Manawatāwhi haerenga October 2019

Table of Contents

Made on the New Zealand Plant Conservation Network website – www.nzpcn.org.nz

Introduction

This book was compiled from information stored on the website of the New Zealand Plant Conservation Network (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 encompases 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.

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

Caption: Lawn of Aira on old dune, Queens Park, Whanganui
Photographer: Colin Ogle

Caption: Coromandel. November
Photographer: John Smith-Dodsworth

Aira praecox

Common Name(s):
early hair grass

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2458

Caption: Aira praecox
Photographer: John Smith-Dodsworth

Caption: Aira praecox
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 srepared 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

Arthropodium bifurcatum

Common Name(s):
Rengarenga Lily

Current Threat Status (2012):
At Risk - Relict

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=1513

Caption: Poor Knights, Aorangi
Photographer: Peter de Lange

Caption: Poor Knights, Aorangi
Photographer: Peter de Lange

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, contra-ligule (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 mintuely 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.

Caption: Lake Morehurehu
Photographer: Lisa Forester

Caption: Surville Cliffs, North Cape. Feb 2011
Photographer: Jeremy Rolfe

***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

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

Caption: Mount Stewart, Manawatu. Dec 2012.
Photographer: Colin Ogle

Caption: Coromandel, October
Photographer: John Smith-Dodsworth

Bromus arenarius

Common Name(s):
sand brome

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Indigenous. In New Zealand known from mainly coastal locations from the Three Kings Islands south to Mahia Peninsula, thence disjunct to Wellington Harbour, and the Chatham Islands. It has been found once in the South Island, inland at Molesworth in Marlborough. Also on Norfolk Island and along the eastern side of Australia

Habitat:
Coastal to lowland (with one montane record from Marlborough). A species of open rocky ground. coastal cliff faces, scree and boulderfield. Often associated with sea bird nesting grounds, especially gulls.

Features*:
Yellow-green annual 200-860 mm tall, tufted or solitary, basal leaves withering at or before flowering. Leaf-sheath densely villous. Ligule 1-2.6 mm, lacerate. Leaf-sheath 70-300 x 1.7-5 mm, densely villous. Culm 150-600(-800) mm, erect or geniculate-ascending, internodes pubescent below panicle. Panicle 70-260 mm, lax, nodding; branches filiform, curving. Spikelets 30-40 mm, 5-8-flowered, numerous, loosely hairy, oblong-lanceolate to wedge-shaped. Glumes unequal, acute, acuminate, apery, covered within long fine hairs; lower 7-9.5 mm, 3-nerved, narrow oblong-lancelate, upper 9.5-13 mm, 5-7-nerved, narrow elliptic-lanceolate. Lemma 11-14 mm, 7-9-nerved, rounded, papery, oblong- to narrowly elliptic-lanceolate, covered with long fine hairs, apex sometimes entire or with 2-acute lobes, awn 14-20 mm, arising 2 mm below lemma apex. Palea ¾ length of lemma, keels sparsely long-ciliate, interkeel glabrous. Callus with minute hairs. Rachilla 1.2 mm, pubescent. Anthers 0.8-1.5 mm.

Flowering:
(July-)August-October

Fruiting:
August-December

Threats:
Although not really threatened this species is never particularly common anywhere. It has a naturally sporadic distribution.

***Attribution:**
Description modified from Edgar and Connor (2000)

References and further reading:
Edgar E. and H. Connor. 2000. Flora of New Zealand. Volume 5. Manaaki Whenua Press: Lincoln, New Zealand.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2077

Caption: Bromus arenarius inflorescence prior anthesis
Photographer: Peter de Lange, Ex Cult. October 2005

Caption: Bromus arenarius inflorescence after anthesis
Photographer: Peter de Lange Ex Cult. November 2005

Bromus diandrus

Common Name(s):
ripgut brome

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3533

Caption: Whitiau 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

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

Caption: Part inflorescence. Whanganui. Nov 2011.
Photographer: Colin Ogle

Caption: Spikelet. Whanganui. Nov 2011.
Photographer: Colin Ogle

Caladenia bartlettii

Common Name(s):
None Known

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Endemic. North Island, from Te Paki to about the northern Waikato and Kaimai Ranges (exact southern limits as yet unclear)

Habitat:
Coastal to montane (0-500 m a.s.l.). Virtually confined to kauri (Agathis australis (D.Don.) Lindl.) forest where it grows in leaf litter, often near the bases of kauri trees. Also found in gumland scrub (but always in association with kauri remnants). Evidently relishes infertile soils.

Features*:
Terrestrial orchid usually occurring as solitary plants sometimes as small colonies of up to 10. All parts finely but sparsely eglandular hairy. Leaf solitary up to 200 x 2 mm long, narrow-linear, dark purple-green to reddish-green. Stem erect, slender somewhat wiry, up to 300 mm tall, sparsely eglandular-glandular hairy. Floral bracts 1(-2). Flowers 1(-2) up to 20 mm diameter, in lax racemes, perianth dark glazed mauve to magenta often fading to pink or white near flower centre. Sepals narrowly-elliptic to broadly elliptic, apex obtuse; dorsal sepal erect others spreading to somewhat deflexed. Labellum 3-lobed, marked with transverse dark pink to magenta bands, disc with 2 unequal lines of stalked callii, stalks dark pink to magenta, globular callus heads yellow, lateral lobes deeply cut; mid-lobe broadly triangular, recurved, margins irregular wavy, dark yellow, marginal callii absent. Column erect to slightly recurved, dark pink to magenta, often with 2-3 darker transverse, irregular bars, column wings distinctly broadening toward apex.

Flowering:
October - December

Fruiting:
November - February

Threats:
Caladenia bartlettii is apparently a rather sparsely distributed and naturally uncommon orchid. However, it is quite likely that the apparent rarity of this species is also in part due to its being overlooked for despite its colourful flowers it is not easily seen amongst the leaf litter in which it usually grows. A further issue is that there seems to be much confusion as to the correct application of the name with a number of unnamed segregates allied to *C. bartlettii* recognised by some New Zealand orchidologists.

Caption: On bank under manuka scrub, Plimmerton.
Photographer: Jeremy Rolfe


Caption: On bank under manuka scrub, Plimmerton.
Photographer: Jeremy Rolfe

***Attribution:**
Fact Sheet prepared by P.J. de Lange (12 February 2007). Description based on Jones et al. (1997) - as Caladenia bartlettii.

References and further reading:

Hopper, S.D.; Brown, A.P. 2004: Robert Brown's *Caladenia* revisited, including a revision of its sister genera *Cyanicula*, *Ericksonella* and *Pheladenia* (Caladeniinae: Orchidaceae). *Australian Systematic Botany* 17: 1-240.

Jones, D.L.; Molloy, B.P.J.; Clements, M.A. 1997: Three new species and a new combination in Caladenia R.Br. (Orchidaceae) from New Zealand. *The Orchadian 12*: 221-229.

Jones, D.L.; Clements, M.A.; Sharma, I.K.; Mackenzie, A.M. 2001: A New Classification of *Caladenia* R.Br. (Orchidaceae). *The Orchadian 13*: 389-419.

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

Rogers, R.S. 1924: *Petalochilus*: a New Genus of New Zealand Orchids. *Journal of Botany 62*: 65-67

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1106

Caladenia chlorostyla

Common Name(s):
None Known

Current Threat Status (2012):
Not Threatened

Distribution:
Probably Endemic. Three Kings, North, South. Stewart and Chatham Islands

Habitat:
Coastal to montane up to 1000 m a.s.l.) in well-lighted situations in scrub, successional and mature tall indigenous forest. Also frequent in plantation forests.

Features*:
Solitary, hirsute, terrestrial, tuberous herb. Leaf semi-erect, 50-150 x 1-3 mm, bright green, narrowly linear, sparsely glandular pubescent. Flowering scape, slender, wiry, 10-300 mm tall, green, glandular-pubescent. Sterile bracts spreading widely, 6.0-11.0 x 1.0-2.5 mm, narrowly ovate-lanceolate, acuminate, externally glandular-pubescent; fertile bracts closely sheathing, 3-8 x 2-3 mm, narrowly ovate-lanceolate, externally glandular pubescent. Ovary, 6-10 mm long, narrowly ellipsoid, green, glandular-pubescent. Flower unscented, 1(-5), 11-16 mm diameter, externally greenish-white, internally pale greenish-white, white, pale mauve or pinkish. Tepals externally sparsely glandular; dorsal sepal erect and incurved; lateral sepals porrect, remaining closely parallel, or with proximal margins overlapping or fused; petals widely spreading or incurved. Dorsal sepal 6.0-8.0 x 1.5-2.0 mm, narrowly obovate, obtuse. Lateral sepals 6.0-8.0 x 2.0-2.5 mm, narrowly obovate, oblanceolate, asymmetric, subacute. Petals 6.0-8.0 x 2.0-2.5 mm, oblanceolate, falcate, subacute, apiculate. Labellum greenish-white, white or pinkish with prominent dark red transverse bars articulated on a short 0.4 x 0.8 mm claw, trilobed. Lamina ovate in outline when flattened, 5.0-6.0 x 4.5 mm, erect in proximal half, decurved in distal half, apex decurved or straight; lateral lobes 1.8 mm wide, erect and column-embracing, entire; mid-lobe 2.5 mm long, narrowly deltoid; cream to pale yellow, with 6-10 pairs of flat to linear marginal calli to 0.8 mm long, these decrescent and irregular towards apex. Lamina calli stipitate, pale yellow often with red stalks, in 2 rows extending onto the base of the mid-lobe. Basal calli 4, darker than the rest; head oblong-ovoid, c.0.5-0.7 mm diameter, papillate. Column 5.0-6.0 x 2.3 mm, green with dark red transverse bars, shallowly incurved, narrowly winged; central anterior ridge 0.8-1.0 mm wide. Anther c.1.3-1.5 x 1.2-1.5 mm, green, papillate, with a short rostrum. Pollinia 4, 0.8-1.0 mm long, curved to flat, white or green, mealy, incoherent. Stigma semi-circular, 1 mm diameter sunken. Capsule erect, 10.0-12.0 x 2.5-3.5 mm long, ellipsoid to ovoid-ellipsoid, green often with purple stripes

Flowering:
September - January

Fruiting:
December - April

Threats:
Not Threatened

Caption: Kaitoke, Upper Hutt. Nov 2012.
Photographer: Jeremy Rolfe

Caption: Rimutaka Forest Park. Nov 2006.
Photographer: Jeremy Rolfe

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007. Description partially taken from Jones et al. (1997).

References and further reading:

Hopper, S.D.; Brown, A.P. 2004: Robert Brown's *Caladenia* revisited, including a revision of its sister genera *Cyanicula*, *Ericksonella* and *Pheladenia* (Caladeniinae: Orchidaceae). *Australian Systematic Botany* 17: 1-240.

Jones, D.L.; Molloy, B.P.J.; Clements, M.A. 1997: Three new species and a new combination in Caladenia R.Br. (Orchidaceae) from New Zealand. *The Orchadian 12*: 221-229.

Jones, D.L.; Clements, M.A.; Sharma, I.K.; Mackenzie, A.M. 2001: A New Classification of *Caladenia* R.Br. (Orchidaceae). *The Orchadian 13*: 389-419.

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

Rogers, R.S. 1924: *Petalochilus*: a New Genus of New Zealand Orchids. *Journal of Botany 62*: 65-67.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1107

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 subtrigonous, 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 trigonous, 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

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 elingamita

Common Name(s):
Three Kings Sedge

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Endemic. Three Kings Island group where it is present on Great (Manawa Tawhi), North East, South West, West Islands and at least Hinemoa Rock in the Princes group. Naturalised in Auckland City

Habitat:
A species of shaded sites under dense forest, often around petrel burrowed ground, boulder falls and rubble.

Caption: West Island, December 1996
Photographer: Peter de Lange

Caption: West Island, December 1996
Photographer: Peter de Lange

Features*:
Rather leafy, light to dark green, tussock forming sedge of shaded forested slopes and boulder field. Culms up to 1 m x 1.5 mm, trigonous, smooth; basal bracts light brown. Leaves < culms, 5-10 mm wide, double folded, margins finely scabrid. Inflorescence of 10-12 compound or simple green to grey-green spikes, 60-80 x 5 mm, the lower 2-4 more or less distant on long erect peduncles; terminal spike male, remaining spikes female below with upper third or more male. Glumes equal or < utricles, linear-lanceolate, membranous (somewhat chaffy when old) with red-brown flecks, truncate or almost emarginated, midrib prolonged as a rigid, strongly scabrid awn. Utricles 4-4.5 mm long, trigonous, elliptic-lanceolate, strongly nerved, erect or slightly recurved, membranous, grey-green, margins glabrous, beak slightly > 1.5 mm long. Margins glabrous, crura scabrid not oblique. Stigmas 3. Nut 2 mm long, red-brown.

Flowering:
September - December

Fruiting:
October - May

Threats:
Not threatened and very common but listed because it occupies a small geographic range.

***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 2009 Vol. 11 No. 4 pp. 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=393

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.

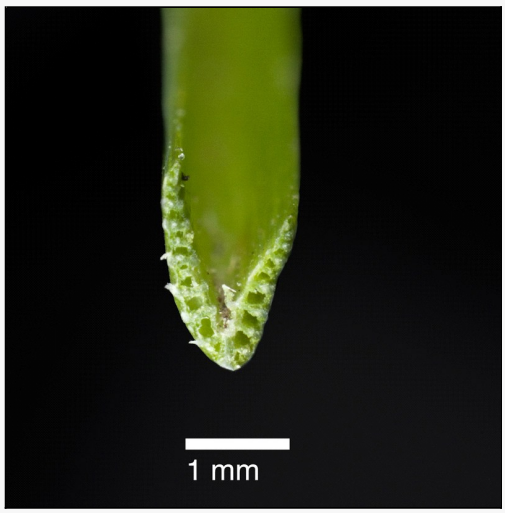
Habitat:
Coastal to montane. Usually in free draining soils under scrub or open forest. Rarely in wetlands or in permanently damp, shaded sites.

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



Caption: Transverse section of leaf. Palliser Bay. Feb 2011.
Photographer: Jeremy Rolfe


Caption: In cultivation. Dec 2007.
Photographer: Jeremy Rolfe

***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

Carex testacea

Caption: Otama Beach, February
Photographer: John Smith-Dodsworth

Caption: At Otama Beach, February
Photographer: John Smith-Dodsworth

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

Carex uncinata

Common Name(s):
bastard grass, hook sedge, kamu, matau-a-maui

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous: New Zealand. North, South, Stewart, Chatham and Auckland Islands. Also in the Hawaiian Islands.

Habitat:
Coastal to montane (up to 1000 m a.s.l.). Widespread and common in most indigenous habitats from dense forest to open shrubland. Rarely colonising the margins of wetlands. Sometimes found as an urban weed in hedgerows, along river banks or in parks.

Features*:
Caespitose, yellow-green to dark green sedge. Culms 100–900 x 1.0–1.5 mm, glabrous, or occasionally scabrid just below inflorescence; basal sheaths dull brown. Leaves 5–10 per culm, ± = culms, or > flowering culms, 2–5 mm wide, dark green or occasionally reddish green, strongly scabrid on the margins and on the adaxial surface towards the tip. Spikes 55–200 x 2.0–3.5 mm, usually bracteate, female flowers numerous, usually c.60–120, very closely crowded throughout almost the whole spike, internodes 0.5–1.5 mm long. Glumes usually < but occasionally slightly > utricles, deciduous, ovate, obtuse or subacute, coriaceous, yellowish with a green midrib or often entirely dark brown, occasionally greenish pink. Utricles 4–5 mm long, slightly > 1 mm. diameter, plano-convex or concavo-convex, lustrous, with usually one prominent lateral nerve on the abaxial face and 3–4 faint nerves on the adaxial face, yellowish to dull brown, stipe 1.0–1.5 mm. long, beak slightly > 1 mm. long; scarcely spreading when ripe.

Flowering:
August - December

Fruiting:
Throughout the year

Threats:
Not Threatened

***Attribution:**
Fact Sheet prepared by P.J. de Lange (18 August 2006). Description adapted from Moore and Edgar (1970) - see also de Lange et al. (2013).

References and further reading:
de Lange, P.J.; Heenan, P.B.; Rolfe, J.R. 2013: *Uncinia auceps* (Cyperaceae): a new endemic hooked sedge for the Chatham Islands. Phytotaxa 104 (1): 12–20. doi: 10.11646/phytotaxa.104.12

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=2281

Caption: Carex uncinata
Photographer: Wayne Bennett

Caption: Leaf of Carex uncinata
Photographer: Wayne Bennett

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

Caption: Flower of Carex virgata
Photographer: Wayne Bennett

Caption: Flower of Carex virgata
Photographer: Wayne Bennett

Cenchrus clandestinus

Common Name(s):
kikuyu grass

Current Threat Status (2009):
Exotic

Habitat:
Terrestrial. A coastal plant of high fertile sites (Timmins & MacKenzie 1995). A plant that prefers warm, moist and fertile soils, but is drought resistant (Department of Conservation 1996). A plant of sand dunes (Timmins & MacKenzie 1995). A plant that is a common dominant pasture grass (Department of Conservation 1996). A plant that is invasive in coastal areas (Department of Conservation 1996).

Features:
Creeping, perennial, hairy, mat-forming grass. Stolons very long, climbing supported occ to 2+ m, rooting frequently. Rhizomes long. Leaves alternate, 5-40 x 3-9 cm, bright green to yellow-green, soft and drooping, sparsely hairy above and below, blades folded, ligule a fringe of hairs, auricle missing. Sheath pale green to white, with soft 2-4 mm hairs. Seedhead of 2-3 tiny spikelets in upper leaf sheaths, wispy anthers and stigmas

Flowering:
flowers are very small and reduced.

References and further reading:
Esler, A.E. 1998. The clandestine flowering of Kikuyu grass. Auckland Botanical Society Journal, 53: 62-64.

Little, C. 1999. Kikuyu a further note. Auckland Botanical Society Journal, 54: 13

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3023

Caption: Cenchrus clandestinus, leafy shoot
Photographer: John Smith-Dodsworth

Caption: Cenchrus clandestinus, stigmas
Photographer: John Smith-Dodsworth

Clematis cunninghamii

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. North Island. South to Hawkes Bay in the east, to ?? in the west.

Habitat:
Lowland forest and forest margins

Features*:
Evergreen woody climber with main stems to 3 m or more tall; branchlets finely grooved, pilose when young. Leaves 3-foliate, opposite; petioles c. 3 cm long, pilose-pubescent. Leaflets pubescent-pilose with fulvous hairs especially beneath; on petiolules c. 1 cm long; midvein and secondary veins visible above, more obvious below; leaflet lamina 1.5-4 x 1-2 cm, ovate, entire or crenately toothed or lobed, submembranous, dark green to yellowish-green, tip acute, base usually cordate, undersides paler. Juvenile leaves larger, thinner, irregularly lobed and sometimes serrate. Inflorescences unisexual, conspicuous, in axillary dichasial cymes, few-flowered, up to 8 cm long, inflorescence bracts linear-oblong, paired, united, inserted above middle of peduncle, fulvous. Flowers slightly fragrant. Male 1-2(-2.5) cm diam., sepals 5-8, narrow-oblong to elliptic-oblong, subacute, imbricate, glabrous above, hairy beneath, 9-12(-22) x 2-5 mm, yellowish; stamens many, anthers 0.7-1 mm long, filaments glabrous., up to 1 cm long. Female 5-8 sepals, imbricate, yellowish, glabrous above, hairy beneath, elliptic-ovate, 8-13(-15) x 2-3(-6) mm; staminodes few. Achenes hairy, elliptic, narroweed to apex, compressed, margin thickened and distinct, surface finely ridged, 2.6-3.4(-3.6) mm long, styles 20-26(-30) cm long at fruiting, white-plumose for most of length, short hairs at base.

Flowering:
September-November

Fruiting:
November-January

Threats:
Not Threatened

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

Caption: Wellsford. Nov 2007.
Photographer: Jeremy Rolfe

***Attribution:**
Description adapted from Allan (1961), Webb et al (1988), Eagle (2000) and Webb and Simpson (2001).

References and further reading:

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

Eagle, A. 2000. Eagle's complete trees and shrubs of NZ. Te Papa Press, 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

Webb, C.J. & Simpson, M.J.A. 2001. Seeds of NZ gymnosperms and dicotyledons. Manuka Press, Christchurch.

Webb, C.J; Sykes, W.R; Garnock-Jones, P.J. 1988. Flora of NZ, Vol. IV. DSIR, Christchurch

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1684

Clematis foetida

Caption: Heyward Point, Dunedin
Photographer: John Barkla

Caption: Heyward Point, Dunedin
Photographer: John Barkla

Common Name(s):
Clematis

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. North and South Island. All except Taranaki in north, Nelson, Marlborough, Canterbury and eastern Otago in south.

Habitat:
lowland forests and especially forest margins.

Features*:
Evergreen woody climber with main stems to 6 m or more tall; trunk to 6 cm diam. at base; branchlets grooved, densely fulvous tomentose. Leaves 3-foliate, opposite; petioles c. 1.5-5(-9) cm long, stout, pilose-pubescent. Leaflets pubescent-pilose with fulvous hairs especially beneath, eventually becoming glabrate; on petiolules c. 5-10 mm long; midvein and secondary veins visible above, more obvious below; leaflet lamina (2.3-)5.5-9 x (1.8-)4.5-8(-12) cm, ovate, entire to sinuate, rarely crenately serrate or lobed, subcoriaceous, dark green, tip acute to obtuse, base truncate to subcordate, undersides paler. Subfloral leaves smaller. Juvenile leaves larger, thinner, irregularly lobed and sometimes serrate. Inflorescences unisexual, conspicuous, in axillary dichasial cymes, few-flowered, up to 8 cm long, inflorescence bracts ovate, acute to acuminate, paired, united, inserted above middle of peduncle. Flowers strongly scented. Male to 2.5 cm diam., sepals (5-)6(-8), ovate-oblong, obtuse to subacute, imbricate, glabrous above, hairy beneath, 6-12(-23) x 2-5(-7) mm, yellow; stamens many, anthers 0.8-1.5 mm long, filaments glabrous., up to 1 cm long. Female 5-8 sepals, imbricate, yellow, glabrous above, pilose beneath, ovate, obtuse, 6-11 x 3-5 mm; staminodes few. Achenes hairy, elliptic, narrowed to apex, compressed, margin thickened and distinct, surface unornamented, (2.0-)2.2-3.0(-3.3) mm long, styles 15-28 cm long at fruiting, white-plumose for most of length, short hairs at base.

Flowering:
September-November

Fruiting:
November-January

Threats:
Not Threatened

***Attribution:**
Description adapted from: Allan (1961), Webb et al. (1988), Eagle (2000), Webb and Simpson (2001)

References and further reading:

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

Eagle, A. 2000. Eagle's complete trees and shrubs of NZ. Te Papa Press, 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

Webb, C.J; Sykes, W.R; Garnock-Jones, P.J. 1988. Flora of NZ, Vol. IV. DSIR, Christchurch

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=1680

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, spathulate 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

Caption: Ruahine Range, near Sunrise Hut
Photographer: John Sawyer

Caption: Dunedin Town belt
Photographer: John Barkla

***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

Coprosma arborea

Common Name(s):
mamangi, tree Coprosma

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. New Zealand: Three Kings and North Island, where found from Te Paki south to near Waitomo in the west and about Gisborne in the East

Habitat:
Coastal to lower montane forest - but mostly coastal to lowland. Often forming the subcanopy in coastal kauri forest or mixed pohutukawa-hardwood forest. rarely, such as on Waiheke Island, forming a distinct forest type where it dominates the canopy.

Features*:
Tree 8-12 m tall; trunk 200-500 mm diameter; branches rather close-set, suberect to spreading; branchlets slender, pubescent. Petioles winged in upper ½, 8-20 mm long. Stipules short, triangular, connate near base, ciliolate, with prominent denticle. Adult lamina submembranous to subcoriaceous, glabrous, somewhat glossy, 50-80 × 30-48 mm, yellow-green, dark green above, usually mottled maroon or purple, pale wine-red below, ovate to broad-elliptic to oblong, sometimes suborbicular; apex rounded or retuse, sometimes apiculate or mucronulate; cuneately or abruptly narrowed to petiole; margins thickened, indistinctly waved, often subcrenulate; juvenile lamina 12-30 × 10-18 mm, spathulate, maroon, dark green mottled with maroon, undersides dull wine-red. Reticulations of lamina obscure above, usually distinct below. Male flower in dense glomerules, terminal on main and axillary branches; calyx-teeth linear, obtuse, ciliolate; corolla funnelform, lobes ovoid, acute, more or less = tube. Female flowers in clusters of 2-4; calyx-teeth obtuse, ciliolate; corolla-tube short, lobes long, acute. Drupe fleshy, 6-8 mm long, white, broad-oblong.

Flowering:
September - December

Fruiting:
January - December

Threats:
Not Threatened

***Attribution:**
Fact sheet prepared by Peter J. de Lange (30 August 2004). Description adapted from Allan (1961)

References and further reading:
Allan, H.H. 1961: Flora of New Zealand. Vol. I, Government Printer, Wellington.

Caption: Coprosma arborea (Mamangi)
Photographer: Wayne Bennett

Caption: Fruit
Photographer: John Smith-Dodsworth

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2306

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

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 neglecta

Current Threat Status (2012):
At Risk - Naturally Uncommon

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=454

Caption: Stipules and abaxial surfaces of leaves. Surville Cliffs. Oct 2009.
Photographer: Jeremy Rolfe

Caption: Surville Cliffs. Feb 2011.
Photographer: Jeremy Rolfe

Coprosma parviflora

Common Name(s):
leafy coprosma

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Three Kings Islands, and the North Island from Te Paki south to Auckland City (Remuera) but now extinct in the Auckland area. Still extant from the Kaipara Harbour north.

Flowering:
August - September (-October)

Fruiting:
March - April (-October)

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=1725

Caption: Coprosma parviflora
Photographer: Peter de Lange

Caption: Stipule. In cultivation ex Rawene. Jul 2007.
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

Caption: Plimmerton. Jun 2006.
Photographer: Jeremy Rolfe

Caption: Plimmerton. Jun 2006. Glabrous leaf base.
Photographer: Jeremy Rolfe

Corybas cheesemanii

Caption: Corybas cheesemanii
Photographer: Kevin Matthews

Caption: Eastbourne. Apr 2004.
Photographer: Jeremy Rolfe

Common Name(s):
Helmet Orchid, Cheesemans Spider Orchid

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Three Kings, North, South and Chatham Islands.

Habitat:
Coastal to montane (up to 1000 m a.s.l.). Usually found in tall scrub or forest, in dark shaded sites, partially buried in deep, moist, semi-rotted leaf litter, especially under kanuka (Kunzea ericoides, K. robusta, K. serotina and K. triregensis) and Beech (Fuscospora and Lophozonia spp.). Often associated with Corybas cryptanthus.

Features*:
Diminutive, winter to spring green perennial herb up to 25 mm tall when flowering, up to 220 mm tall when fruiting. Stem, leaves usually, and sometimes also the flowers completely or partially buried within leaf litter. Tubers spheroidal to ovoid, borne on greatly elongated lateral roots up to 200 mm away from current seasons plant. Stem erect buried within leaf mould. Leaf solitary, sessile, 10-20 mm long, pale green to green above, somewhat silvery-green below, orbicular, orbicular-cordate, sometimes leaf reduced to a small green scale. Floral bract smaller than the bright yellow-green ovary, and usually placed well below it. Flower 1(-2), placed directly over leaf. Ovary erect. Perianth 10-14 mm tall. Dorsal sepals helmet-like (galeate), arching completely over labellum, acute, dark pink, purple-grey, maroon, greyish white (mushroom grey) greyish-white flecked with purple, or completely white, fleshy; lateral sepals subulate (needle-like), minute, usually obscured by dorsal sepal, visible only from the front between the spurs. Petals much smaller than sepals, usually not discernible. Labellum cream or white, forming a curved tube, with the anterior margin sharply and abruptly deflexed under the tip of the galea, as a semicircular papillose lobe; the lobe hiding a median pouch; at the base on either side of the labellum a narrow conical spur projects downwards between the petals and sepals. Fruiting capsule up to 20 mm long, cylindrical to ovoid, erect to suberect, borne on a greatly elongated stem.

Flowering:
May - September

Fruiting:
November - January

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.

Jones, D.L.; Clements, M.A.; Sharma, I.K.; Mackenzie, A.M.; Molloy, B.P.J. 2002: Nomenclatural notes arising from studies into the Tribe *Diurideae* (Orchidaceae). *The Orchadian* 13: 437-468.

Lehnebach, C. 2016: New combinations and a replacement name for three New Zealand spider orchids (*Corybas*). *The New Zealand Native Orchid Journal 139*. 4-5.

Lyon, S. P. 2014: Molecular systematics, biogeography, and mycorrhizal associations in the Acianthinae (Orchidaceae), with a focus on the genus *Corybas*. PhD Thesis, University of Wisconsin-Madison. USA.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1761

Corybas cryptanthus

Caption: Omoana on 3/12/97
Photographer: Eric Scanlen

Caption: The rare alba form, Omoana 3/9/05
Photographer: Eric Scanlen

Common Name(s):
Hidden Spider Orchid, Icky

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Endemic. Three Kings, North and South Islands

Habitat:
Coastal to montane. In dense shrublands and tall forest. Confined to deep, partially decomposed leaf litter where it is easily overlooked except when fruiting. Current records suggest a preference for growing under kanuka (Kunzea ericoides (A.Rich.) Joy Thomps.) and Nothofagus Blume stands. It often grows with Corybas cheeseman (Hook.f. ex Kirk) Kuntze.

Features*:
Saprophytic, rhizomatous, subterranean, orchid lacking chlorophyll and flowering usually buried within leaf litter, only rarely with flowers exposed. Fruiting stem greatly elongated, exposed and held well above the ground. Rhizomes, stems, and flowers hyaline white, usually flecked with red, purple or brown, rarely without any colour. Tubers scarcely evident, minute, globose, partially obscured by leaf-scales. Rhizomes horizontal, extensive, succulent, without roots, frequently and laxly branched, buried within leaf mould and litter, up to 1 mm diameter and 100-120 mm long. Leaves reduced to minute deltoid scales spaced at about 10 mm intervals along rhizome, the one at the base of the flower stem usually broadly ovate and larger. Flowers solitary. Floral bract > to >> ovary. Perianth usually hyaline white to pale pink, more or less streaked with red or purple, sometimes completely white. Dorsal sepal 10-14 mm long, narrow-lanceolate, acuminate; lateral sepals longer than dorsal sepal and labellum, filiform, often protruding from leaf litter. Petals similar to lateral sepals but distinctly shorter. Labellum up to 15 mm long, auriculate at base, the margins meeting behind the column and touching for about half the labellum length, central portion much thickened and papillose, the distal portion greatly expanded, more or less deflexed, usually not abruptly but sometimes so, with the free margin upturned, coarsely and abundantly laciniate, laciniae sometimes branched, margins finely ciliate. Fruiting capsule ovoid, hyaline, flecked with red or purple; terminal on a greatly expanded, erect stem up to 280 mm tall; capsule initially down-turned, at maturity either horizontal or erect.

Flowering:
June - October

Fruiting:
October - April

Threats:
Not Threatened but probably warrants listing as sparse

***Attribution:**
Fact Sheet by P.J. de Lange (1 January 2005). Description adapted from Moore and Edgar (1970)

References and further reading:

Garnock-Jones PJ. 2014: Evidence-based review of the taxonomic status of New Zealand's endemic seed plant genera. New Zealand Journal of Botany 52: 163-212.

Jones, D.L.; Clements, M.A.; Sharma, I.K.; Mackenzie, A.M.; Molloy, B.P.J. 2002: Nomenclatural notes arising from studies into the Tribe Diurideae (Orchidaceae). The Orchadian 13: 437-468.

Irwin, J.B. 1954. *Corybas saprophyticus. Wellington Botanical Society Bulletin 27*:22-23

Lyon, S. P. 2014: Molecular systematics, biogeography, and mycorrhizal associations in the Acianthinae (Orchidaceae), with a focus on the genus *Corybas*. PhD Thesis, University of Wisconsin-Madison. USA.

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

Whitaker, T. 1957. *Corybas cryptanthus* (saprophyticus). *Wellington Botanical Society Bulletin 29*: 3

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1391

Corybas trilobus

Common Name(s):
Spider Orchid

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. North, South, Stewart Islands

Habitat:
Coastal to subalpine (up to 1200 m a.s.l.). Probably the most widely ranging of all the New Zealand species, occupying a diverse array of habitats from coastal dune forest and scrub to subalpine shrublands and mires. More than one species is involved (see under similar species), and any clear habitat distinction at this stage is impractical.

Features*:
Terrestrial, tuberous, glabrous, extremely variable winter to summer-green herb forming dense colonies of many plants through vegetative extension. Plant at flowering 20-50 mm tall, flower usually set above leaf but sometimes beneath. Leaf distinctly petiolate; petiole 10-24 mm long; lamina membranous 10-30 mm diameter, dark green to green, reniform to orbicular, usually wider than long, and mostly bearing a distinct median apiculate lobe, base broadly cordate. Floral bract rarely as long as ovary, linear-lanceolate to lanceolate. Peduncle short to long. Ovary erect, creamy yellow to yellow-green, ribbed. Dorsal sepal short, spathulate, obtuse and concave, rounded to cucullate at broad tip, arched over top of labellum, mostly green with purple flecks, sometimes translucent yellow-green with purple flecks or completely white; lateral sepals long, filiform, greatly exceeding labellum, usually basally red fading through pink to translucent white or completely white. Petals similar to lateral sepals in colour and shape, but usually much shorter. Labellum colour variable, sometimes deep crimson or maroon, otherwise reddish grading through to translucent with purple or even greenish flecks or stripes,occasionally completely white, auriculate at base, lamina very abruptly deflexed, broad and rounded, margin entire, usually incurled except at the lower edge, inner surface retrorsely papillose. Seedling peduncle up to 200 mm tall.

Flowering:
July - December

Fruiting:
August - April

Threats:
Not Threatened

Caption: Spent seed capsule, Eastbourne.
Photographer: Jeremy Rolfe

Caption: Mt Te Moehau, September
Photographer: John Smith-Dodsworth

***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.

Jones, D.L.; Clements, M.A.; Sharma, I.K.; Mackenzie, A.M.; Molloy, B.P.J. 2002: Nomenclatural notes arising from studies into the Tribe *Diurideae* (Orchidaceae). *The Orchadian* 13: 437-468.

Lehnebach, C. 2016: New combinations and a replacement name for three New Zealand spider orchids (*Corybas*). *The New Zealand Native Orchid Journal 139*. 4-5.

Lehnebach, C.A., Zeller, A.J.; Frericks, J.; Ritchie, P. 2016: Five new species of *Corybas* (Diurideae, Orchidaceae) endemic to New Zealand and phylogeny of the *Nematoceras* clade. *Phytotaxa 270*:1-24.

Lyon, S. P. 2014: Molecular systematics, biogeography, and mycorrhizal associations in the Acianthinae (Orchidaceae), with a focus on the genus *Corybas*. PhD Thesis, University of Wisconsin-Madison. USA.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1022

Cotula australis

Common Name(s):
common Cotula, soldiers button

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=2092

Caption: Cotula australis
Photographer: John Smith-Dodsworth

Caption: Hutt River north of Stokes Valley. Apr 2006.
Photographer: Jeremy Rolfe

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

Caption: Cotula coronopifolia
Photographer: Wayne Bennett

Caption: North Otago
Photographer: John Barkla

Crassula colligata subsp. colligata

Caption: Sutton Salt lake
Photographer: John Barkla

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

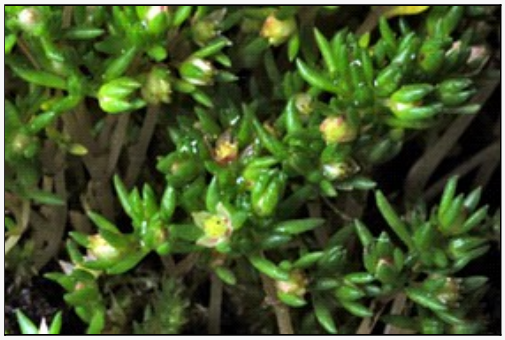
For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2093

Crassula decumbens

Common Name(s):
Cape crassula

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3768



Caption: Mangaweka. Oct 2008.
Photographer: Colin Ogle

Caption: Mangaweka. Oct 2008.
Photographer: Colin Ogle

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 spathulate. Follicles smooth. Seed 0.3-0.5 mm long.

Flowering:
August - December

Fruiting:
October - March

Threats:
Not Threatened

Caption: Beacon Rock
Photographer: Melissa Hutchison

Caption: Wainuiomata River mouth.
Photographer: Jeremy Rolfe

***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

Cyperus insularis

Current Threat Status (2012):
At Risk - Declining

Distribution:
Endemic. Known only from the Kermadec, Three Kings Islands, and northern North Island and associated offshore islands south to Port Waikato and Moutohoura (Whale) Island (Bay of Plenty)

Habitat:
Northern offshore islands, and rocky headlands, usually in association with sea bird nesting grounds, though on the Kermadec Islands, where it is the only species present it is also present along sandy beaches and in swamps.

Features*:
Robust sedge up to 2 m tall with leaves crowded at base of culms. Culms stout, triquetrous, glabrous, striated, green, rarely brown in distal part, at base, upright at flowering, collapsing at seed fall. Leaves 1.4 -3.2 mm x 1-2 m, grey green, strongly keeled, leaf margin and keel sharply scabrid, sheath light pink to light purple-pink. Inflorescence a terminal umbel of 6-12 unequal rays, each subtended by a leaf-like involucral bract, these 0.3-3.2 mm x 0.1-1.15 m, grey-green, base green, often flushed light pink to purple-pink, or rarely pale brown. Spikelets 9-12 mm long, glumes 3-5.8 x 2-2.8 mm, ovate-oblong or ovate, green some times pale green or translucent, distal end and margin red-brown, drying yellow-brown to light brown, keeled, mcuronate or obtuse, crowded into a dense spike 40-60 mm long. Stamens with persistent filaments. Nut 1.6-1.7 mm, red-brown to orange-brown, oblong to broadly oblong.


Caption: Macauley Island
Photographer: John Barkla


Caption: Macauley Island
Photographer: John Barkla

Flowering:
July - December

Fruiting:
July - April

Threats:
Declines are happening on Raoul and Macauley Islands, and there is some evidence of this also in the North Island part of its range. The nature of the decline is not clear, though in some places, such as Macauley Island it appears to be part of natural succession while on Raoul the decline at Denham Bay may be due to the spread of buffalo grass (Stenotaphrum secundatum). Within the mainland portion of its North Island range, the species appears restricted to sites frequented by sea birds, especially their nesting grounds, and it seems that as these habitats have been lost, so too has the Cyperus.

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange (31 July 2004). Description adapted from Heenan & de Lange (2005).

References and further reading:
Heenan, P.B.; de Lange, P.J. 2005: *Cyperus insularis* (Cyperaceae), a new species of sedge from northern New Zealand. *New Zealand Journal of Botany 43*: 351-359.

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=1429

Cyrtostylis oblonga

Common Name(s):
winter orchid

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Three Kings Islands and the northern North Island

Habitat:
Coastal to lower montane in open clay pans or lightly shaded scrub. May be found amongst mosses on basalt rock. Most commonly found in shallow leaf litter or hard clay

Features*:
Winter to spring flowering perennial herb. Plants at flower up to 100 mm tall (usually less), elongating in seed, Stem erect, slender. Leaf sessile, almost basal, 10-40 x 8-17 mm, yellow-green to green, oblong, obtuse to subacute, base cordate to rounded. Inflorescence a raceme up to 30 mm long; floral bracts diminutive, membranous. Flowers 1-4; perianth 8-10 mm long, spreading, pink or pinkish-green. Sepals subequal; dorsal sepal narrow linear-lanceolate, obtuse, erect, concave; lateral sepal narrow-linear, acute, projecting forwards or widely spreading. Petals similar to lateral sepals. Labellum 10 x 4 mm, oblong; apex obtuse, not recurved, projecting horizontally forwards, the adjacent margins toothed; surface more or less plane, lamina bearing two prominent, spheroidal basal calli and two, flat, longitudinal ridges that extend nearly to the apex. Column shorter than the labellum, conspicuous; wings narrow below, widening above so that the stigma is flanked by two lobes. Pollinia two per anther cell, more or less ellipsoid to tabular, some what crescent-shaped, crumbling readily in single grains.

Flowering:
July - November

Fruiting:
August - March

Threats:
Not Threatened

Caption: Te Paki. Sep 2011.
Photographer: Jeremy Rolfe

Caption: Hunua Range, Wharekawa side. August 2000.
Photographer: Eric Scanlen

***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=1780

Daucus glochidiatus

Common Name(s):
native carrot, New Zealand carrot

Current Threat Status (2012):
Threatened - Nationally Vulnerable

Distribution:
Indigenous, North, South and Chatham Islands.

Habitat:
Coastal, lowland to montane on cliff faces, rock outcrops, talus slopes, in short tussockland or grassland and in open forest.

Features*:
Erect, usually hispid, yellow-green to dark reddish green, biennial up to 300-800 mm high (annual in harsh conditions), mostly sparingly branched. Stems and branches glabrescent, deeply ribbed or finely striate. Basal leaves, flaccid, withering at fruiting, glabrous or sparsely covered in stiff hairs, 2-3-pinnate, petioles, 10-150 mm long, expanding toward a ± amplexicaul base, ± glabrous or sparsely covered in stiff hairs (sometimes densely so); primary leaflets in 2-8 pairs, petiolules 4-6 mm long; ultimate segments pinnatisect to pinnatifid, ovate, linear-oblong, linear-spathulate, apices mucronulate; stem leaves similar but reduced. Umbels axillary and terminal, irregularly compound or simple in stressed specimens, on slender or stout hispid peducles up to 170 mm long. Rays 1-11, unequal, primarly up to 160 mm long, secondary up to 15 mm long; bracts (0)-2-5, linear, entire or deeply incised, sometimes pinnatisect, caducous; bracteoles 0-5, simple, linear. Flowers 1-10, c.1 mm diameter, petals white, dirty white or tinged red, withering early and shedding. Fruit ellipsoid, dark brown to red-brown (rarely pale brown), 3-5 mm long; primary ribs sparsely to moderately ciliate; secondary ribs glochidate, glochidia ± 1 mm long, apices capped.

Caption: Te Paki. Oct 2009.
Photographer: Jeremy Rolfe

Caption: Te Paki. Oct 2009.
Photographer: Jeremy Rolfe

Flowering:
September to February

Fruiting:
November - June

Threats:
This species appears to have undergone a rapid decline over the last 30 years and is now extinct over large parts of its former range. The reason for this decline is not clear though it is likely that competition from faster growing, and taller weeds, particularly rats tail grass (Sporobolus africanus) is a key factor. Rats tail now dominates most of the northern North Island habitats that used to support native carrot.

***Attribution:**
Description based on herbarium specimens.

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=123

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

Caption: Rangitoto Island
Photographer: John Barkla

Caption: Dichelachne crinita
Photographer: John Barkla

***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

Dichelachne rara

Common Name(s):
short-hair plume grass

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3813

Caption: Coromandel
Photographer: John Smith-Dodsworth

Caption: Coromandel
Photographer: John Smith-Dodsworth

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

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

Caption: Lake Kohangapiripiri, Wellington. Oct 2008.
Photographer: Jeremy Rolfe

Caption: Lake Kohangapiripiri, Wellington. Oct 2008.
Photographer: Jeremy Rolfe

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

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 0. Seeds brown, obovoid, rugose, c. 1 mm long.

Flowering:
Present throughout the year

Fruiting:
Present throughout the year

Threats:
Not Threatened

Caption: Dunedin
Photographer: John Barkla

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

***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

Elingamita johnsonii

Common Name(s):
Elingamita

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Endemic. Three kings Islands where it is known only from West Island and two nearby rocky islets in the Princes Group.

Habitat:
Pohutukawa (Metrosideros excelsa Sol. ex Gaertn.) forest and coastal shrub on West island, where it is usually an understorey shrub or small tree. Also grows in exposed places as a canopy emergent especially on HInemoa Rock in the Princes Group.

Features:
Stout mostly dioecious tree up to 8 m tall (usually much less). Branches ascending, initialy fleshy to subsucculent, soon becoming woody. Bark grey, smooth (finely lenticellate). Leaves on stout, succulent, coriaceous petioles up to 10 mm long; lamina rigidly coriaceous, 100-200 x 40-190 mm, dark glossy green above, pale beneath, obovate to broadly obovate, margins entire, midrib conspicuous, side veins evident. Inflorescences terminal, paniculate up to 60 x 60 mm, enlarging in fruit; bracteate with bracts shedding as inflorescence matures. Flowers with valvate sepals. Male flowers yellow to yellowish -pink, 4-6-partite, corolla longer than sepals (3-6 x 1.0-1.5 mm), narrowly obovate to broadly oblong. Filaments longer than corolla; anthers elliptic, pollen yellow to yellow-orange. Female flowers pale yellow to pink bearing rudimentary or rarely functional stamens, corolla shorter than sepals, 2.5 x 1-1.5 mm, adnate, shortly oblong to tubular, dehiscing after flowering as a ring. Ovary ovoid, tapered into a stout style. Fruit a globose to subglobose, drupe up to 20 mm diameter, bright red with white flesh. Seed single, enclosed within a brittle subcoriaceous grey-brown to greyish-white endocarp.

Caption: In fruit (in cultivation)
Photographer: Rebecca Stanley

Caption: In fruit (in cultivation)
Photographer: Rebecca Stanley

Flowering:
February - May, sometimes also August - November

Fruiting:
Fruit take a year to ripen so can be present at anytime

Threats:
Currently not threatened but the entire world population occupies a rather small area on one rocky island and two very small adjacent rock islets. These habitats are currently rodent-free. So the species remains vulnerable to stochastic events, fire, and as the fruit is very palatable rats.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=476

Epilobium cinereum

Common Name(s):
willowherb

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: North, South, Stewart and Chatham Islands. Also Australia (Queensland, New South Wales, Victoria, South Australia and Tasmania). Naturalised at least on the Hawaiian Islands if not elsewhere in the Pacific.

Habitat:
Coastal to upper montane. In open habitats and around lake, river and ephemeral wetland margins. Often a prominent urban weed, especially in derelict properties, old car yards, and in car parks. In these habitats it often associates with Epilobium ciliatum, E. hirtigerum, E. tetragonum and Lachnagrostis filiformis.

Features*:
Erect, much branched perennial or annual herb 0.15-0.60 m tall, often reddish-tinged, not obviously stoloniferous; plants strigulose, inflorescence, densely so, hairs comprising an admixture of glandular or non-glandular erect hairs often also present, the stems pubescent all round, conspicuously exfoliating and often somewhat woody near the base. Leaves mostly opposite alternate alternate in the upper half, grey-green, often tinged reddish, densely strigulose, the lateral veins visible to prominent, usually 3-5 on each side of the midrib; lamina 5.0-23.0 × 1.5-7.0 mm, linear to narrowly elliptic, apex subacute to acute or obtuse, base attenuate, margins coarsely serrate, bearing 1-8 teeth on each side, shortly pedunculate or subsessile. Inflorescence erect. Flowers erect. Ovary 10-24 mm long, on a pedicel 0-15 mm long, investiture usually densely though finely strigulose with an admixture of white or greyish-white, glandular or eglandular erect hairs. Floral tube 0.6-1.2 mm deep, 1.2-1.9 mm diameter, usually bearing a conspicuous ring of long hairs within. Sepals 2.5-7.5 × 0.8-1.7 mm, keeled, strigulose, bearing glandular or eglandular hairs also. Petals 3.5-12.0 × 2.0-6.5 mm, the notch 0.8-1.5 mm deep, rose-purple (very rarely white). Stamen filaments white of two types: long 1.5-5.0 mm long and short 1.0-4.5 mm. Anthers cream, 0.5-1.0 × 0.3-0.52 mm. Style 2.5-9.0 mm long, white. Stigma 1.5-4.0 × 0.9-1.5 mm, white, clavate, surrounded by (very rarely held well above) the anthers at anthesis. Capsule 30-68 mm long, densely strigulose, indumentum comprising an admixture of glandular and eglandular erect hairs; pedicel 6-20 mm long. Seeds 0.8-1.0 × 0.3-0.4 mm, brown, reticulate-mammilate to reticulate-papillose, obovoid, chalazal callus absent, apex rounded (not beaked); coma 7.0-10.5 mm long, white, breaking off readily.

Caption: Te rerenga, Coromandel. Dec.
Photographer: John Smith-Dodsworth

Caption: Te rerenga, Coromandel. Dec.
Photographer: John Smith-Dodsworth

Flowering:
September - May

Fruiting:
October - July

Threats:
Not Threatened

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange 22 August 2011. Description adapted from Raven & Raven (1976) and Webb & Simpson (2001).

References and further reading:

Raven, P.H.; Raven, T.E. 1976: The genus Epilobium in Australasia. New Zealand DSIR Bulletin 216. 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.; 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=1842

Epilobium nummulariifolium

Common Name(s):
Creeping willowherb

Current Threat Status (2012):
Not Threatened

Distribution:
Throughout the North Island, eastern half of South Island, Chatham, Mangare & Pitt islands.

Habitat:
Eroding banks and waste places, generally where well lit; sea level to 300m.

Features:
Densely grey-brown strigulose capsules.

Flowering:
August to April

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=1857

Caption: Stokes Valley, Lower Hutt. Sep 2011.
Photographer: Jeremy Rolfe

Caption: Stem hairs decurrent from petiole margins. Stokes Valley. Sep 2011.
Photographer: Jeremy Rolfe

Epilobium rotundifolium

Common Name(s):
Round-leaved willowherb

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. New Zealand: North, South, Stewart and Chatham Islands. Naturalised in Tasmania and the United Kingdom

Habitat:
Coastal to subalpine. Frequenting open forest, shrubland and grassland where it usually grows in partial shade on moist stream side banks, rocks within streams and rivers, or on damp banks, amongst boulders and within seepages in forest. Epilobium rotundifolium is also one of several indigenous epilobia that have successfully established within urban environments.

Features*:
Widely creeping, much-branched from base, perennial herb. Stems 100-400 mm tall, initially procumbent soon becoming ascendent and then erect, surfaces strigulose all round but especially so in lines decurrent from the margins of the petioles, often also with a few glandular hairs. Leaves opposite, a few of the uppermost alternate, the lateral veins inconspicuous, 2-5 on each side of the midrib; lamina 3-25 × 3-20 mm, adaxially green to coppery, dull or somewhat glossy, abaxially pinkish or flushed wine-red, broadly to very broadly ovate, acute to rounded at the apex, obtuse to truncate at the base, margins serrate with 5-14 teeth on each side, petiolate, petiole 1-8 mm long. Inflorescence nodding. Flowers erect. Pedicellate, pedicels 2-12 mm long. Ovaries 8-20 mm long, pubescent, investiture comprised of erect glandular hairs. Floral tube 05-1.5 × 0.9-2.0 mm. Sepals 2.0-3.4 × 0.7-1.2 mm, not keeled, subglabrous. Petals 2.5-5.0 × 1.5-3.5 mm, the notch 0.5-0.9 mm deep, white. Stamen filaments white of two types: long (1.2-2.7 mm long) and short (0.7-1.1 mm long), Anthers 0.7-0.8 × 0.6-0.7 mm, yellow. Style 1.4-2.7 mm long, white; stigma 1.0-1.5 x 0.7-0.8 mm, white, clavate surrounded by the anthers at anthesis. Capsule 20-50 mm long, subglabrous to strigulose, on a pedicel 15-42 mm long. Seeds 0.6-0.9 mm long, orange-brown, obovate-elliptic to obovate, finely reticulate-mammillate; coma 4-7 mm long, white to pale brown, caducous.

Flowering:
September - May

Fruiting:
October - July

Threats:
Not Threatened

Caption: Stokes Valley. Nov 2006.
Photographer: Jeremy Rolfe

Caption: Stokes Valley. Nov 2006.
Photographer: Jeremy Rolfe

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange 30 August 2011. Description adapted from Raven & Raven (1976) and Webb & Simpson (2001).

References and further reading:

Raven, P.H.; Raven, T.E. 1976: The genus Epilobium in Australasia. New Zealand DSIR Bulletin 216. 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.; Simpson, M.J.A. 2011: Seeds of New Zealand Gymnosperms and Dicotyledons. Christchurch, Manuka Press.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1864

Eragrostis curvula

Common Name(s):
African love grass

Current Threat Status (2009):
Exotic

Habitat:
Terrestrial. Dry steep sites, short and tall tussock grassland, coastal areas, riverbeds, cliffs, herbfields.

Features:
Variable, densely tufted, tussock-like, erect or prostrate perennial grass to 1-1.5 m tall. Deciduous in cold areas. Roots fibrous, up to 50 cm deep. Leaves narrow and hair-like, 3-7 mm wide, rolled inwards, rough, bright green to bluegreen (blushes bronze-red after hard frost), usually curly at tips. Seedheads usually loose, airy panicles (occ compressed), 6-30 x 4-20 cm, with tufts of white hair on lower axils. Seeds blackish olive-purple (ripening greyish); on arching stems to 1 m long, Summer. Several vars. in NZ, harshness and palatability varies widely.

Flowering:
November, December

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3893

Caption: Karikari Peninsula. Feb 2011.
Photographer: Jeremy Rolfe

Caption: Inflorescence. Karikari Peninsula. Feb 2011.
Photographer: Jeremy Rolfe

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

Caption: Coromandel
Photographer: John Smith-Dodsworth

Caption: Coromandel
Photographer: John Smith-Dodsworth

Euchiton delicatus

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=1870

Caption: L. Otamangakau, January
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

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 sphaericus

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=2131

Caption: Lake Westmere, Whanganui. Feb 2013.
Photographer: Colin Ogle

Caption: Cannon Point, Upper Hutt. Mar 2013.
Photographer: Jeremy Rolfe

Euphorbia peplus

Common Name(s):
milkweed

Current Threat Status (2009):
Exotic

For more information, visit:
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

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

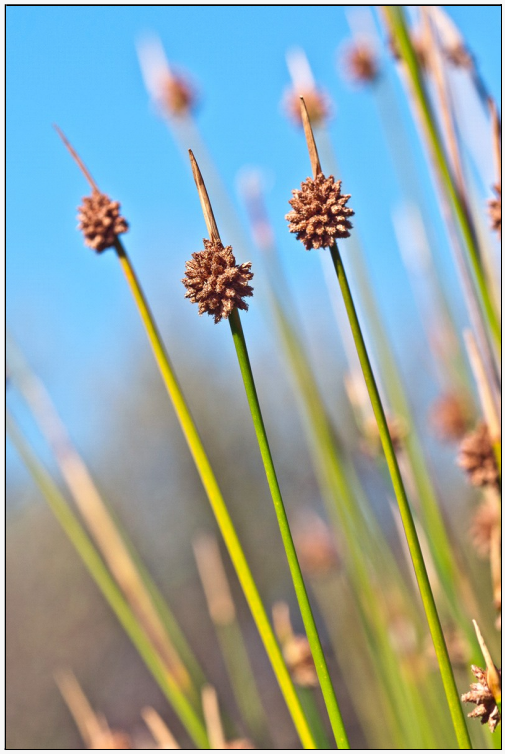
Threats:
Not Threatened

***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



Caption: Pauatahanui Inlet. Feb 2012.
Photographer: Jeremy Rolfe

Caption: Pauatahanui Inlet. Feb 2012.
Photographer: Jeremy Rolfe

Gamochaeta calviceps

Common Name(s):
silky cudweed

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3975

Caption: Otakaha Stream, Palliser Bay. Mar 2008.
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

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

Caption: South West Island
Photographer: Peter de Lange

Caption: South West Island
Photographer: Peter de Lange

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

Caption: Geranium gardneri
Photographer: Peter de Lange

Caption: Auckland
Photographer: Geoffrey Williams

Hydrocotyle heteromeria

Common Name(s):
waxweed, waxweed pennywort

Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

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=2157

Caption: Habit of plant. Lower Hutt. Mar 2007.
Photographer: Jeremy Rolfe

Caption: Foliage. Lower Hutt. Mar 2007.
Photographer: Jeremy Rolfe

Ipomoea cairica

Caption: Macauley Island
Photographer: John Barkla

Caption: Macauley Island
Photographer: John Barkla

Common Name(s):
pouwhiwhi, coastal morning glory, railway creeper

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: Kermadec (Raoul, Macauley, Cheeseman Islands), Three Kings, North and Great Barrier Islands. Mostly local and the exact southern are now unclear due to this species cultivation well south of apparently indigenous populations, and the subsequently naturalisation from these plantings via garden waste and (sometimes) deliberate plantings. The most likely natural southern limit is the Waitemata Harbour though most literature regards Tiritirimatangi Island as the actual southern limit. Also widespread in Africa, Asia, Australia, western Central America and in many of the Pacific islands of Oceania on some of which it may be naturalised.

Habitat:
Coastal. A local to sometimes abundant vine of dune systems, coastal scrub and cliff face vegetation, rubble slopes and mangrove (Avicennia marina subsp. australasica). Also an occasional urban weed found in waste land, rubbish dumps, car yards and hedges.

Features*:
Perennial rhizomatous vine. Stems cable like, usually glabrous (rarely minutely pubescent), initially ± smooth and reddish green to purple but maturing grey with the surface becoming conspicuously tuberculate. Leaves with petioles 20-60 mm long, usually falsely stipulate; lamina 30-100 mm long, palmately divided almost to base, ovate to orbicular in outline, 5-7-lobed, lobes lanceolate to elliptic or obovate with outermost lobes sometimes unequally 2-lobed, acute to obtuse, mucronulate. Inflorescences axillary, 1-several-flowered; peduncle 10-80 mm long; pedicels 10-30 mm long. Sepals 4.5-6.0 mm long, ovate, with outer sepals slightly shorter, obtuse to acute, mucronulate, glabrous. Corolla funneliform, purple, reddish-purple or white. Stamens and style included. Capsule c.10 mm long, ± globose. Seeds c.0.5 mm long, subglobose to ovoid, densely, shortly tomentose.

Flowering:
September - July

Fruiting:
September - August

Threats:
Not Threatened

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange (9 November 2011). Description adapted from Green (1994)

References and further reading:
Green, P.S. 1994: Flora of Australia Volume 49, Oceanic Islands 1. Canberra, Australian Government Publishing Service

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=2163

Isolepis cernua var. cernua

Caption: Coromandel
Photographer: John Smith-Dodsworth

Caption: Coromandel
Photographer: John Smith-Dodsworth

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 subtrigonous 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

Isolepis inundata

Caption: Isolepis inundata
Photographer: John Smith-Dodsworth

Caption: Isolepis inundata
Photographer: John Smith-Dodsworth

Common Name(s):
None Known

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: North, South and Chatham Islands. Also Australia, Malaysia, South America and Norfolk Island

Habitat:
Coastal to montane in fresh water wetlands (eutrophic to oligotrophic). Often forming a floating sud around lake, pond and stream margins. Sometimes colonising old water troughs and damp pasture.

Features*:
Initially tufted, with culms soon arching and spreading. Culms 60.0–500.0 × 0.4–1.8 mm, tufted, numerous, erect, often rather rigid (especially in lower third), terete, bright green. Leaves 1, or rarely 2–3 at the base of the culm, < 1 mm. wide; frequently reduced to a single, mucronate, red basal bract, mucro usually short. Inflorescence an apparently lateral, solitary head of (1–)3–6(-10) crowded spikelets, often proliferous with 1–3 slender branchlets each terminated by a smaller head of spikelets, subtending bract usually slightly > spikelets. Spikelets 2.0–5.0 × 1.5–3.0 mm, ovate or oblong-ovate, often dark red-purple. Glumes 1.5–2.0 mm. long, oblong-obovate, obtuse or ± acute, with a large dark red to black patch on either side of the pale green keel, with numerous distinct, light brown nerves, margins entire, white and membranous, flattened at the tip beside the keel. Hypogynous bristles 0. Stamen 1, very rarely 2. Style-branches 3, or rarely 2–3. Nut c.1.0 × 0.5 mm, slightly > ½ length of glume, conspicuously trigonous (very occasionally biconvex), distinctly mucronate, pale straw-coloured, almost white, occasionally grey-brown, surface distinctly reticulate.

Flowering:
September - January

Fruiting:
October - June

Threats:
Not Threatened

***Attribution:**
Description adapted 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=799

Juncus bufonius var. congestus

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=4679

Juncus edgariae

Common Name(s):
Wiwi, Edgars rush

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Kermadec, North, South, Stewart and Chatham Islands. Naturalised in Britain

Habitat:
Easily the most common indigenous species. Coastal to alpine (1600 m a.s.l.) but mainly coastal to montane. Usually in open shrubland, fringing wetlands, and in seasonally damp sites. Often found invading pasture and in urban areas.

Features*:
Bright to dark green, orange-green to red-green (drying glossy yellow-green) rather variable perennial forming compact to diffuse tussocks 0.6-2.5 m tall. Rhizome at or just below ground, 5 mm diameter, horizontal, difficult to pull from the soil. Flowering culms 1-3 mm diameter, erect, rather wiry (very hard when dry), smooth, shining; striations 22-60; internal culm pith interrupted irregularly or occasionally continuous; leaves absent; basal bracts dark red-brown below, straw-coloured above, tightly sheathing the stem or the uppermost loosely sheathing. Inflorescence apparently lateral, variable, either many or few-flowered, open with few to many branches bearing flowers in small clusters at the tips of branchlets, or condensed to a compact, central cluster with a few pedunculate side clusters, or a single spherical compact head wider than 10 mm. Flowers 1.5-2.0 mm long; tepals 6, brownish green, later becoming brown, acute to acuminate or mucronate; outer tepals 1.7-2.6 mm long, with fine hyaline margins, inner tepals slightly shorter with broad hyaline margins. Stamens 3, shorter than tepals; anthers 0.4-0.6 mm long < or equal in legnth to filaments. Capsule 1.5-2.3 mm long, equal to or < tepals, ellipsoid, obovoid, dark golden brown, with a dark brown, obtuse, almost retuse, apiculate tip. Seeds 0.4-0.6 mm long.

Flowering:
October - December

Fruiting:
November - April

Threats:
Not Threatened

Caption: Juncus edgariae
Photographer: John Smith-Dodsworth

Caption: Close up of Juncus edgariae
Photographer: John Smith-Dodsworth

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange (1 September 2006). Description based on Moore & Edgar (1970) (as J. gregiflorus) supplemented by notes taken from Johnson & Wilson (2000).

References and further reading:

Johnson, L.A.S.; Wilson, K.L. 2000: *Juncus edgariae* (Juncaceae) - a new species from New Zealand. *Telopea 9*: 399-402,

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, 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

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=869

Juncus pauciflorus

Common Name(s):
leafless rush

Current Threat Status (2012):
Threatened - Nationally Vulnerable

Distribution:
Indigenous. North, South and Stewart Islands. Present in Australia

Habitat:
Coastal to lowland (often on northern offshore islands) in damp ground and hollows under light scrub, in pasture, on swamp margins, in dune swales under scrub or within coastal forest.

Features*:
Slender, clumps with sprawling to almost lianoid stems spreading widely from base. Rhizome 2-3 mm diameter, horizontal, near surface or above ground, easily pulled from soil. Flowering stems 0.25-1.00 m long, 0.75-2.00 mm diameter, bright green to reddish green, smooth, glossy to lustrous, internal pith continuous; leaves absent; basal bracts very short, conspicuously dark red-brown, closely sheathing. Inflorescence apparently lateral, rather lax and open, with flowers evenly spaced, often rather remote, on slender, flexible, more or less curved branchlets. Flowers 2.5-3.0 mm long; tepals light greenish brown. Stamens 6. Capsule 2.5-3.5 mm long, usually distinctly > tepals, ovoid to almost oblong, light brown to red-brown, often very dark towards apex.

Flowering:
November - January

Fruiting:
November - April

Threats:
Rather uncommon

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

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. 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 11: 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2174

Juncus planifolius

Common Name(s):
grass-leaved rush

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. North, South, Stewart and Chatham Islands. Also Australia, Hawaii and South America.

Habitat:
Coastal to montane (up to 1000 m a.s.l.) in open, moist ground. Often found on fresh exposed damp clay, or along track sides or on the margins of drains. A common urban weed which has naturalised in the northern Hemisphere.

Features*:
Bright green, yellow-green to wine-red, tufted, grass-like perennial herb of rather variable stature. Stems 20.0-900.0 x 0.5-1.5 mm. Leaves numerous, all basal, up to 100 mm x 8 mm, usually less than stem, solid, flat, non-septate, lanceolate to linear-lanceolate, tapered gradually from base to the slightly dilated, acute, usually mucronate apex; sheaths broad without auricles, mostly pink-coloured, rarely cream. Inflorescence terminal, umbel-like and irregularly branched. Flowers numerous, 1.5-2.0 mm long, crowded in globose or hemispherical clusters at the ends of the numerous branchlets; tepals more or less equal, the outer acuminate, inner acute, all with light green centres and red-brown to wine-red margins. Stamens 3(-6). Capsule equal to or very slightly > tepals, lustrous brown to brownish-black, ovoid, mucronate.

Flowering:
August - April

Fruiting:
October - June

Threats:
Not Threatened

Caption: Pauanui, February
Photographer: John Smith-Dodsworth

Caption: Fruit. Te Marua. Apr 2007.
Photographer: Jeremy Rolfe

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange (1 September 2006). Description based on Moore & 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. 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 11: 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2175

Lachnagrostis billardierei subsp. billardierei

Caption: Lachnagrostis billardierei
Photographer: John Sawyer

Caption: Lachnagrostis billardierei
Photographer: John Sawyer

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 9rarely 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

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

Caption: Pa Hill, Coromandel
Photographer: John Smith-Dodsworth

Caption: Pa Hill, Coromandel
Photographer: John Smith-Dodsworth

***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

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

Caption: Waituhi Saddle. Jan 2009.
Photographer: Jeremy Rolfe

Caption: Pakuratahi Forks, Kaitoke.
Photographer: Jeremy Rolfe

Lagurus ovatus

Common Name(s):
harestail

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3357

Caption: With Bromus diandrus (tall culms), Whitiau Scientific Reserve, Whanganui. Nov 2011.
Photographer: Colin Ogle

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

Lepidium africanum

Common Name(s):
peppercress

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3390

Caption: Miranda. Jul 2007.
Photographer: Jeremy Rolfe

Caption: Miranda. Jul 2007.
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

Caption: Lepidium didymum
Photographer: Jeremy Rolfe, April 2006, Stokes Valley

Caption: Lepidium didymum
Photographer: John Smith-Dodsworth

Lepidium oleraceum

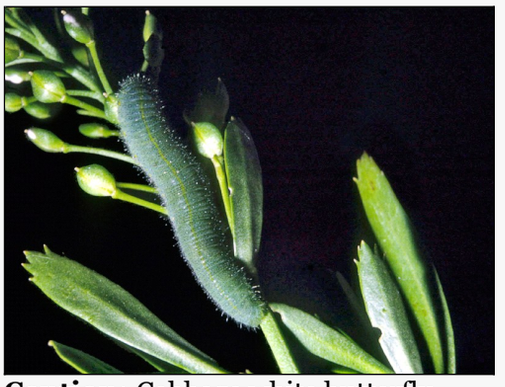
Common Name(s):
Nau, Cooks scurvy grass

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.

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

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-oblanceolate, 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 erecto-patent, 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, Dicotyledons.Christchurch, New Zealand, Botany Division, D.S.I.R.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=71

Litsea calicaris

Caption: Litsea calica (Mangeao)
Photographer: Wayne Bennett

Caption: Litsea calicaris
Photographer: Bec Stanley

Common Name(s):
Mangeao, tangeao

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Three Kings and North Islands. Common to about Mokau in the west and the Rotorua lakes area and Mahia Peninsula in the east

Habitat:
Coastal lowland and lower montane forest. Mangeao is usually a fairly localised tree over much of its range but in the Waikato and Bay of Plenty, particularly on the deep so called "ash" soils and on the limestones in the western Waikato it can be the dominant canopy tree. Although mangaeo seems to like high rainfall it is (or was) also an important tree on the lava fields of Auckland, and it is one of the few tree species to grow on the ultramafic rocks of North Cape.

Features*:
Stout, spreading tree up to 18 m tall; trunk up to 0.80 m dbh; usually solitary, rarely branched from base, often sporting numerous suckers and epicormic growth; bark dark grey to grey-brown, firm (not flaking). Branches stout, initially upright and then shortly to widely spreading, branchlets numerous, sapringly lenticillate, glabrous. Leaves alternate, subcoriaceous, glabrous, adaxially glossy dark green, yellow-green or green suffused with red, sometimes mottled or spotted with dark red or purple (emergent leaves often glaucescent or deeply tinged wine-red), abaxially glaucous or tinged wine-red; midrib raised on both surfaces, veination distinct when fresh or dried; petioles 15-30 mm long, somewhat wiry, dark green red or maroon-black; lamina 50-130 × 30-60 mm, ovate, oval, ovate-elliptic, apex obtuse to subacute, base broadly cuneate. Inflorescence an axillary, racemosely arranged, 4-5-flowered, open or rather congested, involucrate, umbel; peduncle 10-40 mm long, rigidly wiry, pedicels sparsely, minutely, pubescent. Involucrum comprising 4, 5-10 mm long, broadly oblong to oblong-elliptic, glabrous, somewhat fleshy, ± caducous pale green, cream (often red-tinged) scales. Flower perianth segments 4-6(-8), 4-5 mm long, cream, white, pale yellow or greenish,oblong to ovate. Stamens 10-12(-18); filaments slender, 0.8-2.6 mm long, white or pinkish white, biglandular; staminodes flattened, biglandular; stigma dilated,irregularly 3-lobed. Drupe 15-22 mm long, 1-seeded, subovoid to ovoid, seated in enlarged perianth tube; mesocarp purple-black. Endocarp membranous, 10-13 mm long, dark brown. Description adapted from Allan (1961) and Webb & Simpson (2001).

Flowering:
September - November

Fruiting:
September - March

Threats:
Not Threatened. Mangaeo while certainly not threatened at a national level is experiencing a decline over some parts of its range. While possum browse is a factor in some areas, die back of apparently healthy trees in areas where possums are controlled or scarce is of some concern. From time to time "mangaeo die back" is reported in the media - the cause of this "die back" warrants further study.

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange 10 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=940

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).

Caption: Seed of Lotus pedunculatus
Photographer: Trevor James (AgResearch)

Caption: Flower of Lotus pedunculatus
Photographer: Trevor James (AgResearch)

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

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

Caption: Abaxial surfaces of leaves and stipules. Whanganui. Nov 2011.
Photographer: Colin Ogle

Caption: Stipules. Whanganui. Nov 2011.
Photographer: Colin Ogle

Machaerina juncea

Common Name(s):
sedge, tussock swamp twig rush

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: Three Kings, North and South Islands but scarce south of the Bay of Plenty and Waikato, and very uncommon in the South Island where it known mostly from Nelson, Marlborough and North Westland, though it extends south into Otago.

Habitat:
Coastal to lower montane. Locally common in damp sites in gum land, swamps, salt marshes, and also along lake margins and river estuaries.

Features*:
Tufted, rush-like, rhizomatous perennial. Rhizome 3–10 mm diameter, woody, usually shortly creeping, sometimes greatly elongated, covered with loose, papery, imbricate, light brown bracts. Culms 0.2–1.35 tall, 1.0–3.5 mm wide, arising in mostly short- spaced (crowded) tufts along rhizome, terete, rigid, erect, smooth, glaucous to glaucescent, with 1–2 distant nodes. Leaves all reduced to light brown or reddish sheathing bracts, the lowermost smaller, mucronate, the upper 1–3 longer, distant along the culm, usually dark brown at the orifice, with a small, sickle-shaped, laterally flattened mucro-like lamina up to 5 mm long. Inflorescence 25–100 mm long, stiff, erect, spike-like, sparingly branched, subtended by a much shorter sheathing bract. Spikelets not fascicled, 4–5 mm long, red-brown, 1–2-flowered, only the lowest flowers fertile. Glumes 4–5, oblong-lanceolate, acute, membranous, streaked with brown, scabrid on the keel and towards the tip. Nut 2.5–3.0 × c. 1.5 mm, oblong-ovoid, obscurely trigonous, dark brown to black, orange near the base, surface pitted, surmounted by the small, tumid, pubescent style-base.

Flowering:
October - December

Fruiting:
Fruits may be found throughout the year

Threats:
Not Threatened.

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange (16 February 2012). 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 2009 Vol. 11 No. 4 pp. 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2067

Caption: Whangapoua harbour, October
Photographer: John Smith-Dodsworth

Caption: Waikumete, Auckland. Sickle-shaped tip of bract. Oct 2007.
Photographer: Jeremy Rolfe

Machaerina rubiginosa

Common Name(s):
Baumea

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: North, South, Stewart and Chatham Islands. Also New Guinea, New Caledonia and Australia

Habitat:
Coastal to montane (up to 900 m a.s.l.) in most freshwater wetlands; especially favouring low moor peat bogs, the margins of restiad bogs and their burn pools, more rarely on the margins of lakes, tarns and slow-flowing streams where it may grow with Machaerina arthrophylla.

Features*:
Glaucous to bright-green, rhizomatous sedge. Rhizome 2–4 mm diameter, horizontal, shortly creeping, wiry, fibrous, covered with a loose coat of closely imbricating papery scales. Culms 0.3–1.2 m tall, 1.0–2.5 mm, terete, soft, light blue-green, darkly glaucous or bright-green. Lower leaves reduced to grey-brown, membranous, mucronate sheaths; upper leaves 1–3, terete like the culms, < or ± = culms, internally septate, tips subulate, acute. Inflorescence a panicle, 60–350 mm long, rounded at the tip, interrupted, with branchlets in distant fascicles, stoutest lateral branchlet arising from lowest spathaceous bract c.1 mm diameter; bracts subtending upper fascicles acuminate, membranous, red-brown. Spikelets 4.5–6.0 mm long, clustered, red-brown, 2–4-flowered, 1 or occasionally 2 flowers fertile. Glumes 4–5, ovate, acuminate, membranous, streaked with red, margins ciliate, scabrid towards the tip and on the keel. Nut 3.0–4.0 x c.1.5 mm, elliptic-oblong, pale- or orange-yellow, smooth, trigonous while immature; beak small, grey or black, acute, trigonous, puberulous.

Flowering:
October - December

Fruiting:
Throughout the year

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 2009 Vol. 11 No. 4 pp. 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2025

Caption: Baumea rubiginosa
Photographer: Wayne Bennett

Caption: Baumea rubiginosa
Photographer: Wayne Bennett

Machaerina teretifolia

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: North and South Islands - common in the northern half ot he North Island, then less so though locally common around Wellington. In the South Island common in Nelson and Westland. Also Australia and New Guinea.

Habitat:
Coastal to montane (up to 900 m a.s.l.) mostly in moderately acid to extremely acidic peat bogs, (especially low moor bogs and restiad bogs), also in gum land and pakihi. Less commonly found growing along the margins of peat lakes slow-flowing streams draining peat bogs, or along drainage ditches.

Features*:
Plants rhizomatous, variable, either densely tufted, caespitose, or covering large tracts of ground with distant culms. Rhizome 2–4 mm diameter, fibrous and flexuous, usually widely creeping, all parts invested with closely imbricate, grey papery bracts. Culms 0.3–1.1 m tall, 1.5–4.0 mm, terete or slightly compressed, striate, yellow-green. Lowermost leaves reduced to sheathing bracts, pinkish brown, rarely dark grey, mucronate; upper leaves 1–3, < or ± = to culms, terete like the culms except towards the subulate, pungent tip, internally septate, sheath loose. Panicle 40–180 mm long, stiff, erect, narrowed and pointed towards the tip like a spear-head, with numerous closely packed branchlets; sheaths subtending panicle and branchlets short, membranous, pale brown, striate. Spikelets 3–5 mm long, fascicled, close-set, dark brown to almost black, 1(-2)-flowered, if so then with only 1 flower fertile. Glumes 4–5, ovate, acuminate to mucronate, almost awned, dark brown, smooth or slightly scabrid at the back, margins ± ciliate. Nut 1.5–2.0 × c. 1 mm, oblong-obovoid, white or pale brown, surface deeply and ± vertically corrugated; style-base very small, hardly distinct, smooth.

Flowering:
October - December

Fruiting:
Throughout the year

Threats:
Not Threatened.

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange (23 March 2012). 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 2009 Vol. 11 No. 4 pp. 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2026

Caption: Baumea teretifolia
Photographer: Wayne Bennett

Caption: Otaki. Apr 2007.
Photographer: Robyn Smith

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

Caption: Coromandel, October
Photographer: John Smith-Dodsworth

Caption: Tuhuia Is, Coromandel, April
Photographer: John Smith-Dodsworth

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

Caption: Microlaena stipoides
Photographer: John Smith-Dodsworth

Caption: Microlaena stipoides
Photographer: John Smith-Dodsworth

Microtis parviflora

Caption: Bream Tail Reserve, 3/11/95
Photographer: Eric Scanlen

Common Name(s):
Onion-leaved orchid

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. Kermadec, Three Kings, North and South Islands. In the North Island common to about the Waikato and Bay of Plenty scarce otherwise. In the South Island known from the Marlborough Sounds, north-west Nelson and the northern West Coast. Probably also in Australia.

Habitat:
Coastal to lowland. Favouring open clay pans, sand dune hollows, and other areas of exposed soil with little overhead vegetation. Common in gumland scrub, on the margins of peat bogs, in seral forest and within geothermal fields.

Features*:
Terrestrial, glabrous, colony forming, fleshy, tuberous bright green to yellow-green perennial herb. Plants at flowering 100-400(-700) mm tall. Tubers globose to ovoid. Stem erect, terete. Leaf solitary, usually overtopping inflorescence, bright green to yellow-green, closely sheathing stem for much of length, linear-terete, hollow, 400 x 8 mm long. Inflorescence a raceme up to 300 x 10 mm. Flowers 10-80, up to 3 mm diameter, shortly-stalked and closely spaced, more or less overlapping. Perianth green to yellow-green, segments up to 2.2 mm long, widely spreading, thick and fleshy. Dorsal sepal 1.5-2.0 mm long, ovate, erect or projecting forwards, cucullate, concave, column-embracing, acute, apex shortly recurved, smaller than ovary at flowering; lateral sepals shorter and narrower, subacute, strongly deflexed, usually curled under. Petals shorter still, narrowly obtuse, erect, usually partially hidden under dorsal sepal. Labellum sessile, tongue-like, up to 2 mm long, green or yellow-green, more or less triangular-cordate, decurved but more less slightly projecting forwards, broader at base narrowing to an obtuse apex terminated by a down-turned apiculus; margin entire to sinuate (with marginal cells occasionally, slightly enlarged), smooth; anterior callus usually present, somewhat variable in size; basal calli prominent, dark green, ovate, paired and parallel, surrounding a distinct small pouched bulge on the under side of the labellum. Column short, obtuse, base of column wider than stigma, otherwise narrowing behind stigma, wings 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:
September - March

Fruiting:
December - 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=987

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

Caption: Microtis
Photographer: DoC

Caption: Kennedy Bay, November
Photographer: John Smith-Dodsworth

***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

Morelotia affinis

Caption: Fruiting plant, Okere Falls, Rotorua
Photographer: Colin Ogle

Caption: Fruiting head, Okere Falls, Rotorua
Photographer: Colin Ogle

Common Name(s):
Morelotia

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. North and South Islands from Te Paki south to south-west Nelson.

Habitat:
Coastal to montane. usually on steep clay banks and hillsides in gumland scrub, shrublands and other regenerating mainly indigenous vegetation. Sometimes in pine plantations. Also colonising steep rock faces, gorges and boulder falls.

Features*:
Harsh, leafy tufted perennial sedge 200-700 mm tall. Rootstock, stout, lignaceous. Leaves numerous, >> culms, 200-620 x 4-8 mm, green to yellow-green (rarely dark green), flat, curving, scabrid on the abaxial, tapering to a filiform apex, this usually curled when dry; margins scabrid, strongly revolute in the long persistent dry old leaves; sheath rather short compared to lamina, not demarcated from lamina by any transverse line but merely becoming broader, cream, with membranous margins. Panicle erect, rigid, 60-300 mm long, with short, more or less distant branchlets subtended by rigid, scabrid, leaf-like bracts. Spikelets 6.5-10.0 mm long, narrow-lanceolate, shortly stalked. Glumes coriaceous, minutely puberulous, keel and margins finely scabrid; 4 outer glumes smaller, increasing in size, usually acuminate, 2 upper glumes much longer, acute, rigid; a seventh minute membranous glume subtending the uppermost sterile flower. Nut 2.5-3.0 x 1.5 mm, elliptic-oblong, lustrous red-brown to black, with 3 longitudinal ribs, surmounted by a thickened, corky style-base which is very distinct in the immature fruit; ripe fruit retained on plant for a time by being entangled in the slightly elongated staminal filaments.

Flowering:
October - December

Fruiting:
November - April (but old inflorescences present throughout the year)

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=801

Muehlenbeckia australis

Common Name(s):
Pohuehue, large-leaved muehlenbeckia

Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=990

Caption: Fruit. Stokes Valley, Lower Hutt. Apr 2013.
Photographer: Jeremy Rolfe

Caption: Fruit. Stokes Valley, Lower Hutt. Apr 2013.
Photographer: Jeremy Rolfe

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

Caption: Scandia geniculata flowers and foliage through Muehlenbeckia. Birdlings Flat, Canterbury.
Photographer: Jesse Bythell

Caption: Habitat, Birdlings Flat, Canterbury
Photographer: Jesse Bythell

Myosotis spatulata

Caption: Myosotis spathulata
Photographer: John Smith-Dodsworth

Caption: Flowering Myosotis spathulata
Photographer: John Smith-Dodsworth

Common Name(s):
None known

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Endemic. North, South and Chatham Islands.

Habitat:
Coastal to subalpine (0-1300 m a.s.l.). Usually on or near rock outcrops, under rock overhangs, on ledges or amongst rubble in forest or shrubland. Sometimes found on clay banks or open ground under dense forest, along track margins, or in alluvial shrubland. Very rarely found as an urban weed in shaded pavement or in shaded sites amongst mosses within excessively mowed lawns.

Features*:
Mostly decumbent, widely spreading, perennial herb with adventitious roots on lateral branches; these often present to apices unless laterals are ascending. Petioles slender, 10-15 x 1-2 mm wide, purple-black to green, finely to conspicuously hispid to silky hairy. Rosette leaves 15-40 x 5-20 mm, dark green to yellow-green, sometimes with purple-red margins, orbicular, broadly ovate to broadly elliptic, apex retuse, mucronate, mucro 0.1-0.3 mm long; hairs on upper lamina surface short to long, straight, more or less appressed, not crowded, on lower surface similar but erect. Lateral branches 50-600 mm long, usually decumbent, sometimes scending at apices, often heavily branched, sometimes bearing subsidiary rosettes subtending flowers; frequently rooting at leaf junctions; internodes equal to or greater than leaves; cauline leaves shortly petiolate, 5-20 x 5-20 mm, orbicular to broadly elliptic, hairs as for rosette-leaves. Flowers solitary in leaf axils, sometimes up to 15 in sequence along lateral branchlets, pedicels 0.5-6 mm long in fruit. Calyx 1-3 mm, lobed almost to base, lobes narrow, acute, spreading widely in fruit; hairs spreading, scattered over lobes and base, of varying sizes, the largest more or less hooked. Corolla white 1-4 mm diameter, tube cylindric, lobes spreading to patent, never flat; filaments fixed at level of scales, anthers position 1/2 up lobes, anthers < 1 mm long, yellow; style up to 3 mm long; stigma clavate. Nutlet 1-1.5 x 0.6-1 mm, black to grey-black, ovate, apex obtuse, base rounded.

Flowering:
September - March

Fruiting:
September - May

Threats:
Widespread but never common at any particular location (sometimes it is known from just one rock ledge or overhang for an entire district). Despite its natural scarcity it seems quite able to cope with weed invasions, partly because it can tolerate extreme heavy shade and a range of soil/substrate moisture regimes from drought prone to saturated.

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange 1 February 2008. Description based on Allan (1961).

References and further reading:
Allan, H.H. 1961: Flora of New Zealand. Vol. I. Goverment Printer, Wellington.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=289

Myrsine oliveri

Caption: Great Island
Photographer: Peter de Lange

Caption: Great Island
Photographer: Peter de Lange

Current Threat Status (2012):
Naturally Uncommon

Distribution:
Endemic to the Three Kings Islands, where it is known from Manawa Tawhi (Great Island), South West and West Islands.

Habitat:
Coastal forest and shrubland.

Features*:
Shrub or (rarely) a small gynodioecious tree up to 5m tall. Trunk 0.1-0.15 m dbh; usually solitary rarely multi-trunked or branching from near base, root suckers absent; epicormic growth infrequent; bark smooth, firm (not flaking), dark brown to red-brown or grey-brown, usually clean of lichens and bryophyte growth. Branches upright to shortly spreading, flexible, sparsely lenticellate; branchlets leafy, flexible, initially wine-red or pink, finely pubescent, maturing red-brown and glabrous. Leaves alternate, coriaceous, glabrous except for midrib and leaf margin which at least initially is finely pubescent, adaxially glossy dark green, yellow-green to green tinged pink (rarely sparingly spotted with red), abaxially similar but paler, oil glands numerous, minute (scarcely evident) colourless or flushed pink; midrib light green or yellow-green, slightly raised adaxially, prominently so abaxially, venation evident in fresh and dried material; petioles 5-10 mm long, stout, somewhat fleshy when fresh, dark pink, maroon or purple-black. Lamina (30-)50-65(-100) × (15-)30-40(-55) mm, obovate, elliptic to broadly cuneiform, apex rounded (if so then usually weakly emarginate) or subacute, base cuneately narrowed or attenuate; margins distinctly thickened, often slightly recurved, entire or with upper third of lamina irregularly dentate (juvenile leaves similar but smaller and with entire length of lamina margin regularly dentate). Inflorescence in densely 3-5(-8)-flowered, axillary, cymose fascicles (rarely solitary). Flowers pale yellow flushed with pink, sometimes spotted red, pedicels of flowers 1.8-2.2(-3.0) mm long, pinkish green, stout, glabrous, elongating slightly at fruiting. Pistillate flowers: calyx 1.6-2.0 mm, tube 0.5-0.8 mm, lobes (4-)5, erecto-patent,0.6-0.9 x 0.2-0.5 mm, deltoid, margins finely ciliolate, cilia pinkish; corolla 2.4-3.0 mm, tube 0.4-0.6 mm,lobes 4, erecto-patent to spreading (if spreading then with apices strongly decurved at anthesis), 2.3-3.0 x 1.3-1.4 mm, elliptic to elliptic-oblong, margins finely ciliolate, cilia pinkish, apex rounded or obtuse. Antherodes malformed, 0.45-5.8 x 0.3-0.4 mm, apiculus recurved, pollen absent. Ovary 2.0 x 2.4 mm long, ellipsoid. Stigma subsessile to sessile, 2.2-2.8 mm diameter, capitate, ± globular. Staminate flowers: calyx 1.8-2.2 mm, tube 0.65-0.8 mm, lobes 4,erecto-patent, 0.8-1.1 x 0.4-0.6 mm, deltoid, margins finely ciliolate, cilia pinkish; corolla 2.8-3.6 mm, tube 0.45-0.8 mm,lobes (4-)5, spreading (with apices strong decurved at anthesis), 2.6-3.8 x 1.6-1.9 mm, elliptic to elliptic-oblong, margins fimbriate, pinkish, apex rounded or obtuse. Stamens (4-)5, filaments 2.2-2.8 x 0.22-0.30 mm, pinkish, stamens yellow, apiculus recurved. Ovary absent or rudimentary, malformed. Bisexual flowers: calyx 1.7-2.0 mm, tube 0.34-0.7 mm, lobes 5, erecto-patent, 0.6-0.9 x 0.2-0.5 mm, deltoid, margins fimbriate, pinkish; corolla 2.42-2.8 mm, tube 0.4-0.6 mm,lobes 5, spreading (with apices strongly decurved at anthesis), 2.3-2.9 x 1.2-1.31 mm, elliptic, margins fimbriate,cilia pinkish, apex rounded or obtuse. Stamens (4-)5, filaments 2.2-2.8 x 0.22-0.30 mm, pinkish, stamens yellow, apiculus recurved. Ovary 2.0 x 2.4 mm long, ellipsoid. Stigma subsessile to sessile, 2.2-2.8 mm diameter, capitate, ± globular. Drupe 1-seeded, 5.0-8.1 mm diameter, subturbinate-globose to globose, violet to purple-black, sometimes white spotted. Endocarp 3.0-4.0 × 5.0-6.0 mm, subturbinate-globose to globose, pale brown, surface irregular with pale longitudinal veins.

Flowering:
July - September

Fruiting:
October - May

Threats:
Once believed close to extinction this species has made a spectacular recovery and is now abundant on Manawa Tahwi (Great Island), and it is actively spreading to the other adjacent islands. It is listed only because it occupies a small geographic area.

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange 11 February 2011. Original description by P.J. de Lange.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=602

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 cuneatelty 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 pedicles; calyx unequally deeply cleft, ovate, subacuminate; males with 2 large exserted 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

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

***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

Ornithopus pinnatus

Common Name(s):
yellow serradella

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3259

Caption: Ornithopus pinnatus
Photographer: John Smith-Dodsworth

Caption: Ornithopus pinnatus
Photographer: John Smith-Dodsworth

Oxalis exilis

Caption: Oxalis exilis
Photographer: John Barkla

Caption: Stokes Valley. Apr 2006.
Photographer: Jeremy Rolfe

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 cylindric, 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

Oxalis rubens

Caption: Great Barrier island
Photographer: Rebecca Stanley

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

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 cylindric, 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

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-tinged), suborbicular, broad-ovate, rhomboic-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

Caption: Parietaria debilis, Macauley Island
Photographer: John Barkla

Caption: Parietaria debilis, Macauley Island
Photographer: John Barkla

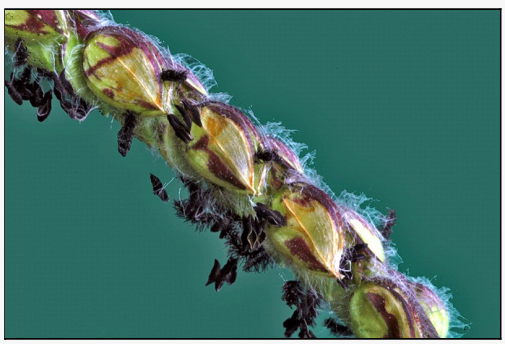
Paspalum dilatatum

Common Name(s):
paspalum

Current Threat Status (2009):
Exotic

For more information, visit:
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, subsessile 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 Paki south to the Bay of Plenty. This species is now scarce south of Auckland City, and has it 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.

Caption: Green Bay, Auckland. Apr 2007.
Photographer: Peter de Lange

Caption: Green Bay, Auckland. Apr 2007.
Photographer: Peter de Lange

***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

Paspalum vaginatum

Common Name(s):
saltwater paspalum

Current Threat Status (2009):
Exotic

Habitat:
Aquatic: Emergent. Found in brackish water around the margins of river mouths and estuaries

Features:
Decumbent perennial grass with long creeping stolons. Leaf-blade up to 8 cm x 2 mm, rather stiff and much narrower than the sheath. Culm up to about 20 cm tall, panicle consisting of 2 spreading racemes.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3296

Caption: North Cape. Feb 2011.
Photographer: Jeremy Rolfe

Caption: North Cape. Feb 2011.
Photographer: Jeremy Rolfe

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

Caption: Beaumont
Photographer: John Barkla

Caption: In cultivation. Oct 2011.
Photographer: Jeremy Rolfe

Pennantia baylisiana

Common Name(s):
Three Kings Kaikomako

Current Threat Status (2012):
Threatened - Nationally Critical

Distribution:
Endemic to Great (Manawa Tawhi) Island, Three Kings Island group.

Habitat:
Coastal Forest.

Features*:
Sturdy, multi-trunked tree 5-8 x 4 m tall. Bark greyish, tessellated. Young branches and branchlets lenticellate. Petiole 25 mm long. Leaves subcoriaceous, glabrescent, 120-160 x 70 -100 mm, oblong to obovate, in exposed conditions distinctly recurved, otherwise flat, margins entire, apex obtuse, rounded, or slightly emarginate; base cuneate to obtuse; lateral veins of underside subtended by axillary hairy, pocket-domatium. Inflorescence usually ramiflorous or cauliflorous, rarely terminal, 80-120 x 40-120 mm. Male flowers unknown. Female flowers 1.5 x 1.5 mm, petals 2.6 mm, greenish white, stamen filaments in bud kinked sideways, straightening at anthesis, 1.5 mm long; anther 1-1.4 mm, pollen usually malformed and sterile. Ovary barrel shaped, 2.8 x 2 mm; stigmatic ring 1.5-1.8 mm diam., crested into 3 triangular plates. Fruit ellipsoidal, 10 x 4.5 mm, flesh purple; stone 9 x 3.5 mm.

Flowering:
October-November

Fruiting:
Fruiting occurs between January and April in cultivated material. Ripe fruit has been seen in the wild during February and March

Threats:
Only one tree occurs in the wild. Initially P. baylisiana and indeed all other Three Kings endemic plants were at serious risk from goats. These were successfully eradicated in 1946. Since then the tree has persisted despite periodic storm and drought damage which may kill entire trunks. However, being female the tree was until recently considered functionally extinct. Apparently viable fruits were first found in the wild in 1989, and these, along with fruiting cutting grown plants in New Zealand provide one source of securing the species. However, until such time as more trees occur in the wild, P. baylisiana remains seriously at risk of extinction through natural events such as storms or senescence through old age.

Caption: Fruit
Photographer: Peter de Lange

Caption: Seedlings and adult foliage
Photographer: Peter de Lange

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange 1 October 2003. Description from Gardner & de Lange (2002) - see also 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.

Gardner, R.O.; de Lange, P.J. 2002: Revision of *Pennantia* (Icacinaceae), a small isolated genus of Southern Hemisphere trees. *Journal of the Royal Society of New Zealand 32*: 669-695.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=32

Peperomia tetraphylla

Caption: Hicks Bay, Onepoto Bay
Photographer: Peter de Lange

Caption: Close up of Peperomia tetraphylla plants
Photographer: Peter de Lange, April 1994, Hicks Bay, Onepoto Bay Track

Common Name(s):
None known

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Indigenous. Recorded from Northland, the Bay of Plenty and East Cape areas. Also known from Australia and some Pacific Islands.

Habitat:
Coastal to lowland, usually epiphytic on tree trunks (particularly near branch junctions) but also found amongst tree roots. Often found on shaded cliff faces and ledges and on boulders within forest. This species is quite tolerant of dry conditions but seems to flourish near streams, water falls and seepages.

Features*:
Succulent herb up to 200 x 300 mm. Plants often epiphytic or rupestral. Branches 1-3 mm diameter, dark green, reddish-green to yellow-green, numerous, ascending and spreading; initially finely puberulent, becoming glabrescent with pubescent retained at nodes. Leaves in whorls of (3-)4, or opposite, subsessile, 5-15 x 4-12 mm, dark green to yellow-green above paler beneath, rhomboid to suborbicular, thick, fleshy, coriaceous, puberulent when young. Inflorescence a terminal spike 10-40 mm long; axis puberulent; bract orbicular-peltate, subsessile, flowers minute, greenish-yellow. Stamens 2, minute, subsessile. Ovary partially immersed in axis; ovoid, acute; stigma capitellate. Drupe 1.5 mm long, ovoid, red to red-green, very sticky.

Flowering:
September - April

Fruiting:
November - April (-May)

Threats:
Not actively threatened but generally uncommon. Some populations are very small, and most of those in Northland occur on private land where they are vulnerable to forest clearance

***Attribution:**
Fact Sheet Prepared by P.J. de Lange (1 November 2009). Description based on Allan (1961) supplemented with observations made from fresh material.

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=295

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

Caption: Peperomia urvilleana, Auckland Botanic Garden
Photographer: John Barkla

Caption: Maitahi Scientific Reserve
Photographer: Bill Clarkson

Physalis peruviana

Common Name(s):
Cape gooseberry

Current Threat Status (2009):
Exotic

Habitat:
Terrestrial.

Features:
Herb, grows 15-200 cm tall, densely hairy. Flowers pale yellow with patches of pale purple towards base, January-December. Fruit 10-20 mm diameter orange, sweet and enclosed in a lantern-like persistent calyx. (DoC 1998)

Flowering:
January, February, March, April, May, June, July, August, September, October, November, December

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=3017

Caption: Robinson Crusoe Island, Chile
Photographer: John Sawyer

Caption: Robinson Crusoe Island, Chile
Photographer: John Sawyer

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. Racmes 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

Caption: Near Raglan, West coast, North Island
Photographer: John Sawyer

Caption: Near Raglan, west coast, North Island
Photographer: John Sawyer

Picris burbidgeae

Common Name(s):
Native Oxtongue

Current Threat Status (2012):
Threatened - Nationally Endangered

Distribution:
Indigenous. In New Zealand known only from the northern North Island (from Te Paki to the Huntly Basin, near Waihi and Rotorua Lakes area), as well as most of the Hauraki Gulf islands. Also known from the Three Kings, and the main Chatham Island. Present in eastern Australia and on Norfolk Island, and the main island of Hawaii

Habitat:
Primarily on offshore islands or in coastal or lowland situations. Often on talus slopes. This species requires open ground and will not tolerate heavy shade. It has been collected from gravelled margins of roadsides and in gravel pits.

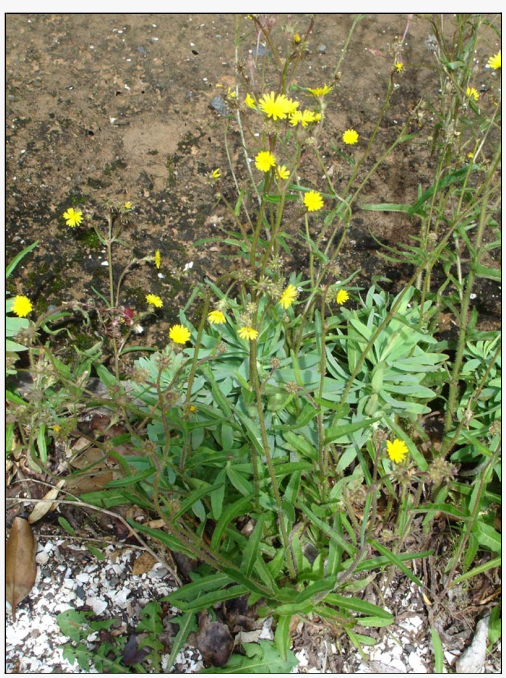
Features*:
Annual to perennial herb 0.5-1.2(-2) m tall. Stem basally woody, dark green to purple-green, branched from upper 1/2 to 1/3. Indumentum of 2-hooked, bristly hairs, copious. Leaves yellow-green. Rosette leaves shortly petiolate, lamina 100-200 x 10-25 mm, narrowly lanceolate to ovate, entire or dentate; stem leaves lanceolate to narrowly lanceolate, entire or dentate, becoming smaller toward plant apex. Lower stem leaves 100-200 x 10-25 mm, upper 20-40 x 0.3-0.5 mm, terminal leaves bract or thread-like. Inflorescences in corymbose panicles. Capitula numerous, 9-12 mm long, 5-6 mm diam. Involucrum of 28-40 bracts in 3-4 irregular outer and 2 inner rows, length of bracts increasing from outer to inner rows. Bracts with a single line of 2-hooked anchor or bifid hairs along midrib on outer surface. Capitula with 30-45 sulphur yellow flowers. Achenes narrowly fusiform 4-5 mm long, 0.8-1.1 mm diam, tapering into short cuspis. Achene ribs 20-35. Pappus 5-8 mm long, pappus rays 50-80.

Flowering:
(July-) October - January (-May)

Fruiting:
(August-) October (-June)

Threats:
Habitat loss through coastal development, succession, displacement by weed invasion, it is also prone top accidental eradication because of its weedy appearance.

Caption: Picris burbidgeae
Photographer: Peter de Lange



Caption: Picris burbidgeae
Photographer: Peter de Lange

***Attribution:**
Fact Sheet Prepared by P.J. de Lange (1 November 2009). Description based on Holzapfel & Lack (1993) and fresh specimens. Description 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.

Holzapfel, S.; Lack, H. W. 1993: New species of *Picris* (Asteraceae, Lactuceae) from Australia. *Willdenowia 23*: 181-191.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=85

Pimelea carnosa

Caption: Pihama Coast, South Taranaki
Photographer: Bill Clarkson

Caption: Pihama Coast, South Taranaki
Photographer: Bill Clarkson

Common Name(s):
Pimelea, pinatoro

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Three Kings (Manawha Tawhi), North and South Islands to about Otago. All recent South Island records come from Nelson, North-west Nelson to about Buller and in the east along the Marlborough coast to Ward and at Kaitorete Spit.

Habitat:
Coastal: Mostly on cliffs and banks, sometimes on dunes; commonly in short turf on wind- and spray-swept cliff tops together with a range of halophytic plants.

Features*:
A small to medium-sized shrub, prostrate or pendent on banks and cliffs; stems slender to stout, flexible, up to 70 cm long. Branching sympodial and lateral, with some short shoots. Branchlets light brown, moderately densely covered by short, stiff, greyish-white hair. Internodes 1–2 mm long. Older stems slightly hairy to glabrate, light-brown to dark grey. Node buttresses short (0.2 mm), dark brown, lunate, masked by hair on young stems, not prominent on leafless stems. Leaves decussate, crowded on young branchlets, imbricate, ascendant, may become patent later, on short (0.5 mm) red petioles. Lamina broad-ovate or broad-elliptic, 3.5–4.9 × 1.5–3.5 mm, glabrous, glaucous, thick, often fleshy, adaxially concave to slightly keeled, midvein evident abaxially, obtuse, base cuneate, sometimes truncate. Stomata abundant on adaxial side, none or rare on abaxial side. Inflorescences 4–6-flowered, terminal on branchlets. Involucral bracts 4, similar in size to adjacent leaves or larger (5.5 × 3.8 mm). Receptacles moderately hairy. Pedicels 0.2 mm. Plants gynodioecious. Flowers white, fragrant, moderately densely hairy on outside of tube and calyx lobes; inside hairless. Calyx lobes open in salverform fashion. Female tube 3 mm, ovary portion 2.2 mm, calyx lobes 1.8 × 1.4 mm; hermaphrodite tube 4.2 mm long, ovary portion 2.5 mm, calyx lobes 2.0 × 1.8 mm. Anther dehiscence semi-latrose. Ovary sparsely hairy at summit and to one-quarter of the way down. Fruits broad ovoid, fleshy, white, opaque, 5.0 × 3.8 mm. Seeds broad ovoid 2.8 × 2 mm.

Flowering:
September – April

Fruiting:
November – June

Threats:
Not Threatened

***Attribution:**
Factsheet prepared for NZPCN by P.J. de Lange (30 August 2009). Description adapted from Burrows (2009).

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=2394

Pimelea telura

Caption: South West Island, December 1995
Photographer: Peter de Lange

Caption: South West Island, December 1995
Photographer: Peter de Lange

Common Name(s):
Three Kings Pimelea

Current Threat Status (2012):
Naturally Uncommon

Distribution:
Endemic. New Zealand: Three Kings Islands (Manawa Tawhi (Great Island);

Habitat:
On Basalt cliffs, rubble slopes and deeply weather basaltic soils. Usually in sparsely vegetated sites or in low windswept scrub dominated by kahikatoa (Leptospermum scoparium var. incanum), Hebe insularis, taupata (Coprosma repens), Disphyma australe subsp. australe, and ferns.

Features*:
Shrubs, to 1 × 1 m with thick, rather stiff stems, decumbent to suberect or erect. Branches stout, numerous, sympodial. Young branchlets densely covered with appressed, short, white, villous hair, older stems less hairy, pale brown maturing grey. Node buttresses short (0.2 mm), lunate, hidden by hair on young branchlets, prominent after leaf fall. Internode length 1.5–3 mm. Leaves decussate, crowded on young branchlets, on short, brown petioles (0.5–0.8 mm), ascendant, becoming patent or deflexed. Lamina glabrous, glaucous to yellow-green glaucescent, 8–14 × 3–6 mm, leathery, flat to slightly adaxially concave, to cymbiform, ovate to narrow ovate or broad elliptic to narrow elliptic, acute to slightly acuminate (but blunt-pointed), base cuneate. Stomata only on adaxial side. Inflorescences crowded, compact, 3–8-flowered. Involucral bracts 4, ovate to elliptic 8–12 × 4–5 mm. Receptacle very hairy. Plants bisexual. Flowers creamy white, on very short pedicels (0.3 mm). Outside of tube and calyx lobes densely covered with hair; inside hairless or sometimes with sparse hair; tube to 5 mm long, ovary portion 4 mm long, with vertical “stripes” of hair when dry, calyx lobes 3 × 2 mm. Anthers yellow. Ovary summit with dense short hair, extending two-thirds of the way to the base. Fruits ovoid, fleshy, creamy white (sometimes basally flushed pink), 6 × 3 mm. The hypanthium breaks off, irregularly, near the base as the fruits ripen. Seed broad-pyriform, with very thin crest, 3.5 × 2.0 mm.

Flowering:
October – July

Fruiting:
October – July

Threats:
A Naturally Uncommon, range-restricted, often sparsely distributed island endemic under no obvious threats. At a few places, such as Bald Hill, Great Island, hybrids between P. telura and a member of the P. urvilleana complex have been found. This is one of the few places where the distribution of these two species overlaps on the Three Kings archipelago. Previously recorded as Pimelea aff. tomentosa (c) (AK 228145; Three Kings) in de Lange et al., 2004, Threatened and uncommon plants on New Zealand, New Zealand Journal of Botany 42: 45-76.

***Attribution:**
Description based on: Burrows (2008).

References and further reading:
Burrows, C.J. 2008: Genus Pimelea (Thymelaeaceae) in New Zealand 1. The taxonomic treatment of seven endemic, glabrous-leaved species. New Zealand Journal of Botany 45: 127-176.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2374

Piper excelsum subsp. delangei

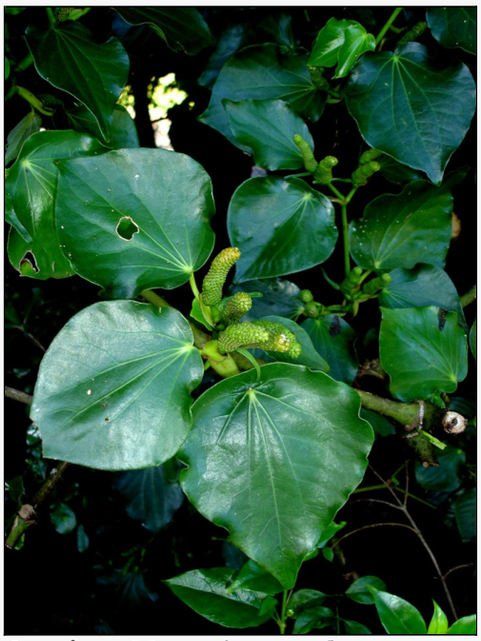
Common Name(s):
de Lange's kawakawa, de Lange's pepper

Current Threat Status (2012):
Naturally Uncommon

Distribution:
Endemic. Three Kings Islands: Manawa Tawhi (Great Island), South West and North East Islands

Habitat:
Coastal forest where it is often an important component of the shrub layer. On South West Island it is sympatric with, and forms hybrids with Piper melchior.

Features*:
Shrub or small tree to at least 3 m tall; stems ± erect, not notably lenticellate, new shoots green (without reddish colouring), taste oily-aromatic and extremely peppery; pith of axes (including rachis of spike) usually without a mucilage core (but this sometimes present in sucker shoots), in older (leafless, secondarily thickened) stems the pith not more than 0.5× stem diameter, and remaining intact in the largest trunks. Prophyll a collar to 0.5(-2.0) mm high. Leaf blades coriaceous, fleshy ± suborbicular, at vegetative nodes to 100(-160) mm diameter, usually with 7 or 9 principal nerves, cordate at base, with a very narrow or closed sinus, occasionally basal lobes overlapping, or sometimes the blade peltate with the petiole inserted up to 5(-20) mm inside blade margin, 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 3.5 mm diam. Inflorescences solitary or 2-3 together on a short (rarely more than I cm 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.



Caption: Macropiper excelsum subsp. peltatum f. delangei
Photographer: Peter de Lange

Caption: Macropiper excelsum subsp. peltatum f. delangei
Photographer: Peter de Lange

Flowering:
August - December

Fruiting:
September - May

Threats:
Not Threatened. Listed because it is a narrow range endemic confined to a small geographic area

***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=578

Piper melchior

Caption: South West Island, October 1991
Photographer: Peter de Lange

Caption: South West Island, October 1991
Photographer: Peter de Lange

Common Name(s):
Three Kings Kawakawa

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Endemic. Three Kings Islands: South West and West Islands only

Habitat:
Coastal forest (mostly in shaded sites) where it is a locally common component of the shrub layer. Very rarely in petrel scrub.

Features*:
Shrub to c. 2 m tall; stems erect to leaning, copiously lenticellate; new shoots green, i.e., leaf nerves, petioles, and new stems with almost no wine colouring, taste only slightly oily-aromatic and not at all peppery; pith of axes (including inflorescence rachis) with central cells soon breaking down to form a 1 mm diam. core of mucilage, in older (leafless, secondarily thickened) stems the pith more than c. 0.3 × stem diameter and disintegrating after a few years. Prophyll a raised line of tissue or sometimes a collar to c.1 mm high. Leaf blades at vegetative nodes ± suborbicular to slightly obovate, to c.10(-18) mm diameter, usually with 9 principal nerves, cordate at base, usually with an open sinus (inner edges of basal lobes seldom touching or overlapping, nor leaf ever peltate), slightly bullate, upper surface with the finer reticulation slightly raised above the ground tissue; petiole to c. 5 cm long, c.0.4× as long as blade, sheathing part to c.(25-)30 mm long, (1-)2-3(-4)× as long as the non sheathing part, the sheath truncate-rounded at apex and not produced, non-sheathing part of the petiole c.4(-5) mm diameter Inflorescence always solitary on a very short (to c.3 mm long) unbranched axillary shoot, the much-reduced leaf at apex of shoot with a short (0-5 mm) green oblong lamina on a vestigial sheathing petiole. Female inflorescence erect in flowering and remaining so into fruit; peduncle to c.15 mm long; spike to c.100 × c.6 mm diameter, with white 10-30-celled hairs to c.0.75 mm long on upper sides and edges of petiole of reduced leaf, and on the lower part of the bract-stalks and on the rachis, and usually conspicuous as an appressed cover on the peduncle around and just below the lowermost bracts; bract-heads c. 1.3 mm diam.; flowers at full emergence centred c. 1.6 mm apart, the emergent part of ovary subglobose; stigmas 3-4(-6), together 0.5-0.8 mm diam. (rarely more than 1 mm diameter). Male inflorescence erect, spike to c.130 × c.8 mm diameter distally in life (5.0-6.5 mm diameter when dry and somewhat flattened), hairs and bracts as in female inflorescence; staminal filaments 1.0-1.5 mm long, anthers c. 0.8 × 0.7 mm wide. Rachis of fruiting spike when ripe c.4 mm diameter, firmly fleshy, orange; ripe fruitlets subglobose, slightly depressed, c.4.5 mm diameter, free from one another and from the bracts and rachis; exocarp and mesocarp orange; seeds c.2.25 × 2.50 mm, ± subglobose in outline, dark brown, with 3-4(-6) rounded longitudinal ridges.

Flowering:
August - November

Fruiting:
Throughout the year

Threats:
Although abundant within its island habitat this species is listed because it occupies a small geographic range

***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 50(4)*: 485-487

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=581

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 funnelform, 5-lobed, usually plicately folded, perianth greenish-white to white, pubescent to glabrescent. Stamens 6-8, anthers scarcely exserted. 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.

Caption: Pisonia brunoniana in heavy fruit
Photographer: Peter de Lange

Caption: Pisonia brunoniana
Photographer: Peter de Lange

***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

Pittosporum fairchildii

Common Name(s):
Fairchild's kohuhu

Current Threat Status (2012):
Naturally Uncommon

Distribution:
Endemic. New Zealand: Three Kings Islands where it is known from North East, Great (Manawa Tawhi), South East and West islands.

Habitat:
Coastal forest and sheltered cliff faces. Usually found in the forest understorey, though on occasion it may grow within open petrel scrub.

Features*:
Gynodioecious shrub to small tree 3-6 m tall. Trunk stout, sometimes with 2 or more arising from ground grey-black, lenticillate. Branches erect to spreading, grey-black; branchlets similar clad in grey to brownish-grey tomentum, emergent shoots and immature branchlets white-tomentose, all soon becoming glabrous. Leaves alternate, usually crowded toward branch and branchlet apices. Petioles 3-8 x 0.5-2 mm, white to brown-tomentose. 40-70 x 20-38 mm, dark to light green above, much paler beneath, obovate, elliptic-obovate, elliptic-oblong or oblanceolate, apex obtuse or acute, base acute, margins entire; surfaces white to brown-tomentose when young, soon glabrous above but remaining finely tomentulose below when mature; very coriaceous, sometimes revolute. Flowers in terminal 2-4-flowered fascicles; pedicels 12-20 mm, accrescent in fruit, brown-tomentose, subtended by a whorl of leaves and caducous, ciliate, 5-10 mm long, bud scales. Sepals 4-7 x 2-3.5 mm, lanceolate, acute, brown-tomentose outside, glabrous within, ciliate. Petals 9-14 x 2.5-4.5 mm, lanceolate-oblong, subacute, free, spreading from about half their length, purple, chocolate or white. Stamens 7-8.5 mm, anthers 1.5-2.5 x 0.5-1.3 mm, sagittiform or elliptic-oblong. Ovary 2.5-6 x 2-4 mm, brown-tomentose; style 3-4 mm, stigma capitate or truncate. Capsules 20-25 mm diameter, 3-valved, subglobose, finely brown tomentose, glabrate, smooth to finely rugose; valves green maturing pale yellow, coriaceous to almost fleshy, scarcely opening at maturity. Mucilage bright yellow. Seeds 20-30, black, round.

Flowering:
May - September

Fruiting:
August - June (may be present throughout the year)

Threats:
Not threatened. However, it occupies a rather small geographic area and so qualifies for Range Restricted status.

Caption: Pittosporum fairchildii fruit and foliage
Photographer: Peter de Lange

Caption: Pittosporum fairchildii showing fruits and leaf undersides
Photographer: Peter de Lange

***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=621

Planchonella costata

Caption: Te Paki. Oct 2009.
Photographer: Jeremy Rolfe

Caption: Te Paki. Oct 2009.
Photographer: Jeremy Rolfe

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 Paki 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 scarcey spreading, closely packed; branchlets clad in appressed hairs and ± lactescent (exuding amilky fluid). Leaves intially 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 cauliflorus, 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

Plantago raoulii

Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1146

Caption: Plantago raoulii
Photographer: John Barkla

Caption: Large coastal form, Whitikau Beach, Patea.
Photographer: Colin Ogle

Poa cita

Common Name(s):
Silver tussock

Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1155

Caption: Tiwai Peninsula, Southland
Photographer: Jesse Bythell

Caption: Poa cita
Photographer: Bec Stanley

Poa imbecilla

Common Name(s):
Weak poa

Current Threat Status (2012):
Non Threatened

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1160

Caption: Poa imbecilla in pot
Photographer: Alan Stewart

Caption: Close up of Poa imbecilla in pot
Photographer: Alan Stewart

Poa pusilla

Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

For more information, visit:
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

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

Caption: Koitiata, edge of salt marsh. Jan 2011.
Photographer: Colin Ogle

Caption: Koitiata, edge of salt marsh. Jan 2011.
Photographer: Colin Ogle

Pomaderris phylicifolia

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 Paki, 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 ⅓ of its length in calyx–tube; operculum covering most of the inner coccus face; seeds c. 2.2 × 1.6 mm, dark–brown, surface glossy.

Flowering:
October to November.

Fruiting:
November to January.

Caption: Pomaderris phylicifolia
Photographer: Kevin Matthews

Caption: Pomaderris phylicifolia
Photographer: Peter de Lange

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

Pseudognaphalium luteoalbum

Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

Caption: Catlins coast, coastal form
Photographer: John Barkla

Caption: Cape Terawhiti
Photographer: Gillian Crowcroft

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 URPSS series 1(9)*: 7-37.

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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

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 racemosely 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, dimpled, 5.5-8.0 mm long.

Threats:
Not Threatened

Caption: Pseudopanax lessonii
Photographer: Wayne Bennett

Caption: Leaves of Pseudopanax lessonii
Photographer: Wayne Bennett

***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

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)

Caption: Stokes Valley. Jul 2001.
Photographer: Jeremy Rolfe

Caption: Stokes Valley.
Photographer: Jeremy Rolfe

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.

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Szlachekto, D.L. 2001: Genera et Species Orchidalium 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

Ranunculus reflexus

Photographer: John Barkla

Caption: Ranunculus reflexus
Photographer: John Sawyer

Common Name(s):
Hairy buttercup, Maru, Maruru, Kopukapuka, Pirikau

Current Threat Status (2012):
Not Threatened

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

Features*:
Non-rhizomatous, tufted perennial, (0.1-)0.3-0.8(-1.0) m tall. Stems erect, with hairs spreading below, appressed above. Basal leaves usually pinnate, rarely 3-foliolate or 3-lobed, hairy; leaflets stalked, ovate or obovate, entire or shallowly to deeply 3-lobed, toothed, very variable in size, 10-50(-60) mm diameter. Cauline leaves similar, smaller, often merely 3-lobed; lobes narrower. Flowers 3 or more per stem, 8-15 mm diameter. Pedicels terete to sulcate, up to 300 mm long, with appressed hairs. Sepals reflexed at flowering, hairy. Petals 5, yellow, narrow-oblong to narrow-obovate; nectary single, c. 0.5 mm from petal base, covered by a small oblong scale. Receptacle hairy. Achenes 40-80-(100), in ovoid heads, small and pale, moderately flattened, glabrous; body 1.5-2.0 mm long; beak often dark, hooked, 0.7-1.0 mm.

Threats:
Not Threatened

***Attribution:**
Description adapted from Webb et al. (1988).

References and further reading:

Garnock-Jones, P.J. 1987. Orthographic Changes for Names of New Zealand Vascular Plants. *New Zealand Journal of Botany 25*: 115-170.

Garnock-Jones, P.J. 1990. Typification of Ranunculus names in New Zealand. New Zealand Journal of Botany 28: 115-123.

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

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1237

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

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.

Rytidosperma gracile

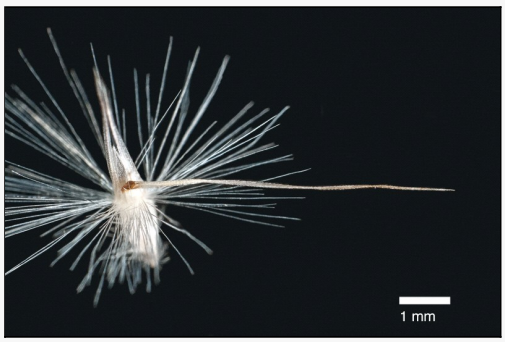
Common Name(s):
Dainty bristle grass

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. Throughout North, South, Stewart and Chatham Islands. Present also in Tasmania

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1272



Caption: Floret, Stokes Valley, Lower Hutt. Mar 2013.
Photographer: Jeremy Rolfe

Caption: Floret, Stokes Valley, Lower Hutt. Mar 2013.
Photographer: Jeremy Rolfe

Rytidosperma racemosum

Common Name(s):
danthonia

Current Threat Status (2009):
Exotic

For more information, visit:
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

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

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

Caption: Stokes Valley. Apr 2006.
Photographer: Jeremy Rolfe

Caption: Stokes Valley. Apr 2006.
Photographer: Jeremy Rolfe

Schoenus maschalinus

Common Name(s):
dwarf bog rush

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. North, South, Stewart and Chatham Islands. Also in Australia, New Guinea as far north as the Philippines.

Habitat:
Coastal to alpine (up to 1400 m a.s.l.). In damp, poorly drained soils in a wide range of habitats from dense forest to river margins, lake sides to alpine seepages and turfs.

Features*:
Small, flaccid, tufted or widely spreading green and leafy sedge. Culms 0.3-1.0 m long, 0.5 mm diameter, bright green, usually trailing and rooting at nodes, branched toward apices. Leaves numerous, 10.0-35.0 x 0.5-1.0 mm, almost flat, alternate, spreading, obtuse, margins usually finely toothed towards leaf apex; sheath enclosing 1/3 of internode, membranous, often red-purple. Spikelets 1-3 in the axils of leaves, 2-3 mm long, 1-2-flowered, light brown or reddish purple, sessile or on short, scabrid stalks. Glumes 5, ovate-lanceolate, more or less obtuse, 2 lowest smaller, empty, membranous, mucronate 1-2 upper glumes fertile, margins hyaline, median nerve pale green. Hypogynous bristles mostly 6, white or yellow-brown, thread-like, slightly greater than or occasionally less than nut, persistent. Stamens 3. Style branches 3. Nut 1 x c.1 mm, white, elliptic-ovoid, angles green and thickened, apex acute, occasionally with a small trigonous, persistent, style-base.

Caption: Shakespeare Bluff, Whitianga, April
Photographer: John Smith-Dodsworth

Caption: Shakespeare Bluff, Whitianga, April
Photographer: John Smith-Dodsworth

Flowering:
Throughout the year

Fruiting:
Throughout the year

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=2040

Schoenus tendo

Common Name(s):
kauri sedge, kauri Schoenus

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. North Island from North Cape to about the southern Waikato, near Awakino and the Bay of Plenty.

Habitat:
Coastal to lowland. Mostly in gumland or tea tree scrub and in regenerating kauri (Agathis australis (D.Don) Lindl.) forest. Sometimes persistent on clay hills coverted to pasture. Rarely colonising the margins of peat bogs.

Features*:
Rush-like sedge up to 1 m tall. Rhizome short, hard, lignaceous, up to 4 mm diameter, loosely covered in brown or greyish-brown bracts. Culms densely crowded, erect or drooping (often forming dense tangles), 0.4-1.2m long, c.1 mm diameter, light green to dark green, glossy. Leaves reduced to sheathing mucronate bracts, dark red-purple, almost black, the mucro more elongated in the uppermost bracts; mouth of sheath fringed by cobwebby hairs. Panicle 15-120 mm long, very narrow, with more or less distant fascicles of 3-4 branchlets, each fascicle subtended by a sheath 0.5-1.5 mm long, ciliate at the mouth; branchlets flexuous, laterally compressed and toothed along edges, each bearing a solitary spikelet or branched again. Spikelets 5-8 mm long, 2-4-flowered, linear-lanceolate, dark brown to almost black. Glumes 10-13, ovate lanceolate acute, margins ciliate towards the apex with tangled woolly hairs, the lower 6-8 glumes shorter, empty, 2-4 succeeding glumes fertile, the 2 upper glumes empty. Hypogynous bristles 3-6, thread-like, less than or greater than nut. Stamens 2. Style-branches 2(-3). Nut 1.5 x 1.0 mm, pale cream or light brown, unequally biconvex, obovoid, obtuse to retuse, surface smooth.

Flowering:
September - January

Fruiting:
October - July

Threats:
Not Threatened

Caption: Whitianga, February
Photographer: John Smith-Dodsworth

Caption: Oratia Valley, Waitakere Range. Jul 2007.
Photographer: Jeremy Rolfe

***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=2041

Senecio bipinnatisectus

Common Name(s):
Australian fireweed

Current Threat Status (2009):
Exotic

For more information, visit:
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

Caption: Senecio glomeratus subsp. glomeratus
Photographer: John Smith-Dodsworth

Caption: Senecio glomeratus subsp. glomeratus
Photographer: John Smith-Dodsworth

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; involucral 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 involucral 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

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

Caption: Kapiti Island.
Photographer: Jeremy Rolfe

Caption: Te Whakaru, Chatham Island
Photographer: John Sawyer

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 distrubed 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 occasionaly with small entire auricles, not amplexicaul; margin entire or with frequentminute 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.

Caption: Cape Palliser
Photographer: Peter de Lange

Caption: Bannockburn sluicings
Photographer: John Barkla

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

Senecio vulgaris

Common Name(s):
groundsel

Current Threat Status (2009):
Exotic

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2669

Caption: Senecio vulgaris
Photographer: Peter de Lange

Caption: Feilding. Sep 2007.
Photographer: Colin Ogle

Sicyos mawhai

Caption: Burgess Island, Mokohinau Trip
Photographer: Peter de Lange

Caption: Motukakarikitahi
Photographer: John Smith-Dodsworth

Common Name(s):
mawhai, ambush vine

Current Threat Status (2012):
At Risk - Relict

Distribution:
Endemic. Kermadec Islands: (Heralds, Meyers, Raoul, Macauley, Haszard). New Zealand: Three Kings, North Island (formerly widespread in northern half) and northern offshore islands), South Island (formerly Marlborough Sounds). Now extinct in the South Island and probably extinct on the mainland of the North Island and on many near shore islands.

Habitat:
Coastal species that has been collected from beach strands, including boulder beaches and banks, from coastal forest (especially forest margins), coastal shrubland and on offshore islands within sea-bird colonies.

Features*:
Herbaceous climber; stems annual, up to 14 m long, up to 2.5 mm diameter, sparsely hirsute with simple multicellular celled hairs and glandular hairs, glabrescent. Tendrils 3–5-branched. Leaves: petiole 25––135 mm long, minutely glandular hairy; lamina broadly ovate in outline, 45–135 × 60–165 mm wide, cordate with the basal sinus ± closed by overlapping lobes, acuminate, shallowly palmately 5- or 7-lobed, the lobes rounded–triangular, margins coarsely dentate with apiculate teeth. Male inflorescence a 14–35-flowered raceme 45–205 mm long; peduncle 35–125 mm long. Male flowers: pedicels 3.5–27 mm long; hypanthium broadly campanulate, 3.8–4.2 mm diameter; calyx lobes linear, c.1.2mm long; corolla rotate, 7–13 mm in diameter, 5-lobed, the lobes rounded–triangular, 2.0–3.5 mm long; disc c.2 mm diameter; staminal column 1.8–2.2 mm long; staminal head 1.9–2.4 mm diameter. Female inflorescence a 6–20-flowered head; peduncle 12–35mm long. Female flowers: subsessile; ovary ovate, 3.2–4.0 mm long, 2.0–2.6 diameter, echinulate with barbed aculei; hypanthium above the constriction broadly campanulate, c.2.4 mm diameter, abaxially scabridulous; calyx lobes linear, c.0.8 mm long; corolla 4–6.8 mm in diameter, glabrous abaxially and adaxially, glandular papillose on margins, white, 5-lobed; lobes triangular–ovate, 2.0–2.3 mm long; disc c.1.3 mm diameter; style c.1.8 mm long; stigma 2-branched, the branches recurved. Fruit ovate, 8.0–13.0 × 4.0–5.8 mm, obtuse or subacute, the surface glabrous or sparsely and minutely hairy, echinate; aculei dense, 2.2–3.6–6mm long, retrorsely barbed. Seeds ± ellipsoidal,5.6–6.0 × 3.8–4.5 mm, brown.

Flowering:
In suitable conditions flowers are produced throughout the year.

Fruiting:
In suitable conditions fruits are produced throughout the year.

Threats:
Sicyos mawhai has vanished from much of its past range over the last 50 or so years (see comments by Cameron 1992). Currently it remains common only on the less accessible northern offshore islands (e.g., Three Kings, Poor Knights and Mokohinau Islands) and on the Kermadec Islands. Sicyos mawhai is susceptible to cucumber, watermelon and zucchini mosaic virus (Delmiglio & Pearson 2006) and this probably accounts for the sudden decline from the more modified parts of its range. Currently as there is no further evidence of decline and, being secure on the Kermadecs and some other island groups, this species, as S. aff. australis (a) (AK 252822; New Zealand) has been listed as "Relict" (de Lange et al. 2009).

***Attribution:**
Fact Sheet Prepared for NZPCN by: P.J. de Lange 24 March 2012. Description based on Telford et al. (2012).

References and further reading:

Cameron E.K. 1992: Decline of mawhai (*Sicyos australis*). *New Zealand Botanical Society Newsletter 28*: 11–12.

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=6743

Sigesbeckia orientalis

Current Threat Status (2009):
Exotic

References and further reading:
Wilcox, M.D. 2002. *Sigesbeckia orientalis*. Auckland Botanical Society Journal, 57: 133

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2736

Caption: Capitula with glandular hairy bracts. Whareama Strm. Mar 1985.
Photographer: Colin Ogle

Caption: Oratia, Waitakere. May 2008.
Photographer: Jeremy Rolfe

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 rarelt dark green, ovate, ovate-oblong to lanceolate-ovate, entire or distally coarsely toothed to lobulate, sometimes sinuate; base cuneate, broad-cuneate or attentuate, rarely cordate to truncate; apex more or less acute, sometimes acumininate. 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

Caption: Hutt River Trail, north of Stokes Valley.
Photographer: Jeremy Rolfe

Caption: Umbel of flowers; forest edge, Bushy Park, Whanganui
Photographer: Colin Ogle

***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

Solanum aviculare var. latifolium

Caption: Hapuka/Crater Head, Great Island
Photographer: Peter de Lange

Caption: Solanum aviculare var. latifolium shrub
Photographer: Peter de Lange, Dec 1995, Hapuka/Crater Head, Great Island

Common Name(s):
poroporo

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Endemic. Three Kings Islands and some islands of the outer Hauraki Gulf south to the Coromandel Peninsula and surrounding islands. Exact distribution in the Hauraki Gulf not clear due to confusion of sterile plants with broad and simple leaved forms of S. laciniatum Aiton.

Habitat:
Coastal. Usually in shaded sites within coastal forest often in and around sea bird nesting grounds (especially petrel burrows) or along forest/petrel scrub margins.

Features*:
Small, softly woody shrub up to 2 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, 150-800 x 30-60(-80) mm, dark green, purple-green or rarely yellow-green, broadly lanceolate, broadly elliptic, broad ovate to broadly rhomboid, usually entire, sometimes sinuate, often deeply 1-2-3- lobed or sparingly and irregularly pinnatifid (often on one side of lamina only); 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, dark blue or white striped with blue/lavender, in all cases usually fading to white after anthesis. Filaments up to 5 mm long. Anthers 5-6 mm long, oblong, spreading, yellow, opening by apical slits. Berry broadly oval, 20-25 mm long, drooping, at firsty dark green maturing yellow, rather fleshy. Seeds 1.3-2 mm long, dull to semi-glossy, orange-brown, purple-brown or dark purple brown, obovate to cricular or transversely elliptic, often asymmetric, compressed.

Flowering:
Throughout the year

Fruiting:
Throughout the year

Threats:
Not threatened. A widespread but biologically sparse plant which reaches its greatest abundance on the Three Kings Islands (its type locality).

***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=321

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

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

Caption: Sonchus asper
Photographer: John Sawyer

Caption: Sonchus asper
Photographer: John Sawyer

Sonchus kirkii

Caption: In cult. ex Awhitu.
Photographer: John Braggins

Caption: Ex cult. Kariotahi
Photographer: Gillian Crowcroft

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 cylindric, bracts imbricate, recurved at fruiting. Florets yellow. Achenes elliptic, brown, strongly flattened, (3-)4 x1-1.8 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

Sonchus novae-zelandiae

Caption: Harris Mts
Photographer: John Barkla

Caption: Old Man Range, Otago
Photographer: John Barkla

Common Name(s):
Dryland sow thistle

Current Threat Status (2012):
Threatened - Nationally Vulnerable

Distribution:
Endemic. Three Kings Islands and South Island from the Marlborough Sounds to Southland and Fiordland.

Habitat:
Coastal to subalpine (10 - 1200 m a.s.l.) amongst sea bird colonies or within open stony ground, short and tall tussock grassland, on or near rock outcrops (on rock ledges, within crevices, and on talus slopes), sometimes on recently exposed alluvium. Rarely in open ground under grey scrub.

Features*:
Rosulate, perennial, scapigerous herb arising from a stout, deeply descending, often multicipital tap root. All parts when broken leaking copious amounts of white latex exudate. Leaves and petiole 20-150 mm long, flattened, and more or less held appressed to the surrounding substrate; lamina crisply membranous, glabrous, lyrate, bright green, yellow-green, or glaucous, sinuately shallowly to deeply, closely or distantly lobulate, or pinnatifid; lobules rounded, apical, often mottled with darker brown pigmentation or glaucous; terminal lobes 30-50 x 20-30 mm, lateral lobes diminishing in size from 10 to 1 mm, confluent, merging into the broadly winged petiole. Scapes 150 mm or more long, slender, initially sparsely and finely tomentose, becoming glabrous, except near capitulum; bracteate, bracts 1-5, linear, tomentose mainly with eglandular hairs, glandular hairs either absent or sparse. Capitula 15-30 x 10-40 mm, receptacle shallowly concave, alveolate. Involucrum 4-seriate, imbricating, membranous with scarious margins; outer involucral bracts 3-5 mm long, narrow-ovate, undersides densely tomentose with dark spreading glandular hairs; inner bracts narrowly ovate-oblong up to 15 mm long, dark brown-green, undersides intially clad in white tomentum and glandular hairs becoming glabrous, margins scarious with rather fine teeth. Florets 30-36, ligulate; limb pale lemon-yellow, about equal in length to the slender claw, apex deeply 5-fid. Style arms long, densely covered in minute processes, finely coiled. Anthers conspicuous. Fertile achenes few, 2-3 mm long, dark brown, slightly compressed, broad at first, apices bluntly obtuse to rounded, narrowed slightly to base, crowned with minute asperities glabrous, primary ribs longitudinal, 4-5, prominent; secondary ribs 4-5, less obvious, otherwise strongly transversely wrinkled towards base. Sterile achenes numerous, narrowly subcylindric, pale and finely ribbed. Pappus hairs up to 7 mm long, copious, white, slender and soft, fused at base otherwise barbellate in upper half.

Flowering:
November - April

Fruiting:
November - May

Threats:
Sonchus novae-zelandiae appears to have always been biologically sparse but recent ad hoc field surveys for this species have found that it has declined from large parts of its former range. Many populations are at risk from the spread of *Pilosella*, and in some sites *Sonchus novae-zelandiae* is now confined to cliff and rock outcrop refugia

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange (6 August 2006). Description adapted from Allan (1961) supplemented with observations made from fresh and dried material (see also de Lange et al. 2010).

References and further reading:

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

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.

Garnock-Jones PJ. 2014: Evidence-based review of the taxonomic status of New Zealand's endemic seed plant genera, New Zealand Journal of Botany, DOI: 10.1080/0028825X.2014.902854

Heenan, P.B.; Mitchell, A.D.; de Lange, P.J.; Keeling, J.; Paterson, A.M. 2010: Late Cenozoic origin and diversification of Chatham Islands endemic plant species revealed by analyses of DNA sequence data. *New Zealand Journal of Botany 48*: 83–136.

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=274

Spergularia tasmanica

Caption: Spergularia tasmanica
Photographer: John Barkla

Caption: Motumorirau, Coromandel. November
Photographer: John Smith-Dodsworth

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

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

Caption: Sporobolus africanus
Photographer: John Smith-Dodsworth

Caption: Sporobolus africanus
Photographer: John Smith-Dodsworth

Streblus smithii

Common Name(s):
Three Kings milk tree

Current Threat Status (2012):
At Risk - Naturally Uncommon

References and further reading:

May, V. 1988. *Streblus (paratrophis) smithii* an assisted immigrant. Auckland Botanical Society Journal, 43: 65-67

May, V. 1997. *Streblus smithii* (*Paratrophis smithii*). Auckland Botanical Society Journal, 52: 64-65.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=697

Caption: Cultivated (October)
Photographer: John Smith-Dodsworth

Caption: Cultivated (October)
Photographer: John Smith-Dodsworth

Tetragonia implexicoma

Caption: Awhitu Peninsula, Auckland region
Photographer: John Sawyer

Caption: North Otago, April
Photographer: John Barkla

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 (Berberris 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

Tetragonia tetragonoides

Caption: Te Whakaru, Chatham Island
Photographer: John Sawyer

Caption: Tutukaka, Tetragonia tetragonioides
Photographer: Lisa Forester

Common Name(s):
kokihi, New Zealand spinach, tutae-ikamoana

Current Threat Status (2012):
At Risk - Naturally Uncommon

Distribution:
Indigenous. Kermadec, Three Kings, North, South, Stewart and Chatham Islands. Also present in Australia, the western Pacific, Malesia, Japan and southern South America.

Habitat:
A species of the coastal strand zone often growing along beaches amongst driftwood, and sea weed but also in sand dunes, on boulder and cobble beaches, on cliff faces and rock ledges and in some areas such as the Kermadec Islands an conspicuous and important associated of the vegetationof many of the outer islands in the archipelago. Partly because it has been cultivated as a vegetable this species often appears in landfills or as a casual weed of urban areas. Indeed some wild occurrences near urban coastal settlements may stem from discarded plants or seed in garden waste.

Features*:
Widely trailing perennial herb forming dense patches, circular mats, or rarely mounds of interlacing branches up to 1 m thick. Branches up to 1 m long, bright to dark green or yellow green, subterete, numerous, woody near base, decumbent, trailing not or only rarely rooting at nodes. Petioles firmly fleshy up to 20 mm long. Leaves 15-80 x 10-60 mm, dark green to yellow green, darker above and paler beneath, ovate-rhomboid, rhomboid to triangular, obtuse to subacute, entire or rarely slightly sinuate or shallowly lobed, both surfaces very densely though finely papillose. Flowers solitary or paired, mostly perfect sometimes unisexual, subsessile, 7-8 mm diameter, perianth dark yellow to pale yellow (rarely yellow-green). Calyx-tube broadly turbinate, lobes broad-triangular, obtuse. Stamens variable but between 10-20. Ovary 3-8-celled, styles 3-8. Fruit 8-10(15) mm long, subturbinate, angled, woody horns 2-4 apical, sharp to blunted-ended, seeds 4-10.

Flowering:
October-February

Fruiting:
November - March

Threats:
It is threatened by disturbance of coastal sands and stony beaches.

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange 1 February 2008. Description based on Allan (1961)

References and further reading:
Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

Wilcox, M.D. New Zealand spinach in Mangere. Auckland Botanical Society Journal, 56: 82

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=325

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

Caption: Thelymitra longifolia
Photographer: DoC

Caption: Thelymitra longifolia
Photographer: DoC

***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).

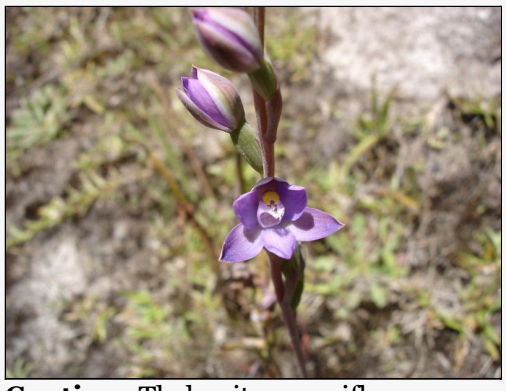
References and further reading:
de Lange, P.; Rolfe, J. St George, I. Sawyer J. 2007: Wild orchids of the lower North Island. Department of Conservation, Wellington. 194pp.

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

Thelymitra pauciflora

Caption: Thelymitra pauciflora at Coopers Beach
Photographer: Bill Campbell



Caption: Thelymitra pauciflora on Spicer Road, Coopers Beach
Photographer: Bill Campbell

Common Name(s):
sun orchid

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. North, South, Stewart and Chatham Islands. Present in Australia where it occurs in Queensland, New South Wales, Australian Capital Territory, Victoria, South Australia and Tasmania.

Habitat:
Mostly coastal to lowland, rarely lower montane. Usually in very open shrubland, on clay pans, gumland scrub, forest margins, in ultramafic scree and in open grassland. This species is also commonly found in urban areas along street verges in bark gardens and wasteland.

Features*:
Glabrous, terrestrial orchid. Tubers 10-20 x 5-10 mm, ovoid, fleshy pinkish white to pinkish grey. Leaf 80-300 x 3-6(-12) mm, erect, fleshy, canaliculated, dark or light green with purplish to maroon base, often spotted with rust, abaxially prominently ribbed, ribs often maroon, sheathing at base, apex acute to acuminate. Inflorescence 0.15-0.6 m tall, 1-1.5(-3) mm diameter, stout but slender, straight, dark green to purple-green to reddish. Sterile bracts 1-2(-3), 15-50 x 3-5 mm, linear to linear-lanceolate, closely sheathing, acute to acuminate, green or maroon, sometimes purplish. Fertile bracts 4-15 x 2-5 mm, ovate-acuminate to obovate-acuminate, sheathing at pedicels, green to purple-green. Pedicels 1-10 mm long, slender. Ovary 5-12 x 2-4 mm, purple-green to red-green, narrow-obovoid. Flowers 1-8, 15-20 mm diameter, dark blue to mauve, sometimes white; opening only on very hot, still, sunny days, mostly entomophilous, tending to autogamous. Perianth segments 6-10 x 3-5 mm, concave, shortly apiculate; dorsal sepal lanceolate to ovate, obtuse to subacute; lateral sepals lanceolate to ovate, often asymmetric, acute; petals ovate to obovate, obtuse to subacute; labellum elliptic to lanceolate, acute, often smaller than other segments. Column 4.0-5.0 x 2.0-2.5 mm, erect from end of ovary, pale blue to dark pink; post anther lobe 1.8-2.5 x 1.0-1.5 mm, cucullate, tubular, gently curved, usually blackish-purple to reddish-brown, apex entire to emarginate, bright yellow; post anther lobe extension 0.4-0.7 mm; auxillary lobes absent or sometimes present as 2 tiny incurved spurs on the lower apical margin of the post-anther lobe; lateral lobes converging, 0.5-1.0 mm long, digitiform, porrect at base, bent sharply upwards near the middle at 90 degrees, each with a subterminal tuft of white (or mauve) cilia that touch the ventral side of the apex of the post-anther lobe; cilia 1-1.5 mm long. Anther inserted above central column, 2.0-2.5 x 1.0-1.5 mm. Stigma situated at base of column, 1.5-2 x 1.5-2 mm, ovate-quadrate, margins irregular. Capsules 8-15 x 3-6 mm, obovoid, erect, deeply ribbed.

Flowering:
September - December

Fruiting:
November - March

Threats:
Not Threatened

***Attribution:**
Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007. Description subsequently published in Rolfe & de Lange (2010). See also Jeanes (2004).

References and further reading:
Jeanes, J. 2004: A revision of the *Thelymitra pauciflora* R.Br. (Orchidaceae) complex in Australia. *Muelleria 19*: 19-79.

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=2273

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

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 pnk.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2848

Caption: Trifolium glomeratum
Photographer: John Smith-Dodsworth

Caption: Trifolium glomeratum
Photographer: John Smith-Dodsworth

Trisetum arduanum

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. In New Zealand scattered throughout from the Three Kings and North Island, south to Marlborough in the South Island. Recently (1998) discovered on Norfolk Island

Habitat:
Usually coastal on rocky headlands, cliff faces and boulderfield. Shows a distinct preference for basalt, limestone and ultramafic rocks but can also be common around bird nesting grounds. Often found inland on limestone outcrops in the Waikato, and on apatite-rich greywacke rock facies around Wellington and the Wairarapa

Threats:
Not Threatened but has declined over the northern part of its range

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1324

Caption: Trisetum arduanum growth habit and inflorescences
Photographer: Peter de Lange, Ex Cult. 11 Nov 2006, Kaitarakihi Bay, Waitakere Ranges

Caption: Trisetum arduanum growth habit and inflorescences
Photographer: Peter de Lange, Ex Cult. 11 Nov 2006, Kaitarakihi Bay, Waitakere Ranges

Veronica plebeia

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous to Australia and New Zealand. In New Zealand known from the Three Kings, North, northern South and Chatham Islands.

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2349

Caption: Veronica plebeia
Photographer: John Smith-Dodsworth

Caption: Veronica plebeia
Photographer: John Smith-Dodsworth

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

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 rought pasture. Sea level to montane.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2643

Caption: Vulpia myuros
Photographer: John Smith-Dodsworth

Caption: Vulpia myuros
Photographer: John Smith-Dodsworth

Wahlenbergia vernicosa

Caption: In cultivation ex North Cape. Dec 1989.
Photographer: Colin Ogle

Common Name(s):
Coastal Harebell, Glossy Harebell

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: Kermadec, Three Kings, North Island and Chatham Islands. Also eastern Australia, Tasmania, Norfolk Island, and possibly the Tongan Islands

Habitat:
Coastal cliffs and islets, typically associated with seabird nesting sites, also volcanic and limestone outcrops both inland and near the sea.

Features*:
Radicate, biennial to short-lived perennial herb. Root branching, fleshy, brittle. Stems 0.1-1.5 m tall, fleshy and brittle in life, juveniles with opposite leaves, adult plants with mostly alternate sessile leaves, some stems and laterals with lower leaves opposite. Branches often closely divaricating, young shoots hairy, with crowded leaves. Leaves usually elliptic to oblanceolate, 10-40 × 5-10 mm, regularly and closely serrate, glabrous, bright green, fleshy and glossy as if varnished (in life), sparsely hairy, with prominent midrib below; sometimes linear, entire. Flowers in different populations may be white, pastel Lilac, or flax blue, on short slender pedicels 20-70 mm long. Corolla campanulate, 10-20 mm diam., 9-12 mm long, tube cylindrical (cup-shaped), 2 × 2 to 4 × 4 mm, lobes 5 × 4 to 8 × 5 mm, oblong, subacute, spreading; style protruding slightly from tube, slightly thickened in upper half, white. Stigmas 3 or 4, small. Calyx lobes glabrous, 3 × 1 to 4.0 × 1.5 mm, narrowly triangular, becoming radiate or recurved in fruit. Capsule glabrous, obconic, 6 × 4 to 10 × 5 mm, flat-topped or slightly concave at the top, valves flat until ripe. Self-fertile. Seeds 0.5 mm long.

Flowering:
October to May

Fruiting:
November - June

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.

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=1363

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*:
Radicate 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-l8 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 Botanv 35*: 9-54.

For more information, visit:
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

Zoysia pauciflora

Common Name(s):
zoysia

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Three Kings Islands, North Island, from North Cape to Kawhia Harbour, near Cambridge and the Bay of Plenty.

Habitat:
Mainly coastal, but inland in the Hamiltion Basin on the banks of the Waikato River. In sandy, and rocky ground, in saltmarshes and often under scrub or under trees.

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1373

Caption: Zoysia pauciflora
Photographer: John Smith-Dodsworth

Caption: Zoysia pauciflora
Photographer: John Smith-Dodsworth