid to globose. Seeds 3-6 per berry.

### **Flowering:**

November - February

### **Fruiting:**

November - March

### **Threats:**

Not Threatened

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=973](http://nzpcn.org.nz/flora_details.asp?ID=973)



**Caption:** Carter Scenic Reserve, Wairarapa

**Photographer:** John Sawyer



**Caption:** Carter Scenic Reserve, Wairarapa

**Photographer:** John Sawyer



## *Mesembryanthemum cordifolium*

**Common Name(s):**

heart-leaf ice plant

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2526](http://nzpcn.org.nz/flora_details.asp?ID=2526)



**Caption:** Whanganui. Jun 2012.

**Photographer:** Colin Ogle



**Caption:** Whanganui. Jun 2012.

**Photographer:** Colin Ogle

# *Metrosideros excelsa*

## Common Name(s):

Pohutukawa, New Zealand Christmas tree

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: Three Kings Islands and North Island from North Cape to about Pukearuhe, (northern Taranaki) in the west and near Mahia Peninsula (in the east). However, exact southern limit is difficult to ascertain as it has been widely planted and there is evidence that old time Maori cultivated the tree in some southerly areas. Found inland around the Rotorua Lakes and at Lake Taupo - though these occurrences could stem from Maori plantings (though the association of other normally coastal species around these lakes argues against this). Now widely planted throughout the rest of New Zealand (especially around Nelson, the Marlborough Sounds, the Kaikoura Coast and on the west coast to about Hokitika).

## Habitat:

Coastal forest and on occasion inland around lake margins. Also in the far north occasionally an associate of kauri forest. In some northerly locations it forms forest type in its own right - this forest is dominated by pohutukawa, other associates often include tawapou (*Pouteria costata*), kohekohe (*Dysoxylum spectabile*), puriri (*Vitex lucens*), karaka (*Corynocarpus laevigatus*), and on rodent-free offshore islands the frequent presence of coastal maire (*Nestegis apetala*), and milk tree (*Streblus banksii*) suggests these species too may once have been important in mainland examples of pohutukawa forest.

## Features\*:

Tree up to 20 m tall with canopy spread of 10-50m. Specimens typically multi-trunked from base, trunks up to 2 m diameter, branches spreading, and often arching, sometimes looping over ground, and/or bearing "brooms" of aerial adventitious roots. Branchlets numerous, twiggy and long-persistent. Bark firm, persistent and difficult to detach, often deeply furrowed, grey to grey-brown, somewhat corky. Young branchlets tomentose, being covered in fine, deciduous, greyish-white hairs. Leaves of all but water shoots leathery, 25-120 × 25-60 mm, elliptic, oblong, rarely lanceolate, apex acute or obtuse, dark olive-green, undersides thickly clad in white tomentum, adaxial surface at first distinctly tomentose but hairs shedding with leaf maturation. Flowers borne on stout, tomentose pedicels crimson, orange, pink, yellow (or very rarely white). Hypanthium obconic, calyx lobes triangular (deltoid).

## Flowering:

(August-) November-December (-March)

## Fruiting:

(January-) March-April (-May)

## Threats:

Like all New Zealand tree *Metrosideros*, pohutukawa is most at risk from possum (*Trichosurus vulpecula*) browse. These can seriously damage and even kill trees. Often where their browsing occurs within sites of unrestricted stock and vehicle access, pohutukawa forest is in danger of becoming locally extinct. It does remain common over large parts of its range, a situation being greatly improved by the efforts of people encouraged by the national coordination of Project Crimson - a non profit organisation set up to protect, enhance and/or establish pohutukawa forest, as well as promote the species use, and its conservation.

## \*Attribution:

Fact sheet prepared for NZPCN by: P.J. de Lange (4 January 2004). Description adapted from Allan (1961).

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=975](http://nzpcn.org.nz/flora_details.asp?ID=975)



**Caption:** Wellington

**Photographer:** John Sawyer



**Caption:** *Metrosideros excelsa*

**Photographer:** Wayne Bennett



## *Microlaena polynoda*

**Common Name(s):**

bamboo grass, bamboo

**Current Threat Status (2012):**

Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=985](http://nzpcn.org.nz/flora_details.asp?ID=985)



**Caption:** Inflorescence. In cultivation ex Rangitikei. Dec.  
**Photographer:** Colin Ogle



**Caption:** May 2007.  
**Photographer:** Peter de Lange



## *Microlaena stipoides*

**Common Name(s):**

meadow rice grass, slender rice grass

**Current Threat Status (2012):**

Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2199](http://nzpcn.org.nz/flora_details.asp?ID=2199)



**Caption:** *Microlaena stipoides*

**Photographer:** John Smith-Dodsworth



**Caption:** *Microlaena stipoides*

**Photographer:** John Smith-Dodsworth

# *Microtis oligantha*

**Common Name(s):**

Small onion orchid

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Endemic. North, South and Chatham Islands

**Habitat:**

Damp places in tussock grassland, on lake, tarn, river and wetland margins. Coastal to subalpine. Mainly montane to subalpine in the North Island, descending to sea level in the South and Chatham Islands

**Features\*:**

Terrestrial, glabrous, fleshy, tuberous bright green to dark green perennial herb forming small colonies or occurring as solitary plants. Plants at flowering up to 150 mm tall. Tubers globose to ovoid. Stem erect, terete, fleshy. Leaf solitary, usually overtopping inflorescence (but often damaged and so falling short), bright green to dark green, rarely tinged with red near base, closely sheathing stem for much of length, linear-terete, hollow, up to 200 mm long. Inflorescence a loose raceme up to 30 x 5 mm. Flowers 1-10, up to 2.8 mm diameter, shortly-stalked mostly widely spaced. Perianth green, segments up to 1.8 mm long, widely spreading, thick and fleshy. Dorsal sepal 2.5 mm long, broadly ovate, erect or projecting forwards, cucullate, concave, column-embracing, apex and margins rounded (without recurved apex), smaller than ovary at flowering; lateral sepals much shorter, narrower, mostly acute to subacute, strongly deflexed, apices straight. Petals shorter again, broadly to narrowly obtuse, erect, mostly hidden under dorsal sepal. Labellum sessile, up to 2.0 mm long, green or yellow-green, oblong, slightly narrowed at mid-length; apex bluntly truncate rarely slightly emarginate, not apiculate; margin papillose, shallowly crenate, often thickened, rarely undulate; anterior callus variously developed, verrucose, rather irregular, often raised on a rounded ridge; basal calli conspicuous, dark green, tabular-ovoid to tabular, usually continuous at sides with narrow band of callus behind a transverse, silt-like (not pouched) furrow; labellum sharply deflexed, pendulous aligned more or less parallel to the ovary. Column short, obtuse, base of column mostly broader than stigma, wings mostly membranous throughout. Anther terminal, erect, situated above stigma, hemispherical, pollinia spheroidal, pollen granular. Stigma broadly ovate; rostellum ovate Capsules broadly ovoid, ovoid-ellipsoid, brown when ripe.

**Flowering:**

December - March

**Fruiting:**

March - May

**Threats:**

Not Threatened

**\*Attribution:**

Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007. Description adapted from Moore and Edgar (1970).

**References and further reading:**

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=986](http://nzpcn.org.nz/flora_details.asp?ID=986)



**Caption:** Kaukau, Wellington.  
**Photographer:** Jeremy Rolfe



**Caption:** Kaukau, Wellington.  
**Photographer:** Jeremy Rolfe



# *Microtis unifolia*

## Common Name(s):

Onion-leaved orchid, microtis

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. In New Zealand present on the Kermadec, Three Kings, North, South, Stewart and Chatham Islands. Exact New Zealand distribution unclear due to confusion with an allied, later flowering entity. Present also in Australia, Norfolk Island, New Caledonia, Indonesia, the Philippines, Japan and China.

## Habitat:

Coastal to montane. Widespread in mainly disturbed or successional habitats. Common in urban areas in lawns, verges, roadside banks and cuttings and even amongst moss filled crevices on old buildings.

## Features\*:

Terrestrial, glabrous, colony forming, fleshy, tuberous bright green to dark green perennial herb. Plants at flowering up to 1 m tall. Tubers globose to ovoid. Stem erect, terete, often striated. Leaf solitary, usually overtopping inflorescence, bright green to dark green, rarely tinged with red near base, closely sheathing stem for much of length, linear-terete, hollow, up to 800 mm long. Inflorescence a raceme up to 300 x 10 mm. Flowers 6-100, up to 4 mm diameter, shortly-stalked and closely spaced, more or less overlapping. Perianth green, segments up to 2.5 mm long, widely spreading, thick and fleshy. Dorsal sepal 3 mm long, broadly ovate, erect or projecting forwards, cucullate, concave, column-embracing, acute with apex usually slightly turned upwards, smaller than ovary at flowering; lateral sepals much shorter and narrower, acute, strongly deflexed, apices tending to coil under. Petals shorter still, obtuse, erect, usually partially hidden under dorsal sepal. Labellum sessile, up to 2.5 mm long, green or yellow-green, oblong, sharply deflexed or decurved, pinched in at about mid-length to form a slight to obvious waste; apex truncate or slightly emarginate, not apiculate though often folded to appear so; margin papillose and usually also crenate and undulate; anterior callus variously developed, verrucose, rather irregular, often raised on a rounded ridge; basal calli dark green, oval, prominent, and usually continuous at sides with narrow band of callus behind transverse, silt-like (not pouched) furrow; labellum standing away from ovary at a very narrow angle. Column short, obtuse, base of column about as broad as stigma, wings mostly membranous throughout. Anther terminal, erect, situated above stigma, hemispherical, pollinia spheroidal, pollen granular. Stigma broadly ovate; rostellum ovate Capsules broadly ovoid, ovoid-ellipsoid, brown when ripe.

## Flowering:

August - November

## Fruiting:

October - March

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007. Description adapted from Moore and Edgar (1970).

## References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=988](http://nzpcn.org.nz/flora_details.asp?ID=988)



**Caption:** *Microtis*  
**Photographer:** DoC



**Caption:** Kennedy Bay,  
November  
**Photographer:** John Smith-  
Dodsworth



## *Mirabilis jalapa*

**Common Name(s):**

four o'clock plant, marvel of Peru

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3199](http://nzpcn.org.nz/flora_details.asp?ID=3199)



**Caption:** Cannon Point Walkway,  
Upper Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Cannon Point Walkway,  
Upper Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe

## *Modiola caroliniana*

**Common Name(s):**

creeping mallow

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3175](http://nzpcn.org.nz/flora_details.asp?ID=3175)



**Caption:** Unripe fruit. Whanganui.  
Nov 2011.

**Photographer:** Colin Ogle



**Caption:** Wanganui. Upper leaf  
surface.

**Photographer:** Colin Ogle

## *Muehlenbeckia complexa* var. *complexa*

### Common Name(s):

Small-leaved pohuehue, scrub pohuehue, wire vine

### Current Threat Status (2012):

Not Threatened

### Threats:

Not Threatened

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=991](http://nzpcn.org.nz/flora_details.asp?ID=991)



**Caption:** *Scandia geniculata* flowers and foliage through *Muehlenbeckia*. Birdlings Flat, Canterbury.

**Photographer:** Jesse Bythell



**Caption:** Habitat, Birdlings Flat, Canterbury

**Photographer:** Jesse Bythell



# *Myoporum laetum*

## Common Name(s):

Ngaio

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. Three Kings, North and South Islands. Also on the Chatham Islands where scarce and probably naturalised.

## Habitat:

Coastal to lowland forest, sometimes well inland (in Hawkes Bay, Rangataiki and Wairarapa). Often uncommon over large parts of its range.

## Features\*:

Decumbent shrub, shrub, or small tree up to 10 m tall and in decumbent forms 2-4 m across. Trunk to 0.3 m diam. Bark light grey to brown, thick and corky, firm, persistent, rough and furrowed. Branches stout, spreading. Leaf buds dark brown, purple-black to almost black, very sticky. Petioles flattened up to 300 mm long. Leaves somewhat fleshy, yellow-green to green, conspicuously white to yellow gland-spotted, (40-)100-120 x (10-)30-40 mm, lanceolate, oblong-lanceolate, oblong to obovate, acute to acuminate, margins crenulate-serrulate in upper half to third, margins sinuate to plain. Flowers in 2-6-flowered axillary cymes. Peduncles up to 15 mm long. Calyx-teeth 2 mm, narrow-lanceolate, acuminate. Corolla campanulate, white, purple-spotted, 5-lobed, lobes hairy on upper surface. Stamens 4. Fruit a narrow-ovoid drupe, 6-9 mm long, white or pale to dark reddish-purple.

## Flowering:

October - January

## Fruiting:

December - June

## Threats:

Not threatened. However, in some parts of the country such as urban Auckland, Wellington and along portions of the Kaikoura coast hybrid swams involving Tasmanian boobialla (*Myoporum insulare* sens. lat.) are common. The widespread planting of Tasmanian boobialla, or hybrids poses a risk to ngaio in places where it is not common.

## \*Attribution:

Fact Sheet prepared for the NZPCN by: P.J. de Lange (22 April 2011). Description based on Allan (1961)

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

Brooker, S. G., Cambie, R. C. and R. C. Cooper (1998). New Zealand Medicinal Plants. Reed: Auckland.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=992](http://nzpcn.org.nz/flora_details.asp?ID=992)



**Caption:** Awhitu, Auckland region  
**Photographer:** John Sawyer



**Caption:** Otago Peninsula  
**Photographer:** John Barkla

## *Myrsine australis*

### **Common Name(s):**

Red mapou, red matipo, mapau, red maple

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. Three Kings, North, South and Stewart Islands.

### **Habitat:**

Common tree of regenerating and mature forest in coastal to montane situations. Often common on northern offshore islands.

### **Features\*:**

Shrub or small tree up 6 m tall. Trunk stout, 0.2-0.6 m diam. Bark dark black or purple-black, red on younger branches. Branchlets numerous erect to spreading, very leafy. Petioles stout, fleshy, 5 mm long, often red or green mottled red. Leaves 30-60 x 15-25 mm, dark green to yellow-green variously mottled or blotched with red, or purple spots, leathery, glabrous except for finely pubescent mid vein, obovate-oblong to broad-elliptic, apex obtuse, margins entire, strongly undulate, rarely flat. Inflorescence a fascicle, usually numerous and crowded, produced along branchlets and in leaf axils. Fixed female and inconstant male flowers on different plants, 1.5-2.5 mm diam., white, cream or pale green. Pedicels short, stout, dark red or purple-black. Calyx-lobes 4, sometimes heavily reduced, long persistent. Petals 4, lanceolate, obtuse, free, revolute. Fruit a 1-seeded drupe, 2-3 mm diam., purple-black to black when mature.

### **Flowering:**

August - January

### **Fruiting:**

September - May

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact Sheet Prepared for NZPCN by: P.J. de Lange 28 October 2009.  
Description based on Allan (1961)

### **References and further reading:**

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1007](http://nzpcn.org.nz/flora_details.asp?ID=1007)



**Caption:** Male flowers. Rimutaka Forest Park.

**Photographer:** Jeremy Rolfe



**Caption:** Male flowers. Rimutaka Forest Park.

**Photographer:** Jeremy Rolfe

## *Narcissus jonquilla*

**Common Name(s):**

jonquil

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4287](http://nzpcn.org.nz/flora_details.asp?ID=4287)



# *Nestegis apetala*

## Common Name(s):

Coastal maire, Bastard Ironwood (Norfolk Island)

## Current Threat Status (2012):

At Risk - Naturally Uncommon

## Distribution:

Indigenous. Norfolk Island and New Zealand (North Island including northern offshore islands from the Three Kings Islands south to Hauturu (Clark Island), near Whangamata. *Nestegis apetala* is especially common on the Poor Knights and Motukino (Fanal Island) - on the latter of which it forms a distinct, pure forest type.

## Habitat:

Strictly coastal. Inhabiting coastal forest often along the exposed margins, also on rocky slopes, cliff faces, talus slopes and exposed ridgelines, as well as forming a minor subcanopy in closed forest. *Nestegis apetala* is often an important component of northern offshore island forests where it co-habits with pohutukawa (*Metrosideros excelsa*), tawapou (*Planchonella costata*), coastal mahoe (*Melicytus novaezelandiae*), *Streblus* spp. (especially *S. banksii*), houpara (*Pseudopanax lessonii*) and whau (*Entelea arborescens*).

## Features\*:

Stout spreading dioecious (?gynodioecious) tree up to 10 m. tall; trunk up to 1 m diameter, sometimes several arising from base, these often twisted; bark firm (not flaking), often deeply furrowed, grey to grey-brown, tessellated. Branches spreading, often tortuous. Branchlets glabrous. Leaves glabrous, coriaceous, dark glossy green above, paler and dull below, margins undulate, somewhat waxy, midrib prominent on both surfaces, yellow; petioles stout, rigid 8-15 mm long; lamina of juveniles 50-120 × 40-90 mm, broad-oblong to ovate, apex acute to acuminate, base cuneately narrowed; of adults 50-80 × 40-70 mm, elliptic-oblong to ovate-elliptic, apex acute to acuminate, base cuneately narrowed. Inflorescence a slender 10-18-flowered raceme 30-45 mm long, rhachis and pedicels, stout glabrous. Flowers 2.5-2.9 mm. diameter, greenish to greenish-yellow; males, females (and very rarely apparently perfect flowers) on very slender pedicels; calyx unequally deeply cleft, ovate, subacuminate; males with 2 large exerted anthers, ovary rudimentary or functional; female flower with 2 rudimentary anthers, ovary with large 2-lobed stigma. Drupe 10-18 mm long, oblong-ovoid, flesh dark pink, red or purple-black to maroon (flesh somewhat oily); endocarp 9.0-15 × 5.5-8.5 mm, dull, pale orange-yellow, elliptic to narrowly elliptic (and slightly compressed). Seed, 1(-2) per endocarp, elliptic, purple-brown.

## Flowering:

October-January

## Fruiting:

January-April

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 9 February 2011. Description adapted from Allan (1961) and Webb & Simpson (2001).

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Wellington, Government Printer.

Webb, C.J.; Simpson, M.J.A. 2001: Seeds of New Zealand Gymnosperms and Dicotyledons. Christchurch, Manuka Press.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1031](http://nzpcn.org.nz/flora_details.asp?ID=1031)



**Caption:** *Nestegis apetala* - close up of foliage showing upper leaf surface. Note wavy leaf margin  
**Photographer:** Peter de Lange



**Caption:** *Nestegis apetala* - close up of foliage showing underside of leaves.  
**Photographer:** Peter de Lange

## *Olearia furfuracea*

**Common Name(s):**

Akepiro

**Current Threat Status (2012):**

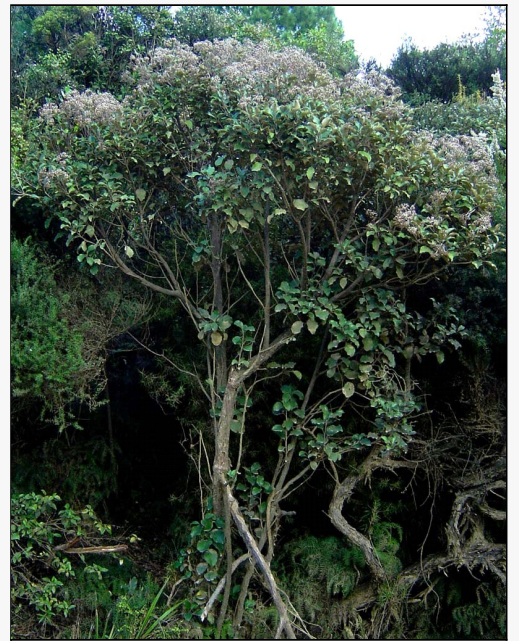
Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1050](http://nzpcn.org.nz/flora_details.asp?ID=1050)



**Caption:** *Olearia furfuracea*  
(Akepiro)

**Photographer:** Wayne Bennett



**Caption:** Flowers of *Olearia furfuracea*

**Photographer:** Wayne Bennett



## *Oplismenus hirtellus* subsp. *imbecillis*

### Current Threat Status (2012):

Not Threatened

### Threats:

Not Threatened

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2208](http://nzpcn.org.nz/flora_details.asp?ID=2208)



**Caption:** Adventitious root.  
Specimen from Raglan. Jun 2012.  
**Photographer:** Colin Ogle



**Caption:** Adventitious root.  
Specimen from Raglan. Jun 2012.  
**Photographer:** Colin Ogle



## *Orobanche minor*

**Common Name(s):**

broomrape

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3226](http://nzpcn.org.nz/flora_details.asp?ID=3226)



**Caption:** Stevensons Island, Lake Wanaka

**Photographer:** John Barkla



**Caption:** Whitiāu Scientific Reserve, Whanganui. Nov 2011.

**Photographer:** Colin Ogle

# *Orthoceras novae-zeelandiae*

## Common Name(s):

Horned orchid

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North and South Islands. In the South Island mainly westerly and recorded as far south as Hokitika

## Habitat:

Coastal to lower montane (up to 800 m a.s.l.). Usually in very sunny sites on open, free draining soils or clay banks with little associated taller vegetation. Often found in urban areas on mostly bare roadside cuttings.

## Features\*:

Terrestrial, usually solitary, glabrous, perennial tuberous herb. Plant at flowering up to 900 mm tall. Tuber up to 50 x 10 mm ovoid, ovoid-ellipsoid. Stem fleshy dark green, red-green, to brown-green, stiffly erect, rather wiry, axis of raceme usually flexuous. Leaves fleshy, suberect to spreading, 10-20 x 3-6 mm, dark green, dark red-green to brown-green, basal third closely sheathing, linear-lanceolate to linear, channelled, apex acute. Inflorescence racemose up to 200 mm long and 2-12-flowered; flowers more or less equidistant subtended by closely sheathing leaf-like bracts. Perianth colour variable, mostly green or red-green, sometimes greenish-yellow. Dorsal sepal uppermost, 10-15 x 9-14 mm, very broad, and arched over column, distinctly cucullate and deeply concave, subacute; lateral sepals 20-50 mm long, 0.5 mm diameter, narrow-linear, semi-terete, channelled, erect to divergent. Petals very short, narrow-oblong, flat, apex mostly notched, occasionally entire, more or less hidden under dorsal sepal. Labellum spreading, deflexed, firmly fleshy to almost coriaceous, green, red-green, yellow or black, trilobed, margins smooth, lateral lobes broad, oblique; mid-lobe larger, ovate; median callus yellow, restricted to near base, shortly conical with a thickened inturned, rounded apex, base of mid-lobe usually bearing two small calli. Column short, column-wings present as two lateral, linear processes, more or less papillose. almost as long as anther. Anther dorsal, taller than stigma, pollinia ill-defined, pollen granular. Stigma disc-shaped; rostellum prominent, acute.

## Flowering:

July - March

## Fruiting:

November - May

## Threats:

Not Threatened

## \*Attribution:

Description adapted from Moore and Edgar (1970).

## References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1070](http://nzpcn.org.nz/flora_details.asp?ID=1070)



**Caption:** Orthoceras  
**Photographer:** Nick Singers



**Caption:** Stokes Valley  
**Photographer:** Jeremy Rolfe

## *Oxalis articulata*

**Common Name(s):**

sourgrass

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3236](http://nzpcn.org.nz/flora_details.asp?ID=3236)



**Caption:** Tarakena Bay,  
Wellington. Apr 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Taiaeroa Head, Otago  
Peninsula

**Photographer:** John Barkla



## *Oxalis corniculata* subsp. *corniculata*

### Common Name(s):

Creeping woodsorrel, horned oxalis

### Current Threat Status (2009):

Exotic

### Habitat:

Gardens, mostly in deeper soils and more shaded sites than var. *atropurpurea*.

### Features\*:

Prostrate to erect to almost semi-scrambling; lacking bulbs, has a wiry tap root; occasionally rooting at nodes, foliage and stems green, leaves glabrous or nearly so above, capsule hairs dense and touching, eglandular; seed 1.0-1.3 mm long, usually with 8-11 deep, ± acute ridges.

### \*Attribution:

Fact sheet amended for NZPCN by C.C. Ogle, 12 Sept. 2014.  
Description adapted from Allan (1961).

### References and further reading:

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988. Flora of New Zealand Volume IV, Naturalised Pteridophytes, Gymnosperms, Dicotyledons: 916.

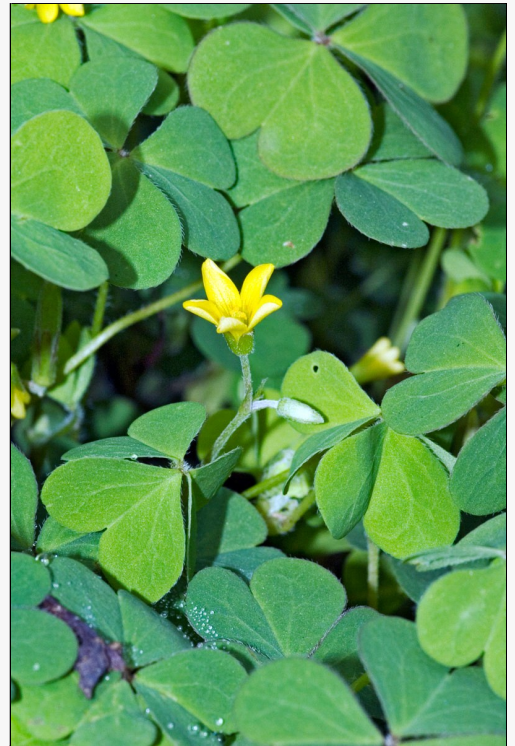
### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=3260](http://nzpcn.org.nz/flora_details.asp?ID=3260)



**Caption:** Stokes Valley, Lower Hutt. Apr 2006.

**Photographer:** Jeremy Rolfe



**Caption:** Stokes Valley, Lower Hutt. Apr 2006.

**Photographer:** Jeremy Rolfe

## *Oxalis exilis*

### **Common Name(s):**

creeping oxalis, yellow oxalis

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. Australia, New Zealand and probably the western Pacific. Naturalised in parts of Europe and the United Kingdom. In New Zealand present on the Three Kings, North, South, Stewart and Chatham Islands.

### **Habitat:**

Coastal to subalpine (up to 1100 m a.s.l.). However, mostly in lowland areas. Common in urban areas and in disturbed or successional indigenous habitats. Rarely in dense forest (though often colonising tracksides) and tussock grassland.

### **Features\*:**

Perennial herb without bulbils; taproot absent or weakly developed. Stems creeping or ascending up to 380 mm long, very sparsely antrorse-hairy. Leaves all cauline, tufted, 3-foliolate; leaflets sessile, 2.5-6.0 x 3.0-6.0 mm, mostly bright green, cuneate-obcordate, bilobed, glabrous above, pubescent below, margins ciliate, sinus cut to 1/3 leaflet length, lobes obovate, divergent, apices obtuse, 2-3 mm apart; petioles 10-90 mm long, with antrorse hairs; stipules to 2 mm long, conspicuous, with apex lobed or truncate, or inconspicuous with apex tapering abruptly to petiole, more or less ciliate. Inflorescences axillary, 1-2-flowered; peduncles at least as long as leaves, antrorse-hairy; pedicels erect, sometimes deflexed in fruit. Sepals oblong, 1.5-3.0 mm long, ciliate or glabrous; petals yellow, 4.5-9.0 mm long. Capsule 5.0-10.0 mm long, conical to cylindrical, usually moderately retrorse-hairy, often with scattered septate hairs; seeds 1.0-1.4 mm long, strongly transversely ribbed.

### **Flowering:**

Throughout the year

### **Fruiting:**

Throughout the year

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange 1 November 2005. Description adapted from Webb et al. (1988).

### **References and further reading:**

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons. Christchurch, New Zealand, Botany Division, D.S.I.R.

Wilcox, M.D. Creeping *Oxalis* carpets on Motuihe island. *Auckland Botanical Society Journal* 56: 19

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2211](http://nzpcn.org.nz/flora_details.asp?ID=2211)



**Caption:** *Oxalis exilis*

**Photographer:** John Barkla



**Caption:** Stokes Valley. Apr 2006.

**Photographer:** Jeremy Rolfe



## *Oxalis rubens*

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. Australia and New Zealand. In New Zealand widespread in the North, South and Chatham Islands.

### **Habitat:**

Mostly coastal (sometimes inland on limestone bluffs) where it is especially common on sand dunes and associated sand soils. Plants usually grow up through other supporting vegetation and are often missed except when in flower.

### **Features\*:**

Perennial herb without bulbils; taproot stout, woody. Stems usually glabrous sometimes covered in sparse antrorse hairs; erect to ascending up to 380 mm long. Leaves all cauline, sometimes subopposite or whorled, 3-foliolate; leaflets sessile, cuneate-obcordate, 2-9 x 2-11 mm, angular, bilobed, purplish-green to subglaucous, more or less glabrous above, sparsely pubescent below, margins ciliate, sinus cut to about half leaflet length, lobes oblong to obovate, straight divergent, apices broad-obtuse, 1.5-7.0 mm apart; petioles c.7-30 mm long, hairs mostly antrorse; stipules usually conspicuous, to 3 mm long, membranous and truncate or apex tapering abruptly to pedicel, ciliate. Inflorescences axillary 1-2-flowered; peduncles longer than leaves, antrorse hairy; pedicels erect. Sepals oblong, 3-4 mm long, often ciliate; petals yellow 7-11 mm long. Capsule cylindrical, 13-24 mm long, thickened in middle, usually densely retrorse-hairy. Seeds transversely ribbed.

### **Flowering:**

September - March

### **Fruiting:**

October - July

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange 1 November 2005. Description adapted from Webb et al. (1988).

### **References and further reading:**

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons. Christchurch, New Zealand, Botany Division, D.S.I.R.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2213](http://nzpcn.org.nz/flora_details.asp?ID=2213)



**Caption:** Great Barrier island  
**Photographer:** Rebecca Stanley



**Caption:** Whitiua Scientific Reserve, Whanganui. Nov 2011.  
**Photographer:** Colin Ogle



## *Ozothamnus leptophyllus*

**Common Name(s):**

Tauhinu

**Current Threat Status (2012):**

Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1081](http://nzpcn.org.nz/flora_details.asp?ID=1081)



**Caption:** Ozothamnus leptophyllus (Tauhinu)  
**Photographer:** Wayne Bennett



**Caption:** Ozothamnus leptophyllus (Tauhinu)  
**Photographer:** Wayne Bennett

## *Parablechnum novae-zelandiae*

### Common Name(s):

kiokio, horokio, palm leaf fern

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. New Zealand: Kermadec Islands (Raoul Island), North, South, Stewart and Chatham Islands

### Habitat:

Coastal to montane. One of the most widespread, abundant and easily recognisable ferns in New Zealand. Widely known by the Maori name "kiokio" *Blechnum novae-zelandiae* is most conspicuous in areas of high rainfall along roadsides, cliff faces, ravines and river banks. It also commonly establishes in pine (*Pinus* spp.) plantations and is a common urban "weedy" fern in some parts of the country.

### Features\*:

Rhizome short-creeping, very robust in larger specimens, occasionally suberect or erect; scales to 16 × 3 mm, linear or lanceolate, acuminate, light reddish brown, sometimes dark at base, more or less entire. Fronds dimorphic, erect or pendulous, 0.09-0.3 m (in dry exposed places and in swamps) -3.5 m long (on stream banks) × 35-500 mm wide, widest mid frond; sterile and fertile fronds usually similar length. Stipes 0.08-0.75 m (stipes of fertile fronds often shorter than stipes of sterile fronds), stout, to c.10 mm diameter, pale brown or pinkish brown, darkening at base, scaly, especially at the base; scales 2-20 × 1-3 mm wide, but mostly small and appressed, ovate, reddish brown, concolorous or "black-spot", entire or branched at their bases. Lamina ovate or lanceolate, bright mid green at maturity, 1 -pinnate, 5-50 pairs of pinnae. Rachis and costae pale pinkish brown, with sparse to moderately dense scales and irregular fine short tangled hairs; scales 3.0-15.0 × 1.0-1.5 mm, variable in shape from linear to ovate or sometimes stellate, pale brown, reddish brown, "black spot" (especially conspicuous for costal scales), or sometimes entirely concolorous (juveniles and plants growing in swamps, and most plants on the Kermadec islands), entire or toothed. Sterile pinnae 20-350 × 6-30 mm, oblong-lanceolate to lanceolate, apices acute, acuminate, or attenuate, or, in juveniles and smaller plants growing in swamps, obtuse; cuneate, truncate, or rounded-cordate at rachis; sub-petiolate at base of lamina, adnate and decurrent at apex; mostly coriaceous but almost membranous in juveniles and plants growing in swamps; margins minutely toothed, more so near apices; veins simple or once-furcate; small-branched or stellate scales often extending on to lower surface of pinnae; basal pinnae rounder and nearly always significantly shorter than middle pinnae, with 2-11 pairs of sterile auricles (small plants from swamps, very harsh conditions, and from low light conditions may lack auricles); terminal pinna longer than subterminal pinnae. Fertile pinnae 20.0-250 × 1.5-6.0 mm, narrow, linear, sessile at base of lamina, becoming basiscopically adnate at apex; basal pinnae often with sterile auriculate segments at their bases, the lowermost sometimes completely sterile and auriculate; sori covering under surface except for auriculate zone and the short sterile apical region; indusium brown, laciniate; spores 40-60 × 32-43 μm.

### Flowering:

Not applicable - spore producing

### Fruiting:

Not applicable - spore producing

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (7 March 2012). Description adapted Chambers & Farrant (1998).

### References and further reading:

Chambers, T.C.; Farrant, P.A. 1998: The *Blechnum procerum* ("capense") (Blechnaceae) complex in New Zealand. *New Zealand Journal of Botany* 36: 1-19.

Gasper, A.L.; de Oliveira Dittrich, V.A.; Smith A.R.; Salino, A. 2016: A classification for Blechnaceae (Polypodiales: Polypodiopsida): New genera, resurrected names, and combinations. *Phytotaxa* 275: 191-227.

Perrie, L.R.; Wilson, R.K.; Shepherd, L.D.; Ohlsen, D.J.; Batty, E.L.; Brownsey, P.J.; Bayly, M.J. 2014: Molecular phylogenetics and generic taxonomy of Blechnaceae ferns. *Taxon* 63(4): 745-758.

PPG 1: The Pteridophyte Phylogeny Group 2016: A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54: 563-603.

Pyner, T. 2017: A new classification of *Blechnum*. British Pteridological Society. <https://ebps.org.uk/new-classification-blechnum/>

Wilcox, M.; Warden, J. 2017: Botany of Hillsborough coast bush reserves, Manukau Harbour, Auckland. *Auckland Botanical Society Journal* 72: 32-46.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1552](http://nzpcn.org.nz/flora_details.asp?ID=1552)



**Caption:** *Parablechnum novaezelandiae*

**Photographer:** Wayne Bennett



**Caption:** *Parablechnum novaezelandiae*

**Photographer:** Wayne Bennett



## *Parietaria debilis*

### **Common Name(s):**

New Zealand pellitory

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. New Zealand: Kermadec (Raoul, Macauley), Three Kings, North, South and Chatham Islands. Present throughout southern hemisphere.

### **Habitat:**

Coastal and lowland. Usually in coastal scrub and forest (often found within canopy gaps or around petrel or shearwater burrows), or under rock overhangs or amongst flax. Sometimes growing in the open on exposed rock stacks or in sand dunes.

### **Features\*:**

Succulent-stemmed, spreading, flaccid to erect, diffuse, sparsely pubescent, annual herb forming solitary stems or tufted patches up to 500 mm diameter. Branches succulent, slender, weakly erect to erect, up to 800 mm long, pale green, translucent white or pale pink, usually hardened at base. Leaves membranous, mostly thin and delicate in shaded sites and subsucculent in exposed sites growing on guano. Petiole filiform to subterete, 10-60 mm long. Lamina 10-60 × 10-30 mm, pale green to dark green above, paler below (very rarely pink-tinted), suborbicular, broad-ovate, rhombic-ovate, base cuneately narrowed, apex obtuse to weakly acuminate. Inflorescence a greenish-white, congested 2-8-flowered cyme; bracteoles linear, bracteoles equal to or more usually larger than perianth at fruiting; perianth-segments more or less pilose, pistillate enlarged in fruit. Achenes 1.0-1.5 mm long, dark glossy brown, ovoid.

### **Flowering:**

Throughout the year

### **Fruiting:**

Throughout the year

### **Threats:**

Not Threatened

### **\*Attribution:**

Description based on live plants and herbarium specimens.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2214](http://nzpcn.org.nz/flora_details.asp?ID=2214)



**Caption:** *Parietaria debilis*, Macauley Island

**Photographer:** John Barkla



**Caption:** *Parietaria debilis*, Macauley Island

**Photographer:** John Barkla



## *Parsonsia capsularis* var. *capsularis*

### **Common Name(s):**

New Zealand jasmine, small flowered jasmine

### **Current Threat Status (2012):**

Non Threatened

### **Threats:**

Not Threatened

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1100](http://nzpcn.org.nz/flora_details.asp?ID=1100)



**Caption:** Fruit. Boulder Hill, Lower Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Wairere falls, November

**Photographer:** John Smith-Dodsworth

## *Parsonsia heterophylla*

**Common Name(s):**

New Zealand jasmine

**Current Threat Status (2012):**

Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1101](http://nzpcn.org.nz/flora_details.asp?ID=1101)



**Caption:** Juvenile leaves.  
Rimutaka Forest Park.

**Photographer:** Jeremy Rolfe



**Caption:** Garden plant

**Photographer:** Melissa  
Hutchison

## *Paspalum dilatatum*

**Common Name(s):**

paspalum

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3288](http://nzpcn.org.nz/flora_details.asp?ID=3288)



**Caption:** Spikelets. Wanganui. Jan 2011.

**Photographer:** Colin Ogle



**Caption:** Spikelets. Wanganui. Jan 2011.

**Photographer:** Colin Ogle



# *Paspalum orbiculare*

## Common Name(s):

Scrobic, Native Paspalum

## Current Threat Status (2012):

At Risk - Declining

## Distribution:

Indigenous. Known only from the Kermadec Islands and North Island of New Zealand. In the North Island it occurs from Northland to Raglan Harbour in the west and Whale Island in the Bay of Plenty. Common in the wider Pacific and Australia

## Habitat:

Coastal to lowland, in seasonal wetlands (often with *Baumea juncea*), on lake margins, in gumland scrub, along track sides and near or around active geothermal vents

## Features\*:

Perennial grass. Leaves stiffly erect. Leaf sheath subcoriaceous, striate, strongly keeled, brown to purple-brown or red, glabrescent. Ligule 1-2 mm, truncate, entire. Leaf-blade 100-200(-300) x 3.5-5 mm, flat, rigid, midrib distinct, upper surface glabrous, undersides pilose hairy near ligule. Culm (200-)350-700 mm, erect, compressed, internodes glabrous, striate. Panicle erect, 60-120 mm, with 3-8 erect to slightly spreading racemes. Racemes (20-)30-40 mm, 1.2-1.7 mm wide, with short white hairs at base, bearing 2 rows of single to paired, sessile spikelets. Spikelets 2-2.5 mm, imbricate, ovoid-elliptic to ovoid-orbicular, glabrous, obtuse, light brown. Lower glume 0, upper = spikelet, 3(-5)-nerved, glabrous. Lower floret 3-5-nerved, glabrous. Upper floret elliptic-orbicular, glossy, brown. Flowers with anthers 1 mm, if bearing pollen then yellow, usually brown due to malformed pollen, stigmas purple, seed > 1mm.

## Flowering:

May flower throughout the year but most plants can be found in flower from August - April

## Fruiting:

Seed may be present at anytime of the year but it is most commonly found from September - July

## Threats:

Formerly widespread from Te Pahi south to the Bay of Plenty. This species is now scarce south of Auckland City, and has its strongholds on Great Barrier Island and in the far North. It seems to be threatened by other taller, faster growing grass and shrub species, though exact data on the nature or mechanism of its decline is not available. Some populations have been lost accidentally through failure to recognise its indigenous status, or by revegetation projects using taller native species which eventually shading out this grass.

## \*Attribution:

Fact Sheet Prepared by P.J. de Lange (1 November 2009). Description based on Edgar & Connor (2000). See also comments by de Lange & Murray (2002).

## References and further reading:

Cameron, E.K. 1998. *Paspalum orbiculare* an adventive addition to the Waitakeres. *Auckland Botanical Society Journal* 53: 40-42.

de Lange, P.J.; Murray, B.G. 2002: Contributions to a chromosome atlas of the New Zealand flora—37. Miscellaneous families. *New Zealand Journal of Botany* 40: 1-23

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=189](http://nzpcn.org.nz/flora_details.asp?ID=189)



**Caption:** Green Bay, Auckland. Apr 2007.

**Photographer:** Peter de Lange



**Caption:** Green Bay, Auckland. Apr 2007.

**Photographer:** Peter de Lange

## *Pelargonium ×asperum*

**Common Name(s):**

Pelargonium hybrid

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3001](http://nzpcn.org.nz/flora_details.asp?ID=3001)



**Caption:** *Pelargonium ×asperum*

**Photographer:** Peter de Lange



**Caption:** *Pelargonium ×asperum*

**Photographer:** Peter de Lange

## *Pelargonium ×hortorum*

**Common Name(s):**

zonal Pelargonium

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3004](http://nzpcn.org.nz/flora_details.asp?ID=3004)



**Caption:** *Pelargonium ×hortorum*

**Photographer:** John Smith-Dodsworth



**Caption:** *Pelargonium ×hortorum*

**Photographer:** John Smith-Dodsworth



## *Pelargonium inodorum*

**Common Name(s):**

kopata

**Current Threat Status (2012):**

Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2215](http://nzpcn.org.nz/flora_details.asp?ID=2215)



**Caption:** Beaumont

**Photographer:** John Barkla



**Caption:** In cultivation. Oct 2011.

**Photographer:** Jeremy Rolfe

## *Pelargonium peltatum*

**Common Name(s):**

ivy-leaved geranium

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3015](http://nzpcn.org.nz/flora_details.asp?ID=3015)



**Caption:** Whanganui. Dec 2011.

**Photographer:** Colin Ogle



**Caption:** Whanganui. Dec 2011.

**Photographer:** Colin Ogle

# *Pellaea falcata*

## Common Name(s):

Sickle fern, Australian cliff brake

## Current Threat Status (2012):

At Risk - Declining

## Distribution:

Indigenous. Common in eastern Australia. In New Zealand primarily a species of northern offshore islands but also known from a few locations in Northland, Auckland and Coromandel.

## Habitat:

Coastal in short scrub, on cliff faces and in open forest. Often on small islands, also inland on scoria and basalt rocks around Auckland City.

## Features\*:

Shortly rhizomatous, tufted fern. Stipes 70-250 mm, stipes and rachises erect, dark brown, densely clad in spreading scales. Frond linear, pinnate, 200-500 x 30-70 mm. Pinnae, shortly stalked, oblong-falcate to distinctly falcate, 15-40 x 7-15 mm, evenly spaced, margins smooth, glossy green above, paler below. Sori in two marginal bands reaching toward but not meeting at pinna apices.

## Flowering:

Spore bearing fronds may be found throughout the year

## Fruiting:

Spore bearing fronds may be found throughout the year

## Threats:

Its status has been confused due to the occurrence of intermediate forms between it and *P. rotundifolia*. Some appear to be stable, apomictic races requiring further study. Excluding these forms means the typical species is very uncommon primarily confined to northern offshore islands, on several of which it is now threatened by weeds. It has also been collected from mainland stations as far south as Kawhia and Thames. Many mainland sites are threatened by weeds and coastal development. In some places it is or has recently been threatened by over-collection. Herbarium evidence shows this species was once common on the volcanic cones of Auckland City, but due to targeted collection, the species has all but vanished from this area within the last forty years.

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (21 April 2006). Description adapted from Brownsey & Smith-Dodsworth (2000).

## References and further reading:

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=190](http://nzpcn.org.nz/flora_details.asp?ID=190)



**Caption:** Otuataua Stonefields, Manukau. Apr 2012.

**Photographer:** Peter de Lange



**Caption:** Matapaua, Coromandel

**Photographer:** John Smith-Dodsworth



## *Pellaea rotundifolia*

### **Common Name(s):**

round-leaved fern, New Zealand cliff brake

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

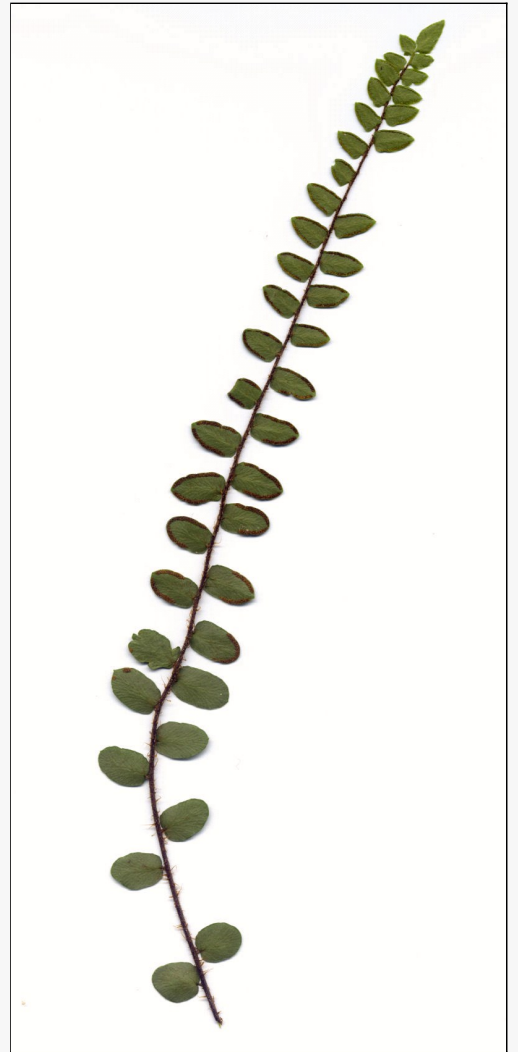
### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2217](http://nzpcn.org.nz/flora_details.asp?ID=2217)



**Caption:** Sori on abaxial surface of pinna and scales on rachis. Upper Hutt. Feb 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Dunedin

**Photographer:** John Barkla

## *Peperomia urvilleana*

### **Common Name(s):**

Peperomia

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. Coastal to inland in warmer places throughout the North Island. In the South Island known only from the Marlborough Sounds and Golden Bay south to the Heaphy. Also on Raoul Island in the Kermadec Islands group. Present on Norfolk and Lord Howe Islands where it is usually regarded as scarce.

### **Threats:**

Not Threatened

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1105](http://nzpcn.org.nz/flora_details.asp?ID=1105)



**Caption:** *Peperomia urvilleana*,  
Auckland Botanic Garden

**Photographer:** John Barkla



**Caption:** Maitahi Scientific  
Reserve

**Photographer:** Bill Clarkson

## *Phormium tenax*

### **Common Name(s):**

flax, harakeke, korari (maori name for inflorescence).

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous to New Zealand and Norfolk Island. A broad circumscription has been adopted here - many botanists feel that plants from the Chatham Islands could be distinguished at species rank from the mainland New Zealand species, other distinctive variants occur on the Three Kings and outer Hauraki Gulf Islands, and along the Kaikoura coast. Norfolk Island plants though uniform differ in subtle ways from the New Zealand forms of *P. tenax*. Further study into this variation is underway.

### **Habitat:**

Common from lowland and coastal areas to montane forest, usually but not exclusively, in wetlands and in open ground along riversides.

### **Features:**

Stout liliaceous herb, 1-5(-6) m tall. Leaves numerous, arising from fan-like bases. Individual leaves rather stiff at first, but becoming decurved, somewhat pendulous or "floppy" in upper half to a third, 1-3 x 50-120 mm, usually blue-grey (glaucous) or dark green, lamina margin, entire, somewhat thickened and pigmented black, dark red, pink, yellow or cream. Inflorescence 5(-6) m tall, somewhat woody and fleshy when fresh, long persistent, drying charcoal grey or black, with the fibrous interior becoming progressively more exposed. Peduncle 20-30 mm diam., erect, dark grey-green or red-green, glabrous. Flowers 25-50 mm long, tubular, predominantly dull red but may also be pink or yellow; tips of inner tepals slightly recurved. Ovary erect. Capsules 50-100 mm long, dark green, red-green or black, trigonous in cross-section, erect, abruptly contract at tip, not twisted, initially fleshy becoming woody with age, long persistent. Seeds 9-10 x 4-5 mm, black, elliptic, flat and plate-like, margins frilled or twisted.

### **Flowering:**

(September-) October-November (-January)

### **Fruiting:**

(November-) December (-March)

### **Threats:**

Not threatened although see the discussion below about flax dieback. This die back phenomenon is characterised by abnormal yellowing of the leaves and may result in collapse of flax plants or whole populations.

### **References and further reading:**

Boyce, et al. 1951. Preliminary note on yellowleaf disease. NZJ of Science and Technology, 32(3): 76-77

Scheele, S. 1997. Insect pests and diseases of harakeke, Manaaki Whenua Press

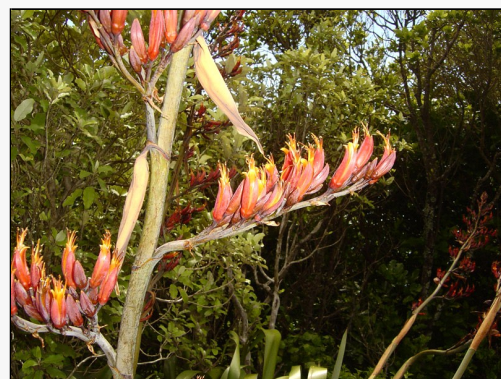
### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2219](http://nzpcn.org.nz/flora_details.asp?ID=2219)



**Caption:** *Phormium tenax*

**Photographer:** Wayne Bennett



**Caption:** Flowers of *Phormium tenax*

**Photographer:** Wayne Bennett



## *Phytolacca octandra*

### Common Name(s):

inkweed

### Current Threat Status (2009):

Exotic

### Habitat:

Terrestrial.

### Features:

Glabrous, spreading or mainly erect subshrub to approx. 2m tall, with numerous white raphides on stems and lower surface of leaves. Stems softly woody towards base, often reddish. Petioles to 2.5cm long, moderately thick, often reddish. Lamina 4~15 x 1.5~5cm, elliptic or elliptic-ovate; base cuneate to attenuate; apex acute or mucronate. Racemes erect to approx. 7cm at flowering, to 11cm at fruiting; peduncles and very short pedicels mostly granular, becoming crimson at fruiting. Hermaphrodite flowers dense. Bracts 3~4mm long, linear-lanceolate to subulate; bracteoles much smaller. Perianth 5~7mm diam.; tepals accrescent, 2~3mm long, broad-ovate, imbricate, whitish or pale greenish at first, becoming pink to crimson at fruiting. Stamens 8, slightly < perianth; anthers white. Ovary 8-carpellate, green with numerous white raphides. Fruit about 8mm diam. when fresh, depressed globose, with 8 very shining black, very succulent with dark red juice. Seed 2~2.5mm diam., subglobose, glossy black. (-Webb et. al., 1988)

### Flowering:

November, December, January, February, March, April, May, June, July, August

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=3062](http://nzpcn.org.nz/flora_details.asp?ID=3062)



**Caption:** Near Raglan, West coast, North Island

**Photographer:** John Sawyer



**Caption:** Near Raglan, west coast, North Island

**Photographer:** John Sawyer

## *Picris hieracioides*

**Common Name(s):**

oxtongue

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=4133](http://nzpcn.org.nz/flora_details.asp?ID=4133)



**Caption:** On limestone rockface, Salzburg, Austria. Jun 2013.

**Photographer:** Peter de Lange



**Caption:** *Picris hieracioides*

**Photographer:** Peter de Lange

## *Pimelea prostrata* subsp. *prostrata*

### Common Name(s):

pinatoro, New Zealand daphne, Strathmore weed

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. North Island: South Auckland, Taranaki, Gisborne, Hawke's Bay, eastern Wairarapa, and near Wellington. South Island: Marlborough, Nelson, Westland, Canterbury, Otago, Southland

### Habitat:

Coastal to montane. In open sites, such as coastal gravel, sand dunes, and mudstone cliffs; on ultramafic rock, mudstone, sandstone, marble, limestone, gravel river floodplains; vegetated places, in open scrub, low grassland, Schoenus marsh, Sphagnum bog, around tarn margins.

### Features\*:

A small shrub; stems prostrate, often thin and flexible, creeping on open areas or in low vegetation, pendent on banks, cliffs, up to 300 mm long. Stems may be partially buried on sandy substrates; adventitious roots may develop on these, or on stems in moist habitats. Branching sympodial and lateral. Branchlets uniformly yellowish-brown to brown, usually smooth but sometimes muricate, glabrous except in leaf axils and on receptacles, or sparsely to moderately clad in short, silky hair. Internodes 1–4 mm long. Older stems grey-brown to dark grey. Node buttresses light to medium brown, occupying part or all of the internode; occasionally prominent on leafless branches. Leaves close (exposed or drier sites) or distant (shaded sites), patent, on short red petioles. Lamina glaucous, often red-margined, usually 3–6 × 1.5–4 mm, thin, elliptic to broad-elliptic, flat, tip obtuse. Inflorescences 5–8-flowered, terminal on branchlets. Involucral bracts to 5.6 × 4.2 mm. Flowers relatively sparsely hairy outside, inside hairless, on very short pedicels (0.2 mm). Female tube 2.5 mm long, ovary portion red, 2 mm; calyx lobes 1.2 × 1.2 mm; h tube 4.8 mm long, ovary portion 2 mm; calyx lobes 2 × 1.5 mm. Ovary moderately hairy at summit. Fruits broad ovoid to globose, fleshy, white, opaque 4.2 × 2.8 mm. Seeds narrow-ovoid 2.5 × 1.5 mm, crest very thin.

### Flowering:

September - May

### Fruiting:

October - July

### Threats:

Not Threatened

### \*Attribution:

Description from: Burrows (2008).

### References and further reading:

Burrows, C.J. 2009: Genus *Pimelea* (Thymelaeaceae) in New Zealand 2. The endemic *Pimelea prostrata* and *Pimelea urvilliana* species complexes. *New Zealand Journal of Botany* 47: 163–229

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1125](http://nzpcn.org.nz/flora_details.asp?ID=1125)



**Caption:** *Pimelea prostrata*

**Photographer:** John Barkla



**Caption:** Baring Head

**Photographer:** John Sawyer



## *Pinus pinaster*

### **Common Name(s):**

cluster pine

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. A plant of coastal and lowland habitats (Timmins & MacKenzie 1995). The plant grows in sites of low fertility (Timmins & MacKenzie 1995). A plant of shrubland, tussockland, cliff, bluff and coastal communities (Timmins & MacKenzie 1995).

### **Features:**

Medium-sized to large tree with rather open crown, the stout trunk becoming bare of branches for most of length. Bark thick, deeply fissured and forming small irregular plates with smooth dark red or reddish-brown surfaces. Shoots deep brown or brownish, shining, glabrous, with remains of leaf bases prominent. Buds cylindric-oblong, sometimes very large (> 4 x 1.5cm), not resinous; scales dark reddish, reflexed, with margins strongly white-fimbriate. Leaves 2 per fascicle, 6~17cm x 2mm, appearing narrower due to incurved margins, dull green, rigid, pungent; resin canals median; sheath 5~10mm long in older leaves. Male strobili < 1.5cm long, ellipsoid or broad-ellipsoid. Conelets sessile, prominent and broad-ellipsoid; scales obtuse, acute or mucronate. Mature cones often persistent for several years, sessile or subsessile, 7~15 x 4~6cm when closed, usu. cylindric-ovoid, sometimes ovoid, generally symmetric; apophyses rhomboid, keeled, shining brown; umbo prickly. Seed wing asymmetric, to 2.5cm long. (-Webb et. al., 1988)

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3087](http://nzpcn.org.nz/flora_details.asp?ID=3087)



**Caption:** Pinus pinaster

**Photographer:** John Smith-Dodsworth



**Caption:** Pinus pinaster

**Photographer:** John Smith-Dodsworth

## *Piper excelsum* subsp. *excelsum*

### Common Name(s):

kawakawa, pepper tree

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. North and South Islands. Common from te Pahi south to about Okarito, North Canterbury and Banks Peninsula.

### Habitat:

Coastal to lowland (extending up 500 m a.s.l. in warmer parts of the country). Usually an important understorey species in coastal forest.

### Features\*:

Small tree to at least 5 m tall; stems erect (occasionally layering), not notably lenticellate, new shoots red-green or green (leaf nerves, petioles and new stems with reddish colouring), taste peppery; pith of axes (including rachis of spike) without a mucilage core. Prophyll a collar to 0.3 (-2.2) mm high. Leaf blades submembranous, orbicular, suborbicular, at vegetative nodes to 100(-120) mm diameter, usually with 5-8 principal nerves, cordate at base, with a very narrow or closed sinus, occasionally basal lobes overlapping, upper surface of blade not bullate; petiole to 40(-60) mm long, c.0.4×as long as blade, the sheath 0.3-1.0(-2)× as long as non-sheathing part, truncate-rounded at apex and not produced there, the non-sheathing part of petiole to 4.0 mm diameter. Inflorescences solitary or 2-3 together on a short (rarely more than 10 mm long) axillary shoot, and (usually solitary) on the adjacent terminal shoot (occasionally this shoot not fertile); reduced leaf at apex of fertile shoot with a glabrous petiole and usually with a green oblong lamina at least 5 mm long, but lamina often ± lacking, especially on terminal fertile shoot. Female inflorescence erect in flowering and remaining so into fruit, peduncle to c. 1.5 cm long, spike to 60(-100) × c.6 mm diameter, with uniseriate usually 5-10-cellular hairs to 0.15 mm long on lower part of bract stalks and sparingly on rachis, these hairs not obvious on the peduncle just below the lowermost bracts; bracts peltate, bract heads 0.40-0.75 mm diameter; flowers at full emergence centred c.1.3 mm apart, emergent part of ovary ovoid; stigmas 3-4(-5), together c. 1.2 mm diameter. Male inflorescence erect, spike to c.110 mm long, proximally c.6 mm diameter, bracts and hairs as in female inflorescence; staminal filaments c. 0.25 mm long, anthers c.1.00 × 0.75 mm wide. Ripe infructescence c.10 mm diameter; fruitlets coalescent, sunken apically about the persistent dark stigmas, exocarp and mesocarp orange; seed oblong to slightly obovoid, apiculate at apex, c.2.0 × 1.5 dark brown, with (3-)4-5(-7) broad longitudinal furrows.

### Flowering:

August - November

### Fruiting:

Throughout the year

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 30 August 2005. Description based on Gardner (1997).

### References and further reading:

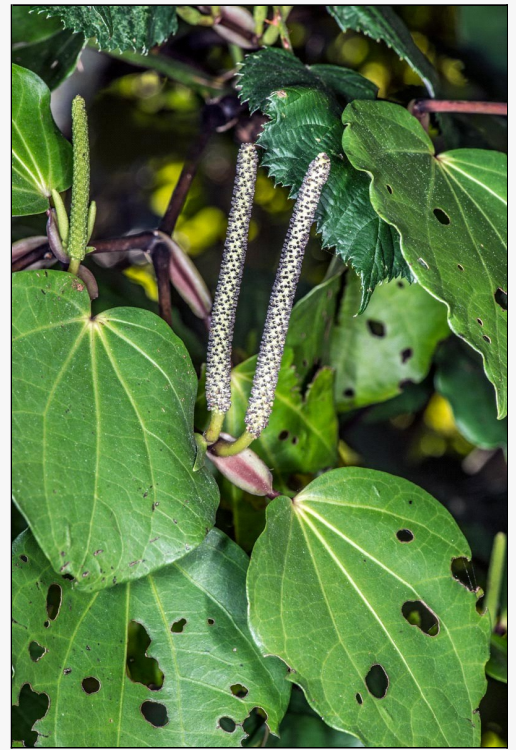
de Lange, P.J. 2012: Taxonomic notes on the New Zealand flora: new names in *Piper* (Piperaceae). *New Zealand Journal of Botany* DOI:10.1080/0028825X.2012.708904

Gardner, R.O. 1997: *Macropiper* (Piperaceae) in the south-west Pacific. *New Zealand Journal of Botany* 35: 293-307.

Jaramillo, M.A.; Callejas, R; Davidson, C.; Smith, J.F.; Stevens, A.C.; Tepe, E.J. 2008: A phylogeny of the tropical genus *Piper* using ITS and the chloroplast intron psbJ-petA. *Systematic Botany* 33: 647-660.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=964](http://nzpcn.org.nz/flora_details.asp?ID=964)



**Caption:** Lower Hutt. Jul 2013.  
**Photographer:** Jeremy Rolfe



**Caption:** Cathedral Cove,  
Coromandel  
**Photographer:** John Sawyer



## *Piper excelsum* subsp. *psittacorum*

### Common Name(s):

kawakawa, pepper tree

### Current Threat Status (2012):

Naturally Uncommon

### Distribution:

Indigenous. Kermadec Islands (Raoul Island). Also Norfolk and Lord Howe Islands.

### Habitat:

Coastal forest where it is often an important component of the shrub layer.

### Features\*:

Dioecious shrub to small suckering tree up to 3 m tall, branching from base. Branches terete up to 40 mm diameter, initially bright green, maturing dull greenish-brown. Leaves mildly aromatic with a slight peppery taste when chewed; petioles u-shaped in cross-section, upper surface grooved, 20-80 mm long, green to yellow-green; lamina slightly bullate, 50-180 × 60-200 mm, pale green to dark green, rarely yellow-green, broadly ovate to suborbicular, base cordate, rounded or rarely with ends overlapping, apex distinctly acuminate, margins entire; main nerves 5-9, raised slightly above lamina surface. Inflorescence a solitary or paired spike bearing numerous, crowded flowers on a slender rachis, each flower subtended by a peltate scale 1.5-2.0 mm diameter; male spikes to 200 mm long, often faintly tapered, stamens 2-3; female spikes 40-80 mm long, style 3-4, minute; ovary ovoid. Fruiting spike 12-20 mm diameter, yellow or orange when ripe. Fruit fleshy, sweet, coalescent, with dimpled apex. Seeds 1.8-2.0 mm long, ellipsoid, grooved with 3-4 furrows, hard, peppery when crushed.

### Flowering:

August - November

### Fruiting:

Throughout the year

### Threats:

Not Threatened. Listed because in New Zealand it is only known from Raoul Island, where it is abundant.

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 30 August 2005. Description based on live plants (wild and cultivated) and herbarium specimens.

### References and further reading:

de Lange, P.J. 2012: Taxonomic notes on the New Zealand flora: new names in *Piper* (Piperaceae). *New Zealand Journal of Botany* DOI:10.1080/0028825X.2012.708904

Jaramillo, M.A.; Callejas, R; Davidson, C.; Smith, J.F.; Stevens, A.C.; Tepe, E.J. 2008: A phylogeny of the tropical genus *Piper* using ITS and the chloroplast intron psbJ-petA. *Systematic Botany* 33: 647-660.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=580](http://nzpcn.org.nz/flora_details.asp?ID=580)



**Caption:** Raoul island

**Photographer:** John Barkla



**Caption:** Raoul island

**Photographer:** John Barkla



# *Pisonia brunoniana*

## Common Name(s):

Parapara

## Current Threat Status (2012):

At Risk - Relict

## Distribution:

Indigenous. Kermadecs (Raoul), Three Kings, North Island (mainly offshore islands) but known on the mainland in scattered locations from the Whangape Harbour to Mangawhai. Historical records show it was around Auckland, on the Coromandel Peninsula and at East Cape.

## Habitat:

Coastal forest. Now mainly found on rodent-free offshore islands where it can be a very important component of the understorey of mixed-broadleaf forest.

## Features\*:

Spreading, usually multi-trunked and freely coppicing tree rarely exceeding 8 x 2 m in height. Main trunk up to 800 mm dbh, clad in firm, grey-brown to green-brown bark, usually with numerous dormant epicormic buds present. Branches at first erect, then spreading, rather brittle. Leaves opposite or in whorls. Petioles up to 40 mm, stout, fleshy, red-green to green; lamina 100-600 x 50-200 mm, green, yellow-green, or dark-green suffused with red (new growth often pink), glabrous, oblong to obovate-oblong, obtuse, margins entire, sinuate, sometimes lobed. Inflorescence a many-flowered, terminal, paniculate cyme with subtending, deciduous, leaf-like bracts. Pedicels finely covered in red-brown pubescence, stout, fleshy up to 20 mm long. Flowers usually monoecious, up to 10 mm long, calyx funnellform, 5-lobed, usually plicately folded, perianth greenish-white to white, pubescent to glabrescent. Stamens 6-8, anthers scarcely exerted. Fruit a 5-ribbed, hardened, narrowly elliptic to elliptic perianth 25-40 mm long; ribs exuding an extremely viscid exudates. Achene usually narrowly oblong to oblong-elliptic usually 5-angled, 16-20 mm long, dark red-brown to brown.

## Flowering:

August - December

## Fruiting:

August - July

## Threats:

Within the mainland part of its range, Parapara is virtually extinct. Its large leaves are especially palatable to browsing animals such as possums, goats and other feral livestock. However the main threat to accessible mainland populations is the irresponsible behaviour of ignorant people who have cut down trees because of their ability to trap small passerines. On rodent-free offshore islands it is common but has declined on those supporting these vermin. As more northerly islands are being made rodent-free parapara is making a spectacular come back.

## \*Attribution:

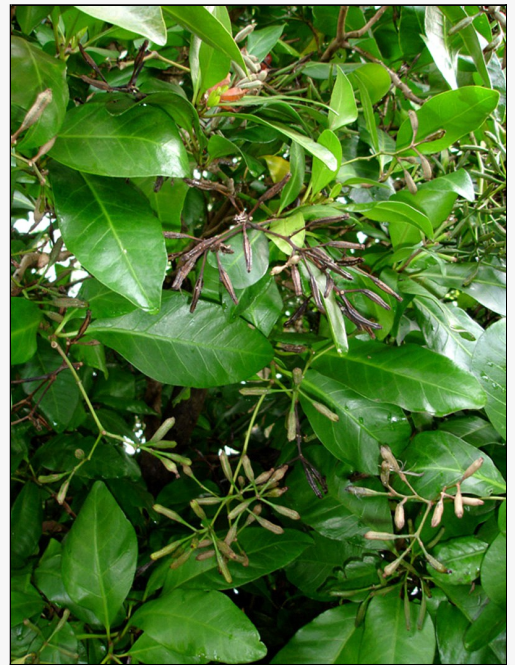
Fact Sheet prepared for NZPCN by P.J. de Lange 1 September 2004. Description modified from Allan (1961) supplemented with observations made from herbarium and fresh specimens.

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Government Printer, Wellington

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=299](http://nzpcn.org.nz/flora_details.asp?ID=299)



**Caption:** *Pisonia brunoniana* in heavy fruit

**Photographer:** Peter de Lange



**Caption:** *Pisonia brunoniana*

**Photographer:** Peter de Lange

# *Pittosporum crassifolium*

## Common Name(s):

Karo

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand, Great Barrier and North Island. In the North indigenous from Te Pahi south to about White Cliffs, and East Cape. Widely naturalised further south to Wellington. Naturalised in the South, Stewart and Chatham Islands. Also naturalised on Norfolk Island, and in Hawaii.

## Habitat:

Coastal and offshore islands. Favours steep slopes, cliff faces, boulder beaches, rock stacks and the margins of petrel burrowed land. Sometimes forms major canopy dominant on offshore islands, and on occasion can be a significant component of dune forest. Often an urban weed because its fruits/seeds are avidly taken by indigenous and exotic birds and dispersed widely.

## Features\*:

Gynodioecious shrubs to small trees 1-10 m tall. Trunk stout, grey-black, often distinctly lenticillate. Branches and branchlets erect, dark grey-black or brown, immature branchlets densely invested in grey-white or white tomentum, this maturing black. Leaves alternate, usually densely crowded toward branch and branchlet apices. Petioles 4-14 x 1-3 mm, grey-white to grey-black tomentose. Leaves 30-100 x 10-30 mm, obovate to oblanceolate, apices obtuse to acute, base attenuate, margins entire, both surfaces densely white, grey-white or brown tomentose when young, soon glabrate above but remain densely covered in dirty white or grey-white, appressed tomentum beneath, very coriaceous, margins thickened and often strongly revolute, surfaces often blistered with insect galls. Flowers in terminal 1-10-flowered fascicles; pedicels 6-50 mm, accrescent in fruit, tomentose, subtended by a whorl of leaves and numerous, 3-15 mm long, caducous, brown-tomentose, ciliate bud scales. Sepals 7-11 x 1.5-3 mm, oblong to linear-lanceolate, acute, greyish-white, dirty white or brown tomentose on outer surfaces, inner surface only toward the middle, margins ciliate. Petals 10-16 x 3-5 mm, oblanceolate to lanceolate, subacute, free to base, recurved at apices, dark red, purple, yellow, pink or white; stamens 5-9 mm long, anthers 1-3 x 0.5-1.5 mm, sagittiform to elliptic-oblong. Ovary 3-6 x 2-5 mm, white or grey-white tomentose; style 3-2.5 mm long, stigma capitate or 3-lobed truncate. Capsules woody, 10-30 x 10-30 mm, (2-)3(-4)-valved, woody, trigonous, sometimes 2-4-lobed

## Flowering:

August - October

## Fruiting:

September - August (Old fruits persist on trees)

## Threats:

Not Threatened. However, the fruits are eaten by rats, and on rodent infested offshore islands this species rarely regenerates.

## \*Attribution:

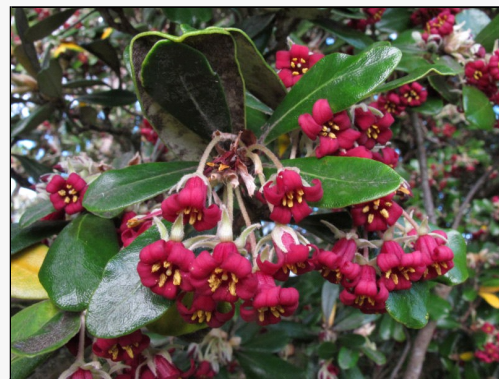
Fact sheet prepared for NZPCN by P.J. de Lange 30 August 2006. Description adapted from Cooper (1956).

## References and further reading:

Cooper, R.C. 1956: The Australian and New Zealand species of *Pittosporum*. *Annals of the Missouri Botanical Garden* 43: 87-188

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1133](http://nzpcn.org.nz/flora_details.asp?ID=1133)



**Caption:** Masterton

**Photographer:** John Barkla



**Caption:** Meola Reef, Westmere, Auckland

**Photographer:** John Sawyer



# *Planchonella costata*

## Common Name(s):

tawapou

## Current Threat Status (2012):

At Risk - Relict

## Distribution:

Indigenous. Norfolk Island and New Zealand where it found in the North Island only from Te Pahi south to the Manukau and Coromandel Peninsula after which it occurs in scattered sites as far south as East Cape in the East and Kawhia Harbour in the west. Some of these southerly occurrences are associated with Pa sites, and as the glossy seeds were used as necklaces by Maori it is possible that this species was planted over some parts of its southern North Island range. Tawapou is common on rodent-free offshore islands in the Hauraki Gulf, around the Coromandel Peninsula, Great Barrier Island, and on the Mokohinau, Poor Knights, Hen & Chickens and Three Kings Islands.

## Habitat:

Strictly coastal where it is usually a minor (rarely dominant) component of coastal forest on rocky headlands and talus slopes, windswept ridge-lines, forested islands and islets. Usually associated with pohutukawa (*Metrosideros excelsa*), puriri (*Vitex lucens*), karaka (*Corynocarpus laevigatus*), whau (*Entelea arborescens*), kowhai (*Sophora chathamica*), tawaroa (the northern wide-leaved form of *Beilschmedia tawa*) and on offshore islands such as the Three Kings, Poor Knights, Mokohinau Islands with coastal maire (*Nestegis apetala*), *Streblus* spp., and *Hoheria* spp.

## Features\*:

Tree up to 18 m. tall; trunk up to 1 m diameter; bark firm (not flaking), greyish-white to grey-brown, finely furrowed; branches numerous, erect and scarcely spreading, closely packed; branchlets clad in appressed hairs and ± lactescent (exuding milky fluid). Leaves initially pubescent (pubescence comprising fine, matted greyish to grey-brown hairs), lactescent, petioles 8-12 mm long, rather stout and rigid. Lamina 40-150 × 20-50 mm, yellow-green to dark green, elliptic-to obovate-oblong, entire, very coriaceous, adaxially lustrous, when mature glabrous except on abaxial midrib, apex obtuse or retuse, base cuneately narrowed. Lateral veins numerous, set at a rather wide angle to midrib. Flowers axillary and/or cauliflorous, solitary or rarely 2 together, 3.8-6.2 mm diameter; [peduncles 6-12 mm long, rather stout and rigid ± curved; calyx 4(-5)-toothed, teeth narrowly to broadly ovate, pubescent, obtuse; hairs centrally affixed. Corolla greenish to yellow-green, slightly > calyx, deeply 4-5-partite; lobes obovate-oblong, 3.8-4.1 mm. long. Stamens 5, filaments thick; staminodes 5, subulate. Ovary 4-5-loculed. Fruit fleshy, 25-50 mm long, ovoid to ellipsoid, maturing dark purple-black, dark red or orange-yellow. Seeds 1-4, 22-48 mm long, curved, rather hard, testa black, glossy.

## Flowering:

September - November

## Fruiting:

December - June

## Threats:

Not Threatened

## \*Attribution:

Description adapted from Allan (1961) by P. J. de Lange.

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Wellington, Government Printer.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2227](http://nzpcn.org.nz/flora_details.asp?ID=2227)



**Caption:** Te Pahi. Oct 2009.

**Photographer:** Jeremy Rolfe



**Caption:** Te Pahi. Oct 2009.

**Photographer:** Jeremy Rolfe



## *Plantago coronopus*

### **Common Name(s):**

buck's horn plantain

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Extensively naturalised in coastal areas. common around lowland lakes inland, in waste places and other modified areas.

### **Features:**

Annual or perennial herb with persistent taproot. Leaves all radical, 120 x 5 mm with 1-4 pairs of lobes or teeth. Flowering stem up to 45 cm long, usually clothed in hairs, cylindrical spike contains many flowers. Capsule up to 2 mm long, usually containing 4 small pinkish-brown seeds.

### **Flowering:**

July, August, September, October, November, December, January, February, March, April

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3082](http://nzpcn.org.nz/flora_details.asp?ID=3082)



**Caption:** Plantago coronopus

**Photographer:** John Barkla



**Caption:** Pauatahanui. Apr 2006.

**Photographer:** Jeremy Rolfe

## *Plantago lanceolata*

**Common Name(s):**

narrow-leaved plantain

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3019](http://nzpcn.org.nz/flora_details.asp?ID=3019)



**Caption:** Western Hutt hills. Sep 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Dunedin

**Photographer:** John Barkla

## *Plantago major*

**Common Name(s):**

broad-leaved plantain

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3056](http://nzpcn.org.nz/flora_details.asp?ID=3056)



**Caption:** Taita Gorge, Hutt River.  
Dec 2001.

**Photographer:** Jeremy Rolfe



**Caption:** Stokes Valley. Dec 2005.

**Photographer:** Jeremy Rolfe



## *Poa anceps*

### **Common Name(s):**

Broad-leaved poa

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. New Zealand: Three Kings, North and South Islands (north and western coasts as far south as George Sound, on Banks Peninsula in the east).

### **Habitat:**

Coastal, lowland to subalpine. On coastal and inland cliffs, on rock falls, in open forest, scrub and grassland

### **Features\*:**

Very variable, coarse, light green, greenish brown to bluish green perennial tufted grass to 1 m, with stiff erect leaves < stems, or often scrambling and trailing to 2 m, with hanging leaves and stems drooping from thick stolons, rooting at nodes below tufts; branching extravaginal, with up to three, short, glabrous, obtuse, bract-like sheaths at base; leaf-blades persistent. Leaf-sheath light green to light brown, coriaceous, folded and strongly keeled, lateral ribs conspicuous, smooth or slightly scabrid above, rarely minutely scabrid throughout. Ligule 0.5 mm, a truncate usually long-ciliate rim, scabrid abaxially. Leaf-blade coriaceous, folded to flat, leaf-blade 100-400 × 1.0-6.5 mm, abaxially with prominent, thickened midrib, and numerous, distinct lateral ribs, smooth apart from prickle-teeth near tip; upper surface smooth, or scabrid on ribs, rarely papillose-scabrid, occasionally with fringe of stiff short hairs above ligule; margins smooth or scabrid, thickened, tip acuminate or abruptly acute, often pungent, scabrid. Culm 150-700 mm, often not far exerted beyond uppermost leaf-sheath, internodes glabrous. Panicle 100-280 mm, usually open with numerous spreading branches, sometimes contracted, branches whorled, very slender; rachis and primary branches often smooth, secondary branchlets finely, sharply, densely or sparsely scabrid or smooth, often spikelet-bearing ± throughout. Spikelets numerous, 3.0-7.5 mm, 2-8-flowered light green. Glumes subequal, narrow- to elliptic-lanceolate, acute to subobtuse, occasionally smooth throughout, or upper 2/3 scabrid; lower slightly shorter, lower glume 2.0-4.5 mm, 3-nerved, upper 2.5-5.0 mm, 3-nerved. Lemma 3.0-4.5 mm, 5-7-nerved, elliptic-oblong, acute to subobtuse, internerves finely scaberulous throughout, occasionally only minutely papillose, bearing short crinkled hairs on lower 1/2 of midnerve and near base of outer lateral nerves; margins minutely scabrid. Palea 2.5-4.0 mm, keels finely scabrid, interkeel and flanks smooth or minutely scabrid. Callus with thick tuft of soft crinkled hairs. Rachilla c.0.5 mm, smooth or minutely, sparsely scabrid; prolongation c. twice as long. Lodicules c.0.5 mm, occasionally hair-tipped. Anthers 1.5-2.5 mm. Seed c.2.0 × 0.5 mm.

### **Flowering:**

September - December

### **Fruiting:**

November - May

### **Threats:**

Not Threatened

### **\*Attribution:**

Description modified Edgar and Connor (2000).

### **References and further reading:**

Edgar, E.; Connor, H.E. 2000: Flora of New Zealand. Vol. V. Grasses. Christchurch, Manaaki Whenua Press. 650 pp.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1150](http://nzpcn.org.nz/flora_details.asp?ID=1150)



**Caption:** Maungapakeha taipo, Wairarapa. Nov 2004.

**Photographer:** Barbara Mitcalfe



**Caption:** Eastbourne Hills. Dec 2006.

**Photographer:** Jeremy Rolfe

## *Poa annua*

### **Common Name(s):**

annual poa

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Prevalent in lawns and gardens, particularly those with moist, rich soils (Wax, Fawcett and Isely 1981). A weed of cultivated land and waste places.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3106](http://nzpcn.org.nz/flora_details.asp?ID=3106)



**Caption:** *Poa annua*

**Photographer:** John Smith-Dodsworth



**Caption:** *Poa annua*

**Photographer:** John Smith-Dodsworth

## *Poa pratensis*

**Common Name(s):**

Kentucky bluegrass

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3108](http://nzpcn.org.nz/flora_details.asp?ID=3108)



**Caption:** Poa pratensis  
**Photographer:** John Smith-Dodsworth



**Caption:** Poa pratensis  
**Photographer:** John Smith-Dodsworth



## *Poa pusilla*

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1168](http://nzpcn.org.nz/flora_details.asp?ID=1168)



**Caption:** In cultivation ex Woodhill. Oct 2007.

**Photographer:** Jeremy Rolfe



**Caption:** In cultivation ex Woodhill. Oct 2007.

**Photographer:** Jeremy Rolfe

## *Polycarpon tetraphyllum*

**Common Name(s):**

allseed

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3074](http://nzpcn.org.nz/flora_details.asp?ID=3074)



**Caption:** Polycarpon tetraphyllum

**Photographer:** John Smith-Dodsworth



**Caption:** Polycarpon tetraphyllum

**Photographer:** John Smith-Dodsworth

## *Polypogon monspeliensis*

**Common Name(s):**

beard grass

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3120](http://nzpcn.org.nz/flora_details.asp?ID=3120)



**Caption:** Koitiata, edge of salt marsh. Jan 2011.

**Photographer:** Colin Ogle



**Caption:** Koitiata, edge of salt marsh. Jan 2011.

**Photographer:** Colin Ogle



# *Polystichum neozelandicum* subsp. *zerophyllum*

## Common Name(s):

shield fern

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: North, South, Stewart and Chatham Islands, In the North Island ranging from Taupo and the South Bay of Plenty southwards (but extent of overlap with *P. neozelandicum* subsp. *neozelandicum* not clear).

## Habitat:

Coastal to montane. Common fern of forested hillsides and banks, coastal cliff faces (under scrub), usually in well-lit conditions. It has also extended its range into urban situations where it sometimes a feature of roadside banks and cuttings.

## Features\*:

Rhizomes short, erect. Stipes 100–420 mm long. Stipes and rachises moderately to densely scaly. Scales obviously scale-like to the naked-eye; usually acicular-lanceolate; usually widest in the basal third of length; those from the stipe-rachis junction usually 135–570 µm wide at mid length; mid to dark brown, often appearing black to the naked eye; apex tapering; margins almost always with projections which usually taper to cilia-like apices; underlain by smaller scales, including 'arachnioid' scales with fimbriate bases. Lamina 175–525 × 90–220 mm, bipinnate with the basal primary pinnae of some large fronds becoming tripinnate; usually forest green with primary and secondary costae blackish blue. Primary pinnae in 11–25 pairs, the longest 45–120 × 5–38 mm. Secondary pinnae stalked and free towards the base of primary pinnae, becoming sessile and adnate towards the apex of primary pinnae; with sharply pointed apices and usually additional marginal teeth and/or crenulations. Sori round. Indusia peltate, ± flat, ± round, with entire, although often undulate and/or scalloped, margins; persistent; central dark area moderately sized (5–30% surface area).

## Flowering:

Not Applicable - Spore Producing

## Fruiting:

Not Applicable - Spore Producing

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (13 November 2012). Description adapted from Perrie et al. (2003).

## References and further reading:

de Lange, P.J.; Heenan, P.B.; Rolfe, J.R. 2011: Checklist of vascular plants recorded from the Chatham Island Islands. Department of Conservation, Wellington. 57pp.

Perrie, L.R.; Brownsey, P.J.; Lockhart, P.J.; Large, M.F. 2003A: Evidence for an allopolyploid complex in New Zealand *Polystichum* (Dryopteridaceae). *New Zealand Journal of Botany* 41: 189–215

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1183](http://nzpcn.org.nz/flora_details.asp?ID=1183)



**Caption:** Sori

**Photographer:** John Barkla



**Caption:** Frond of *Polystichum neozelandicum* subsp. *zerophyllum*

**Photographer:** John Barkla

# *Pomaderris phyllicifolia*

## Common Name(s):

Tauhinu

## Current Threat Status (2012):

Threatened - Nationally Endangered

## Distribution:

Indigenous. North Island. Historically known from Northland to the northern Waikato. Still present in Te Pahi, near Te Kao and in scattered sites south to near Orewa. In Australia known from Victoria and southern New South Wales.

## Habitat:

Mainly coastal, nutrient poor, open sites amongst manuka and sedges, clay banks and roadsides. This plant is a naturally short-lived, early coloniser of slips and disturbed areas.

## Features\*:

Compactly much-branched, spreading shrub up to 1.5 × 2.0 m. Young stems, buds, and leaves usually densely invested in long, spreading greyish-white to white hairs, rarely ± or completely glabrous. Leaves 10–30 × 4–20 mm, dark green above, white to grey-green below, narrow-oblong, narrow-ovate, oblanceolate, to cymbiform, deeply grooved at midrib, margins entire, initially flat but becoming recurved at maturity (though not so as to obscure lower surface); upper surface weakly rugulose, initially with dense covering of bristly simple hairs becoming glabrescent or glabrous; undersides except for midrib and secondary veins densely tomentose, midrib and secondary veins ± visible, hairs on midribs simple, those between stellate. Inflorescences in short axillary cymes aggregated, forming narrow terminal panicles. Buds grey-green to brown-grey, ovoid; pedicels 2.5 mm long. Flowers pale yellow, 4–5 mm diameter; calyx-tube covered in fine indumentum through which is mixed numerous long straight hairs; sepals c. 2 mm long, not persistent in fruit; petals mostly absent, rarely present as petaloid staminal filaments; stamens 2 mm long; style divided almost to base. Capsule 4 mm long, immersed up to 1/3 of its length in calyx-tube; operculum covering most of the inner cocoon face; seeds c. 2.2 × 1.6 mm, dark-brown, surface glossy.

## Flowering:

October to November.

## Fruiting:

November to January.

## Threats:

Use of herbicides along roadsides and goat browsing are the main causes of decline. Also, habitat loss through succession, causing shading as a canopy develops.

## \*Attribution:

Fact Sheet Prepared by P.J. de Lange (1 November 2009). Description by P.J. de Lange subsequently published in de Lange et al (2010).

## References and further reading:

de Lange, P.J.; Heenan, P.B.; Norton, D.A.; Rolfe, J.R.; Sawyer, J.W.D. 2010: Threatened Plants of New Zealand. Canterbury University Press, Christchurch.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=90](http://nzpcn.org.nz/flora_details.asp?ID=90)



**Caption:** Pomaderris phyllicifolia  
**Photographer:** Kevin Matthews



**Caption:** Pomaderris phyllicifolia  
**Photographer:** Peter de Lange

## *Portulaca oleracea*

**Common Name(s):**

purslane

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3084](http://nzpcn.org.nz/flora_details.asp?ID=3084)



**Caption:** *Portulaca oleracea*  
**Photographer:** John Smith-Dodsworth



**Caption:** *Portulaca oleracea*  
**Photographer:** John Smith-Dodsworth



## *Prunella vulgaris*

### **Common Name(s):**

self-heal

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Because of its low growth habit, self-heal all can often escape detection until firmly established in the lawn. The first signs of of the plant are during flowering when hundreds of purple (occasionally mauve) flowers on short compact spikes are seen above the ground.

### **Features:**

Self-heal is a low-growing, spreading by rooting at nodes; a perennial of the mint family. It has distinctive puckered leaves with an opposite arrangement on square stems. The ovate leaves (wider at the base and tapering toward the apex) are covered with short, coarse hairs. When viewing this plant from directly above, each set of leaves is rotated ninety degrees from the previous set.

### **Flowering:**

Self heal flowers in early-to-mid summer on stems that extend above the ground

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=3129](http://nzpcn.org.nz/flora_details.asp?ID=3129)



**Caption:** Pale corolla form (the only form locally), mown lawn, Durie Hill, Whanganui

**Photographer:** Colin Ogle



**Caption:** Pale corolla form (the only form locally), mown lawn, Durie Hill, Whanganui

**Photographer:** Colin Ogle

## *Prunus persica*

### **Common Name(s):**

peach

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Light demanding (West, 1996). Grassy and scrub-covered hillsides, roadsides, tracks, railways, wasteland (Webb et al., 1988).

### **Features:**

A small, spreading, deciduous tree up to 4m; 5 pink petals; round, greenish yellow to red fruit 50-80mm long; stone deeply pitted and furrowed (Webb et al., 1988).

### **Flowering:**

August, September, October

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2854](http://nzpcn.org.nz/flora_details.asp?ID=2854)



**Caption:** *Prunus persica*

**Photographer:** John Smith-Dodsworth



**Caption:** Close up of flowers, Sep 2006.

**Photographer:** Peter de Lange

# *Pseudognaphalium luteoalbum*

## Current Threat Status (2012):

Not Threatened

## Threats:

Not Threatened

## References and further reading:

de Lange, P.J.; Heenan, P.B.; Norton, D.A.; Rolfe, J.R.; Sawyer, J. 2010: *Threatened plants of New Zealand*. Christchurch, Canterbury University Press. 450 p

Greuter, W. 2003: The Euro+Med treatment of *Gnaphalieae* and *Inuleae* (*Compositae*) - generic concepts and required new names. *Willdenowia* 33: 239-244

Kirpicznikov, M. E.; Kuprijanova, L. A. 1950: Morphological-geographical and palynological contributions to the understanding of the genera of the subtribe *Gnaphaliinae*. *Trudy Botanicheskogo Instituta Akademii Nauk SSSR. Series 1. Flora i Sistematika Vyssikh Rastenii. Acta Instituti Botanici Academiae Scientiarum URSS series 1(9)*: 7-37.

Richard, A. 1832: Essai d'une Flore de la Nouvelle Zélande. In: *Botanique. Essai d'une Flore de la Nouvelle Zélande*[1]-376

Tzvelev, N. N. 1993: Notes on some Caucasian Asteraceae and Araceae. *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody, Otdel Biologicheskii* 98(6): 99-108

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: *Flora of New Zealand. Vol. IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons*. Christchurch, Botany Division DSIR

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2228](http://nzpcn.org.nz/flora_details.asp?ID=2228)



**Caption:** Catlins coast, coastal form

**Photographer:** John Barkla



**Caption:** Cape Terawhiti

**Photographer:** Gillian Crowcroft



# *Pseudopanax lessonii*

## Common Name(s):

Houpara

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. Three Kings to Poverty Bay and northern Taranaki

## Habitat:

Coastal forest and scrub

## Features\*:

Small tree to 6 m tall; branches stout, with leaves crowded towards tips of branchlets. Leaves alternate, leaflets 3-5, palmate, lateral leaflets smaller; juvenile leaves larger than adult. Petiole to 15 cm long, stout, sheathing stem at base; stipules absent. Leaflets subsessile, terminal leaflet on short petiolule, obovate-cuneate, sinuate-crenate to bluntly serrate in distal half, subacute to obtuse, dark green above, paler beneath, midvein obvious, lateral veins obscure, c. 5-10 x 2-4 cm. Inflorescence a terminal compound umbel; male (staminate) primary rays (branchlets) 4-8 c. 4-5 cm long, flowers racemously arranged along secondary rays; pistillate (female) primary rays shorter, flowers in irregular umbellules. Petals greenish, acute; anthers on filaments < petals. Ovary 5-loculed, each containing 1 ovule; style branches 5, conate, tips spreading. Fruit fleshy, dark purple, broadly oblong, 7 x 5 mm, style branches retained on an apical disc. 5 Seeds per fruit, narrowly ovate to ovate or oblong, 5.5-8.0 mm long.

## Threats:

Not Threatened

## \*Attribution:

Description adapted from Allan (1961), Eagle (2006) and Webb and Simpson (2001).

## References and further reading:

Allan, H.H. 1961. Flora of NZ, Vol. I. Government Printer, Wellington

Eagle, A. 2000. Eagle's complete trees and shrubs of NZ. Te Papa Press, Wellington

Webb, C.J. & Simpson, M.J.A. 2001. Seeds of NZ gymnosperms and dicotyledons. Manuka Press, Christchurch.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1198](http://nzpcn.org.nz/flora_details.asp?ID=1198)



**Caption:** *Pseudopanax lessonii*  
**Photographer:** Wayne Bennett



**Caption:** Leaves of *Pseudopanax lessonii*  
**Photographer:** Wayne Bennett

# *Psilotum nudum*

## Common Name(s):

whisk fern, skeleton fork fern

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. New Zealand: Kermadec Islands (Raoul Island), North Island (North Cape south to the southern shore of Lake Taupo and Tokaanu).

## Habitat:

Coastal to monatanic. In the northern part of its range *Psilotum* is usually a local component of coastal forest where it grows on the forest floor, in rock piles and on cliff faces. It is also occasionally epiphytic on trees such as pohutukawa (*Metrosideros excelsa*). On Raoul Island it is an abundant ground cover in the "dry" forest type on that island. In the North Island outside Northland and the Coromandel Peninsula, *Psilotum* becomes increasingly tied to geothermally active sites where it usually grows on cliff faces and warm soil around fumaroles. In the ignimbrite country north of Lake Taupo, and also along the western shore of Lake Taupo, *Psilotum* is at times a very common species growing in the joints of columnar ignimbrite. On the western shoreline of Lake Taupo in this type of habitat plants can grow very large, and they may grow right down into the flood-line where they are often associated with *Lindsaea viridis*. Around Auckland City *Psilotum* is a very common, though easily overlooked plant of stone walls (especially basalt or concrete retaining walls).

## Features\*:

Epiphytic or terrestrial plants. Rhizome branching, short- to long-creeping, usually clumped. Aerial shoots 50-100-200(-900) mm, dark green, green or yellow depending on growing conditions, erect, firm or sometimes flaccid in shaded situations, branched repeatedly in different planes in the upper part. Branches prominently ribbed 3-7×, subterete in cross-section, to 4.5 mm diameter; stomata restricted to furrows between ribs. Sterile leaves 1.0-2.5 mm long, pale yellow (translucent toward apices), restricted to ribs, subspiral, terete. Synangia 1.5-2.0 × 2.0-2.5 mm, yellow, globular, partitioned in 3 segments.

## Flowering:

N.A. Spore producing

## Fruiting:

N.A. Spore producing

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (7 May 2011). Description adapted from Chinnock (1998).

## References and further reading:

Chinnock, R.J. 1998: Psilotaceae. Flora of Australia 48: 47-53.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2229](http://nzpcn.org.nz/flora_details.asp?ID=2229)



**Caption:** *Psilotum nudum*

**Photographer:** John Barkla



**Caption:** *Psilotum nudum*

**Photographer:** John Barkla

# *Pteridium esculentum*

## Common Name(s):

bracken, rarauhe, bracken fern

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous: New Zealand: Kermadec (Raoul Island only), North, South, Stewart, Chatham and Antipodes Islands. Also South East Asia, Australia, Lord Howe, Norfolk Islands extending into western Oceania.

## Habitat:

Common in mainly seral habitats from the coast to the low alpine zone.

## Features\*:

Fern with deeply rooted, subterranean rhizomes. Stipes and rachis chestnut brown at base, yellow-brown to russet at apex, woody, grooved, smooth, bearing sparse non-glandular hairs or ± glabrous stipe 0.2-1.3(-2.0) m or more long, 3-8(-15) mm diameter, woody. Lamina broadly elliptic or broadly ovate, 0.25-1.5-1.8 × 0.2-1.0-1.4 m wide, 3-4-pinnate at base, dark green (often glaucescent) above, paler beneath, adaxially glabrous, abaxially with sparse red-brown hairs on midribs and dense colourless appressed non-glandular hairs along veins. Longest pinnae arising at narrow angles; longest 150-650 × 80-400 mm. Secondary pinnae arising at narrow angles; longest 50-260 × 15-130 mm; basal one often much-reduced; midribs of primary and secondary pinnae narrowly winged. Tertiary pinnae decreasing markedly in length along secondary pinnae; longest 7-70 × 2-20 mm, with winged midribs. Quaternary pinnae to 12 × 4 mm; ultimate pinnules linear, straight, acute, entire, adnate and decurrent on 1 side. Sori continuous along pinna margin. Indusium > 0.2 mm wide, membranous, entire, glabrous. Spores dark yellow to orange yellow., granulose.

## Flowering:

None (spore bearing)

## Fruiting:

None (spore bearing)

## Threats:

Not Threatened.

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 11 January 2011. Description adapted from Brownsey (1998) and Brownsey & Smith-Dodsworth (2000).

## References and further reading:

Brownsey, P.J. 1998: Dennstaedtiaceae: Flora of Australia 48: 214-228.

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2230](http://nzpcn.org.nz/flora_details.asp?ID=2230)



**Caption:** Awhitu Regional Park, Auckland region

**Photographer:** John Sawyer



**Caption:** Mt Karioi, south of Raglan

**Photographer:** John Sawyer



## *Pteris tremula*

### **Common Name(s):**

shaking or tender brake, Australian bracken

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. New Zealand: Kermadec Islands (Raoul, Meyers and Macauley Islands), Three Kings, North, South, Chatham Islands. Also Australia, Tasmania, Lord Howe, Norfolk and Fiji.

### **Habitat:**

Coastal to montane (in northern part of range) in open, dry forest, scrub, wasteland, along track and roadsides and on retaining walls and similar sites in built up areas.

### **Features\*:**

Stout terrestrial ferns. Rhizomes short, erect, apex covered with long narrow, pale brown scales. Fronds dimorphic, tufted. Stipes 0.15-0.6 m long, glabrous (rarely with a few narrow basal scales), red-brown or black, often basally so and then red-yellow for rest of length. Laminae 0.3-1.2 × 0.2-0.7 m, bright green, yellow-green or yellow, ovate, ovate-deltoid, 3-4-pinnate at base, membranous, rachis red-brown or yellow-green. Pinnae overlapping; most secondary pinnae stalked or sessile. Ultimate sterile segments 6-38 × 3 mm wide, linear, apices blunt margins toothed; ultimate fertile segments 5-35 × 1-2 mm, linear, apices blunt, margins toothed. Veins free, simple or 1-2-forked. Sori ± continuous on a marginal vein, but absent from bases and apices of ultimate segments, protected by a membranous inrolled pinna margins

### **Flowering:**

Not applicable - spore producing

### **Fruiting:**

Not applicable - spore producing

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange (17 January 2012). Description adapted from Brownsey & Smith-Dodsworth (2000) and Kramer & McCarthy (1998).

### **References and further reading:**

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman.

Kramer, K.U.; McCarthy, P.M. 1998: Pteridiaceae. Pp. 241-248. Flora of Australia 48. Australian Biological Resources Study, CSIRO Canberra

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2232](http://nzpcn.org.nz/flora_details.asp?ID=2232)



**Caption:** Emerging frond. Stokes Valley, Lower Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Coromandel

**Photographer:** John Smith-Dodsworth

# *Pterostylis alobula*

## Common Name(s):

greenhood

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: Three Kings, Poor Knights, North, South and Chatham Islands. In the South Island found in the east as far south as South Canterbury and the lower Waitaki Valley, and in the west as far south as Cape Foulwind.

## Habitat:

Coastal to montane (up to 1100 m a.s.l.). Usually on the forest floor in sparse leaf litter, open clay pans under scrub or amongst mosses in semi-shaded successional forest. Occasional invades rough pasture and lawns bordering forest remnants. Often growing with *Pterostylis trullifolia*

## Features\*:

Terrestrial, colony forming, perennial herb. Plants at flowering up to 150 mm tall. Stem green or reddish-green, slender, terete, smooth; internodes rarely > leaves. Petiolate leaves in separate loose rosette or more or less loosely spaced up the lower part of flowering stem; petiole up to 10 mm long, initially distinct soon merging into leaf lamina on lower cauline leaves; leaf lamina 5-15 x 4-15 mm, dark green or green, broad-ovate, orbicular-cordate to trowel-shaped, apex acute to subacute, upper leaf surface smooth. Cauline leaves 2-6, mostly all sessile, 5-25 x 3-6 mm, dark green to green, linear to narrow-lanceolate or narrow-elliptic, uppermost slightly overtopping ovary. Flower 1(-2) erect, pale green and white striped. Dorsal sepal 20-25 mm tall, apex acuminate, usually horizontal; lateral sepals diverging at a wide angle to form a V shape when viewed from the front, sinus smoothly rounded and not jugate in side view, tips long-caudate and much overtopping galea. Petals almost as long as dorsal sepal, with the exposed marginal strip of medium width, and often nearly horizontal. Labellum arched and protruding, basal portion lanceolate, gradually tapering to mid-length, then abruptly contracted; margins recurved such that distal third is linear in outline and deeply channelled beneath, apex bluntly truncate. Column shorter than labellum; stigma elliptic, slightly prominent.

## Flowering:

March to November

## Fruiting:

May - January

## Threats:

Not Threatened

## \*Attribution:

Description adapted from Moore and Edgar (1970)

## References and further reading:

Janes, J.K.; Dorothy A. S.; Vaillancourt, R.E.; Duretto, M.F. 2010: A new classification for subtribe Pterostylidinae (Orchidaceae), reaffirming *Pterostylis* in the broad sense. *Australian Systematic Botany* 23: 260-269

Jones, D.L.; Clements, M.A.; Molloy, B.P.J 2002: A Synopsis of the Subtribe *Pterostylidinae*. *Australian Orchid Research* 4: 129-146.

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Szlachekto, D.L. 2001: Genera et Species Orchidarium 1. *Polish Botanical Journal* 46: 11-26.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1792](http://nzpcn.org.nz/flora_details.asp?ID=1792)



**Caption:** Stokes Valley. Jul 2001.

**Photographer:** Jeremy Rolfe



**Caption:** Stokes Valley.

**Photographer:** Jeremy Rolfe



## *Pyrrosia elaeagnifolia*

### **Common Name(s):**

leather-leaf fern, Pyrrosia

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Endemic. Kermadec, Three Kings, North, South, Stewart and Chatham Islands.

### **Habitat:**

Coastal to montane. Common as an epiphyte on both indigenous and exotic trees and shrubs, also on rocks, cliffs faces and in urban areas on buildings, walls, bridges and fence posts.

### **Features\*:**

Epiphytic or rupestral rhizomatous fern. Rhizomes long-creeping, often densely interwoven, young portions densely invested in red-brown to fawn coloured scales. Stipes reduced to phyllopodia borne in intervals along rhizome. Fronds coriaceous, fleshy to almost succulent, undivided, 30-200 × 5-20(-30) mm; adaxially yellow-green to dark green (rarely glaucescent), glabrescent, initially sparsely covered in long straight to somewhat flexuous pale-yellow to translucent caducous hairs; abaxially densely covered in fawn or white-coloured stellate hairs, aside from midrib, veins not evident on either surface; lamina variable; sterile examples broadly ovate, rhomboidal, suborbicular, to elliptic (very rarely linear); fertile linear, linear-lanceolate to suborbicular. Sori without indusia, ovoid, ellipsoid to rounded, in 2-3(-4) irregular rows (rarely more) either side of midrib and set away from frond margins. Spores yellow.

### **Flowering:**

N.A.

### **Fruiting:**

N.A.

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange 9 April 2011.  
Description by P.J. de Lange.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2235](http://nzpcn.org.nz/flora_details.asp?ID=2235)



**Photographer:** Rebecca Stanley



**Caption:** Rangaika, Chatham Island. June 2013.

**Photographer:** Jeremy Rolfe



## *Ranunculus parviflorus*

### Common Name(s):

small-flowered buttercup

### Current Threat Status (2009):

Exotic

### Features:

Annual; roots all fibrous. Stems moderately slender, sprawling to sub-erect, sparsely hairy, (50-)100-300-(600) mm tall. Basal leaves subcircular, 3-5-lobed to about 1/2 way, 10-30 × 10-40 mm; lobes obovate, cuneate, dentate to crenate, hairy; petioles hairy, (20-)30-80 (-150) mm long. Cauline leaves similar to basal but segments becoming lanceolate, entire; uppermost leaves sometimes not lobed, lanceolate, entire. Flowers many per stem, 3-6 mm diameter. Pedicels erecto-patent, glabrous or hairy, terete, 8-40 mm long at fruiting. Sepals 5, hairy, suberect, obtuse, c.2 mm long. Petals 5, yellow, obovate-spathulate, 1.5-2.5 × c.1 mm; nectary single, 0.5-1.0 mm from petal base, covered by an obtuse scale. Receptacle glabrous. Achenes (5)-10-20, strongly flattened, bordered, broadly ovate to subcircular; body 2.0-2.5 × c.2.0 mm; face densely covered with short hooked spines; beak curved at tip, 0.5-0.7 mm long.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2875](http://nzpcn.org.nz/flora_details.asp?ID=2875)



**Caption:** Feilding.

**Photographer:** Colin Ogle



**Caption:** Feilding.

**Photographer:** Colin Ogle

# *Rhopalostylis sapida*

## Common Name(s):

Nikau palm

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North Island, South Island from Marlborough Sounds and Nelson south to Okarito in the west and Banks Peninsula in the east. Also on Chatham and Pitt Islands. However Chatham Islands plants have a distinct juveniel form, larger fruits, and thicker indumentum on the fronds.

## Habitat:

Primarily a species of coastal to lowland forest in the warmer parts of New Zealand.

## Features:

Trunk up to 15 m, stout, covered in grey-green leaf scars, otherwise green. Crownshaft 0.6(-1) m long, dark green, smooth, bulging. Fronds up to 3 m long; leaflets to 1 m, closely set (sometimes over lapping), ascending. Spathes c.300 x 150 mm., between pink and yellow, caducous. Inflorescence shortly stalked, with many branches, 200-400 mm long. Flowers sessile, unisexual, tightly packed, lilac to pink. Males in pairs, caducous, stamens 6. Females solitary, with minute staminodes, ovary 1-locular, stigmas terminal, recurved, persistent. Fruit c.10 x 7 mm, elliptic-oblong, flesh red.

## Flowering:

November - April

## Fruiting:

February - November

## Threats:

Not Threatened

## References and further reading:

Esler, A.E. 1969. Leaf fall and flowering of nikau. Wellington Botanical Society Bulletin, 36: 19-22

Greenwood, R.M. 1969. Notes on growth of young nikau plants. Wellington Botanical Society Bulletin, 36: 22-23

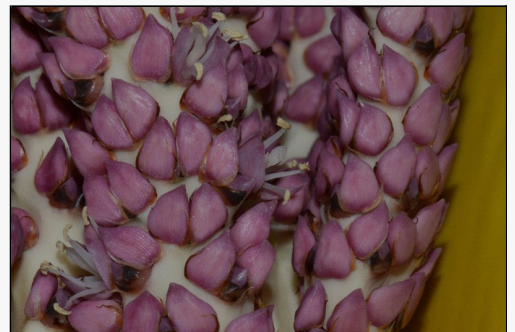
## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1259](http://nzpcn.org.nz/flora_details.asp?ID=1259)



**Caption:** *Rhopalostylis sapida*

**Photographer:** Pat Enright



**Caption:** *Rhopalostylis sapida*

**Photographer:** Pat Enright



# *Ripogonum scandens*

## Common Name(s):

Supplejack, kareao

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. North, South, Stewart and Chatham Islands

## Habitat:

Coastal to montane. Usually in forest but occasionally in swamps (where it sprawls through flax and fern), and common in karst country where it often grows in doline, tomo and cave entrances

## Features\*:

Woody, evergreen, twining forest liane. Rhizome horizontal, stout, lignaceous, usually swollen into a woody tuber 30-60 mm diameter at base of erect stem. Stems of two kinds: (a) twining stems growing upward from mature rhizome on forest floor, without green lvs, succulent at tip; these are several metres long, c.15-20 mm diameter, little branched, almost black, finely pubescent; nodes c.100-200 mm apart, thickened; sheathing scale leaves alternate, subopposite or opposite, membranous, 10-30 mm long, charcoal black, narrowly deltoid, finely brown-scabrid, caducous. (b) non-twining stems arising from the long stems in full light; these are to 1 m long, c.5 mm diameter, more branched and widely spreading, light brown, glabrous; internodes shorter, the distal ones bearing green leaves and inflorescences. Leaves mostly opposite, 55-160(-230) × 20-60(-80) mm, green, dark green or yellow-green, ± coriaceous, narrow-ovate to oblong, narrowed rather abruptly to tip, margins entire and ± undulate; petiole c.10-15 mm long, ± channelled. Inflorescence axillary or terminal, simple or compound, 100-150(-280) mm long; bracts usually all small and membranous, rarely foliaceous. Pedicels c.5-9 mm long, without bracteole at base but with one or more adjacent to and resembling perianth-segs. Flowers not crowded. Tepals green often hyaline green, minute, free, spreading. Stamens much > tepals; filaments c.2 mm long; anthers greenish, yellow or cream, linear-oblong, c.3.0-5.0 × 1.0-1.5 mm, dehiscing laterally by long slits. Ovary globose, c.1.5 mm diameter; ovules 2 per locule, attached about mid-level; style 2 mm long, including stigma of 3 verrucose lobes. Fruit globose, bright red, c.10-15 mm diameter, pericarp thin, fleshy, tightly stretched over 1-2(-3) hard, spotted seeds, seed when single almost spherical. Fruit falling, 12-15 months after flowering, by abscission layer just above perianth.

## Flowering:

October - May

## Fruiting:

Throughout the year

## Threats:

Not Threatened

## \*Attribution:

Description adapted from Moore & Edgar (1970). Fact sheet prepared for NZPCN by P.J. de Lange 14 February 2011.

## References and further reading:

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand Vol. II. Wellington, Government Printer.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1260](http://nzpcn.org.nz/flora_details.asp?ID=1260)



**Caption:** Rangaika, Chatham Island. Jun 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Nikau Bush, Chatham Island. Jun 2013.

**Photographer:** Jeremy Rolfe



# *Rorippa divaricata*

## Common Name(s):

New Zealand watercress, Matangaoa

## Current Threat Status (2012):

Threatened - Nationally Vulnerable

## Distribution:

Endemic. Known from the Kermadec, Three Kings, North, South and Chatham Islands. It has not been seen on the Kermadecs for over 100 years but is still present on the Three Kings, Poor Knights and other Hauraki Gulf Islands. In the North Island it has been recorded recently from Kawhia, Hicks Bay and the Rotorua Lakes district. In the South Island it is known from and in the vicinity of the Abel Tasman National Park. On the Chatham Islands it has been collected once in 1985 and not reliably reported since.

## Habitat:

A species of recently disturbed ground. Usually found in or near clearings, on recent slips or on track margins. Often on lake and river margins. Plants may also grow within active petrel colonies, often around burrow entrances. This species seems to do best in dappled light, and is often found in forested habitats. It has also been found in pine plantations.

## Features\*:

Annual to perennial herb (depending on local growing conditions), 0.3-2 m tall, arising from stout taproot. Basal stem one (or more), erect to decumbent, glabrescent, woody, purple red when mature, somewhat angled. Leaves green, yellow-green, dark green or purple-green, margins sinuate, dentate to deeply toothed. Basal leaves petiolate, petiole broadly winged, grading into deflexed amplexicaul leaf lobes; lamina 30-160 x 20-80 mm, pinnatifid. Mid cauline leaves similar but smaller, upper cauline leaves much smaller, linear-lanceolate, simple, basally cuneately narrowed or amplexicaul. Inflorescence a complex, heavily branched raceme. Racemes 50-200 mm long. Pedicels 5-20 mm long at flowering, erecto-patent, spreading to deflexed at fruiting. Sepals 2-3 mm long. Petals white 2-3 mm long. Fruit a dark green to purple-green silique, 10-40 x 1-2 mm, spreading, linear, more or less terete, shallowly grooved along suture. Style remnant c.2 mm long. Seeds orange to red-brown, c.1 mm diam., extremely sticky when fresh.

## Flowering:

Spring (can flower from October to February)

## Fruiting:

Summer (can fruit from October to May)

## Threats:

Weed competition is a major threat. Trampling, vegetation succession and vegetation clearance will also threatened populations. Plants are prone to drought. Browsing animals (possums, rodents, stock and feral pigs) and exotic insect pests (particularly cabbage white butterfly) are also significant threats.

## \*Attribution:

Fact Sheet Prepared by P.J. de Lange (1 November 2009). Description by P.J. de Lange subsequently published in de Lange et al (2010).

## References and further reading:

de Lange, P.J.; Heenan, P.B.; Norton, D.A.; Rolfe, J.R.; Sawyer, J.W.D. 2010: Threatened Plants of New Zealand. Canterbury University Press, Christchurch.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=91](http://nzpcn.org.nz/flora_details.asp?ID=91)



**Caption:** Blue Lake, Rotorua. March 2013.

**Photographer:** Jeremy Rolfe from a specimen collected by Sarah Beadel.



**Caption:** Leaf node. Blue Lake, Rotorua. Mar 2013.

**Photographer:** Jeremy Rolfe from a specimen collected by Sarah Beadel.

## *Rubus idaeus*

**Common Name(s):**

raspberry

**Current Threat Status (2009):**

Exotic

**Habitat:**

Terrestrial. Roadsides, wasteland, streambanks, scrub edges.

**Features:**

Erect shrub to about 2 m high with dense suckering habit, stems often growing horizontally when older. Stems are armed with numerous weak prickles. Leaves usually with 2 pairs of leaflets (occasionally 3). Leaflets are ovate, with obvious white tomentum beneath and serrate margins. The inflorescence consists of a few white flowers up to 25 mm diameter. Fruit are red or orange drupelets, up to 15 mm long.

**Flowering:**

November, December,  
January

**Fruiting:**

January, February,  
March

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2936](http://nzpcn.org.nz/flora_details.asp?ID=2936)



**Caption:** *Rubus idaeus*

**Photographer:** John Smith-Dodsworth



**Caption:** *Rubus idaeus*

**Photographer:** John Smith-Dodsworth

## *Rumex acetosella*

**Common Name(s):**

sheep's sorrel

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2947](http://nzpcn.org.nz/flora_details.asp?ID=2947)



**Caption:** *Rumex acetosella*

**Photographer:** John Smith-Dodsworth



**Caption:** *Rumex acetosella*

**Photographer:** John Smith-Dodsworth



## *Rumex conglomeratus*

**Common Name(s):**

clustered dock

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2937](http://nzpcn.org.nz/flora_details.asp?ID=2937)



**Caption:** Coromandel. Jan.  
**Photographer:** John Smith-Dodsworth



**Caption:** Close up, Coromandel.  
Jan.  
**Photographer:** John Smith-Dodsworth

## *Rumex crispus*

**Common Name(s):**

curled dock

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2948](http://nzpcn.org.nz/flora_details.asp?ID=2948)



**Caption:** *Rumex crispus*

**Photographer:** John Smith-Dodsworth



**Caption:** *Rumex crispus*

**Photographer:** John Smith-Dodsworth

## *Rumex pulcher*

**Common Name(s):**

fiddle dock

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2951](http://nzpcn.org.nz/flora_details.asp?ID=2951)



**Caption:** Rumex pulcher

**Photographer:** John Smith-Dodsworth



**Caption:** Coromandel, Jan.

**Photographer:** John Smith-Dodsworth



# *Rytidosperma biannulare*

**Common Name(s):**

gumland bristle grass

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Endemic. North Island from Surville Cliffs south to Auckland with spot occurrences at Taumarunui and Wellington. South Island, North-West Nelson, DUrville Island and Wairau Valley. Its distribution and ecology suggest it is not endemic and should also be in Australia. It should be carefully looked for there

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2244](http://nzpcn.org.nz/flora_details.asp?ID=2244)

## *Rytidosperma caespitosum*

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2960](http://nzpcn.org.nz/flora_details.asp?ID=2960)

## *Rytidosperma pilosum*

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2963](http://nzpcn.org.nz/flora_details.asp?ID=2963)



## *Rytidosperma racemosum*

**Common Name(s):**

danthonia

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2942](http://nzpcn.org.nz/flora_details.asp?ID=2942)



**Caption:** Motuwi, Coromandel.

Dec

**Photographer:** John Smith-Dodsworth



**Caption:** Motuwi, Coromandel.

Dec

**Photographer:** John Smith-Dodsworth

## *Rytidosperma unarede*

**Common Name(s):**

bristle grass

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Endemic. Kermadec, Three Kings, North, South, Stewart and Chatham Islands

**Habitat:**

Coastal, lowland to montane grasslands, and on cliff faces and sparsely vegetated hill sides.

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1278](http://nzpcn.org.nz/flora_details.asp?ID=1278)



**Caption:** Floret, Stokes Valley, Lower Hutt. Mar 2013.

**Photographer:** Jeremy Rolfe



**Caption:** Stevensons Island, Lake Wanaka

**Photographer:** John Barkla

## *Sagina apetala*

**Common Name(s):**

pearlwort

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2943](http://nzpcn.org.nz/flora_details.asp?ID=2943)



**Caption:** Hutt River north of Stokes Valley. Oct 2007.

**Photographer:** Jeremy Rolfe



**Caption:** Hutt River north of Stokes Valley. Oct 2007.

**Photographer:** Jeremy Rolfe



## *Sagina procumbens*

**Common Name(s):**

procumbent pearlwort

**Current Threat Status (2009):**

Exotic

**Habitat:**

Favours damp sites (Webb et al 1988)

**Flowering:**

(August) May

**Fruiting:**

August- (May)

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2944](http://nzpcn.org.nz/flora_details.asp?ID=2944)



**Caption:** Stokes Valley. Apr 2006.  
**Photographer:** Jeremy Rolfe



**Caption:** Stokes Valley. Apr 2006.  
**Photographer:** Jeremy Rolfe

## *Salicornia quinqueflora*

**Common Name(s):**

glasswort

**Current Threat Status (2012):**

Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2247](http://nzpcn.org.nz/flora_details.asp?ID=2247)



**Caption:** Cape Kidnappers

**Photographer:** John Sawyer



**Caption:** Meola Reef, Westmere,  
Auckland

**Photographer:** John Sawyer

## *Samolus repens* var. *repens*

### **Common Name(s):**

Sea primrose, shore pimpernel, water pimpernel

### **Current Threat Status (2012):**

Not Threatened

### **Threats:**

Not Threatened

### **References and further reading:**

Angiosperm Phylogeny Group 2009. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG III. *Botanical Journal of the Linnean Society* 161: 105-121

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1280](http://nzpcn.org.nz/flora_details.asp?ID=1280)



**Caption:** Cape Kidnappers

**Photographer:** John Sawyer



**Caption:** Hingaia, Auckland

**Photographer:** John Sawyer



## *Scleranthus biflorus*

**Common Name(s):**

Canberra grass

**Current Threat Status (2012):**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1291](http://nzpcn.org.nz/flora_details.asp?ID=1291)



**Caption:** Rotorua. Nov 2006.

**Photographer:** Ross Beever



**Caption:** Rotorua. Nov 2006.

**Photographer:** Ross Beever



## *Selliera radicans*

### Common Name(s):

Selliera, remuremu, half-star, bonking grass

### Current Threat Status (2012):

Not Threatened

### Distribution:

Endemic. New Zealand: Three Kings, North, South, Stewart and Chatham Islands.

### Habitat:

Coastal to alpine. In permanently to seasonally damp, open sites and depressions such as in sand swales, on cliff tops and on talus slopes below these, in coastal turf, in the marginal turf of lake and ponds, in salt pans. Mostly coastal but also recorded from well inland in the South Island and parts of the Central North Island (such as along the shores of Lake Taupo)

### Features\*:

Perennial, ± succulent creeping herb forming matted patches up to 1 m or more in diameter. Stems and branches, 1-4 mm diameter, white or yellowish, procumbent (rarely with tips ascendant) held near at or just below substrate surface, widely spreading, rooting at nodes yellowish. Leaves, 1-4 borne in a fascicles along stem, alternate, appressed to ground or ascending, coriaceous, (± succulent (fleshy)), dark green to yellow-green, glabrous, glossy; petioles 4-40 mm long, slender flattened; lamina 3-50 × 1-10 mm, very variable ranging from orbicular, rhomboid through narrowly spatulate, obovate-spatulate, linear-spatulate to linear, base attenuate to truncate, apex obtuse, subacute to acute. Inflorescences single, arising in leaf axils, borne on stout fleshy, bracteate peduncles 4-45 mm, bracts 1.0-2.6 × 0.7-1.3 mm, broadly to narrowly lanceolate, falcate, green, erect; pedicels 1-24 mm long; bracts 0.8-1.0 × 0.6-0.9 mm, subulate-attenuate. Flowers 1-2. Calyx persistent, calyx lobes 1.2-1.6 × 0.7-1.2 mm, linear to narrow-triangular, green, distally flushed red, apex subacute to acute; corolla 4-11 × 8-16 mm; petals 5 fused in proximal part, inner surface white to pale blue, outer white, pinkish-white to pale red; petal segments 3-8 × 1.5-2.4 mm, lanceolate to narrow-oblong, falcate, acute to acuminate. Ovary 1.4-1.9 mm, green, glabrous. Style purple-red, stigma glabrous, orange brown. Stamens 3, orange-brown. Fruit 3.0-6.1 × 2.1-10.0 mm, obovoid to ovoid, truncate, green. Seeds 1.0-1.8 mm long, broadly ovate, broadly elliptic to almost circular, biconvex, pale orange yellow to pale brown, winged, wing 0.1-0.3 mm wide, margin irregular, wrinkled, translucent.

### Flowering:

August - April

### Fruiting:

October - June

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 28 June 2012. Description from herbarium material and fresh plants except for the seed description which is modified from Webb & Simpson (2001). Common name 'half-star' added by C C Ogle 24 Oct 2019

### References and further reading:

de Lange, P.J.; Rolfe, J.R. 2010: New Zealand Indigenous Vascular Plant Checklist. Wellington, New Zealand Plant Conservation Network. 164pp.

Duguid, F. 1985. *Selliera radicans* with regular corolla. *Wellington Botanical Society Bulletin*, 42: 84

Webb, C.J.; Simpson, M.J.A. 2001: Seeds of New Zealand gymnosperms and dicotyledons. Christchurch, The Caxton Press. 428 p.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2255](http://nzpcn.org.nz/flora_details.asp?ID=2255)



**Caption:** Tiwai Peninsula, Southland

**Photographer:** Jesse Bythell



**Caption:** Long Point, Catlins

**Photographer:** John Barkla



## *Senecio bipinnatisectus*

### **Common Name(s):**

Australian fireweed

### **Current Threat Status (2018):**

At Risk - Declining

### **Habitat:**

Disturbed sites - tracks, forest edges, dunes, clay or gravel road edges. Long-regarded as adventive from Australia, it is now regarded as another successful trans-Tasman coloniser - as with *Senecio esleri*, *S. hispidulus*, *S. minimus*, *S. biserratus*, *S. diaschides* etc.

### **References and further reading:**

de Lange, P.J.; Rolfe, J.R.; Barkla, J.W.; Courtney, S.P.; Champion, P.D.; Perrie, L.R.; Beadel, S.M.; Ford, K.A.; Breitwieser, I.; Schonberger, I.; Hindmarsh-Walls, R.; Heenan, P.B.; Ladley, K. 2018: Conservation status of New Zealand indigenous vascular plants, 2017. New Zealand Threat Classification Series 22. Department of Conservation, Wellington. 82 p.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2680](http://nzpcn.org.nz/flora_details.asp?ID=2680)



**Caption:** Otaki Forks, Taraua Forest Park. 070423.

**Photographer:** Jeremy Rolfe



**Caption:** *Senecio bipinnatisectus*

**Photographer:** John Smith-Dodsworth



## *Senecio glomeratus* subsp. *glomeratus*

### Common Name(s):

fireweed

### Current Threat Status (2012):

Not Threatened

### Distribution:

Indigenous. Three Kings, North, South, Stewart and Chatham Islands.  
Present in Australia

### Habitat:

A weedy species of disturbed ground. Predominantly coastal and lowland but does extend to the subalpine zone. Tolerant of water logged and very dry habitats

### Features\*:

Annual to short-lived perennial herb to 2 m tall. Stems erect or ascending to erect, moderately coarse-hairy, becoming sparsely coarse-hairy and/or appressed cottony or nearly glabrous upwards. Mid stem leaves more or less evenly spaced and sized, 50-200 mm long, dark glaucous green to dark green, elliptic to narrow-elliptic, length:width (l:w) ratio 2-7, coarse-dentate to deeply lobate, rarely not dissected, semiamplexicaul; margin with scattered or frequent denticulations or teeth; both surfaces usually coarse-hairy but commonly coarse hairs sparse or absent above mid stem; lower surface green or purple, above mid stem appressed, woolly, cobwebby or more or less glabrous. Uppermost leaves narrow-elliptic, lanceolate or linear, l:w ratio 3-10; dentate or margin appearing entire due to rolling. Unit Inflorescences of many capitula; total number of capitula per stem often 50-300, over topping variable; mature lateral peduncles mostly 4-13 mm long. Calycular bracteoles of capitula 6-12, 1.0-3.0 mm long; peduncle and margin of bracteoles cobwebby to densely woolly at anthesis; involucre 3.0-6.0 x 1.5-2.5 mm; involucre bracts 12-14, glabrous or basally slightly cobwebby, apex erect; stereomes (on drying) gently to moderately convex, green, black at apex, sometimes with a purple zone 1 mm long immediately below tip, sometimes entirely purple. Florets 26-50, c.80% female, dark sulphur yellow; corolla-lobes deltoid, thickened apically; corolla of bisexual florets 3.5-6.5 mm long, 5-lobed; corolla-lobes of female florets 2-4, mostly 0.2-0.3 mm long; corolla-limb commonly deeper cleft on inner face. Cypsela narrow obloid to narrow-ellipsoid, sometimes slightly clavate, < 1/3 of involucre bract length (1.0-1.7 mm long), commonly all medium to dark red-brown, with papillose hairs in lines or narrow bands, l:w ratio of hairs 3; pappus usually > 5 mm long.

### Flowering:

Throughout the year but most plants peak in summer

### Fruiting:

Late summer to early winter but can present all year

### Threats:

Not Threatened

### \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (12 July 2005). Description based on Thompson (2004).

### References and further reading:

Thompson, I.R. 2004: Taxonomic studies of Australian Senecio (Asteraceae): 1. The disciform species. *Muelleria* 19: 101-214.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2312](http://nzpcn.org.nz/flora_details.asp?ID=2312)



**Caption:** *Senecio glomeratus* subsp. *glomeratus*

**Photographer:** John Smith-Dodsworth



**Caption:** *Senecio glomeratus* subsp. *glomeratus*

**Photographer:** John Smith-Dodsworth

# *Senecio hispidulus*

## Common Name(s):

fireweed

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. Three Kings, North, South, Stewart and Chatham Islands. Present in Australia.

## Habitat:

Coastal to montane. Widespread in disturbed habitats, especially in places recently burned or cleared of indigenous vegetation. Often found as a pasture weed, and can be common in urban areas. This species was regarded as scarce in the South Island during the 1800s. It is now common in the northern two-thirds of that island though still local in the west and it is still spreading south. It seems to be a recent arrival on the Chatham Islands.

## Features\*:

Annual to short-lived perennial herb up to 2 m tall. Stems erect, sparsely to moderately coarse-hairy or glabrous near base, if hairy reducing to more or less glabrous above mid stem. Mid stem leaves more or less evenly spaced and sized, 70-150 mm long, dark green to yellow green, sometimes tinged with red, narrow-ovate to lanceolate, rarely narrow-elliptic or linear, length:width (l:w) ratio 2.5-6, usually coarse-dentate to sub-pinnatisect; segments 2-5 per side predominantly in proximal two-thirds, large divisions usually in proximal half, slightly antrorse, deltoid to narrow-deltoid or occasionally sub-oblong; base auriculate with auricles divided, semiamplexicaul; margins with scattered denticulations or teeth; both surfaces coarse hairy; lower surface dark green or purple, often with weakly cobwebby hairs overlaying coarse-hairs. Uppermost leaves narrow-lanceolate or linear, l:w 5-15 (excluding auricles), lobate or appearing undissected due to rolling of lamina, often widest at auricles. Unit Inflorescence usually of many capitula; total number of capitula per stem often 50-100; overtopping marked; mature lateral peduncles mostly 7-14 mm long. Calycular bracteoles of capitula 3-6, 1.0-2.5 mm long; peduncle and margin of bracteoles more or less glabrous at anthesis; involucre 4.5-6.0 x 1.4-1.8 mm, involucre bracts 9-13, glabrous, with erect apex; stereomes of dried material moderately convex, green with minutely blackened tip. Florets 18-35, pale yellow to yellow, c.70% female; corolla-lobes deltoid, thickened apically; corolla of bisexual florets 4.5-6.0 mm long, 5-lobed; corolla-lobes of female florets 4, 0.3-0.5 mm long. Cypsela 1.5-2.2 mm long, red-brown, narrow-obloid with fine papillose hairs in lines or narrow bands, l:w ratio of hairs 3. Pappus 4-6 mm long.

## Flowering:

August - May

## Fruiting:

September - July

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (12 July 2005). Description based on Thompson (2004).

## References and further reading:

Thompson, I.R. 2004: Taxonomic studies of Australian *Senecio* (Asteraceae): 1. The disciform species. *Muelleria* 19: 101-214

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2257](http://nzpcn.org.nz/flora_details.asp?ID=2257)



**Caption:** Papanui Point

**Photographer:** Gillian Crowcroft



**Caption:** *Senecio hispidulus* showing basal and lower cauline leaves

**Photographer:** Jeremy Rolfe, Jul 2006, Eastbourne



## *Senecio lautus*

### **Common Name(s):**

Shore groundsel, variable groundsel

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Probably endemic. There is still some doubt as to whether *S. lautus* is in Australia or not

### **Threats:**

Not Threatened

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1296](http://nzpcn.org.nz/flora_details.asp?ID=1296)



**Caption:** Kapiti Island.

**Photographer:** Jeremy Rolfe



**Caption:** Te Whakaru, Chatham Island

**Photographer:** John Sawyer



# *Senecio minimus*

**Common Name(s):**

fireweed

**Current Threat Status (2012):**

Not Threatened

**Distribution:**

Indigenous. Three Kings, North, South, Stewart and Chatham Islands. Present in Australia.

**Habitat:**

A weedy species of disturbed ground. Predominantly coastal to montane but occasionally extending into subalpine habitats. Most commonly associated with forest margins.

**Features\*:**

Short-lived perennial to annual herb up to 2 m tall. Stems erect, green to dark purple, sparsely and minutely coarse-hairy below mid stem, becoming glabrous above. Mid stem leaves more or less evenly spaced and sized, 80-250 mm long, length:width ratio (l:w) 3-6, oblanceolate to narrow-elliptic, rarely broadly elliptic, not dissected often shallowly crenate; base auriculate, semi-amplexicaul; margin crowded-denticulate; upper surface dark green to greyish-green, glabrous or sparsely scabridulous; lower surface green or purple, sparsely cobbwebby. Upper most leaves narrowly elliptic, occasionally linear or narrow-lanceolate, l:w 3-10, often widest at auricles. Unit Inflorescences of many capitula; total number of capitula per stem often several hundred; overtopping absent or slight; mature lateral peduncles mostly 5-10 mm long. Capitula: calycular bracteoles 3-5, 1.0-2.0 mm long; peduncles mostly 5-10 mm long; peduncle and margin of bracteoles more or less glabrous to lightly cobbwebby at anthesis; involucre 4.0-6.5 x 1.0-1.5 mm, involucre bracts 7-10, glabrous; stereomes (in dried material) more or less flat, green with black tips. Florets 12-25, c. 80% female; corolla lobes triangular, thickened apically; corolla of bisexual florets 4.5-6.0 mm long, 4-5-lobed; corolla lobes of female florets 3-4, 0.2-0.3 mm long. Cypselae 1.6-2.5 mm long, narrow obloid, sometimes slightly angular, dull brown or dark red-brown, somewhat lustrous with papillose hairs in lines. Pappus 5-6 mm long.

**Flowering:**

Throughout the year but peaking in summer

**Fruiting:**

Throughout the year but most common in late summer to early autumn

**Threats:**

Not Threatened

**\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange 28 July 2007. Description by P.J. de Lange based on Webb et al. (1988) and observations obtained from fresh plants and herbarium specimens.

**References and further reading:**

de Lange, P.J.; Rolfe, J.R. 2010: New Zealand Indigenous Vascular Plant Checklist. Wellington, New Zealand Plant Conservation Network. 164pp.

Drury, D.G. 1974: Illustrated and annotated key to the erectitoid senecios in New Zealand (Senecioneae-Compositae) with a description of *Senecio diaschides*. N.Z. Journal of Botany 12(4): 513-540.

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: Flora of New Zealand Vol. IV. DSIR, Christchurch.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2258](http://nzpcn.org.nz/flora_details.asp?ID=2258)



**Caption:** A specimen of the northern race of *S. minimus*. Waipu. Nov 2010.

**Photographer:** Peter de Lange



**Caption:** *Senecio minimus*

**Photographer:** John Smith-Dodsworth

# *Senecio quadridentatus*

## Common Name(s):

cotton fireweed, white fireweed, pahokoraka

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. Three Kings, North, South, Stewart and Chatham Islands.  
Present in Australia

## Habitat:

Throughout from coastal to subalpine habitats. Always in recently disturbed ground

## Features\*:

Short-lived, usually much branched, perennial herb up to 1 m tall. Stems erect, moderately to densely covered in appressed-cottony hairs. Mid stem leaves more or less evenly spaced and sized., linear to narrow linear, 80-220 mm long, length:width ratio (l:w) 15-40 (or 7-10 if lobes present), mostly entire, rarely dissected or lobed, sometimes coarsely dentate to lobate; segments remote 1-3 per side and mainly in proximal half, spreading, triangular, base attenuate or occasionally with small entire auricles, not amplexicaul; margin entire or with frequent minute denticulations, appearing entire due to revolute margin; upper surface hairs appressed-cobwebby becoming glabrescent; lower surface green or purple-green, moderately to densely woolly. Upper stem leaves similar; auricles more frequent. Unit Inflorescence usually of many capitula; total number of capitula per stem often 50-200; overtopping variable; mature lateral peduncles mostly 5-25 mm long. Calycular bracteoles of capitula 4-8, 1.0-3.0 mm long peduncle and margin of bracteoles cobwebby to woolly at anthesis, or glabrate; involucre 6.0-10.0 x 1.2-2.0 mm; involucral bracts 8-14, basally cobwebby or glabrate, with apex erect; stereomes (in dried material) more or less flat, green or partially purple, sometimes minutely black-tipped or purple in a zone 1 mm long below tip. Florets 18-50, c. 80% female; corolla-lobes triangular, not or hardly thickened apically; corolla of bisexual florets 6-9 mm long, 4-lobed; corolla-lobes of female florets 3, 0.1 mm long. Cypsela 2.2-3.5 mm long, subcylindric, narrow to and constricted below apex, usually with 2-3 rows of hairs in narrow grooves between broad ribs, sometimes glabrous.

## Flowering:

October - March

## Fruiting:

December - May

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (12 July 2005). Description based on Thompson (2004).

## References and further reading:

Thompson, I.R. 2004: Taxonomic studies of Australian *Senecio* (Asteraceae): 1. The disciform species. *Muelleria* 19: 101-214.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2259](http://nzpcn.org.nz/flora_details.asp?ID=2259)



**Caption:** Cape Palliser

**Photographer:** Peter de Lange



**Caption:** Bannockburn sluicings

**Photographer:** John Barkla



## *Senecio vulgaris*

**Common Name(s):**

groundsel

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2669](http://nzpcn.org.nz/flora_details.asp?ID=2669)



**Caption:** *Senecio vulgaris*

**Photographer:** Peter de Lange



**Caption:** Feilding. Sep 2007.

**Photographer:** Colin Ogle



# *Sicyos australis*

## Common Name(s):

ambush vine

## Current Threat Status (2012):

Non Resident Native - Coloniser

## Distribution:

Indigenous. New Zealand: North Island (Northland, Auckland, Waikato and Bay of Plenty). Also Australia and formerly Norfolk and Lord Howe Islands.

## Habitat:

Coastal forest or lowland forest, often in scrub or amongst bracken fern.

## Features\*:

Herbaceous climber; stems annual, up to 10m long, 5-mm diameter, sparsely hirsute with simple multicellular hairs and glandular hairs, glabrescent. Tendrils 3–5-branched. Leaves: petiole 10–65 mm long, scaberulous; lamina ovate or broadly ovate in outline, 35–195 × 45–200mm, cordate with the basal sinus broad, the lobes not overlapping, acuminate, shallowly to deeply palmately 5- or 7-lobed, the lobes broadly triangular, acute or acuminate, margins dentate with apiculate teeth, sparsely scaberulous adaxially and abaxially with simple hairs, more densely and coarsely along veins. Male inflorescence an 8–19-flowered raceme 25–155 mm long; peduncle 15–125 mm long, sparsely scaberulous; rhachis glandular hairy. Male flowers: pedicels 3–11 mm long; hypanthium broadly campanulate, 2.4–2.7 mm diameter; calyx lobes linear, 0.4–0.7 mm long; corolla rotate, 4.5–7.8 mm diameter, mostly glabrous abaxially, the lobe apices puberulous, glabrous adaxially, white, 5-lobed, the lobes broadly triangular–ovate, obtuse; 2.0–2.6 mm long; disc c.1.2 mm in diameter; staminal column 1.5–1.8 mm long; staminal head 1.7–2.2 mm diameter. Female inflorescence an 8–11-flowered head; peduncle 8–33 mm long. Female flowers: subsessile; ovary ovate, attenuate, c.3 mm long, 1.4 mm diameter, minutely and densely echinate with barbed aculei; hypanthium above the constriction broadly campanulate, c.1.5 mm in diameter, minutely glandular hairy surrounding the disc; calyx lobes linear, 0.4–0.7 mm long; corolla 2.5–3.5 mm diameter, mostly glabrous abaxially, the lobe apices puberulous, glabrous adaxially, white, 5-lobed, the lobes triangular–ovate, obtuse, c.1.6mm long; disc c.1 mm in diameter; style c.1.4mm long; stigma 2-lobed, the lobes c.0.3mm long, recurved. Fruit ovate, rarely fusiform, 6.4–9.5 × 2.8–4.0 mm, apically attenuate, the surface ± glabrous or scabridulous with short hairs, echinate; aculei dense, 1.6–3.6 mm long, retrorsely barbed. Seeds ellipsoidal, 4.0–5.5 × 2.8–3.4 mm brown.

## Flowering:

In suitable conditions flowers are produced throughout the year.

## Fruiting:

In suitable conditions fruits are produced throughout the year.

## Threats:

Previously listed under the tag name *S. aff. australis* (b) (AK 289786; Mangere Stonefields) by de Lange et al. (2009) as a "Coloniser" now that the exact identity of *Sicyos australis* has been clarified (Telford et al. 2012) this status is still appropriate. It appears that *Sicyos australis* has recently established in New Zealand, presumably (or at least initially) by natural means. It is now locally distributed over a large part of mainly eastern northern New Zealand and it is actively spreading from these areas into farmland, plantation forestry and urban wasteland. Although it is susceptible to cucumber, watermelon and zucchini mosaic virus, it seems less so than the endemic *S. mawhai* and it is secure at most known sites.

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 4 January 2004. Description based on Telford et al.

## References and further reading:

Cameron, E.K. 1991. Mangere a small forest remnant and *Sicyos australis*. *Auckland Botanical Society Journal*, 46: 83–84

de Lange, P.J.; Norton, D.A.; Courtney, S.P.; Heenan, P.B.; Barkla, J.W.; Cameron, E.K.; Hitchmough, R.; Townsend, A.J. 2009: Threatened and uncommon plants of New Zealand (2008 revision). *New Zealand Journal of Botany* 47: 61–96.

Delmiglio, C.; Pearson, M.N. 2006: Effects and incidence of cucumber mosaic virus, watermelon mosaic virus and zucchini yellow mosaic virus in New Zealand's only native cucurbit, *Sicyos australis*. *Australasian Plant Pathology* 35: 29–35.

Telford, I.R.H.; Sebastian, P.; de Lange, P.J.; Bruhl, J.J.; Renner, S.S. 2012: Morphological and molecular data reveal three rather than one species of *Sicyos* (Cucurbitaceae) in Australia, New Zealand, and the islands of the South West Pacific. *Australian Systematic Botany* 25: 188–201.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=40](http://nzpcn.org.nz/flora_details.asp?ID=40)



**Caption:** Otuataua Stonefields, Manukau. Apr 2012.

**Photographer:** Peter de Lange



**Caption:** Fruit. Otuataua Stonefields, Manukau. Apr 2012.

**Photographer:** Peter de Lange

## *Silene coronaria*

### **Common Name(s):**

rose campion

### **Current Threat Status (2009):**

Exotic

### **Features:**

A clump forming perennial. The whole plant is densely covered in long woolly silvery hairs. Flowering stems erect 30 - 100cm tall. Lower leaves are loosely tufted and oblanceolate in shape tapering to long stalk; 10-25cm long by 2-4 cm wide. Purplish pink or white, flowers are borne in panicles on branching grey stems between December and February.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2713](http://nzpcn.org.nz/flora_details.asp?ID=2713)



**Caption:** *Silene coronaria* (L.)  
Clairv.

**Photographer:** John Smith-Dodsworth



**Caption:** *Silene coronaria* (L.)  
Clairv.

**Photographer:** John Smith-Dodsworth

## *Silene gallica*

**Common Name(s):**

catchfly

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2759](http://nzpcn.org.nz/flora_details.asp?ID=2759)



**Caption:** Developing fruit.  
Whanganui. Nov 2011.

**Photographer:** Colin Ogle



**Caption:** Developing fruit.  
Whanganui. Nov 2011.

**Photographer:** Colin Ogle



## *Sisymbrium officinale*

**Common Name(s):**

hedge mustard

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2751](http://nzpcn.org.nz/flora_details.asp?ID=2751)



**Caption:** Rimutaka Rail Trail. Dec 2006.

**Photographer:** Jeremy Rolfe



**Caption:** Hutt Valley. Jan 2007.

**Photographer:** Jeremy Rolfe

## *Sisymbrium orientale*

**Common Name(s):**

oriental mustard

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2768](http://nzpcn.org.nz/flora_details.asp?ID=2768)



## *Solanum americanum*

### **Common Name(s):**

small-flowered nightshade

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. Kermadec, Three Kings, North, South and Chatham Islands. In the North Island locally common to about the Bay of Plenty and Taranaki scarce otherwise. In the South Island reported from Nelson, Marlborough, North Canterbury and Westland. Uncommon on the Chatham Islands. Abundant on northern offshore islands especially the Kermadec Islands. Present also in Australia, Africa, India, south-east Asia and the Pacific.

### **Habitat:**

Usually coastal but also found inland in open forested situations up to about 400 m a.s.l. Occasionally an urban weed. *S. americanum* is the typical *Solanum* of northern offshore islands where it grows in great abundance on the richly manured, frequently disturbed ground of petrel colonies, and may on occasion form dense thickets.

### **Features\*:**

Small, annual to perennial bright-green to purple-green herb up to 1 x 1 m but usually much less. All parts glabrous to glabrescent except on occasion on very young growth. Branches and branchlets usually unarmed though sometimes furnished on the flanges with sparse blunt-ended hooks. Petioles to 50 mm long. Cauline leaves 40-100 x 15-55 mm, usually bright green rarely dark green, ovate, ovate-oblong to lanceolate-ovate, entire or distally coarsely toothed to lobulate, sometimes sinuate; base cuneate, broad-cuneate or attenuate, rarely cordate to truncate; apex more or less acute, sometimes acuminate. Flowers in few-flowered umbels. Peduncles 20 mm long, slender; pedicels up to 5 mm long, more or less pendent, markedly deflexing at fruiting. Calyx < 2 mm long, accrescent; lobes very narrowly elliptic to ovate, reflexed at fruiting. Corolla 5-8 mm diameter, stellate, white, pale mauve, glabrous; lobes triangular. Anthers 1.0-1.5 mm long, yellow. Fruit a berry 5-8 mm diameter, globular, glossy black to purple-black, stone cells present, often copious. Seeds 1.0-2.5 mm long, semi-glossy buff to pale orange-yellow or dark yellow, obovate to broadly obovate, sometimes circular, asymmetric, strongly compressed.

### **Flowering:**

October - April

### **Fruiting:**

November - June

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact Sheet prepared for the NZPCN by P.J. de Lange 12 May 2006. Description by P.J. de Lange with some elements based on Allan (1961) and Webb et al. (1988).

### **References and further reading:**

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Government Printer, Wellington.

Manoko, M.L.K.; van den Berg, R.G.; Feron, R.M.C.; van der Weerden, G.M.; Mariani, C. 2007: AFLP markers support separation of *Solanum nodiflorum* from *Solanum americanum* sensu stricto (Solanaceae). *Plant Systematics and Evolution* 267: 1-11.

Webb CJ, Sykes WR, Garnock-Jones PJ 1988. Flora of New Zealand. Vol. IV. Botany Division, DSIR, Christchurch.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2262](http://nzpcn.org.nz/flora_details.asp?ID=2262)



**Caption:** Hutt River Trail, north of Stokes Valley.

**Photographer:** Jeremy Rolfe



**Caption:** Umbel of flowers; forest edge, Bushy Park, Whanganui

**Photographer:** Colin Ogle



## *Solanum aviculare* var. *aviculare*

### Common Name(s):

poroporo

### Current Threat Status (2012):

At Risk - Declining

### Distribution:

Indigenous. Kermadec, North, South and Chatham Islands. In the South Island south to about Banks Peninsula and Westland. Also present on Norfolk (Extinct), Lord Howe (Extinct) and eastern Australia and New Guinea. Naturalised in at least China and Russia, probably elsewhere.

### Habitat:

Coastal to lowland (0-400 m a.s.l.). Usually in open shrubland, in and around sea bird nesting grounds, seal haul outs, or along forest margins. Sometimes an urban weed.

### Features\*:

Small, softly woody shrub up to 3 x 2 m. Branches sparse to many, suberect to spreading, initially dark green, purple-green to reddish-brown, maturing with fine grey, chartaceous bark. Leaves alternate with decurrent, fleshy petioles up to 30 mm long; lamina fleshy-membranous to almost coriaceous, 40-400 x 10-15(-20) mm, dark green, purple-green or rarely yellow-green, narrowly lanceolate to elliptic, entire, or deeply 1-3(-4)-lobed to pinnatifid; lobes/pinnae broadly lanceolate. Flowers axillary in 1-3 few to many-flowered cymes. Calyx lobes short, broad, spreading. Corolla broadly campanulate to rotate, up to 40 mm diameter; tube up to 10 mm long, funnelform, widely flaring at mouth, lobes 10-15 mm, lanceolate; white, lavender, or dark blue, in all cases usually fading to white after anthesis. Filaments up to 5 mm long. Anthers 3-6 mm long, oblong, spreading, yellow, opening by apical slits. Berry 15-25 mm long, broadly ovoid to ellipsoid, maturing yellow or orange, fleshy, pendent; stone cells sparse, inconspicuous. Seeds 1.3-2 mm long, dull to semi-glossy, orange-brown, purple-brown or dark purple brown, obovate to circular or transversely elliptic, often asymmetric, compressed.

### Flowering:

Throughout the year

### Fruiting:

Throughout the year

### Threats:

It has been observed that var. *aviculare* is becoming less common in the northern North Island though why is not clear. A full nationwide conservation assessment is needed to clarify its exact status.

### \*Attribution:

Fact Sheet prepared for the NZPCN by P.J. de Lange 12 May 2006. Description by P.J. de Lange with some elements based on Allan (1961) and Webb et al. (1988).

### References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Government Printer, Wellington.

Webb CJ, Sykes WR, Garnock-Jones PJ 1988. Flora of New Zealand. Vol. IV. Botany Division, DSIR, Christchurch.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2263](http://nzpcn.org.nz/flora_details.asp?ID=2263)



**Caption:** Close up of *Solanum aviculare* var. *aviculare* flowers showing acute corolla lobes

**Photographer:** Peter de Lange, 9 Dec 2006, Mangaonua Gully, Hamilton.



**Caption:** *Solanum aviculare* var. *aviculare* in flower

**Photographer:** Peter de Lange, 9 Dec 2006, Mangaonua Gully, Hamilton.

## *Solanum lycopersicum*

**Common Name(s):**

tomato

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2775](http://nzpcn.org.nz/flora_details.asp?ID=2775)



**Caption:** fruit (in cultivation)

**Photographer:** Jesse Bythell



**Caption:** Weed dominant on  
derelict property. Dec 2006.

**Photographer:** Peter de Lange

## *Solanum nigrum*

**Common Name(s):**

black nightshade

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2714](http://nzpcn.org.nz/flora_details.asp?ID=2714)



**Caption:** Meola Reef, Westmere, Auckland

**Photographer:** John Sawyer



**Caption:** Meola Reef, Westmere, Auckland

**Photographer:** John Sawyer



## *Sonchus asper*

**Common Name(s):**

prickly sow thistle

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2781](http://nzpcn.org.nz/flora_details.asp?ID=2781)



**Caption:** *Sonchus asper*

**Photographer:** John Sawyer



**Caption:** *Sonchus asper*

**Photographer:** John Sawyer

# *Sonchus kirkii*

## Common Name(s):

Puha, shore puha, New Zealand sow thistle

## Current Threat Status (2012):

At Risk - Declining

## Distribution:

Endemic. Three Kings, North, South, Stewart and Chatham Islands.

## Habitat:

Coastal. Usually on cliff faces in or around damp seepages where it often grows with the blue green alga *Nostoc* and fern *Blechnum blechnoides*. This species has a distinct preference for base rich rocks such as basalt, calcareous mudstones, siltstones, limestone or apatite-rich greywacke faces. On some offshore islands this species extends up into coastal scrub and herbfield. It occasionally grows on stabilised sand dunes. Indications are that this species once occupied a wider range of habitats but has retreated to those less suited to other faster growing introduced weeds.

## Features:

Biennial to perennial herb (50-)150-600(-1000) mm tall. Taproot stout and swollen above. all parts exuding white latex when ruptured. Stem erect, simple or branched, finely grooved and ribbed, glabrous, hollow. Leaves thick, dull glaucous, lanceolate to narrowly oblong or linear oblanceolate (30-)80-200(-550) x (10-)30-60(-150) mm, margins dentate. Rosette and lower stem leaves pinnatifid to c.1/2 way to midrib; lobes broadly triangular, spreading or deflexed. Upper leaves not lobed, narrowly triangular to linear, or narrowly oblanceolate. Inflorescence cymose to umbellate. Capitula few to many. Involucre 10-15 mm, turbinate to cylindrical, bracts imbricate, recurved at fruiting. Florets yellow. Achenes elliptic, brown, strongly flattened, (3-)4 x 1-1.8 mm, 3-ribbed on each face, winged, wings and ribs smooth. Pappus hairs, fine, white.

## Flowering:

August - April

## Fruiting:

September - June

## Threats:

Appears to be declining over most of its range but especially in the North Island. The main threat seems to be from competition by faster growing weed species. Specifically there is some evidence that suggests it may be outcompeted by the introduced sowthistles *Sonchus asper* and *S. oleraceus* which grow faster, and thus can more quickly colonise the habitats preferred by *S. kirkii*. The species has also declined markedly along the south Wellington coast. Here it was once very common up until the mid 1980s subsequently it has disappeared from many of its former haunts, partly as a result of weed invasion and quarrying for rock, but it has also vanished from apparently stable, mainly indigenous habitats. The exact reason(s) for this loss are as yet unclear.

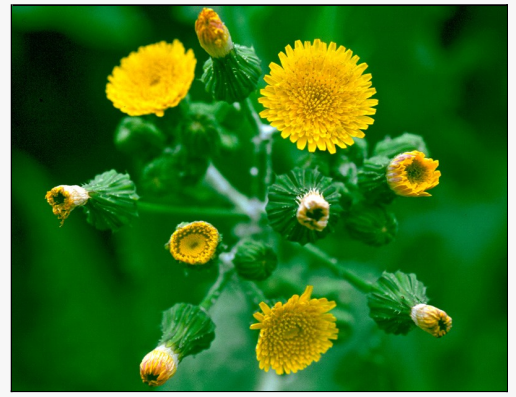
## References and further reading:

Cameron, E.K. 2000. Native sow thistle *Sonchus kirkii* rediscovered in the Auckland region. *Auckland Botanical Society Journal*, 55, 21-24.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=205](http://nzpcn.org.nz/flora_details.asp?ID=205)



**Caption:** In cult. ex Awhitu.

**Photographer:** John Braggins



**Caption:** Ex cult. Kariotahi

**Photographer:** Gillian Crowcroft

## *Sonchus oleraceus*

**Common Name(s):**

sow thistle, sowthistle

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2799](http://nzpcn.org.nz/flora_details.asp?ID=2799)



**Caption:** L–R: *Sonchus kirkii*, *S. asper*, *S. oleraceus*, *S. kirkii*. Kai-iwi sea cliff. Aug 2010.

**Photographer:** Colin Ogle



**Caption:** *Sonchus oleraceus*

**Photographer:** John Smith-Dodsworth



## *Spergularia rubra*

**Common Name(s):**

sand spurrey

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2810](http://nzpcn.org.nz/flora_details.asp?ID=2810)



**Caption:** *Spergularia rubra*

**Photographer:** John Barkla



**Caption:** Pisa Flats, Central Otago

**Photographer:** John Barkla

# *Spergularia tasmanica*

## Common Name(s):

New Zealand sea spurrey, native sea spurrey

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. New Zealand (North, South and Stewart Islands) and Australia (Western Australia, South Australia, New South Wales, Victoria and Tasmania)

## Habitat:

Coastal (rarely inland in lowland saline areas). A locally common, often sparsely distributed species of mudflats (especially the upper *Sarcocornia* dominated reaches of estuaries), also on consolidated sand, cliff faces and rubble slopes.

## Features\*:

Perennial with thick, woody rootstock. Branches erect to ± decumbent from base. Leaves 10-60(-80) × 1-2 mm, yellow-green to ± green or reddish green, flattened, mucronate to shortly caudate, glabrous to sparsely glandular-ciliate. Stipules (3-)4-6(-7) mm long, acute to acuminate, sometimes furcate, shortly connate in the inflorescence. Inflorescence lax, densely invested in glandular hairs (0.1-)0.15-0.25(-0.5) mm long. Pedicels much longer than sepals. Sepals 3.0-3.5(-5.0) mm (mostly 4-6 mm long in fruit), ovate-lanceolate; glaucescent, occasionally with dark purple spots at base. Petals c.4 mm long, pink or mauve soon fading to white flushed pink or white. Stamens 5-10. Capsules 6-9 mm long (up to 2 mm longer than sepals), ovoid. Seeds 0.7-0.9(-1.1) mm long, dark grey-brown to jet black, pyriform to orbicular, bluntly to prominently colliculate-papillose, usually all scariously winged (rarely all wingless or some wingless in same capsule), the wing margin centre to erose-denticulate.

## Flowering:

July - June

## Fruiting:

July - June

## Threats:

Not Threatened

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (Updated 8 May 2011). Description adapted from Adams et al. (2008).

## References and further reading:

Adams, L.G.; West, J.G.; Cowley, K.J. 2008: Revision of *Spergularia* (Caryophyllaceae) in Australia. Australian Systematic Botany 21: 251-270. Flora of Australia

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2265](http://nzpcn.org.nz/flora_details.asp?ID=2265)



**Caption:** *Spergularia tasmanica*

**Photographer:** John Barkla



**Caption:** Motumorirau,  
Coromandel. November

**Photographer:** John Smith-  
Dodsworth

## *Sporobolus africanus*

**Common Name(s):**

rat's tail

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2717](http://nzpcn.org.nz/flora_details.asp?ID=2717)



**Caption:** *Sporobolus africanus*  
**Photographer:** John Smith-Dodsworth



**Caption:** *Sporobolus africanus*  
**Photographer:** John Smith-Dodsworth



## *Stellaria parviflora*

**Common Name(s):**

New Zealand chickweed

**Current Threat Status (2012):**

Not Threatened

**Threats:**

Not Threatened

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2267](http://nzpcn.org.nz/flora_details.asp?ID=2267)



**Caption:** Makarora, Otago

**Photographer:** Jesse Bythell



**Caption:** Motumorirau

**Photographer:** John Smith-Dodsworth

# *Stenotaphrum secundatum*

## Common Name(s):

buffalo grass

## Current Threat Status (2009):

Exotic

## Habitat:

Terrestrial. Light demanding (West, 1996). On Raoul this grass is found on coastal areas and occasionally young plants are found along tracks through the forest and even in the wet forest (West, 1996). Smothers coastal areas (Cameron 1996).

## Features:

Dense, mat-forming, coarse perennial grass. Stolons stout, long, usually reddish, occ with thin rhizomes. Leaves alternate, 40-100 x 4-12 mm, dull greyish to bluish green, flattened strap-like, tip hooded which splits when flattened, blades folded at base, ligule a tiny fringe, auricles missing. Sheath large, broad, with fine green and white stripes, usually has reddish tinge, with 3-4 mm hairs at blade junction. Seedhead rigid, flattened, brittle spike; seeds usually aligned to one side.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2818](http://nzpcn.org.nz/flora_details.asp?ID=2818)



**Caption:** Castlepoint Scenic Reserve

**Photographer:** John Sawyer



**Caption:** Castlepoint Scenic Reserve

**Photographer:** John Sawyer



# *Streblus banksii*

## Common Name(s):

Large-leaved milk tree, turepo

## Current Threat Status (2012):

At Risk - Relict

## Distribution:

Endemic. New Zealand: North and South Islands. In the North Island mainly easterly from about Kaitaia to East Cape, Waikato and northern Hawkes Bay, including islands of the Hauraki Gulf, thence somewhat disjunct reappearing in the Horowhenua to Wellington and the western side of the Wairarapa. Confined to the northern South Island where populations are known from the Marlborough Sounds (mainly islands), Abel Tasman National Park, and also the eastern Golden Bay.

## Habitat:

Coastal and lowland forests (0-200 m a.s.l.), preferring deep, fertile soils, large trees are often found on alluvial terraces. On offshore islands it seems more able to tolerate drier conditions and skeletal soils and may at times be found on steep cliff faces, rock ledges, or as stunted shrubs on cobble/boulder beaches.

## Features\*:

Dioecious, robust tree or large shrub (depending on growing conditions) up to 12 m tall, usually with a broad canopy crown; trunk up to 0.8 m d.b.h., bark dark brown. Branches ascending at first then widely spreading; branchlets somewhat flexuous, wiry and pliant, initially puberulent and very lenticellate, later glabrate. Leaves of juvenile plants variable 20-60 x 10-30 mm, dark green above, paler beneath, elliptic-oblong, margins finely to deeply crenate, usually deeply lobed, pandurate, sinus obtuse; petioles up to 8 mm long. Leaves of adults 35-85 x 20-35 mm, dark green to yellow green, paler beneath, ovate to broadly ovate, ovate-elliptic, obtuse to subacute, margins crenate (very rarely lobed), petioles stout up to 10 mm long. Inflorescences axillary or terminal, spicate, solitary, paired or in threes; staminate up to 30 mm long, densely flowered, flowers rather densely close-set, almost imbricating, grey-green, perianth 4-partite, segments obtuse to rounded; pistillate similar, up to 25 mm long, flowers widely spaced, distichously arranged. Fruits up to 65 mm diameter, drupaceous, broad-ovoid, fleshy, flesh red.

## Flowering:

August - October

## Fruiting:

October - April

## Threats:

It would appear that this species may once have been quite widespread. However, its current distribution is typically sparse and it is rarely common anywhere except on rodent-free offshore islands in the Hauraki Gulf and off the eastern Coromandel Peninsula. In mainland areas and on rodent infested islands plants are damaged by possum and goat browsing, and also by rodents which avidly eat the fruit, seed and emerging seedlings. In remnants being dioecious sex imbalance can be an issue. Successful island rodent eradication's have allowed this species to reestablish itself. It certainly responds rapidly to rodent removal.

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange January 2005. Description adapted from Allan (1961).

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Government Printer, Wellington.

Mitcalfe, B., Horne, C. 2002. Large-leaved milk tree, ewekuri, in the Wellington Region. Wellington Botanical Society Bulletin, 48: 41-43

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=324](http://nzpcn.org.nz/flora_details.asp?ID=324)



**Caption:** Photo by Bec Stanley



**Caption:** Photo by Bec Stanley



# *Symphiotrichum subulatum*

## **Common Name(s):**

Bushy starwort, sea aster

## **Current Threat Status (2009):**

Exotic

## **Distribution:**

Common in the North Island, also established in northern South Island.

## **Habitat:**

Wetland margins and coastal places, also in drier habitats including roadsides, wasteland and open grassland.

## **Features\*:**

Tap-rooted annual or short-lived perennial herb, glabrous or rarely with a few hairs on upper stem; stems erect, terete, sparingly branched below, 20-200 -(300) cm tall, rarely stems resprouting and somewhat woody after flowering. Mid cauline lvs lanceolate to linear, apetiolate and cuneate, acute, crenulate or remotely serrulate, 35-150 × 3-10-(20) mm; lowermost lvs mostly petiolate, elliptic, cuneate, obtuse; uppermost lvs linear. Infl. a many-headed diffuse panicle. Capitula 2-5 mm diam. Involucral bracts very unequal; inner bracts narrow-oblong to subulate, acute to slightly acuminate, green toward apex and along midrib, purplish at apex and margins, 5-8 mm long; outer bracts not wholly herbaceous, c. 2 mm long. Ray florets numerous; ligules white to pale purple, c. 1-2 mm long. Achenes subcylindric to ellipsoid, compressed, 4-5-ribbed, 1.5-2.2 mm long, with sparse antrorse hairs.

## **Flowering:**

Year-round

## **Fruiting:**

Summer to winter

## **\*Attribution:**

Factsheet prepared by Paul Champion and Deborah Hofstra (NIWA). Features description from Webb et al. (1988).

## **References and further reading:**

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. (1988). Flora of New Zealand Volume 4: Naturalised pteridophytes, gymnosperms, dicotyledons. Botany Division, DSIR, Christchurch.

Popay et al (2010). An illustrated guide to common weeds of New Zealand, third edition. NZ Plant Protection Society Inc, 416pp.

Johnson PN, Brooke PA (1989). Wetland plants in New Zealand. DSIR Field Guide, DSIR Publishing, Wellington. 319pp.

## **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=6764](http://nzpcn.org.nz/flora_details.asp?ID=6764)



**Caption:** Koitiata Reserve. Mar 2013.

**Photographer:** Colin Ogle



**Caption:** *Symphiotrichum subulatum*

**Photographer:** John Smith-Dodsworth

# *Symphytum officinale*

**Common Name(s):**

comfrey

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2719](http://nzpcn.org.nz/flora_details.asp?ID=2719)

# *Syzygium smithii*

**Common Name(s):**

lilly pilly, monkey apple

**Current Threat Status (2009):**

Exotic

**Habitat:**

Terrestrial.

**Features:**

Tree (6-15 m high in cultivation). Lvs very aromatic when crushed; petiole usually c. 5mm long. Lamina 4-12-(15) x 2-5-(8) cm, ovate or elliptic-ovate, coriaceous, glossy above, dotted with glands below; veins parallel and prominent below; base cuneate or narrow-cuneate; apex obtusely cuspidate or acuminate. Fls shortly pedicellate. Hypanthium (including pseudopedicel) 3-5 mm long; calyx lobes 4, deciduous. Petals 4, c. 2mm long, forming a small calyptrum, whitish. Stamens to c.3mm long whitish. Fr. subglobose to broad-oblong or obovoid, often slightly flattened, usually 1-1.7-(3) cm diam., pinkish mauve or white, with apical cavity. Seed large. (Webb et. al. 1988).

**Flowering:**

October, November, December, January

**References and further reading:**

Gardner, R. 2009. Monkey-apples: the fruit and seed of two *Syzygium* spp. (Myrtaceae). *Auckland Botanical Society Journal*, 64(1): 75-76

[Syzygium smithii - Wikipedia](#)

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2437](http://nzpcn.org.nz/flora_details.asp?ID=2437)



**Caption:** Thorndon, Wellington  
**Photographer:** Clayson Howell,  
Department of Conservation  
(Crown copyright)



**Caption:** Coromandel  
**Photographer:** John Smith-  
Dodsworth



# *Tetragonia implexicoma*

## Common Name(s):

native spinach

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. New Zealand: Kermadec Islands (Herald Islets, Raoul, Macauley Islands), Three Kings, North, South and Chatham Islands. Also Australia, Norfolk and Lord Howe Islands

## Habitat:

Coastal to montane. Mostly found in coastal areas occupying a variety of habitats from cobble and sand beaches through coastal forest and shrubland, also found in exposed windshorn vegetation on cliffs and rock stacks. Occasionally found growing well inland, sometimes in farmland where it grows in barberry (*Berberis* spp.) hedges or on limestone and calcareous sandstone outcrops in otherwise dense forest.

## Features\*:

Prostrate or scrambling subshrub forming straggling to dense leafy patches up to 4 m long. Stems long trailing, terete, initially somewhat succulent, and often coloured red or pink, maturing dark green to brown-black and becoming woody with age. Leaves alternate, often clustered, sometimes widely spaced along stems, fleshy, papillose; petiole 3-15(-20) mm long; lamina 20-50(-80) × (8-)10-30(-46) mm, ovate-rhomboid to lanceolate, to linear-lanceolate, adaxially dark green, green to almost glaucescent, abaxially paler, sometimes flushed pink. Flowers solitary; pedicels slender, 5-30 mm long. Perianth lobes 4, (1.8-)2.8-3.0(-3.6) mm long, oblong, abaxially papillose-hairy, adaxially finely papillose, yellow. Stamens 12-20. Ovary semi-inferior; locules and styles 2(-3). Fruit 5-8 mm long, succulent, pink to dark red, subglobose.

## Flowering:

September - June

## Fruiting:

September - July

## Threats:

Not Threatened. A widespread and common species throughout most of coastal New Zealand.

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 24 October 2011. Description by P.J. de Lange.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2269](http://nzpcn.org.nz/flora_details.asp?ID=2269)



**Caption:** Awhitu Peninsula, Auckland region

**Photographer:** John Sawyer



**Caption:** North Otago, April

**Photographer:** John Barkla

# *Thelymitra longifolia*

## Common Name(s):

White Sun Orchid

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. Three Kings, North, South, Stewart, Chatham and Auckland Islands. Also on Norfolk Island.

## Habitat:

Coastal to subalpine (up to 1200 m a.s.l.). Occupying a wide range of habitats from open ultramafic talus to dense forest. However, it is most common in shrublands. This species is extremely variable and it is likely that following taxonomic revision, a number of forms, some with distinct ecologies, may be formally segregated.

## Features\*:

Terrestrial, tuberous, glabrous, spring to summer-green perennial herb, either solitary or in dense colonies of 4-20 plants arising through vegetative extension. Plant at flower up to 1 m tall (usually much less). Leaf solitary, erect, suberect or trailing the ground, very fleshy to subcoriaceous, deeply to weakly channelled and prominently ribbed longitudinally, 50-380 x 10-40 mm, green, dark green, reddish-green, reddish brown or yellow-green, lanceolate to linear-lanceolate, base closely sheathing, margins, surface and apex often disfigured by black spots and sometimes by prominent dark orange-brown rust pustules. Flowering stem stiffly erect, rather wiry, green, reddish green to brownish green. Bracts 1-2(-3), foliaceous, closely-sheathing, fleshy, of similar colour to stem and leaf. Raceme bearing (1-)5(-20) scented or unscented flowers. Flowers 8-18 mm diameter, externally red-green to dark green, internally white or very pale pink, segments spreading, widely spreading or scarcely opening, dorsal sepal slightly broader than laterals. Petals and labellum alike, narrowly ovate, subacute. Column up to 8 mm long, erect, basally brown or white grading to dark brown to almost black toward apex; column arms terete, mostly bent inwards such that they are lying more or less under post-anther lobe; cilia abundant, floccose (like cotton) or coarsely ciliate, white or cream, short and crowded in globose masses; post anther lobe overtopping anther, dark and smooth above middle, and usually yellowish on the semi-circular cucullate apex.

## Flowering:

September - February

## Fruiting:

October - April

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007. Description subsequently published in de Lange et al. (2007) and Rolfe & de Lange (2010).

## References and further reading:

de Lange, P.; Rolfe, J. St George, I. Sawyer J. 2007: Wild orchids of the lower North Island. Department of Conservation, Wellington. 194pp.

Rolfe, J.R.; de Lange, P.J. 2010: Illustrated guide to New Zealand sun orchids, *Thelymitra* (Orchidaceae). Jeremy Rolfe, Wellington.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1316](http://nzpcn.org.nz/flora_details.asp?ID=1316)



**Caption:** *Thelymitra longifolia*  
**Photographer:** DoC



**Caption:** *Thelymitra longifolia*  
**Photographer:** DoC

## *Trifolium dubium*

**Common Name(s):**

suckling clover

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2846](http://nzpcn.org.nz/flora_details.asp?ID=2846)



**Caption:** *Trifolium dubium*

**Photographer:** John Smith-Dodsworth



**Caption:** *Trifolium dubium*

**Photographer:** John Smith-Dodsworth



## *Trifolium glomeratum*

**Common Name(s):**

clustered clover

**Current Threat Status (2009):**

Exotic

**Features:**

Annual with decumbent stems, not rooting at nodes; leaves glabrous; leaflets with equal-length petiolules. Heads sessile, or almost so, when in flower and fruit. Corolla pink.

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2848](http://nzpcn.org.nz/flora_details.asp?ID=2848)



**Caption:** *Trifolium glomeratum*

**Photographer:** John Smith-Dodsworth



**Caption:** *Trifolium glomeratum*

**Photographer:** John Smith-Dodsworth

## *Trifolium pratense*

**Common Name(s):**

red clover

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2567](http://nzpcn.org.nz/flora_details.asp?ID=2567)



**Caption:** Stokes Valley. Dec 2005.

**Photographer:** Jeremy Rolfe



**Caption:** Trifolium pratense

**Photographer:** John Smith-Dodsworth

## *Trifolium repens*

**Common Name(s):**

white clover

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2568](http://nzpcn.org.nz/flora_details.asp?ID=2568)



**Caption:** Stokes Valley. Dec 2005.

**Photographer:** Jeremy Rolfe



**Caption:** *Trifolium repens*

**Photographer:** John Smith-Dodsworth



## *Trifolium subterraneum*

**Common Name(s):**

subclover

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2573](http://nzpcn.org.nz/flora_details.asp?ID=2573)



**Caption:** *Trifolium subterraneum*

**Photographer:** John Smith-Dodsworth



**Caption:** *Trifolium subterraneum*

**Photographer:** John Smith-Dodsworth

## *Tropaeolum majus*

### **Common Name(s):**

nasturtium

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Terrestrial. Disturbed sites, especially adjacent to gardens and dumps. Shrubland, herbfield, wetland, streamsides.

### **Features:**

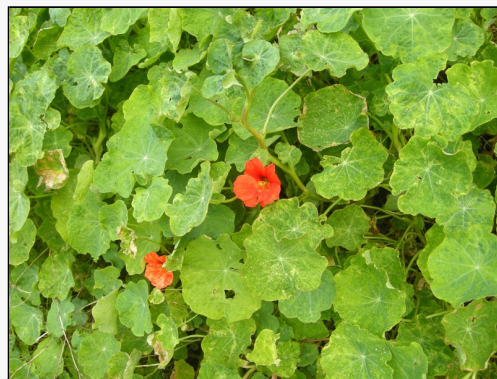
Scrambling or trailing, hairless, aromatic, annual or short-lived perennial, occ climbing to 2 m high. Stems succulent, to 10 m long, sap watery. Leaves distinctive, roundish shield-shaped, often slightly asymmetric, bluish below, up to 18-21 cm diam, with long stalk attached to back of leaf. Flowers solitary or 2-3 clustered, tubular, 4 cm diam, 5 irregular petals, scarlet orange or yellow, Oct- May. Seed capsule 3-sided, green, 10-14 mm long, succulent. Seeds caper-like.

### **Flowering:**

(January), October, November, December, January, February, March, April, May (December)

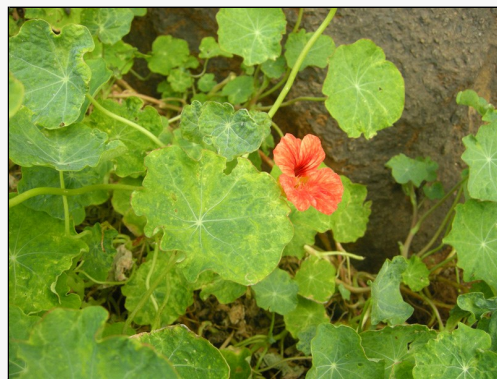
### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2580](http://nzpcn.org.nz/flora_details.asp?ID=2580)



**Caption:** Robinson Crusoe Island, Chile

**Photographer:** John Sawyer



**Caption:** Robinson Crusoe Island, Chile

**Photographer:** John Sawyer

## *Ulex europaeus*

### Common Name(s):

gorse

### Current Threat Status (2009):

Exotic

### Habitat:

Terrestrial. A plant of coastal and lowland habitats. The plant occurs in sites with low - low/moderate fertility. It is common in disturbed areas and can tolerate a wide range of conditions and soil types allowing it to establish in most areas. It is more abundant in waste places, riverbeds and poorer land than it is in developed and fertile land. It occurs in scrub and forest margin, shrubland, fernland and riverbed communities and grassland, shrubland, forest margins, coastal habitats and waste places. It occurs in rough foothills and less-intensively farmed areas and is often abundant in disturbed lowland and lower montane places. It is a plant that often aggressively invades rough pasture.

### Features:

Shrub up to 2m high; main stems erect or spreading, densely branched in younger parts but eventually bare at base; young twigs and spines somewhat glaucous; hairs usu. grey. Leaves of seedlings not spinous but with 3 hairy leaflets; spines branched; terminal and lateral spines rigid, deeply furrowed, 15~30mm long; secondary spines subtending lateral up to 12mm long. Flowers solitary; bracteoles acute to rounded, 1.5~3mm wide. Calyx greenish-yellow, about 2/3~3/4 length of corolla, with generally patent hairs; calyx teeth connivent. Corolla clear yellow or golden yellow, 13~20mm long; wings > keel. Pod villous, turning dark brown to black, 13~25mm long; seeds smooth and rounded, brown or greenish-brown, shiny, few per pod. (Webb et. al., 1988).

### Flowering:

(January) May, June, July, August, September, October, November (December)

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2610](http://nzpcn.org.nz/flora_details.asp?ID=2610)



**Caption:** Mt Frith, Rimuataka Hill

**Photographer:** John Sawyer



**Caption:** Mt Frith, Riutaka Hill

**Photographer:** John Sawyer



# *Veronica bollonsii*

## Common Name(s):

Hebe

## Current Threat Status (2012):

At Risk - Naturally Uncommon

## Distribution:

Endemic. North Island, outer Hauraki Gulf where it is mainly found on the Poor Knights and Hen & Chicken Island groups. Also local on rock stacks and headlands from Tutukaka north to about Mimiwhangata.

## Habitat:

Petrel scrub, low wind shorn shrubland and open coastal forest or on rock stacks. On the Poor Knights and Hen & Chicken Islands it is often in low wind shorn petrel scrub on exposed shore platforms or on slip scars or in wind damaged coastal forest. Frequent on rocky headlands and sometimes on rock stacks.

## Features\*:

Heavily branched, rather bushy shrub 2 x 3 m. Branches numerous, erect, old stems grey to grey-brown; branchlets green, minutely puberulent, glabrate; internodes 1-45 mm; leaf decurrencies evident. Leaf bud with sinus. Leaves erect to patent; lamina 14-130 x 8-42 mm, upper surface dark green, usually glossy, hairy along midrib, undersides light green dull or glossy oblanceolate, obovate to oblong or elliptic, coriaceous, more or less flat, apex shortly apiculate, subacute to obtuse, secondary venation evident in young leaves; margin narrowly cartilaginous, glabrous or minutely ciliate. Inflorescences lateral, unbranched racemes, 35-150 mm long, bearing 24-125 flowers; peduncle 6-30 mm, rachis 27-126 mm. Bracts alternate or lowermost pair opposite, then subopposite or alternate above, lanceolate to linear-lanceolate or ovate, acute. Flowers on pedicels 1-7 mm long. Calyx 2.5-5.5 mm; lobes lanceolate, acute, rarely sparsely hairy on the outside. Corolla tube 3-5 x 1.9-2.5 mm, funnellform, hairy inside and often outside (near where lobes diverge); lobes equalling or longer than corolla tube, tinged very pale mauve at anthesis soon fading to white, lanceolate or narrowly elliptic, subacute, anterior lobe obtuse; patent to recurved. Stamen filaments 3.8-7 mm; anthers 2-2.7 mm, mauve or purple. Ovary 0.6-1.2 mm; style 5.5-8.5 mm. Capsules 2.5-5.5 x 1.8-4 mm, subacute. Seeds 1-1.7 x 0.9-1.3 mm, straw-yellow, broad-ellipsoid, more or less winged, flattened.

## Flowering:

September - February (often sporadic throughout the year)

## Fruiting:

Present throughout the year

## Threats:

A naturally uncommon, range restricted species virtually confined to offshore islands where it is under no obvious threats.

## \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 1 October 2006. Description based on Bayly & Kellow (2006).

## References and further reading:

Bayly, M.J.; Kellow, A.V. Hebes, identification, classification and biology. Wellington, Te Papa Press

Metcalf, L. 2006. Hebes - a guide to species, hybrids, and allied genera. Portland, Oregon, Timber Press.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1970](http://nzpcn.org.nz/flora_details.asp?ID=1970)



**Caption:** Hebe bollonsii shrub in flower

**Photographer:** Peter J. de Lange, December 1993, Aorangi Island, Poor Knights Islands



**Caption:** Hebe bollonsii - flowering specimen

**Photographer:** Peter de Lange, 11 Nov 2006, Ex Cult. ex Taranga (Hen) Island.



## *Veronica colensoi*

### **Common Name(s):**

Hebe

### **Current Threat Status (2012):**

At Risk - Naturally Uncommon

### **Distribution:**

Central North Island - in the upper catchments of the Moawhango, Mohaka, Rangitikei, Taruarau and Ngaruroro rivers.

### **Habitat:**

Grows on rock outcrops on bluffs, gorges and riverbanks.

### **Features\*:**

Openly branched, small bushy shrub or spreading low shrub to 0.4 (-0.75) m tall. Branches erect, old stems brown or grey; branchlets initially green, becoming brown, glabrous or, very sparsely puberulent, hairs bifarious; internodes (1.5-) 2-5 (-8) mm; leaf decurrencies evident. Leaf bud distinct, tetragonous in transverse section; sinus narrow and acute. Leaves decussate or subdistichous, erecto-patent; lamina obovate or elliptic (narrowly to broadly), coriaceous, shallowly m-shaped in transverse section (the margins being slightly revolute) or flat, (10-) 14-27 (-42) x (2-) 4.5-9 (-15.5) mm; apex subacute or obtuse; margin sometimes very narrowly cartilaginous, glabrous and minutely papillate (to the inside of outer cartilaginous portion), entire or shallowly toothed (may vary on one plant); upper surface glaucous (often less so than lower surface), with many stomata, glabrous or hairy along midrib; lower surface glaucous; petiole glabrous or hairy above. Inflorescences with (11-) 15-21 (-29) flowers, lateral and sometimes also terminal, tripartite and/or unbranched, only sometimes with more than three branches, (1,7-) 2.5-4.5 cm; peduncle 0.5-1.3 cm, glabrous (usually) or hairy; rachis (1.2-) 1.9-3.3 cm. Bracts alternate (lowermost pair may be subopposite or opposite), lanceolate or deltoid or oblong, acute or subacute, margins glabrous (usually) or hairy (very rarely, and only with a few cilia near base). Flowers hermaphrodite or female (on different plants). Pedicels longer than or equal to bracts, 0.5-2 (-3) mm. Calyx (1.5-) 2-2.5 (-3) mm, 4-5-lobed (5th lobe small, posterior), with anterior lobes free for most of their length or united to 1/3 - 2/3-way to apex; lobes deltoid or lanceolate, acute or subacute, margins glabrous (usually) or eglandular ciliate (only ever with sparse, short hairs). Corolla tube glabrous; tube of hermaphrodite flowers 1.8-2.3 x 1-1.5 mm, funnelform, shorter than (mostly) or equalling calyx; lobes white at anthesis, lanceolate or ovate, subacute or obtuse, patent to recurved, longer than corolla tube. Stamen filaments 2-3.5 mm; anthers yellow or buff or pink or mauve or violet, 1.2-1.9 mm. Ovary ovoid (sometimes very narrowly), 0.8-1.3 mm; ovule, 4-8 per locule; style 2.2-4.5 mm. Capsules subacute, (2.5-) 2.8-3.5 (-3.8) x 1.9-2.5 mm, loculicidal split extending 1/4-1/2-way to base. Seeds flattened, more or less ellipsoid-oblong, more or less smooth, pale brown (with orange component), 1.1-1.5 x 0.7-0.9 mm, micropylar rim 0.2-0.3 mm.

### **Flowering:**

(August-) September-November (-January)

### **Fruiting:**

December-April (-October)

### **Threats:**

Not Threatened

### **\*Attribution:**

Description adapted by M. Ward from Bayly & Kellow (2006).

### **References and further reading:**

Allan, H. H. 1961. Flora of New Zealand. Volume 1. Wellington: Government Printer.

Bayly, M.J., Kellow, A.V. 2006. An illustrated guide to New Zealand Hebes. Wellington, N.Z.: Te Papa press pg. 240.

Elder, N. L. 1939. The glaucous *Hebe* of the Inland Patea. *Veronica colensoi*, *V. hillii* and *V. darwiniana*. Transactions of the Royal Society of New Zealand 69: 373-7.

Elder, N. L. 1971. The glaucous hebe of the Inland Patea: a footnote. Wellington Botanical Society Bulletin 37:64.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=1975](http://nzpcn.org.nz/flora_details.asp?ID=1975)

## *Veronica persica*

### **Common Name(s):**

scrambling speedwell, Persian speedwell

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2614](http://nzpcn.org.nz/flora_details.asp?ID=2614)



**Caption:** *Veronica persica*  
**Photographer:** John Smith-Dodsworth



**Caption:** Hutt River. Apr 2006.  
**Photographer:** Jeremy Rolfe



## *Vicia hirsuta*

**Common Name(s):**

hairy vetch, tiny vetch

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2625](http://nzpcn.org.nz/flora_details.asp?ID=2625)



**Caption:** Unripe seed pods. Hutt Valley. Jan 2007.

**Photographer:** Jeremy Rolfe



**Caption:** Hutt River. Apr 2006.

**Photographer:** Jeremy Rolfe

## *Vicia sativa*

### **Common Name(s):**

vetch

### **Current Threat Status (2009):**

Exotic

### **Features:**

Slender to stout scrambling or tufted annual; leaflets in 4-8 pairs often alternate; flowers purple, sometimes white or pink; blackish or brownish/black pod 30-60mm long with 5-12 seeds.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2635](http://nzpcn.org.nz/flora_details.asp?ID=2635)



**Caption:** *Vicia sativa* pale-flowered form. Dec 2016.

**Photographer:** Jeremy Rolfe



**Caption:** *Vicia sativa* pale-flowered form. Dec 2016.

**Photographer:** Jeremy Rolfe

## *Viola odorata*

**Common Name(s):**

violet

**Current Threat Status (2009):**

Exotic

**For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2638](http://nzpcn.org.nz/flora_details.asp?ID=2638)



**Caption:** Viola odorata

**Photographer:** John Smith-Dodsworth



**Caption:** Viola odorata

**Photographer:** John Smith-Dodsworth



# *Vitex lucens*

## Common Name(s):

puriri

## Current Threat Status (2012):

Not Threatened

## Distribution:

Endemic. New Zealand: Three Kings Islands and North Island from Te Pahi to Taranaki, Mahia Peninsula and the northern Hawkes Bay. Puriri is, as a rule, scarce south of about Opotiki and Kawhia.

## Habitat:

In the northern part of its range Puriri is a common co-dominant with Taraire (*Beilschmiedia tarairi*) and karaka (*Corynocarpus laevigatus*) especially on rich fertile soils derived from basaltic and basaltic-andesitic igneous rocks. South of the northern Bay of Plenty and Raglan Harbours it is rarely found inland and is more commonly found in coastal forest where it co-habits with pohutukawa (*Metrosideros excelsa*) and karaka. Puriri is also an important forest tree on many of the smaller islands of the Hauraki Gulf, where it may at times be the canopy dominant.

## Features\*:

Tree up to c. 20 m. tall with a broad spreading canopy; trunk up to c.1.5 m. diameter; bark grey-brown, firm, flaking in small irregular-shaped shards. Branches stout, spreading; branchlets 4-angled, green. Leaves opposite, glabrous, coriaceous, compound, on petioles up to 110 mm long; Leaflets 3-4-5, somewhat undulose, adaxially dark green, glossy, abaxially lighter green, mat; basal one or pair of leaflets usually much smaller than the terminal 3, digitate; lamina of 3 main leaflets 50-140 × 30-60 mm; elliptic-oblong to obovate, abruptly acute to subacuminate, margin entire. Domatia (pit-type) present at axils of costa and main veins. Inflorescence in axillary, dichotomous, (4)-10-15-flowered panicles. Calyx cupular, minutely 5-toothed; corolla dull red, pink or white, pubescent, 2-lipped, c.25-35 mm long. Upper lip entire or bifid, lower deflexed, 3-lobed. Style slender, bifid, c.25 mm long. Drupe 20-26 mm diameter subglobose, bright red, pink or white.

## Flowering:

May - October

## Fruiting:

January - October

## Threats:

Not Threatened. However, in some parts of Northland puriri "die-back" has been observed (the exact causes of which are much debated). Puriri is at times heavily browsed by possums, to such an extent that trees can die.

## \*Attribution:

Factsheet prepared for NZPCN by P.J. de Lange 9 February 2011. Description adapted from Allan (1961).

## References and further reading:

Allan, H.H. 1961: Flora of New Zealand. Vol. I, Wellington, Government Printer.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1359](http://nzpcn.org.nz/flora_details.asp?ID=1359)



**Caption:** In cultivation.

**Photographer:** John Braggins



**Caption:** In cultivation.

**Photographer:** John Braggins

## *Vulpia bromoides*

### **Common Name(s):**

Vulpia hair grass, brome fescue, squirrel-tailed fescue

### **Current Threat Status (2009):**

Exotic

### **Features:**

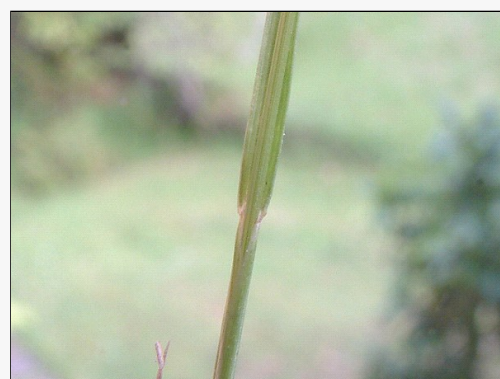
Annual grass. Short-lived slender tufts. Leaves dull green or brown-green.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2642](http://nzpcn.org.nz/flora_details.asp?ID=2642)



**Caption:** *Vulpia bromoides* (L.) Gray  
**Photographer:** John Smith-Dodsworth



**Caption:** *Vulpia bromoides* (L.) Gray  
**Photographer:** John Smith-Dodsworth

## *Vulpia myuros* var. *myuros*

### **Common Name(s):**

Vulpia hair grass, rat's tail fescue

### **Current Threat Status (2009):**

Exotic

### **Habitat:**

Waste land, shingly river flats, and rough pasture. Sea level to montane.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2643](http://nzpcn.org.nz/flora_details.asp?ID=2643)



**Caption:** *Vulpia myuros*  
**Photographer:** John Smith-Dodsworth



**Caption:** *Vulpia myuros*  
**Photographer:** John Smith-Dodsworth



# *Wahlenbergia violacea*

## Common Name(s):

Violet Harebell

## Current Threat Status (2012):

Not Threatened

## Distribution:

Indigenous. New Zealand: North and South Islands. Also Norfolk Island.

## Habitat:

Rarely coastal, mostly inland and lowland in scrub or bracken-clothed hills, or thin pasture, usually on clay; rural roadsides, burnt or eroded or disturbed places, often invasive in gardens.

## Features\*:

Radicant perennial herb. Stems 100-500 mm tall, slender, erect or decumbent. Leaves oblanceolate to lanceolate to linear, shallowly denticulate to subentire, dark green, the lowermost 2-5 pairs opposite in seedlings and young shoots. Pedicels slender, 30-150 mm long. Flowers self-fertile, glabrous, 5-18 mm diameter, 2-10 mm long, bright blue-violet, paler outside. Corolla shortly campanulate, bowl-shaped, often with tube distinctly angled at the sinus; tube 1.5 × 3.0 mm to 3 × 4 mm, ¼ to 1/3 length of corolla; corolla lobes ovate, acute, overlapping or touching in open flower, 3 × 2 mm to 7 × 4 mm. Style capitate, thickened, and blue at apex. Stigmas large, often white and fluffy. Calyx lobes glabrous 1.5 × 0.7 mm to 4 × 1 mm narrowly triangular, equal in length to corolla lobe. Capsule glabrous obconic, with protruding apical valves. Bud at anther dehiscence tinted blue. Seeds 0.5 mm long.

## Flowering:

November - April

## Fruiting:

December - April

## Threats:

Not Threatened

## \*Attribution:

Fact Sheet Prepared by P.J. de Lange 12 June 2007. Description adapted from Petterson (1997).

## References and further reading:

Petterson, J.A. 1997: Revision of the genus *Wahlenbergia* (Campanulaceae) in New Zealand. *New Zealand Journal of Botany* 35: 9-54.

## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=1367](http://nzpcn.org.nz/flora_details.asp?ID=1367)



**Caption:** Coromandel, February

**Photographer:** John Smith-Dodsworth



**Caption:** Rimutaka Rail Trail. Mar 2007.

**Photographer:** Jeremy Rolfe

## *Watsonia meriana* var. *bulbillifera*

### Common Name(s):

bulbil Watsonia

### Current Threat Status (2009):

Exotic

### Features:

Gladiolus-like, clump-forming, summer-green perennial to 2 m tall. Stout corms, 5-7 cm diam, with thick fibrous coat, multiply at ground level. Stem stiffly erect, 2 cm diam. Leaves sword-shaped, 2-5 x 30-60 cm, arising from base, folded, tough, fibrous, light green. Flowers curved, brick-red to salmon pink and 6-8cm long - numerous in a terminal spike. Petals 6, fused. Produces numerous brown cormils in clusters of up to 16 at nodes on the upper stem.

### For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2646](http://nzpcn.org.nz/flora_details.asp?ID=2646)



**Caption:** Watsonia bulbillifera

**Photographer:** John Smith-Dodsworth



**Caption:** Flowering Watsonia bulbillifera

**Photographer:** John Smith-Dodsworth

## *xAgropogon littoralis*

### **Current Threat Status (2009):**

Exotic

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2650](http://nzpcn.org.nz/flora_details.asp?ID=2650)



# *Zantedeschia aethiopica*

## Common Name(s):

arum lily

## Current Threat Status (2009):

Exotic

## Distribution:

Scattered throughout northern North Island, less common in southern North Island and northern South Island.

## Habitat:

Swampy areas, often under willows and damp pasture and waste land.

## Features\*:

Robust, evergreen, erect, clump-forming, to 1.5 m high, in close-set tufts from a tuberous rootstock with white fleshy roots; new tubers arising from shoots on the rootstock. Leaves large, leathery; laminae sagittate or ovate-cordate, 15-45 × 10-25 cm, dark green, the very fine veins somewhat lighter green, shining, entire, tip apiculate, margins undulate; petiole 40-100 cm long, lighter green, spongy, white on inside, purplish on outside. Scape ± = leaves, green, stout. Spathe ivory-white, bright green at base on outside, to 25 cm long, funnel-shaped, narrowed towards tip with a recurved apiculus to 2 cm long. Spadix ± ½ spathe, bright yellow; basal female zone, with staminodia interspersed, c. ¼-½ length of spadix, contiguous with upper male zone; sterile terminal appendage 0. Berries green or yellow, to ± 1 cm diam.

## Flowering:

October to December

## Fruiting:

Summer to autumn

## \*Attribution:

Prepared by Paul Champion and Deborah Hofstra (NIWA). Features description taken from Croasdale et al. (1994).

## References and further reading:

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Weeds of Australia ([http://keyserver.lucidcentral.org/weeds/data/03030800-0b07-490a-8d04-0605030c0f01/media/Html/Zantedeschia\\_aethiopica.htm](http://keyserver.lucidcentral.org/weeds/data/03030800-0b07-490a-8d04-0605030c0f01/media/Html/Zantedeschia_aethiopica.htm))

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## For more information, visit:

[http://nzpcn.org.nz/flora\\_details.asp?ID=2655](http://nzpcn.org.nz/flora_details.asp?ID=2655)



**Caption:** *Zantedeschia aethiopica*  
**Photographer:** John Smith-Dodsworth



**Caption:** *Zantedeschia aethiopica*  
**Photographer:** John Smith-Dodsworth



## *Zealandia pustulata* subsp. *pustulata*

### **Common Name(s):**

hounds tongue, kowaowao, paraharaha

### **Current Threat Status (2012):**

Not Threatened

### **Distribution:**

Indigenous. New Zealand: Kermadec Islands (Raoul, Meyers only), Three Kings, North, South, Stewart, Chatham, Auckland and Antipodes Islands. Also Australia. Abundant throughout main islands of New Zealand except for Central Otago.

### **Habitat:**

A common fern of coastal to montane area, growing either on the ground, over rocks or on tree trunks and branches. Although widespread and often found growing admixed with *Dendroconche scandens*, *Zealandia pustulata* is more drought tolerant and seems to prefer more open, drier habitats.

### **Features\*:**

Epiphytic or rupestral scrambling or climbing fern. Rhizomes long-creeping, 4-10(-12) mm diameter, fleshy-succulent, yellow-green to golden brown, sometimes glaucescent maturing greyish-brown to grey-black, growing tips densely invested in brown-black appressed ± ovate scales, these entire or minutely toothed near apex, scales shedding over time as rhizome matures leaving small scars. Fronds joined to rhizomes, very coriaceous; stipes 20-250(-340) mm long, pale brown to almost black, ± pliant when young becoming brittle with age; laminae adaxially glabrous (except for a few scales on midrib and costae), bright glossy green (yellow green in exposed sites), abaxially paler, in outline variable ranging from undivided (especially in young plants) narrowly elliptic, 70-250 × 10-30 mm to mostly pinnate, ovate, 60-450 × 40-300 mm; midrib and veins prominent, main lateral veins mostly prominent, usually with 2 or 3 series of major areoles between costa (midrib in simply fronds); hydathodes present on blind vein endings, visible mainly on upper surface; pinnae in 1-12 pairs, 30-170 × 5-40 mm, bluntly acute, margins smooth, weakly undulose to extremely so, bases adnate. Sori prominent, round (rarely elliptic), sunk into abaxial lamina causing a prominent bulge on the adaxial laminal surface, aligned in one row either side of costa, set back from pinna margins. Spores pale, bearing wart-like protuberances.

### **Flowering:**

Not applicable - spore producing

### **Fruiting:**

Not applicable - spore producing

### **Threats:**

Not Threatened

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange (13 January 2012). Description adapted from Brownsey & Smith-Dodsworth (2000) and Bostock & Spokes (1998).

### **References and further reading:**

Bostock, P.D.; Spokes, T.M. 1998: Polypodiaceae. Pp. 468-495. Flora of Australia 48. Australian Biological Resources Study, CSIRO Canberra

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### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=2201](http://nzpcn.org.nz/flora_details.asp?ID=2201)



**Caption:** *Microsorium pustulatum* subsp. *pustulatum* (Kowaowao)

**Photographer:** Wayne Bennett



**Caption:** *Microsorium pustulatum* subsp. *pustulatum* (Kowaowao)

**Photographer:** Wayne Bennett



## Definitions of botanical terms

A glossary has been provided below with definitions for many of the botanical terms used in the species descriptions.

### Glossary

Term	Definition
<b>Abaxial</b>	Facing away from the stem of a plant (especially denoting the lower surface of a leaf).
<b>Acerose</b>	Narrow with a sharp stiff point.
<b>Achene</b>	A simple, dry, one-seeded (one-celled) fruit
<b>Acicular</b>	Needle-shaped.
<b>Acidic</b>	Having a low pH, opposite of basic or alkaline.
<b>Acroscopic</b>	Pointing towards, or on the side of, the apex
<b>Acuminate</b>	Gradually tapered to a point. Sharply pointed.
<b>Acute</b>	Pointed or sharp, tapering to a point with straight sides.
<b>Adnate</b>	Fusion of unlike parts, e.g. stamens fused to petals.
<b>Adventive</b>	A plant that grows in the wild in New Zealand but which was introduced to the country by humans.
<b>Agglutinated</b>	Stuck together.
<b>Allelopath</b>	An organism that releases compounds that are toxic to other species.
<b>Allelopathy</b>	The release by an organism of compounds that are toxic to other species.
<b>Alternate</b>	Attached singly at each node but changing from one side of a stem to the other.
<b>Alveolate</b>	Honeycombed with ridged partitions.
<b>Amplexicaul</b>	clasping or surrounding the stem
<b>Anamorph</b>	Asexual fruiting stage, usually of an ascomycete fungus.
<b>Anastomosing</b>	Rejoining after branching, as in some leaf veins.
<b>Annual</b>	A plant that completes its complete life cycle within the space of a year
<b>Annual evergreen</b>	Plants that lose their over-wintering leaves rapidly in the first half of the growing season. Annual evergreens never present a leafless appearance, but are closer in a functional sense to a deciduous plant than they are to multi-annual evergreens.
<b>Annulus</b>	Line of thickened cells that governs the release of spores from a sporangium
<b>Anterior</b>	Towards the front.
<b>Anther</b>	The pollen-bearing portion of the stamen.
<b>Antheridium</b>	Male reproductive organ formed on the prothallus of a fern
<b>Anthesis</b>	When the flower is fully developed and functioning. The time of pollination or bloom.
<b>Apex</b>	Tip; the point furthest from the point of attachment.
<b>Apices</b>	Plural of apex. Tip, the point furthest from the point of attachment
<b>Apiculate</b>	Bearing a short slender and flexible point.
<b>Apiculus</b>	A small, slender point.
<b>Apomixis</b>	A form of reproduction whereby seed is formed without the usual mode of sexual fusion
<b>Appressed</b>	Pressed against another organ or surface.
<b>Aquatic</b>	Growing, or living in, or frequenting water. Applied to plants and animals and their habitats. Opposite of terrestrial (land living).
<b>Archegonium</b>	Female reproductive organ of a fern formed on the prothallus
<b>Arcuate</b>	Curved into an arch.
<b>Aril</b>	An often fleshy appendage on the outside of a seed.
<b>Artificial thinning</b>	Selectively removing vegetation to create gaps to facilitate natural invasion of native plants, or to plant later successional plants.
<b>Ascending</b>	Growing obliquely upward.
<b>Asexual</b>	Vegetative reproduction, lacking sexual involvement by sperm or egg cells
<b>Attenuate</b>	Narrowing gradually
<b>Auricle</b>	A small, ear-shaped appendage.
<b>Auriculate</b>	Bearing a small, ear-shaped appendage.
<b>Autogamous</b>	Self-fertilising flowers.
<b>Autotrophic</b>	Of or relating to organisms (as green plants) that can make complex organic nutritive compounds from simple inorganic sources by photosynthesis
<b>awn</b>	A stiff or bristle like projection often from the tip or back of an organ
<b>Axil</b>	The upper angle between the leaf and the stem.
<b>Axis</b>	The longitudinal supporting structure around which organs are borne, e.g., a stem bearing leaves.
<b>Barbellate</b>	Barbed, having or covered with protective barbs or quills or spines or thorns or setae
<b>Basal</b>	At the base.
<b>Basisopic</b>	Pointing towards the base
<b>Beak</b>	A prominent extension of an organ
<b>Bifid</b>	Deeply split into two lobes.
<b>Bifurcate</b>	Divided into two.





<b>Term</b>	<b>Definition</b>
<b>Biosecurity</b>	Preventing, eradicating, controlling and managing risks posed by pests and diseases.
<b>Biotic</b>	Pertaining to the living parts of the environment
<b>Bipinnate</b>	With each primary pinna divided to the midrib into a secondary pinna
<b>Biserrate</b>	Doubly serrate.
<b>Blade</b>	The flattened part of a leaf.
<b>Blunt</b>	Not pointed at the ends
<b>Bog</b>	A quagmire covered with specialised plants including sphagnum moss, grasses, sedges, rushes, sundews, umbrella ferns and other plants; has wet, spongy ground, a marsh-plant community on wet, very acid peat. Fed only by rainfall.
<b>Bottleneck</b>	A genetic term; refers to the fact that in smaller populations there could be lower genetic variability
<b>Brachyblasts</b>	Short shoots
<b>Bract</b>	A reduced leaf or leaf-like structure at the base of a flower.
<b>Bracteate</b>	Bearing bracts: leaves or leaf-like structure reduced at the base of a flower.
<b>Bracteolate</b>	With small bracts.
<b>Bracteole</b>	A small bract.
<b>Bracteoles</b>	Bracts directly below the flower
<b>Brevideciduous</b>	Brief (1 month or less) loss of most leaves from the canopy just before flowering or during flushing of a new cohort of leaves.
<b>Bryophyte</b>	Plant group including mosses, liverworts and hornworts
<b>Bryophytes</b>	Plant group including mosses, liverworts and hornworts
<b>Bulbil</b>	A bud produced vegetatively on the stem or frond that is capable of breaking off and growing into a new plant
<b>Bullate</b>	With rounded projections covering the surface as if blistered
<b>Caespitose</b>	Growing in dense tufts
<b>Calli</b>	Circular, warty, stalked thickenings commonly found on the lip (labellum) of the orchid (plural of callus).
<b>Callose</b>	Hardened or thickened.
<b>Callus</b>	Stalked thickening on the lip (labellum) of an orchid.
<b>Calyx</b>	The group of sepals, or outer floral leaves, of a flower
<b>Campanulate</b>	Bell-shaped.
<b>Canaliculate</b>	With longitudinal channels or grooves.
<b>Canopy</b>	The uppermost cover formed by the branches and leaves of trees or the spread of bushes, shrubs and ground covers.
<b>Canopy closure</b>	Stage where canopies of shrub and tree species meet.
<b>Canopy manipulation</b>	Selectively removing vegetation to create gaps to facilitate natural invasion of native plants, or to plant later successional plants.
<b>Capillary</b>	Hair-like
<b>Capitula</b>	Plural of capitulum: A dense head-like inflorescence of many flowers as occurs in most Asteraceae (daisies)
<b>Capitulum</b>	A dense head-like inflorescence of many flowers as occurs in most Asteraceae (daisies)
<b>Capsule</b>	A dry fruit formed from two or more fused carpels that splits open when ripe.
<b>Carbon sinks</b>	Carbon locked away, or sequestered e.g. by trees
<b>Carpel</b>	One unit of the female part of a flower that consists of a basal seed-bearing ovary joined to a receptive stigma by a stalk-like style.
<b>Cauda</b>	Tail-like appendage. (pl. caudae; adj. caudate)
<b>Caudex</b>	The axis of a woody plant, esp. a palm or tree fern, comprising the stem and root.
<b>Cauline</b>	Belonging to the stem, as in cauline leaves emerging from the stem.
<b>Cerise</b>	Bright or deep red.
<b>Chartaceous</b>	Having a papery texture.
<b>Chlorophyll</b>	The green pigment of plants.
<b>Chlorotic</b>	Lacking chlorophyll, therefore yellowish, suffering from chlorosis.
<b>Cilia</b>	Short small hair-like structures on a cell or microorganism
<b>Ciliate</b>	With small hairs (cilia).
<b>Ciliolate</b>	Diminutive of ciliate, i.e., having very small hairs
<b>Cladode</b>	Flattened stem with the function of a leaf
<b>Cladodes</b>	Usually flattened, photosynthetically active branches, these may be leaf-like (e.g., <i>Phyllocladus</i> ) or branch-like (e.g., <i>Carmichaelia</i> )
<b>Clavate</b>	Club-shaped, gradually widening towards apex.
<b>Cleft</b>	Having indentations that extend about halfway to the center, as in certain leaves.
<b>Cleistogamous</b>	Flowers that self-fertilise without opening.
<b>Coherent</b>	Sticking together of like parts.
<b>Column</b>	Stamen and stigmas fused to form a single organ.





<b>Term</b>	<b>Definition</b>
<b>Columnar</b>	Shaped like a column
<b>Composite</b>	many small flowers tightly packed together e.g., daisy flowers.
<b>Compound</b>	Composed of several similar parts (cf simple)
<b>Concave</b>	Curved inward.
<b>Concolorous</b>	Of the same colour.
<b>Conical</b>	Cone-shaped.
<b>Connate</b>	Fusion of like parts.
<b>Conspecific</b>	Individuals of the same species.
<b>Cordate</b>	Heart-shaped with the notch at the base.
<b>Coriaceous</b>	Leather-like; thick, tough, and somewhat rigid.
<b>Corolla</b>	The whorl of petals of a flower.
<b>Corymb</b>	Modified raceme where stalks of lower flowers are elongated to same level as the upper flowers.
<b>Cosmopolitan</b>	A species or other taxonomic group that is distributed widely throughout the world.
<b>Costa</b>	The midrib
<b>Crenate</b>	With rounded teeth (bluntly toothed) along the margin.
<b>Crisped</b>	Margin tightly wavy or crinkled, curled or wavy.
<b>Cristate</b>	With a crest.
<b>Crown</b>	The growing point of an upright rhizome or trunk. This usually produces a tuft or ring of fronds.
<b>Crura</b>	The two small projections at the mouth of a utricle in <i>Carex</i>
<b>Cucullate</b>	Hood-shaped.
<b>Culm</b>	The erect stem of a grass.
<b>Cuneate</b>	Wedge-shaped.
<b>Cupular</b>	Cup-shaped.
<b>Cuttings</b>	Stems and/or leaves taken from plants for propagation
<b>Cyathium</b>	A cup-like structure that surrounds the inflorescence in <i>Euphorbia</i>
<b>Cyme</b>	Inflorescence at the terminus of a branch and where new flowering branches emerge laterally below the flower.
<b>Cytorace</b>	Populations (or infraspecific taxa) that differ in chromosome number or chromosome morphology, e.g., <i>Nematoceras trilobum</i> agg. has two cytoraces, a diploid and a tetraploid (in which the chromosomes are doubled).
<b>Cytotype</b>	Populations (or infraspecific taxa) that differ in chromosome number or chromosome morphology, e.g., <i>Nematoceras trilobum</i> agg. has two cytotypes, a diploid and a tetraploid (in which the chromosomes are doubled).
<b>Deciduous</b>	Marked leaflessness in winter, and greater than 90% leaves lost by beginning of spring flush.
<b>Decrescent</b>	Diminishing.
<b>Decumbent</b>	With a prostrate or curved base and an erect or ascending tip.
<b>Decurrent</b>	Attached by a broadened base.
<b>Decurved</b>	Curved downward.
<b>Deflexed</b>	Bent abruptly downward.
<b>Dehiscence</b>	The time of opening at maturity to release the contents, e.g., a capsule releasing the seeds.
<b>Dehiscent</b>	Splitting open at maturity to release contents (of a fruit).
<b>Deltoid</b>	Shaped broadly like an equilateral triangle.
<b>Dentate</b>	Toothed along the margin with the teeth pointing outward, not forward.
<b>Denticles</b>	minute teeth
<b>Denticulate</b>	having a very finely toothed margin
<b>Dichotomous</b>	Divided into two equal branches.
<b>Digitiform</b>	Finger-like.
<b>Dioecious</b>	Having male and female flowers on separate plants of the same species.
<b>Diploid</b>	With two complete sets of chromosomes in each cell.
<b>Disarticulating</b>	Separating at a joint.
<b>Discoïd</b>	Disc-shaped.
<b>Disjunct</b>	A species or other taxonomic group that occupies areas that are widely separated and scattered and therefore have a discontinuous distribution.
<b>Distal</b>	Toward the apex, away from the point of attachment (cf. proximal).
<b>Distichous</b>	In two rows on opposite sides of the axis.
<b>Divaricating</b>	Branching at a very wide angle with stiff intertwined stems.
<b>Domatia</b>	small structures on the lower surface of a leaf in some woody dicotyledons, located in the axils of the primary veins and usually consisting of depressions partly enclosed by leaf tissue or hairs.





<b>Term</b>	<b>Definition</b>
<b>Dorsal</b>	Of the back or outer surface relative to the axis. (cf. ventral)
<b>Drupe</b>	A stone fruit, the seed enclosed in a bony covering (endocarp) which is surrounded by a + fleshy layer (mesocarp)
<b>Early successional species</b>	Plants which are able to colonise an open area after disturbance but which are often temporary and are replaced by taller plants in time and shaded out.
<b>Echinate</b>	having sharply pointed spines or bristles.
<b>Ecological district</b>	A characteristic landscape and biological community defined in the PNA (Protected Natural Area) programme.
<b>Ecological restoration</b>	Attempt to reinstate original (pre-disturbance) state of a habitat, plant community or ecosystem.
<b>Ecosourced</b>	Plants sourced from seed collected from similar naturally growing plants in the area of the planting site.
<b>Ecosourcing</b>	Using native plants grown from locally grown seeds. Eco-sourced plants help to preserve the ecological distinctiveness of an area, and ecosourced plants fare better and are adapted to survive in the local conditions.
<b>Eglandular</b>	Without glands.
<b>Elaiosome</b>	Fleshy, oil-rich structure attached to seed that attracts ants which act as dispersers.
<b>Ellipsoid</b>	Elliptic in long section and circular in cross-section.
<b>Elliptic</b>	Broadest at the middle
<b>Emarginate</b>	With a notch at the apex.
<b>Emarginated</b>	Having a shallow notch at the tip, as in some petals and leaves.
<b>Emergent</b>	In an aquatic sense - wetland herbs that are rooted in the substrate below water level, but carry leaves and stems above the water level e.g. rushes and raupo. Found on the shallow margins of lakes, ponds and waterways. In a forest sense - tree that is appearing above the surrounding canopy.
<b>Emergent marginals</b>	An aquatic plant having most of its structure above water. Other aquatic plants are submerged or floating.
<b>Endemic</b>	Unique or confined to a place or region, found naturally nowhere else.
<b>Endophyte</b>	An endosymbiont (usually a bacterium or fungus) that lives within a plant for at least part of its life without causing any apparent disease.
<b>Endophytes</b>	Endosymbionts (usually bacteria or fungi) that live within plants for at least part of their lives without causing any apparent disease.
<b>Endosperm</b>	The nutritive tissue of a seed, consisting of carbohydrates, proteins, and lipids.
<b>Enrichment planting</b>	Returning to a revegetation site and creating gaps, or filling existing gaps, with different plants of plants, usually later successional plants which may not have survived being planted in the first phases of the project.
<b>Ensiform</b>	Sword shaped
<b>Entire</b>	Smooth. Without teeth, notches or divisions.
<b>Entomophilous</b>	Pollinated by insects.
<b>Epicalyx</b>	Calyx-like structure outside, but close to, the true calyx.
<b>Epigeal</b>	Growing on or close to the ground or emerging from the ground after germination (often used for cotyledons).
<b>Epiphyte</b>	A plant that grows upon another plant but is not parasitic and does not draw nourishment from it.
<b>Epiphytic</b>	Growing upon another plant but not parasitic and not drawing nourishment it
<b>Erose</b>	Irregularly toothed, as if gnawed.
<b>Estuarine</b>	Pertaining to the meeting of freshwater and seawater wetlands.
<b>Ethnobotany</b>	The study of people's classification, management and use of plants.
<b>Eusporangia</b>	Sporangia that arise from groups of epidermal cells
<b>Evanescent</b>	Lasting a very short time or running a short distance.
<b>Ex situ</b>	Away from the place of natural occurrence.
<b>Ex-situ</b>	Maintenance of plants as live specimens or propagules in cultivation as insurance against the loss of wild populations and as source for material for translocation.
<b>Excurrent</b>	Having the axis prolonged to form an undivided main stem or trunk (as in conifers).
<b>Extravaginal</b>	Outside an enclosing sheath
<b>Falcate</b>	Hooked or curved like a sickle.
<b>Fastigate</b>	Branches erect and close to central axis.
<b>Fen</b>	A type of wet land that accumulates peat deposits. Fens are less acidic than bogs, deriving most of their water from groundwater rich in calcium and magnesium.
<b>Ferrugineous</b>	Rust-like (a colour term)
<b>Fertile frond</b>	Fronds that bear sporangia.
<b>Filamentous</b>	Resembling a filament.
<b>Filiform</b>	Thread like, resembling a filament.
<b>Filiramulate</b>	Branching at a very wide angle with stiff intertwined stems.
<b>Fimbriae</b>	Plural of fimbria: Fringe. A fimbria is composed of many fimbriae (individual hair-like structures).
<b>fimbriate</b>	With fringes.
<b>Flabellate</b>	Fan shaped.
<b>Flaccid</b>	Limp, not rigid, flabby.
<b>Flange</b>	A projecting rim.





<b>Term</b>	<b>Definition</b>
<b>Flexuose</b>	With curves or bends.
<b>Floccose</b>	Having tufts of soft woolly hairs
<b>Floret</b>	A small flower, usually one of a cluster - the head of a daisy for example.
<b>Foliaceous</b>	Leaf-like.
<b>Foliolate</b>	Having leaflets.
<b>Founder effect</b>	When a small number of plants (and therefore their genes) from a larger population are selected some genetic information is lost.
<b>Fronid</b>	A leaf, the complete leaf of a fern including the stipe and lamina
<b>Fulvous</b>	Orange-yellow.
<b>Funneliform</b>	Funnel-shaped.
<b>Fusiform</b>	Broadest near the middle and tapering toward both ends.
<b>Galea</b>	Helmet- or hood-shaped.
<b>Galeate</b>	Shaped like a helmet or hood.
<b>Gametophyte</b>	A plant that produces sperm and egg cells and in which sexual reproduction takes place - in ferns this is known as the prothallus
<b>Gene pool</b>	The mixture of all genes and gene variations of a group or population.
<b>Genetic diversity</b>	The variety of genes in a plants or populations.
<b>Genetic variation</b>	Differences displayed by individuals within a plant which may be favoured or eliminated by selection.
<b>geniculate</b>	abruptly bent
<b>Genus</b>	A taxonomic rank of closely related forms that is further subdivided in to species (plural = genera). In a scientific name (e.g., <i>Sicyos australis</i> ), the first word is the genus, the second the species.
<b>Gibbous</b>	Swollen or enlarged on one side, as in a gibbous moon.
<b>Glabrescent</b>	Lacking hair or a similar growth or tending to become hairless
<b>Glabrous</b>	Without or devoid of hairs, smooth.
<b>Gland</b>	A structure that secretes a sticky or oily substance.
<b>Glandular</b>	A structure that secretes a sticky or oily substance.
<b>Glaucous</b>	Covered with a fine, waxy, removable powder that imparts a white or bluish cast to the surface.
<b>Gley</b>	A soil prone to seasonal inundation.
<b>Globose</b>	Globe-shaped.
<b>Glume</b>	One of two bracts at the base of a grass spikelet.
<b>Groundwater</b>	Groundwater is the water beneath the surface that can be collected with wells, tunnels, or drainage galleries, or that flows naturally to the earth's surface via seeps or springs. Groundwater is the water that is pumped by wells and flows out through springs.
<b>Gymnosperm</b>	Plants in the class Gymnospermae that have seeds which are not enclosed in an ovary.
<b>Gynodioecious</b>	A species population containing plants that produce bisexual (perfect) flowers, and plants that produce only female (pistillate) flowers.
<b>Gynoeceum</b>	The female reproductive organs of a flower; the pistil or pistils considered as a group. Means literally "womans house" i.e., the overall structure that contains the female sex organs
<b>Hastate</b>	Spear like. Shaped like an arrowhead, but with basal lobes pointing outward rather than downward.
<b>Haustorium</b>	The absorbing organ of a parasite or hemiparasite
<b>Hemi-parasite</b>	Obtains water and nutrients from the roots of other plants but also manufactures food through photosynthesis.
<b>Hemi-parasitic</b>	Obtaining water and nutrients from the roots of other plants then manufacturing food through photosynthesis.
<b>Herbarium</b>	The place where collections of dried/pressed plants are kept.
<b>Hermaphrodite</b>	Having both male and female sexual characteristics and organs.
<b>Heteroblastic</b>	Exhibiting differences in leaf shapes or forms in juvenile and adult phases of the plant.
<b>Heteroblasty</b>	The state of being heteroblastic (i.e., exhibiting differences in leaf shapes or forms in juvenile and adult phases of the plant).
<b>Hirsute</b>	Hairy.
<b>Hyaline</b>	Membranous, thin and translucent.
<b>Hybrid</b>	An individual that is the offspring of a cross between two different varieties or species.
<b>Hybridise</b>	Breeding with a member of a different plant or type.
<b>Hydrophyte</b>	A plant species adapted to growing in or on water or in wet situations. Aquatic or semi-aquatic.
<b>Hymenium</b>	The fertile, spore-bearing layer of a fruitbody.
<b>Hypanthium</b>	A ring-like, cup-shaped, or tubular structure of a flower on which the sepals, petals, and stamens are borne.
<b>Imbricate</b>	Overlapping.
<b>imbricating</b>	Overlapping.
<b>Imparipinnate</b>	Odd-pinnate, a leaf shape; pinnate with a single leaflet at the apex.
<b>In-situ</b>	On site conservation relating to the maintenance of plants in the wild.
<b>Inbreeding</b>	Genetic similarity in offspring of closely related individuals.





<b>Term</b>	<b>Definition</b>
<b>Incoherent</b>	Not sticking together.
<b>Incursion</b>	Entrance of a pest into an area where it is not present
<b>Indumentum</b>	A covering of fine hairs (or sometimes scales)
<b>Indusia</b>	Plural of indusium, a membrane covering a sorus of a fern
<b>Indusium</b>	A thin tissue that covers the sorus in many ferns. Plural: indusia.
<b>Inflorescence</b>	The arrangement of flowers on the stem. A flower head.
<b>Infundibuliform</b>	Funnel-like.
<b>Interkeel</b>	The space between the keel and the leaf blade
<b>Internode</b>	The part of an axis between two nodes; the section of the stem between leaves.
<b>Internodes</b>	Part of a stem between two nodes.
<b>Intramarginal</b>	Within or near the margin.
<b>Involucral bracts</b>	The scales surrounding the flower head or capitula.
<b>Involucre</b>	A group of bracts surrounding a flower head.
<b>Involute</b>	With margins rolled inward toward the upper side.
<b>Irritable</b>	Responding to touch.
<b>Jugate</b>	Paired.
<b>Juvenile</b>	A plant of non-reproducing size.
<b>Keel</b>	A prominent or obvious longitudinal ridge (as in a boat).
<b>Labellar</b>	Pertaining to the labellum: a lip; in orchid flowers referring to the middle petal which usually differs in size, shape or ornamentation from the two lateral petals.
<b>Labellum</b>	A lip; in orchid flowers referring to the highly modified middle petal which usually differs in size, shape or ornamentation from the two lateral petals.
<b>Lacinia</b>	A jagged lobe.
<b>Laciniae</b>	Jagged lobes.
<b>Laciniate</b>	Cut into narrow, irregular lobes or segments.
<b>Lacustrine</b>	Of or having to do with a lake, of, relating to, or formed in lakes, growing or living in lakes.
<b>Lamina</b>	The expanded flattened portion or blade of a leaf, fern frond or petal.
<b>Lanceolate</b>	Lance-shaped; of a leaf several times longer than wide with greatest width about one third from the base, tapering gradually to apex and more rapidly to base
<b>Lateral</b>	On or at the side.
<b>Lax</b>	With parts open and spreading, not compact.
<b>Laxly</b>	With parts open and spreading, not compact
<b>Leaflet</b>	One section of a compound leaf.
<b>Lemma</b>	The lower of two bracts enclosing the flower in grasses.
<b>Lenticillate</b>	Bark that is covered in fine lenticles (breathing pores)
<b>Ligulate</b>	Strap-like, tongue-shaped
<b>Ligule</b>	The membrane between the leaf and the stem of a grass; the "petal" of a ray floret in a composite inflorescence
<b>Linear</b>	Long and narrow with more or less parallel sides.
<b>Littoral</b>	Occurring at the border of land and sea (or lake). On or pertaining to the shore. The shallow sunlit waters near the shore to the depth at which rooted plants stop growing.
<b>Lobe</b>	A recognisable, but not separated, rounded division or segment of a leaf or pinna. Used to describe ferns and leaves in <i>Cotula</i> and <i>Leptinella</i> .
<b>Lobed</b>	Part of a leaf (or other organ), often rounded, formed by incisions to about halfway to the midrib.
<b>Lobule</b>	A small lobe or sub-division of a lobe
<b>Lustrous</b>	Glossy, shiny.
<b>Lycophytes</b>	Seedless vascular plants that belong to the phylum Lycophyta (characterised by microphylls -primitive leaves found in ancient plants).
<b>Lyrate</b>	Pinnatifid or pinnatisect terminal lobe much larger than lower lobes.
<b>Maculate</b>	Blotched or spotted.
<b>Mangrove</b>	Coastal wetland dominated by Manawa or mangrove <i>Avicennia marina</i> var. <i>resifera</i> . Northern New Zealand only, salt marsh replaces it further south.
<b>Margin</b>	The edge or border of a leaf
<b>Marine</b>	Pertaining to the sea and saltwater systems.
<b>Marsh</b>	A tract of wet land principally inhabited by partially-submerged herbaceous vegetation. Has fewer woody plants than swamper habitats.
<b>Mealy</b>	Dry, powdery, crumbly.
<b>Median</b>	In the middle.
<b>Membranous</b>	Very thin, like a membrane.
<b>Mid-lobe</b>	The middle part into which a leaf is divided.
<b>Midrib</b>	The central or principal vein of a leaf or pinna of a fern.
<b>Mire</b>	Synonymous with any peat-accumulating wetland. Term covers bogs and peaty swamps, fens, carr, moor, muskeg and peatland. Term excludes marsh which is non-peat forming.





Term	Definition
<b>Molecular techniques</b>	Where proteins and genes are used to investigate plant relationships
<b>Monitoring</b>	Recording of quantitative data over time to document changes in condition or state of species or ecosystems.
<b>Monoecious</b>	Having male and female flowers on the same plant of the same species.
<b>Montane</b>	Land between 300 and 800 metres above sea level.
<b>Mucronate</b>	Tipped with a short, sharp, point.
<b>Mucronulate</b>	Having a very small mucro; diminutive of mucronate.
<b>Multi-annual evergreen</b>	Overlapping annual cohorts of leaves always present.
<b>Multifid</b>	Cleft into many lobes or segments
<b>Multiseptate</b>	With many septa.
<b>muricate</b>	Rough with short, hard points like the shell of Murex, a genus of tropical sea snails with elaborately pointed shells.
<b>Mycorrhiza</b>	A symbiotic relationship between a fungus and a plant.
<b>Mycorrhizal associations</b>	Symbiotic association between fungi and plant roots which assists plant health by allowing increased ability for uptake of nutrients and promote plant growth.
<b>Napiform</b>	A long swollen but tapering root – like a parsnip, or carrot.
<b>Native</b>	Naturally occurring in New Zealand (i.e., not introduced accidentally or deliberately by humans).
<b>naturalised</b>	Referring to plants that have escaped from cultivation (including gardens or forest plantations) and can now reproduce in the wild (without human assistance)
<b>Nectary</b>	Organ that produces nectar.
<b>Nerve</b>	Prominent vein or rib.
<b>Nerves</b>	Strands of conducting and usually strengthening tissue in a leaves or similar structures
<b>Net veins</b>	Veins that repeatedly divide and re-unite.
<b>Net venation</b>	Feather-like or hand-like venation on a leaf.
<b>Nival</b>	Growing at high altitudes. From Latin: nivalis, snowy etc. from nix, nivis, snow.
<b>Node</b>	The point at which leaves, branches or roots arise on a stem.
<b>Ob-</b>	Prefix meaning inverted, in reverse direction.
<b>Obcordate</b>	Heart shaped with the notch at the apex.
<b>Oblanceolate</b>	Tapering and widest towards the apex or inversely lanceolate.
<b>Oblique</b>	Slanting; of a leaf, larger on one side of the midrib than the other, in other words asymmetrical.
<b>Oblong</b>	Rectangular.
<b>Obovate</b>	Roughly elliptical or reverse egg shaped and widest near the apex (i.e., the terminal half broader than the basal half).
<b>Obtuse</b>	Blunt or rounded at the apex, with the sides meeting at an angle greater than 90°.
<b>Operculate</b>	With a small lid.
<b>Opposite</b>	A pair of organs attached at nodes in pairs on either side of a stem or axis.
<b>Orbicular</b>	Almost or approximately circular.
<b>Outbreeding depression</b>	A reduction in vigor of offspring from distant parents. It can occur when a locally adapted population is moved and mixed with plants adapted to different conditions.
<b>Outer canopy deciduous</b>	Marked reduction in leaf number in the outer canopy in exposed high light environments over winter.
<b>Oval</b>	Planar, shaped like a flattened circle, symmetrical about both the long and the short axis; about twice as long as broad, tapering equally both to the tip and the base. Synonymous with elliptical.
<b>Ovary</b>	Part of a flower containing the ovules and later the seeds.
<b>Ovate</b>	Egg-shaped and widest at base.
<b>Ovoid</b>	Oval; egg-shaped, with rounded base and apex.
<b>Pakihi</b>	A term which in its strict sense refers to open clears within forest dominated by low scrub and rushes. However, more usually used to refer natural and induced wetlands and their associated shrublands. A vernacular most frequently used in the West Coast for impoverished soils and their associated peats, left after forest has been cleared
<b>Palea</b>	The small upper bract enclosing the flower of a grass
<b>palea</b>	1. The upper of the two bracts that enclose each floret in a grass spikelet. 2. A small bract at the base of a disc floret in some plants of the composite family. 3. Scales on various parts of ferns (referred to as paleate or paleaceous). From the Latin word for 'chaff'.
<b>paleae</b>	Plural of palea, from the Latin word for 'chaff'. 1. The upper of the two bracts that enclose each floret in a grass spikelet. 2. A small bract at the base of a disc floret in some plants of the composite family. 3. Scales on various parts of ferns (referred to as paleate or paleaceous).
<b>Palmately</b>	Radiating from a point, as fingers radiating from the palm of a hand.
<b>Palmatifid</b>	Deeply divided into several lobes arising from more or less the same level.
<b>Palmatisect</b>	Intermediate between palmate and palmatifid, i.e. the segments are not fully separated at the base; often more or less digitate.
<b>Palustrine</b>	Pertaining to wet or marshy habitats. Term covers mires and marshes
<b>Pandurate</b>	Fiddle-shaped.
<b>Panicle</b>	Highly branched (multiple raceme).





Term	Definition
<b>Papilla</b>	A short rounded projection.
<b>Papillae</b>	A soft, fleshy projection, usually small and nipple-like.
<b>Papillate</b>	With short rounded projections.
<b>Papillose</b>	Warty, with short rounded projections or gland-dotted
<b>Parallel venation</b>	Veins are parallel along leaf.
<b>Parasite</b>	An organism that derives all its nourishment from its host.
<b>Patent</b>	Spreading or expanded, e.g., spreading petals.
<b>Peat</b>	A mass of partially carbonised plant tissue formed by partial decomposition in water of various plants and especially of mosses of the genus <i>Sphagnum</i> , widely found in many parts of the world, varying in consistency from a turf to a slime used as a fertiliser, as stable litter, as a fuel, and for making charcoal. Partially carbonized vegetable matter saturated with water; can be used as a fuel when dried. A type of soil deriving from dead organic material situated in a wet area, where the reduced amount of [oxygen available in the wet conditions results in the organic material not decomposing as much as it usually would do so in the presence of more oxygen. Used in growing media. Represents an important carbon sink – drainage of peat releases large amounts of carbon (CO <sub>2</sub> ) to the atmosphere.
<b>Pedicele</b>	The stalk of a single flower in an inflorescence or fruit (either in a cluster or existing singularly).
<b>Peduncle</b>	The stalk of a solitary flower or the main stalk of an inflorescence or flower cluster.
<b>Pedunculate</b>	Describing fruits, which are borne on a stalk (a peduncle).
<b>Pellucid</b>	Transparent.
<b>Peltate</b>	Shield-like, with the stalk attached well inside the margin
<b>Pendent</b>	Hanging down from its support
<b>Pendulous</b>	Hanging or drooping.
<b>Penicillate</b>	With a tuft of hairs at the end, like a brush.
<b>Perennial</b>	A plant lasting for three seasons or more
<b>Perianth</b>	A collective term for the calyx (sepals or tepals) and corolla (petals) of the flower, especially when these are indistinguishable
<b>Petal</b>	Part of flower inside the sepals; usually coloured.
<b>Petiolate</b>	Having a petiole.
<b>Petiole</b>	Leaf stalk.
<b>phloem</b>	The vascular tissue in land plants that is primarily responsible for the distribution of sugars and nutrients manufactured in a shoot.
<b>Photopoint</b>	A monitoring technique where repeat photos are taken of the same scene from the same point over a period of time in order to quantify changes.
<b>Pilose</b>	Bearing long, soft hairs.
<b>Pinna</b>	A segment of a divided lamina that is classified as primary, secondary or tertiary according to the degree of dissection of the lamina.
<b>Pinnae</b>	Divisions of a pinnate leaf
<b>Pinnate</b>	With leaflets arranged regularly in two rows on either side of a stalk as in a feather; the lamina on a fern is divided into separate pinnae
<b>Pinnatifid</b>	Pinnately lobed, cleft more than halfway to the midrib. Not cleft all the way to the rachis.
<b>Pinnatisect</b>	Pinnately divided almost to midrib but segments still confluent.
<b>Pioneer</b>	Plant species are hardy species that should be planted first to establish a good canopy cover that restricts weed growth and promotes natural regeneration. In natural ecosystems these are the first plants to arrive and grow on a site.
<b>Pistil</b>	The female reproductive organ of a flower, consisting of an ovary, style, and stigma.
<b>Pistillate</b>	A flower with one or more pistils, but no stamens.
<b>Plano-convex</b>	Flat on one side, convex on the other.
<b>Plumose</b>	Feathery.
<b>Podzol</b>	Infertile, acidic soil, strongly leached to form a whitish-grey subsoil underlain by a layer enriched in iron, aluminium and organic matter; usually under forest in a wet temperate climate.
<b>Pole</b>	A subcanopy size individual with a long thin trunk and foliage tuft of a potential canopy tree.
<b>Pollinia</b>	Compact masses of orchid pollen.
<b>Population enhancement</b>	Increasing a population for a specific biological purpose, e.g., when a species is already present in an area but extra individuals are added to address a sex imbalance.
<b>Porrect</b>	Extending forward.
<b>Procumbent</b>	Lying and flat along the ground but not rooting
<b>Propagate</b>	To reproduce a plant by sexual (i.e., from seed) or asexual (e.g., from cuttings) means.
<b>Prostrate</b>	A general term for lying flat along the ground. This includes procumbent (that is lying and flat along the ground but not rooting) and decumbent (with a prostrate or curved base and an erect or ascending tip).
<b>Provenance</b>	The place of origin (of a plant that is in cultivation).
<b>Proximal</b>	Toward the base or point of attachment (cf. distal).
<b>Pseudobulb</b>	Thickened surface stem; usually looking like a bulb.
<b>Pseudoterminal</b>	Falsely terminal – as in a bud which appears to occupy a terminal position but does not





Term	Definition
<b>Puberulent</b>	Minutely clad in short, soft hairs
<b>Pubescence</b>	Covering of soft, fine hairs
<b>Pubescent</b>	Covered in short, soft hairs.
<b>Pungent</b>	Ending in a stiff sharp point
<b>Pustule</b>	Small blister-like elevation.
<b>Quadrante</b>	Square, rectangular.
<b>Raceme</b>	An unbranched, elongated inflorescence with pedicellate flowers maturing from the bottom upward i.e., flowers attached to the main stem by short stalks.
<b>Rachis</b>	the axis of an inflorescence or of a compound leaf
<b>Ray</b>	An outer ring of strap-like florets in the head of Asteraceae (daisy) flowers.
<b>Re-introduction</b>	Translocating wild or cultivated individuals to sites where the taxon has been known to occur in the past, but from which it has disappeared.
<b>Recurved</b>	Curved backward.
<b>Reflexed</b>	Bent back on itself
<b>Reniform</b>	Kidney shaped.
<b>Repand</b>	With a slightly wavy margin.
<b>Replum</b>	The outer structure of a pod in which the valves have dehisced (persists after the opening of the fruit)
<b>Restiad</b>	Area dominated by rush-like plants (collectively known as restiads) of the family Restionaceae. Includes Chatham Island and North Island Sporodanthus and oioi (Apodasmia similis)
<b>Retrorse</b>	Pointing backward.
<b>Retuse</b>	A shallow notch at the rounded or blunt apex of a leaf.
<b>Rhizoid</b>	Any of various slender filaments that function as roots in mosses and ferns and fungi.
<b>Rhizomatous</b>	With underground creeping stems.
<b>Rhizome</b>	An underground stem (usually spreading horizontally or creeping) or short and erect.
<b>Rhombic</b>	Diamond-shaped.
<b>Rhomboid</b>	Diamond shaped, nearly rhombic.
<b>Riparian</b>	Relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or a tidewater.
<b>Riparian margin</b>	Refers to the edges of streams, rivers, lakes or other waterways.
<b>Riparian plants</b>	Refers to plants found growing near the edges of streams, rivers or other waterways.
<b>Riparian zone</b>	A strip of land next to streams, rivers, and lakes where there is a transition from terrestrial (land vegetation) to aquatic (water) vegetation. Also known as "berm".
<b>Riverine</b>	Pertaining to rivers, streams and such like flowing water systems.
<b>Rootstock</b>	A short, erect, underground stem.
<b>Rosette</b>	A radiating cluster of leaves.
<b>Rostellum</b>	In orchids, a modified stigma that prevents self-fertilisation.
<b>Rosulate</b>	A dense radiating cluster of leaves.
<b>Rugose</b>	Wrinkled.
<b>Rugulose</b>	Having small wrinkles.
<b>Runcinate</b>	Sharply pinnatifid or cleft, the segments directed downward.
<b>Runner</b>	A trailing stem that roots at the nodes.
<b>Rupestral</b>	Growing on rocks.
<b>Rushes</b>	A group of distinctive wetland plants. They have solid stems (grasses have hollow stems), true rushes <i>Juncus</i> sp. have rounded leaves.
<b>Sagittate</b>	Shaped like the head of an arrow; narrow and pointed but gradually enlarged at base into two straight lobes directed downwards; may refer only to the base of a leaf with such lobes; cf. hastate.
<b>Salt marsh</b>	A coastal wetland, with specialized salt tolerant plants (halophytes).
<b>Sapling</b>	A juvenile tree that has reached the stage of 1 or 2 main stems but is still in the shrub layer.
<b>Saprophyte</b>	A plant lacking chlorophyll and living on dead organic matter.
<b>Saprophytic</b>	Lacking chlorophyll and living on dead organic matter.
<b>Sarcotesta</b>	The fleshy, often highly coloured outer layer of the seed coat in some species, e.g., titoki ( <i>Alectryon excelsus</i> ).
<b>Scabrid</b>	Roughened or rough with delicate and irregular projections.
<b>Scale</b>	Any thin, flat, membranous structure.
<b>Scape</b>	A leafless flower stem.
<b>schizocarp</b>	A fruit which splits when dry, from the Greek <i>skhizein</i> 'split' and <i>karpos</i> 'fruit'
<b>schizocarps</b>	Plural of schizocarp, a fruit which splits when dry, from the Greek <i>skhizein</i> 'split' and <i>karpos</i> 'fruit'
<b>Scutiform</b>	Shield-shaped.
<b>Sedges</b>	A group of grass-like or rush-like herbaceous plants belonging to the family Cyperaceae. Many species are found in wetlands some are forest floor plants. Leaves are usually angular. Hence the saying "rushes are round and sedges have edges".





<b>Term</b>	<b>Definition</b>
<b>Seedling</b>	A newly germinated plant.
<b>Self sustaining</b>	Able to sustain itself, or replace itself, independently of management i.e. regenerate naturally
<b>Self thinning</b>	Natural tree death in a crowded, even-aged forest or shrubland.
<b>Semi-deciduous</b>	Partial leaflessness in winter, and greater than 50% leaves lost by the beginning of spring flush.
<b>Sepal</b>	Outer part of flower; usually green.
<b>Serrate</b>	Sharply toothed with teeth pointing forwards towards apex.
<b>Serrulate</b>	Finely serrate, i.e., finely toothed with asymmetrical teeth pointing forward; like the cutting edge of a saw.
<b>Sessile</b>	Attached by the base without a stalk or stem.
<b>Seta</b>	The stalk of a fruiting moss capsule
<b>Sheath</b>	A portion of an organ that surrounds (at least partly) another organ (e.g., the tubular envelope enclosing the stem in grasses and sedges).
<b>Silicles</b>	The flattened usually circular capsule – compared with the narrow, elongated fruit (silique) – containing the seed/seeds. A term used almost exclusively for plants within the cabbage family (Brassicaceae)
<b>Silique</b>	A capsule, usually 2-celled, with 2 valves falling away from a frame (replum) bearing
<b>Simple</b>	Of one part; undivided (cf compound).
<b>Sinuate</b>	With a wavy margin.
<b>Sinus</b>	The space or recess between lobes; in hebes a gap between the margins of two leaves of an opposite pair that may be present in the bud before the pair of leaves separate.
<b>Sorus</b>	A cluster of two or more sporangia on the margin or underside of the lamina of a fern, sometimes protected by an indusium.
<b>Spathulate</b>	Spatula or spoon-shaped, a rounded blade tapering gradually to the base.
<b>Spheroidal</b>	Almost spherical but elliptic in cross section.
<b>Spicate</b>	Arranged in a spike.
<b>Spike</b>	Flowers attached to main stem without stalks.
<b>Spikelet</b>	Collection of individual grass florets borne at the end of the smallest branch of the inflorescence.
<b>Sporangia</b>	Plural of sporangium. Structures in which spores are produced.
<b>Sporangium</b>	Structure in which spores are produced.
<b>Spore</b>	A single-celled reproductive unit similar in function to that of the seed in a flowering plant.
<b>sporophyte</b>	The spore producing plant in ferns that is usually the visible part.
<b>Stamen</b>	The male reproductive organ of a flower where pollen is produced. Consists of an anther and its stalk.
<b>Stamens</b>	The male, pollen bearing organ of a flower.
<b>Standing water</b>	Where water lies above the soil surface for much of the year.
<b>Stellate</b>	Irregularly branched or star shaped.
<b>Stigma</b>	Female part of the flower that is receptive to pollen, usually found at or near the tip (apical end) of the style where deposited pollen enters the pistil.
<b>Stipe</b>	The stalk of a frond.
<b>Stipitate</b>	Borne on a stipe or stalk.
<b>Stipulate</b>	A leaf with stipules.
<b>Stipule</b>	A scale-like or leaf-like appendage at the base of a petiole, usually paired.
<b>Stolon</b>	A stem which creeps along the ground, or even underground.
<b>Stoloniferous</b>	Producing stolons
<b>Stramineous</b>	Chaffy, like straw or straw-colored.
<b>Stria</b>	A fine line or groove.
<b>Striae</b>	Fine lines or grooves.
<b>Striate</b>	Fine longitudinal lines or minute ridges
<b>Style</b>	The elongated part of the flower between the ovary and the stigma.
<b>Sub-</b>	A prefix meaning under, somewhat or almost.
<b>Subglabrous</b>	Very slightly, but persistently, hairy.
<b>Suborbicular</b>	Slightly rounded in outline
<b>Substrate</b>	The surface upon which an orchid grows.
<b>Subtended</b>	Immediately beneath, occupying a position immediately beneath a structure, i.e., flower subtended by bract
<b>Subulate</b>	Slender and tapering to a point.
<b>Succession</b>	Progressive replacement of one species or plant community type by another in an ecosystem.
<b>Successional</b>	Referring to species, plant communities or habitats that tend to be progressively replaced by another.
<b>Succulent</b>	Fleshy and juicy.
<b>Summer-green</b>	Used in New Zealand to indicate herbs or sub-shrubs that die down to a root stock or rhizomatous network.
<b>Supplementary planting</b>	Returning to a revegetation site and creating gaps, or filling existing gaps, with different plants of plants, usually later successional plants which may not have survived being planted in the first phases of the project.





<b>Term</b>	<b>Definition</b>
<b>Surface water</b>	Water present above the substrate or soil surface.
<b>Surveillance</b>	Regular survey for pests inside operational and managed areas e.g. nurseries, stand-out areas on parks.
<b>Survey</b>	Collection of observations on the spatial distribution or presence or absence of species using standardised procedures.
<b>Sustainable Land Management</b>	The use of farming practices which are sustainable both financially and environmentally including management of nutrient runoff, waste disposal or stock effluent, reducing impacts of nutrients on waterways, preventing erosion and soil loss, and protecting native forest and wetland habitats from stock damage.
<b>Swamp</b>	Low land that is seasonally flooded; has more woody plants than a marsh and better drainage than a bog. They are more fertile and less acidic than bogs because inflowing water brings silt, clay and organic matter. Typical swamp plants include raupo, purei and harakeke (flax). Zonation and succession often leads through manuka to kahikatea swamp forest as soil builds up and drainage improves.
<b>Symbiote</b>	An organism that has an association with organisms of another species whereby the metabolic dependence of the two associates is mutual.
<b>Symbiotic</b>	The relation between two different species of organisms that are interdependent; each gains benefits from the other (see also symbiosis).
<b>Sympatric</b>	Occupying the same geographical region.
<b>Synangia</b>	Structures made up of fused sporangia
<b>Synonym</b>	A botanical name that also applies to the same taxon.
<b>Systematics</b>	The study of taxonomy, phylogenetics, and taxogenetics.
<b>Tabular</b>	Shaped like a rectangular tablet.
<b>Taxa</b>	Taxonomic groups. Used to refer to a group at any level e.g., genus, species or subspecies.
<b>Taxon</b>	A taxonomic group. Used to refer to a group at any level e.g., genus, species or subspecies.
<b>Taxonomy</b>	The process or science of classifying, naming, and describing organisms
<b>Tepal</b>	An individual member of the perianth.
<b>Terete</b>	Cylindrical and tapering.
<b>Terminal</b>	At the tip or apex.
<b>Ternatifid</b>	Leaflets in threes,
<b>Tetrad</b>	A group of four.
<b>Tomentum</b>	A hairy covering of short closely matted hairs.
<b>Translocation</b>	The movement of living organisms from one area to another.
<b>Trifid</b>	Divided into three.
<b>Trifoliate</b>	Having three leaflets.
<b>Trigonus</b>	Three-angled
<b>Tripinnate</b>	With each secondary pinna divided to the midrib into tertiary pinnae
<b>Triquetrous</b>	Triangular in cross section and acutely angled.
<b>Truncate</b>	With the apex or base squared at the end as if cut off.
<b>Tuberculate</b>	Bearing small swellings.
<b>Tubular</b>	Tube-shaped.
<b>turbinate</b>	Top-shaped.
<b>Turgid</b>	Distended through internal pressure
<b>Type locality</b>	The place or source where a holotype or type specimen was found for a species.
<b>Ultramafic</b>	A type of dark, usually igneous, rock that is chemically dominated by magnesium and iron-rich minerals, the partially metamorphosed form of which is serpentinite.
<b>Umbel</b>	Umbrella like; the flower stalks arise from one point at the stem.
<b>Undulate</b>	Wavy edged.
<b>Undulose</b>	Wavy edged.
<b>Unitubular</b>	A tube partitioned once – literally one tube (compare – multitubular – many tubes)
<b>Utricle</b>	A thin loose cover enveloping some fruits (eg., Carex, Uncinia)
<b>Valvate</b>	Opening by valves.
<b>Vascular plant</b>	A plant that possesses specialised conducting tissue (xylem and phloem). This includes flowering plants, conifers and ferns but excludes mosses, algae, lichens and liverworts.
<b>Velutinous</b>	Thickly covered with delicate hairs; velvety.
<b>Ventral</b>	Of the front or inner (adaxial) surface relative to the axis. (cf. dorsal)
<b>Vermiform</b>	Worm-shaped.
<b>Vernicose</b>	Glossy, literally as if varnished, e.g., Hebe vernicosa has leaves that appear as if varnished
<b>Verrucose</b>	Having small rounded warts.
<b>Verticillium</b>	A fungus disease that will cause wilting and death.
<b>Villous</b>	Covered with long, soft, fine hairs.
<b>Water table</b>	The level at which water stays in a soil profile. The zone of saturation at the highest average depth during the wettest season.
<b>Wetland</b>	A site that regularly has areas of open water for part or all of the year, or has a water table within 10 cm of the surface for at least 3 months of the year. Wetland ecosystems support a range of plant and animal species adapted to an aquatic or semi-aquatic environment.





<b>Term</b>	<b>Definition</b>
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<b>Whipcord</b>	A shrub in which the leaves are reduced to scales that are close-set and pressed against the stem.
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<b>Whorl</b>	A ring of branches or leaves arising at the same level around the stem of a plant.
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