



Plants of Note at Castle Rock



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

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Introduction

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

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

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

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

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

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

The New Zealand Botanic Region

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

About the Network

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

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

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

That work has included:

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

What is a threatened plant?

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

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

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

Aciphylla subflabellata

Common Name(s):

Spaniard

Current Threat Status (2012):

At Risk - Declining

Distribution:

Endemic. South Island in the east from south-eastern Marlborough to Southland

Habitat:

Montane to subalpine (300-1400 m a.s.l.). Usually in dry sites on alluvial terraces, gentle rolling slopes and colluvium, intermontane basins amongst short or tall tussocks and on the margins of grey scrub. Sometimes on or near rock outcrops or amongst boulders.

Features*:

Stout perennial forming stout rosettes. Stems up to 0.8 m long. Leaves yellow-green to grey-green, narrowly subflabellate-bipinnate. Sheaths membranous, up to 20 mm long, ligules 2, up to 10 mm long; stipules 20 mm long, irregularly bipinnate. Petioles 25 x 5 mm, concavo-convex with internodes up to 25 mm long. Primary pinnae 3-4 pairs, these strongly serrulate-crenulate on midrib and margins, sometimes pinnate again with leaflets up to 200 x 3 mm, narrowly acicular. Stems stout, deeply grooved up to 1 m x 25 mm, including inflorescence 0.5-0.6 m long. Bracts numerous, close-set; sheaths up to 70 x 10 mm; stipules erect, simple to bifid, up to 150 x 1 mm; central leaflet up to 300 mm long, at length strongly reflexed, margins serrulate. Umbels exceeding the bract-sheaths especially in the male inflorescence. Mericarps 5-12 mm long with 5 ribs, 3-4 of these winged.

Flowering:

December - February

Fruiting:

February - May

Threats:

Widespread but generally never common. Possibly it is more threatened than believed because many of its lowland habitats are extremely modified, weed infested and plants are browsed where accessible by cattle, rabbits and hares. Current herbarium evidence suggests that this species is still poorly known but that from available evidence it is naturally uncommon over large parts of its stated range.

*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (1 September 2004). Description based on Allan 91961).

References and further reading:

Allan, H.H. 1961: 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=215



Caption: Mossburn, Southland
Photographer: Gillian Crowcroft



Caption: Upper Clarence, Near Hamner
Photographer: Gillian Crowcroft

Anisotome brevistylis

Common Name(s):

Native carrot

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

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=1498



Caption: Hawkdun Range
Photographer: John Barkla



Caption: Kyeburn
Photographer: John Barkla

Asplenium lyallii

Common Name(s):

Lyall's spleenwort

Current Threat Status (2012):

Not Threatened

Distribution:

Endemic. New Zealand: North (from Port Waikato south to Wellington), South (North-West Nelson otherwise mainly eastern), Stewart and Chatham Islands

Habitat:

Coastal to alpine. A basicole favouring base rich substrates but especially calcareous rocks (limestone and marble) and basalt rock. In tall forest, scrub or on exposed rock surfaces. Often present in cave entrances.

Features*:

Rhizome stout, ascending, bearing brown subulate to narrowly triangular scales up to 25×2 mm. Stipes 30-200 mm long, pale brown at base and on underside, green elsewhere, covered with scales similar to but smaller than those of the rhizome. Laminae lanceolate to elliptic, $40-400 \times 20-200$ mm, dark shiny green to dull grey-green, pinnate to bipinnate. Raches normally green, occasionally brown on the underside, often grooved, scaly. Pinnae 2-16 pairs, ovate to narrowly oblong, obtuse to acuminate, serrate to \pm entire, stalked, $10-100 \times 5-50$ mm, often covered on both surfaces with tiny scales. Lowermost pinnae normally at least partially lobed or divided at the base, sometimes completely pinnate; pinnules stalked, lanceolate to elliptic, obtuse, serrate to entire, up to 30×15 mm. Sori up to 10 mm long, not reaching lamina edge.

Flowering:

Not applicable - spore producing

Fruiting:

Not applicable - spore producing

Threats:

Not Threatened

*Attribution:

Description from Brownsey (1977).

References and further reading:

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

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

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=1524



Caption: Henga, Chatham Island. May 2013.

Photographer: Jeremy Rolfe



Caption: Henga, Chatham Island. May 2013.

Photographer: Jeremy Rolfe

Asplenium richardii

Common Name(s):

Richards spleenwort

Current Threat Status (2012):

Not Threatened

Distribution:

Endemic. New Zealand: North (Mt Honokawa, Mt Ruapehu, and parts of the Kaimanawa Range), and South Islands (mainly east of the Main Divide)

Habitat:

Montane to alpine. On basalt, limestone, schist and greywacke rock outcrops, cliff faces (where usually in crevices), amongst boulders, and on stream banks particularly under beech (*Nothofagus*) forest.

Features*:

Rhizome short, stout, erect, bearing dark brown subulate scales up to 20×2 mm. Stipes 50-150 mm long, brown on underside, green above, densely covered in subulate scales with filiform apices. Laminae ovate to narrowly ovate, $100-250 \times 40-120$ mm, dark green, relatively thin, normally tripinnate. Raches green, very scaly, slightly grooved. Pinnae 10-15 crowded and overlapping pairs, ovate to narrowly ovate, sub-acute, stalked, $20-80 \times 10-40$ mm. Secondary pinnae stalked, ovate, $10-20 \times 10-15$ mm, again pinnate or pinnatifid. Ultimate segments linear, acute or sub-acute, up to 8 mm long. Pinnae and pinnules not flattened in one plane but spreading in three dimensions. Sori 2-4 mm long, submarginal.

Flowering:

Not applicable - spore producing

Fruiting:

Not applicable - spore producing

Threats:

Not Threatened

*Attribution:

Description from Brownsey (1977).

References and further reading:

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

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=1526



Caption: Arthurs Pass

Photographer: John Smith-Dodsworth



Caption: Arthurs Pass

Photographer: John Smith-Dodsworth

Carmichaelia petriei

Common Name(s):

desert broom

Current Threat Status (2012):

Not Threatened

Threats:

Not Threatened

References and further reading:

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

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=1602



Caption: Seeds. From cultivated plant

Photographer: John Barkla



Caption: Cardrona Valley

Photographer: John Barkla

Clematis foetida

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-foliolate, 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



Caption: Heyward Point, Dunedin

Photographer: John Barkla



Caption: Heyward Point, Dunedin

Photographer: John Barkla

Clematis marata

Current Threat Status (2012):

Not Threatened

Distribution:

Endemic to South Island. Found in Marlborough (upper Awatere Valley), Canterbury, Otago, Southland (Te Anau Downs) and Stewart Island.

Habitat:

Apparently restricted to river terraces, rock outcrops and dry hillsides and scrub habitats.

Features:

A slender low-climbing evergreen woody climber. Leaves are hairy on both sides, trifoliolate and dull green.

Flowering:

September - December

Fruiting:

December - March

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=1682



Caption: Minaret Burn, March

Photographer: John Barkla



Caption: Kingston

Photographer: John Barkla

Corokia cotoneaster

Common Name(s):

Korokio, wire-netting bush

Current Threat Status (2012):

Not Threatened

Threats:

Not Threatened

References and further reading:

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

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=1756



Caption: Upper Oreti River, Southland

Photographer: Jesse Bythell



Caption: Fuit, Greenstone Valley

Photographer: John Barkla

Corybas macranthus

Common Name(s):

Spider Orchid

Current Threat Status (2012):

Not Threatened

Distribution:

Endemic. North, South, Stewart, Chatham, Auckland and Campbell Islands

Habitat:

Lowland to subalpine (up to 1200 m a.s.l.) usually in damp, shaded to well-lit seepages, or in shaded sites under tall forest or associated with rock overhangs (then often in very dry sites). Favouring base-rich substrates such as calcareous mudstones, siltstones, limestones, dolomite or marble; also on basalt and basaltic-andesites, and soils derived from these.

Features*:

Terrestrial, tuberous, spring to summer green perennial forming dense colonies. Plant at flowering 40-100 mm tall. Leaf solitary, distinctly petiolate, petiole hyaline to white, more or less fleshy up to 60 mm long, suberect, ascending; lamina firmly fleshy, up to 40 x 40 mm, mostly green flecked or spotted with purple, or dark green above, silvery green to white beneath, orbicular to oblong-oval, apiculate, base rounded. Floral bract minute, < ovary, narrowly deltoid, initially closely sheathing spreading at flower anthesis. Dorsal sepal mostly shorter than labellum, hyaline yellow-green to greenish-white flecked with crimson or completely wine red, rather long and narrow-lanceolate, acute to shortly acuminate, arching over tubular portion of labellum; lateral sepals dark pink to crimson, filiform, greatly exceeding labellum. Petals similar to lateral sepals but usually much shorter. Labellum completely dark maroon-black or wine red, or dark maroon-black with a greenish throat, auriculate at base, lamina abruptly deflexed, funnelform, broadly expanded all round, margin minutely denticulate with a median apiculus, inner surface rough with short, sharp, retrorse papillae

Flowering:

September - January

Fruiting:

October - February

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:

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.

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



Caption: Palliser Bay. Oct 1994.

Photographer: Jeremy Rolfe



Caption: Rimutaka Incline. Oct 1994.

Photographer: Jeremy Rolfe

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=1017

Fuchsia perscandens

Common Name(s):

Fuchsia

Current Threat Status (2012):

Not Threatened

Distribution:

Endemic. North and South Islands, found from near Pipiwai, Northland to Southland. Often uncommon over large parts of its range

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=1902



Caption: *Fuchsia perscandens* ex. Awaroa

Photographer: Peter de Lange



Caption: Mount Torlesse

Photographer: Melissa Hutchison

Ileostylus micranthus

Common Name(s):

green mistletoe, pirita

Current Threat Status (2012):

Not Threatened

Distribution:

Indigenous. North, South and Stewart Islands, also on Norfolk Island.

Habitat:

Mainly a coastal and lowland species which rarely extends into upper montane forest. Prefers shrubland and secondary regrowth. This species shows some regional host specificity but nevertheless has been recorded from a wide range (nearly 300) of indigenous and exotic hosts. One of the few indigenous mistletoe's to regularly grow in urban situations.

Features*:

Woody, epiphytic much branched, bushy hemiparasite. producing multiple haustoria (these attaching at intervals long host branch) and epicortical, often spiraled roots. Leaves opposite, coriaceous. Petioles 5-50 mm long, flattened and slightly winged. lamina 30-60(-80) × 15-40(-68) mm, dark green to yellow-green, broadly elliptic, slightly ovate, ovate, obovate to rhomboid, base attenuate, apex obtuse to rounded. Inflorescences axillary, solitary or paired, in cymose panicles, these 10-15(-20) mm long with 8-9-12(-15) flowers arranged in threes. Flowers male, female or hermaphroditic (the dioecious condition most commonly seen when *Ileostylus* is parasitic on species of totara (*Podocarpus* spp.)). Calyx cylindrical, presenting as an truncate rather obscure narrow rim 0.2 mm high. Petals 4, free, c.3-4 mm × 0.8-1.6 mm, greenish to yellow-green. Anthers 4, basifixed. Style contorted, usually initially coiled in middle, up to 3.0-4.5 mm long when uncoiled. Ovary 1-locular. Fruit a 1-seeded, 5-8 mm, yellow or orange, ellipsoid or globular (rarely ellipsoid-globular) berry. Seed 5.0-5.5 mm long, elliptic, rounded at both ends, terete.

Flowering:

September - December

Fruiting:

December - July

Threats:

Not Threatened

*Attribution:

Factsheet and description prepared for the NZPCN by P.J. de Lange (7 May 2011).

References and further reading:

Cameron, E.K. 2000. An update of the distribution and discovery of *Ileostylus micranthus* in the Auckland region. *Auckland Botanical Society Journal*, 55: 39-44

Duguid, F. 1967. Hosts of *Loranthus micranthus*. *Wellington Botanical Society Bulletin*, 34: 23-24

Menzies, B. 1945. *Loranthus micranthus*. *Auckland Botanical Society Journal*, 2: 8-9

Moore, S. 1987. Mistletoes are urban parks ideal habitats? *Wellington Botanical Society Bulletin*, 43: 26-27

Silbery, T. 2002. A sticky solution to a tricky problem: restoration of *Ileostylus micranthus*. *Wellington Botanical Society Bulletin*, 48: 27-32

Stanley, R. 1998. Mistletoe hunt in Hunua. *Auckland Botanical Society Journal*, 53: 74-75

Young, M. 1996. Information on the *ileostylus* intersection. *Auckland Botanical Society Journal*, 51: 68-69.

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=858



Caption: Planted on Matiu/Somes Island

Photographer: John Sawyer



Caption: Banks Peninsula

Photographer: Melissa Hutchison

Korthalsella clavata

Common Name(s):

Leafless mistletoe, dwarf mistletoe

Current Threat Status (2012):

At Risk - Naturally Uncommon

Distribution:

Endemic. North and South Islands from near Whakamaru south to Cape Turakirae and the Wairarapa. In the South Island throughout, though notably more common in the east.

Habitat:

Coastal to subalpine. Usually found parasitising shrubs within grey scrub communities, also found on shrubs and trees within montane alluvial forest. No clear host preference is as yet evident, though regional patterns may exist (this needs study).

Flowering:

October - March

Fruiting:

October - June

Threats:

Not Threatened

References and further reading:

Rebergen, A., Sawyer, J.W.D. 2005. *Korthalsella clavata* in the lower North Island. *Wellington Botanical Society Bulletin*, 49: 11-15

Nickrent, D.L.; Malécot, V.; Vidal-Russell, R.; Der, J.P. 2010: A revised classification of Santalales. *Taxon* 59: 538-558.

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

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=883



Caption: Paengaroa S.R. Mataroa, Taihape

Photographer: Peter de Lange



Caption: Catlins

Photographer: John Barkla

Melicope simplex

Common Name(s):

Poataniwha

Current Threat Status (2012):

Not Threatened

Threats:

Not Threatened

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=966



Caption: Upper Hutt, Aug 2012.

Photographer: Jeremy Rolfe



Caption: Mt Watkin, Otago

Photographer: John Barkla

Microtis unifolia

Common Name(s):

Onion-leaved orchid, microtis

Current Threat Status (2012):

Not Threatened

Distribution:

Indigenous. In New Zealand present on the Kermadec, Three Kings, North, South, Stewart and Chatham Islands. Exact New Zealand distribution unclear due to confusion with an allied, later flowering entity. Present also in Australia, Norfolk Island, New Caledonia, Indonesia, the Philippines, Japan and China.

Habitat:

Coastal to montane. Widespread in mainly disturbed or successional habitats. Common in urban areas in lawns, verges, roadside banks and cuttings and even amongst moss filled crevices on old buildings.

Features*:

Terrestrial, glabrous, colony forming, fleshy, tuberous bright green to dark green perennial herb. Plants at flowering up to 1 m tall. Tubers globose to ovoid. Stem erect, terete, often striated. Leaf solitary, usually overtopping inflorescence, bright green to dark green, rarely tinged with red near base, closely sheathing stem for much of length, linear-terete, hollow, up to 800 mm long. Inflorescence a raceme up to 300 x 10 mm. Flowers 6-100, up to 4 mm diameter, shortly-stalked and closely spaced, more or less overlapping. Perianth green, segments up to 2.5 mm long, widely spreading, thick and fleshy. Dorsal sepal 3 mm long, broadly ovate, erect or projecting forwards, cucullate, concave, column-embracing, acute with apex usually slightly turned upwards, smaller than ovary at flowering; lateral sepals much shorter and narrower, acute, strongly deflexed, apices tending to coil under. Petals shorter still, obtuse, erect, usually partially hidden under dorsal sepal. Labellum sessile, up to 2.5 mm long, green or yellow-green, oblong, sharply deflexed or decurved, pinched in at about mid-length to form a slight to obvious waste; apex truncate or slightly emarginate, not apiculate though often folded to appear so; margin papillose and usually also crenate and undulate; anterior callus variously developed, verrucose, rather irregular, often raised on a rounded ridge; basal calli dark green, oval, prominent, and usually continuous at sides with narrow band of callus behind transverse, silt-like (not pouched) furrow; labellum standing away from ovary at a very narrow angle. Column short, obtuse, base of column about as broad as stigma, wings mostly membranous throughout. Anther terminal, erect, situated above stigma, hemispherical, pollinia spheroidal, pollen granular. Stigma broadly ovate; rostellum ovate Capsules broadly ovoid, ovoid-ellipsoid, brown when ripe.

Flowering:

August - November

Fruiting:

October - March

Threats:

Not Threatened

*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007. Description adapted from Moore and Edgar (1970).

References and further reading:

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

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=988



Caption: Microtis
Photographer: DoC



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

Myosotis spathulata

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. Government Printer, Wellington.

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=289



Caption: *Myosotis spathulata*
Photographer: John Smith-Dodsworth



Caption: Flowering *Myosotis spathulata*
Photographer: John Smith-Dodsworth

Oxalis exilis

Common Name(s):

creeping oxalis, yellow oxalis

Current Threat Status (2012):

Not Threatened

Distribution:

Indigenous. Australia, New Zealand and probably the western Pacific. Naturalised in parts of Europe and the United Kingdom. In New Zealand present on the Three Kings, North, South, Stewart and Chatham Islands.

Habitat:

Coastal to subalpine (up to 1100 m a.s.l.). However, mostly in lowland areas. Common in urban areas and in disturbed or successional indigenous habitats. Rarely in dense forest (though often colonising tracksides) and tussock grassland.

Features*:

Perennial herb without bulbils; taproot absent or weakly developed. Stems creeping or ascending up to 380 mm long, very sparsely antrorse-hairy. Leaves all cauline, tufted, 3-foliolate; leaflets sessile, 2.5-6.0 x 3.0-6.0 mm, mostly bright green, cuneate-obcordate, bilobed, glabrous above, pubescent below, margins ciliate, sinus cut to 1/3 leaflet length, lobes obovate, divergent, apices obtuse, 2-3 mm apart; petioles 10-90 mm long, with antrorse hairs; stipules to 2 mm long, conspicuous, with apex lobed or truncate, or inconspicuous with apex tapering abruptly to petiole, more or less ciliate. Inflorescences axillary, 1-2-flowered; peduncles at least as long as leaves, antrorse-hairy; pedicels erect, sometimes deflexed in fruit. Sepals oblong, 1.5-3.0 mm long, ciliate or glabrous; petals yellow, 4.5-9.0 mm long. Capsule 5.0-10.0 mm long, conical to cylindrical, usually moderately retrorse-hairy, often with scattered septate hairs; seeds 1.0-1.4 mm long, strongly transversely ribbed.

Flowering:

Throughout the year

Fruiting:

Throughout the year

Threats:

Not Threatened

***Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange 1 November 2005. Description adapted from Webb et al. (1988).

References and further reading:

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

Wilcox, M.D. Creeping *Oxalis* carpets on Motuihe island. *Auckland Botanical Society Journal* 56: 19

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=2211



Caption: *Oxalis exilis*

Photographer: John Barkla



Caption: Stokes Valley. Apr 2006.

Photographer: Jeremy Rolfe

Pseudopanax ferox

Common Name(s):

Fierce lancewood

Current Threat Status (2012):

At Risk - Naturally Uncommon

Distribution:

Endemic. North and South Islands. In the North rather patchy, known from Ahipara, Woodhill Forest (South Kaipara), the Moawhango and southern Rimutaka Range. In the S. Island more widespread but easterly from the Marlborough Sounds to Southland.

Habitat:

Coastal to subalpine (10-800 m a.s.l.) on consolidated sand dunes (dune forest), in grey scrub overlying pumice, on recent alluvial (coarse gravels), limestone outcrops, boulder fall, cliff faces, talus slopes and scarps. Also found as a sparse component of seasonally drought-prone but otherwise cold and wet alluvial forests. This species prefers drier habitats and conditions than *P. crassifolius* (Sol. ex A.Cunn.) C.Koch.

Features:

Gynodioecious small tree up to 8 m tall. Trunk slender, longitudinally deeply grooved and ridged, bark fawn, mottled grey-white, often finely encrusted with lichens. Seedling leaves patent, 15-40 x 3-6 mm, dark or light chocolate brown to almost black, linear-lanceolate, margins deeply lobed with hooked ends; sapling and unbranched juvenile leaves strongly deflexed, 100-500 x 6-15 mm, light brown mottled with fawn and white near lobes or dark chocolate brown, mottled with fawn and white near lobes, coriaceous, very thick and rigid, margins set with closely-spaced to more or less distant, broadly and broad-based, somewhat raised, rounded, prominently and sharply hooked lobes; midrib raised, 2 mm wide, leaf apex terminating in 2-6 crowded, hooked lobes; leaves at branching stage similar but shorter, sub- to ascending, sometimes more deeply and sharply lobed before passing into adult foliage. Adult leaves 50-150 x 10-20 mm, dark or light chocolate brown, oblong to linear-obovate or broadly lanceolate, narrowing to a stout petiole 10-20 mm long; apex obtuse or mucronate-apiculate, retuse, bluntly serrate to entire, veins evident above. Umbels terminal, compound, staminate and perfect umbels with 5-12 rays, 30-50 mm long; flowers more or less racemosely distributed, trending to umbellules in perfect flowers; pistillate with rays 10-30 mm long, umbellules 2-5-flowered. Stamens 4-5, ovary 5-loculed, 5-ovuled; style branches 5, fused, sometimes free at tips. Fruit 8-9 mm diameter, brown or purple-brown, ovoid, fleshy.

Flowering:

November - April

Fruiting:

December - June

Threats:

Probably warrants a higher threat listing. *P. ferox* is biologically sparse but it is also threatened by possum, deer and goat browse, because juvenile plants command high prices in the nursery trade accessible populations have and continue to be plundered for seedlings and ripe fruit. Hybridisation with *P. lessonii* (DC.) K.Koch has been reported from several northern populations, if substantiated, the long-term effect hybridism may have on the viability of *P. ferox* at these sites has yet to be evaluated. The most secure populations seem to be the one in the southern North Island and a few island populations in the Marlborough Sounds and those in the more remote parts of the south-eastern South Island.

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=307



Caption: Pigeon Island, Lake Wakatipu

Photographer: John Barkla



Caption: Seedlings, Cultivated, Dunedin

Photographer: John Barkla

Raukaua anomalus

Current Threat Status (2012):

Not Threatened

Distribution:

Endemic. North, South and Stewart Island. Widespread, but often localised

Habitat:

Lowland to montane forest margins and shrubland. Near sea level to 900 m.

Features*:

Shrub to 3 m tall; branchlets hairy with stiff dark bristles, densely divaricating, interlacing; bark grey. Leaves alternate or fascicled, in juvenile plants 3-foliolate; adult leaves single; stipules absent. Petioles of juvenile winged, to 2.5 cm long, 5 mm long in adult, jointed to lamina; minute straw coloured scales at petiole base and internodes. Lamina 1-2 x 1-1.5 cm, obovate-oblong to suborbicular, crenate to sinuate, often mucronate, subcoriaceous, often with dark blotch at base; margin irregularly serrate to sinuate in juvenile, sinuate to minutely crenate in adult, teeth often terminating in a soft point; veins indistinct.

Inflorescence axillary, a simple umbel, 2-10 flowered; rays short.

Flowers small, green, hermaphroditic, passing through various stages; calyx minutely 5-toothed; ovary 2-loculed, each with 1 ovule; style branches 2, free at tips, connate; stamens 5, projecting, < petals. Fruit fleshy, 4-5 mm wide, laterally compressed, green ripening to either dark brown, blotched reddish purple, or pale cream; style bases retained on apical disc. Seeds 2 per fruit, broadly ovate or oblong and straight along ventral edge, surface irregularly ridged and dimpled, 2.4-3.8 mm long.

Threats:

Not Threatened

***Attribution:**

Description adapted from Eagle (2000), Frodin and Govaerts (2003), Moorfield (2005), Webb and Simpson (2001) and Wilson and Galloway (1993).

References and further reading:

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

Frodin, D.G.; Govaerts, R. 2003: World Checklist and Bibliography of Araliaceae, The Cromwell Press, European Union.

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

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

Wilson, H & Galloway, T. 1993. Small-leaved shrubs of NZ. Manuka Press, Christchurch.

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=790



Caption: Pinehaven. Jan 2005.

Photographer: Jeremy Rolfe



Caption: Pinehaven. Jan 2005.

Photographer: Jeremy Rolfe

Teucrium parvifolium

Common Name(s):

Teucrium

Current Threat Status (2012):

At Risk - Declining

Distribution:

Endemic to New Zealand, occurring sporadically from Northland to Southland, but commoner in the east of both islands.

Habitat:

Along fertile stream sides and river terraces in lowland dry forest and podocarp-hardwood forest; occasionally on forest margins, clearings and amongst scrub.

Features:

A small-leaved shrub to 2 m. Young stems are orange or brown, square in cross-section and finely hairy. Leaves are in opposite pairs, round, dull green or brown-green; up to 12 mm long on stalks of equal length. Flowers are small (8 mm diameter), white (rarely bluish) with 5 irregular petal lobes. Fruit is a group of 4 seeds held within a persistent calyx.

Flowering:

Flowering occurs from October to January.

Fruiting:

Fruiting from December to March.

Threats:

Forest clearance, rural development, stock and feral animal browse, invasive weeds.

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=207



Caption: Old Man Range, January

Photographer: John Barkla



Caption: Eastern Wairarapa.

Photographer: Jeremy Rolfe

Urtica ferox

Common Name(s):

Ongaonga, tree nettle

Current Threat Status (2012):

Not Threatened

Distribution:

Endemic. Found throughout NZ in North and South Islands reaching Otago as its southern limit.

Habitat:

Common in the fringes of bushland. Mainly found in coastal and lowland forest margins and shrublands.

Features:

The tree stands up to 2 meters tall with a base up to 12cm diameter. Its leaves are pale green 8-12 x 3-5 cm that are borne on petioles up to 5 cm long.

Flowering:

November - March

Fruiting:

December - May

Threats:

Not Threatened

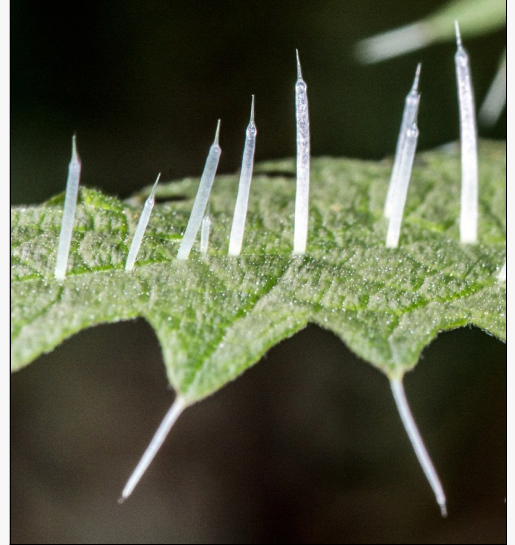
For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=1354



Caption: Leitz's Gully, Otago

Photographer: Jesse Bythell



Caption: Stinging hairs on leaf.
Western Hutt hills.

Photographer: Jeremy Rolfe